STAGE 1 ARCHAEOLOGICAL ASSESSMENT
MOBILITY HUB PLANNING CONSULTING SERVICES: DOWNTOWN
PART OF BRANT'S BLOCK AND LOT 18, BROKEN FRONT CONCESSION
(FORMER TOWNSHIP OF NELSON, COUNTY OF HALTON)
CITY OF BURLINGTON
REGIONAL MUNICIPALITY OF HALTON, ONTARIO

REVISED REPORT

Prepared for:

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Archaeological Licence #P094 (Merritt)
Ministry of Tourism, Culture and Sport PIF# P094-0270-2018
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Stage 1 Archaeological Assessment
Mobility Hub Planning Consulting Services: Downtown
Part of Brant's Block and Lot 18, Broken Front Concession
(Former Township of Nelson, County of Halton)
City of Burlington
Regional Municipality of Halton, Ontario

EXECUTIVE SUMMARY

Archaeological Services Inc. was contracted by Brook McIlroy Inc. to conduct a Stage 1 Archaeological Assessment as part of the Mobility Hub Planning Consulting Services MCEA in the City of Burlington. The purpose of the project is to develop four Area Specific Plans to support the future redevelopment and intensification of each of Burlington's Mobility Hubs: Aldershot, Burlington, Downtown, and Appleby. As part of the City of Burlington's "Grow Bold" initiative, the City is currently undertaking updates to several key planning and transportation documents (including the Official Plan and associated intensification framework and employment lands review, Transportation Plan, Transit Mobility Plan and Cycling Master Plan) to plan for future growth and intensification.

This report will address the Downtown Study Area, approximately 184 hectares, roughly bounded by the Queen Elizabeth Highway to the west, Smith Avenue to the east, Lake Ontario to the south, and Prospect Street to the north.

The Stage 1 background study determined that 61 previously registered archaeological sites are located within one kilometre of the Study Area. The Burlington Mounds site (AhGw-3) and the St. Luke's Church site (AhGw-25) are within the Study Area and are considered to retain further Cultural Heritage Value or Interest. The background research determined that parts of the Study Area exhibit potential and will require a detailed Stage 1 including property inspection prior to any future development.

In light of these results, the following recommendations are made:

1. Any future developments within the Study Area, beyond those portions that have already been assessed and cleared of any further archaeological concern, must be preceded by Stage 2 Archaeological Assessment. Such assessment(s) must be conducted in accordance with the Ministry of Tourism, Culture and Sport's 2011 Standards and Guidelines for Consultant Archaeologists. All active or formerly worked agricultural lands must be assessed through pedestrian survey. Wood lots and other non-arable lands must be assessed by means of test pit survey. Areas deemed to be disturbed or of no potential due to factors of slope or drainage during the Stage 2 assessment process must be appropriately documented.

   This work is required prior to any land disturbing activities in order to identify any archaeological remains that may be present.

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2. The Burlington Mounds site (AhGw-3) and the St. Luke's Church site (AhGw-25) are located within the Study Area. Both archaeological sites are likely related to the same archaeological feature complex reported to contain human remains. Given the sensitivity of these sites it is recommended that any proposed development within 50 metres of their locations should be subject to a Stage 2 archaeological assessment by test pit survey at a minimum of 5 metre intervals, where possible.
    - Because the exact limits of these are not known, any proposed development within the vicinity of these sites should also be reviewed by a licensed archaeologist to help determine an appropriate impact-specific assessment plan, and any investigation must be completed in accordance with the 2011 Standards and Guidelines for Consultant Archaeologists.

    - Further, the investigations should be undertaken in consultation with Nancy Watkins, Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures.

    - In the event that burials are found during the assessment/investigation, further planning and mitigation must be consistent with the requirements of the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002.

3. AhGw-270 is located within the Study Area. This sensitive and significant archaeological site must continue to be protected and preserved *in situ* as per previous recommendations. As per recommendations made in TMHC 2012b, if construction will take place within the immediate vicinity of the site, protective fencing around the known extent of the site should be established prior to the work commencing and under the supervision of a licensed archaeologist.

4. The Brant Hotel Complex site (AhGw-99) is located within the Study Area. This site was previously subject to an archaeological assessment that determined that the site does not retain further cultural heritage value or interest and as such, can be considered clear of further archaeological concern;

5. The Skyway site (AhGw-278) is located within 50 m of the Study Area and has been subject to Stage 4 mitigation by means of comprehensive salvage excavation. The site is not considered to retain further CHVI, and may be considered free of any further archaeological concern;

6. It should be noted that the archaeological assessment of any proposed development (e.g., a draft plan of subdivision) must be carried out on all lands within that particular subject property, not simply those lands identified as exhibiting high potential in this study.

7. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

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PROJECT PERSONNEL

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by Brook McIlroy Inc. to conduct a Stage 1 Archaeological Assessment as part of the Mobility Hub Planning Consulting Services Municipal Class Environmental Assessment (MCEA) in the City of Burlington. The purpose of the project is to develop four Area Specific Plans (ASPs) to support the future redevelopment and intensification of each of Burlington's Mobility Hubs: Aldershot, Burlington, Downtown, and Appleby. As part of the City of Burlington's "Grow Bold" initiative, the City is currently undertaking updates to several key planning and transportation documents (including the Official Plan and associated intensification framework and employment lands review, Transportation Plan, Transit Mobility Plan and Cycling Master Plan) to plan for future growth and intensification.

This report will address the Downtown Study Area, approximately 184 hectares, roughly bounded by the Queen Elizabeth Highway (QEW) to the west, Smith Avenue to the east, Lake Ontario to the south, and Prospect Street to the north (Figure 1).

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2017) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (Ministry of the Environment 1990 as amended 2010) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (2000 as amended in 2007, 2011 and 2015).

The *Archaeological Master Plan for the Regional Municipality of Halton* (ASI 1998) and the 2008 Update (ASI 2008) were also consulted.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by Brook McIlroy Inc. on March 8, 2017.

1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information pertaining to the Study Area. A summary is first presented of the current understanding of the Indigenous land use of the Study Area. This is then followed by a review of the historical Euro-Canadian settlement history.

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000

BP, the environment had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Ellis et al. 1990, 2009; Brown 1995:13).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2500 BP and exchange and interaction networks broaden at this time (Spence et al. 1990:136, 138) and by approximately 2,000 BP, evidence exists for macro-band camps, focusing on the seasonal harvesting of resources (Spence et al. 1990:155, 164). By 1500 BP there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2300 BP - it is likely that once similar analyses are conducted on Ontario vessels of the same period, the same evidence will be found (Birch and Williamson 2013:13–15). Bands likely retreated to interior camps during the winter. It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 BP lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (CE), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990:317). By 1300-1450 CE, this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). From 1450-1649 CE this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. By 1600 CE, the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the traditional enmity between the Haudenosaunee[1] and the Huron-Wendat (and their Algonkian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat.

Shortly after dispersal of the Wendat and their Algonquian allies, Ojibwa began to expand into southern Ontario and Michigan from a "homeland" along the east shore of Georgian Bay, west along the north shore of Lake Huron, and along the northeast shore of Lake Superior and onto the Upper Peninsula of Michigan (Rogers 1978:760–762). This history was constructed by Rogers using both Anishinaabek oral tradition and the European documentary record, and notes that it included Chippewa, Ojibwa, Mississauga, and Saulteaux or "Southeastern Ojibwa" groups. Ojibwa, likely Odawa, were first

[1] The Haudenosaunee are also known as the New York Iroquois or Five Nations Iroquois and after 1722 Six Nations Iroquois. They were a confederation of five distinct but related Iroquoian–speaking groups – the Seneca, Onondaga, Cayuga, Oneida, and Mohawk. Each lived in individual territories in what is now known as the Finger Lakes district of Upper New York. In 1722 the Tuscarora joined the confederacy.

encountered by Samuel de Champlain in 1615 along the eastern shores of Georgian Bay. Etienne Brule later encountered other groups and by 1641, Jesuits had journeyed to Sault Sainte Marie (Thwaites 1896:11:279) and opened the Mission of Saint Peter in 1648 for the occupants of Manitoulin Island and the northeast shore of Lake Huron. The Jesuits reported that these Algonquian peoples lived "solely by hunting and fishing and roam as far as the "Northern sea" to trade for " Furs and Beavers, which are found there in abundance" (Thwaites 1896-1901, 33:67), and "all of these Tribes are nomads, and have no fixed residence, except at certain seasons of the year, when fish are plentiful, and this compels them to remain on the spot" (Thwaites 1896-1901, 33:153). Algonquian-speaking groups were historically documented wintering with the Huron-Wendat, some who abandoned their country on the shores of the St. Lawrence because of attacks from the Haudenosaunee (Thwaites 1896-1901, 27:37).

Other Algonquian groups were recorded along the northern and eastern shores and islands of Lake Huron and Georgian Bay - the "Ouasouarini" [Chippewa], the "Outchougai" [Outchougai], the "Atchiligouan" [Achiligouan] near the mouth of the French River and north of Manitoulin Island the "Amikouai, or the nation of the Beaver" [Amikwa; Algonquian] and the "Oumisagai" [Missisauga; Chippewa] (Thwaites 1896-1901, 18:229, 231). At the end of the summer 1670, Father Louys André began his mission work among the Mississagué, who were located on the banks of a river that empties into Lake Huron approximately 30 leagues from the Sault (Thwaites 1896-1901, 55:133-155).

After the Huron had been dispersed, the Haudenosaunee began to exert pressure on Ojibwa within their homeland to the north. While their numbers had been reduced through warfare, starvation, and European diseases, the coalescence of various Anishinaabek groups led to enhanced social and political strength (Thwaites 1896-1901, 52:133) and Sault Sainte Marie was a focal point for people who inhabited adjacent areas both to the east and to the northwest as well as for the Saulteaux, who considered it their home (Thwaites 1896-1901, 54:129-131). The Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. From east to west, these villages consisted of Ganneious, on Napanee Bay, an arm of the Bay of Quinte; Quinte, near the isthmus of the Quinte Peninsula; Ganaraske, at the mouth of the Ganaraska River; Quintio, at the mouth of the Trent River on the north shore of Rice Lake; Ganatsekwyagon (or Ganestiquiagon), near the mouth of the Rouge River; Teyaiagon, near the mouth of the Humber River; and Quinaouatoua, on the portage between the western end of Lake Ontario and the Grand River (Konrad 1981:135). Their locations near the mouths of the Humber and Rouge Rivers, two branches of the Toronto Carrying Place, strategically linked these settlements with the upper Great Lakes through Lake Simcoe. The inhabitants of these villages were agriculturalists, growing maize, pumpkins and squash, but their central roles were that of portage starting points and trading centres for Iroquois travel to the upper Great Lakes for the annual beaver hunt (Konrad 1974; Williamson et al. 2008:50–52). Ganatsekwyagon, Teyaiagon, and Quinaouatoua were primarily Seneca; Ganaraske, Quinte and Quintio were likely Cayuga, and Ganneious was Oneida, but judging from accounts of Teyaiagon, all of the villages might have contained peoples from a number of the Iroquois constituencies (ASI 2013).

During the 1690s, some Ojibwa began moving south into extreme southern Ontario and soon replaced, the Haudenosaunee by force. By the first decade of the eighteenth century, the Michi Saagiig Nishnaabeg (Mississauga Nishnaabeg) had settled at the mouth of the Humber, near Fort Frontenac at the east end of Lake Ontario and the Niagara region and within decades were well established throughout southern Ontario. In 1736, the French estimated there were 60 men at Lake Saint Clair and 150 among small settlements at Quinte, the head of Lake Ontario, the Humber River, and Matchedash (Rogers 1978:761). This history is based almost entirely on oral tradition provided by Anishinaabek elders such as George Copway (Kahgegagahbowh), a Mississauga born in 1818 near Rice Lake who followed a traditional lifestyle until his family converted to Christianity (MacLeod 1992:197; Smith 2000). According to

Copway, the objectives of campaigns against the Haudenosaunee were to create a safe trade route between the French and the Ojibwa, to regain the land abandoned by the Huron-Wendat. While various editions of Copway's book have these battles occurring in the mid-seventeenth century, common to all is a statement that the battles occurred around 40 years after the dispersal of the Huron-Wendat (Copway 1850:88, 1851:91, 1858:91). Various scholars agree with this timeline ranging from 1687, in conjunction with Denonville's attack on Seneca villages (Johnson 1986:48; Schmalz 1991:21–22) to around the mid- to late-1690s leading up to the Great Peace of 1701 (Schmalz 1977:7; Bowman 1975:20; Smith 1975:215; Tanner 1987:33; Von Gernet 2002:7–8).

Robert Paudash's 1904 account of Mississauga origins also relies on oral history, in this case from his father, who died at the age of 75 in 1893 and was the last hereditary chief of the Mississauga at Rice Lake. His account in turn came from his father Cheneebeesh, who died in 1869 at the age of 104 and was the last sachem or Head Chief of all the Mississaugas. He also relates a story of origin on the north shore of Lake Huron (Paudash 1905:7-8) and later, after the dispersal of the Huron-Wendat, carrying out coordinated attacks against the Haudenosaunee. Francis Assikinack, an Ojibwa of Manitoulin Island born in 1824, provides similar details on battles with the Haudenosaunee (Assikinack 1858:308–309).

Peace was achieved between the Haudenosaunee and the Anishinaabek Nations in August of 1701 when representatives of more than twenty Anishinaabek Nations assembled in Montreal to participate in peace negotiations (Johnston 2004:10). During these negotiations captives were exchanged and the Iroquois and Anishinaabek agreed to live together in peace. Peace between these nations was confirmed again at council held at Lake Superior when the Iroquois delivered a wampum belt to the Anishinaabek Nations.

From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there is no interruption to Anishinaabek control and use of southern Ontario. While hunting in the territory was shared, and subject to the permission of the various nations for access to their lands, its occupation was by Anishinaabek until the assertion of British sovereignty, the British thereafter negotiating treaties with them. Eventually, with British sovereignty, tribal designations changed (Smith 1975:221–222; Surtees 1985:20–21). According to Rogers (1978), by the twentieth century, the Department of Indian Affairs had divided the "Anishinaubag" into three different tribes, despite the fact that by the early eighteenth century, this large Algonquian-speaking group, who shared the same cultural background, "stretched over a thousand miles from the St. Lawrence River to the Lake of the Woods." With British land purchases and treaties, the bands at Beausoleil Island, Cape Croker, Christian Island, Georgina and Snake Islands, Rama, Sarnia, Saugeen, the Thames, and Walpole, became known as "Chippewa" while the bands at Alderville, New Credit, Mud Lake, Rice Lake, and Scugog, became known as "Mississauga." The northern groups on Lakes Huron and Superior, who signed the Robinson Treaty in 1850, appeared and remained as "Ojibbewas" in historical documents.

The Michi Saagiig (Mississauga) Nishnaabeg left a minimal footprint archaeologically, as they were historically a highly mobile sustainably living society, but it is known through oral histories and traditional knowledge that the north shore of Lake Ontario has been their homeland for millennia (Kapyrka and Migizi 2016; Migizi and Kapyrka 2015). The Michi Saagiig are known as "the people of the big river mouths" and the "Salmon People", as their traditional territory span the north shore of Lake Ontario between Gananoque in the east to the north shore of Lake Erie, along the waterways from their headwaters to their outlets in Lake Ontario (Migizi 2018). Individual bands were politically autonomous and numbered several hundred people. Nevertheless, they shared common cultural traditions and relations with one another and the land. These groups were highly mobile, with a subsistence economy based on hunting, fishing, gathering of wild plants, and garden farming.

In 1763, following the fall of Quebec, New France was transferred to British control at the Treaty of Paris. The British government began to pursue major land purchases to the north of Lake Ontario in the early nineteenth century, the Crown acknowledged the Mississaugas as the owners of the lands between Georgian Bay and Lake Simcoe and entered into negotiations for additional tracts of land as the need arose to facilitate European settlement.

The eighteenth century saw the ethnogenesis in Ontario of the Métis, when Métis people began to identify as a separate group, rather than as extensions of their typically maternal First Nations and paternal European ancestry (Métis National Council n.d.). Métis populations were predominantly located north and west of Lake Superior, however, communities were located throughout Ontario (MNC n.d.; Stone and Chaput 1978:607,608). During the early nineteenth century, many Métis families moved towards locales around southern Lake Huron and Georgian Bay, including Kincardine, Owen Sound, Penetanguishene, and Parry Sound (MNC n.d.). Recent decisions by the Supreme Court of Canada (Supreme Court of Canada 2003, 2016) have reaffirmed that Métis people have full rights as one of the Indigenous people of Canada under subsection 91(24) of the Constitution Act, 1867.

The Study Area is within Treaty 3. In 1792, under the terms of the "Between the Lakes Purchase" signed by Sir Frederick Haldimand and the Mississaugas, the Crown acquired over one million acres of land in-part spanning westward from near modern day Niagara-on-the-Lake along the north shore of Lake Ontario to modern day Burlington. The Study Area is also within Treaty 3 ¾, signed in 1795 and confirmed in 1797 between the Mississaugas and the Crown for the parcel of 3450 acres on the present site of the City of Burlington, as chosen by Mohawk Chief Joseph Brant in recognition of his military service in the American Revolutionary War (Mississauga of the New Credit First Nation 2017; Aboriginal Affairs and Northern Development Canada 2016).

1.2.2 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in part of Brant's Block and Lot 18, Broken Front Concession in the Former Nelson Township, County of Halton.

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 m of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation

routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006).

Nelson Township

The land within the Township of Nelson was acquired by the British from the Mississaugas in 1795. The first township survey was undertaken in 1806, and the first legal settlers occupied their land holdings in the same year. The township was first named "Alexander Township" in honour of Alexander Grant, the administrator of Upper Canada. In 1806, it was renamed in honour of Horatio Viscount Nelson, after his victory at Cabo Trafalgar in Spain the previous year. Nelson was initially settled by the children of Loyalists, soldiers who served during the War of 1812, and by immigrants from England, Scotland and Ireland. By the 1840s, the township was noted for its good land and excellent farms (Smith 1846:121; Armstrong 1985:143; Rayburn 1997:237). In 1817, it was estimated that the Township of Nelson contained sixty-eight inhabited houses, with a total population of 476. At that time it contained two grist mills and three saw mills (Smith 1851:257–258; Pope 1877:60). The oldest principal village in the township during the nineteenth century was Burlington, which had originally been named "Wellington Square." Other villages within the township during the nineteenth century included Nelson, Zimmerman, Lowville, Willbrook, Cumminsville and Kilbride (Smith 1846:121; Crossby 1873:92; Pope 1877:38–39). By the 1850s, Nelson had 3,792 inhabitants and was well settled with schools, churches, prosperous farms and an established system of municipal government (Smith 1851:258; Walker & Miles 1877:60). Additional prosperity came with the Toronto branch of the Great Western Railway, constructed across the township in 1854-55. In 1878, the Northern and North Western Railway constructed a rail line diagonally across the township between the towns of Burlington and Milton. This line is now owned and operated by the Canadian National Railway.

City of Burlington

This incorporated village comprised part of Lots 17 and 18 Concessions 3 and 4 SDS in Nelson Township. Burlington was first settled by Augustus Bates in 1800. Mohawk Chief Joseph Brant held over 3,000 acres of land here, and the settlement was first known as "Brant's Block." In 1807, James Gage purchased land from the widow of Chief Joseph Brant upon which he laid out a plan of subdivision which was called "Wellington Square." Some of the streets were named after various members of the Brant family, such as John, Elizabeth and Caroline. Registered plans of subdivision for Burlington date from 1854-1866. Between 1845 and 1865 Wellington Square was one of the largest producers and exporters of wheat. Burlington was a port where ships would sail in to collect local produce. Gradually flour became an important export and since ships were important to the life of the area, the development of ship building became a thriving industry. Lumber was another important enterprise. By 1846, there were 17 sawmills in Nelson Township, with local merchant Benjamin Eager particularly successful. In 1873, the communities of Wellington Square and Port Nelson amalgamated and formed a new town known as Burlington. It is thought to have been the corrupt form of the name of a resort town in England called "Bridlington." In 1877, an Anglican Church and cemetery was located in the block bounded by Ontario, Elgin, Burlington and Nelson. Burlington also contained a Catholic and Methodist church by the late nineteenth century. The lumber industry boomed in the mid-nineteenth century, with well-known entrepreneurs like Waldie, Kerns, Bates Cotter, and Benjamin Eager living in Burlington at that time. Rail service was provided by the Hamilton and North Western Railway, as well as the Great Western Railway. Three wharves (Baxter, Torrance and Bunton) extended into Lake Ontario between Brant and Elizabeth Streets, and large quantities of grain and lumber were shipped from here during the nineteenth century. It also contained a number of stores such as John Waldie & Co. Other businesses in the village included two telegraph offices, several hotels, stores, and a saw and grist mill. The population numbered

about 700 in 1873. In 1958, the Town of Burlington annexed Aldershot and most of the Township of Nelson, and in 1974 was incorporated as a city (Crossby 1873:353; Emery 1967; Winearls 1991:631; Scott 1997:37; Rayburn 1997:48; Turcotte 1989a, 1989b, 1992; Town of Burlington 1973).

Joseph Brant had a large estate house constructed near the north shore of the beach bar in 1802 where he lived until hist death in 1807. It overlooked the beach and Brant's Pond, a body of water between Burlington Bay and Lake Ontario. After the War of 1812, Brant's children moved into the house until ownership passed to Brant's grandson William J. Simcoe Kerr, who died in 1875 when the home was sold at auction (Turcotte 1987). This marked the end of the house as a private residence, as it became the Brant House resort and hotel under J. Morris, later owned by Benjamin Eager (as it appears on the 1877 atlas), A.B. Coleman, who expanded the complex with a second brick hotel and country club/Brant Inn, and John Murray Anderson, who rebuilt the inn after a fire in 1927 (Timmins Martelle Heritage Consultants Inc. 2012a; Turcotte 1987; Machan 1997; Craig 1902). The hotel was expropriated in 1917 and converted into a hospital, only to be closed in 1923 (Loverseed 1988:85, 91). Both the hotel/hospital building and Brant's house became derelict and were destroyed by fire and torn down (Loverseed 1988:92, 93).

The beach bar shaped early Euro-Canadian settlement activity and travel, just as it had done in precontact times. The band of dry land across the lake confined and concentrated travel routes within a very narrow band. John Graves Simcoe's 1790s military road, the 1820s Beach Road, the 1876 rail lines and 1896 electric radial lines, the 1930s Queen Elizabeth Way and hydro transmission lines, circa 1910, all occupied and vied for space. In addition, the construction and opening of the Burlington Canal in 1832, together with the installation of a bridge and construction of wharves resulted in a booming beach economy and the birth of a small but thriving port community.

The strategic importance of the head of the lake attracted the attention of American forces during the War of 1812. In the summer of 1813 two American schooner landed a contingent of 200 troops. After a brief skirmish with a small British garrison stationed at the Kings Head Inn, they razed the buildings there, as well as destroying a redoubt at the outlet on the north end of the beach strip.

After the war, the importance of the area as a transportation hub continued to grow apace. Ships off-loaded their cargo on the beach and these goods were then taken across the bar on log roads to be loaded on to barges that crossed the bay to Hamilton. A tavern, storehouses and some residences were built along the beach in support of these activities. In order to improve the movement of goods, a canal was constructed through the bar in the early 1820s. Officially opened in 1832, the Burlington Bay Canal, underwent numerous modifications in order to expand its capacity and to repair damage to its associated facilities such as the swing bridge, ferry, lighthouse, and piers as well as the store and staff houses, which were prone to damage, both from ice and wind off the lake and fire due to sparks from the engines of the steamers that passed through. The evolution of the canal continued into the modern era and has entailed multiple reconstructions on massive scales.

Railways

The Great Western Railway was originally incorporated in 1834 as the London and Gore Railroad Co. and changed its name to the Great Western Railway in 1853. It received considerable promotion by Allan Napier MacNab, Isaac and Peter Buchanan, R.W. Harris and John Young. Aided by government guarantees and supported by foreign American and British investment, the Great Western Railway opened its mainline (Windsor-London-Hamilton-Niagara Falls) in 1854. By 1882, it was operating throughout southwestern Ontario and even into Michigan. In 1882 it merged with the Grand Trunk Railway in an

attempt to successfully compete with rival American railroads for American through-traffic between Michigan and New York states (Baskerville 2015).

The arrival of the railway to the beach bar spurred on a different and sustained form of development: a late-nineteenth and early-twentieth century recreational community of cottages and ornate summer residences that accommodated some of Hamilton's most prosperous families. The Hamilton Electric Railway line ran from the terminal at King and Catherine Streets in Hamilton, east to the beach strip then over the canal and on through to Burlington and Oakville. However, throughout the 1920s to the 1950s, Hamilton Beach slowly declined as a holiday venue, but a housing shortage caused by two World Wars assured its survival, if not revival. With an affordable and modest range of housing, the beach strip continued to function as a unique residential enclave. Despite attempts to remove houses and establish a publicly owned system of parks and open space, the Beach community continued to survive and by the 1990s had consolidated itself as a viable and sustainable community.

1.2.3 Historical Map Review

The 1806 Plan of the Township of Nelson, 1858 *Map of the County of Halton* (Tremaine 1858), and the 1877 *Illustrated Historical Atlas of the County of Halton*, Township of Nelson and Village of Burlington pages (Pope 1877) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Table 1; Figures 2-5).

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally proceeds by using common reference points between the various sources. These sources are then geo-referenced in order to provide the most accurate determination of the location of any property on historic mapping sources. The results of such exercises are often imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including the vagaries of map production (both past and present), the need to resolve differences of scale and resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping.

Table 1: Nineteenth-century property owner(s) and historical features(s) within or adjacent to the Study Area

		1858		*1877*	
Con #	**Lot #**	**Property Owner(s)**	**Historical Feature(s)**	**Property Owner(s)**	**Historical Feature(s)**
Broken Front	18	Jno & Alex Malcomson	None	Village of Burlington	Town lots
Brant's Block		Geo. Will Jabez Bent Wm. Chapman Nelson Ogg Wm. Bates	Wellington Square town lots wharf (2)	Fredk. Bray Nelson Ogg Edw. Thomas Robt. Lindley A.T. Springer	Farmstead Farmstead Farmstead Farmstead, H&NW Farmstead

		1858		*1877*	
Con #	**Lot #**	**Property Owner(s)**	**Historical Feature(s)**	**Property Owner(s)**	**Historical Feature(s)**
		Jno Trillier Esq.		T. Dent	Farmstead
		Kerr family		Thos. Bell	None
		A. Bates		Hy. Foster	Farmstead, H&NW
		Torrance		B. Eager	Farmstead
				Village of Burlington	H&NW, church, cemetery, town lots, wharf (3), house (2), farmstead

The 1806 plan shows that part of the Study Area was within Captain Brant's Land, a large parcel that extended from the lakeshore to just south of Dundas Street, roughly within what would have been surveyed as Lots 18-24, Concessions 1-3 and Broken Front. Lots had not yet been surveyed within the Broken Front.

The 1858 map illustrates that the settlement of Wellington Square (present day Burlington) was a growing community along the lakeshore within the boundaries of present day Burlington Avenue, Martha Street, and Caroline Street – within the former Brant's Block. This map shows that east-west settlement streets, including Martha, Pearl, Eliza, Brant, John, Locust, and Maple, were surveyed by 1858. The north-south settlement roads of Lakeshore Road, Caroline, Ontario, Maria, James, and Pine streets were also surveyed by that time. Although no individual structures are illustrated within the study area, the village is depicted as having town lots and dense urban settlement surrounded by the large estate of the Kerr family to the west and other farmsteads and estates along Brant Street and Lakeshore Road. Two docks are illustrated extending into Lake Ontario at the end of what is now Brant Street. Rambo Creek is shown in the eastern part of the Study Area. No structures or roads are illustrated along the beach bar.

The 1877 map depicts substantial growth in the Village of Burlington and surrounding areas. Farmsteads lined Brant Street and Maple Avenue. A church is illustrated on the west side of Caroline Street. Three docks are illustrated on the waterfront. The H&NWR can be seen to have been constructed through the western part of the Study Area and along the beach bar. Nelson Avenue was opened and Ontario Street connected to Maple Avenue. The map also shows that Port Nelson had become part of Burlington. Three watercourses are depicted within the Study Area. One structure is shown at the top of Burlington Bay west of the junction of the H&NW and Lakeshore Road, both of which extend along the beach bar.

The 1877 Village of Burlington plan shows that the Study Area includes the historic centre of Burlington. Several landowners and features are illustrated, including the Wm. Chapman, Murray McCay, H.H. Hurd, Torrance, Mr. Crosby, Wm. Dalton, and W. Bunton properties. St. Luke's church and cemetery are illustrated between Ontario Street and Elgin Street. The Baxter's, Torrance's and Bunton's wharves are shown at the foot of Brant Street. The map indicates the former alignments of Rambo Creek and Hager Creek flowed through the village centre. The map does not include areas west of the railroad/Nelson Avenue, or Burlington Bay.

1.2.4 Twentieth-Century Mapping Review

The 1909 and 1999 National Topographic System Hamilton and Hamilton-Burlington Sheets as well as the 1954 aerial photograph of the City of Burlington (Department of Militia and Defence 1909; University of Toronto 1954; Natural Resources Canada 1999) were examined to determine the extent and nature of development and land uses within the Study Area (Figures 6-8).

The 1909 map and 1954 aerial demonstrate that relatively little additional development occurred into the mid-twentieth century, with a similar urban density to what was depicted in earlier mapping within the City of Burlington. The canal along Burlington Beach is illustrated as being opened by 1909. Numerous cottages line the Burlington Beach, adjacent to Lakeshore Road and the Toronto and Niagara Power line. The Brant Hotel (former residence of Captain Joseph Brant/Tahayendanegea) is illustrated west of Maple Avenue and Lakeshore Road. North of Caroline Street, the Study Area remained within a rural landscape.

The 1954 aerial photograph indicates that the QEW had been constructed to connect with Lakeshore Road along Burlington Beach. The lands between the QEW, North Shore Boulevard, and Lakeshore Road are shown to have been infilled by the mid twentieth-century to facilitate development after the demolition of the Brant Hotel complex.

By 1999, the city is illustrated as having undergone significant urban growth within the historic centre of Burlington, including the removal of the railroad, substantial development along Burlington Beach and widening of the QEW.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MTCS through "Ontario's Past Portal"; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

The optional Stage 1 property inspection was not conducted.

A review of available Google satellite imagery between 2004 and 2017 illustrates that the Study Area has experienced significant urban redevelopment in the downtown core of Burlington, including construction of condominium towers and apartment buildings (Figure 9). A parking lot was constructed on the southeast corner of Brock Avenue and Ontario Street, along with park trails through Brock Park. Mixed-use condominiums were built on the northwest corner of Brock Avenue and Elgin Street, on Lakeshore Road between Elizabeth and Pearl Streets, and south of Pine Street between Pearl and Martha Streets. Structures on the northwest and southwest corners of Locust Street and Elgin Street, as well as the property south of Caroline Street between Elizabeth and John Streets, were demolished for redevelopment. A townhouse complex was constructed between Caroline, Maria, Elizabeth and Pearl Streets. The playground and Spencer's at The Waterfront on Lakeshore Road ant Nelson Avenue is show to be under construction in 2004-2005. By 2014, the imagery shows the completed expansion and construction of the McMaster Halton Family Health Centre within the Joseph Brant Hospital complex on Lakeshore Road. The property at 2042 Lakeshore Road is shown as being redeveloped three times between 2004 and 2017.

1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Study Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (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, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow and Warner 1990:Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, and 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; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

Wave action eroded a prominent beach ridge and deposited sand in a broad belt along the current Lake Ontario waterfront, forming the baymouth bar across the head of the lake that is today known as Burlington Beach. As the glacial ice continued to retreat, lower outlets of Lake Iroquois were opened, resulting in lowering water levels in the Ontario basin between 12,000 and 11,500 B.P. Early Lake Ontario began between 11,500 B.P. and 10,500 B.P., at water levels that were as much as 100 metres below present. Levels gradually rose again until around 5,000 B.P. when they attained levels several metres above present during the Nipissing Transgression period. After about 4,000 B.P. water levels fell to modern levels (Anderson and Lewis 1985).

The Study Area is on sand plains within the Iroquois Plain physiographic region of southern Ontario (Figure 10). This is a lowland region bordering Lake Ontario. This region is characteristically flat, and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 km (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196). The Study Area is north of the glacial beach, what is now known as Burlington Beach connecting the City of Hamilton and the City of Burlington.

Figure 11 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by glaciolacustrine deposits of silty to clayey till, coarse-textured glaciolacustrine deposits, and Paleozoic bedrock (Ontario Geological Survey 2010). No information about the natural soils in the Study Area could be found (Presant and Wicklund 1955).

The Study Area is adjacent to Lake Ontario, Indian Creek of the North Shore Watershed, and includes Rambo Creek and Hager Creek, two of 18 watercourses making up the Burlington Urban Creeks Watershed. These creeks all flow from the Niagara Escarpment through Hamilton, Burlington, Oakville, and portions of Mississauga to drain into Lake Ontario and have undergone channeling and diversion through the urban centre of the City of Burlington (Conservation Halton 2017). Indian Creek flows from Rambo Creek flows from north of the interchange of Highway 407 ETR and Highway 403, east of Brant Street to its outlet near 2160 Lakeshore Road, roughly following its historical alignment. Hager Creek follows Kerns Road and is carried under the highways to the Hager-Rambo Diversion Channel which flows west and outlets to Indian Creek and ultimately Hamilton Harbour. The Hager-Rambo Flood Channel, almost 4 km long, was completed in 1976 to ease local flooding in residential areas, diverting the flow of the upper Hager and Rambo Creeks west to Indian Creek before emptying into Lake Ontario (Conservation Halton 2018).

1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The Study Area under review is located in Borden block *AhGw*.

According to the OASD, 61 previously registered archaeological sites are located within one kilometre of the Study Area, five of which are within 50 metres of the Study Area and three that are within the Study Area (Ministry of Tourism, Culture and Sport 2018). A summary of the sites is provided below. The location of previously registered archaeological sites within or directly adjacent to the Study Area are indicated in the *Supplementary Documentation* accompanying this report.

Table 2: List of previously registered sites within one kilometre of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AhGw-3	*Burlington Mounds*	*Pre-Contact Indigenous*	*Burial*	*AARO 1896/7; Roberts 1976*
AhGw-6	Almas S.	Archaic	Findspot	Roberts 1976
AhGw-8	Thorpe 4	Archaic	Findspot	Roberts 1976
AhGw-9	Thorpe 3	Archaic	Findspot	Roberts 1976
AhGw-10	Marshy Pond	Archaic	Findspot	Roberts 1976
AhGw-13	Murry Thorpe 2	Archaic	Unknown	Roberts 1976
AhGw-14	Murry Thorpe 1	Archaic	Camp	Roberts 1976
AhGw-15	Treguno	Archaic	Camp	Roberts 1976
AhGw-16	South of Treguno	Archaic	Findspot	Roberts 1976
AhGw-17*	David Davidson	Archaic	Camp	Roberts 1976

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AhGw-18	*Rene Bridgeman*	*Archaic*	*Unknown*	*Roberts 1976*
AhGw-19	Cestnik	Archaic	Camp	Roberts 1976; Ambrose 1983
AhGw-20	Indian Point	Unknown	Unknown	Roberts 1976
AhGw-23	John Blair	Archaic	Camp	Roberts 1976
AhGw-24	*Bell 2*	*Archaic*	*Unknown*	*Roberts 1976*
AhGw-25	**St. Luke's Church**	**Unknown Indigenous**	**Burial**	**Thorpe 1975, Roberts 1976**
AhGw-26	Maple Avenue	Archaic	Unknown	Roberts 1976
AhGw-33*	Borfield	Archaic	Unknown	Ambrose 1981
AhGw-34	Lockhart Road	Archaic	Camp	Ambrose 1982
AhGw-37	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-38	N/A	Pre-Contact Indigenous	Findspot	Roberts 1979, 1982
AhGw-39	N/A	Early Woodland (Meadowood)	Scatter	Roberts 1979
AhGw-40	Riverfield	Late Woodland, Archaic	Scatter	Roberts 1979, 1982
AhGw-41	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-42	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-43	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-44	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-45	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-46	N/A	Early Archaic	Unknown	Roberts 1979, 1982
AhGw-47	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-48	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-49	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-50	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-51	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-52	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-53	*N/A*	*Archaic*	*Camp*	*Roberts 1979, 1982*
AhGw-54	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-55	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-56	N/A	Late Archaic, Lamoka	Unknown	Roberts 1979, 1982
AhGw-57	N/A	Pre-Contact Indigenous	Unknown	Roberts 1979, 1982
AhGw-62	N/A	Pre-Contact Indigenous	Scatter	Roberts 1979, 1982
AhGw-99	**Brant Hotel Complex**	**Late Woodland; EuroCanadian**	**Unknown**	**ARA 1993, 1994**
AhGw-270	**N/A**	**Late Archaic, Early Woodland; Euro-Canadian**	**Village; Unknown**	**TMHC 2009, 2012**
AhGw-278	*Skyway Site*	*Late Archaic, Early-Late Woodland,*	*Village;*	*Archeoworks 2009, 2010 Amec 2011, 2013*

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
		Contact Indigenous; Euro-Canadian		
AhGw-538	N/A	Pre-Contact Indigenous	Scatter	ASI 2018
AiGw-77	Stanley Blair	Paleoindian; Archaic; Woodland	Camp	Roberts 1976

*same site, registered under two Borden #s
Sites in **bold** are within the Study Area
Sites in *italics* are within 60m of the Study Area
AARO – Annual Archaeological Research, Ontario
ARA – Archaeological Research Associates
TMHC – Timmins Martelle Heritage Consultants
N.B. Roberts 1976 survey for Ontario Ministry of Culture and Recreation

According to the OASD, AhGw-18 was undergoing disturbance at the time of Roberts' survey in 1976. AhGw-24 consisted of a lithic find with no pottery, but the collection was lost, and Roberts notes that the site was to be impacted by urban development. AhGw-53 was a surface collection of eight Brewerton side-notched points, a broken possible fluted point base, a pebble, and a flake. The dimensions of the site was not identified.

The Burlington Mounds site (AhGw-3) is located within proximity of the Study Area, however the exact location of this site is unknown. The site was registered within the OASD by Arthur Roberts in 1976, based on second hand information. It was originally recorded in the memoirs of the Reverend Dr. Reed as a series of earthen mounds on Burlington Beach. Reed was a Methodist missionary active in York, Peel and Halton Counties between 1820 and 1822. His description of the site was reproduced by Andrew F. Hunter in the Annual Archaeological Report, Ontario (AARO) of 1896-1897:

> "At the head of Lake Ontario is a considerable body of water separated from the lake by a sandy beach about five miles in length, and from 80 to 100 yards in width. The water thus separated from the lake is called Burlington Bay, at the upper end of which now stands the City of Hamilton. The outlet of the bay into the lake is near the north end of the beach, and is celebrated as a famous fishing place.... I noticed in passing over this beach singular excavations at regular intervals about midway between the lake and the bay. They were about twenty or thirty yards apart; originally of a square form, and measuring from ten to fifteen yards on a side. They were evidently artificial, and of very ancient date, as in some instances old trees were growing within them. At the north end of the beach, on the mainland,...was the elegant residence of Colonel Brandt.... In this immediate vicinity the soil was mingled with vast quantities of human bones, stones, arrowheads, hatchets, etc.... In sight of the mansion, and in plain view of the road, was a large mound of earth filled with human bones. One or two others stood near but had been demolished" (AARO 1897:91).

The AARO also describes the excavations were "about 20-30 yards apart; originally of a square form and measuring from 10-15 yards a side; evidently artificial and of a very ancient date. At the north end of the beach on the mainland near the lake shore" (AARO 1897:91).

Peter Jones, son of Augustus Jones the surveyor and Tuhbenahneequay (daughter of Mississauga Chief Wahbanosay), recounts that the last battle fought between the Haudenosaunee and the Anishinaabek nation was fought:

> "at the outlet of Burlington Bay, which was at the south end of the beach, where the Government House formerly stood. Near to this place a mound of human bones is seen to this day; and also another at the north end, close to the residence of the late Captain Brant." (Jones 1861:113)

The St. Luke's Church site (AhGw-25) researchers commented that "Indian skeletons found in basement of church while being excavated (reference M. Thorpe)". The site record form states that Arthur Roberts from the Historical Planning and Research branch of the Ministry of Culture and Recreation reported the site in 1976 and that the condition of the site and collection are both destroyed. No other information is provided.

Further comments concerning archaeological sites within the grounds of the Brant House Estate appear in a 1915 article by Frank Wood that appeared in a Wentworth Historical Society publication (Wood 1915:5–16). Wood was an active collector of artifacts from archaeological sites in the Hamilton and Burlington areas and noted that:

> "The Brant House corner of the bay is another good stamping ground for the relic hunter, but it is getting pretty well cleaned up now. We have got a good many specimens there. Many years ago the Beach was covered with oak trees and wild vines. It was a great resort of Indians, who dug pits at intervals along nearly its whole length. A few traces of these still remain. Whether these pits were fortifications or for habitations is hard to say. Probably they were used for both purposes. The ground around them is burned black with camp fires which have been continually burning there" (Wood 1915:9).

Wood went on enumerate the types of material he had collected from the grounds of the estate, including ceramics, chert projectile points, a copper point, bone tools, "articles of French origin", and items he refers to as "firestones", which on the basis of his description, may be mortars or metates (Wood 1915:9). He also recounted meeting "an old gentleman who showed me a place where many skeletons had been unearthed; these, however, turned out to be the remains of negroes. The gentleman was seventy years of age, and a native of the place. He could not recollect any one who knew anything regarding their presence there…" (Wood 1915:10). Wood attributed these remains as slaves from Brant's household, however, any racial identification made at the turn of the twentieth century should be treated as speculation.

The Brant Hotel Complex site (AhGw-99) was registered in 1993. The site is presently occupied by the Joseph Brant Memorial Hospital, constructed in 1961. It is probable that significant archaeological site destruction occurred with the construction of the modern hospital, however, some deposits are likely to survive on the grounds, as evidenced by the discovery of the multicomponent precontact and Euro-Canadian archaeological site in the parking lot of the modern hospital.

Previous Reports Within 50 m of the Study Area

The majority of previously registered sites within one kilometre of the Study Area were first documented by Roberts in the late 1970s (see Table 1), at a time of substantial development of the areas surrounding the historical downtown core of Burlington. A series of surveys undertaken by Arthur Roberts of the Burlington-Oakville area in the 1970s were part of his larger study of the north shore of Lake Ontario (Roberts 1985). The study involved both interviews with landowners and field surveys. The field surveys in the Burlington-Oakville region focused on four specific areas, two of which were located between the Lake Iroquois shoreline and Lake Ontario; these two areas were chosen due to their status as the only locations in both of the rapidly developing towns with remaining actively-cultivated agricultural lands.

The main objectives of these surveys were "to locate as many sites as possible and to expand the site inventory of the lake-edge zone between the Lake Iroquois shoreline and Lake Ontario" (Roberts 1985:54). Roberts reported that, of 157 pre-contact Indigenous sites located within the Burlington-Oakville area, the majority were well drained and within 63 metres of the nearest water source. The exact limits of the studies conducted by Roberts in the Burlington area are unclear.

ASI (2017) conducted a Stage 1 and 2 archaeological assessment of the Proposed Hydro One Path from Graham's Lane to Ontario Street in the City of Burlington adjacent to the current Study Area. The study area consisted of a 1.3-kilometre-long, four-metre-wide, narrow corridor. The stage 2 survey was conducted in 2017 by test pit survey at five metre intervals. The lands situated within 10 metres of the existing hydro towers were excluded from the Stage 2 field survey, as per the agreement between ASI and Hydro One and will require additional Stage 2 test pit survey prior to development. While part of the study corridor was determined to be disturbed, the assessment resulted in the identification of a pre-contact Indigenous site, Site AhGw-538. The site is greater than 50m from the current Study Area. ASI (2018) conducted Stage 3 Archaeological Assessment in order to more fully identify the character, extent, and significance of the archaeological deposit.

Brant Hotel Complex (AhGw-99)

- Archaeological Research Associates (ARA 1993) conducted an archaeological assessment for proposed areas to be impacted by the expansion of the Joseph Brant Memorial Hospital and relocation of the Joseph Brant Museum. The proposed impact areas were subject to a Stage 2 test pit survey at five metre intervals, with some intensification at a two metre interval, resulting in the identification of archaeological resources in three disturbed contexts. The finds consisted of 77 artifacts dating from the late-eighteenth to the late-nineteenth centuries, and were designated AhGw-99. Demolition debris was noted with a concrete foundation in the area thought to contain the footprint of the Brant House/Hotel (circa 1875-1918) and later the Brant Hospital (1918-1930s). Although the site was deemed to be disturbed, archaeological monitoring of the removal of soils from the impact areas was recommended to identify any features beneath the fill deposits.

- ARA (1994) conducted archaeological monitoring of the Brant Hotel Complex site (AhGw-99), which identified a foundation and a range of 19th century artifacts, including mid-19th century material in addition to late- 19th and early-20th century diagnostic material. All of the artifacts were collected from secondary contexts and no intact archaeological deposits such as middens were identified. It was recommended that no further archaeological work be carried out due to the recent date of the hotel structure.

At the time of writing, these reports and their associated mapping were not available for review. The following information is taken from TMHC's (2012a, 2012b) Stage 1&2 and Stage 3 reports on the Brant Memorial Hospital lands (see below) which summarized ARA's assessments.

Joseph Brant Memorial Hospital Complex and AhGw-270

- TMHC (2009a) conducted a Stage 1 and Stage 2 archaeological assessment of lands associated with former Burlington Patrol Yard at 1205 Lakeshore Road. The Stage 1 indicated that the property had potential for the recovery of archaeological resources and Stage 2 test pit survey was carried out for all of the undisturbed areas within the parcel. One archaeological site (AhGw-270) was identified, a potential Princess Point occupation (ca. 500- 1000 A.D.) with historic era material. The site was recommended for Stage 3 assessment.

- TMHC (2009b) conducted a Stage 3 archaeological assessment of AhGw-270. This work was carried out in cooperation with the Six Nations and the Mississaugas of the New Credit First Nations. The historical review indicated that the property once contained the 19th century house and estate of Joseph Brant and subsequent hotel buildings. The report noted that if construction was to take place in any of the parking areas near the hospital, archaeological monitoring of construction were recommended. The Stage 3 documented undisturbed soils within the wooded area and disturbed soil horizons on the periphery, adjacent to parking lots and paved surfaces. Several potential subsurface features were identified and a significant sample of indigenous artifacts, including Princess Point ceramics, was recovered. The Stage 3 work determined that AhGw-270 was a primarily undisturbed and significant archaeological site and was recommended for Stage 4 mitigation. The site has subsequently protected and removed from all construction plans. The Stage 3 testing was conducted as a field school for Six Nations and New Credit archaeological monitors.

- TMHC (2012a) conducted a Stage 1 and 2 archaeological assessment of the Joseph Brant Memorial Hospital and adjacent lands on two parcels at 1230 North Shore Boulevard, within the current Study Area. The background research determined that the parcels exhibit potential for the recovery of archaeological resources due to the proximity of Brant's Pond and Lake Ontario, historic transportation, and historic settlement (Brant's Estate, Brant Hotel), as well as previously registered archaeological sites. The North Parcel was confirmed to have been entirely disturbed on the surface, from the construction of a paved parking lot and underground servicing, however the southwestern-most portion of the parking area falls in immediate proximity to AhGw-270. Pristine soils had been previously documented and may have been situated along the edge of Brant's Pond in the past. Lands within 50 metres of the site were recommended for archaeological monitoring or mechanical topsoil stripping to identify any intact soils. All parts of the south parcel were considered clear of further archaeological concern.

- TMHC (2012b) conducted a Stage 3 archaeological assessment of the Joseph Brant Memorial Hospital complex. The limits of the AhGw-270 were established by test units and trenching and through association with other notable landscape and disturbance features. The limits of the site were established and the report recommends that no part of the site extends into the parking lot or adjacent and serviced grassed areas and therefore the investigated areas in the parking lot and service trench are considered clear of further archaeological concern. The report recommended that the site will continue to be protected and preserved *in situ*. If construction will take place within the immediate vicinity of the site, protective fencing should be established prior to the work commencing and under the supervision of a licensed archaeologist.

Skyway site (AhGw-278)

- Archeoworks (2009a) conducted a Stage 1 archaeological assessment of the Burlington Skyway Wastewater Treatment Plant (WWTP), located at 1125 Lakeshore Road, in the City of Burlington. The extent of disturbance and precise location of the natural shoreline was unknown. Background research noted that some lands were built up and filled in to support transportation between Hamilton and Burlington. Stage 2 survey was recommended to establish the extent of any disturbance and to identify any archaeological resources.

- Archeoworks (2009b) conducted Stage 2 assessment for all proposed expansion areas of the Skyway WWTP in areas of archaeological potential, which were subject to test pit survey at five metre intervals, identifying three positive test pits with Pre-Contact Indigenous and Euro-

Canadian artifacts. The site (later designated AhGw-248) was recommended for Stage 3 investigations.

- Archeoworks (2010) conducted a Stage 3 site-specific assessment of the Skyway site (AhGw-248) and recommended that, due to development constraints and the nature of the deposits, the site should be mitigated by salvage excavation. Amec (2011) also conducted a second Stage 3 site-specific assessment of the site along a narrow strip of land approximately 260 square metres in size, at the southern perimeter fence of the Skyway WWTP property, south of the Skyway site which had not been included in Archeoworks' Stage 3. Amec's report concluded that this section was clear of further archaeological concern.

- Amec (2013), with representatives from Six Nations of the Grand and the Haudenosaunee Development Institute, conducted a Stage 4 Mitigation of the Skyway site (AhGw-278) in 2011. In total, 110,749 artifacts were recovered, 116 subsurface features identified, and 2487 post moulds were recorded. The site was determined to date from the Transitional Woodland to the Late Woodland periods (ca. AD 500-1650) with evidence of occupation from the Late Archaic, ca. 2500-1000 BC; the Early Woodland Adena peoples, ca. 650-400 BC; and proto-historic to historic period Indigenous groups since AD 1650 through the eighteenth century. Isolated and re-deposited Euro-Canadian settler artifacts were also present, dating from the late 1870s until the early 1900s related to the construction of the railways that formerly ran along the beach. Most recently, the site exhibits infilling and cottage construction since the twentieth century. The report concluded that the Skyway site has no further CHVI and is considered clear of further archaeological concern.

2.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. These data are presented below in Section 3.1.

2.1 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Study Area meets the following criteria indicative of archaeological potential:

- Proximity to previously registered archaeological sites (see Table 2);
- Proximity to Euro-Canadian settlements (Village of Burlington, Wellington Square, farmsteads);
- Proximity to historic transportation routes (Hamilton & North Western Railway; Lakeshore Road and Martha, Pearl, Eliza, Brant, John, Locust, Maple, Caroline, Ontario, Maria, James, and Pine Streets); and,
- Proximity to water sources (Lake Ontario, Rambo Creek, Hager Creek)

According to the S & G, Section 1.4 Standard 1e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The review of Heritage Registers found that 91 Listed or Designated properties are within the Study Area (Figure 12). Further information on these properties is provided in ASI's forthcoming Cultural Heritage Resource Assessment of the Downtown Burlington Mobility Hub Study Area.

The *Archaeological Master Plan for the Regional Municipality of Halton* (ASI 1998; ASI 2008a) illustrates that parts of the Study Area within the Burlington historic settlement area are considered to have archaeological potential.

The head of Lake Ontario has had a long and complex settlement history. Accordingly the general potential for the presence of archaeological resources within the area is extremely high. Moreover, the beach bar was an extremely significant feature determining the character and extent of the occupation of the area from its earliest settlement. Nevertheless it must be recognized that the potential for the survival of pre-modern archaeological remains dating to before the modern era is low, due to the continued redevelopment of the site. The shifting water levels of Lake Ontario are likely to have destroyed or submerged evidence of occupations prior to circa 3000 B.C. Moreover, the intensity of nineteenth and twentieth century land use in the Study Area will have likely dispersed any deposits associated with such sites. Likewise, any deposits within the Study Area that may have been associated with use of the beach bar between 3000 B.C. and the early nineteenth centuries, particularly the more ephemeral remains left by any Indigenous occupations, have been destroyed.

Submerged deposits may include accumulations of damaged and discarded goods handled on the shore, or accidentally lost, as ships' cargoes were loaded or unloaded on the beach, prior to the construction of the canal, or were lost as a result of accidents at the canal mouth. Remnants of cribbing associated with the various piers and canal works may also be expected. Within the Study Area along the beach bar, however, the survival of such remains is dependent upon the degree to which the channel area was dredged in order to maintain or expand the shipping capacity of the canal, and the degree to which the various reconstructions and expansions of the facility resulted in the disturbance or destruction of earlier structures. For the most part it is expected that modern redevelopment of the canal, particularly that which occurred after World War I, when the capacity of the facility was expanded through a series of dredging and reconstruction projects will have destroyed most traces of the earlier features.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be captured by the basic proximity to the water model, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of concession roads and railroads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 m of the early settlement roads and 50m from historic railroads are also considered to have potential for the presence of Euro-Canadian archaeological sites.

An archaeological potential model takes into consideration the Study Area's proximity to previously registered archaeological sites, designated heritage structures, and up to 100 metres from historic transportation routes. Where data was available building footprints with basements, massive infrastructure like highways and railways, as well as analysis of Google Earth orthoimagery showing twenty-first century urban development (eg. condominium construction and other topsoil stripping construction activities), were removed from areas of potential. Deeply buried archaeological sites may still be identified below disturbed areas like parking lots within urban contexts, where deep excavation has not taken place. In consideration of these factors, parts of the Study Area is determined to have potential for the identification Indigenous and Euro-Canadian archaeological resources.

A Stage 1 property inspection was not conducted. The archaeological potential model is presented here for planning purposes only and does not replace a property inspection or Stage 2 assessment. Any future developments within the Study Area, beyond those portions that have been previously assessed and

cleared of any further archaeological concern (Figure 12: areas highlighted in yellow), must be preceded by Stage 2 Property Survey, once project design concepts are known (Figure 12: areas highlighted in pink). Areas modelled not to have archaeological potential must be subject to Stage 2 documentation and/or test pit survey to confirm disturbance, in accordance with S & G Standard 2.1.8 (Figure 12: areas hatched in green).

According to the S & G Section 2.1.1, pedestrian survey is required in actively or recently cultivated fields. According to the S & G Section 2.1.2, test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow linear corridors up to 10 metres wide. Areas identified during the Stage 2 survey as sloped in excess of 20 degrees, as permanently low and wet areas, or as having been subjected to deep soil disturbance events, must be appropriately documented, in accordance with S & G Section 2.1 and Section 1.3.2.

2.2 Conclusions

The Stage 1 background study determined that 61 previously registered archaeological sites are located within one kilometre of the Study Area. The Burlington Mounds site (AhGw-3) and the St. Luke's Church site (AhGw-25) are within the Study Area and are considered to retain further Cultural Heritage Value or Interest (see *Supplementary Documentation*). The background research determined that parts of the Study Area exhibits potential and will require a detailed Stage 1 including property inspection prior to any future development.

3.0 RECOMMENDATIONS

In light of these results, the following recommendations are made:

1. Any future developments within the Study Area, beyond those portions that have already been assessed and cleared of any further archaeological concern, must be preceded by Stage 2 Archaeological Assessment. Such assessment(s) must be conducted in accordance with the Ministry of Tourism, Culture and Sport's 2011 Standards and Guidelines for Consultant Archaeologists. All active or formerly worked agricultural lands must be assessed through pedestrian survey. Wood lots and other non-arable lands must be assessed by means of test pit survey. Areas deemed to be disturbed or of no potential due to factors of slope or drainage during the Stage 2 assessment process must be appropriately documented (Figure 12).

   This work is required prior to any land disturbing activities in order to identify any archaeological remains that may be present.

2. The Burlington Mounds site (AhGw-3) and the St. Luke's Church site (AhGw-25) are located within the Study Area (see *Supplementary Documentation)*. Both archaeological sites are likely related to the same archaeological feature complex reported to contain human remains. Given the sensitivity of these sites it is recommended that any proposed development within 50 metres of their locations should be subject to a Stage 2 archaeological assessment by test pit survey at a minimum of 5 metre intervals, where possible.
   - Because the exact limits of these are not known, any proposed development within the vicinity of these sites should also be reviewed by a licensed archaeologist to help determine an appropriate impact-specific assessment plan, and any investigation must be completed in accordance with the 2011 Standards and Guidelines for Consultant Archaeologists.

   - Further, the investigations should be undertaken in consultation with Nancy Watkins, Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures.

   - In the event that burials are found during the assessment/investigation, further planning and mitigation must be consistent with the requirements of the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002.

3. AhGw-270 is located within the Study Area (see *Supplementary Documentation)*. This sensitive and significant archaeological site must continue to be protected and preserved *in situ* as per previous recommendations. As per recommendations made in TMHC 2012b, if construction will take place within the immediate vicinity of the site, protective fencing around the known extent of the site should be established prior to the work commencing and under the supervision of a licensed archaeologist.

4. The Brant Hotel Complex site (AhGw-99) is located within the Study Area (see *Supplementary Documentation)*. This site was previously subject to an archaeological assessment that determined that the site does not retain further cultural heritage value or interest and as such, can be considered clear of further archaeological concern;

5. The Skyway site (AhGw-278) is located within 50 m of the Study Area and has been subject to Stage 4 mitigation by means of comprehensive salvage excavation (see *Supplementary*

Documentation). The site is not considered to retain further CHVI, and may be considered free of any further archaeological concern;

6. It should be noted that the archaeological assessment of any proposed development (e.g., a draft plan of subdivision) must be carried out on all lands within that particular subject property, not simply those lands identified as exhibiting high potential in this study.

7. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MTCS should be immediately notified.

4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological field work and report recommendations ensure the conservation, preservation and protection 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 field work 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 Archaeology 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 sec. 48 (1) of the *Ontario Heritage Act*.

- 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.

- 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, nor may artifacts be removed from them, except by a person holding an archaeological license.

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6.0 MAPS

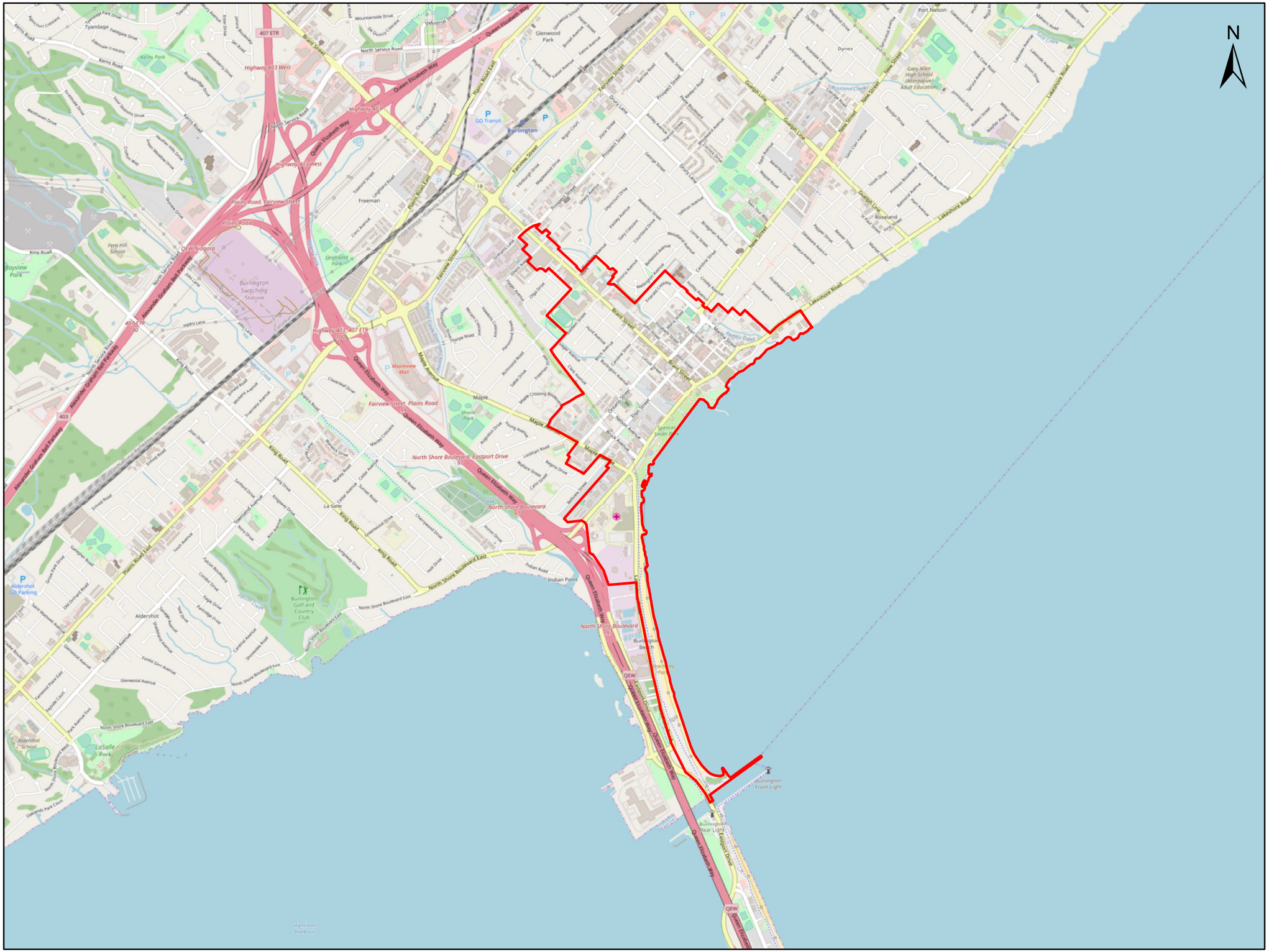

Figure 1: Mobility Hub Planning Consulting Services: Downtown - Location of the Study Area

Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
416-966-1069 | F416-966-9723 | asiheritage.ca

ASI PROJECT NO.: 16EA-341
DATE: 8/21/2018
DRAWN BY: BW
FILE: 16EA342_Fig2_1806

Figure 2: Mobility Hub Planning Consulting Services: Burlington Study Area (Approximate Location) Overlaid on the 1806 Plan of Nelson Township

X:\2016 Projects\EA\16EA-339-345 Burlington Mobility\View\16EA342_hist_Lndscp.mxd

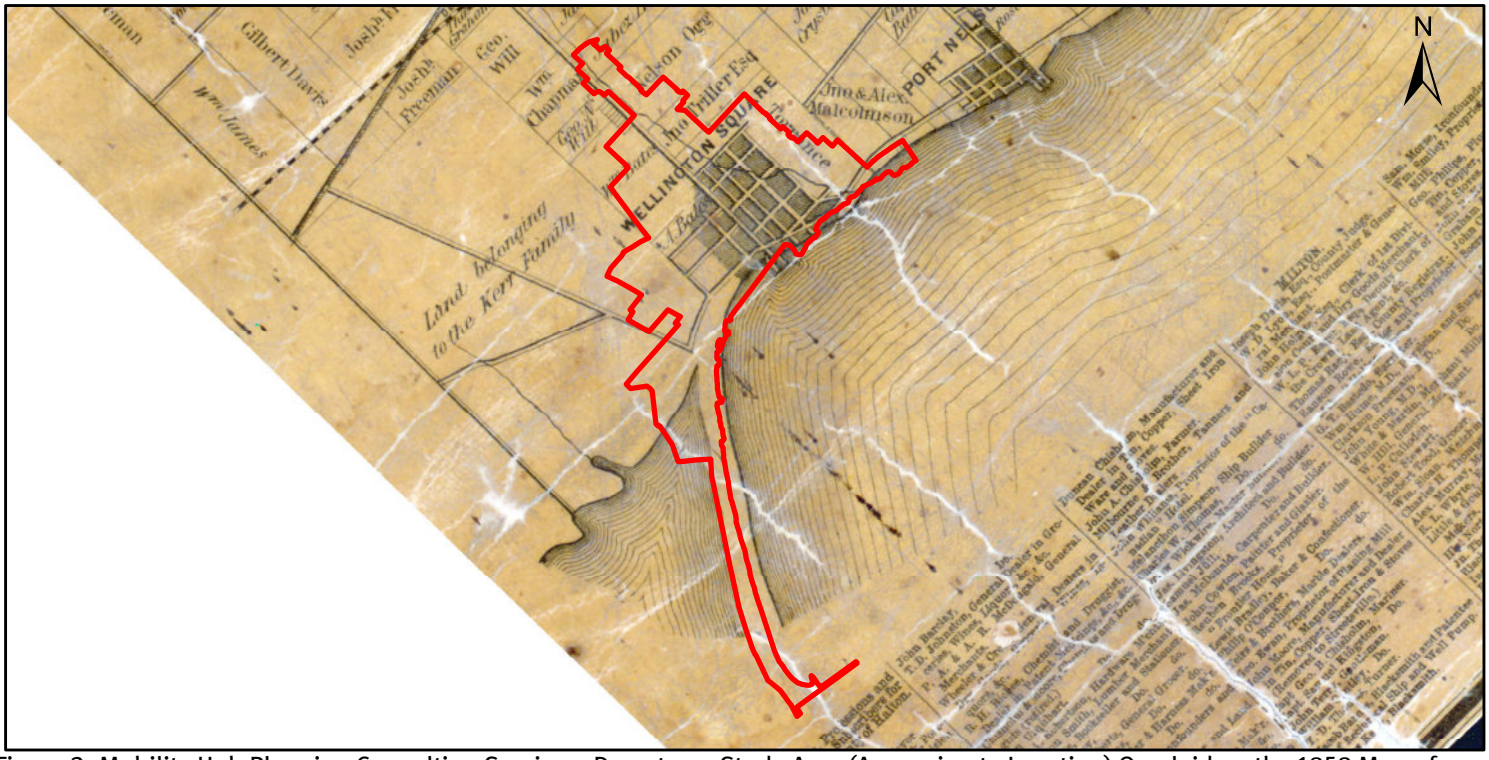

Figure 3: Mobility Hub Planning Consulting Services: Downtown Study Area (Approximate Location) Overlaid on the 1858 Map of the County of Halton

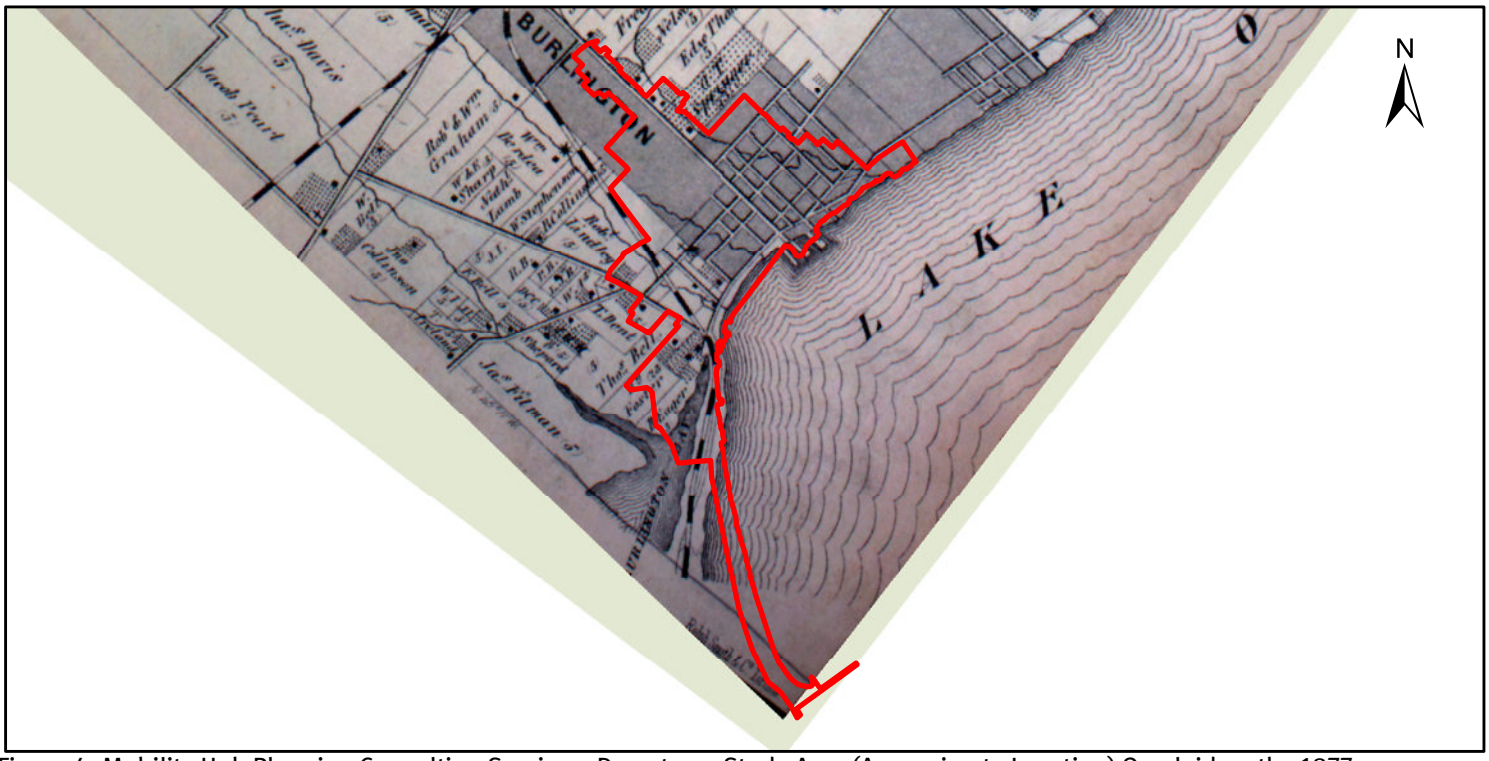

Figure 4: Mobility Hub Planning Consulting Services: Downtown Study Area (Approximate Location) Overlaid on the 1877 Illustrated Historical Atlas of the Township of Nelson

Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
416-966-1069 | F416-966-9723 | asiheritage.ca

Study Area

Base:
Tremaine 1858
Historical Atlas 1877

0 1.25
Kilometres

ASI PROJECT NO.: 16EA-342
DATE: 8/21/2018

DRAWN BY: JF
FILE: 16EA342_Fig3_4_hist

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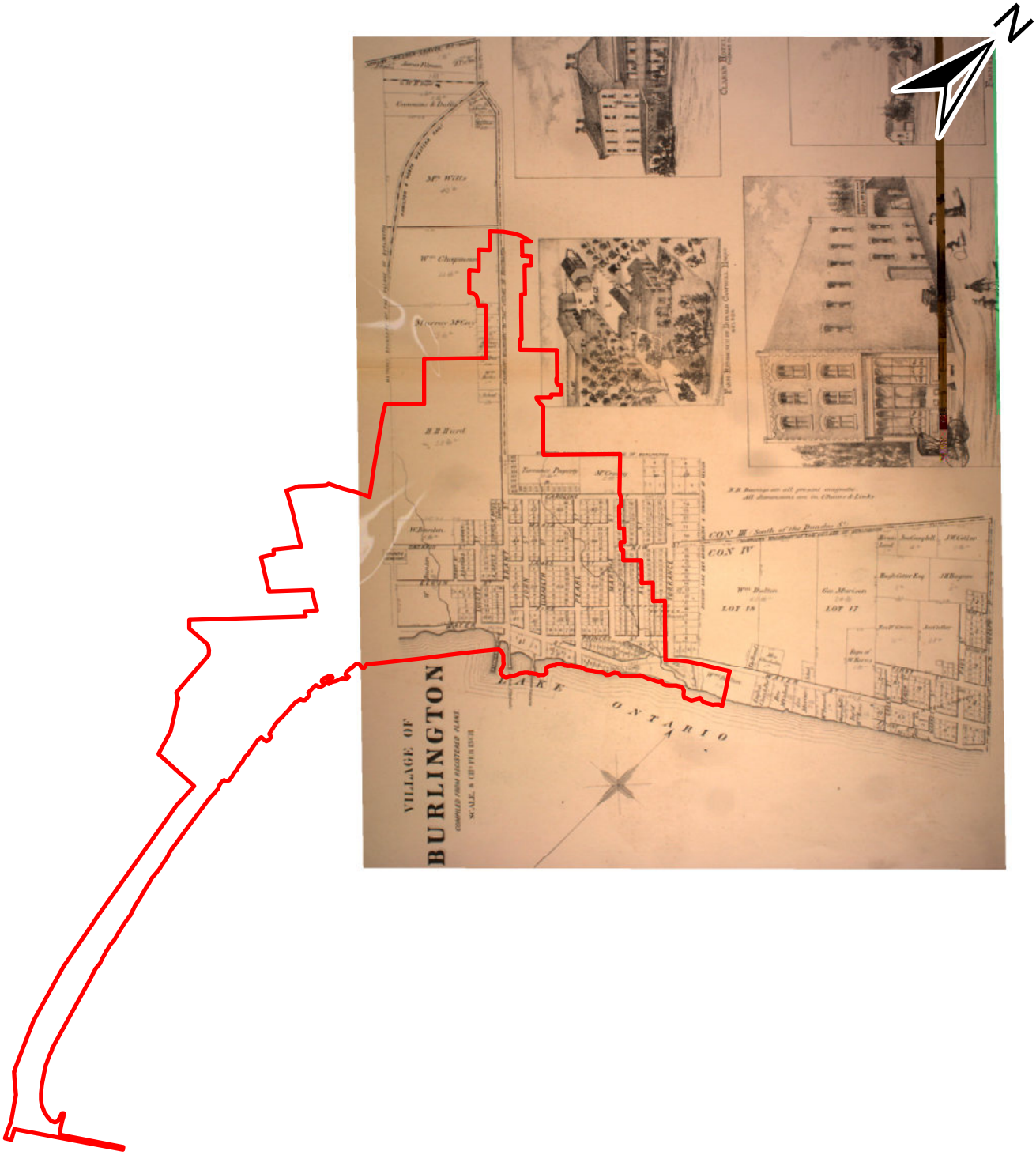

Study Area

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1877 Illustrated Historical Atlas of the
County of Halton, Village of Burlington page

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Kilometres

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FILE: 16EA342_Fig5_1877

Figure 5: Mobility Hub Planning Consulting Services: Downtown Study Area (Approximate Location) Overlaid on the 1877 Illustrated Historical Atlas of the Coutny of Halton, Village of Burlington page

Figure 6: Mobility Hub Planning Consulting Services: Downtown Study Area (Approximate Location) Overlaid on the 1909 National Topographic Series Hamilton Sheet

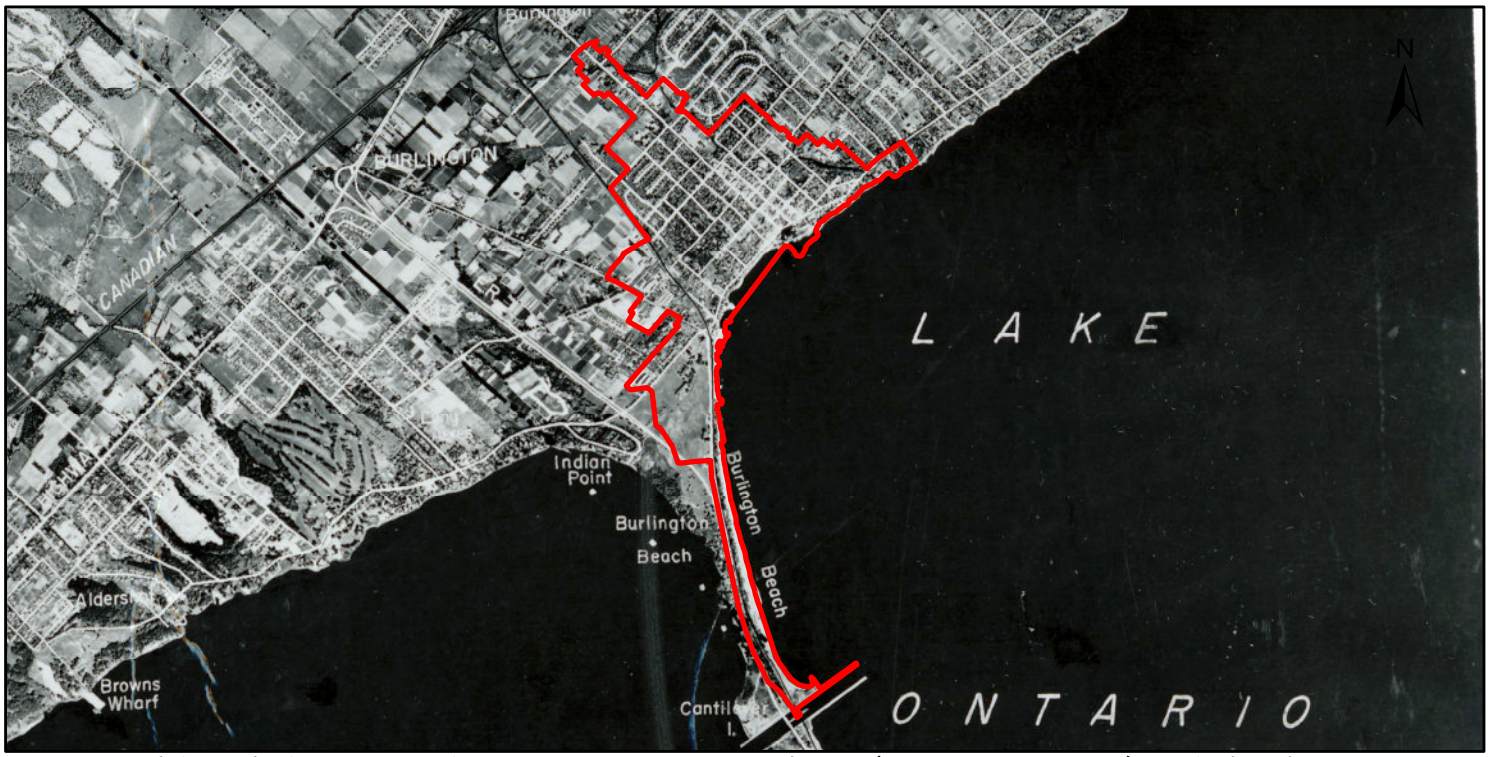

Figure 7: Mobility Hub Planning Consulting Services: Downtown Study Area (Approximate Location) Overlaid on the 1954 Aerial Photograph of Burlington

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Study Area

Base:
Tremaine 1858
Historical Atlas 1877

0 1.25
Kilometres

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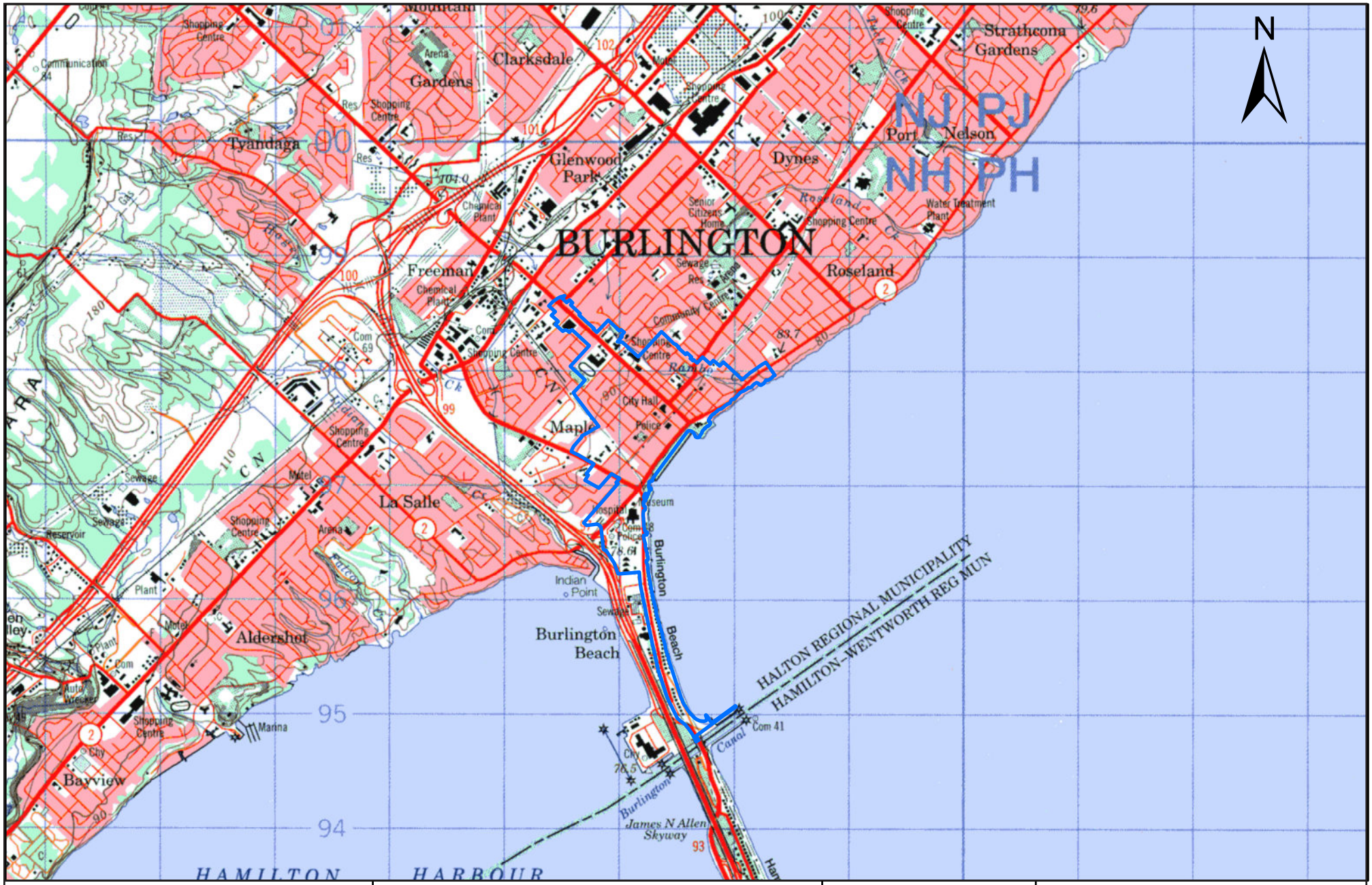

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FILE: 16EA342_Fig8_NTS199

Figure 8: Mobility Hub Planning Consulting Services: Burlington Study Area (Approximate Location) Overlaid on the 1999 National Topographic Series Hamilton-Burlington Sheet

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Figure 9: Burlington Mobility Hubs: Downtown Study Area (Approximate Location) Overlaid on 2016 Google Earth Orthoimagery

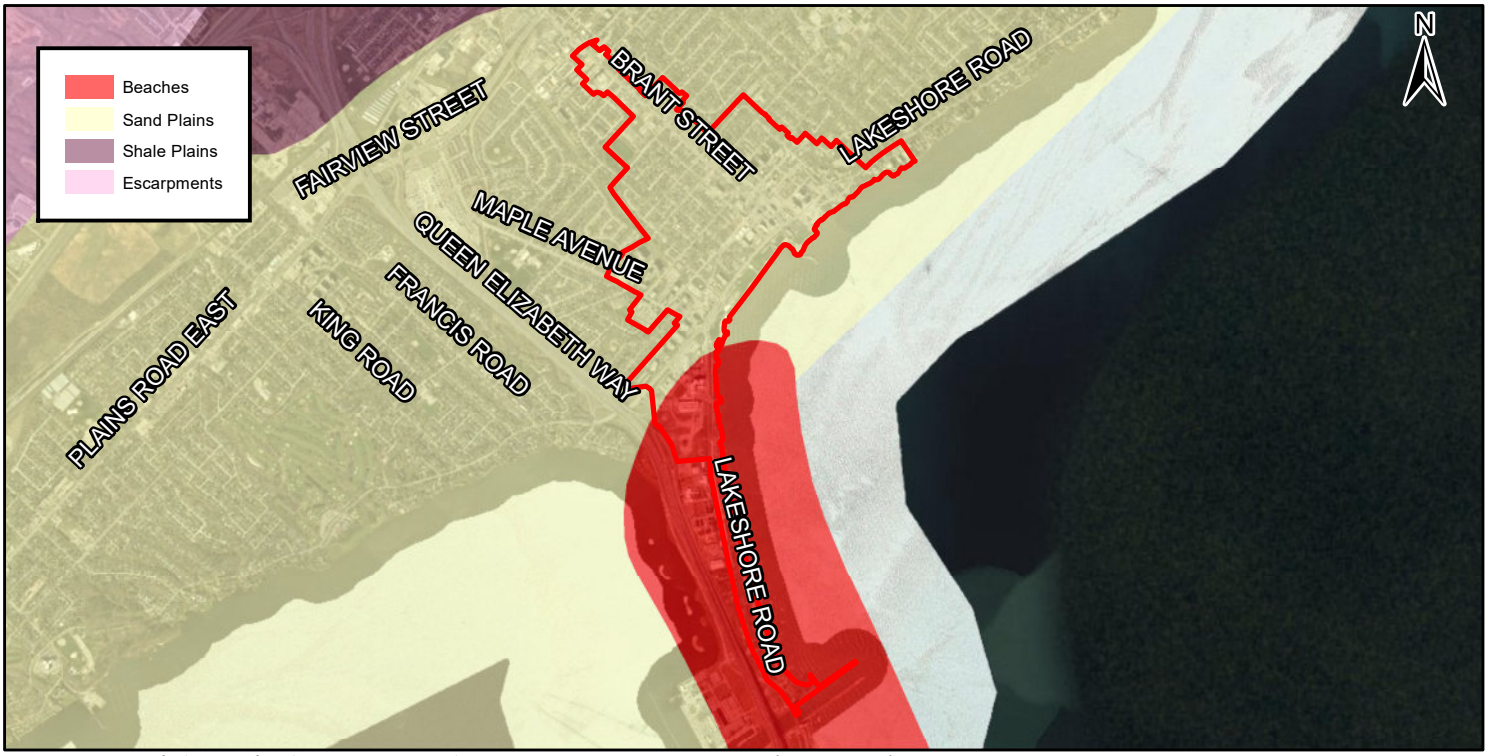

Figure 10: Mobility Hub Planning Consulting Services: Downtown - Physiographic Regions

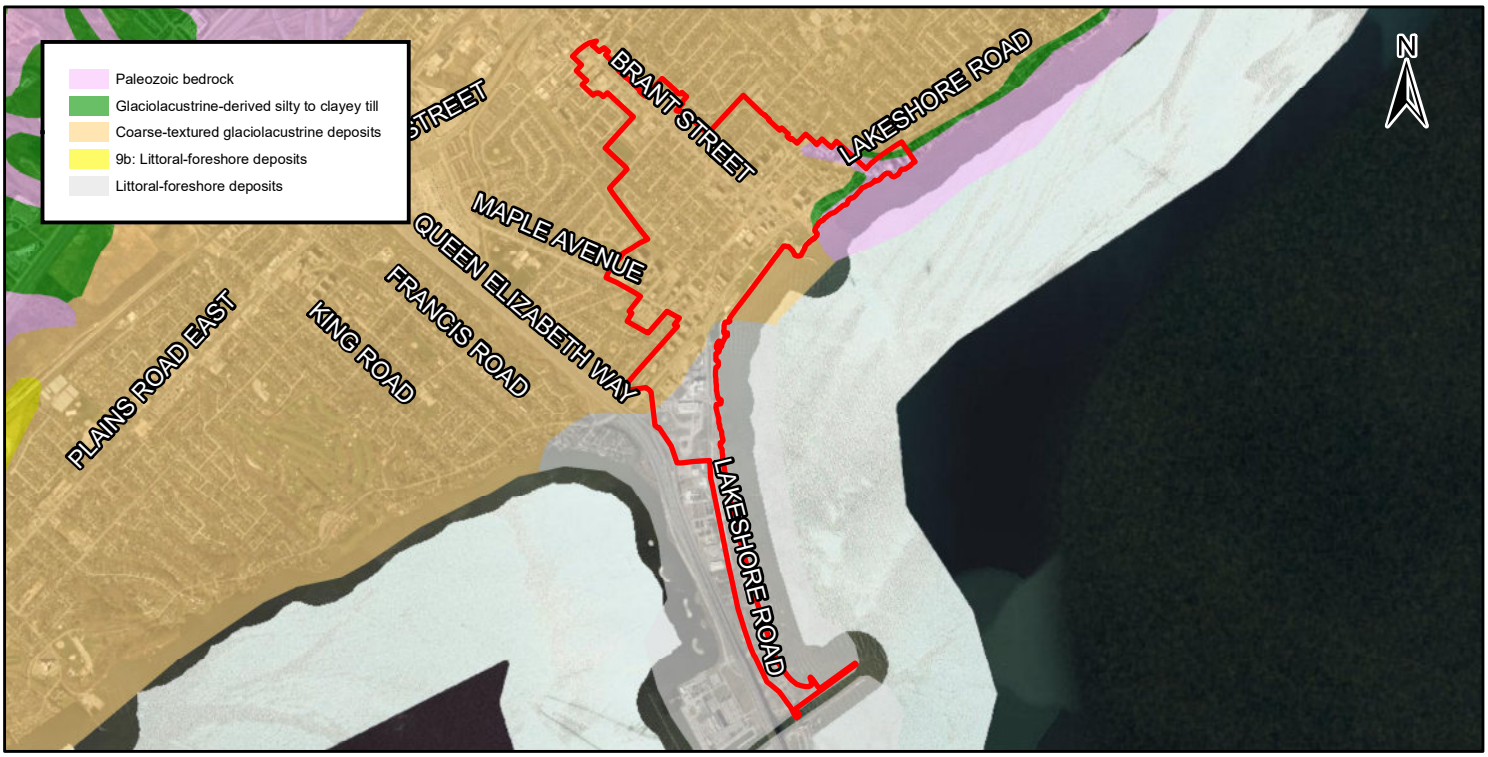

Figure 11: Mobility Hub Planning Consulting Services: Downtown - Surficial Geology

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Study Area

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Historical Atlas 1877

0 1.25
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Figure 12: Mobility Hub Planning Consulting Services: Downtown Study Area – Archaeological Potential Model