

**Stage 1 Archaeological Assessment
Background Study and Property Inspection**

**Hamilton RT B-Line Maintenance and Storage Facility and
Associated Spur Line Corridor**

Class Environmental Assessment Study

**Former Township of Barton, Wentworth County
City of Hamilton, Ontario**

ORIGINAL

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EXECUTIVE SUMMARY

Archaeological Services Inc (ASI) was contracted by Hatch Mott MacDonald to conduct a Stage 1 Archaeological assessment as part of the Hamilton RT B-Line Maintenance and Storage Facility and Spur Lines Class Environmental Assessment (EA). The project involves the construction of a B-Line Maintenance and Storage Facility (MSF) and associated Spur Line Corridors. The MSF is generally bounded by Wentworth Street North and Munroe Street on the west, Brant Street on the north, Birch Avenue on the east, and the rail line on the south. The associated Spur Lines run along Birch Avenue, Barton Street East, Sanford Avenue, and Cannon Street East.

The Stage 1 background study determined that no archaeological site have been registered within 1 km of the study area. A review of the geography of the study area suggested that the study area has potential for the identification of Aboriginal and Euro-Canadian archaeological resources.

The property inspection determined that the entire Hamilton RT B-Line MSF study area has been disturbed by previous construction activity including industrial, commercial, and residential development.

In light of these results, ASI makes the following recommendations:

1. Due to extensive and deep land alterations that have severely damaged the integrity of any potential archaeological resources, the lands within the RT B-Line Maintenance and Storage Facility study area do not retain archaeological potential. These lands do not require further archaeological assessment;
2. Should the proposed work extend beyond the current study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands.



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ENVIRONMENTAL ASSESSMENT DIVISION**

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1.0 PROJECT CONTEXT

Archaeological Services Inc (ASI) was contracted by Hatch Mott MacDonald to conduct a Stage 1 Archaeological assessment as part of the Hamilton RT B-Line Maintenance and Storage Facility and Spur Lines Class Environmental Assessment (EA). The project involves the construction of a B-Line Maintenance and Storage Facility (MSF) and associated Spur Line Corridors. The MSF is generally bounded by Wentworth Street North and Munroe Street on the west, Brant Street on the north, Birch Avenue on the east, and the rail line on the south. The associated Spur Lines run along Birch Avenue, Barton Street East, Sanford Avenue, and Cannon Street East (Figure 1).

This assessment was conducted under the project management of Heidi Schopf and senior project management of Lisa Merritt, both of ASI; Ms. Merritt was also the licensee for the project (PIF P094-160-2012).

The objectives of this report are:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the study area;
- To evaluate in detail the archaeological potential of the study area which can be used, if necessary, to support recommendations for Stage 2 Archaeological Assessment for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 Archaeological Assessment, if necessary.

This report describes the Stage 1 assessment that was conducted for this project and is organized as follows: Section 1.0 describes the project context and summarizes the background study that was conducted to provide the archaeological and historical context for the project study area; Section 2.0 describes the field methods used during the assessment and summarizes the results of the property inspection; Section 3.0 provides an analysis of the assessment results and evaluates the archaeological potential of the study area; Section 4.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (1990) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted under the Class EA for Provincial Transportation Facilities process.

All activities carried out during this assessment were completed in accordance with the terms of the *Ontario Heritage Act* (2005) and the *Standards and Guidelines for Consultant Archaeologists* (S&G).



Permission to carry out all activities necessary for the completion of the assessment was granted by Hatch Mott MacDonald on May 24, 2012.

1.2 Historical Context

This section provides a brief summary of historic research for the study area. A review of available primary and secondary source material was undertaken to produce a contextual overview, including a general description of settlement and historic land use. Historically, the study area is located in Concession 1, Lots 9 and 10 and Concession 2, Lots 9 and 10 in the former Township of Barton, Wentworth County.

1.2.1 *Aboriginal Land Use*

The Aboriginal land use of the Hamilton area dates to the Paleo-Indian and Early Archaic periods, which range from 12,000-7,000 before present (BP). The archaeological remains of these cultures are usually small, ephemeral scatters of lithic material, which reflect the sparse regional population and brief occupation of sites in this region (City of Hamilton 2004). The general understanding of this settlement period is that small Paleo-Indian family groups initially ranged widely across southern Ontario. Group sizes increased and group movement lessened into the Archaic period when long distance trade relationships were first established.

Population sizes continued to increase during the Middle-Late Archaic (7000-3000 BP) and Woodland (3000-500 BP) periods. By the Woodland period, settlement was typified by larger villages interspersed by seasonal cabins and hunting sites. Large sites of 1 ha or more became more frequent, which illustrates a trend towards sedentary settlements with increasingly complex social structures (City of Hamilton 2004). Horticulture was established during the Woodland period, which gave rise to substantial villages that often covered several hectares and featured numerous longhouses that measured up to 100 m in length.

The first record of a European visit to southern Ontario was made in 1615 by Samuel de Champlain, who reported that a group of Iroquoian-speaking people situated between the New York Iroquois and the Huron were at peace and remained “la nation neutre”. In 1626, the Recollet missionary Joseph de la Roche Daillon recorded his visit to the villages of the Attiwandaron, whose name in the Huron language meant “those who speak a slightly different tongue” (the Neutral apparently referred to the Huron by the same term). Like the Huron, Petun and New York Iroquois, the Neutral people were settled village horticulturalists. The Neutral territory included discrete settlement clusters in the lower Grand River, Fairchild-Big Creek, Upper Twenty Mile Creek, Spencer-Bronte Creek drainages, Milton, Grimsby, Eastern Niagara Escarpment and Onondaga Escarpment areas. Since the 1970s, much archaeological research has focussed on refining regional chronologies, and describing settlement-subsistence patterns, in addition to excavating individual sites.

Between 1647 and 1651, the villages of the Neutral were destroyed by the New York Iroquois, who subsequently settled along strategic trade routes on the north shore of Lake Ontario for a brief period during the late 17th-century. One French explorer who is known to have entered the Burlington Bay area during this period was Rene-Robert Cavalier de La Salle, who left Montreal



with a flotilla of nine canoes and eventually reached the head of Lake Ontario in September of 1669. After landing, de La Salle's group travelled to the Seneca village of Tinaouataoua, the exact location of which is open to speculation (ASI 2004:13-14), and his explorations in the area may have utilized the Humber Trail (MPP:1986 42)

During the late 17th and early 18th centuries, the former Neutral territory came to be occupied by the Mississauga, an Algonquian-speaking southeastern Ojibwa people whose subsistence economy was based on garden farming, as well as hunting, fishing and gathering wild plants. The Mississauga and other Ojibwa groups began expanding southward from their homelands in the upper Great Lakes in the late 17th century, coming into occasional conflict with the New York Iroquois who had established themselves in southern Ontario (although alliances between the two groups were occasionally established as well). The colonial government recognized the Mississauga as the "owners" of the north shore of Lake Ontario and entered into negotiations for additional tracts of land as the need arose to facilitate European settlement (ASI 2004:14).

The Aboriginal presence in the Hamilton area continued during the early Euro-Canadian settlement of the region. Economies changed to include large-scale fur trapping and trading industries (City of Hamilton 2004). During the contact period, Aboriginal population size dropped dramatically due to illness contracted through Europeans. An added factor was that Aboriginal groups formed strategic alliances with different European powers, which resulted in tension and ultimately displacement of some Aboriginal groups.

By the late eighteenth and early nineteenth centuries, the Aboriginal populations of southern Ontario were displaced and localized to Indian Reservations. In the Hamilton area title to a portion of the lands acquired through the 1784 purchase was granted to the Six Nations in restitution for aboriginal lands that British had surrendered to the American government under the terms of the Treaty of Paris in 1783. These lands consisted of a tract six miles deep on either side of the Grand River, from its mouth to its source. Joseph Brant, the Mohawk hereditary chief who led the migration to the Grand River valley in the winter of 1784-spring 1785, claimed the title was an estate in fee simple, giving the Iroquois political sovereignty, including the right to sell the land at their discretion (Johnston 1964:xliv). Thus, after the Mohawk, Cayuga and other groups had organized themselves into villages along the Grand River, from Lake Erie to the present site of Brantford, Brant proceeded to lease or sell to non-aboriginal people close to half the total area set forth in the Haldimand Grant.

The sale of these lands was initially contested by the Crown, leading to the Simcoe Patent of 1793, which stipulated that all land transactions had to be approved by the Crown. Brant and the chiefs rejected this statement and continued to lease or sell land to Whites, and the Indian administration was ill-equipped to prevent these actions. An 1834 assessment of this state of affairs led the Crown to conclude that it was too late to contest Brant's actions and too costly to remove the White settlers and so their leases were legally confirmed.

Euro-Canadian settlement continued to expand in the area through the 1830s and 1840, and by 1847, the Six Nation lands were consolidated as a reserve of approximately 45,000 acres together with some other small scattered holdings retained from the original tract.



1.2.2 Township Survey and Settlement

Wentworth County was once part of the Gore District that covered an area of over a half a million acres in western Ontario. When the district was broken up into counties in 1850, Wentworth and Halton were united as a single municipality. This continued until 1854 when they were separated. Prior to the formation of the Regional Municipality of Hamilton-Wentworth in 1974, Wentworth County was composed of the seven townships: Ancaster, Barton, Beverly, Binbrook, Flamborough East and Flamborough West, Glanford and Saltfleet. The City of Hamilton was the county seat. Although the study corridor falls within the present-day limits of the City of Hamilton, historically it was associated with the Townships of Barton and Glanford.

The earliest settlers in Wentworth County were United Empire Loyalists who, in the early 1790s, built saw and grist mills on area creeks. These water powered industries attracted more settlers and more industries – and settlements grew around them. By the 1870s the Wentworth County landscape was dominated by a regimen of 100 to 200 acre farm lots separated by road allowances, as is evident in the 1875 *Illustrated Historical Atlas of the County of Wentworth*.

Barton Township

The land within Barton Township was acquired by the British from the Mississaugas in 1784. The first township survey was undertaken in 1791 by Augustus Jones and the first settlers occupied their land holdings the same year (Smith 1846:8; Burkholder 1956; Armstrong 1985:141; Rayburn 1997:24). Barton Township was bounded by Burlington Bay on the north, Saltfleet Township on the east, Ancaster on the west, and Glanford to the south. Part of the Niagara Escarpment passes through the township and has, since its early days, been known as the “Mountain” (Mika and Mika 1977).

The original designation for this tract of land was “Township Number 8.” The name that was finally given to the township was derived from Barton upon Humber in Lincolnshire, England. It was said to have been a place of “great strength” and commerce before the Norman Conquest. The English place name was originally spelled “Barntown.” Wentworth County was named in honour of Sir John Wentworth, who served as the Lieutenant Governor of Nova Scotia between 1792 and 1808. He was also the brother-in-law of Sir Francis Gore, who was the Lieutenant Governor of Upper Canada at the time when the new County was established in 1816 (Gardiner 1899:261, 266; Rayburn 1997:24, 367).

One of the first pioneers in Barton Township was Robert Land who emigrated from the United States in the 1770s and settled below the Niagara Escarpment. Early settlers who settled on the plain on top of the Mountain include Cornelius and Samuel Ryckman, Lewis and Peter Horningm William Terryberry, Jacob and William Ryman and the Markle family (Mika and Mika 1977). Barton was also initially settled by disbanded soldiers, mainly Butler’s Rangers, and other Loyalists following the end of the American Revolutionary War.

One writer described the Head of the Lake and Burlington Bay in a geographical account of Upper Canada published in the early nineteenth century, but made no particular mention of Barton Township. Settlement was slow up until the time of the War of 1812, perhaps due to the early importance of the nearby town of Dundas. By 1815, it is said that Barton Township contained just 102 families. By 1823, however, the township contained three sawmills and a



gristmill. By 1841, the township population had increased to 1,434 and it contained five saw mills and one grist mill. In 1846, the township was described as “well settled” and under cultivation (Boulton 1805:48-49; Smith 1846:8; Mika 1977:143).

The settlement of Barton Township was slow at first and was mainly concentrated on the area below the Mountain. Land at the foot of the Mountain was not favourable for farming but the area prospered due to its proximity to Burlington Bay. Barton Township became a part of the City of Hamilton in 1960.

City of Hamilton

The City of Hamilton was surveyed and established by 1820 through the combined efforts of George Hamilton, James Durand and Nathaniel Hughson. The first court house and jail, a log-and-frame building, was constructed in 1817, which was replaced with a stone building in 1827/28. The settlement became a port in 1827, at which point Hamilton became the commercial centre of the District of Gore, in addition to serving as its administrative centre (Gentilcore 1987: 101-3). Hamilton was incorporated as a City in 1846.

Hamilton Harbour

Hamilton Harbour has always been a place of both recreation and commerce. After the canal was cut through the Beach Strip in the 1820s, Hamilton became an important port bringing passengers and raw materials for industry and exporting agricultural and industrial products (Freeman 2001:164). Until the 1920s the bay was used extensively for recreation with swimming spots dotting the full length of the shoreline. The presence of numerous inlets, such as the Sherman Inlet, provided space for recreation as well as habitats for plant and animal life.

The face Hamilton Harbour changed dramatically in the 1920s when swimming areas were closed due to extensive pollution caused by the industry located along and in close proximity to the waterfront. During this period docking facilities were built to facilitate commercial and industrial shipping and large-scale landfill projects in Hamilton Harbour were approved (Freeman 2001:165). The biggest of these projects were located in the east end of Hamilton Harbour where both steel companies such as Dofasco and Stelco filled portions of the waterfront with slag, a waste product of the steel making process, to create usable land that was used to expand their plants and docking facilities (Freeman 2001:165). The cumulative effect of this filling was that the original shoreline of the Hamilton Harbour shoreline was completely altered during the beginning of the twentieth century.

1.2.3 Historic Map Review

The 1875 *Illustrated Historical Atlas of the County of Wentworth* was reviewed to determine the potential for the presence of historic archaeological resources within the study area during the nineteenth century (Figure 2). 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.



Historically, the study area is located in Lots 9 and 10, Concession 1 and Lots 9 and 10, Concession 2 of the former Township of Barton. Details of the property owners and historic features in the study area are provided in Table 1.

Table 1: Nineteenth century property owners/tenants

Con #	Lot #	Property Owner/Tenant	Historic Feature(s)
1	9	Moore & Davis, G. William, E. Wyth, John Land, D. Ewing	Historic roads
	10	Gillkinson's Survey	Pork Refinery, Carbon Works, Oil, industrial structures, Numerous surveyed lots, historic roads
2	9	Jas. Wyth, E. Slavin, W.J. Anderson	Numerous surveyed lots, historic roads
	10	Mrs. Caine, W. Milne, J. McKay, Jas. Gage, Jas. Tavel, J. Harvey	Numerous surveyed lots, historic roads

The 1875 map demonstrates that the majority of the MSF portion of the study area was formerly occupied by the Sherman Inlet, which was a part of the original shoreline of Hamilton Harbour. The 1875 map also depicts numerous industrial buildings surrounding the Sherman Inlet, including a Pork Refinery and Carbon/Oil Works. Additionally, numerous lots are depicted on the northwest side of the study area, which are labelled as the Gilkinson's Survey. It appears that the survey was divided into small lots for worker's cottages.

1875 map shows the Spur Lines running along historically surveyed roads and through small lots with individual property owners.

The 1922 map of the City of Hamilton was also examined to determine any changes that took place in the study area during the beginning of the twentieth century (Figure 3). The 1922 map demonstrates that the study area was altered extensively during the early 1900s. The Sherman Inlet had been largely filled by this point and the shoreline had changed considerably. The small lots illustrated in Gilkinson's Survey are no longer shown and a different street network is depicted in this area. The street network below the MSF study area was also altered and additional industrial facilities, such as the Canadian Westinghouse Co. are depicted. The 1922 street network closely resembles the current street network of the area.

The Great Western Railway, which borders the MSF study area on the south, is depicted on both maps. The T.H.&B. Railway Spur Line and associated tracks are depicted running through the MSF study area on the 1922 map.

Section 1.3.1 of 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.



1.2.4 Summary of Historical Context

The background research and historic mapping demonstrates that the study area has been altered dramatically since the nineteenth century. Notable changes in the study area include extensive filling, the realignment of road networks, rail construction, and successive industrial, commercial and residential land use. In effect, there are many indicators of archaeological potential as discussed in Section 1.2 of the S&G, but these are largely negated by the continual development and extensive industrial use of the study area, particularly in the MSF site. The Spur Lines may have experienced less disturbance.

Further, the background research demonstrated that the study area was once settled by the Neutral Nation. However, it should be noted that while the Aboriginal occupation of the shore of Lake Ontario is well documented, downtown Hamilton and Hamilton Harbour shoreline has experienced a high degree of change and development, which would have disturbed any Aboriginal archaeological resources that may have been present. The intensity of nineteenth and twentieth-century urban/industrial development in the study area is likely to have destroyed or dispersed the any archaeological deposits left by any previous Aboriginal land use and settlement.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Hamilton RT B-Line Maintenance and Storage Facility 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 in the study area; the site record forms for registered sites housed at the MTCS; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

The Stage 1 property inspection was conducted by Peter Carruthers (P163) ASI, on July 12, 2012. The property inspection demonstrated that the Hamilton RT B-Line MSF study area is currently used as an industrial site. The majority of this area is paved and any open green space is graded and manufactured. The MSF study area also features industrial buildings and a rail line.

The Spur Lines are located within the road right-of-way (ROW) of Birch Avenue, Barton Street East, Sanford Avenue, and Cannon Street. These streets are bordered by a mix of residential, commercial, and industrial development.

1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is an important predictor of archaeological potential. Accordingly, a description of the study area physiography and soils is provided below.



Section 1.3.1 of 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 after the Pleistocene era, 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.

Section 1.3.1 of the *S&G* also lists other geographic characteristics that can indicate archaeological potential including: elevated topography (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. Physical indicators of use may be present, 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.

The study area is located within the Iroquois Plain physiographic region of southern Ontario, which 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 approximately 300 km (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements.

Glacial Lake Iroquois came into existence by about 12,000 before present (BP) as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift and the blockage of subsequent lower outlets by glacial ice produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 BP, water levels started to drop during the next few centuries in response to sill elevations at the changing outlet. By about 11,500 BP, when the St. Lawrence River outlet became established, the initial phase of Lake Ontario began and this low water phase appears to have lasted until at least 10,500 BP. At this time the waters stood as much as 100 m below current levels. At this time isostatic uplift had started to raise the outlet around Kingston so that by 10,000 BP the water level had risen to about 80 m below present. Uplift has continued to tilt Lake Ontario upward to the northeast, creating a gradual and transgressive expansion throughout the basin (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1988, 1990).

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). This narrow strip is



the most densely inhabited area because of its proximity to Lake Ontario and its climatic influences, as well as its favourable soil conditions.

Surficial geology and soils information is not available for the Hamilton RT B-Line MSF study area due to the early urban development of the City of Hamilton and industrialization of the Hamilton Harbour shoreline.

In terms of water sources, a small inlet of Lake Ontario is located approximately 300 m north of the MSF study area. This inlet once encompassed the majority of the study area before it was filled at the beginning of the twentieth century (See Figures 2 and 3). The inlet is labelled as the Sherman Inlet on the 1922 map of the City of Hamilton.

The original shoreline of Hamilton Harbour was once punctuated by numerous inlets, which provided habitat for a wide variety of plant and animal species. At least nine inlets are identified on historic mapping, each of which had names that reflect the city's early settlement and history (e.g. Lotridge Inlet, Stipes Inlet, Gage Inlet, Sherman Inlet) (Terpstra 2005). The Hamilton City Council and Hamilton Harbour Commission (formed in 1912) hoped to concentrate heavy industry in this area, leaving the rest of the bayfront for recreation and residential uses (City of Hamilton 2007). As a result, they promoted the filling of these inlets to create more land for industry. Only remnants of these inlets still remain.

It should be noted that the Sherman Inlet, which formerly covered the majority of the study area, was filled for health reasons since it had already been extensively polluted by industrial and residential pollution by the beginning of the twentieth century (City of Hamilton 2007).

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 blocks *AhGx*.

According to the OASD (email communication, Robert von Bitter, MTCS Data Coordinator, July 17, 2012), no identified archaeological sites are located within 1 km of the study area.

Part of the study area has been subject to previous work by ASI in 2009 (MCL PIF P264-077-2009). ASI conducted a Stage 1 Archaeological Assessment of the Main/King Street corridor from Eastgate Square/Centennial Parkway to University Plaza, and along James Street from Main Street to the Hamilton waterfront. The Main Street, King Street, and James Street right-of-ways (ROW) were cleared of archaeological concern due to previous disturbances. The MTCS concurred with these recommendations in a letter dated February 1, 2012. Accordingly, the portion of the current Hamilton RT B-Line MSF study area that falls within the Kings Street ROW can be considered free of archaeological concern.



1.3.4 Summary of Archaeological Context

The review of archaeological work conducted in the area demonstrated that no archaeological sites have been registered within 1 km of the study area.

As discussed in Section 1.3.3 of this report, archaeological potential is associated with the presence of certain topographic features. The Hamilton RT B-Line MSF study area features the former shoreline of the Sherman Inlet, which was part of the original shoreline of Hamilton Harbour. The Sherman Inlet would have been a distinctive landscape feature and resource area, as well as a watercourse, before it was filled and overtaken by industrial activity. The presence of the Sherman Inlet indicates that the study area had the potential for the recovery of Aboriginal archaeological resources.

It should be recognized that downtown Hamilton and the Hamilton Harbour shoreline has experienced a high degree of change and development, which would have disturbed any Aboriginal archaeological resources that may have been present. As noted in Section 1.2.3, it was not until circa 3,000 B.P. that the Lake Ontario shoreline was more or less established in the location that is depicted in the 1875 mapping. Thus, the shifting water levels of Lake Ontario are likely to have destroyed or submerged evidence of occupations along the shoreline in the Hamilton shoreline area prior to circa 5,000 B.C. Moreover, the intensity of industrial and urban development in the study area during the nineteenth and twentieth centuries is likely to have destroyed or dispersed the comparatively brief archaeological deposits left by the pre-contact occupation of the 5,000 B.C.-A.D. 1800 shoreline zone. These developments have resulted in the thorough and complete alteration of the original Hamilton Harbour shoreline.

2.0 FIELD METHODS

A property inspection was conducted in order to gain first-hand knowledge of the geography, topography, and current conditions of the Hamilton RT B-Line MSF study area as per Section 1.2 of the *S&G*. A property inspection is a visual inspection only and does not include excavation or collection of archaeological resources.

Where applicable, Section 1.2, Standards 1-5 of the *S&G* were met as follows during the course of the property inspection:

- The Hamilton RT B-Line MSF study area was inspected systematically during optimal weather conditions which permitted good visibility of land features;
- Weather conditions were clear and sunny, and 25°C with no precipitation;
- Coverage was sufficient to identify previously identified features of archaeological potential and additional features not visible on mapping; and,
- Additional features were documented as well as any features that will affect assessment strategies.

Field observations are compiled onto a map of the study area in Section 7.0 (Figures 5-7) and associated photography is presented in Section 8.0 (Plates 1-14).



3.0 ANALYSIS AND CONCLUSIONS

The archaeological and historical context was analyzed to help determine the archaeological potential of the study area. A summary of the archaeological potential of the Hamilton RT B-Line MSF study area is presented in Section 3.1 of this report and an evaluation of the property inspection results is presented in Section 3.2.

3.1 Analysis of Archaeological Potential

Section 1.3.1 of the *S&G* lists characteristics that indicate where archaeological resources are most likely to be found, and archaeological potential is confirmed when one or more features of archaeological potential are present. Accordingly, the Hamilton RT B-Line MSF study area meets the following criteria used for determining archaeological potential:

- Water source: primary, secondary, or past water source (e.g. Sherman Inlet)
- Areas of early Euro-Canadian settlement (e.g. urban dwelling)
- Areas of early Euro-Canadian industry (e.g. Pork Refinery)
- Early historical transportation routes (e.g. Barton Street)
- Distinctive land formations that might have been special or spiritual places (e.g. Sherman Inlet)

These criteria characterize the study area as having potential for the identification of Aboriginal and Euro-Canadian archaeological resources, depending on the degree of previous disturbance.

3.2 Analysis of Property Inspection Results

As mentioned in Section 1.0 of this report, the Hamilton RT B-Line MSF project involves the construction of a maintenance and storage facility and associated spur line corridors.

Part of the Hamilton RT B-Line MSF study area is comprised of a right-of-way (ROW). Typically, the ROW can be divided into two areas: the disturbed ROW, and ROW lands beyond the disturbed ROW. The typically disturbed ROW extends outwards from either side of the centerline of the traveled lanes, and it includes the traveled lanes and shoulders and extends to the toe of the fill slope, the top of the cut slope, or the outside edge of the drainage ditch, whichever is furthest from the centerline. Subsurface disturbance within these lands may be considered extreme and pervasive, thereby negating any archaeological potential for such lands.

ROW construction disturbance may be found to extend beyond the typical disturbed ROW area, and this generally includes additional grading, cutting and filling, additional drainage ditching, watercourse alteration or channelization, servicing, removals, intensive landscaping, and heavy construction traffic. Areas beyond the typically disturbed ROW generally require archaeological assessment in order to determine archaeological potential relative to the type or scale of disturbances that may have occurred in these zones.

The property inspection determined that the MSF portion of the study area has been disturbed by previous construction activities. Previous disturbance at this site can be attributed to the industrial



use of the site, which includes extensive filling, grading, building construction, and road construction (Plates 1-9). The successive industrial use of the 330 Wentworth site has likely destroyed any archaeological resources that may have been present. These lands can be considered to have no archaeological potential and do not require further assessment (Figure 5: areas marked in yellow).

The property inspection revealed that Spur Lines associated with the MSF facility consist of the existing ROW of Birch Avenue, Barton Street, Cannon Street and Sanford Avenue and associated grading/ditching. These lands have been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. These ROW disturbances can be attributed to typical road construction activities including paving, utility installation, grading, and ditching. These areas do not retain archaeological potential and do not require further assessment (Plates 10-14: areas marked in yellow).

3.3 Conclusions

The Stage 1 Archaeological Assessment was conducted to assist with the Hamilton RT B-Line Maintenance and Storage Facility Class EA. The assessment determined that no archaeological sites have been registered within 1 km of the study area. A review of the geography and history of the study area suggested that the study area has potential for the identification of Aboriginal and Euro-Canadian archaeological resources. The property inspection determined that the entire Hamilton RT B-Line MSF study area has been disturbed by previous construction activity including industrial, commercial, and residential development.

4.0 RECOMMENDATIONS

In light of the results of the background research and property inspection undertaken for the Stage 1 Archaeological Assessment of the Hamilton RT B-Line MSF Class EA, ASI makes the following recommendations:

1. Due to extensive and deep land alterations that have severely damaged the integrity of any potential archaeological resources, the lands within the RT B-Line Maintenance and Storage Facility study area do not retain archaeological potential. These lands do not require further archaeological assessment (Figures 5-7: areas marked in yellow);
2. Should the proposed work extend beyond the current study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands.

Notwithstanding the results and recommendations presented in this study, Archaeological Services Inc. 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 Ministry of Tourism, Culture and Sport should be immediately notified.



5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI 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*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, 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 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*; and
- 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.



6.0 BIBLIOGRAPHY

Archaeological Services Inc. (ASI)

2004 The Archaeological Study for the Growth Related Integrated Strategy, City of Hamilton. Final Report. Report on file with the Ministry of Culture, Toronto. (Revised 2005).

2009 Stage 1 Archaeological Assessment, Rapid Transit Initiative, City of Hamilton, Ontario. Report on file with the MTCS. MCL PIF P264-077-2009.

Boulton, D'Arcy.

1805 *Sketch of His Majesty's Province of Upper Canada*. London: C. Rickaby (reprinted in Toronto by the Baxter Publishing Company, 1961).

Chapman, L. J. and F. Putnam

1984 *The Physiography of Southern Ontario*. Ontario Geological Survey, Special Volume 2. Ontario Ministry of Natural Resources, Toronto.

City of Hamilton

2004 *Hamilton's Heritage, Volume 4: Inventory of Registered Archaeological Sites*. Planning and Development Department.

2007 *Hamilton Historic Shoreline (1900-2000)*. Planning and Economic Development Department, Long Range Planning Division, Official Plan & Information Planning. Retrieved 13 August 2012 from http://map.hamilton.ca/Static/PDFs/Planning%20and%20Ec%20Dev/HistoricShoreGISDay2007_RP.pdf

Crossby, P.A.

1873 *Lovell's Gazetteer of British North America*. Montreal: John Lovell.

Freeman, Bill

2001 *Hamilton: A People's History*. James Lorimer & Company, Toronto.

Gardiner, Herbert F.

1899 *Nothing But Names: An Inquiry into the Origins of the Names of the Counties and Townships of Ontario*. Toronto: George N. Morang & Co. Ltd.

Glanford Historical Society.

1985 *Glanford. Recollections and Reflections*. Hamilton: printed by W.L. Griffin Printing Ltd.

Johnston, Charles M.

1964 *The Valley of the Six Nations*. The Champlain Society for the Government of Ontario, University of Toronto Press.



Mayer, Pihl, Poulton and Associates, Incorporated (MPP)

- 1986 Report on Phase I of an Archaeological Masterplan for the Town of Vaughan: Background Research and Feasibility Study, Volume 1. Report on file at the Ministry of Culture, Toronto.

Mika, Nick and Helma.

- 1977 *Places in Ontario: Their Name Origins and History*. Belleville: Mika Publishing (volumes 2 and 3 published in 1981 and 1983).

Ontario Ministry of Environment

- 1990 *Environmental Assessment Act*

Ontario Ministry of Tourism, Culture and Sport (MTCS)

- 2005 *Ontario Heritage Act*.
- 2011 *Standards and Guidelines for Consultant Archaeologists*. Cultural Programs Branch, Ontario Ministry of Tourism and Culture, Toronto, Ontario.
- 2012 Sites within a one kilometre radius of the study area provided by the Ontario Archaeological Sites Database (OASD) on 17 July 2012.

Page, H. R.

- 1875 *Illustrated Historical Atlas of the County of Wentworth*.

Rayburn, Alan.

- 1997 *Place Names of Ontario*. Toronto: University of Toronto Press.

Smith, W.H.

- 1846 *Smith's Canadian Gazetteer*. Toronto: H. & W. Rowsell.

Terpstra, John

- 2005 Where water lilies once congregated. *The Hamilton Spectator*. Retrieved 13 August 2012 from http://www.hamiltonharbour.ca/documents/articles/WhereTheWaterLiliesOnceCongregated-TheSpec_31Oct05.pdf



7.0 MAPS

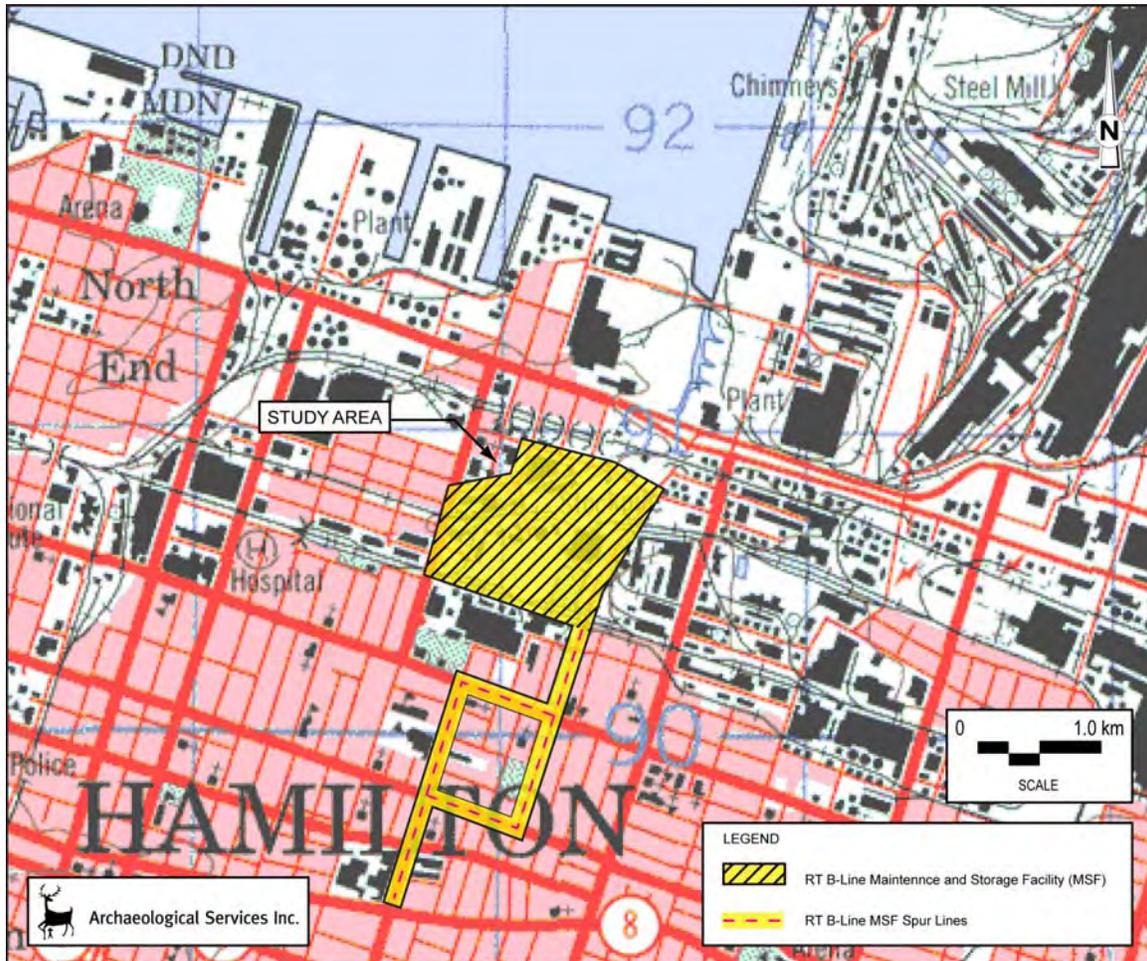


Figure 1: Location of the study area

Base Map: NTS Sheet 30 M/05 (Hamilton/Burlington)

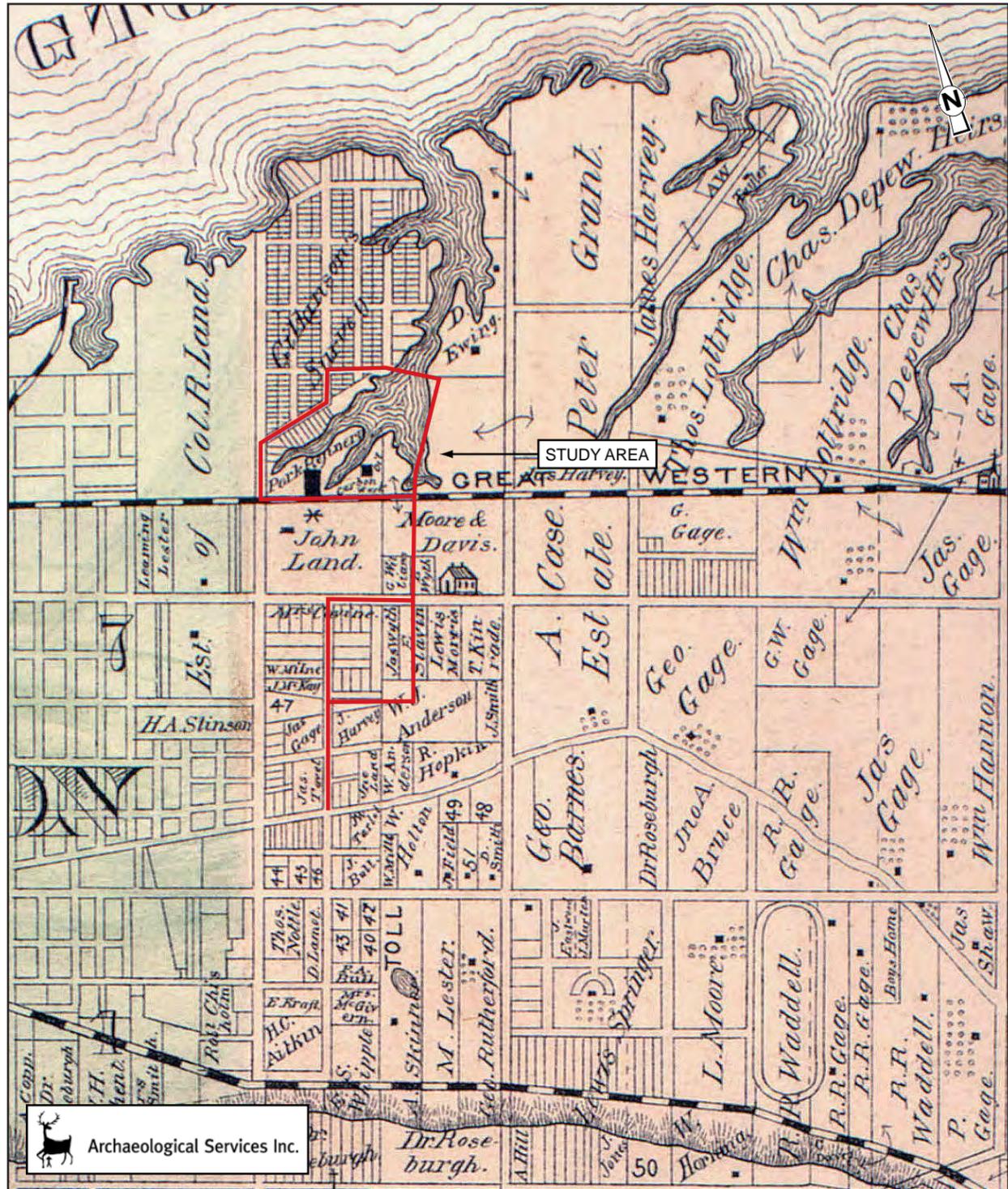


Figure 2: The study area overlaid on the 1875 map of the Township of Barton
 Base Map: Illustrated historical atlas of the County of Wentworth (Page & Smith 1875)

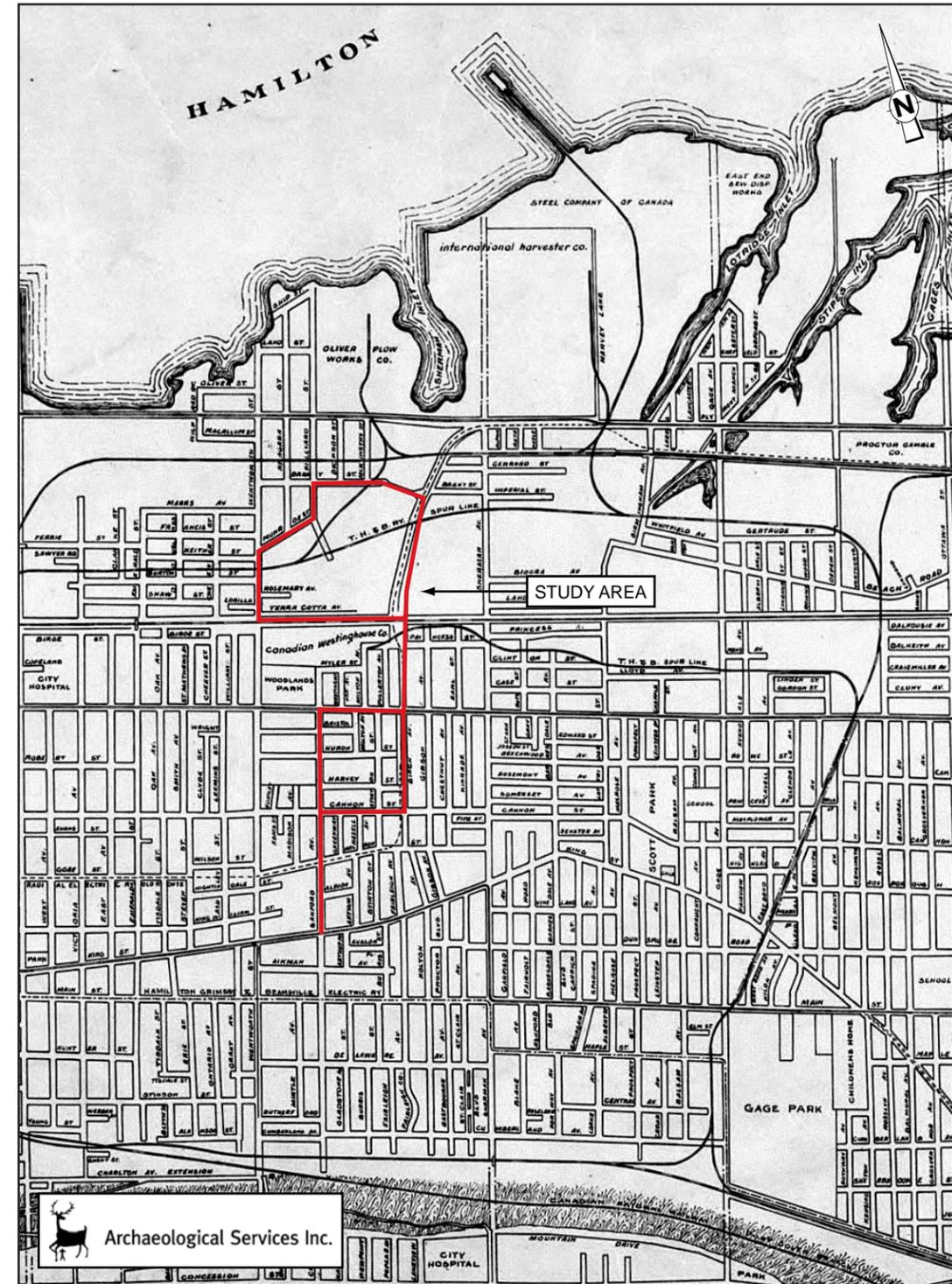


Figure 3: The study area overlaid on the 1922 map of the City of Hamilton
 Base Map: Map of the City of Hamilton (n.a. 1922)



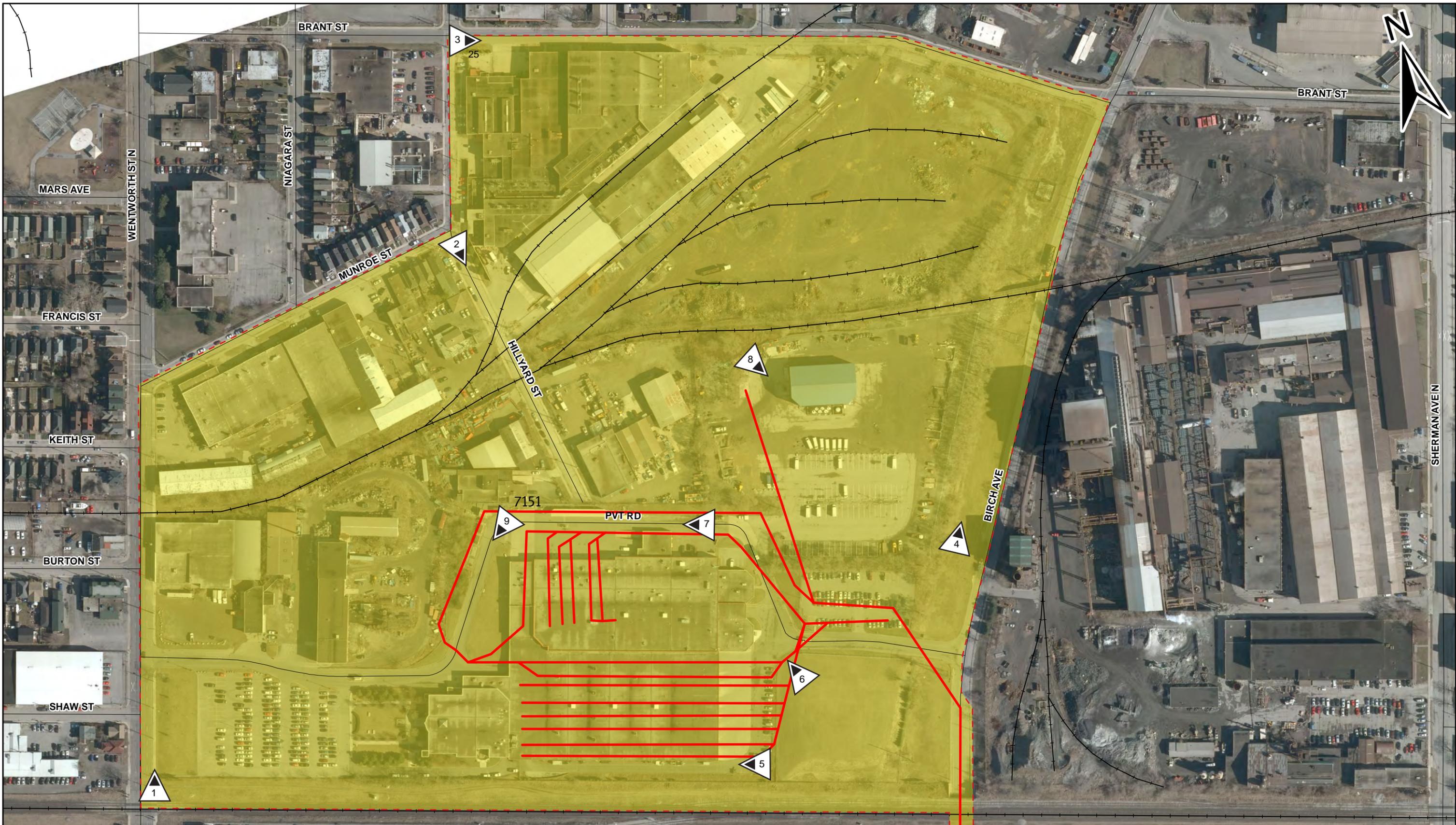

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LEGEND
 Alternative 8 and Wentworth Site
 Hamilton Roads

BASE:
 Hamilton Ortho
 Provided by Hott MacDonald


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 ASI PROJECT NO.: 12EA063_63 DATE: July 11, 2012
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Figure 4: Hamilton RT B-Line Maintenance and Storage Facility - Key Map




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LEGEND

- Study Area
- Alternative 8 and Wentworth Site
- Hamilton Roads
- Disturbed - No Potential
- Photo Location and Direction

BASE:
 Hamilton Ortho
 Provided by Hott MacDonald


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 ASI PROJECT NO.: 12EA063_63
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Figure 5: Hamilton RT B-Line Maintenance and Storage Facility (Sheet 1) - Results of Stage 1 Property Inspection




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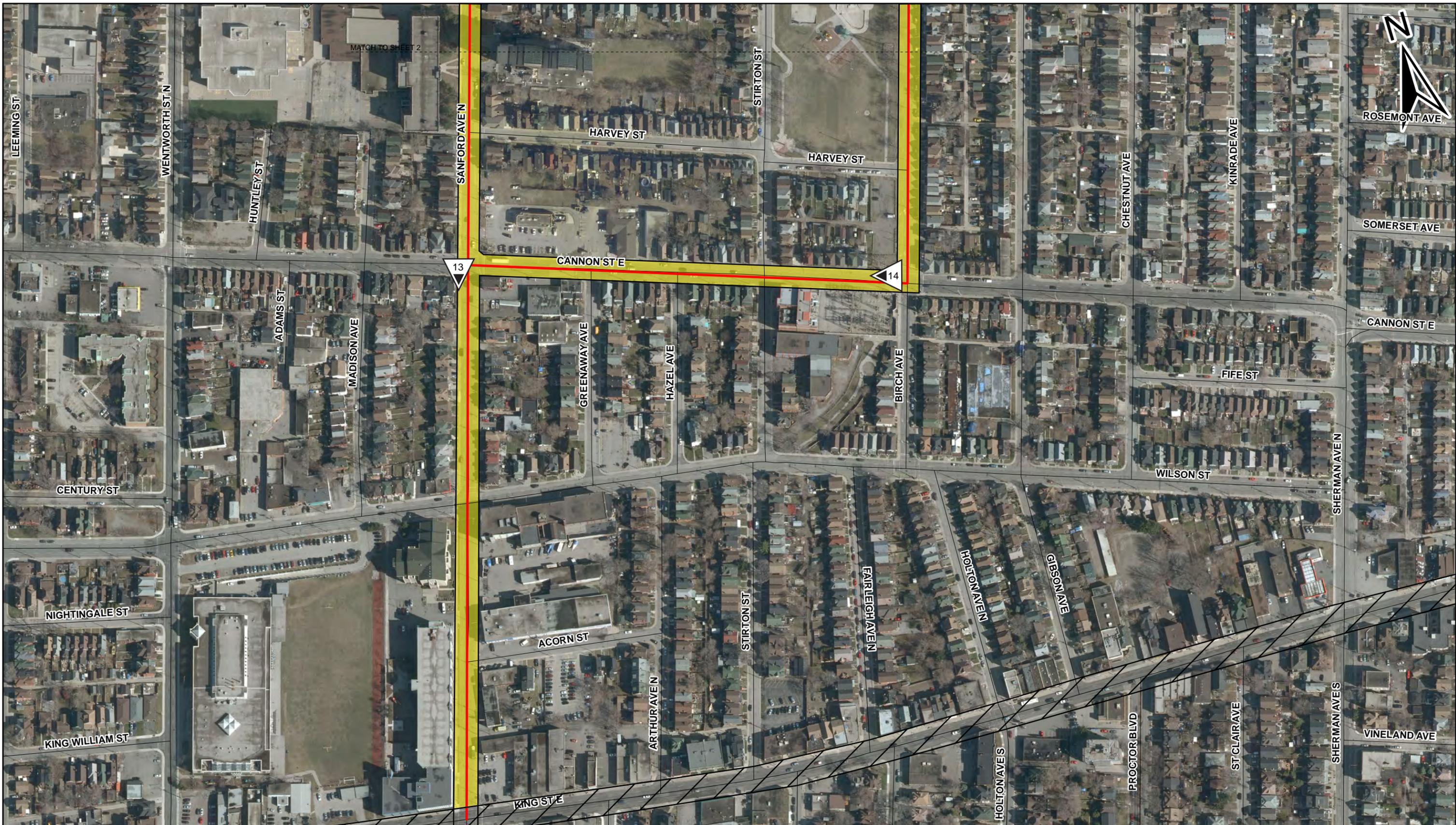
LEGEND

- Study Area
- Disturbed - No Potential
- Hamilton Roads
- Photo Location and Direction

BASE:
 Hamilton Ortho
 Provided by Hott MacDonald


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Figure 6: Hamilton RT B-Line Maintenance and Storage Facility (Sheet 2) - Results of Stage 1 Archaeological Assessment




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LEGEND	
	Study Area
	Disturbed - No Potential
	Hamilton Roads
	Previously Assessed (ASI 2009)
	Photo Location and Direction

BASE:
 Hamilton Ortho
 Provided by Hott MacDonald



ASI PROJECT NO.: 12EA063_63
 DATE: July 11, 2012
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 FILE: 12EA62_63_S2

Figure 7: Hamilton RT B-Line Maintenance and Storage Facility (Sheet 3) - Results of Stage 1 Archaeological Assessment

8.0 IMAGES



Plate 1: North-northeast view up Wentworth Street North. ROW, infrastructure, and extensive landscaping. No potential.



Plate 2: South view up Hillyard development. ROW and industrial development. No potential – all disturbed.



Plate 3: East-southeast view along Brant Street. ROW and industrial development. All disturbed and no potential.



Plate 4: North-northeast view along Birch Avenue. ROW, infrastructure, and grading. No potential – all disturbed.



Plate 5: West-northwest along southern limits of proposed development. All disturbed and no potential.



Plate 6: Northwest view of current facility. Industrial buildings, paving, and extensive landscaping. No potential – all disturbed.





Plate 7: West-northwest view along PVT Road. Industrial buildings, ROW, and grading. No potential – all disturbed.



Plate 8: South-southeast view of current facility. Industrial buildings, paving, grading, and infrastructure. No potential.



Plate 9: West-southwest view along PVT Road. All disturbed and no potential.



Plate 10: South-southwest view along Birch Avenue. All disturbed and no potential.



Plate 11: West-northwest view along Barton Street. Relatively recent commercial and residential development. All disturbed and no potential.



Plate 12: South-southwest view down Sanford Street. No potential – all disturbed.





Plate 13: South-southwest view along Sanford Avenue. All disturbed – recent commercial and residential development. No potential.



Plate 14: West-northwest view of Canon Street. No potential – all disturbed.

