

**STAGE 1 ARCHAEOLOGICAL ASSESSMENT
DENISON AVENUE EXTENSION
PART OF LOT 6, CONCESSION 1 WCR
(FORMER TOWNSHIP OF CHINGUACOUSY, COUNTY OF PEEL)
CITY OF BRAMPTON
REGIONAL MUNICIPALITY OF PEEL**

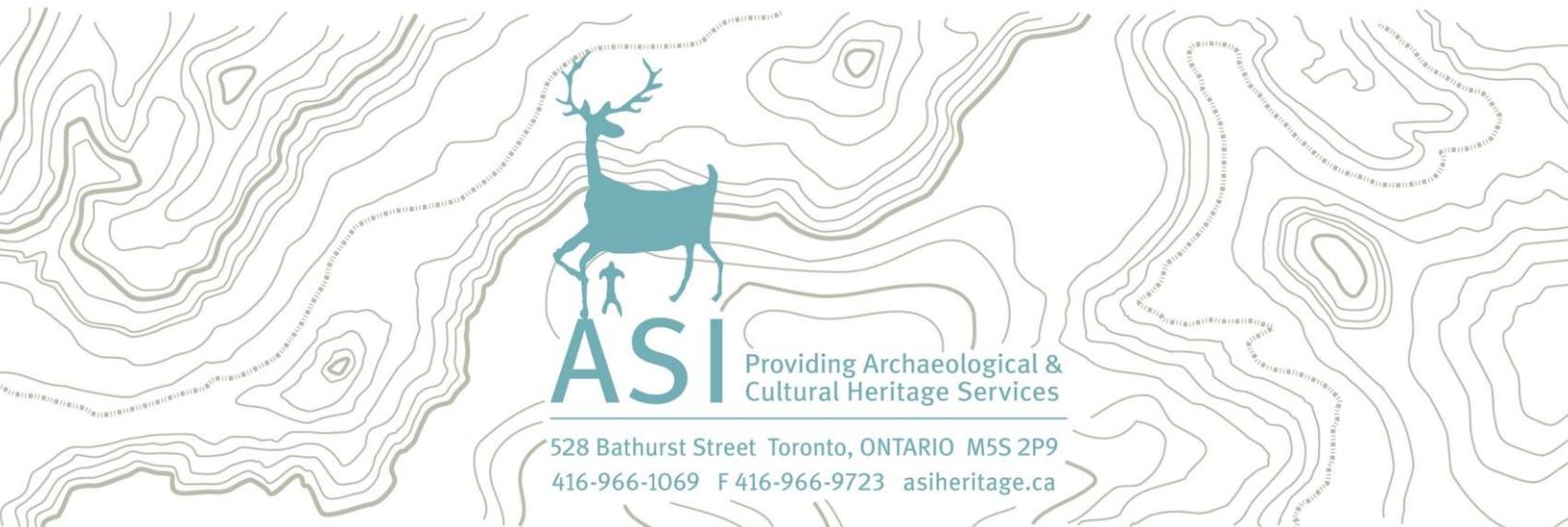
ORIGINAL REPORT

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Ministry of Tourism, Culture and Sport PIF# P094-0293-2019
ASI File: 18EA-179

21 January 2020



**Stage 1 Archaeological Assessment
Denison Avenue Extension
Part of Lot 6, Concession 1 WCR
(Former Township of Chinguacousy, County of Peel)
City of Brampton
Regional Municipality of Peel**

EXECUTIVE SUMMARY

ASI was contracted by Associated Engineering to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Denison Avenue Extension, City of Brampton. This project involves the extension of Denison Avenue, from Park Street to Mill Street, as part of the City of Brampton's Transportation Master Plan. Preferred Alternative Design 1 connects Park Street to Mill Street North in the lot north of the residential properties at 34 Park Street and 45 Mill Street.

The Stage 1 background study determined that one previously registered archaeological site is located within one kilometre of the Study Area. The property inspection determined that parts of the Stage 1 Study Area exhibit archaeological potential. Preferred Alternative Design 1 does not include areas of archaeological potential.

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

1. The Study Area exhibits archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals, if impacted, prior to any proposed construction activities;
2. The remainder of the Study Area, including Preferred Alternative Design 1, does not retain archaeological potential on account of deep and extensive land disturbance. These lands do not require further archaeological assessment; and,
3. 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.



PROJECT PERSONNEL

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by Associated Engineering to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Denison Avenue Extension, City of Brampton (Figure 1). This project involves the extension of Denison Avenue, from Park Street to Mill Street, as part of the City of Brampton's Transportation Master Plan. Preferred Alternative Design 1 connects Park Street to Mill Street North in the lot north of the residential properties at 34 Park Street and 45 Mill Street.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (2019, as amended in 2018) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS 2011).

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).

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by Associated Engineering on April 25, 2019.

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 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; Ellis et al. 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 2,500 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 1,500 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 phytolith evidence for maize in central New York State by 2,300 BP - it is likely that once similar analyses are conducted on Ontario ceramic 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 Haudenosaunee¹ and the Huron-Wendat (and their Algonquian allies such as the Nipissing and Odawa) led to the dispersal of the Huron-Wendat.

Shortly after dispersal of the Wendat, Ojibwa began to expand into southern Ontario and Michigan from 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 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-

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.



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” [Mississauga; 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; Copway 1851:91; Copway 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.

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 throughout Ontario in the early nineteenth century, and entered into negotiations with various Nations for additional tracts of land as the need arose to facilitate European settlement.

In 1805, the Mississaugas were granted one mile (approximately 1.6 km) on either side of the Credit River, Twelve Mile Creek and Sixteen Mile Creek. In 1818, the majority of the Mississauga Tract was acquired by the Crown excluding the lands tracts flanking the Credit River, Twelve Mile Creek and Sixteen Mile Creek. In 1820, the remainder of Mississauga land was surrendered except approximately 81 hectares (ha) along the Credit River (Heritage Mississauga 2012:18). In 1825-26 the Credit Indian Village was established as an agricultural community and Methodist mission near present day Port Credit (Heritage Mississauga 2019; Mississaugas of the New Credit First Nation 2014). By 1840 the village was under significant pressure from Euro-Canadian settlement that plans begun to relocate the settlement. In 1847 the Credit Mississaugas were made a land offer by the Six Nations Council to relocate at the Grand River. In 1847, 266 Mississaugas settled at New Credit, approximately 23 km southwest of Brantford. In 1848 a mission of the Methodist Church was established there by Rev. William Ryerson (Woodland Indian Cultural Education Centre 1985). Although the majority of the former Mississauga Tract had been surrendered from the Mississauga by 1856 (Gould 1981), this does not exclude the likelihood that the



Mississauga continued to utilise the landscape at large during travel (Ambrose 1982) and for resource extraction.

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; Supreme Court of Canada 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 19, the Ajetance Purchase, signed in 1818 between the Crown and the Mississaugas (Aboriginal Affairs and Northern Development Canada 2013). This treaty, however, excluded lands within one mile on either side of the Credit River, Twelve Mile Creek, and Sixteen Mile Creeks. In 1820, Treaties 22 and 23 were signed which acquired these remaining lands, except a 200 acre parcel along the Credit River (Heritage Mississauga 2012:18).

1.2.2 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in the Former Chinguacousy Township, County of Peel, in part of Lot 6, Concession 1 West of Centre Road (WCR).

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).

Township of Chinguacousy

The Township of Chinguacousy is said to have been named by Sir Peregrine Maitland after the Mississauga word for the Credit River meaning “young pine.” Other scholars assert that it was named in



honour of the Anishnabek Chief Shinguacose, which was corrupted to the present spelling of 'Chinguacousy,' "under whose leadership Fort Michilimacinac was captured from the Americans in the War of 1812" (Mika and Mika 1977:416; Rayburn 1997:68). The township was formally surveyed in 1818, and the first legal settlers took up their lands later in that same year. The extant Survey Diaries indicate that the original timber stands within the township included oak, ash, maple, beech, elm, basswood, hemlock, and pine. It was recorded that the first landowners in Chinguacousy included settlers from New Brunswick, the United States, and also United Empire Loyalists and their children (Walker and Miles 1877:65; Mika and Mika 1977:417; Armstrong 1985:142).

Due to the small population of the newly acquired tract, Chinguacousy was initially amalgamated with the Gore of Toronto Township for political and administrative purposes. In 1821, the population of the united townships numbered just 412. By 1837, the population of the township had reached an estimated 1,921. The numbers grew from 3,721 in 1842 to 7,469 in 1851. Thereafter the figures declined to 6,897 in 1861, and to 6,129 by 1871 (Walton 1837:71; Walker and Miles 1877:59). Chinguacousy Township was the largest in Peel County and was described as one of the best settled townships in the Home District. It contained excellent, rolling land which was timbered mainly in hardwood with some pine intermixed. The township contained one grist mill and seven saw mills. By 1851, this number had increased to two grist mills and eight sawmills (Smith 1846:32; Smith 1851:279). It was estimated that the only township in the province which rivaled Chinguacousy in wheat production at that time was Whitby (Smith 1851:279).

Chinguacousy was originally included within the limits of the Home District until 1849, when the old Upper Canadian Districts were abolished. It formed part of the United Counties of York, Ontario and Peel until 1851, when Peel was elevated to independent county status under the Provisions 14 & 15. A provisional council for Peel was not established until 1865, and the first official meeting of the Peel County council occurred in January 1867.

In 1974, part of the township was amalgamated with the City of Brampton, and the remainder was annexed to the Town of Caledon (Walker and Miles 1877:59; Mika and Mika 1977:417–418; Armstrong 1985:152; Rayburn 1997:68).

Brampton

The lands on which Brampton is situated was originally granted to Samuel Kenny. Kenny sold the land to John Elliot who cleared the land, laid it out into village lots, and named it Brampton. The population in Brampton began grow by 1822, and in 1845 the settlement gained a large influx of Irish immigrants leading to its incorporation as a village in 1852. At this point, the settlement limits had expanded across Etobicoke Creek. The creek was spanned by three bridges, and the village contained seven churches, five schools, a distillery, a cooperage, and a potashery. In 1858, Brampton was connected with the Grand Trunk Railway. This allowed the founding of two major industries in Brampton: the Haggert Foundry and the Dale Estate Nurseries. Dale Estate Nurseries remained the largest employer in the city until the 1940's. By the 1860s, Brampton had a population of 1627 and became the County Town. In 1867, a courthouse was constructed. In 1873, Brampton was incorporated as a town. Brampton's population remained relative static until the 1940's (Mika and Mika 1977:250–251).

Railways

The Grand Trunk Railway Company of Canada (GTR) was incorporated by the Canadian government in 1852 and was planned to connect Toronto to Montreal. It began in 1853 by purchasing five existing railways: the St. Lawrence and Atlantic Railroad Company, the Quebec and Richmond Railroad



Company, the Toronto and Guelph Railroad Company, the Grand Junction Railroad Company, and the Grand Trunk Railway Company of Canada East. By 1853, the Toronto and Guelph Railroad Company had already begun construction of its line. After its merger with the Grand Trunk Railway Company, the line was redirected from its original route and extended to Sarnia to be a hub for Chicago bound traffic. By 1856 the line had been built from Montreal to Sarnia via Toronto. The company fell into great debt in 1861 and while it was saved from bankruptcy by the Canadian government, in 1919 the company was bankrupt following its expansion west in an attempt to compete with the Canadian Pacific and Canadian Northern Railways (Library and Archives Canada 2005).

The Credit Valley Railway (CVR) was constructed between 1877 and 1879 to improve trade opportunities in Southern Ontario. The project was backed by George Laidlaw and was intended to connect Toronto with Orangeville via Streetsville. Construction began in 1874 and over subsequent years several branches were added to the proposed line. The first section of track from Parkdale (Toronto) to Milton was opened in 1877. In 1873, survey work was completed and track was first laid in 1876. Construction on the railway reached the Forks of the Credit by 1879 with a station at the northern end of the longest curved timber trestle of the time, which spanned 1,146 feet through the river valley at a height of 85 feet (Town of Caledon 2009:7.30). The line was completed in 1881 but nearly bankrupted the company. It was established in direct competition with the Toronto, Grey and Bruce Railway in the hopes of stimulating trade and economic opportunities in the outlying areas. In 1883 the line was taken over by the Canadian Pacific Railway (Town of Caledon 2009; Heritage Mississauga 2009).

1.2.3 Historical Map Review

The 1859 *Map of the County of Peel* and the 1877 *Illustrated Historical Atlas of the County of Peel* Plan of Brampton pages (Tremaine 1859; Walker and Miles 1877) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Figures 2-3).

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

1859			1877		
Con	Lot	Property Owner(s)	Historical Feature(s)	Property Owner(s)	Historical Feature(s)
1	6	Town of	Town lots	Town of	Town lots
WCR	E 1/2	Brampton		Brampton	CVR

The 1859 map demonstrates that the Study Area was located along the western boundary of the Village of Brampton, though was not developed by that time. The GTR is visible to the north, while the developed urban centre of Brampton is visible to the east. Railroad, Nelson, West, Park, Mill and Wellington Streets (now Denison Avenue) were all historically surveyed roads within the village plan of Brampton. The 1877 plan shows that the CVR was constructed through the Study Area along Park Street.

1.2.4 Twentieth-Century Mapping Review

The 1909, 1942, and 1972 National Topographic System Brampton Sheets (Department of Militia and Defence 1909; Department of National Defence 1942; Department of Energy, Mines and Resources 1973), as well as the 1954 aerial photograph of Brampton (Hunting Survey Corporation Limited 1954), were examined to determine the extent and nature of development and land uses within the Study Area during the twentieth century (Figures 4-7). The 1909 map illustrates that the western limit of Brampton's centre was before West Street. Wooden and brick houses are illustrated within the Study Area along Denison Avenue and Mill Street, with the historical alignment shown for Park Street. The CVR is shown to split into multiple tracks along Park Street between the GTR and Queen Streets. The 1942 map shows a diagonal street crossing the CVR tracks along the current alignment of Denison and Park Street was realigned to the east of the railway. The 1954 photograph shows that the Study Area had been fully developed, but that settlement within the City remained focussed around the historic downtown. The 1973 map shows residential development within the Study Area and the structure which has since been demolished along the west side of Mill Street within the Study Area.

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

A review of available Google satellite imagery shows that there was a large industrial building standing prior to 2013 within what is now a vacant lot between 45 Railroad Street and 45 Mill Street North.



A Stage 1 property inspection was conducted on May 8, 2019 that noted that the proposed extension of Denison Avenue begins from Denison Avenue at Park Street and continues east to Mill Street.

Currently, Park Street extends south towards Denison Avenue and then continues south towards Nelson Street West within a primarily residential area. A former industrial building is located to the east of the existing railway and Park Street at 45 Railroad Street and is currently surrounded by hoarding and under construction. A railway corridor runs north-south along the west boundary of the study corridor to the east of Park Street while residential buildings are located along the west side of Park Street. Within and to the south of the Study Area along the east side of Park Street and the west side of Mill Street North are single-detached residential properties. A former industrial building adapted for commercial use is located along the north side of Railway Road, separated from the roadway by another railway line running east-west. The existing industrial building dominates the southwest corner of Railroad Street and Mill Street North, with residential properties extending along the east and west side of Mill Street North to the south. At the northeast corner of Mill Street North and Railway Street is the provincial heritage property at 27 Church Street, the Brampton GO Transit/VIA Rail Station.

The proposed extension of Denison Avenue will result in a new roadway between Park Street south of Denison Avenue to Mill Street North. The proposed roadway will extend through a currently vacant space adjacent to the south of a former industrial building, a designated heritage property, at 45 Railway Street.

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).



The Study Area is within the bevelled till plains of the Peel Plain physiographic region of southern Ontario (Chapman and Putnam 1984). The Peel Plain is a level-to-undulating area of clay soil which covers an area of approximately 77,700 hectares across the central portions of the Regional Municipalities of York, Peel, and Halton. The Peel Plain has a general elevation of between 150 and 230 metres above sea level with a gradual uniform slope towards Lake Ontario. The Peel Plain is sectioned by the Credit, Humber, Don, and Rouge Rivers with deep valleys as well as a number of other streams such as the Bronte, Oakville, and Etobicoke Creeks. These valleys are in places bordered by trains of sandy alluvium. The region is devoid of large undrained depressions, swamps, and bogs, nevertheless the dominant soil possesses imperfect drainage.

The Peel Plain overlies shale and limestone till which in many places is veneered by occasionally varved clay. This clay is heavy in texture and more calcareous than the underlying till and was presumably deposited by meltwater from limestone regions and deposited in a temporary lake impounded by higher ground and the ice lobe of the Lake Ontario basin. The Peel Plain straddles across the contact of the grey and red shales of the Georgian Bay and Queenston Formations, respectively, which consequently gives the clay southwest of the Credit River a more reddish hue and lower lime content than the clay in the eastern part of the plain. Additionally, the region exhibits exceptional isolated tracts of sandy soil specifically in Trafalgar Township, near Unionville, and north of Brampton where in the latter location there is a partly buried esker. The region does not possess any good aquifers and the high level of evaporation from the clay's now deforested surface is a disabling factor in ground-water recharge. Further, deep groundwater accessed by boring is often found to be saline (Chapman and Putnam 1984: 174-175).

Figure 8 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by clay to silt-textured till derived from glaciolacustrine deposits, and modern alluvial deposits (Ontario Geological Survey 2010). Soils in the Study Area are Chinguacousy clay, a grey-brown podzolic with imperfect drainage (Figure 9).

The Study Area is within West Etobicoke Creek subwatershed of the Etobicoke Creek. The Etobicoke Creek watershed, derived from the Algonkian word "*Wah-do-be kaug*" meaning "place where the alders grow" includes the major tributaries Spring Creek, Little Etobicoke Creek, and West Etobicoke Creek, and drains an area of approximately 211 square kilometres within the cities of Brampton, Mississauga, Toronto, and the Town of Caledon. The creeks flow south from its headwaters in Caledon into Lake Ontario through 68% urban, 27% rural and 5% urbanizing land (Toronto and Region Conservation Authority 2018).

The Study Area is also near Fletcher's Creek, within the Credit River watershed. The Credit River Watershed drains an area of approximately 860 square kilometres from its headwaters in Orangeville, Erin, and Mono, passing through part of the Niagara Escarpment and the Oak Ridges Moraine, and draining into Lake Ontario at the town of Port Credit (Credit Valley Conservation 2009). The river was named "*Mis.sin.ni.he*" or "*Mazinigae-zeebi*" by the Mississaugas, and surveyor Augustus Jones believed this signified "the trusting creek" or could also be translated as "to write or give and make credit", while the French name used when the river was first mapped in 1757 was "*Riviere au Credit*". These names refer to the fur trading period, when French, British, and Indigenous traders would meet along this river (Jameson 1838:73-74; Smith 1987:255-257; Rayburn 1997:84; Scott 1997:182; Gibson 2002:177; Robb et al. 2003:6). The Credit River was historically considered to be one of the best potential power sources for milling in all of southern Ontario, which led to the development of early of saw and grist mill industries, and later textile mills, distilleries, bottling plants, and hydro-electric plants spawned



communities throughout the river valley, typically close to the Niagara Escarpment (Town of Caledon 2009:fig. 7.1).

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 AkGw.

According to the OASD, one previously registered archaeological sites is located within one kilometre of the Study Area, which is not within 50 m of the Study Area (Ministry of Tourism, Culture and Sport 2018). A summary of the sites is provided below (Table 2).

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

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AkGw-456	Alderlea House	Euro-Canadian	Midden	ARA 2012

According to the background research, no previous reports detail fieldwork within 50 m of the Study Area.

2.0 FIELD METHODS: PROPERTY INSPECTION

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 archaeological assessment property inspection was conducted under the field direction of Eliza Brandy (R1109) of ASI, on May 8, 2019, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a visual inspection only and did not include excavation or collection of archaeological resources. Fieldwork was only conducted when weather conditions were deemed suitable and seasonally appropriate, per S & G Section 1.2., Standard 2. Previously identified features of archaeological potential were examined; additional features of archaeological potential not visible on mapping were identified and



documented as well as any features that will affect assessment strategies. Field observations are compiled onto the existing conditions of the Study Area in Section 7.0 (Figure 10) and associated photographic plates are presented in Section 8.0 (Plates 1-24).

3.0 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. Results of the analysis of the Study Area property inspection are presented in Section 3.2.

3.1 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:

- Previously identified archaeological sites (AkGw-456);
- Water sources: primary, secondary, or past water source (West Etobicoke Creek);
- Early historic transportation routes (Denison Ave, Park St, Mill St, GTR);
- Proximity to early settlements (Brampton); and
- Well-drained soils (Chinguacousy clay)

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 Municipal Heritage Register was consulted and four properties within the Study Area are Listed or Designated under the Ontario Heritage Act:

- 3 Denison Avenue (Listed); c.1880 house associated with Edward Heydon, a local builder, mason and bricklayer who purchased the property in 1882
- 39 Mill Street North (Listed); c.1875 house
- 40 Mill Street North (Listed); c.1910 house
- 44 Mill Street North (Designated); c.1875 house associated with the family of George Graham, a prominent family in the area, as well as the sister of Anne Stirk, sister of a prominent veterinarian

These criteria are indicative of potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.



3.2 Analysis of Property Inspection Results

The property inspection determined that parts of the larger Study Area exhibit archaeological potential (Plates 5, 21, 22; Figure 10: areas highlighted in green). If impacted, these areas will require Stage 2 archaeological assessment prior to any construction activities. 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.

The remainder of the Study Area has been subjected to deep soil disturbance events and according to the S & G Section 1.3.2 do not retain archaeological potential (Plates 1-24; Figure 10: areas highlighted in yellow). Preferred Alternative Design 1 within the lot north of the residential properties at 34 Park Street and 45 Mill Street does not exhibit archaeological potential (see Appendix A). These areas do not require further survey.

3.3 Conclusions

The Stage 1 background study determined that one previously registered archaeological site is located within one kilometre of the Study Area. The property inspection determined that parts of the Stage 1 Study Area exhibit archaeological potential. Preferred Alternative Design 1 does not include areas of archaeological potential.

4.0 RECOMMENDATIONS

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

1. The Study Area exhibits archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals, if impacted, prior to any proposed construction activities;
2. The remainder of the Study Area, including Preferred Alternative Design 1, does not retain archaeological potential on account of deep and extensive land disturbance. These lands do not require further archaeological assessment; and,
3. 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.



5.0 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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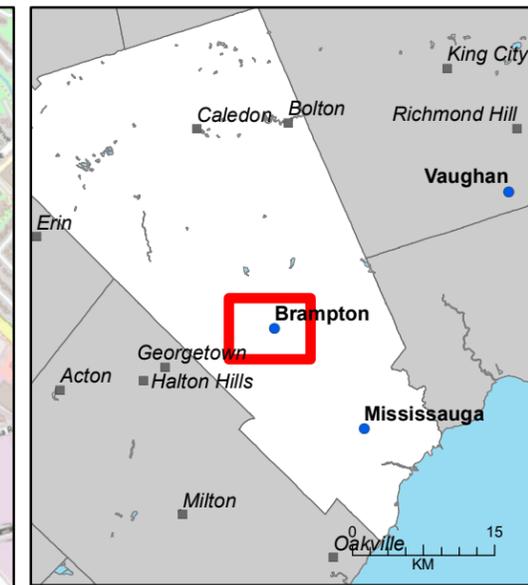
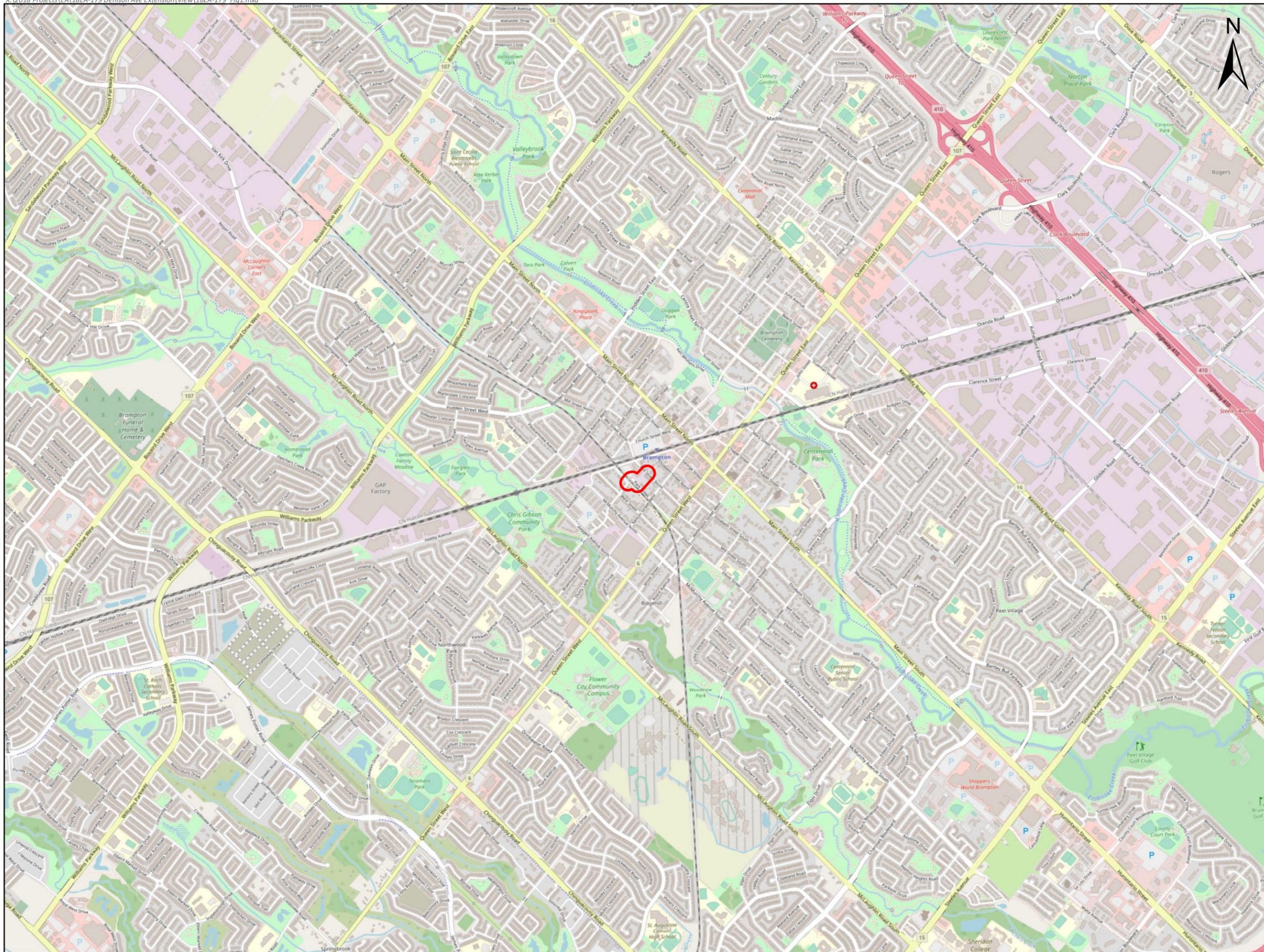


<<http://www.casbrant.ca/files/upload/Mississaugas%20of%20the%20New2.pdf>>.



7.0 MAPS





 STUDY AREA

Sources: Ortho: ESRI
 Projection: NAD 1983 UTM Zone 17N
 Scale: 1:25,000
 Page Size: 11 x 17



ASI PROJECT NO.: 18EA-179
 DATE: 2019-05-15
 DRAWN BY: AB
 FILE: 18EA-179_Fig1



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

Figure 1: Denison Avenue Extension Study Area



Figure 2: Study Area (Approximate Location) Overlaid on the 1859 Map of the County of Peel, Plan of Brampton

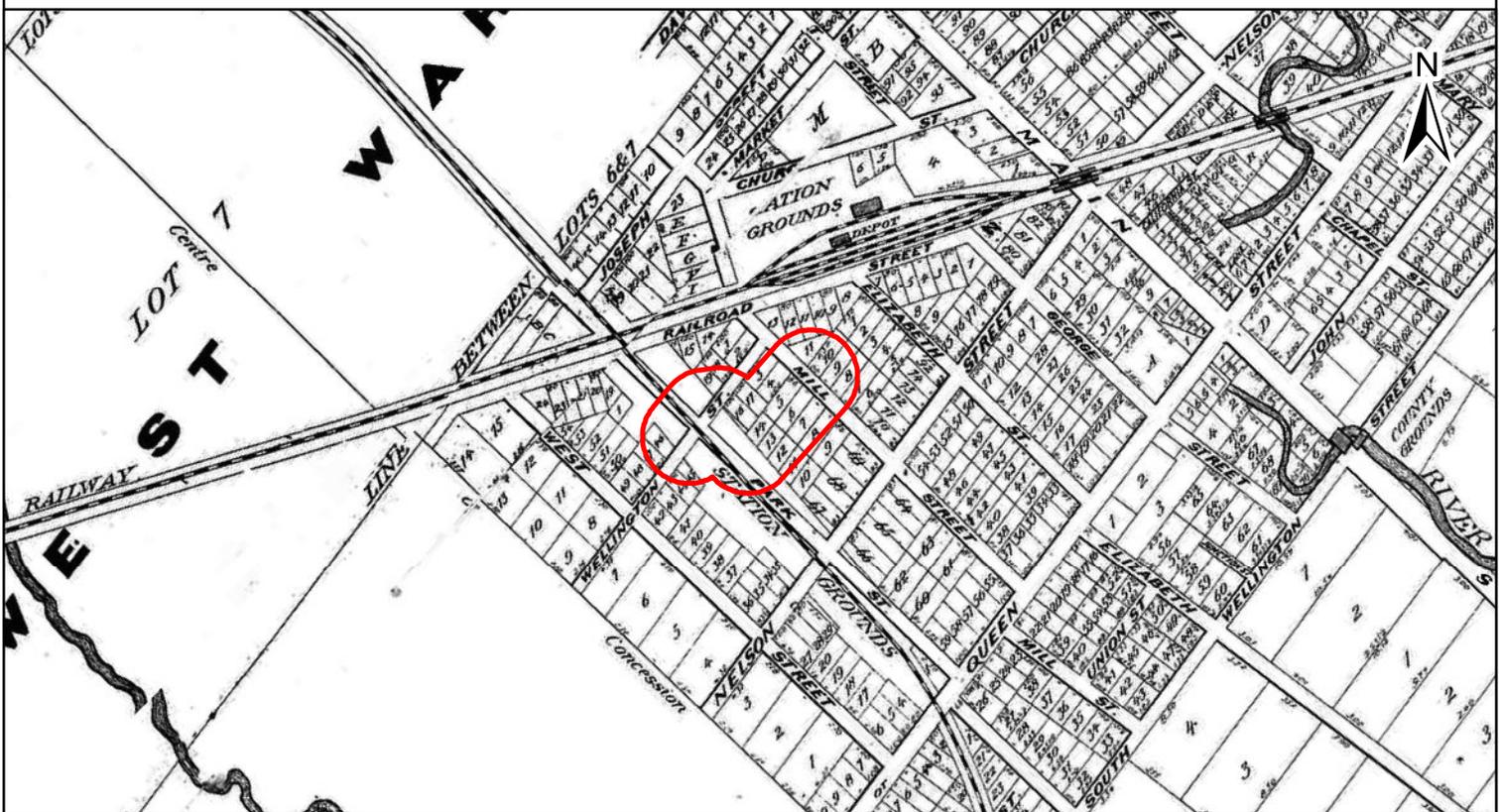


Figure 3: Study Area (Approximate Location) Overlaid on the 1877 Illustrated Historical Atlas of the County of Peel, Plan of Brampton

	 STUDY AREA	Sources: 1859 Tremaine Map County of Peel 1877 Illustrated Historical Atlas County of Peel Projection: NAD 1983 UTM Zone 17N Scale: 8,000 Page Size: 8.5 x 11	 <p>0 250 Metres</p> <p>ASI PROJECT NO.: 18EA-179 DRAWN BY: AB DATE: 2019-05-15 FILE: 18EA-179_Fig2-3_Hist</p>
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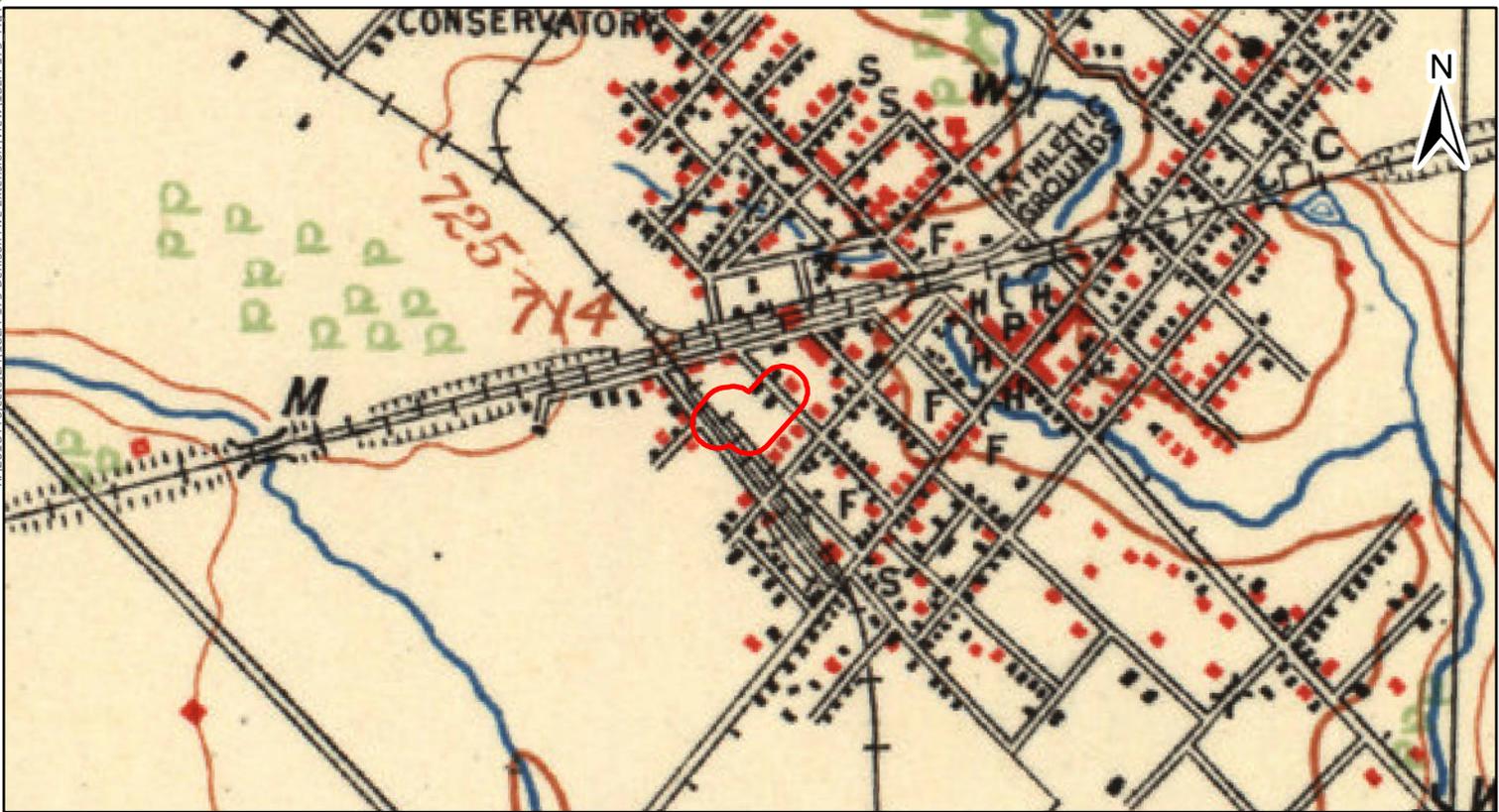


Figure 4: Study Area (Approximate Location) Overlaid on the 1909 NTS Brampton Sheet



Figure 5: Study Area (Approximate Location) Overlaid on the 1942 NTS Brampton Sheet

 <p>ASI</p>	 <p>STUDY AREA</p>	<p>Sources: 1909 & 1942 NTS Maps Brampton Sheet</p> <p>Projection: NAD 1983 UTM Zone 17N Scale: 15,000 Page Size: 8.5 x 11</p>	 <p>0 500 Metres</p> <p>ASI PROJECT NO.: 18EA-179 DRAWN BY: AB DATE: 2019-05-15 FILE: 18EA-179_Fig4-5_Hist</p>
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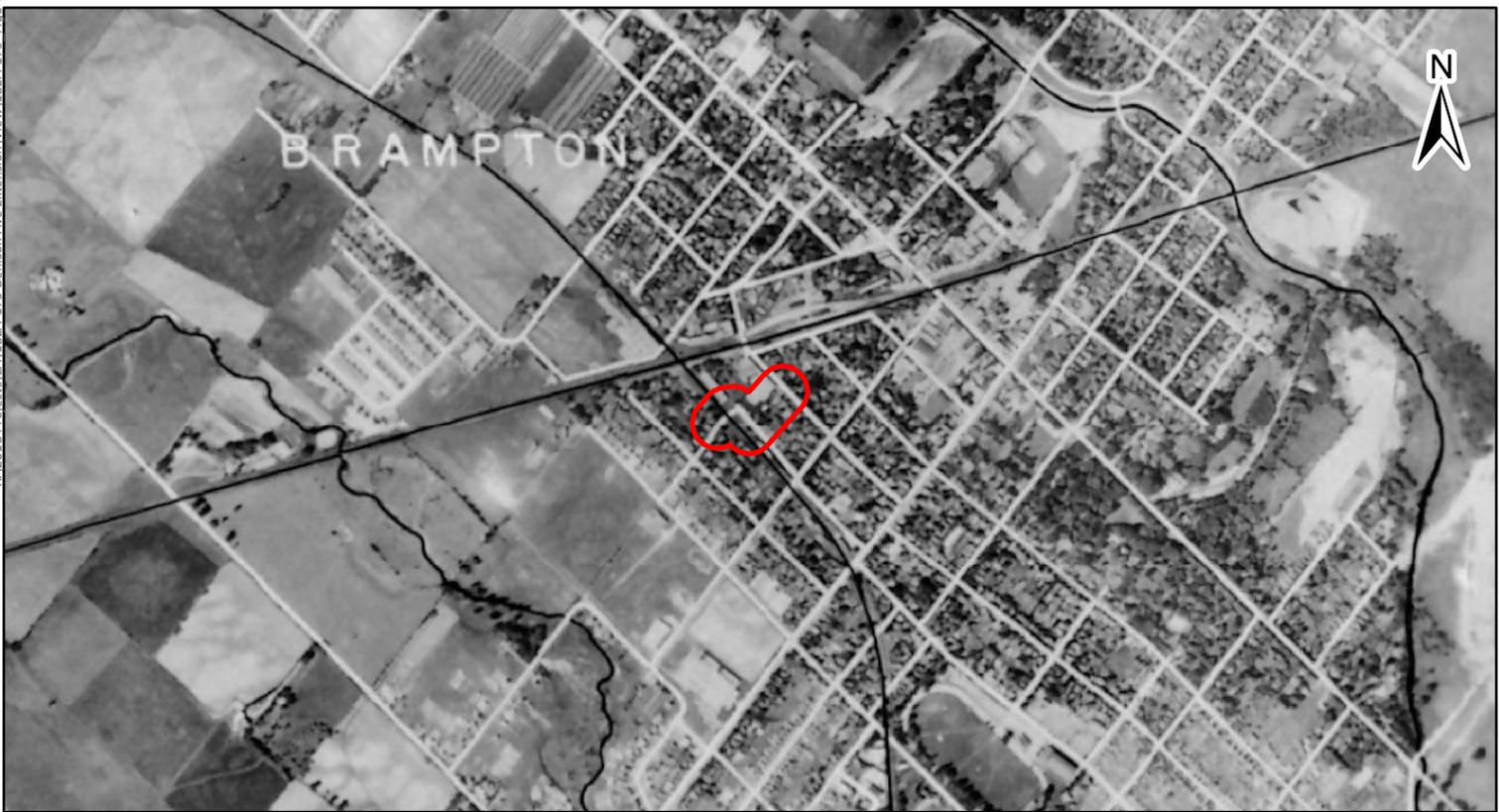


Figure 6: Study Area (Approximate Location) Overlaid on the 1954 Aerial Photograph of Brampton

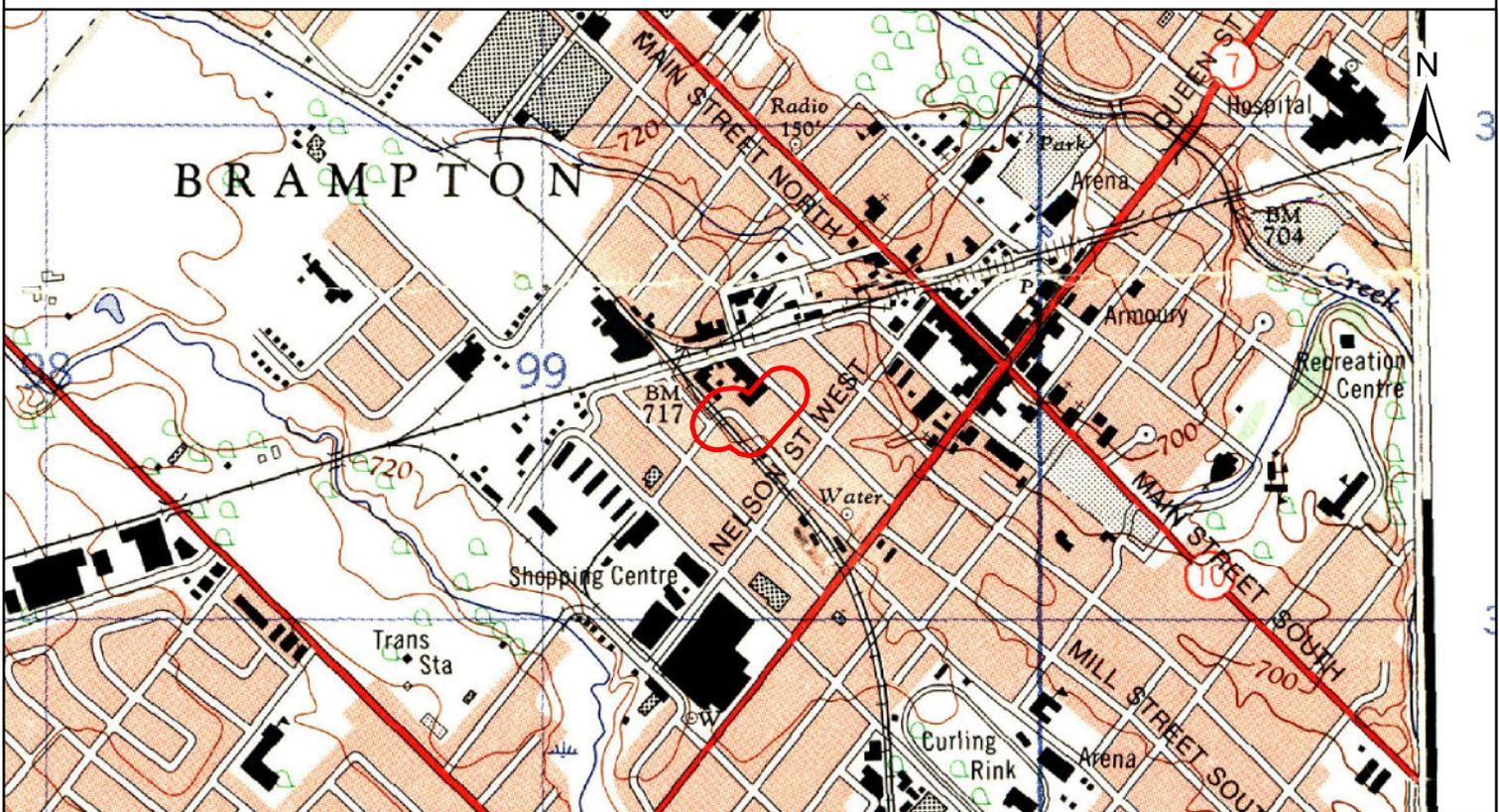


Figure 7: Study Area (Approximate Location) Overlaid on the 1973 NTS Brampton Sheet

	<p>STUDY AREA</p>	<p>Sources: 1954 Aerial Photography 1973 NTS Map Brampton Sheet</p> <p>Projection: NAD 1983 UTM Zone 17N Scale: 15,000 Page Size: 8.5 x 11</p>	<p>0 500</p> <p>Metres</p>	<p>ASI PROJECT NO.: 18EA-179 DRAWN BY: AB DATE: 2019-05-15 FILE: 18EA-179_Fig6-7_Hist</p>
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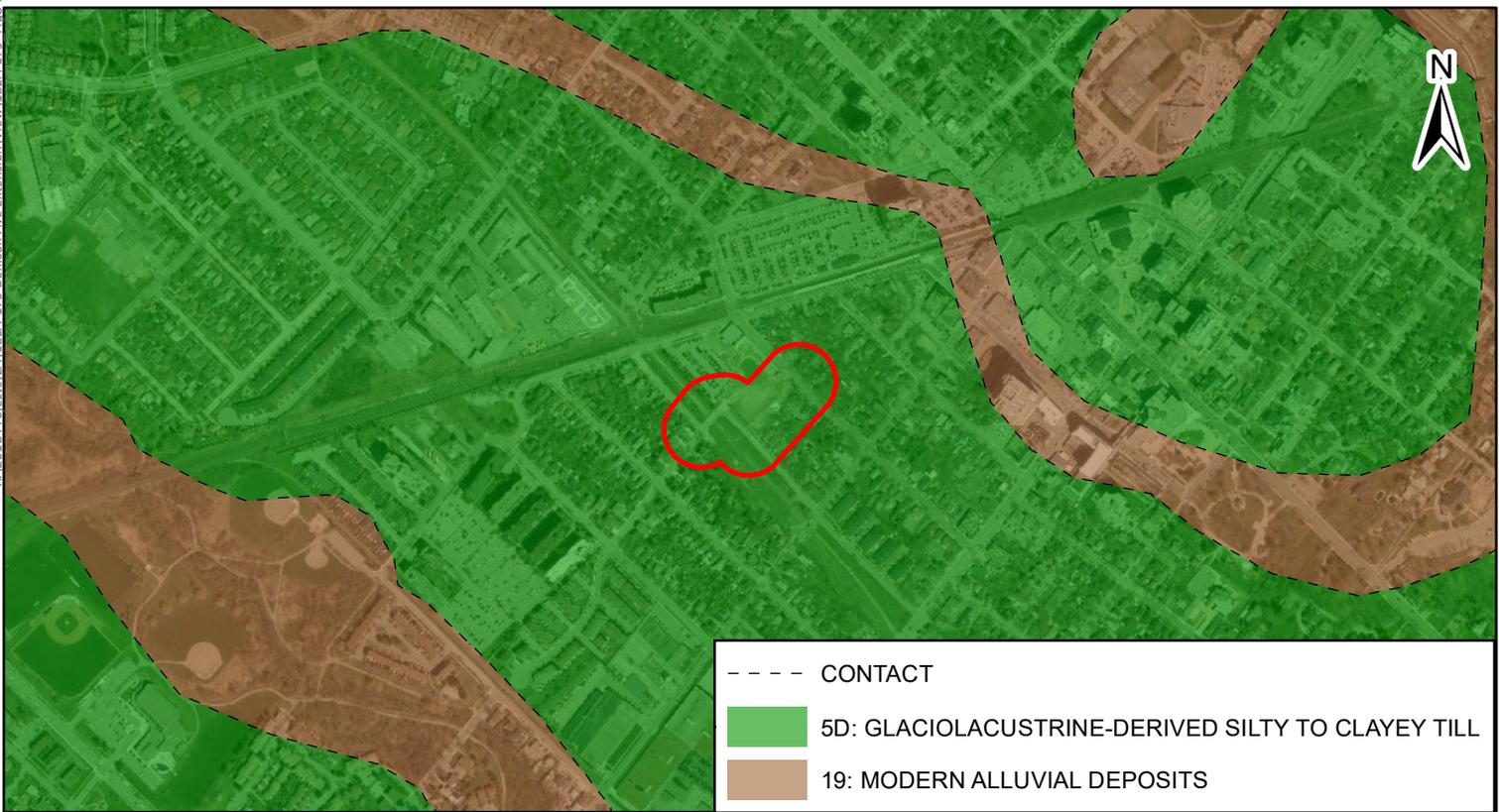
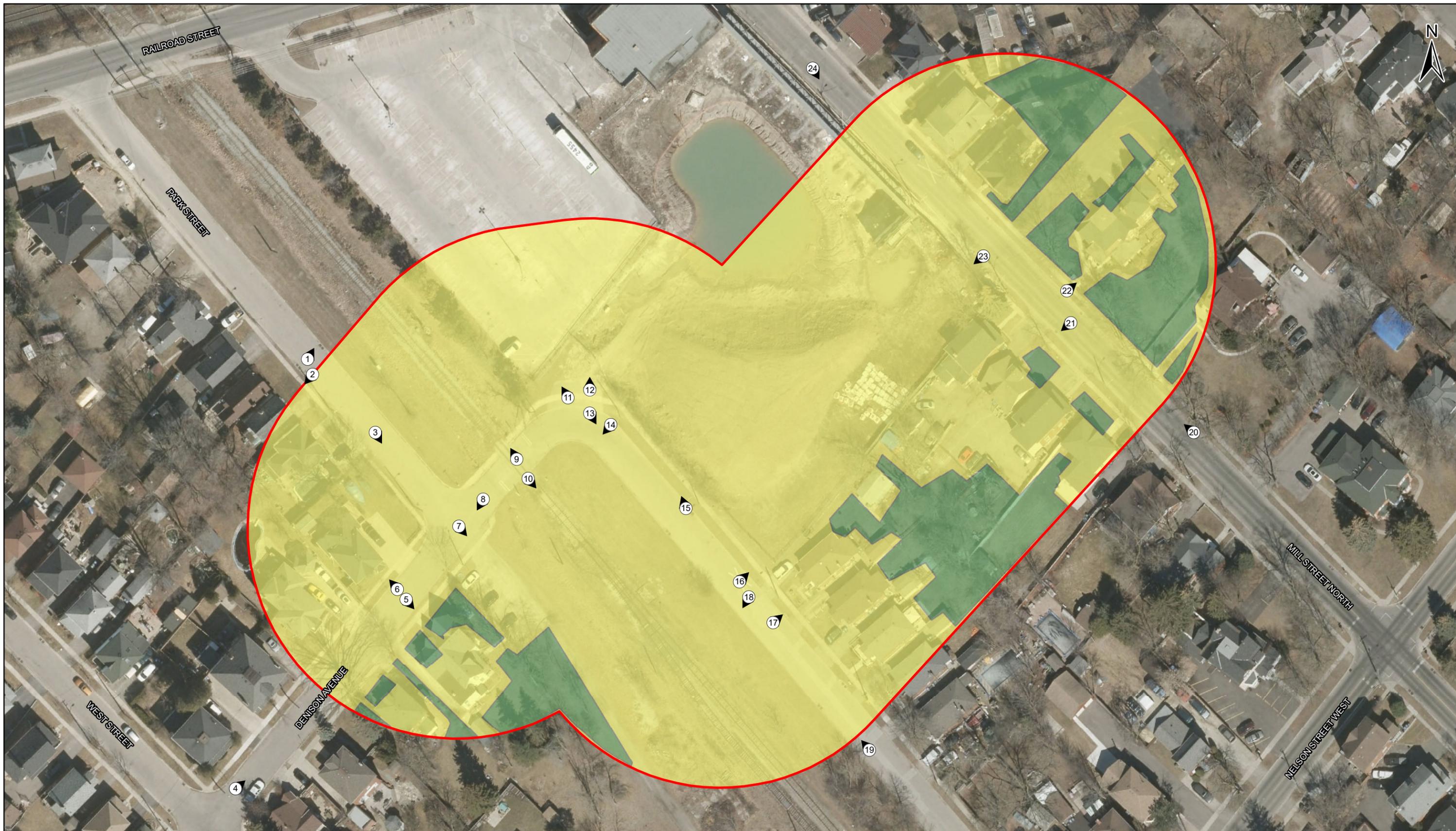


Figure 8: Study Area - Surficial Geology



Figure 9: Study Area - Soil Drainage

	 STUDY AREA	Sources: Ministry for Mining and Resources	0  300 Metres
		Projection: NAD 1983 UTM Zone 17N Scale: 10,000 Page Size: 8.5 x 11	ASI PROJECT NO.: 18EA-179 DRAWN BY: AB DATE: 2019-05-15 FILE: 18EA-179_Fig8-9_Geo



	STUDY AREA	TEST PIT SURVEY - 5m
	DISTURBED - NO POTENTIAL	PHOTO LOCATIONS

Sources: Field Data Client Provided Ortho	0 50 Metres
Projection: WGS 1984 Web Mercator Auxiliary Sphere Scale: 1:1,156 Page Size: 11 x 17	ASI PROJECT NO.: 18EA-179 DATE: 2019-05-16 DRAWN BY: AB FILE: 18EA-179_Stage1

Figure 10: Denison Avenue Extension Study Area - Results of the Study Area

8.0 IMAGES



Plate 1: Northeast view of railway and parking lot; Area is disturbed, no potential



Plate 2: Southwest view of Park St.; Area is disturbed, no potential



Plate 3: Southeast view of Park St.; Area is disturbed, no potential

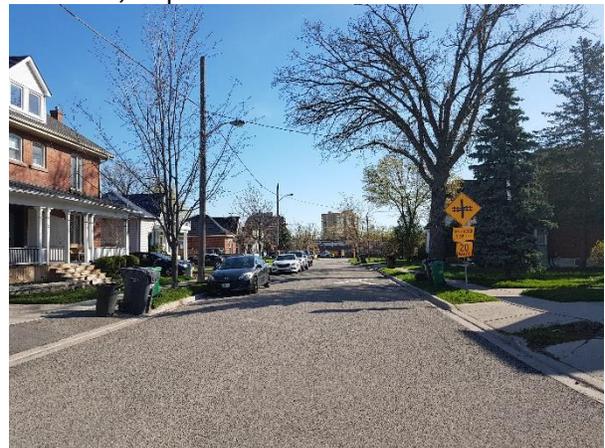


Plate 4: Northeast view of Denison Ave.; Area is disturbed, no potential



Plate 5: Southeast view of 3 Denison Ave.; Area beyond disturbed ROW requires Stage 2 survey



Plate 6: Northwest view of 2 Denison Ave.; Area is disturbed, no potential



Plate 7: Southeast view of Denison Ave. rail crossing; Area beyond disturbed ROWs and parking area require Stage 2 survey



Plate 8: Southwest view of Denison Ave.; Area is disturbed, no potential



Plate 9: Northwest view of Park St and rail ROWs; Area is disturbed, no potential



Plate 10: Southeast view of rail ROW.; Area is disturbed, no potential



Plate 11: Northwest view of Denison Ave. terminus; Area is disturbed, no potential



Plate 12: North view of Denison Ave. terminus; Area is disturbed, no potential



Plate 13: Southeast view of Park St; Area is disturbed, no potential



Plate 14: Southwest view of Denison Ave. terminus; Area is disturbed, no potential



Plate 15: Northwest view of Park St.; Area is disturbed, no potential



Plate 16: Northeast view of Park St.; Area is disturbed, no potential



Plate 17: Northeast view of Park St.; Area is disturbed, no potential

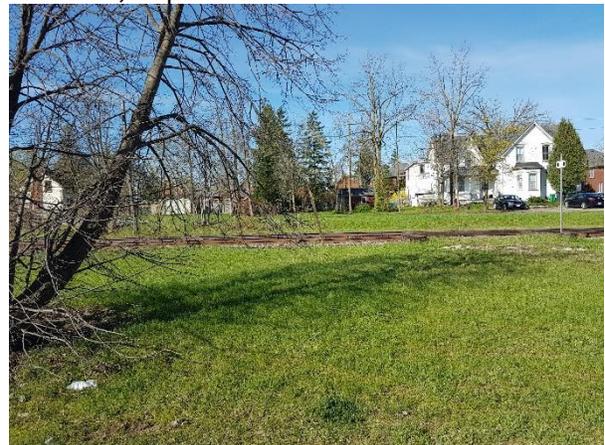


Plate 18: Southwest view of rail ROW; Area is disturbed, no potential



Plate 19: Northwest view of Park St.; Area is disturbed, no potential



Plate 20: Northwest view of Mill St.; Area beyond disturbed ROW requires Stage 2 survey



Plate 21: Southwest view of Mill St.; Area beyond disturbed ROW requires Stage 2 survey



Plate 22: Northeast view of 44 Mill St.; Area beyond disturbed ROW requires Stage 2 survey



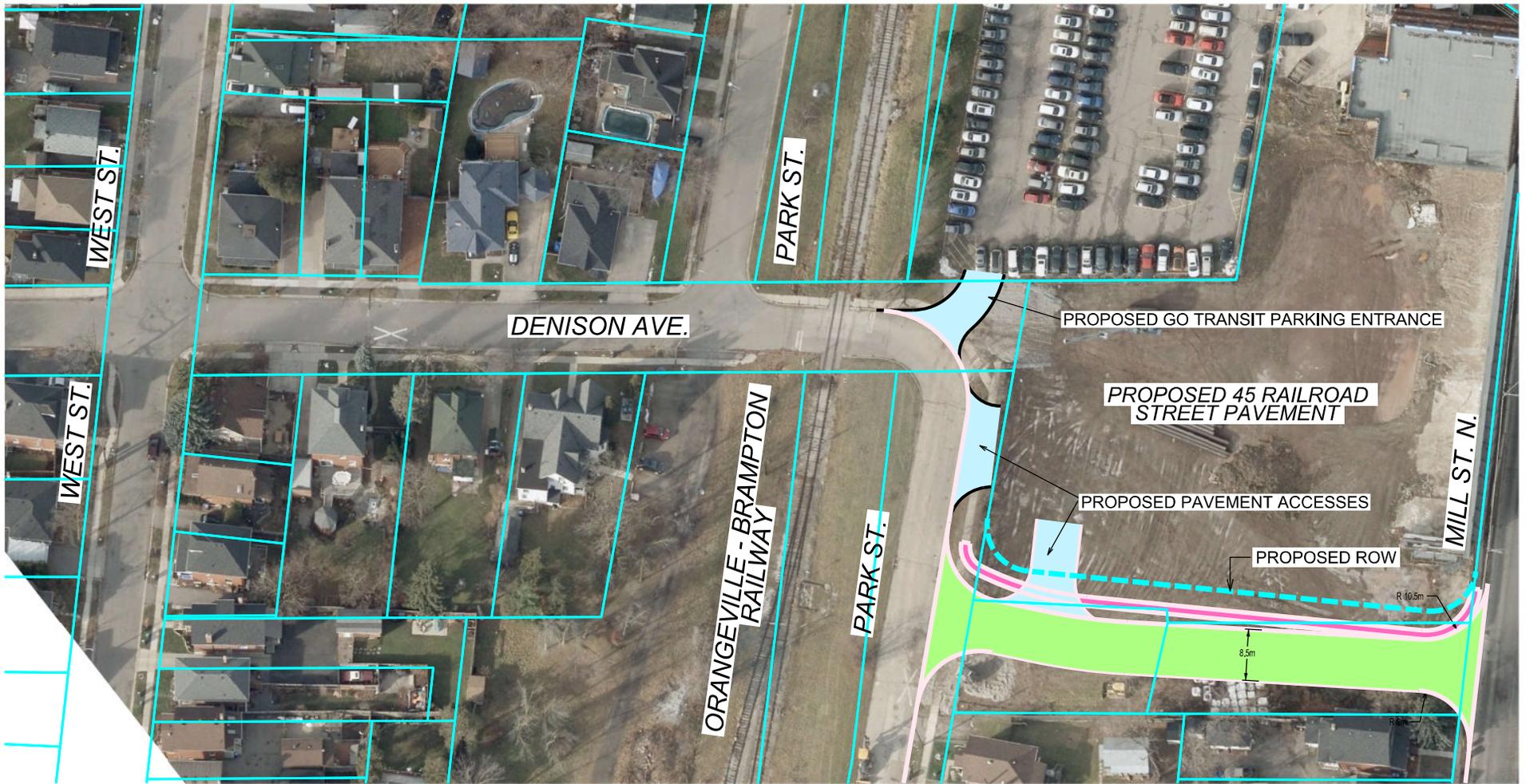
Plate 23: Southwest view of Mill St.; Area is disturbed, no potential



Plate 24: Southeast view of Mill St.; Area is disturbed, no potential

9.0 APPENDIX A: PREFERRED ALTERNATIVE DESIGN 1





LEGEND

- PROPOSED PAVEMENT
- PROPOSED ENTRANCE
- PROPOSED SIDEWALK
- PROPOSED ROW



**Public Works & Engineering
Capital Works**

DENISON AVENUE EXTENSION

EA STUDY

ALTERNATIVE DESIGN 1

SCALE:

1:1000

DATE:

MAY 24, 2019