STAGE 1 ARCHAEOLOGICAL ASSESSMENT
CALEDON BRIDGE & CULVERT: PATTERSON SIDE ROAD BRIDGES
LOTS 25-26, CONCESSIONS 5-6
(FORMER TOWNSHIP OF ALBION, COUNTY OF PEEL)
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL, ONTARIO

ORIGINAL REPORT

Prepared for:

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Ministry of Heritage, Sport, Tourism and Culture Industries PIF# P1066-0160-2020
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EXECUTIVE SUMMARY

ASI was contracted by R.J. Burnside & Associates Limited to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Bridge and Culvert Environmental Assessment and Detailed Design in the Town of Caledon. This Stage 1 Study Area includes the replacement of two bridges on Patterson Sideroad, and one bridge on Duffy's Lane.

The Stage 1 background study determined that two previously registered archaeological sites are located within one kilometre of the Study Area, neither of which is within 50 metres. The property inspection determined that parts of the Study Area exhibit archaeological potential and will require Stage 2 assessment, prior to any proposed construction activities.

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 prior to any proposed impacts to the property;

2. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance, watercourses, or slopes in excess of 20 degrees. 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.

ASI

PROJECT PERSONNEL

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by R.J. Burnside & Associates Limited to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Bridge and Culvert Environmental Assessment and Detailed Design in the Town of Caledon (Figure 1). This Stage 1 Study Area includes the replacement of two bridges on Patterson Sideroad and one bridge on Duffy's Lane.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2018) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI 2011), formerly the Ministry of Tourism, Culture and Sport.

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 R.J. Burnside & Associates Limited on September 8, 2020.

1.2 Historical Context

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

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the environment had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries

dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Ellis et al. 1990; 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 small community 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 phytolithic 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). As is evident in detailed Anishinaabek ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 BP, lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (CE), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990:317). By 1300-1450 CE, this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). From 1450-1649 CE this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

By 1600 CE, the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the traditional enmity between the Haudenosaunee and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

The Humber River watershed exhibits two well documented ancestral Huron-Wendat settlement sequences, one in the middle Humber River area spanning the fifteenth century (eg. Black Creek site, Emerson 1954; and Parsons Site, Robertson and Williamson 1998) and one in the area of the Humber River headwaters spanning the late-fifteenth century (eg. Damiani Site, ASI 2012a) to late sixteenth century (eg. Skandatut Site, ASI 2012b). By the turn of the seventeenth century, the Humber River populations are believed to have relocated to join either the Huron-Wendat Nation or perhaps the Tionontaté (Petun) Nation (Williamson 2014).

1.2.2 Treaties

The Study Area is within Treaty 19, the Ajetance Purchase, signed in 1818 between the Crown and the Mississaugas (Crown-Indigenous Relations and Northern Affairs 2016). 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).

1.2.3 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in the Former Albion Township, County of Peel in Lots 25-26 & Concessions 5-6.

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).

Albion Township

The first township survey was undertaken in 1819, and the first legal settlers occupied their land holdings in the same year. The township was named by surveyor James G. Chewett after a poetic name for Britain. Eleven concessions comprised the township and were laid out west to east. Early settlement and development in the area is attributed to the emergence of water-power mill sites located near the Humber River, which ran through the whole length of the township. Albion was initially settled by the children of Loyalists, soldiers who had served during the War of 1812, and by immigrants from England, Scotland and Ireland. By the 1840s, the township was noted for its good farms (Armstrong 1985:141; Rayburn 1997:6; Smith 1846:2).

Hamilton & North Western Railway

The Hamilton & North Western Railway (H&NW) was formed in 1872. Construction began in 1877 and by late that year had reached Barrie and by mid-1879, Collingwood. Due to economic recession and railway politics, the H&NW merged with the Northern Railway of Canada to form the Northern & North Western Railway. The Northern & North Western Railway was acquired by the Grand Trunk Railway in 1888 (Cooper 2001).

The Caledon Trailway Path was constructed in 1994, after being purchased by the Town of Caledon in 1989 to convert a 35 kilometre section of the former H&NW corridor into a gravel multi-use trailway from Winston Churchill Boulevard north of King Street in Terra Cotta, through Caledon East, to Mill Street west of Queen Street in Tottenham. The Caledon Trailway became the first designated portion of the Trans Canada Trail, re-named to the Great Trail (Town of Caledon 2018).

1.2.4 Historical Map Review

The 1859 *Tremaine's Map of the County of Peel* (Tremaine 1859) and the 1877 *Illustrated Historical Atlas of the County of Peel* (Walker and Miles 1877) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Table 1; 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)**
5	25	John Penbellor	Humber River	Jno Sullivan	Railway, Humber River
5	26	William Gray	Humber River	Mrs MJ Taylor	Railway, Humber River
6	25	Michl Murphy	Humber River	Jas G. Carter	Humber River
6	26	Dr. Wm Adams	Humber River	None listed	Railway, Humber River

The 1859 and 1877 maps indicate historical road allowances in the alignments of present-day Patterson Side Road and Duffy's Lane. The Humber River is shown splitting into two branches south of the Study Area. These branches intersect the Study Area west and east of Duffy's Lane at Patterson Side Road. The 1877 map depicts the H&NW intersecting the Study Area west of Duffy's Lane, in the alignment of the present-day Caledon Trailway Path.

1.2.5 Twentieth-Century Mapping Review

The 1919 and 1994 National Topographic Series (NTS) Bolton Sheets (Department of Militia and Defence 1919; Department of Energy, Mines and Resources, Canada 1994), as well as the 1954 aerial photography (Hunting Survey Corporation Limited 1954) were examined to determine the extent and nature of development and land uses within the Study Area (Figures 4-6).

By 1919, the H&NW is illustrated as having been renamed the Grand Trunk Hamilton Beeton and Allandale Branch. Patterson Side Road east of Duffy's Lane is indicated to be a metalled road[1]. A bridge is shown where each branch of the Humber River meets Patterson Side Road, and a third masonry bridge is shown where the Humber River meets Duffy's Lane to the south. The Study Area is within an area of undulating topography along the main branches of the Humber River. The 1954 aerial photography shows treed areas along Patterson Side Road and Duffy's Lane, clustered around the two branches of the Humber River. The west and east ends of the Study Area are surrounded by open fields. The 1994 map shows the Study Area along the boundary of the Albion Hills Conservation 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 MHSTCI 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 since 2004 shows that the Study Area has remained relatively unchanged.

A Stage 1 property inspection was conducted on October 27, 2020 that noted the Study Area is located along Patterson Side Road crossing the Humber River in two places, adjacent to a low-lying wetland, and along Duffy's Lane where it crosses the Humber River. The surrounding area is treed and the topography is undulating, generally sloping towards the river valleys.

The Patterson Side Road Bridge No. 1 is a single span cast-in-place concrete slab bridge supported by cast-in-place reinforced concrete beams with a northeast-southwest orientation that carries two lanes of

[1] Metalled roads were constructed from crushed stone bound by tar which was then compressed with a steam roller, also known as "tarmac" (Neill 2016)

vehicular traffic across a small branch of the Humber River. This bridge is presumed to have been constructed in 1950, and measures 7.15 metres in overall length with a width of 7.34 metres.

Patterson Side Road Bridge No. 2 is a single span cast-in-place rigid frame concrete bridge with a northeast-southwest orientation that carries two lanes of vehicular traffic across a branch of the Humber River. This subject bridge was constructed in 1956, and measures 14.51 metres in overall length with a width of 8.47 metres.

Duffy's Lane Bridge is a single span cast-in-place rigid frame concrete bridge with a northwest-southeast orientation that carries two lanes of vehicular traffic over a small branch of the Humber River. The bridge is presumed to have been constructed in 1957, and measures 10.6 metres in overall length and 8.9 metres wide.

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 located within the kame moraines of the Oak Ridges Moraine physiographic region of southern Ontario (Chapman and Putnam 1984). The Oak Ridges Moraine physiographic region of southern Ontario (Chapman and Putnam 1984:166-169) extends from the Niagara Escarpment to the Trent River forming the height of land separating the drainage basin of Lake Ontario from the drainage basins of Georgian Bay and the Trent. This physiographic region, covering approximately 1,300 square kilometres, is characterized by hilly, "knob and basin" topography of sandy or gravelly till. The Moraine

was created during the melting of the Laurentian Glaciers 13,000-12,000 B.P. The meltwater ran into present day Georgian Bay and Lake Simcoe areas, and into the Great Lakes, forming Lake Iroquois to the south (over present day Lake Ontario), and Lake Algonquin to the north (over present day Lake Huron, Georgian Bay and Lake Simcoe). On the moraine itself, glacial melting formed a series of kettle lakes (Bennett and Glasser 1996:262).

Figure 8 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by ice-contact stratified deposits of sand and gravel, minor silt, clay and till as well as modern alluvial deposits of clay, silt, sand, gravel, and may contain organic remains (Ontario Geological Survey 2010). Soils in the Study Area consist of Bottomland, an alluvial with variable drainage, and Pontypool sandy loam, a grey-brown podzolic with good drainage (Figure 9).

Two main branches of the Humber River intersect the Study Area, one approximately 150 metres west of Duffy's Lane at Patterson Side Road, and one within 20 metres east of Duffy's Lane. The Humber River watershed encompasses an area of approximately 911 square kilometers with a main, east and west branch, originating on the Niagara Escarpment and the Oak Ridges Moraine and flowing through York and Peel Regions into the City of Toronto where it drains into Lake Ontario (Toronto and Region Conservation Authority 2016). The Humber River was designated as a Canadian Heritage River System in 1999 for its Carolinian forests, farms and old mills, and because of its 10,000 year history of human settlement and significance as the Carrying Place Trail (Canadian Heritage Rivers System 2016).

1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MHSTCI. 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 *AlGx*.

According to the OASD, two previously registered archaeological sites are located within one kilometre of the Study Area, neither of which is within 50 metres (MHSTCI 2020). A summary of the sites is provided below.

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

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AlGx-2	Wharton	Archaic	Findspot	Latta 1979
AlGx-10	Matson	Woodland	Unknown	TRCA 1988

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 Alexis Dunlop (P1146) of ASI, on October 27, 2020, 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 systematic visual inspection of the entire study area from publicly accessible lands/public right-of-ways (ROWs) and did not include excavation or collection of archaeological resources.

Fieldwork was conducted when weather conditions were deemed clear with good visibility (partly cloudy with seasonal temperatures), as per S & G Section 1.2., Standard 2. Field observations are compiled onto the existing conditions of the Study Area in Section 7.0 (Figure 9) and associated photographic plates are presented in Section 8.0 (Plates 1-8).

3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. Results of the analysis of the Study Area property inspection and background research are presented in Section 3.1.

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 (See Table #2);
- Water sources: primary, secondary, or past water source (Humber River);
- Early historic transportation routes (Patterson Side Road, Duffy's Lane); and
- Well-drained soils (Pontypool sandy loam)

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 no properties within the Study Area are Listed or Designated under the Ontario Heritage Act.

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.

Parts of the Study Area exhibit archaeological potential beyond the bottom of the slope and outer edges of the ROW ditches. Stage 2 survey is recommended in these areas, if impacted by 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 (Figure 9: areas highlighted in green). Due to the complex nature of the topography, standard five metre survey intervals should be maintained where possible.

A combination of property inspection observations with a review of topographic mapping (ESRI 2020) indicates that some of lands within the Study Area are sloped in excess of 20 degrees, and according to the S & G Section 2.1 do not retain potential (Figure 9: area highlighted in pink).

A part of the Study Area is located within the Humber River main watercourses, and according to the S & G Section 2.1 does not retain potential (Plate 2, 4; Figure 9: areas highlighted in blue).

The remainder of the Study Area has been subjected to deep soil disturbance events due to construction of the existing structures and road ROW, as indicated in detailed topographic survey data provided for the project (see Figure 9), and according to the S & G Section 1.3.2 do not retain archaeological potential (Plates 1-8; Figure 9: areas highlighted in yellow). These areas do not require further survey.

3.2 Conclusions

The Stage 1 background study determined that two previously registered archaeological sites are located within one kilometre of the Study Area, neither of which is within 50 metres. The property inspection determined that parts of the Study Area exhibit archaeological potential and will require Stage 2 assessment, prior to any proposed construction activities.

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 prior to any proposed impacts to the property;

2. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance, watercourses, or slopes in excess of 20 degrees. 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 MHSTCI 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 Ministry of Heritage, Sport, Tourism and Culture Industries 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 Heritage, Sport, Tourism and Culture Industries, 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.

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7.0 MAPS

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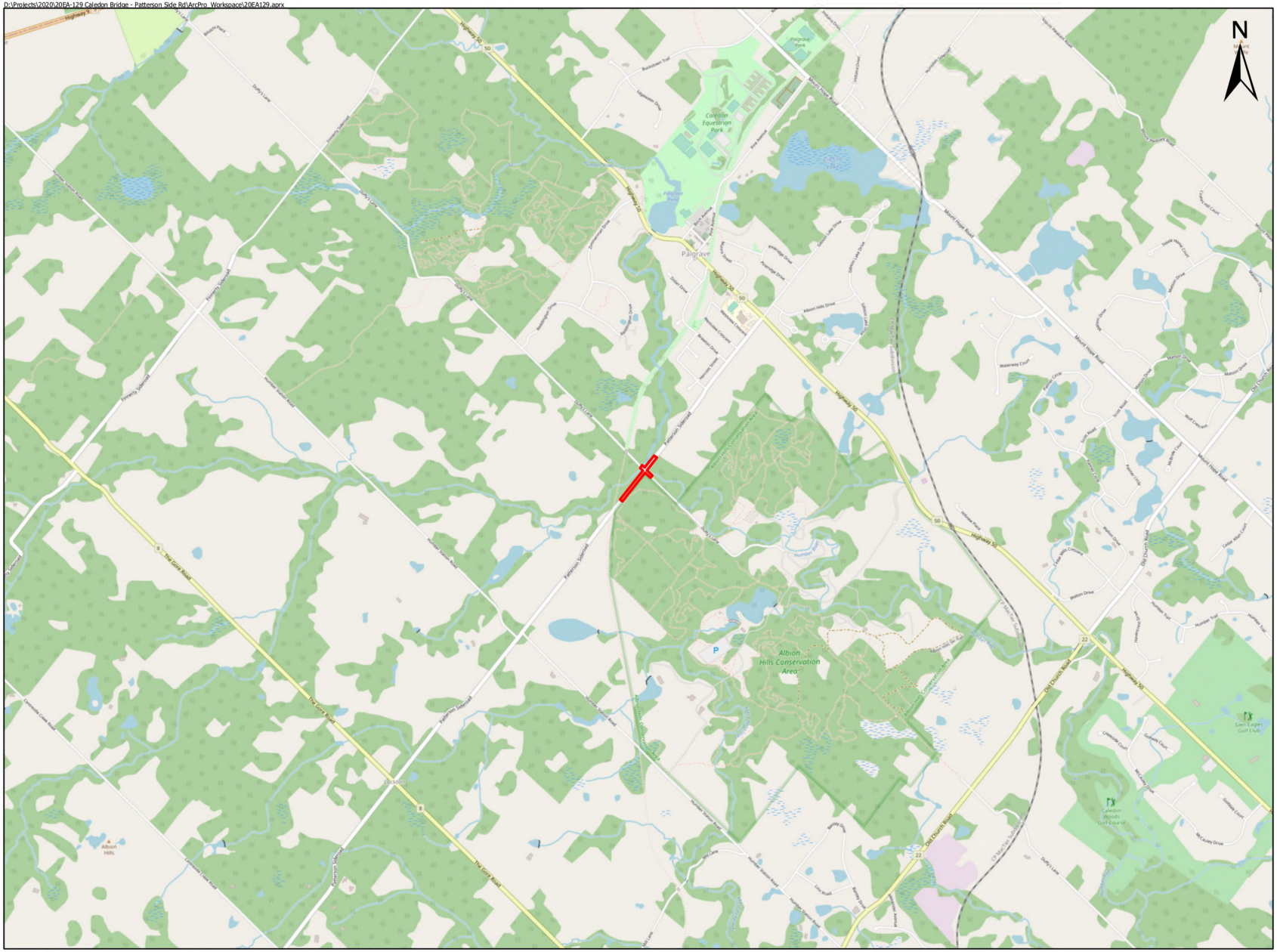

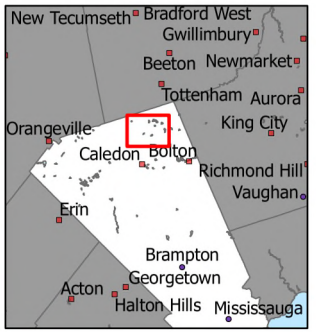

STUDY AREA

Sources:© OpenStreetMap (and) contributors, CC-BY-SA

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ASI Project No: 20EA-129
Date: 2020-11-17 4:17 PM

Drawn By: cnettleton
File: Figure1

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

Figure 1: Caledon Bridge - Patterson Side Road Study Area

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

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

STUDY AREA

Sources: 1859 Tremaine Map of the County of Peel

1877 Illustrated Historical Atlas of the County of Peel

Projection: NAD 1983 CSRS UTM Zone 17N
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Figure 4: Study Area (Approximate Location) Overlaid on the 1919 NTS Bolton Sheet

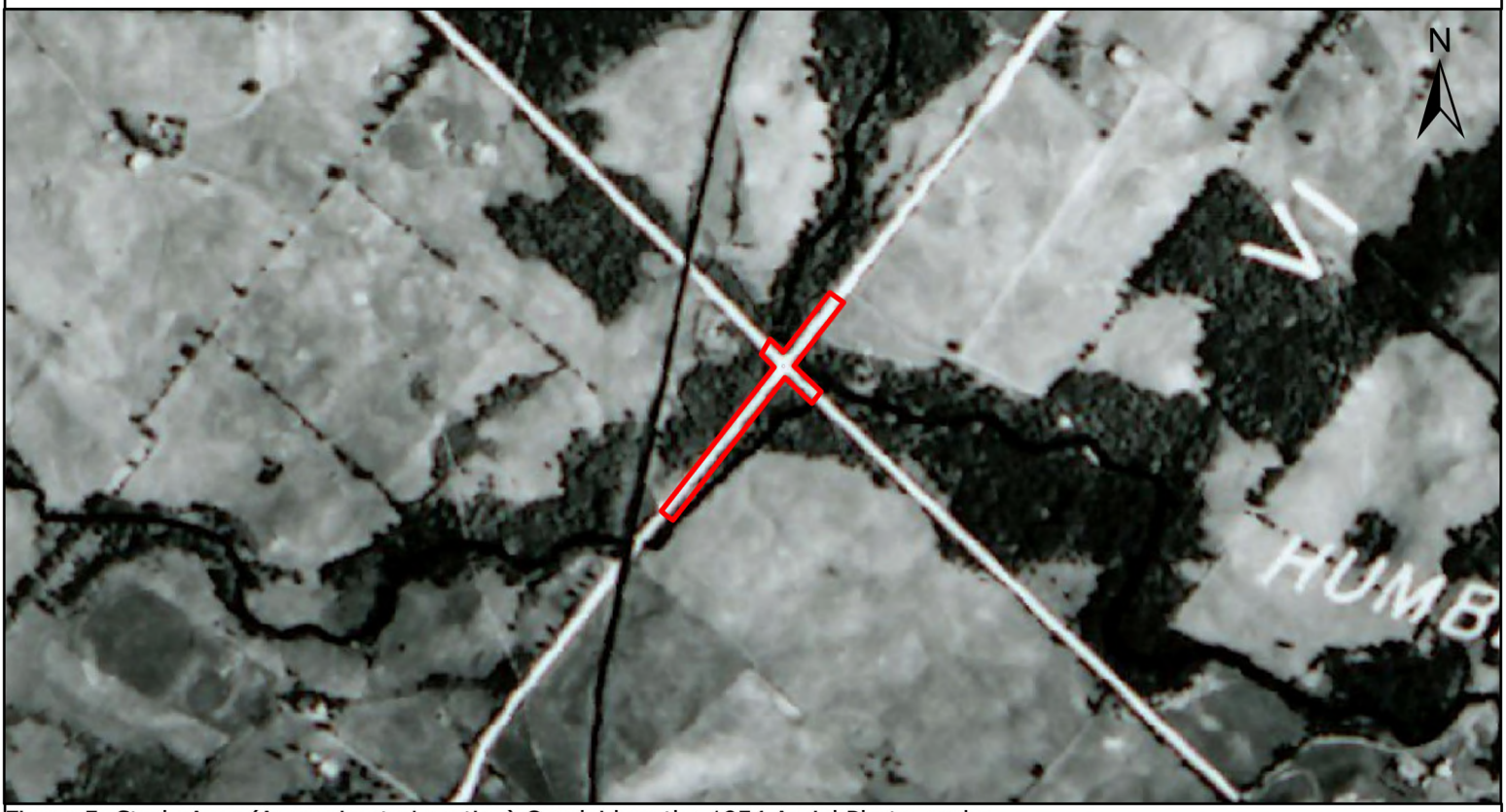

Figure 5: Study Area (Approximate Location) Overlaid on the 1954 Aerial Photography

ASI

STUDY AREA

Sources: 1919 NTS Bolton Sheet

1954 Aerial Photography of Southern Ontario

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Projection: NAD 1983 CSRS UTM Zone 17N
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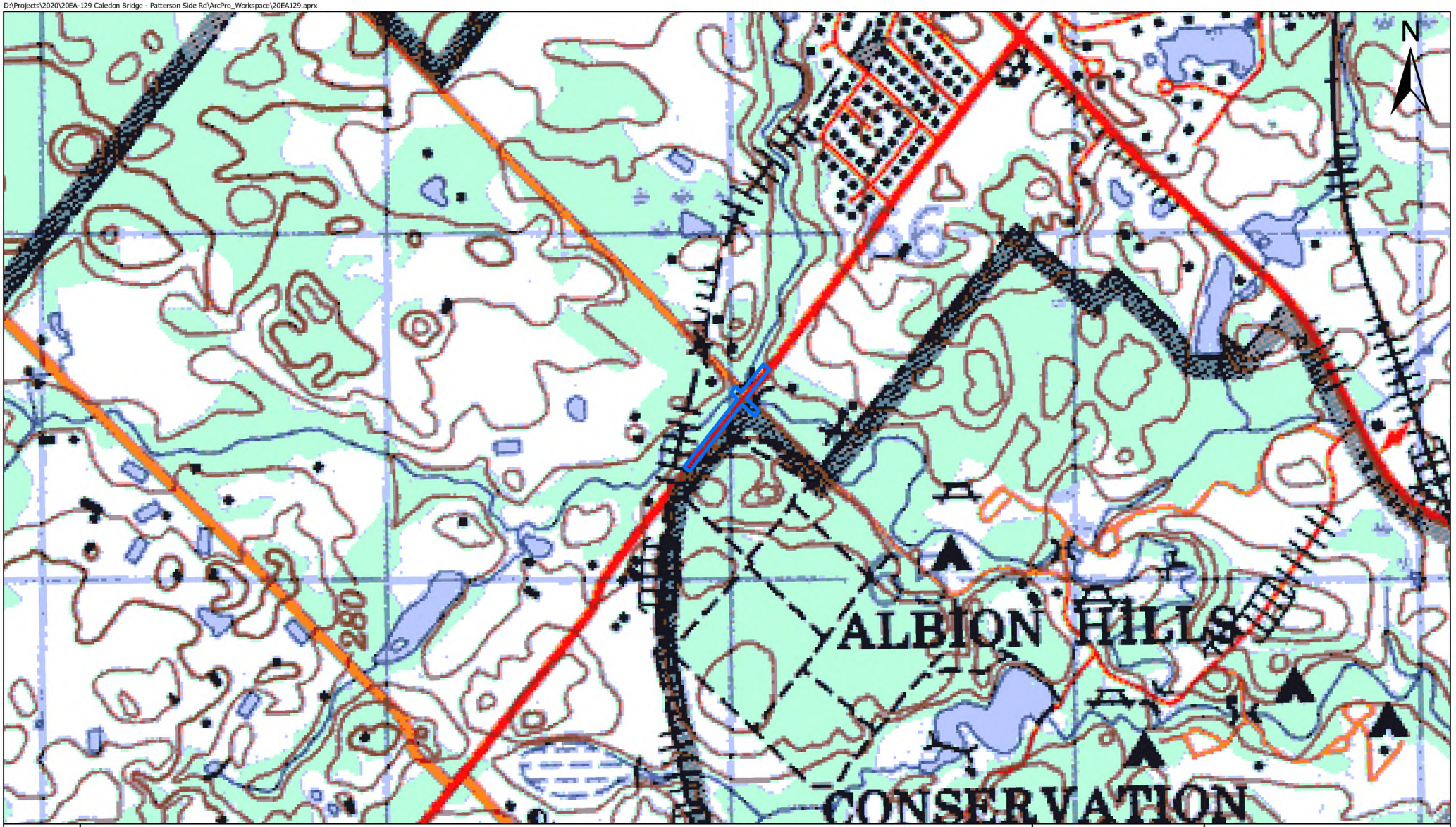

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STUDY AREA

Source: 1994 National Topographic System, Bolton Sheet

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Figure 6: Study Area (Approximate Location) Overlaid on the 1994 NTS Bolton Sheet

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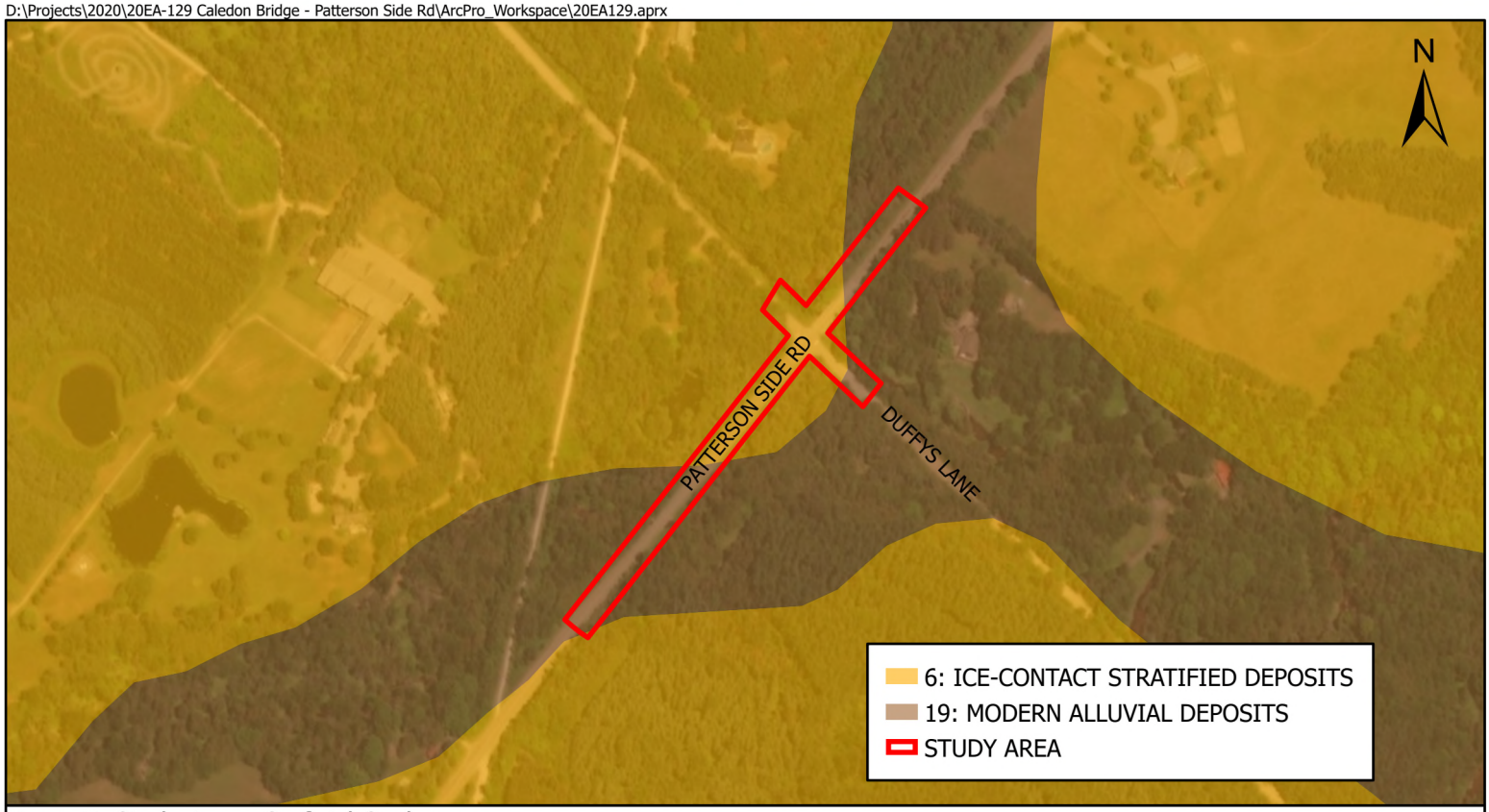

Figure 7: Study Area - Surficial Geology

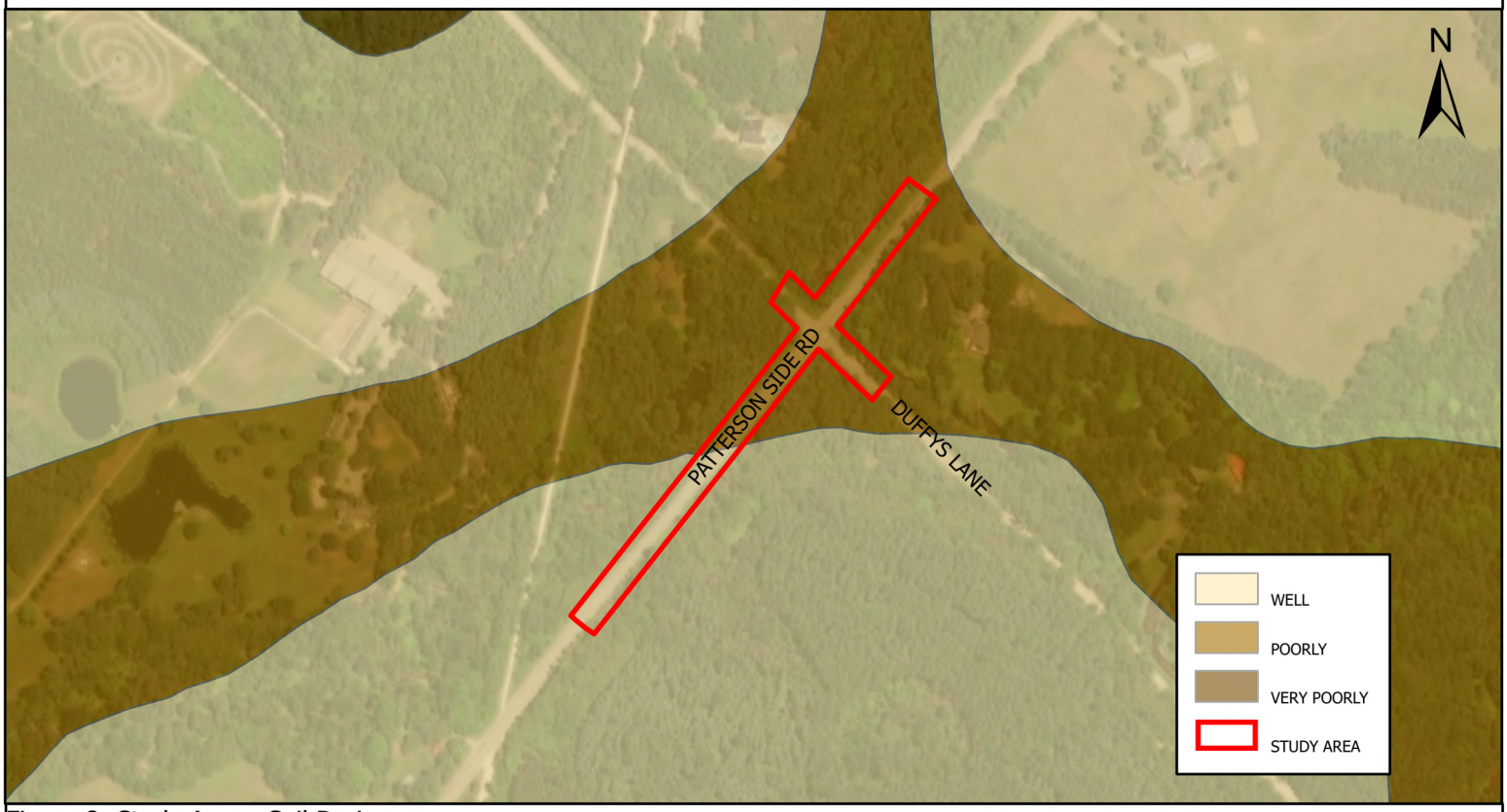

Figure 8: Study Area - Soil Drainage

ASI

Sources: USDA FSA, GeoEye, Maxar; Ontario Geological Survey, Ministry of Northern Development and Mines, © Queen's Printer for Ontario, 2003; Guelph Geomatics Services, Ontario Ministry of Agriculture and AgriFood.

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Projection: NAD 1983 CSRS UTM Zone 17N
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ASI

STUDY AREA
DISTURBED: NO POTENTIAL
SLOPED: NO POTENTIAL
TEST PIT SURVEY REQUIRED
WATERCOURSE: NO POTENTIAL
PHOTO LOCATION AND DIRECTION
X-BANK-TOP
X-ROAD-ASPHALT
X-WATER-EDGE
X-BANK-BOT
X-CL
X-DITCH

USDA FSA, GeoEye, Maxar

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Date: 2021-01-12 3:23 PM

Drawn By: cnettleton
File: Figure 9

Figure 9: Caledon Bridge - Patterson Side Road - Results of Stage 1

8.0 IMAGES

Plate 1: View of Patterson Side Road; Road ROW is disturbed, no potential. Treed lands beyond ROW ditch require Stage 2 survey.

Plate 2: View of Patterson Side Road Bridge 1 over Humber River; Area is disturbed, no potential

Plate 3: View of Patterson Side Road Bridge 1 over Humber River; Area is disturbed, no potential

Plate 4: View of Patterson Side Road at Duffy's Lane; Road ROW is disturbed, no potential

Plate 5: View of Patterson Side Road Bridge 2 over the Humber River; Road ROW and bridge footings are disturbed, no potential

Plate 6: View of Duffy's Lane; Road and ditch is disturbed, no potential. Lands beyond ROW ditch require Stage 2 survey.

Plate 7: View from Patterson Side Road Bridge 2 over the Humber River

Plate 8: View of Patterson Side Road; Road is in fill and is disturbed, no potential. Lands beyond ROW require Stage 2 survey.