Appendix I

Stage 1-2 Archeological Assessments

ORIGINAL REPORT

Stage 2 Archaeological Assessment

Highway 34 and County Rd 17 (Site 27-51), Assignment #5 Hawkesbury, Lot 11, Concession 1, Geographic Township of East Hawkesbury, Prescott, Russell County, Ontario

PIF Number: P340-0083-2018

Licencee: Shan Ling (P340)

Submitted to:

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Distribution List

1 e-copy - C2MH

1 e-copy - Ministry of Tourism, Culture and Sport

1 e-copy - Golder Associates Ltd.

Executive Summary

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

Golder Associates Ltd. (Golder) was retained by Dillon Consulting Limited (Dillon) to undertake a Stage 2 archaeological assessment of the area to be impacted by the proposed replacement of the Highway 34 Overpass at Highway 34 (Site 27-51) and County Road 17, Lot 11, Concession 1, Geographic Township of East Hawkesbury, Prescott, Russell County, Ontario (Map 1 and Map 2)

Highway 34 Overpass is a rigid frame reinforced cast in place concrete structure. It was constructed in 1956 as part of County Rd 17 and carries traffic over Highway 34. The Overpass is located in Hawkesbury, on part Lot 11, Concession 1, Geographic Township of West Hawkesbury, Prescott Russell County, Ontario.

The Stage 2 study area was determined during the Stage 1 archaeological assessment which made recommendations for further work. A Stage 2 test pitting survey was conducted on April 24, 2018 by a licensed archaeologist with permission to access from the client. This involved excavating 30x30 cm test pits in all areas that were determined to have archaeological potential in the Stage 1 assessment. Photographs were taken of the study area with their locations represented on Map 6. The Stage 2 test pitting survey revealed no artifacts or archaeological features.

On the basis of the above information, the following recommendation is made:

1) No artifacts or archaeological features were identified during the stage 2 investigation. As such no further archaeological work is recommended in the study area identified in Map 2.

The Ontario Ministry of Tourism, Culture and Sport is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of concurrence with the findings presented herein.

Project Personnel

Client Contact	Annamarie Burgess (Dillon Consulting Limited)
Project Director/Senior Archaeologist	Hugh Daechsel, M.A.
Project Manager	Shan Ling M.A. (P340)
Senior Archaeologist/Reviewer	Hugh Daechsel, M.A. (P051)
Licenced Archaeologist	Shan Ling, M.A.
Field Crew	Randy Hahn, PhD
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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. (Golder) was retained by Dillon Consulting Limited to undertake a Stage 2 archaeological assessment of the Highway 34 Overpass (Site 27-50) to determine if there are archaeological resources in the area surrounding the structure, under Purchase Order Number 4016-E-0012 for the Ministry of Transportation (MTO) (Map 1 and Map 2). Constructed in 1956, the Highway 34 Overpass (Country Rd 17) is located on Lot 11, Concession 1, Geographic Township of East Hawkesbury, Prescott, Russell County, Ontario.

A previous Stage 1 archaeological assessment was completed to identify known archaeological and heritage resources on and in the vicinity of the study area as well as to assess the archaeological potential of the subject property. This Stage 2 assessment will determine if any additional archaeological investigations are required. The objectives of a Stage 2 assessment flow from principles outlined in the *Ontario Heritage Act* (Consolidated 2007), the *Standards and Guidelines for Consulting Archaeologists* (2011). More specifically, this study was completed with the following objectives:

- To document all archaeological resources on the property;
- To determine whether the property contains archaeological resources requiring further assessment, and;
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

The Stage 2 background study was conducted under archaeological consulting licence P340 issued to Shan Ling, M.A. of Golder by the Ontario Ministry of Tourism, Culture and Sport, PIF # P340-0083-2018. Test pitting was conducted as part of the Stage 2 archaeological assessment on April 24, 2018. Permission to access the site was granted by the Client as well as through the MTO Compass system. The study area boundaries were provided by the client.

Stage 2 field work was based on the recommendations made in the Stage 1 archaeological investigation. The Stage 1 made the following recommendations:

1) Given disturbance identified for much of the area immediately surrounding the Overpass, that no further archaeological assessment is required for those areas identified in Map 6 as being disturbed, and as a consequence that the Ministry of Tourism, Culture and Sport issue a letter concurring that no additional archaeological investigations are required for these sections of the study area.

2) Should any construction occur in the areas identified as having archaeological potential, then prior to construction, a Stage 2 test pitting assessment must be completed in those areas identified in Map 6 by a licensed archaeologist.

3) Any Stage 2 archaeological assessment will follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

The Stage 1 report was reviewed by the MTCS on April 18, 2018 and was deemed compliant and was entered into the Ontario Public Register of Archaeological Reports.

1.2 Approach

The results of the Stage 2 investigation are outlined in three sections. The first provides an overview of the general sequence of Pre-Contact and Historic Euro-Canadian Occupation of the study area, followed by a description of the local environment and summary of previous research. The third section describes any Stage 2 work that was completed.

A summary of the results based on the analysis of previously completed archaeological reports, known archaeological sites in the vicinity of the study area and the current landscape and environmental conditions is provided. Relevant references are listed at the end of this report.

1.3 Historical Context

Our understanding of the local sequence of human activity in the study area following the recession of the last ice sheet and the Champlain Sea is incomplete. It is possible, however, to provide a general outline of Pre-Contact occupation in the Ottawa region based on the archaeological investigations conducted throughout eastern Ontario.

1.3.1 Regional Pre-Contact Aboriginal History

Human occupation of southern Ontario dates back approximately 12,000 years before present (BP). These first peoples, known as Paleo-Indians, moved into Ontario as the last of the glaciers retreated northward. The former shores of the vast glacial lakes such as Lake Algonquin in the area that is now southern Georgian Bay, and along the north shore of present day Lake Ontario, contain remnants of some of their sites. Isolated finds of the distinctive, parallel-flaked Paleo-Indian spear points have been recorded in the Rideau Lakes and north of Kingston (Watson 1982; Kennett and Earl 2000). Although there is limited information on the lifestyle of the Paleo-Indians, what little evidence that is available suggests that they were highly mobile hunters and gatherers relying on caribou, small game, fish and wild plants found in the sub-arctic environment (Ellis and Deller 1990).

It was not until the succeeding Archaic Period (*ca*. 9,000 to 3,000 BP), that the environment of southern Ontario approached modern conditions. While more land became available for occupation as the glacial lakes drained, Archaic populations continued as hunter-gatherers; however, they appear to have focused more on local food resources, abandoning the highly mobile lifestyle of their predecessors. Although Paleo-Indian workmanship of stone tools was also lost, the Archaic Period tool kit became more diversified, reflecting the change to a temperate forest environment. Ground stone tools such as adzes and gouges first appeared and may indicate the construction of dug-out canoes or other heavy wood working activities. Extensive trade networks had developed by the middle to late Archaic Period. Items such as copper from the north shore of Lake Superior were exchanged during this time in Archaic Period sites have been identified in the Prescott area.

The Woodland Period (*ca*. 3,000 to 400 BP) is distinguished by the introduction of ceramics. Early Woodland groups continued to live as hunters, gatherers and fishers in much the same way as earlier populations had done. They also shared an elaborate burial ceremonialism evidenced by the inclusion of exotic artifacts within graves (Spence *et al* 1990: 129). Extensive trade networks continued through the early part of this period and Early Woodland populations in Ontario appear to have been heavily influenced by groups to the south, particularly the Adena people of the Ohio Valley. By 1,700 BP, the trade networks had reached their peak and covered much of North America.

Through the Middle Woodland Period (*ca*. 2,400 to 1,100 BP) there was an increase in the decorative styles found on ceramic pots and changes in the shapes and types of tools used. For the first time, it became possible to identify regional cultural traditions within the province, with "Point Peninsula" being the distinctive variant found in eastern and south-central Ontario. A greater number of known sites from this period have allowed archaeologists to develop a better picture of the seasonal round followed in order to exploit a variety of resources within a home territory. Through the late fall and winter, small groups would occupy an inland "family" hunting area. In the spring, these dispersed families would congregate at specific lakeshore sites to fish, hunt in the surrounding forest, and socialize. This gathering would last through to the late summer when large quantities of food would be stored for the approaching winter.

Another significant development of the Woodland Period was the appearance of domesticated plants ca. 1,450 BP. Initially, only a minor addition to the diet, the cultivation of corn, beans, squash, sunflowers and tobacco gained economic importance for Late Woodland peoples. Along with this shift in subsistence, settlements located adjacent to the corn fields began to take on greater permanency as sites with easily tillable farmland became more important. Eventually, semi-permanent and permanent villages were built, many of which were surrounded by palisades, evidence of growing hostilities between neighbouring groups. By the end of the Late Woodland Period, distinct regional populations occupied specific areas of Southern Ontario separated by vast stretches of largely unoccupied land, including the Huron along the north shore of Lake Ontario, and the St. Lawrence Iroquois along the St. Lawrence River.

A number of Middle Woodland Period sites have been identified along the St. Lawrence River corridor both east and west of the study area. There have also been a number of Late Woodland St. Lawrence Iroquois sites identified in the Spencerville area, west of the study area and to the north and east towards Cornwall.

Facing persistent hostilities with Iroquoian populations based in what is now New York State, the Huron moved from their traditional lands on the north shore of Lake Ontario to the Lake Simcoe and Georgian Bay region. Algonquin groups, who had occupied the lands north of the Huron, also appear to have retreated further northward in order to place greater distance between themselves and the Iroquois.

1.3.2 Regional Euro-Canadian History

Samuel de Champlain was the first European to document his explorations of the Ottawa Valley, initially in 1613 and again in 1615. He was preceded, however, by two of his emissaries, Etienne Brule around 1610 and Nicholas de Vigneau in 1611. It is likely that all three travelled at least the lower reaches of the Rideau River.

In the wake of Champlain's voyages, the Ottawa River became the principal route for explorers, missionaries and fur traders travelling from the St. Lawrence to the interior, and throughout the seventeenth and eighteenth centuries this route remained an important link in the French fur trade.

At the time of initial contact, the French documented three Algonquin groups residing in the vicinity of the study area (Heidenreich & Wright 1987: Plate 18). These included the Matouweskarini along the Madawaska River to the west, the Onontchataronon in the Gananoque River basin to the southwest, and the Weskarini, the largest of the three, situated in the Petite Nation River basin. While prolonged occupation of the region may have been avoided as a result of hostilities with Iroquoian speaking populations to the south, at least the northern reaches of the South Nation River basin were undoubtedly used as hunting territories by the Algonquin at this time. The recovery of European trade goods (i.e. iron axes, copper kettle pieces and glass beads) from aboriginal sites throughout the Ottawa River drainage basin has provided evidence of the extent of contact between aboriginals and the fur traders during this period. The English, upon assuming possession of New France, continued to use the Ottawa River as an important transportation corridor.

Significant European settlement of the region did not occur until United Empire Loyalists and other immigrants began to move to lands along the Ottawa River in the late eighteenth and early nineteenth centuries. The need for land on which to settle the Loyalists led the British government into hasty negotiations with their indigenous military allies, the Mississauga, who were assumed, erroneously, to be the only Aboriginal peoples inhabiting eastern Ontario. Captain William Redford Crawford, who enjoyed the trust of the Mississauga chiefs living in the Bay of Quinte region, negotiated on behalf of the British government. In the so-called "Crawford Purchase," the Mississauga were persuaded into giving up Aboriginal title to most of eastern Ontario, including what would become the counties of Stormont, Dundas, Glengarry, Prescott, Russell, Leeds, Grenville and Prince Edward, as well as the front Townships of Frontenac, Lennox, Addington and Hastings and much of what is now the City of Ottawa (including the Geographic Townships of Gloucester, Nepean, Osgoode, Marlborough and North Gower) (Lockwood 1996: 24). Two years after the 1791 division of the Province of Quebec into Upper and Lower Canada, John Stegmann, the Deputy Surveyor for the Province of Upper Canada, undertook an initial survey of four Townships (Nepean, Gloucester, North Gower and Osgoode) on both sides of the Rideau River near its junction with the Ottawa River.

Commonly acknowledged as the first permanent European resident in the Ottawa area, Philemon Wright settled in Hull Township with five families and 33 men in 1800 (Bond 1984:24). The community along the north shore of the Ottawa River grew over the next few years and by 1805 Wright had begun significant lumbering activity in the region.

The scarcity of roads and poor state of transportation beyond the Ottawa River shoreline slowed settlement in many parts of the Ottawa Valley (Belden, 1879); although with the construction of the Rideau Canal (1827 – 1832) the new settlement of Bytown experienced its first major growth in population. This resulted in the development of two areas: Lower Bytown east of the Canal, primarily populated by French Canadian and Irish labourers and merchants, and Upper Bytown to the west with a predominantly white Anglo-Saxon Protestant population. Bytown was incorporated as the City of Ottawa on January 1, 1855, with a population of 10,000. The selection of Ottawa as the capital of Canada in 1857 was the major catalyst in the subsequent development of the city.

1.3.3 Hawkesbury

The town of Hawkesbury was founded in 1798 and was named after Charles Jenkinson, Baron of Hawkesbury. The area was divided into two sections, East and West Hawkesbury and boarders the historic county of Vaudreuil on the east, and borders Lochiel to the south. Following the American Revolution the influx of Loyalist and American settlers to the region resulted in the construction of a number of mills in the early nineteenth century at Hawkesbury. The most significant being the Hawkesbury Mills begun around 1805. Increased demand for lumber by the English who were at this time fighting Napoleon, was further fueled by closures of ports in Norway and Denmark which traditionally supplied lumber.

The community was eventually known as "Hawkesbury Mills" or "Hamilton Mills" by 1810. The mill became one of the largest mills along the Ottawa River.

The Township of Hawkesbury was incorporated in 1859. By this time the township had a high school, merchant shops, a hotel, and four stone churches. The mills were eventually sold to the Hawkesbury lumber company in 1888 and supplied lumber to the United States. The mill continued to produce lumber until the 1920's when the complex was destroyed by fire.

The study area is located in Lots 70, 71, and 72 Concession 1 in Hawkesbury Village (Map 3). There are no historic structures identified in the study area according to Belden's 1881 Historic Atlas.

1.3.4 Highway 34

Highway 34 is a provincially maintained highway that connects Vankleek Hill and Hawkesbury. The distance of the highway is 16.9 kilometres. The Highway was first named in 1930 and has remained relatively unchanged since that time (Bevers 2013). The overpass and County Rd 17 which crosses Highway 34 was constructed in 1956.

1.4 Archaeological Context

1.4.1 Stage 1 Assessment Area Overview

The Highway 34 Overpass is located on Lots 71, 72, and 73, Concession 1, Geographic Township of East Hawkesbury, Prescott, Russell County, Ontario and intersects Country Rd 17. It is oriented along a north-south axis. In the south west corner there is an auto shop (Kal's Tires), in the south east corner is a small brick structure that appears after the overpass was constructed as seen in the aerial photographs (Map 5). In the north west corner there is some residential development and in the east corner there is little development and a small treed section that borders Highway 17. All around the overpass there appears to be fill creating an embankment on both the north and south sides of the overpass. A rail line and Hawkesbury Creek are also present on the west side of Country Rd 17.

1.4.2 The Natural Environment

Highway 34 Overpass is located in the Russell and Prescott sand plains, an area of sands and gravels first formed as a delta deposited by the Ottawa River and its tributaries into the now extinct Champlain Sea (Chapman and Putman 1968: 209-210). The soils in this region are poor for agricultural development although dairy farming has been successfully implemented in areas with finer sands and silts (Chapman and Putman 1968: 210). Amelioration has also improved agricultural yields in these areas with some success in growing flax, potatoes, and grain corn.

The original vegetation of the area included pines, American elm, red maple, white ash, black ash, basswood, and yellow birch. In boggier areas, larch, white spruce, black spruce, alder, and willow can be found (Chapman and Putman 1968: 209). White birch and trembling aspen may also grow in abandoned fields on the sand plains. The implementation of forestry management practices beginning in 1928 has resulted in large land parcels being given over to reforestation leading to the creation of wooded areas such as LaRose forest.

The physiology of the study area (Map 4) is primarily sand plains on the western portion of the study area and drumlinized till plains and clay plains on the eastern portion.

1.4.3 Previous Research and Archaeological Investigations

There has been a moderate amount of archaeological activity in the Hawkesbury area. In 2008 Jacques Whitford conducted a Stage 1-2 archaeological assessment on Waterdown Road Corridor Option. ASI has conducted a Stage 1-2 in 2014 for a culvert rehabilitation/replacement along Highway 34.

Further east in Point Fortune, Ontario Heritage Trust conducted several seasons of archaeological excavations since the late 1970's at the MacDonelle/Williamson house in Pointe Fortune. The house was constructed in the 1830's and now serves as a museum (Doroszenko 2003A, 2003B, 2004).

Specifically related to the study area, a Stage 1 archaeological assessment was conducted by Jacqueline Fisher in 2001 for modifications to Highway 34. Her study indicated that there were several areas of archaeological potential along the highway. In regards to the study area, Fisher indicates that the western section by the Kal Tire has been disturbed while some sections on the east side of Highway 34 have high archaeological potential (Fisher 2001).

Immediately east of the study area a Stage 1 assessment by AECOM was undertaken of Country Rd 17. The findings in this report indicated that there was no archaeological potential based on the disturbances from the construction of Country Rd 17 (Grant 2014).

A search of the MTCS archaeological sites database revealed that there are no registered archaeological sites within 1 km of the study area (accessed April 23, 2018).

2.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

2.1 Field methodology

Subsurface testing involved the hand excavation of test pits in intervals of 5 metres. The excavated soil was screened through a 6 mm mesh and the test pit backfilled upon completion of the investigation. Where artifacts or features of archaeological interest are identified, the test pit interval will be intensified (i.e., reduced to 2.5 metres). GPS coordinates will be taken of all positive test pits (i.e., test pits where artifacts or features of archaeological interest are identified). A general field log was maintained along with digital photographs of the investigation and representative soil profiles.

A field logbook was maintained for the duration of the investigation detailing pertinent information and digital photographs were taken of the tested areas, topography, and specific representative test pits. Location and direction of photographs taken in the field represented on Maps

3.0 RECORD OF FINDS

Survey Method: Test pitting

Number of Artifacts: 0

Date Tested: April 24, 2018

Weather Conditions: Overcast 16°C

The eastern half of the study area (Operation A) consisted of overgrown grassland that currently has no current use. The North and south quadrants are separated by Highway 17 with the interchange to Highway 34 to the east. A grey brick structure stands in the south east quadrant while the north east quadrant has no structures. Soils in this area displayed evidence of disturbance with gravel mixed in with the medium brown sandy loam soils. Subsoil, an orange brown sandy clay, was reached at approximately 25 cm below the surface. No artifacts or features were found in this section. Images 1-9, pp.9-13 represent photos taken while excavating the eastern half of the study area.

The western half of the study area (Operation B) consists of an old rail line and Hawkesbury Creek. This area also has a trail and several trees the north and south of Highway 17. A small bridge that was blocked (no pedestrian access) is located on the south west quadrant. Soils in this half were sandier than the eastern section but also exhibited signs of disturbance with gravel intermixed into the medium brown sandy soil. Subsoil was reached at approximately 23 cm below the surface. No artifacts or features were found in this section. Images 10-23, pp.13-20 represent photos taken while excavating the western half of the study area.

4.0 CONCLUSION

On behalf of Dillon, Golder conducted a Stage 2 archaeological assessment for the Highway 34 Overpass at Highway 34 in Hawkesbury, Ontario. This assessment was completed in response to an EA and detail design study reviewing alternatives to replacement of the Overpass and was based on the recommendations made in the Stage 1 Archaeological Assessment. The objective of this assessment was to identify known archaeological sites on and within the vicinity of the study area and to assess the archaeological potential of the property under investigation.

Test pitting was conducted on April 24, 2018 with permission to access the site from the Client. Areas that were test pitted are represented on Map 7. Photographs were taken during the visit to document the stage 2 test pitting survey (Map 6).

This Stage 2 archaeological assessment conducted by Golder in revealed that the entire area exhibited signs of disturbance. No artifacts or features were found during the excavation.

5.0 RECOMMENDATIONS

Based on the stage 2 archaeological investigation the following recommendation is made:

1) No artifacts or archaeological features were identified during the stage 2 investigation. As such no further archaeological work is recommended in the study area identified in Map 2.

The Ontario Ministry of Tourism, Culture and Sport is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of concurrence with the findings presented herein.

6.0 IMAGES

Image 1: Landscape showing south east quadrant facing east.

Image 2: Grey Stone building in southeast quadrant facing north.

Image 3: Test pit in eastern half showing gravel disturbed soils.

Image 4: Crew test pitting in southeast quadrant facing east.

Image 5: Embankment and ditch bordering along the edge of the southeast quadrant facing north.

Image 6: Landscape showing northeast quadrant crew test pitting facing southwest.

Image 7: Northeast quadrant showing landscape facing east.

Image 8: Drainage in the northeast quadrant facing west.

Image 9: Crew test pitting in northeast quadrant facing west.

Image 10: Crew test pitting in northwest quadrant facing east.

Image 11: Train tracks on western half of study area facing west.

Image 12: Test pit in western half of study area.

Image 13: Hawkesbury Creek facing northwest.

Image 14: Crew test pitting in northwest quadrant facing northwest.

Image 15: Bridge overpass Highway 17 over train tracks in north west quadrant facing south east.

Image 16: Treed section in the north west quadrant facing south west.

Image 17: Treed section in north west quadrant showing small embankment facing south.

Image 18: Crew test pitting north western quadrant in treed section facing south east.

Image 19: Test pitting in the western section of north west quadrant facing south west.

Image 20: South west quadrant showing small path and bridge overpass Highway 17 facing north.

Image 21: Footbridge in south west quadrant facing north west.

Image 22: Crew test pitting southwest quadrant facing north east.

Image 23: Gravel on surface in south west quadrant facing south.

7.0 REFERENCES

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1897 **Illustrated Historical Atlas of the Counties of Stormont, Dundas and Glengarry, Ontario**. Reprint Port Elgin 1972.

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Watson, Gordon
1982 **"Prehistoric Peoples of the Rideau Waterway."** In Archaeological and Historical Symposium, October 2-3, 1982, Rideau Ferry, Ontario. F.C.L. Wyght, ed., Smiths Falls: Performance Printing.

8.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*. Archaeological sites recommended for further archaeological fieldwork or protection remains subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ontario Ministry of Consumer Services is also immediately notified.

9.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder Associates Ltd. (“Golder”) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied, is made.

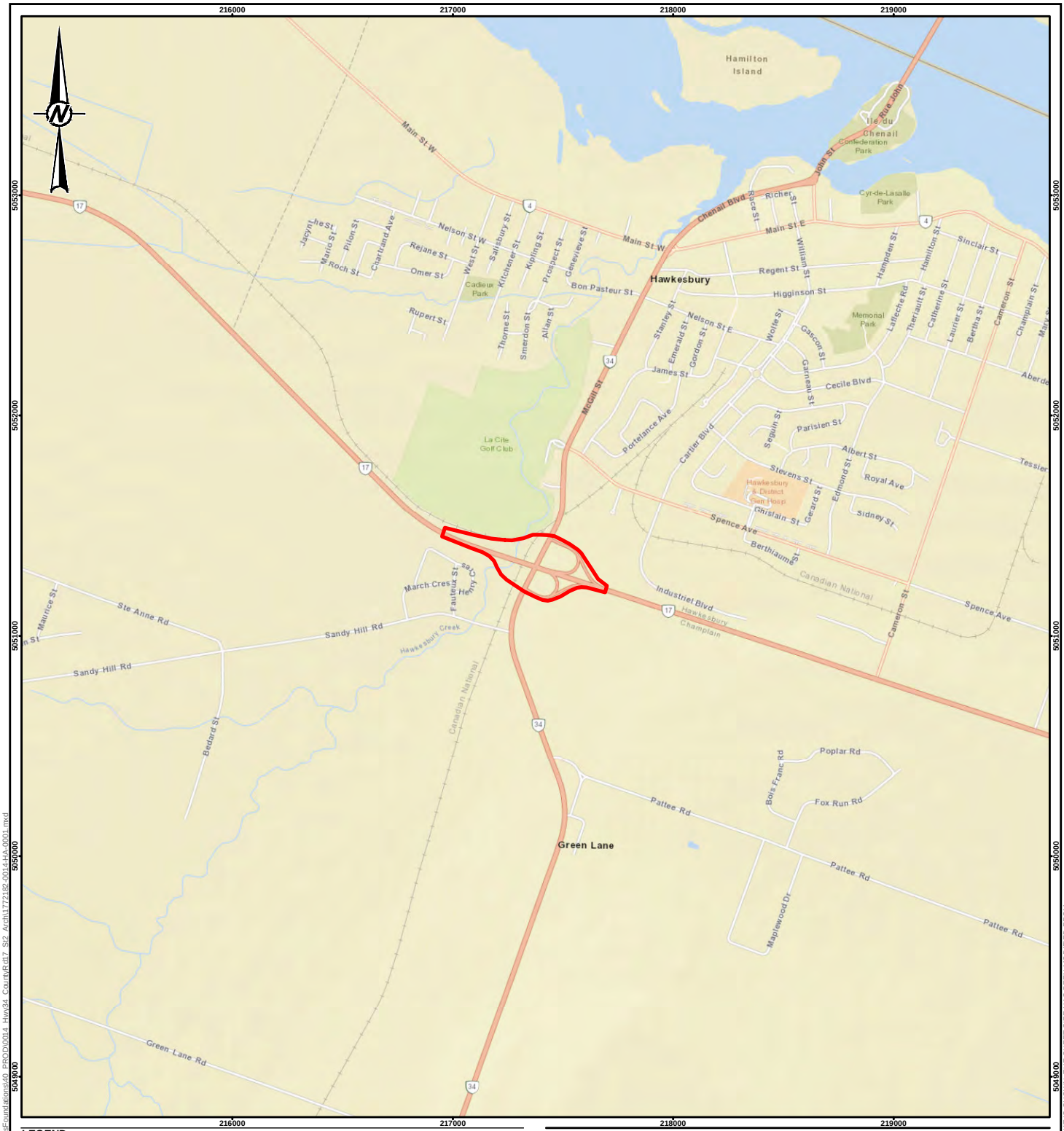
This report has been prepared for the specific site, design objective, developments and purpose described to Golder by C2MH (the “Client”). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder’s express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder’s report or other work products.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the MTCS’ *Standards and Guidelines for Consultant Archaeologists* (2011).

10.0 MAPS



LEGEND

STUDY AREA

0 250 500 1,000

1:25,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 8 VERTICAL DATUM: CGVD28

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
KEY PLAN

CONSULTANT
Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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KEY MAP

SCALE 1:50,000

LEGEND

- STUDY AREA
- ROADWAY
- RAILWAY
- TOPOGRAPHIC CONTOUR, metres
- WATERCOURSE
- WETLAND
- LOT FABRIC

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
2. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 25 50 100

1:2,500 METRES

CLIENT

MTO

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE

SITE PLAN

CONSULTANT

Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

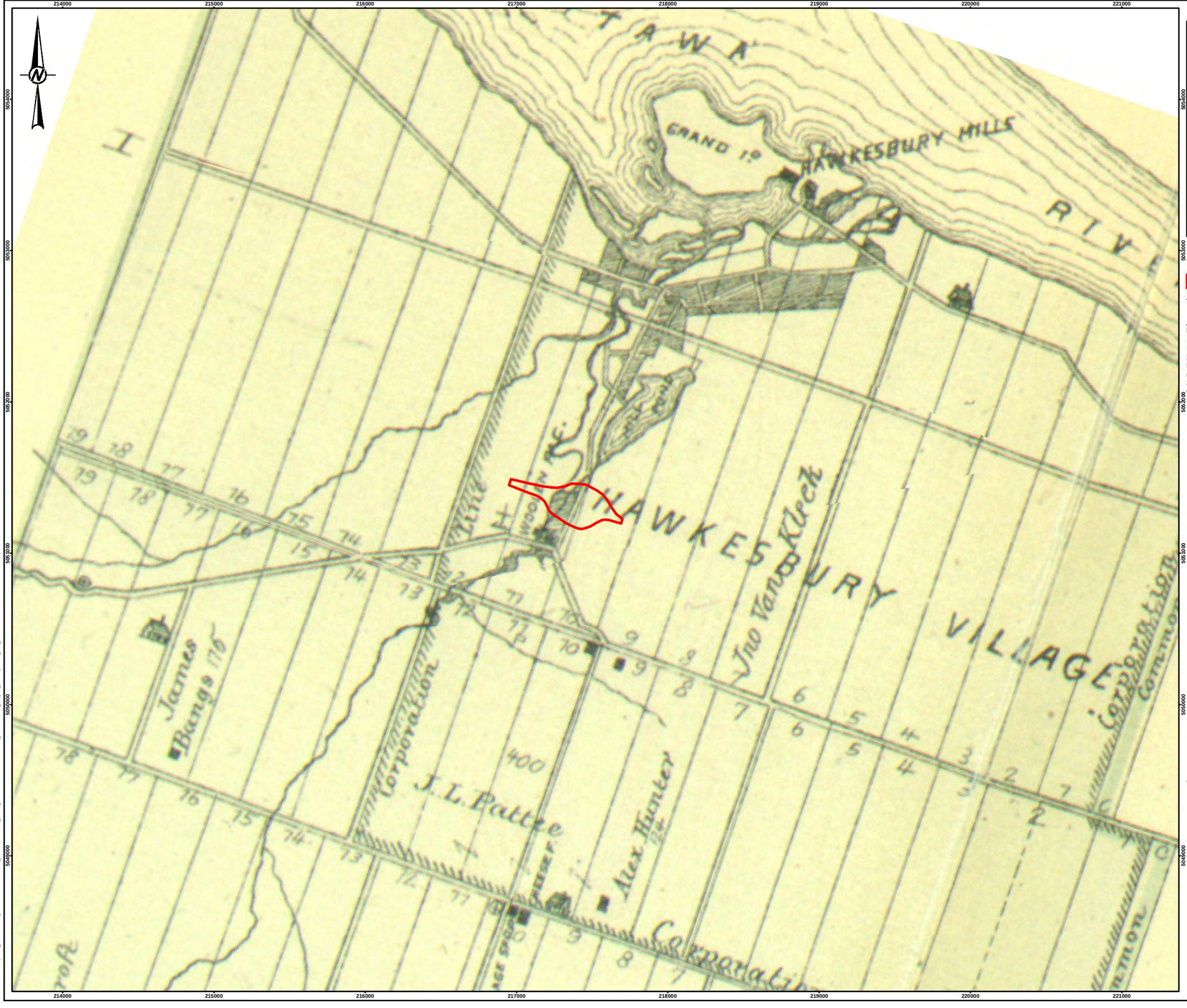
PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:

25mm

214000 215000 216000 217000 218000 219000 220000 221000

5054000 5053000 5052000 5051000 5050000 5049000



214000 215000 216000 217000 218000 219000 220000 221000

KEY MAP

SCALE 1:50,000

LEGEND

STUDY AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. HISTORIC BASE MAP: BELDEN, H., 1881. PRESCOTT AND RUSSELL SUPPLEMENT IN ILLUSTRATED ATLAS OF THE DOMINION OF CANADA TORONTO: H. BELDEN & CO.
2. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 250 500 1,000

1:25,000 METRES

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
1881 BELDEN'S HISTORIC ATLAS

CONSULTANT

Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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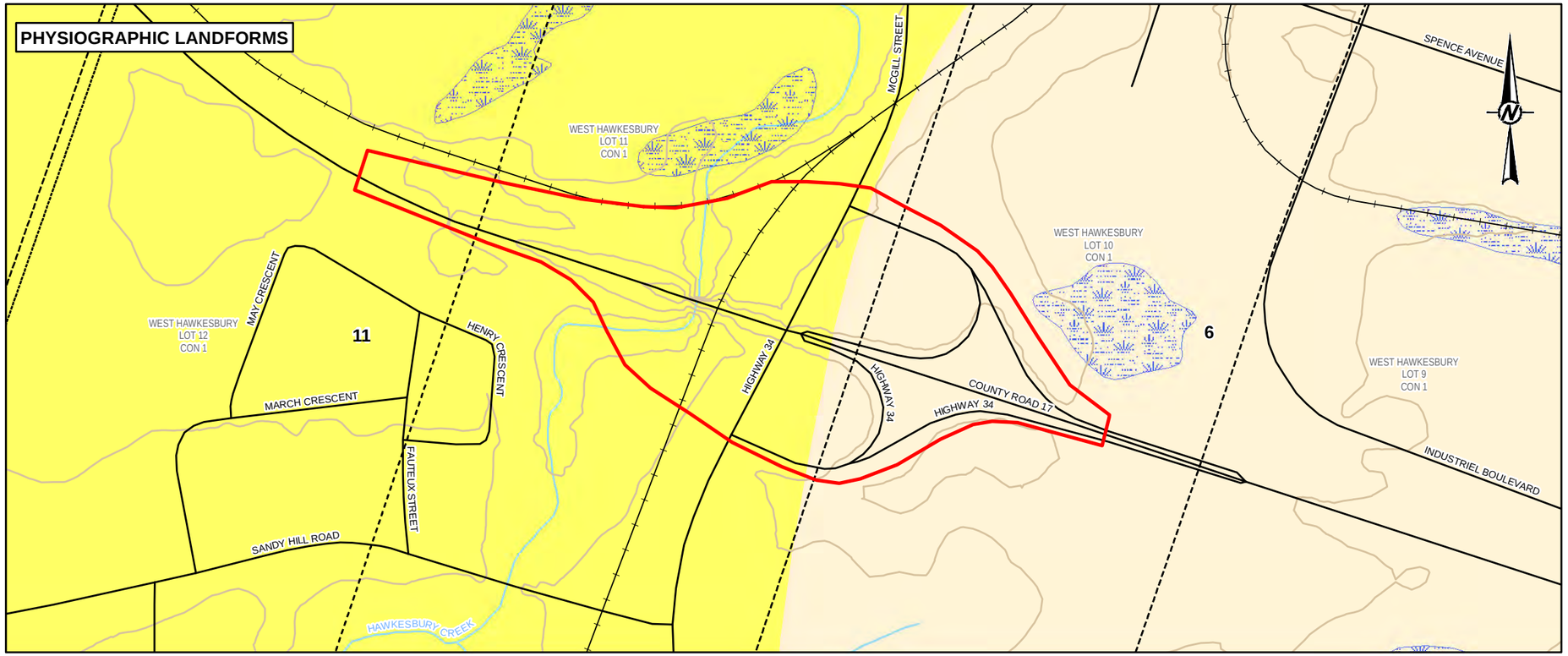
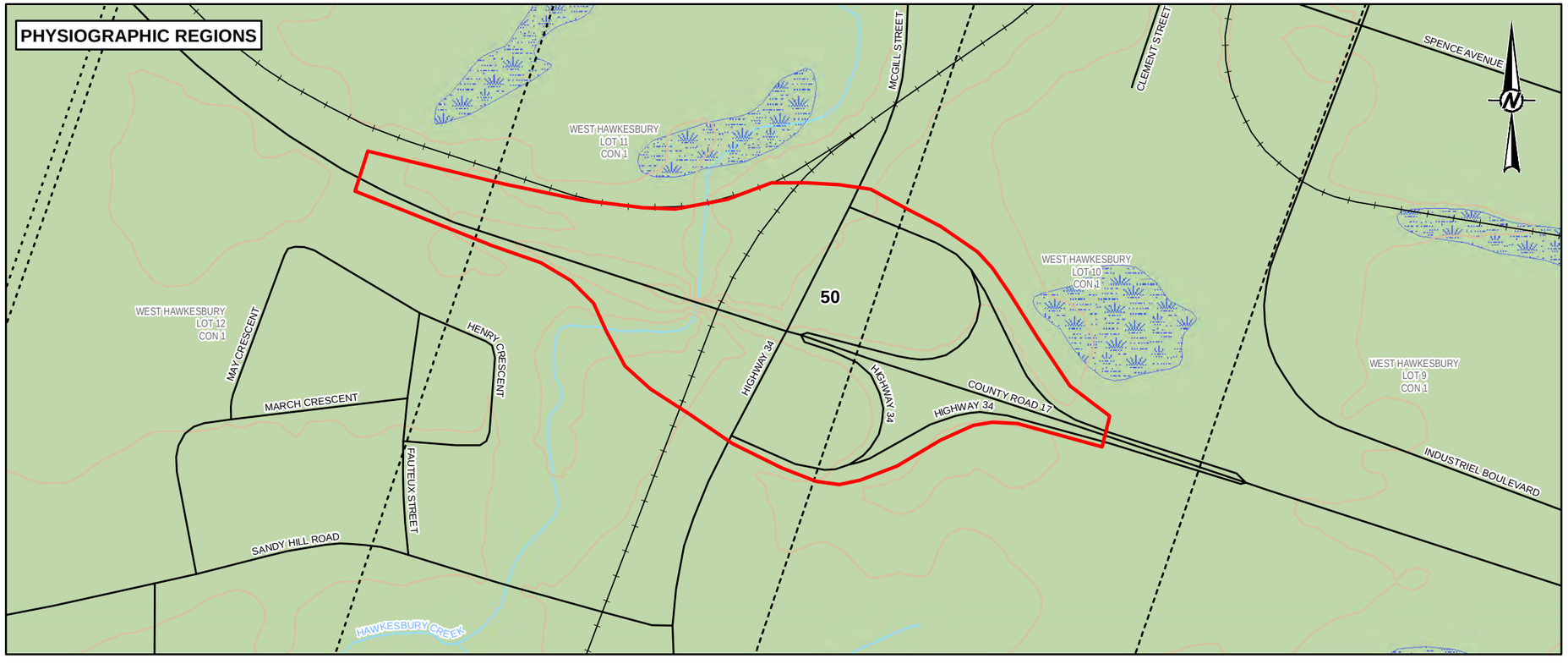
PHYSIOGRAPHIC LANDFORMS



PHYSIOGRAPHIC REGIONS



KEY MAP

SCALE 1:50,000

LEGEND

- STUDY AREA
- ROADWAY
- RAILWAY
- TOPOGRAPHIC CONTOUR, metres
- WATERCOURSE
- WETLAND
- LOT FABRIC

PHYSIOGRAPHIC LANDFORMS

- 11: Sand Plains
- 6: Till Plains (Drumlinized)

PHYSIOGRAPHIC REGIONS

- 50, Russell And Prescott Sand Plains

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CHAPMAN, L.J. AND PUTNAM, D.F. 2007. PHYSIOGRAPHY OF SOUTHERN ONTARIO; ONTARIO GEOLOGICAL SURVEY, MISCELLANEOUS RELEASE-DATA 228
2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
3. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
4. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83,
COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 50 100 200
1:5,000 METRES

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
PHYSIOGRAPHY

CONSULTANT
Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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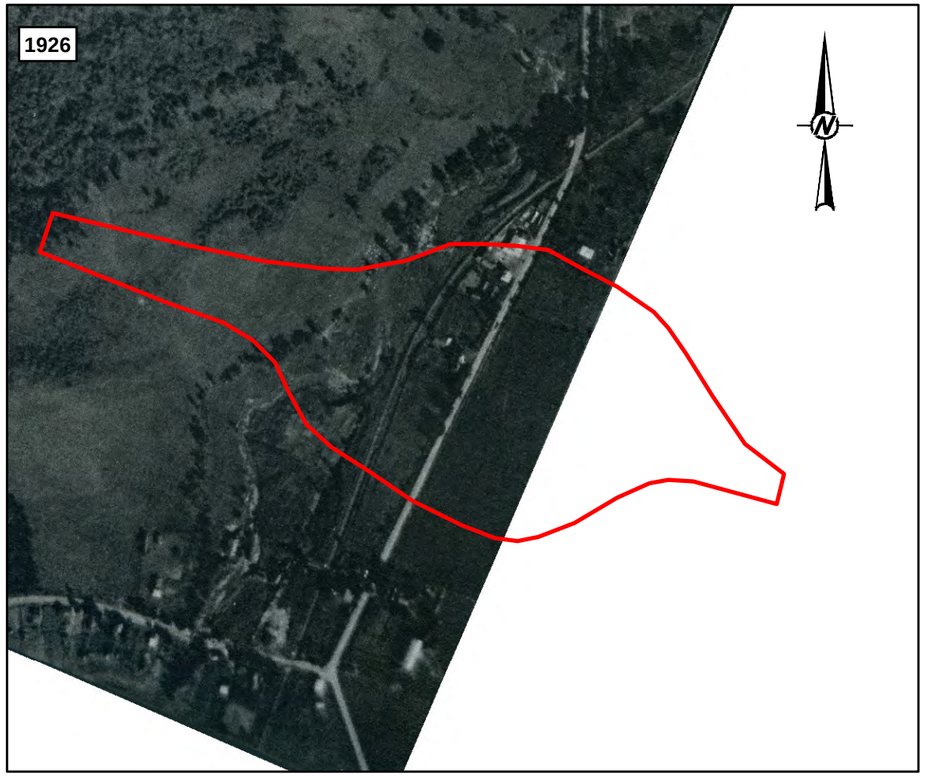

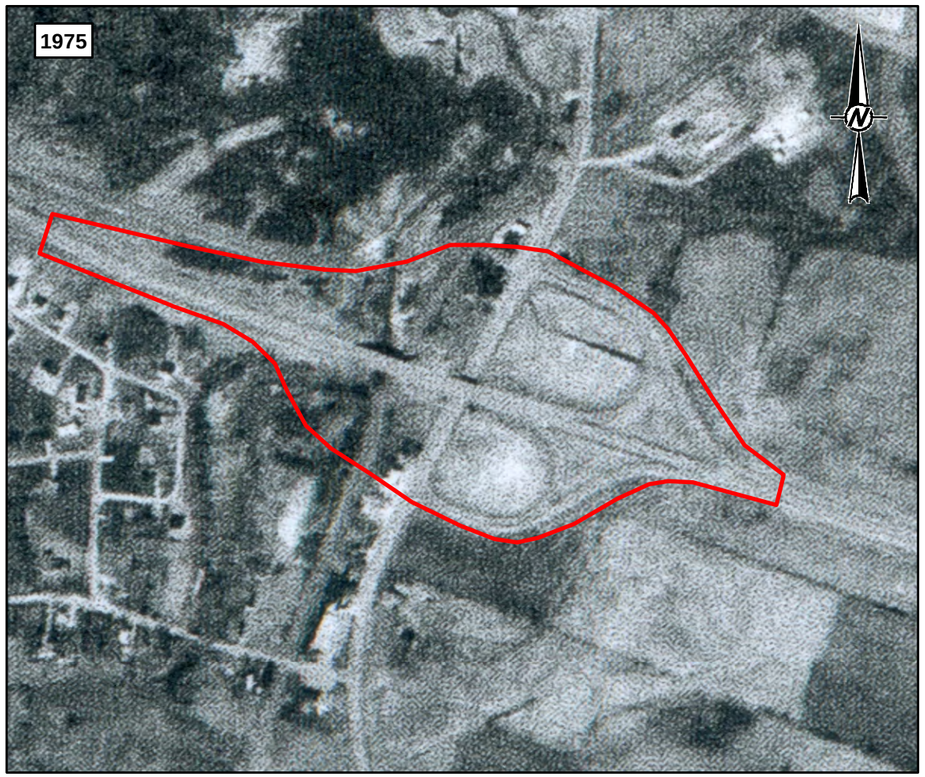

KEY MAP

SCALE 1:50,000

LEGEND

STUDY AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. 1926 AIR PHOTO, NAPL, HA115-9
2. 1927 AIR PHOTO, NAPL, HA272-36
3. 1946 AIR PHOTO, NAPL, A10348-261
4. 1975 AIR PHOTO, NAPL, A23966-180
5. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
6. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 60 120 240

1:6,000 METRES

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
AERIAL PHOTOGRAPHS

CONSULTANT
Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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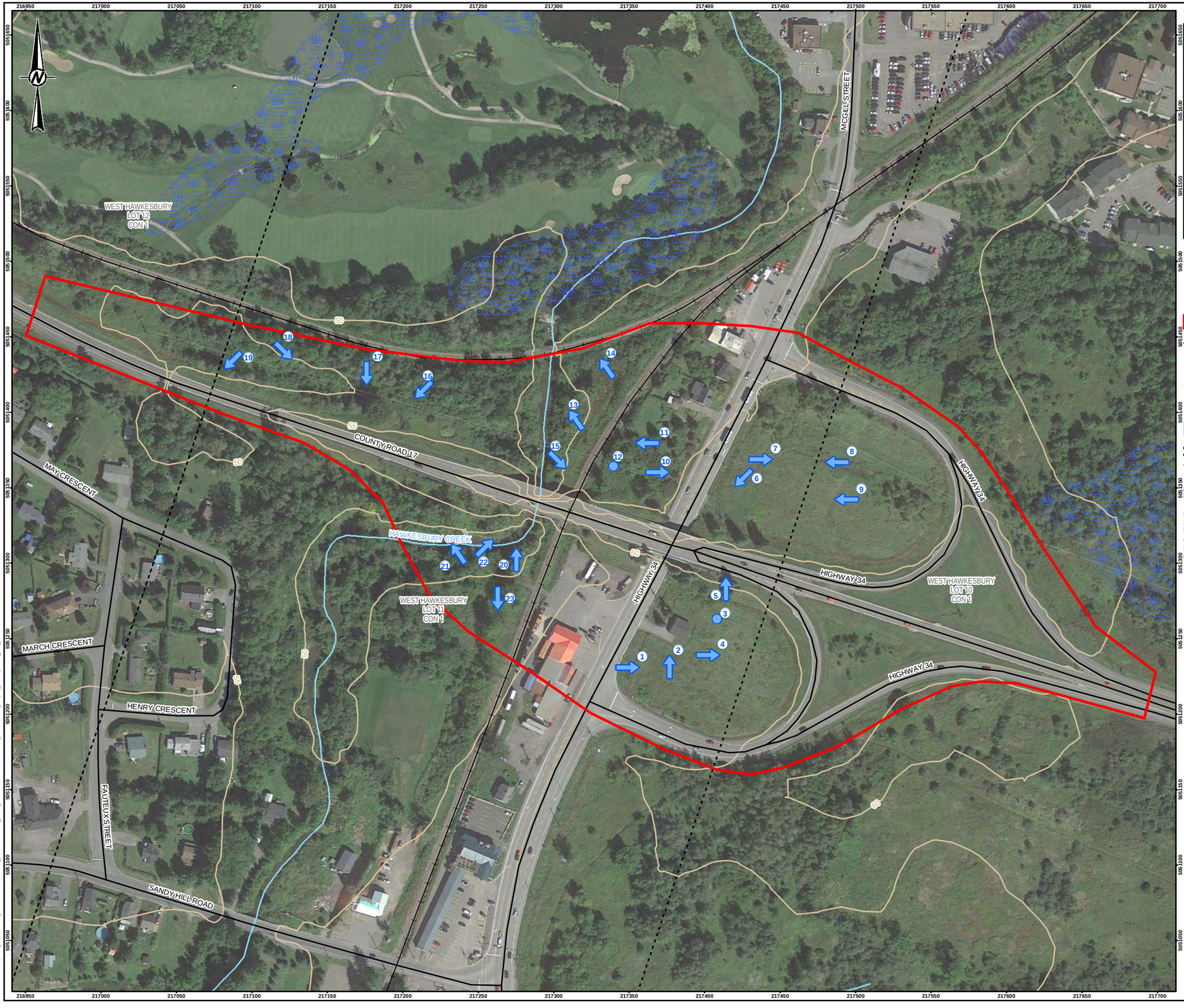

KEY MAP

SCALE 1:50,000

LEGEND

- PHOTO LOCATION AND DIRECTION
- PHOTO LOCATION POINTING DOWN
- STUDY AREA
- ROADWAY
- RAILWAY
- TOPOGRAPHIC CONTOUR, metres
- WATERCOURSE
- WETLAND
- LOT FABRIC

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
2. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 25 50 100
1:2,500 METRES

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
PHOTO LOCATION AND DIRECTION

CONSULTANT
Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	**6**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B (279mm x 432mm)

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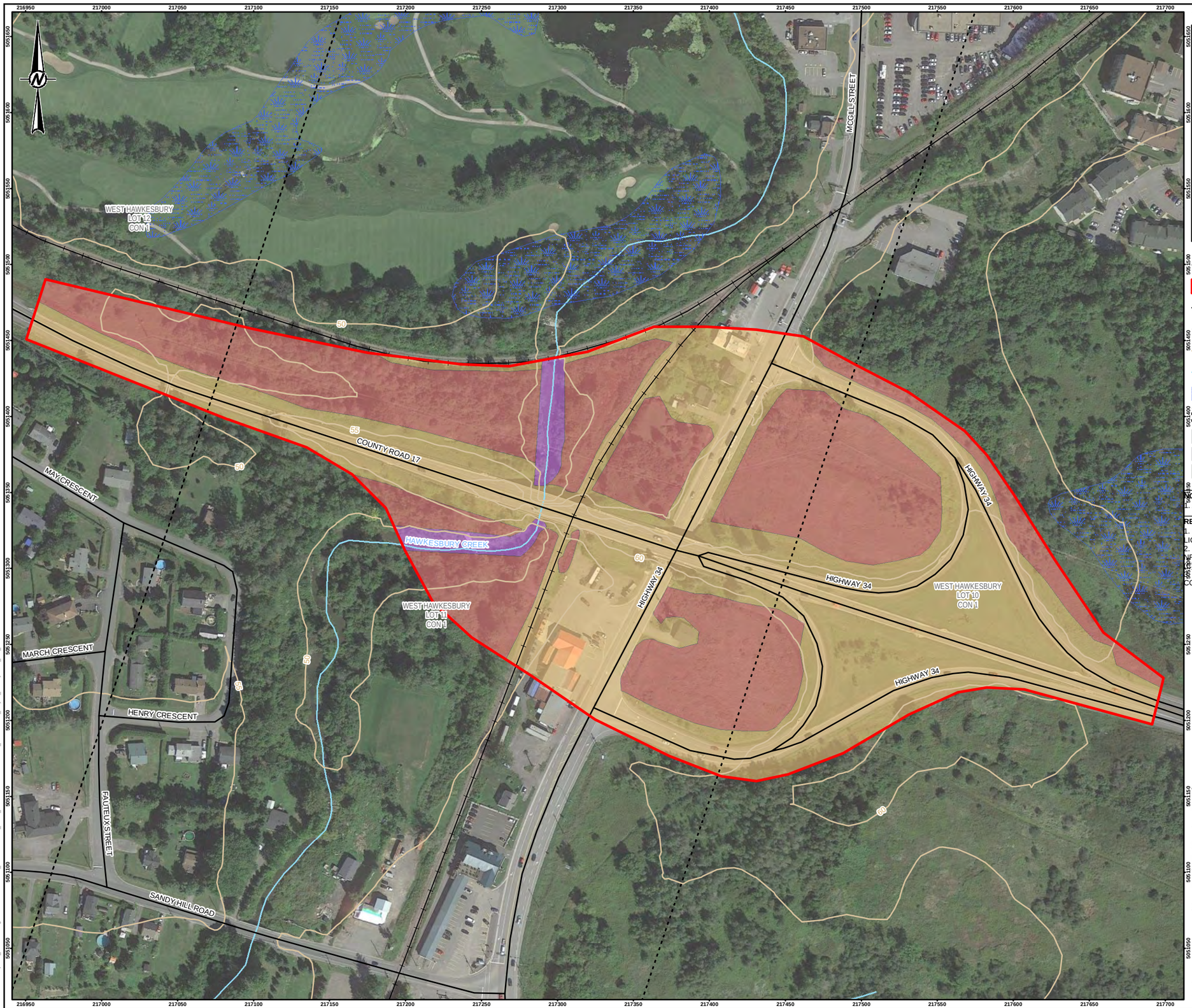

KEY MAP

SCALE 1:50,000

LEGEND

- STUDY AREA
- ROADWAY
- RAILWAY
- TOPOGRAPHIC CONTOUR, metres
- WATERCOURSE
- WETLAND
- LOT FABRIC
- TEST PITTED AT 5 METRE INTERVALS
- DISTURBED
- WET

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
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PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83,
COORDINATE SYSTEM: MTM ZONE 8, VERTICAL DATUM: CGVD28

0 25 50 100
1:2,500 METRES

CLIENT
MTO

PROJECT
STAGE 2 ARCHAEOLOGICAL ASSESSMENT
HIGHWAY 34 AND COUNTY ROAD 17, HAWKESBURY, ONTARIO

TITLE
RESULTS OF STAGE 2 FIELDWORK

CONSULTANT
Golder Associates

YYYY-MM-DD	2019-07-30
DESIGNED	----
PREPARED	BR
REVIEWED	SL
APPROVED	HJD

PROJECT NO.	CONTROL	REV.	MAP
1772182	0014	0	7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

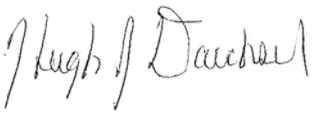
Path: N:\Active\Spatial_IM\MTO\Maple\EasternRetainer\69B_PRO\1772182_Dillon_PavementsFoundations\40_PROD\0014_Hwy34_CountyRd17_St2_Arch\1772182-0014-HHA-0007.mxd

Signature Page

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

Golder Associates Ltd.

Shan Ling, M.A.
Archaeologist



Hugh J. Daechsel, M.A.
Principal, Senior Archaeologist

STWL/HJD/ca

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