

APPENDIX

C-3 *STAGE 1 ARCHAEOLOGICAL ASSESSMENT*

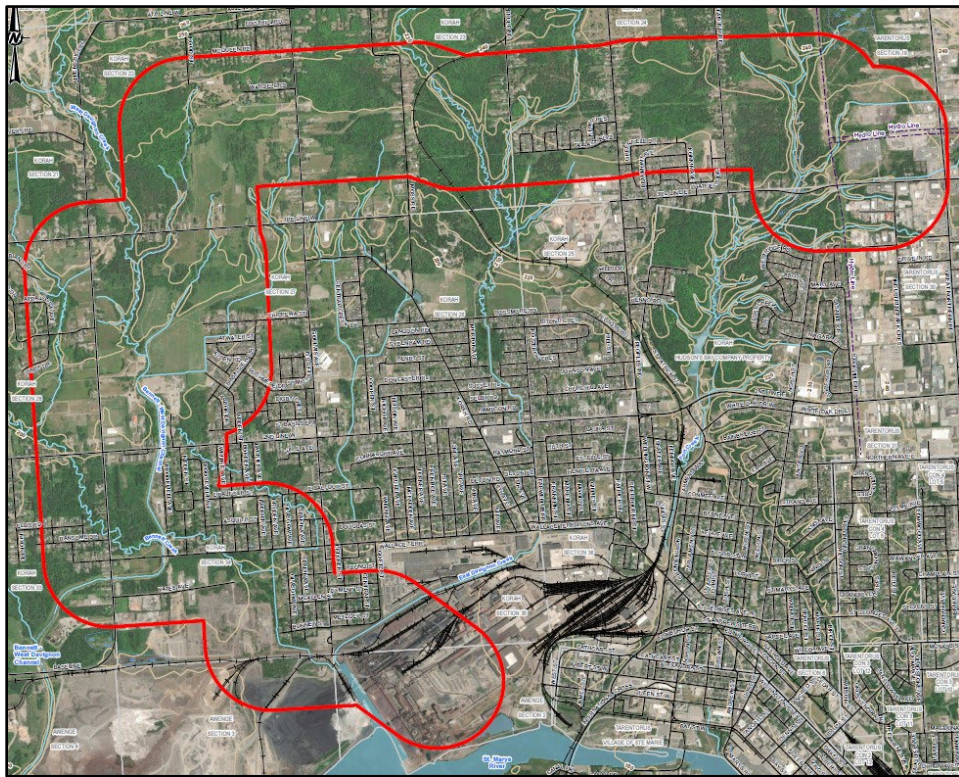
PUC TRANSMISSION LP

STAGE 1 ARCHAEOLOGICAL ASSESSMENT

230 KV TRANSMISSION PROJECT – CLASS
ENVIRONMENTAL ASSESSMENT

SEPTEMBER 26, 2022

FINAL DRAFT





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ALEXANDRA MULLAN- P1006

STAGE 1 ARCHAEOLOGICAL ASSESSMENT

230 KV TRANSMISSION PROJECT – CLASS ENVIRONMENTAL ASSESSMENT

PUC TRANSMISSION LP

PART OF SECTIONS 2-3, 19, 21-24, 27-28, AND 33-35, GEOGRAPHIC
TOWNSHIP OF KORAH, ALGOMA DISTRICT, NOW THE CITY OF SAULT
STE. MARIE, ONTARIO

FINAL DRAFT

PROJECT NO.: 221-01502-00

DATE: SEPTEMBER 26, 2022

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September 26, 2022

Stage 1 Archaeological Assessment

230 KV Transmission Project – Class Environmental Assessment

Part of Sections 2-3, 19, 21-24, 27-28, and 33-35, Geographic Township of Korah, Algoma District, now the City of Sault Ste. Marie, Ontario

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EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) has been retained by PUC Transmission LP (the Client) to undertake a Stage 1 archaeological assessment as part of a Class Environmental Assessment (Class EA) for the 230 kilovolt (kV) Transmission Project. The study area consists of an approximately 10 kilometer (km) long and 500 metre (m) wide corridor that begins at the Third Line Transmission Station (TS) at Third Line East and Great Northern Road and terminates in a new transformer station located at the Algoma Steel Plant along the St. Mary's River (Figure 1 and Figure 2). The study area crosses multiple lots and concessions in the Geographic Township of Korah, District of Algoma, now the city of Sault Ste. Marie, Ontario.

This archaeological assessment was required to fulfill the requirements of the Environmental Assessment Act and *O.Reg. 116/01*. This archaeological assessment was triggered by the Class EA for Minor Transmission Facilities (2011) process under the Environmental Assessment Act to ensure the Client is compliant with the Ontario Heritage Act, 1990 and constitutes a Category 'B' Project. This archaeological assessment was carried out during the Detail Design phase.

The proposed project includes an expansion of the electrical supply related to load expansion at Algoma Steel, which will require a double circuit 230 kV line and a transformer station from the Third Line TS to the Algoma Steel Plant. The Stage 1 archaeological assessment includes a review of previous archaeological research, historic maps and aerial photographs, land registry documents, and local histories. This assessment included one potential route option for the 230 kV line, and new station options for the PUC Station, Algoma Steel Inc. Electric Arc Furnace Station, and the Hydro One Third Line Station. The proposed infrastructure identified as retaining archaeological potential and require Stage 2 archaeological assessment are listed in **Table 1**.

Table 1: Infrastructure Requiring Stage 2 Archaeological Assessment

Proposed Infrastructure	Stage 2 Archaeological Assessment Required
Route Option D	Stage 2 required.
PUC Station Option 1	Stage 2 required.
PUC Station Option 1-A	Stage 2 required.
PUC Station Option 2	No Stage 2 required.
Algoma Steel Inc. Electric Arc Furnace Station	No Stage 2 required.
Hydro One Third Line Station	Stage 2 required.

The Stage 1 archaeological assessment was carried out in accordance with the Ontario Ministry of Tourism, Culture, and Sport (MTCS)'s *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011) supporting the *Ontario Heritage Act*. Based on the results of background historic research and an understanding of the geography and natural environment of the study area, **a Stage 2 archaeological assessment is recommended for areas determined to retain archaeological potential should they be impacted by ground disturbing activities (Figure 8).**

As the study area is located within northern Ontario and on Canadian Shield terrain, the recommendations for the Stage 2 archaeological assessment are to follow the requirements of Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011). The recommendations are as follows:

- Test pit survey is required at 5 m intervals in areas between 0-50 m from existing water features as per Section 2.1.5, Standards 1 and 2a of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Test pit survey is required at 5 m intervals in areas between 0-50 m from the identified glacial strandline, and at 10 m intervals between 50-150 m from the identified glacial strandline as per Section 2.1.5, Standards 2b of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Test pit survey is required at 5 m intervals in areas between 0-50 m from historic transportation routes, and at 10 m intervals between 50-150 m from historic transportation routes as per Section 2.1.5, Standards 2b of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Agricultural fields must be subject to pedestrian survey at 5 m intervals as per Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (2011). Prior to pedestrian survey, the fields must be ploughed and weathered to allow for soil visibility of at least 80%; and,
- All other areas have been identified as previously disturbed or having low archaeological potential, and no further assessment is required in these areas as per Section 2.1.5, Standard 2c of the *Standards and Guidelines for Consultant Archaeologists* (2011).

It should be noted that the results of this report are not considered final until the above stated recommendations have been accepted by the Ontario MTCS, and the report has been entered into the Public Register of Archaeological Reports.

PROJECT PERSONNEL

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1 PROJECT CONTEXT

1.1 OBJECTIVES

The objectives of a Stage 1 archaeological assessment are as follows:

- To provide information regarding the property's geography, history, relevant previous archaeological fieldwork, and current land conditions;
 - To provide a detailed evaluation of the property's archaeological potential; and,
 - To recommend appropriate strategies for Stage 2 survey when required.
-

1.2 DEVELOPMENT CONTEXT

WSP Canada Inc. (WSP) has been retained by PUC Transmission LP ((PUC) the 'Client') to undertake a Stage 1 archaeological assessment as part of a Class Environmental Assessment (Class EA) for a 230 KV Transmission Project in the city of Sault Ste. Marie, in northern Ontario. The study area consists of an approximately 12 kilometer (km) long and 1 km wide corridor that begins at the Third Line Transmission Station (TS) at Third Line East and Great Northern Road and terminates in a new transformer station located at the Algoma Steel Plant along the St. Mary's River (Figure 1 and Figure 2). The study area crosses multiple lots and concessions in the Geographic Township of Korah, District of Algoma, now the city of Sault Ste. Marie, Ontario.

This archaeological assessment was required to fulfill the requirements of the *Environmental Assessment Act* and *O.Reg. 116/01*. This archaeological assessment was triggered by the *Class EA for Minor Transmission Facilities* (2011) process under the *Environmental Assessment Act* to ensure the Client is compliant with the *Ontario Heritage Act, 1990* and constitutes a Category 'B' Project. This archaeological assessment was carried out during the Detail Design phase.

PUC has identified the need for a double-circuit 230 kilovolt (kV) transmission line and a new transformer station (the Project). The Project is proposed to serve the immediate need for increased power supply to Algoma Steel for its new electric arc furnaces (EAFs) project and to provide PUC redundancy of supply to accommodate future maintenance or service interruptions in the city. The Stage 1 archaeological assessment includes a review of previous archaeological research, historic maps and aerial photographs, land registry documents, and local histories.

1.3 HISTORICAL CONTEXT

The following sections provide a brief outline of the pre-contact and post-contact periods of north-central Ontario and the study area to provide a generalized historical framework for the archaeological assessment.

1.3.1 PRE-CONTACT PERIOD

The pre-contact period in Ontario has been reconstructed, primarily, from the archaeological record and interpretations made by archaeologists through an examination of material culture and site settlement patterns. Technological and temporal divisions of the pre-contact period have been defined by archaeologists based on

changes to natural, cultural, and political environments that are observable in the archaeological record. It is pertinent to state that although these divisions provide a generalized framework for understanding the broader events of the pre-contact period, they are not an accurate reflection of the fluidity and intricacies of cultural practices that spanned thousands of years. The following sections present a sequence of Indigenous land-use during periods defined by archaeologists from the earliest human occupation of Ontario following deglaciation to the period when Europeans began to settle the land. These periods are:

- The Paleo Period
- The Archaic Period
- The Woodland Period
- The Post-Contact Period

PALEO PERIOD

The Paleo period represents the earliest human occupation of the region and is divided into the Early (12,000-10,000 BP) and Late (10,000-7,500 BP) Paleo periods. In north-central Ontario, there is no confirmed evidence of an Early Paleo occupation, largely because deglaciation did not occur until around 10,500 BP when the Laurentide Ice Sheet retreated from the northern shores of Lake Huron and the eastern shores of Lake Superior. Upon deglaciation, the area was largely inundated by glacial Lake Algonquin except for exposed land situated north of Sault Ste. Marie and east of Goulais Bay between Lake Algonquin and the Laurentide Ice Sheet (Heath & Karrow, 2007). However, no evidence of occupation of the exposed land has been recorded during this period. The earliest confirmed human occupation of northern Lake Huron and Georgian Bay dates to ca. 9,500 BP at the Sheguiandah site on Manitoulin Island (Julig, 2002).

A tundra-like environment emerged after deglaciation, providing a suitable habitat for large herds of big game, such as caribou. It is presumed that the earliest inhabitants would have been drawn to the area by migrating caribou herds, supplementing their diet as required with small game, fishing, and gathering of wild edible plants (Julig, 2002). Unfortunately, the acidic soils of the boreal forest are averse to the survival of organic material, such as floral and faunal remains and bone tools, and interpretation of subsistence strategy is based on the relationship between the paleoenvironment, lithic assemblages, and settlement patterns.

Similar to Paleo populations elsewhere in Ontario, there appears to be a preference for littoral habitation sites, particularly near the presence of lithic outcrops. For example, there is an abundance of quartzite available near the Sheguiandah site where there is evidence of long-term reoccupation of the site along various relic shorelines. Similarly, at the western end of Lake Superior, the Cummins site is situated along a relic shoreline and near a taconite outcrop, the favoured tool stone material of the first inhabitants on the western shoreline of Lake Minong (modern Lake Superior) (Julig, 1994).

ARCHAIC PERIOD

The Archaic period in north-central Ontario roughly dates to 7,500-2,500 BP. Generally, in North America, the Archaic period represents a transition from big game hunting to broader, more generalized subsistence strategies dependent on local environmental parameters. This period is characterized by the following traits:

- An increase in stone tool variation and reliance on local stone sources;
- The emergence of notched and stemmed projectile point types;
- A reduction in extensively flaked tools;
- The use of native copper;

- The use of bone tools for hooks, gorges, and harpoons;
- An increase in extensive trade networks; and,
- The production of ground stone tools.

It is important to note that not all of the traits above are expressed by more northern Archaic cultures (Hamilton, 1991).

The Archaic period in Ontario is generally divided into the Early (8,000 – 7,000 BP), Middle (7,000 – 4,500 BP), and Late (4,500 – 2,300 BP) Archaic. However, little is known of the Archaic in the boreal forest, with most sites being attributed to the Shield Archaic culture (8,000 – 2,500 BP), which encompasses all three subperiods.

In 1972, J.V. Wright proposed the concept of the Shield Archaic to include the various, lesser-known Archaic cultures spread across the Canadian Shield. It is believed that these cultures operated in small, nomadic, kin-based units who moved to various locations based on available resources and seasonal constraints. A broad-spectrum foraging strategy was adapted to survive in the harsh and fluctuating dependency of the boreal forest. It has been suggested that the production of side-notched lanceolate projectile points and wide variety of unifacial scrapers are representative tools for the Archaic period in northeastern Ontario (Hamilton, 1991; Wright, 1972).

The concept of the Shield Archaic is not fully accepted by all archaeologists (Buchner, 1979; Buchner, 1980; Hamilton, 1991). The main issue, which Wright acknowledges, is the unlikeliness that all archaeological sites ascribed to the Shield Archaic can be attributed to a single culture. However, without additional data, the Shield Archaic is necessary to provide some level of classification. Archaeologists also refute Wright's theory that the Shield Archaic represents the migration of peoples eastward from the Keewatin District over thousands of years into Quebec and the Maritimes. In northwestern Ontario, Hamilton believes that the Archaic populations derive from the Paleo populations present in the region. He theorizes that, despite the focus of Paleo sites associated with relic shorelines, Paleo utilization of the upland landscape is probable and it is likely that these early inhabitants pushed further north as the glacial frontier receded, gradually shifting into an Archaic lifestyle as the boreal forest environment became established (Hamilton, 1991). This is likely the case in north-central Ontario as well.

The Old Copper Culture (or Complex) is an Archaic culture centered around the shoreline of Lake Superior, the Boundary Waters to Rainy Lake, northern Wisconsin, the Upper Michigan Peninsula and the northern half of the Lower Michigan Peninsula. This culture quarried copper from bedrock and glacial deposits, producing a variety of tools through heating, hammering, grinding, and annealing. It is believed this copper technology dates as early as 6,120 BP, which makes them some of the earliest metal workers in the world (Hamilton, 2013).

Within north-central Ontario, it is believed that almost every remote lake and river system had been inhabited at some point within the Archaic. Numerous small sized Lake Archaic sites have been found along St. Mary's River and are known as the Mark's Bay complex. These include the Mark's Bay Site (CcIc-8), the Harvest Home Site (CcIc-10), and the Korah Site (CdIc-6), which is located approximately 230 m west of the western portion of the study area (Conway, 1984). Other significant Archaic sites have been identified around Timmins, Killarney and Dog Lake near Missinaibi (Conway, 1981).

WOODLAND PERIOD

The Woodland period began ca. 2,300 BP with the introduction of pottery to the region, although little change in the lifeways of the inhabitants is suspected. This occurred during the Middle Woodland period with the Laurel Culture (2,050-650 BP), who represent either a migration of peoples or ideas into the area (Wright, 1967; Reid & Rajnovich, 1991). Although the Woodland period includes an Early Woodland stage in southern Ontario, Early Woodland tool types do not appear in the northern archaeological record. Instead, archaeologists typically define the northern

Ontario Woodland period as having an Initial Woodland (2,300 – 1,000 BP) and Terminal Woodland (1,000 – 400 BP) cultural periods.

Two traditions were present near Sault Ste Marie during the Initial Woodland period: the Laurel, and the La Cloche. In northern Ontario, pottery was first introduced by the Laurel Culture in the boundary waters of northern Minnesota and northwestern Ontario during the Middle Woodland period (Wright, 1995). Pottery with decoration associated with the Laurel Culture began to appear across the boreal forest, stretching as far west as east-central Saskatchewan and as far east as the border of northern Ontario and Quebec. The Laurel Culture was also known for the construction of earthen burial mounds. They are best known for several burial mounds along the Rainy River, but burial mounds have also been discovered near Killarney (Julig & Brose, 2008).

Within north-central Ontario, several Laurel sites have been discovered along the St. Mary's River, along Lake Superior's shoreline, and around Timmins. Artifact assemblages tended to include side-notched projectile points, small blade knives, an abundance of scrapers, net sinkers and a few bone harpoons.

The La Cloche tradition saw less of a presence within the modern borders of Canada. La Cloche sites are situated along the North Channel of Lake Huron in the La Cloche Mountains. They are contemporary to the Laurel Culture but are distinguished by their distinctive pottery styles and frequent use of local quartzite. This tradition appears to have had a stronger affinity towards the Michigan shores of Lake Huron, and the sites found north of Lake Huron may represent their most northerly range (Conway, 1981).

The Late Woodland period saw the emergence of different pottery styles and refined construction methods ca. 650 BP. In northeastern Ontario, regional micro-environments and varying regional influences may have resulted in at least three similar, but distinct techno-traditions. Namely, variation in tool production may be attributed to the Blackduck (which is hypothesized to be the parent tradition of the Ojibway), Moose River Cree, and Algonquin traditions (Pollock, 1975). Iroquoian speaking traditions may have also had an influence either by trade or by technology emulation. The most notable evidence of this is the discovery of 143 Iroquoian-like ceramic vessels found in the Lake Abitibi area (Guindon, 1991).

At the end of what archaeologists define as the Late Woodland period, early European contact resulted in extensive changes to traditions of most populations that inhabited northern Ontario.

1.3.2 POST-CONTACT PERIOD

At the arrival of European explorers, the fur trade introduces the proto-contact period, followed by the post-contact period when more permanent European settlements were established. The French were the first Europeans to begin westward exploration from the Atlantic coast. Beginning in the early 1600s, exploration and trade focused primarily on the St. Lawrence River, the Three Rivers (Ottawa, St. Maurice, and Saguenay), what is now New York state, and southern Ontario south of Lake Nipissing (Innis, 2017). European influence preceded their presence in lands north of Lake Nipissing with Algonquin and Nipissing becoming early traders in the proto-historic period. However, as demand for beaver increased, beaver populations drastically reduced in the Three Rivers area. By 1635, beaver populations had been severely impacted, forcing the trade further into more remote areas (Innis, 2017).

The post-contact is generally considered to begin in Ontario in 1650 Common Era (CE); however, on a regional level this period truly begins following regular interaction between Indigenous populations and Euro-Canadians. The transition from the time before European influence and this regular contact has been termed the Proto-Historic, and is a period where European influence begins to appear on Indigenous sites (i.e. metal cookware, trade items, firearms) or when European-introduced disease begins to greatly impact Indigenous populations.

During this time, the Ojibwa continued to live in the area, particularly on Whitefish Island, who referred to the area as *Bawating* (place of the rapids). The Whitefish Island Site (CdIc-3) is situated beside the rapids of the St. Mary's River and in one of the largest pre-contact and post-contact Indigenous sites in the upper Great Lakes (Conway, 1984). Current understanding of the archaeological material on the island is that it has been occupied since the Archaic period into the 19th Century and represents a seasonal site occupied in the Summer. When the Jesuits first arrived, the settlement was estimated to have around 200 inhabitants, but could grow to as many as 2,000 during the seasonal fish runs (Heath, 1988).

The first known European contact with the Indigenous peoples living around Sault Ste. Marie occurred in 1621-22 when Etienne Brule travelled to the area, reporting on the rapids of the St. Mary's River. It is possible that Brule travelled to Sault Ste. Marie during his 1617-1618 exploration of the Lake Huron area, but he did not keep detailed accounts of his journeys (Heath, 1988). Etienne Brule was a French *Truchement* (i.e. young Frenchman sent to live among the Indigenous to establish good relations and learn the language) who was sent by Champlain to live among the Algonquin in 1610 and became a valued interpreter and intermediary between the French and Indigenous peoples (Marsh, 2015).

Jean Nicolet is known to have traveled to the Sault Ste. Marie area in 1634, still in search of the fabled northwest passage (Heath, 1988). The next Euro-Canadians to travel to the area were Pierre-Esprit Radisson and Medard Chouart des Groseilliers, who were French explorers and fur traders who were known for opening up Lake Superior and Lake Michigan to the fur trade and Jesuit Missions. Their exploration of 1659 to 1660 took them through the St. Mary's River and circumnavigated Lake Superior. They were later imprisoned and heavily fined by the New France government for going on this journey without leave. The fallout from this treatment led to the founding of the Hudson's Bay Company after the two French fur traders approached the British in Boston with their knowledge gained from that journey (Canadian Museum of History, n.d.).

The Jesuits began to send delegations to the area to spread their doctrine. A permanent Mission was established in 1668 by Father Jacques Marquette on the south side of St. Mary's River the river. It is Father Marquette who renamed the area as Ste-Marie du Sault (Heath, 1988). Jesuit Missions and the expanding fur trade led to permanent European settlement in Ontario. As other Christian sects increased their efforts of converting the Indigenous peoples of the Upper Great Lakes, the Catholic and Episcopal missionaries began focusing on the Ojibwe between Thessalon and Batchewana Bay (Chute, 1998 p. 46) and a Catholic Mission was established in 1862 on Goulais Bay (Devlin, 2002 p. 270). The Goulais Mission's placement was near where an Ojibwe community was concentrated. Many Ojibwe gathered in Goulais Bay, Batchewana Bay, and the Sault rapids for fishing (Devlin, 2002 p. 271). Euro-Canadian commercial interests quickly established themselves on the lands and waters used by the Ojibwe. Commercial fishing, timber harvesting, and mining exploration punctuated the lands around Sault Ste. Marie (Devlin, 2002).

In 1850, the Crown negotiated a land Treaty with the Indigenous people in the area, known as the Robinson-Superior Treaty. It was negotiated by Treaty Commissioner William Robinson and several Chiefs in the area and signed in Sault Ste. Marie. The Crown negotiated this treaty to up mineral exploration and mining in the area, but it also allowed for settlers to purchase land, which promoted settlement in the area (Government of Ontario, 2018).

ALGOMA DISTRICT

The District of Algoma was organized in 1858 and is situated north of Lake Huron and the St. Mary's River, with the District of Sudbury to the east, Cochrane to the north, and Thunder Bay to the west. Algoma consists of fourteen townships; however, Sault Ste. Marie is the only city in the district and was named the headquarters upon its organization (Mika & Mika, 1977, p. 39).

The region became the first area in Ontario to be accurately mapped, as it was heavily traversed during the height of the fur trade. The fur yields collected in the northwest area of the province moved through what would become Sault Ste. Marie, along the Michipicoten-James Bay route towards Hudson Bay. The area was also rich in minerals and, as early as 1665, copper was reported to be found and mining operations began not long after. In 1736, the first vessel to sail on the Great Lakes was built on the St. Mary's River at Point aux Pins and, in 1771, the first blast furnace was built in Ontario to smelt copper ore (Mika & Mika, 1977, p. 39).

Development within the District was aided by the completion of the American and Canadian locks at Sault Ste. Marie in 1885 and 1895 respectively. Additionally, the completion of the Canadian Pacific Railway line linking Sault Ste. Marie and Sudbury, and the construction of an international railway bridge between Ontario and America furthered development in Algoma (Mika & Mika, 1983, p. 40).

TOWNSHIP OF KORAH

There was little settlement within Korah Township prior to 1850 with the exception of the construction of a shipbuilding yard within the Sault area in 1727. The yard was built to support the fur trade and mining industry and was eventually taken over by Alexander Henry and Company to build ships for the Northwest Fur Trading Company. In the late 1840s, an officer with the Hudson's Bay Company began a mining operation within the township and a road was constructed northwesterly through Korah towards Goulais Bay (Moore, 1998, p. 6).

Korah was surveyed in 1859 by James Johnston; however, the site established for the village of Sault Ste. Marie had been surveyed earlier in 1846 (Mika & Mika, 1981). The early settlers in the area predominantly arrived by boat, and acquired land through the *Crown Land Act*, which stipulated that a house of a certain size and a percentage of the property must be cleared in order for the final deed to be issued. In 1871, Korah Township became part of the municipality of Sault Ste. Marie, which was made up of seven townships. Korah Township separated from the municipality in 1904 to form the town of Steelton; however, it amalgamated with the city of Sault Ste. Marie in 1965 (Moore, 1998, p. 8).

CITY OF SAULT STE. MARIE

Sault Ste. Marie was initially surveyed in 1846, but by that time Sault Ste. Marie already had a population of approximately 500 people, primarily Hudson Bay Company staff and Indigenous peoples. In 1848, the first dock opened at the foot of Spring Street and the first lake steamer began regular passenger and freight service from Sault Ste. Marie to southern Georgian Bay. Euro-Canadians hoping to settle in Sault Ste. Marie were unable to purchase land until 1850, when the Robinson-Superior Treaty was signed, allowing the Crown to sell off parcels. Following the organization of the Algoma District in 1858, Sault Ste. Marie became the home of the district's headquarters, and by 1866 a courthouse and school had been established (Mika & Mika, 1983, p. 357).

As the fur trade industry declined, settlement in Sault Ste. Marie slowed; however, the discovery of copper and other valuable minerals in the area attracted settlers and, in 1887, Sault Ste. Marie was incorporated as a town. That same year, the Canadian Pacific Railway line was built from Sudbury and a bridge was constructed connecting Sault Ste. Marie with the United States. In 1895, the Ship Canal was opened, which formed part of the route from the Atlantic Ocean to the Great Lakes. Francis Hector Clergue arrived in Sault Ste. Marie in 1894, and soon constructed a power plant, paper and steel mills, and reopened the iron mines. He also established the Algoma Central Railway and the Algoma Steel Corporation, which eventually became one of the largest steel operations in Canada (Mika & Mika, 1983, p. 40).

By the turn of the twentieth century industrial development was growing. In 1912, Sault Ste. Marie was incorporated as a city and six years later, it was amalgamated with the Town of Steelton. In 1965, following the amalgamation

with Korah and Tarentorus Townships, the population of Sault Ste. Marie was approximately 82,000 (Mika & Mika, 1983, p. 358).

1.3.3 STUDY AREA SPECIFIC HISTORY

The study area falls on parts of Sections 2-3, 19, 21-24, 27-28, and 33-35 within the Geographic Township of Korah. To better understand the historic land use of the study area, a nineteenth century map of Korah and Awenge Townships was reviewed to examine whether historic features are located within or in close proximity to the study area. The exact date of this map is not indicated and the western portion of the study area extends beyond its boundaries and is not covered by available historic maps. The listed occupants on the properties within the study area are listed in **Table 2**.

Table 2: Landowners within the Study Area boundaries

Quarter	Section	Occupants
NE	2	H. Davieau (west)
		Thomas Maitland (east)
NW		T. Maitland
NE	3	Johnathan Noble
NW		W.H. Laird
N/A	19	Map unavailable
SE	21	R. Coverdale (south)
NE	22	John Lammine (south)
		Howlett (north)
NW		Howlett
SW		McNab (north)
		H. Ross (south)
SE		John Lamming
NE	23	LEG
NW		McCulloch
SW		McCulloch
		McCulloch (west)
		Hughes (east)
NE	24	Sharp (northwest)
		Perault (northeast)
		Patterson (southwest)
		McAther (southeast)
NW		Sharp (north)
		Douglas (south)
SE		Douglas (northwest)
		Doherty (southwest)
		Penno (east)
SW		Penno (west)
	Hether (east)	
NE	27	J. Fletcher (north)
		James Cook (south)

Quarter	Section	Occupants
NW		S. Brotherhood
SW		George McKay
SE		Joe Sharp (west) Leg Sharp (east)
NE	28	Alan Turner
SE		Ableson
NE	33	Murton (north) Coverdale (south)
SE		Dillineau (northeast) James Henry Gore (remainder)
NE		Joe Sharp (west) Leg Sharp (east)
NW	34	James McKie
SW		James McKie
SE		Townsend (west) H. Davieau (east)
NW		Leeper (west)
SE	35	A.C. Ponsmault (southwest)
SW		E.A. Biggings

Although landowners are listed, the historic map does not indicate the presence of structures within each property. It should be noted that the absence of structures on the map does not preclude the presence of structures on the property. Illustrating the location of structures may have been beyond the intended scope of the historic map at the time of its production. A number of historic transportation routes are illustrated within, or directly adjacent to the study area. Present-day Third Line East, Second Line West, Base Line, Allens Sideroad, Goulais Avenue, Peoples Road, Old Goulais Bay Road, Great Northern Road, and Korah Road appear to have been under use by the time of the production of the map. The southern portion of the study area is located adjacent to the “Village of Sault Ste. Marie” and the “Hudson’s Bay Post” (Figure 3). Sault Ste. Marie was incorporated as a town in 1887, so it is likely that this map pre-dates that time given reference to the settlement area as a “village”. Unfortunately, no other historic maps of this area could be located for review at the time of production of this report.

AERIAL IMAGERY

To gain a better understanding of the more recent land use of the study area, aerial imagery from 1957 was reviewed, made available by Trent University (University of Trent, n.d.). In 1954, the surrounding landscape was largely cleared and under use for agricultural purposes. Residential developments are clustered to the east within the city of Sault Ste. Marie. The present-day Algoma Steel Plant is located within the southern portion of the study area, which has been heavily disturbed. Additionally, the Canadian National Railway Line that had been built in 1887 is seen extending through the central portion of the study area in a north-south direction (Figure 4).

1.4 ARCHAEOLOGICAL CONTEXT

1.4.1 CURRENT CONDITIONS

The study area is an approximately 12 km long hydro corridor that extends from the existing Third Line Transformer Station located at Third Line East and Great Northern Road, running westward to Allens Sideroad where it turns southward to eventually terminate at the Algoma Steel Plant along the St. Mary's River. The study area is approximately 500 m wide, and is comprised of numerous local roads, residential and industrial developments, woodlots, overgrown scrub, manicured lawn, and agricultural fields.

1.4.2 PHYSIOGRAPHY AND ECOLOGY

The study area is situated in the Georgian Bay Ecoregion of the Ontario Shield Ecozone (i.e. on the Canadian Shield) (Crins et al. 2009). The Ecoregion is predominantly underlain by granite and other hard Precambrian rocks, covering an area of 15,500 square miles (9,934,000 acres). The Georgian Bay Ecoregion is situated between Lake Superior and the Quebec Border, on the southern portion of the Precambrian Shield. This Ecoregion is typified by humid and cool-temperate weather, with a mean annual temperature ranging from 2.8 to 6.2 °C. Mean annual precipitation ranges between 771 and 1,134 mm, with the mean summer rainfall between 204 and 304 mm.

The Ecoregion is located within the Great Lakes-St. Lawrence Forest Region where species such as Eastern White Pine, Red Pine, Eastern Hemlock and Yellow Birch are common (Rowe, 1972). Towards the southern edge of the Ecoregion and within mesic sites, Sugar Maple, American Beech, Wild Black Cherry, Basswood, and White Ash dominate, while concentrations of boreal species including White Spruce, Black Spruce, Tamarack and Balsam Fir can be found on certain landform units or within cooler-than-normal sites. Characteristic mammals include moose, American black bear, white-tailed deer, beaver, and muskrat. Common fish found in the lakes and rivers include lake trout, brook trout, yellow perch, lake whitefish, and bluntnose minnow (Crins et al., 2009). Such abundant flora and fauna would have been important resources for Indigenous and early Euro-Canadian populations.

Proximity to natural sources of water is an important indicator of archaeological potential. Portions of the study area are located directly adjacent to the St. Mary's River, and several smaller tributaries of the St. Mary's flow through the study area, including Bennett Creek, West Davignon Creek, East Davignon Creek, and Fort Creek. Additionally, numerous unnamed tributaries of these creeks flow within, or directly adjacent to, the study area. The St. Mary's River connects Lake Huron and Lake Superior, with strong rapids where the river drains into Lake Superior. The St. Mary's River rapids were an important fishing location for Indigenous populations, who settled along the river to utilize this resource (Government of Canada, 2022). In addition to the St. Mary's River, the smaller creeks and tributaries would have also served as important sources of potable water, riverine and lake resources, and transportation routes during the pre- and post-contact periods. Additionally, the study area is located approximately 14.5 km east of Lake Superior.

1.4.3 RELIC WATER SOURCES

Relic water sources are also considered features of archaeological potential (see **Appendix A**). Relic water sources include ancient shorelines (strandlines), glacial outwash channels, and dried riverbeds. In northern Ontario and on Canadian Shield terrain, test pit survey is required within 150 m of relic water sources. The test pit survey must be

conducted at 5 m intervals from 0-50 m, and 10 m intervals from 50-150 m away from the identified relic water source (Section 2.1.5, Standard 2, *Standards and Guidelines for Consultant Archaeologists*, 2011).

There are six strandlines within the study area, which are remnants from Glacial Lake Algonquian and the Nipissing Phase of the Upper Great Lakes. Strandlines in Sault Ste. Marie associated with Glacial Lake Algonquian are located between 309-312 m above sea level and are believed to have formed between 10,400 and 10,000 years ago as the water levels in Lake Algonquian fell. The Nipissing phase of the Upper Great Lakes left several strandlines in the Sault Ste. Marie area as the water levels in Lake Huron fell approximately 2,200 years ago (City of Sault Ste. Marie, 2012, p. 59-60). These strandlines represent ancient beaches and would have been an attractive location for pre-contact Indigenous populations (Figure 5).

1.4.4 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

A search of the Ministry of Tourism, Culture, and Sport (MTCS)’s *Ontario Public Register of Archaeological Reports* indicates that two archaeological assessments have been conducted on or within 50 m of the study area (Figure 6). Both reports have been conducted for land located within the boundaries of the study area and are detailed in **Table 3**.

Table 3: Previous archaeological assessments on or within 50 m of the study area

Year	PIF	Title	Researcher
2009	P044-056-2009	<i>Stage 1 Archaeological Assessment 430 Third Line East, Sault Ste. Marie, Ontario District of Algoma</i>	Ross Archaeological Research Associates
2012	P047-335-2012	<i>Stage 1 and 2 Archaeological Assessment of the Proposed Greenfield Subdivision Extension Part of Section 24, Geographic Township of Korah, County of Algoma, Now in the City of Sault Ste. Marie</i>	Archaeological Services Inc. (ASI)

In 2009, Ross Archaeological Research Associates conducted a Stage 1 archaeological assessment for the Great Lakes Power Ltd. transformer station located at 430 Third Line East. This transformer station is now the Hydro One Third Line Station and is within the eastern portion of the current study area. The results of this assessment determined that the study area had low archaeological potential and no further work was recommended. This assessment was completed prior to the publication of the 2011 *Standards and Guidelines for Consultant Archaeologists* and does not meet current standards as the study area is not clearly defined (Ross Archaeological Research Associates, 2009).

ASI conducted a Stage 1-2 archaeological assessment for the proposed Greenfield Subdivision Extension, within Part of Section 24, in the Geographic Township of Korah, now the City of Sault Ste. Marie, Ontario in 2012. The subject property was approximately 4.8 hectares (ha) in size and is located within the northeast portion of the current study area. The results of the Stage 1-2 assessment did not result in the recovery of archaeological resources, and no further work was recommended (ASI, 2012).

1.4.5 REGISTERED ARCHAEOLOGICAL SITES

A search of the *Ontario Archaeological Sites Database* (OASD) indicates that there are two registered archaeological sites within 1 km of the study area (MTCS, 2022). The paucity of registered sites is not necessarily

reflective of a lack of past use of the landscape or an absence of archaeological sites, but more likely a result of a lack of archaeological assessments being completed in this area. Details about the sites identified are provided in **Table 4**.

Table 4: Registered archaeological sites within 1 km of the study area

Borden	Site Name	Time Period	Cultural Affinity	Site Type	Current Development Status
CdIc-8	Korah School	Post-Contact	Euro-Canadian	School	-
CdIc-6	Korah	Late Archaic	Indigenous	Camp/campsite	-

- denotes no information listed

* denotes inferences made by author

The Korah School site (CdIc-8) is a Euro-Canadian school site that was identified in 1984 along Allens Sideroad approximately 80 m outside of the western portion of the current study area boundaries. An associated report for this site could not be located for review and no further information could be found in the OASD. The site’s current development status is unknown.

The Korah site (CdIc-6) is a pre-contact Indigenous site that was identified in 1930 along Second Line approximately 230 m west of the western boundaries of the current study area. The Korah Site was dated to the Late Archaic period and was identified as part of the Mark’s Bay complex, which is a complex of small sized Late Archaic sites along the St. Mary’s River. No further information was available in the OASD and its current development status is unknown.

1.4.6 ARCHAEOLOGICAL MASTER PLAN

The Archaeological Master Plan (AMP) for the City of Sault Ste. Marie was developed by Archaeological Services Inc. (ASI) in 2012 and archaeological potential mapping was created based on the AMP (City of Sault Ste. Marie, 2012). The AMP indicates that archaeological potential exists within 100 m of previously registered archaeological sites, 100 m of historic transportation routes, 50 m of early railways and identified features of potential, and within 150 m of rivers and bodies of water (City of Sault Ste. Marie, 2012). Based on a review of the archaeological potential mapping, portions of the current study area are documented as holding archaeological potential (Figure 7).

2 ANALYSIS AND CONCLUSIONS

2.1 ARCHAEOLOGICAL POTENTIAL

The criteria for determining the level of archaeological potential are primarily focused on physiographic variables that include distance and nature of the nearest source/body of water, distinguishing features in the landscape (e.g. ridges, knolls, eskers, wetlands), the agricultural viability of soils, resource availability, and other features which may have made the area more suitable for settlement and occupation. A more comprehensive list of features indicative of archaeological potential, as outlined in the *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011), can be found in **Appendix A**.

There is potential for the presence of pre-contact archaeological resources within portions of the study area given the proximity to St. Mary's River, as well as Bennett Creek, West Davignon Creek, East Davignon Creek, and Fort Creek, all of which pass through the study area. Several smaller tributaries of these creeks also flow through the study area. In addition to these water sources, there are several glacial strandlines that fall within the study area boundaries, which may have been utilized during the pre-contact period. These water sources would have made the area ideal for pre-contact settlement given the readily available terrestrial and marine resources. Additionally, one pre-contact archaeological site (CdIc-6) is located approximately 230 m west of the study area, further supporting the use of the area during the period.

Historic background and archival research, including review of historic maps and county/township histories provide the basis for determining historic archaeological potential. There is also potential for the presence of historic Euro-Canadian archaeological resources based on the presence of numerous historical transportation routes within, or adjacent to the study area, a Euro-Canadian archaeological site (CdIc-8) within 80 m of the study area, and the proximity of the early settlement of Sault Ste. Marie and Hudson's Bay trading post. The largely agricultural and rural land has been occupied since the mid-nineteenth century.

2.2 CONCLUSION

The Stage 1 archaeological assessment determined that the study area corridor exhibits potential for the presence of both pre-contact and historic archaeological resources. Archaeological potential has been removed from portions of the study area as a result of the construction of local roads and their associated rights-of-way, and the construction of the Algoma Steel Plant. Additionally, archaeological potential is considered low in areas that are more than 150 m away from features of archaeological potential. The remainder of the study area is largely rural and undeveloped and retains potential for the presence of archaeological resources. These findings are further supported by the city of Sault Ste. Marie's archaeological potential mapping. The proposed infrastructure identified as retaining archaeological potential and require Stage 2 archaeological assessment are listed in **Table 5**.

Table 5: Infrastructure Requiring Stage 2 Archaeological Assessment

Proposed Infrastructure	Stage 2 Archaeological Assessment Required
Route Option D	Stage 2 required.
PUC Station Option 1	Stage 2 required.
PUC Station Option 1-A	Stage 2 required.

Proposed Infrastructure	Stage 2 Archaeological Assessment Required
PUC Station Option 2	No Stage 2 required.
Algoma Steel Inc. Electric Arc Furnace Station	No Stage 2 required.
Hydro One Third Line Station	Stage 2 required.

The route with the least potential effects and greatest benefits is recommended as the preferred route from a technical, environmental and/or socio-economic perspective; in this case this was Route Option D and Station Option 1-A.

Following the completion of the draft ESR 30-day review period, based on public feedback received on the proposed location of the southern portion of the Common Element Route in relation to Glasgow Park, PUC decided to shift the 230 kV line west along Yates Avenue, in an area that is predominately zoned as heavy industrial, as well as rotating the preferred station option orientation (Station Option 1-A) by 90 degrees, now Station **Option 1-A R** . These refinements will avoid impacting existing trees and vegetation east of the proposed station location.

3 RECOMMENDATIONS

The Stage 1 archaeological assessment was carried out in accordance with the Ontario MTCS's *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011) supporting the *Ontario Heritage Act*. Based on the results of background historic research and an understanding of the geography and natural environment of the study area, **a Stage 2 archaeological assessment is recommended for areas determined to retain archaeological potential including within the Common Elements Route, the preferred route (Route Option D) and the refined Station Option (1-A R) and should they be impacted by ground disturbing activities (Figure 8).**

As the study area is located within northern Ontario and on Canadian Shield terrain, the recommendations for the Stage 2 archaeological assessment are to follow the requirements of Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011). The recommendations are as follows:

- Test pit survey is required at 5 m intervals in areas between 0-50 m from existing water features as per Section 2.1.5, Standards 1 and 2a of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Test pit survey is required at 5 m intervals in areas between 0-50 m from the identified glacial strandline, and at 10 m intervals between 50-150 m from the identified glacial strandline as per Section 2.1.5, Standards 2b of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Test pit survey is required at 5 m intervals in areas between 0-50 m from historic transportation routes, and at 10 m intervals between 50-150 m from historic transportation routes as per Section 2.1.5, Standards 2b of the *Standards and Guidelines for Consultant Archaeologists* (2011) for all potentially undisturbed areas of woodlot, scrub overgrowth, and portions of manicured lawn where the degree of ground disturbance is not clear;
- Agricultural fields must be subject to pedestrian survey at 5 m intervals as per Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (2011). Prior to pedestrian survey, the fields must be ploughed and weathered to allow for soil visibility of at least 80%; and,
- All other areas have been identified as previously disturbed or having low archaeological potential, and no further assessment is required in these areas as per Section 2.1.5, Standard 2c of the *Standards and Guidelines for Consultant Archaeologists* (2011).

It should be noted that the results of this report are not considered final until the above stated recommendations have been accepted by the Ontario MTCS, and the report has been entered into the Public Register of Archaeological Reports.

4 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries 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 for Consultant Archaeologists (2011a) 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 (MTCS) a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological 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 Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

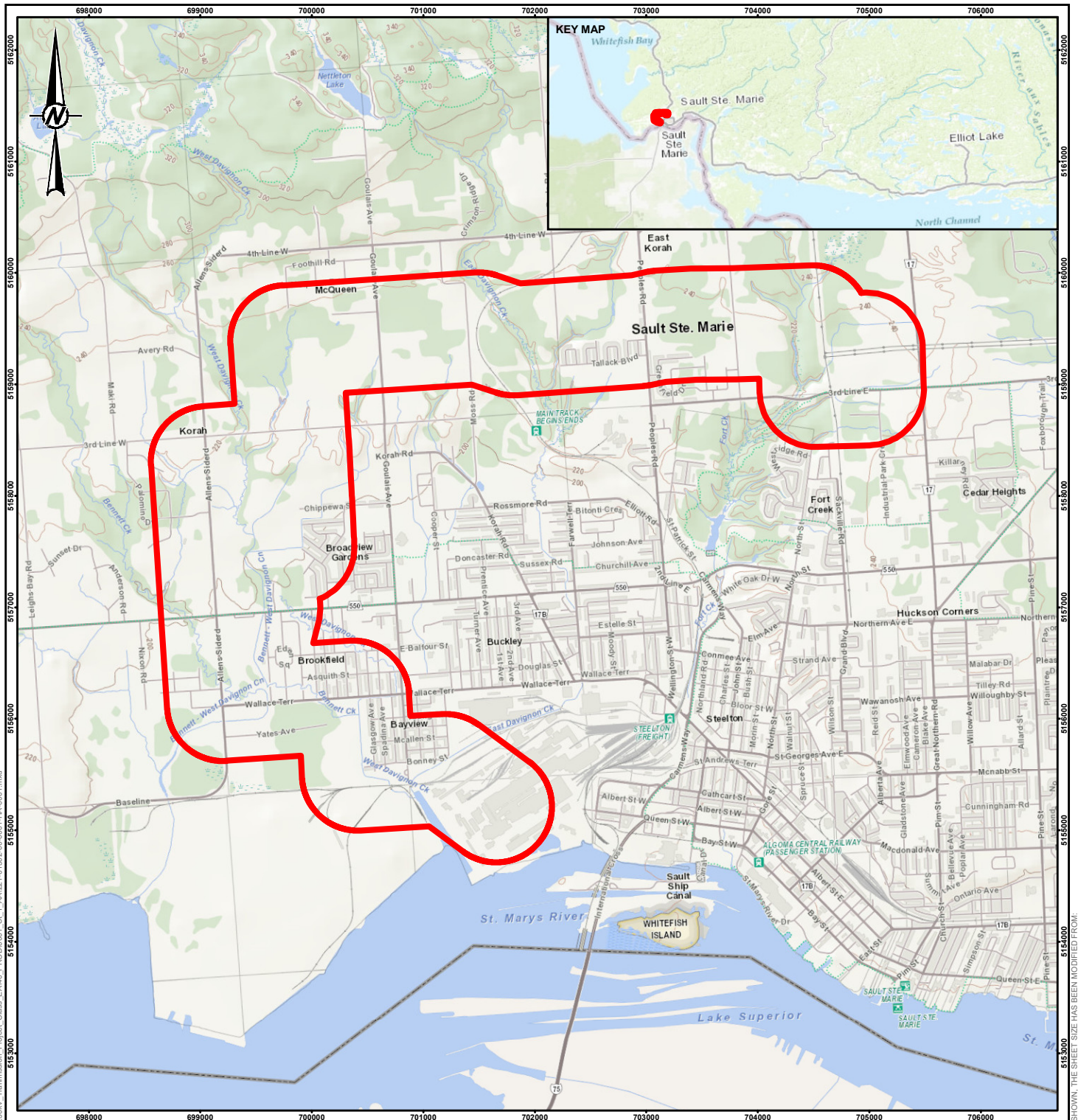
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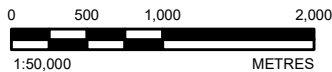
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6 FIGURES



LEGEND

 STUDY AREA




NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 16 VERTICAL DATUM: CGVD28

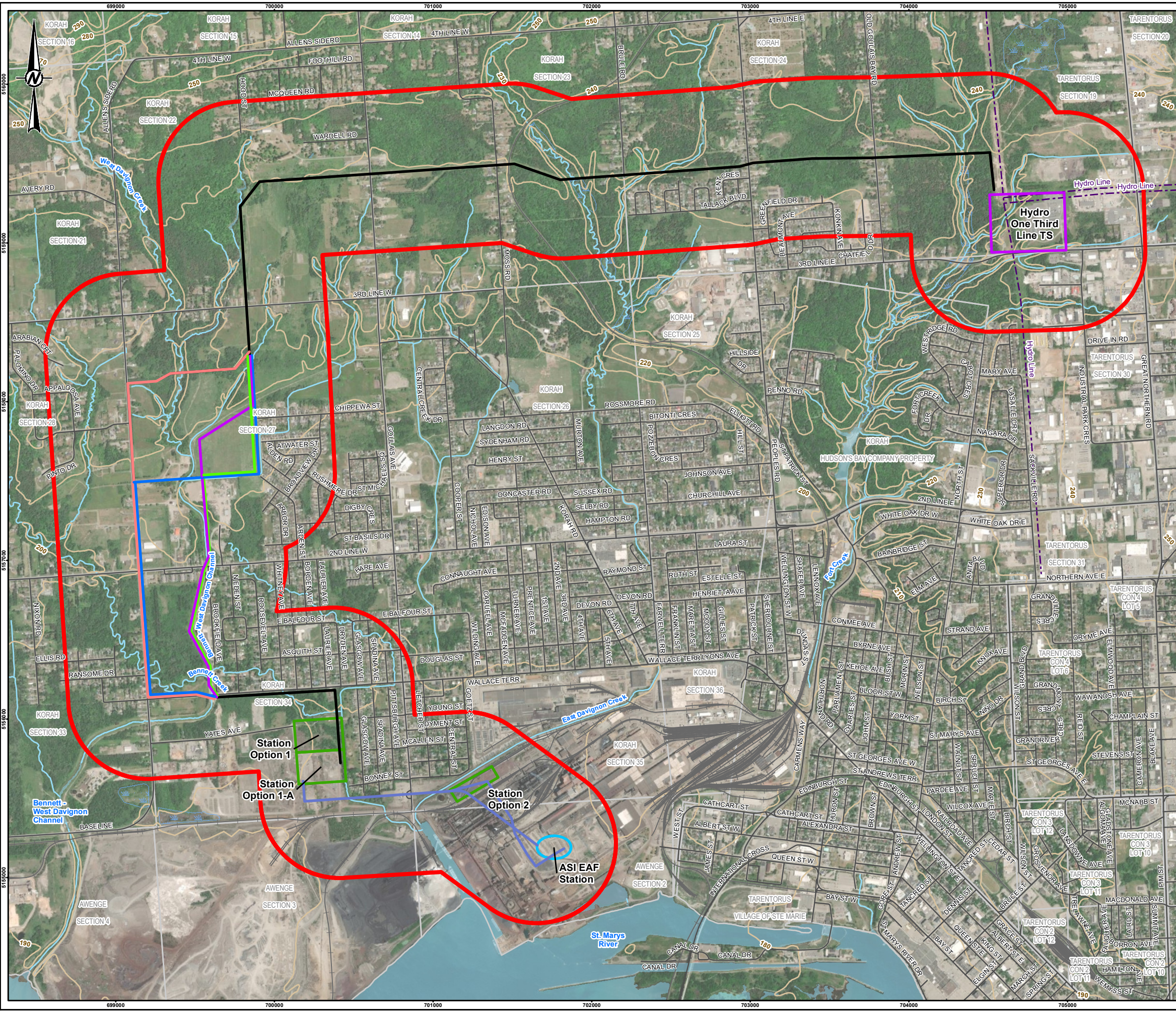
CLIENT
PUC TRANSMISSION LP

PROJECT
**STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV
TRANSMISSION PROJECT CLASS ENVIRONMENTAL
ASSESSMENT**

TITLE
PROJECT LOCATION

CONSULTANT	YYYY-MM-DD	2022-07-26
	DESIGNED	----
	PREPARED	BR
	REVIEWED	----
	APPROVED	----

PROJECT NO.	CONTROL	REV.	MAP
221-01502-00	0001	A	1

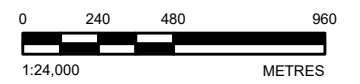


LEGEND

- ROUTE OPTION A
- ROUTE OPTION B
- ROUTE OPTION C
- ROUTE OPTION D
- 230 kV COMMON ELEMENT ROUTE
- 115 kV COMMON ELEMENT ROUTE
- NEW PUC STATION OPTION
- ALGOMA STEEL INC. (ASI) ELECTRIC ARC FURANCE (EAF) STATION
- HYDRO ONE THIRD LINE TRANSFORMER STATION (TS)
- STUDY AREA
- ROADWAY
- RAILROAD
- UTILITY LINE
- TOPOGRAPHIC CONTOUR, METRES
- WATERCOURSE
- WATERBODY
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

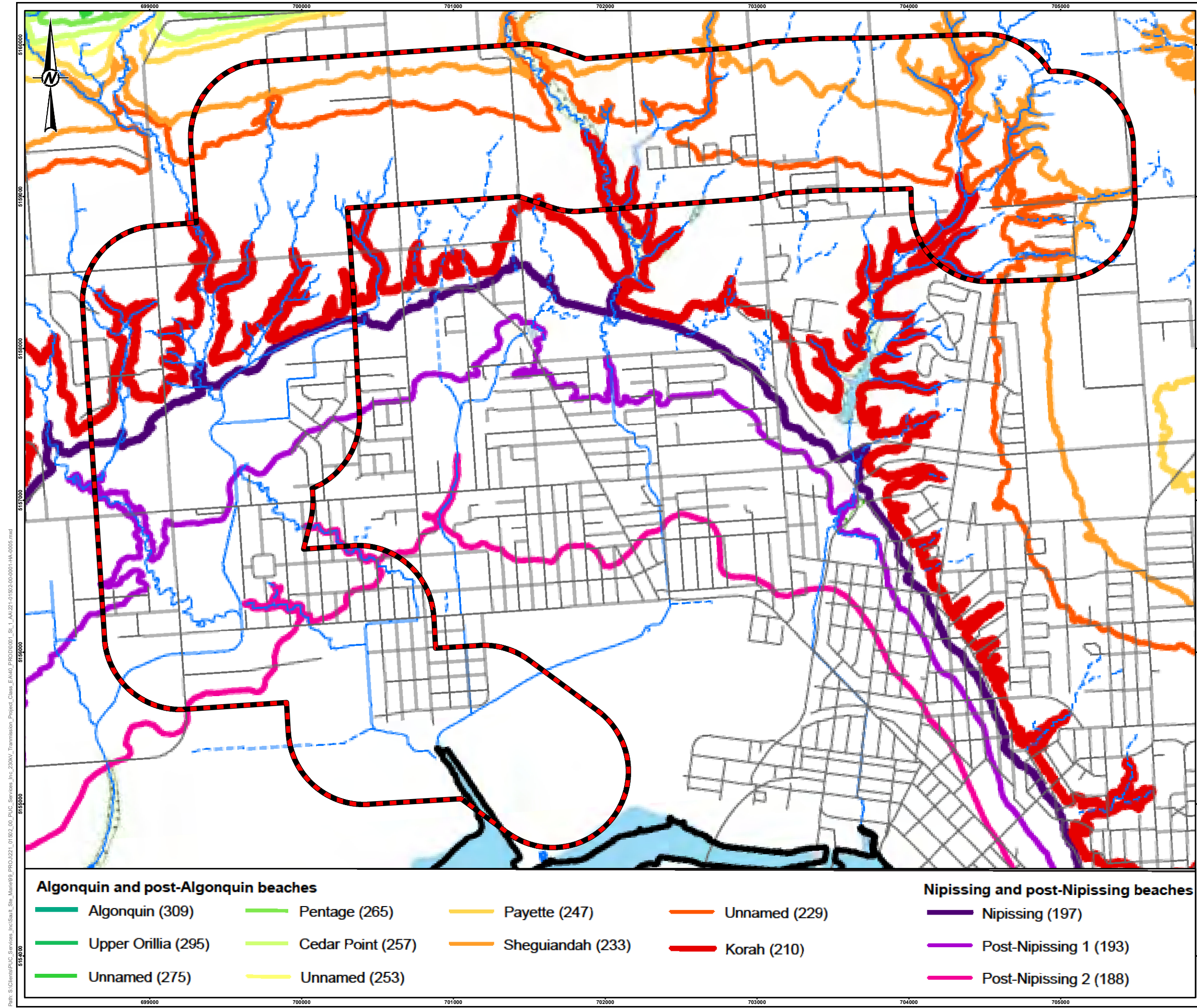
NOTE(S)
 1. ALL LOCATIONS ARE APPROXIMATE


REFERENCE(S)
 1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD, UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2022
 2. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 16, VERTICAL DATUM: CGVD28



CLIENT PUC TRANSMISSION LP		
PROJECT STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV TRANSMISSION PROJECT CLASS ENVIRONMENTAL ASSESSMENT		
TITLE STUDY AREA		
CONSULTANT	YYYY-MM-DD	2022-07-26
DESIGNED	---	---
PREPARED	BR	---
REVIEWED	---	---
APPROVED	---	---
PROJECT No.	CONTROL	REV.
221-01502-00	0001	A
		MAP
		2

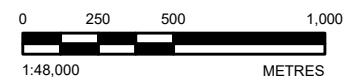
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 If this measurement does not match what is shown, the sheet size has been modified from: 26mm













LEGEND
 STUDY AREA

NOTE(S)
 1. ALL LOCATIONS ARE APPROXIMATE




REFERENCE(S)
 1. STRANDLINES IN SAULT STE. MARIE, ARCHAEOLOGICAL SERVICES INC. 2010.
 2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83.
 COORDINATE SYSTEM: UTM ZONE 16, VERTICAL DATUM: CGVD28




Algonquin and post-Algonquin beaches

- | | | | |
|---|---|---|---|
|  Algonquin (309) |  Pentage (265) |  Payette (247) |  Unnamed (229) |
|  Upper Orillia (295) |  Cedar Point (257) |  Sheguiandah (233) |  Korah (210) |
|  Unnamed (275) |  Unnamed (253) | | |

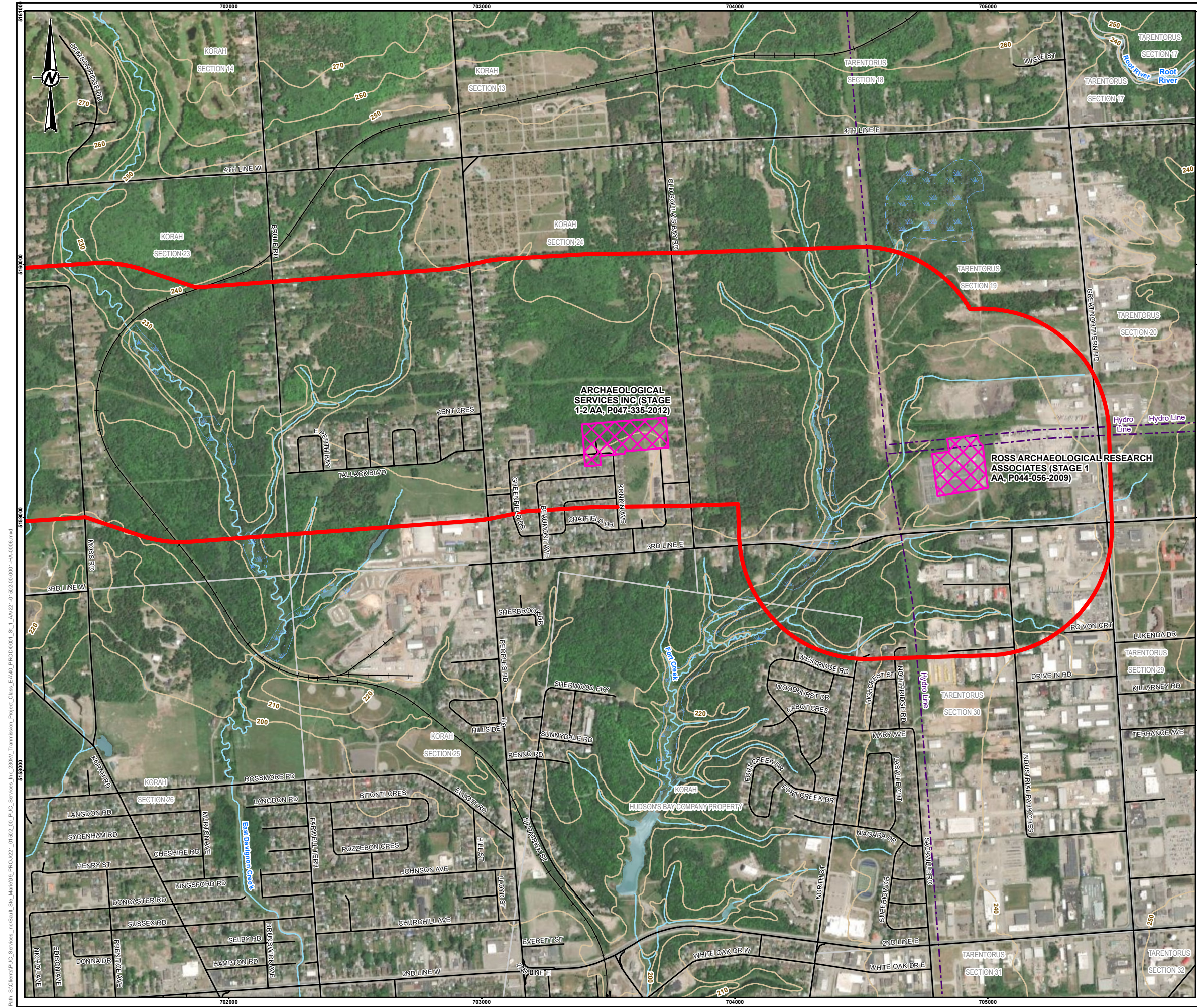
Nipissing and post-Nipissing beaches

- | |
|--|
|  Nipissing (197) |
|  Post-Nipissing 1 (193) |
|  Post-Nipissing 2 (188) |

CLIENT PUC TRANSMISSION LP		
PROJECT STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV TRANSMISSION PROJECT CLASS ENVIRONMENTAL ASSESSMENT		
TITLE STRANDLINES IN SAULT STE. MARIE		
CONSULTANT	YYYY-MM-DD	2022-07-26
 GOLDER	DESIGNED	---
	PREPARED	BR
	REVIEWED	---
	APPROVED	---
PROJECT No. 221-01502-00	CONTROL 0001	REV. A
		MAP 5

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 28mm

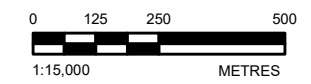


LEGEND

- PREVIOUS ARCHAEOLOGICAL ASSESSMENTS
- STUDY AREA
- ROADWAY
- RAILROAD
- UTILITY LINE
- TOPOGRAPHIC CONTOUR, METRES
- WATERCOURSE
- WATERBODY
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

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 2022
2. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 16, VERTICAL DATUM: CGVD28



CLIENT
PUC TRANSMISSION LP

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV TRANSMISSION PROJECT CLASS ENVIRONMENTAL ASSESSMENT

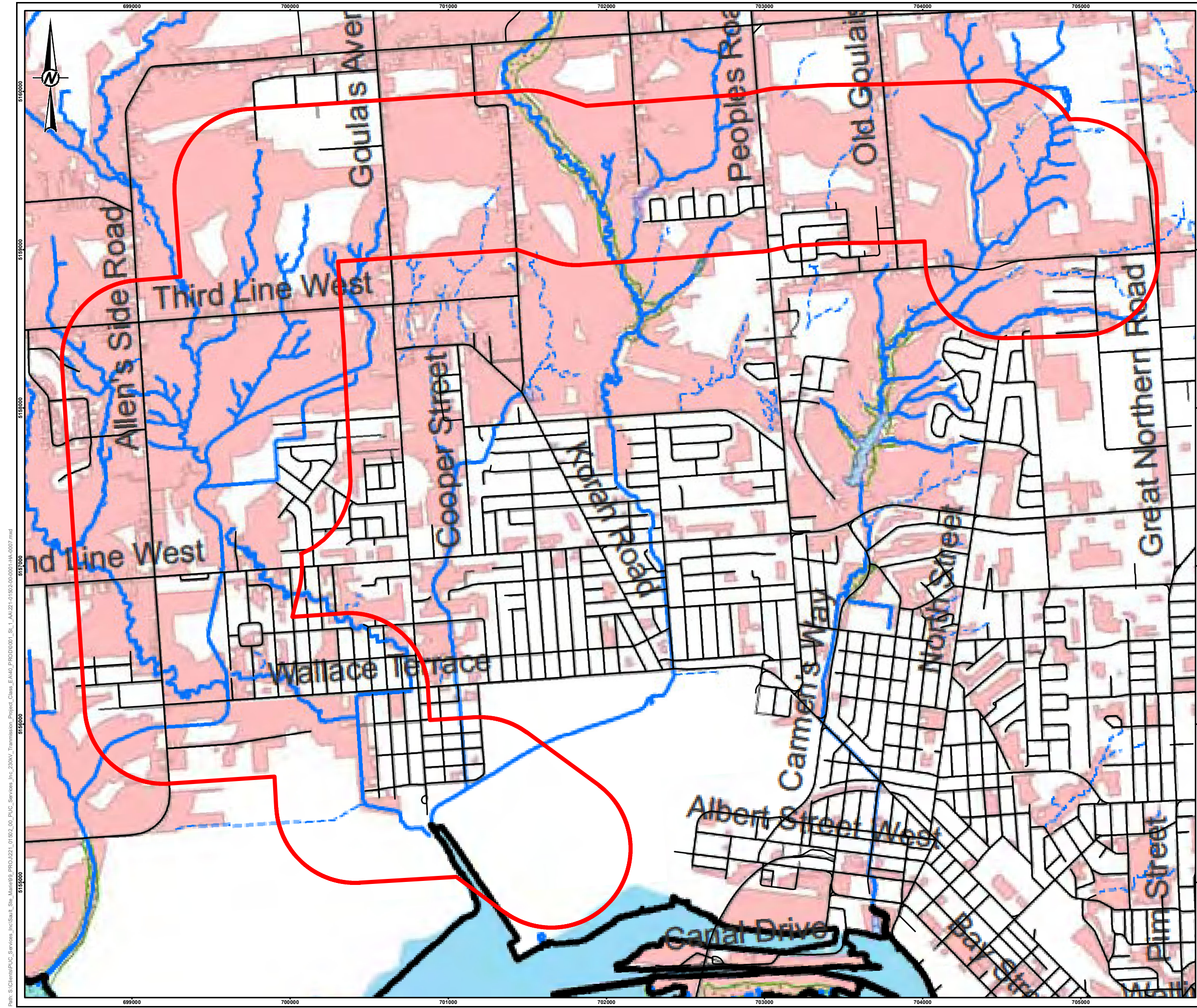
TITLE
PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

CONSULTANT	YYYY-MM-DD	2022-07-26
DESIGNED	---	---
PREPARED	BR	---
REVIEWED	---	---
APPROVED	---	---

PROJECT No. 221-01502-00 CONTROL 0001 REV. A MAP 6

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 28mm



LEGEND

- STUDY AREA
- ARCHAEOLOGICAL POTENTIAL WITH INTEGRITY AND NO SLOPE EXCEEDING 10 DEGREES

NOTE(S)
 1. ALL LOCATIONS ARE APPROXIMATE

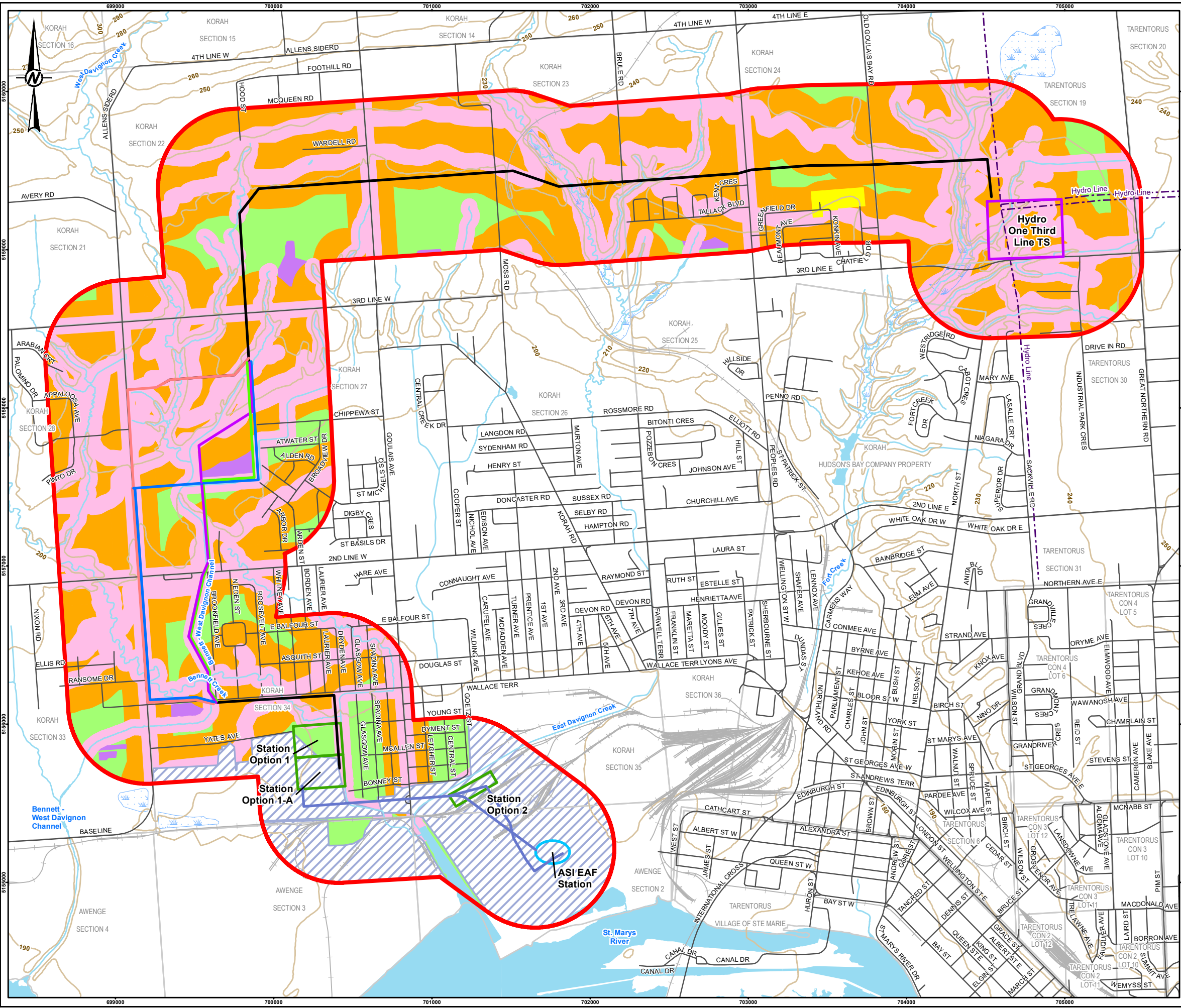
REFERENCE(S)
 1. FINAL ZONE OF ARCHAEOLOGICAL POTENTIAL, ARCHAEOLOGICAL SERVICES INC., 2010.
 2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83.
 COORDINATE SYSTEM: UTM ZONE 16, VERTICAL DATUM: CGVD28



CLIENT	
PUC TRANSMISSION LP	
PROJECT	
STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV TRANSMISSION PROJECT CLASS ENVIRONMENTAL ASSESSMENT	
TITLE	
ARCHAEOLOGICAL POTENTIAL	
CONSULTANT	YYYY-MM-DD 2022-07-26
DESIGNED	---
PREPARED	BR
REVIEWED	---
APPROVED	---
PROJECT No.	CONTROL
221-01502-00	0001
REV.	MAP
A	7

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 28mm



LEGEND

- ROUTE OPTION A
- ROUTE OPTION B
- ROUTE OPTION C
- ROUTE OPTION D
- 230 kV COMMON ELEMENT ROUTE
- 115 kV COMMON ELEMENT ROUTE
- NEW PUC STATION OPTION
- ALGOMA STEEL INC. (ASI) ELECTRIC ARC FURNACE (EAF) STATION
- HYDRO ONE THIRD LINE TRANSFORMER STATION (TS)

RECOMMENDATIONS

- STAGE 2 TEST PIT SURVEY AT 5 M REQUIRED
- STAGE 2 TEST PIT SURVEY AT 10 M REQUIRED
- STAGE 2 PEDESTRIAN SURVEY REQUIRED
- LOW ARCHAEOLOGICAL POTENTIAL, NO FURTHER ASSESSMENT REQUIRED
- DISTURBED, NO FURTHER ASSESSMENT REQUIRED
- PREVIOUSLY ASSESSED, NO FURTHER WORK REQUIRED
- STUDY AREA
- ROADWAY
- RAILROAD
- UTILITY LINE
- TOPOGRAPHIC CONTOUR, METRES
- WATERCOURSE
- WATERBODY
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

NOTE(S)
 1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
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 2. SERVICE LAYER CREDITS:
 3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 16, VERTICAL DATUM: CGVD28



CLIENT
PUC TRANSMISSION LP

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT 230 KV TRANSMISSION PROJECT CLASS ENVIRONMENTAL ASSESSMENT

TITLE
RECOMMENDATIONS

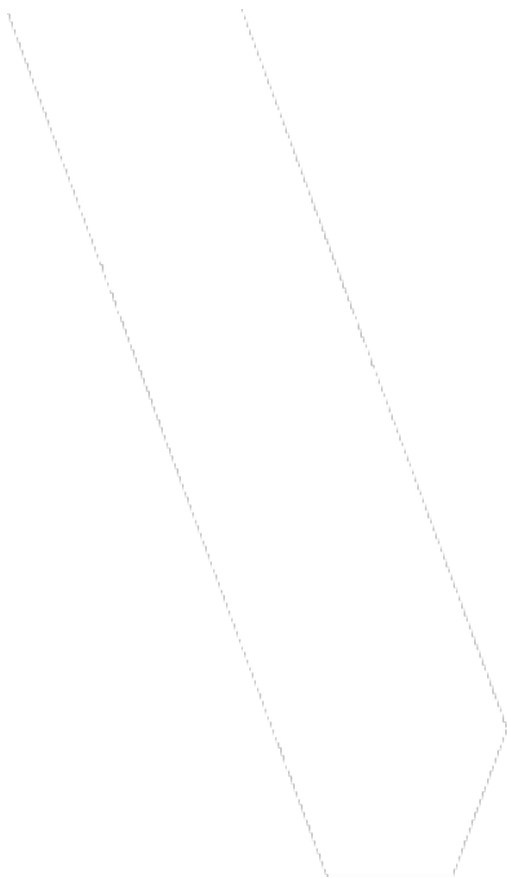
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PREPARED	BR	
REVIEWED	---	
APPROVED	---	
PROJECT No.	CONTROL	REV.
221-01502-00	0001	A

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 25mm

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

A

**FEATURES INDICATION
ARCHAEOLOGICAL POTENTIAL**



FEATURES INDICATING ARCHAEOLOGICAL POTENTIAL

The following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites.
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks).
 - Secondary water sources (intermittent streams and creeks, springs, marshes, swamps).
 - Features indicating past water sources (e.g. glacial lake shorelines, relic river or stream channels, shorelines of drained lakes or marshes, cobble beaches).
- Accessible or inaccessible shoreline (e.g. high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh).
- Elevated topography (e.g. eskers, drumlins, large knolls, plateaux).
- Pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground.
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases.
- Resource areas, including:
 - Food or medicinal plants (e.g. migratory routes, spawning areas, prairie).
 - Scarce raw materials (e.g. quartz, copper, ochre, or outcrops of chert).
 - Early Euro-Canadian industry (e.g. fur trade, logging, prospecting, mining).
- Areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g. pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries.
- Early historical transportation routes (e.g. trails, passes, roads, railways, portage routes).
- Property listed on a municipal register or designated under the Ontario Heritage Act or that is federal, provincial or municipal historic landmark or site.
- Property that local histories or informants have identified with possible archaeological sites, historic events, activities, or occupations

Source

Section 1.3. Ministry of Tourism, Culture and Sport (MTCS) (2011). *Standards and Guidelines for Consultant Archaeologists*. Toronto, Ontario: Queen's Printer for Ontario.