

Stage 1 Archaeological Assessment – Master Community Plan for Smithville

Smithville Master Community Plan and Municipal Class Environmental Assessment

Lots 3-11, Concession 9, Lots 4-11, Concession 8, Geographic Township of Grimsby and
Lots 28-35, Concession 6, Geographic Township of Gainsborough, Counties of Lincoln and
Welland, Now the Township of West Lincoln

Township of West Lincoln

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Original Report

Aggregate Potential Assessment

Township of West Lincoln, Ontario
Smithville Master Community Plan and Municipal Class Environmental Assessment

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Township of West Lincoln, Ontario
Smithville Master Community Plan and Municipal Class Environmental Assessment

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Aggregate Potential Assessment

Township of West Lincoln, Ontario

Smithville Master Community Plan and Municipal Class Environmental Assessment

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Executive Summary

AECOM Canada Ltd. (AECOM) was retained by Township of West Lincoln to complete a Stage 1 archaeological assessment in support of the Master Community Plan for Smithville, in the Township of West Lincoln, Ontario (**Figure 1**). Historically, the study area is found within Lots 3-11, Concession 9, Lots 4-11, Concession 8, Geographic Township of Grimsby and Lots 28-35, Concession 6, Geographic Township of Gainsborough, Counties of Lincoln and Welland, Community of Smithville, now the Township of West Lincoln. The study area encompasses the current Smithville Urban Area and the Smithville Development Study Area (SDSA). The SDSA encompasses approximately 425 gross hectares of developable land located north, west, and south of the urban area of Smithville. The Master Community Plan is being undertaken as part of an Integrated Municipal Class Environmental Assessment (EA).

This report details the rationale, methods and results of the Stage 1 archaeological assessment. As a property inspection was not conducted, the Stage 1 archaeological assessment was completed using background research to describe the geography, land use history, previous archaeological fieldwork and current conditions of the study area to determine its archaeological potential. In addition, satellite imagery and thematic and historic maps were analyzed. The results of the Stage 1 archaeological assessment indicate while some of the study area does not contain archaeological potential as it has been extensively and deeply disturbed by past residential and commercial construction activity, or been cleared by previous assessments, there are sections of the study area that are not obviously disturbed and will therefore require a Stage 2 archaeological assessment. This Stage 1 background archaeological assessment and review is necessarily high level due to the early stage of planning. As the design is refined and there is a better understanding of the planned impacts, areas that require further archaeological assessment will be examined against the type of impact planned to formulate the appropriate Stage 2 archaeological assessment strategy on a property by property basis.

In light of these results, prior to any ground disturbing activities, a Stage 2 archaeological assessment is recommended for all land identified as retaining archaeological potential.

1. Stage 2 archaeological assessments must be conducted for all areas identified in this report as retaining moderate to high archaeological potential shaded in green on **Figure 6**.

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2. Areas that are marked in hatching on **Figure 6** have been subject to previous archaeological assessment that have cleared the land of archaeological concerns, therefore no further archaeological work is recommended for those areas.
3. Areas with yellow shading indicate areas of low archaeological potential and will require a comprehensive property inspection as part of the Stage 2 field survey in order to determine the extent of previous disturbance (**Figure 6**).
4. Further archaeological assessments must be conducted by a licensed archaeologist and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). The requirements for standard surface archaeological survey include:
 - i. Test pit survey at 5 m intervals in all areas that will be impacted by the project and where ploughing is not possible (e.g., woodlots, overgrown areas, manicured lawns);
 - ii. Pedestrian survey at 5 m intervals where ploughing is possible (e.g. agricultural fields). This assessment will occur when agricultural fields have been recently ploughed, weathered, and exhibit at least 80% surface visibility.
5. It should be noted that special consideration and recommendations must be made for land within the cemeteries located within the study area, including Smithville Union Cemetery, Saint Luke Anglican Church Cemetery and Smithville United Church Cemetery (**Figure 6**).
 - i. Given the early-19th century establishment of the cemeteries, current fence lines or marked cemetery boundaries do not necessarily represent the limits of the cemetery below ground.
 - ii. As a precautionary measure, it is recommended that after Stages 1 and 2 archaeological assessments are completed, should any ground disturbing activities be conducted adjacent to the cemeteries located within the study area, a Stage 3 Cemetery Investigation must be conducted around the cemetery in a buffer of 10 m to determine if human remains are present. Recommendations for the Stage 3 Cemetery Investigation are as follows:
 - a. Mechanical topsoil removal is required to determine if deeply buried archaeological resources or human remains are present. Mechanical topsoil removal must be conducted in the presence of a licensed archaeologist as per Section 3.3.3 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011);

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- b. The results and effectiveness of this protection strategy must be reported to the MHSTCI as part of a Stage 3 cemetery investigation. This report will document the monitoring of the mechanical topsoil removal and will provide details on any findings related to the presence or absence of grave shafts and/or human remains;
 - c. If human remains are encountered during construction, work must cease immediately, the police or Regional Coroner should be contacted, as well as the Registrar of Burial Sites, War Graves, Abandoned Cemeteries, and Cemetery Closures of the Ministry of Consumer Services.
6. The six registered archaeological sites (AgGv-71, AgGv-68, AgGv-67, AgGv-55, AgGv-145, and AgGv-137) within the study area which still retain cultural heritage value or interest and should be subject to further archaeological assessment by a licensed consultant archaeologist, in accordance with the previous consultants' recommendations outlined in **Section 1.1.3** of this report and the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011) prior to any ground disturbing activities (found in the **Supplementary Documentation, Figure 8**).

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Under Separate Cover

Supplementary Documentation

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1. Project Context

1.1 Introduction

The Township of West Lincoln (or the Township) is completing a Master Community Plan Study to guide future development in the Community of Smithville, including the identification of the preferred area(s) for urban boundary expansion. A Subwatershed Study is also being undertaken to address environmental and stormwater considerations associated with the Twenty Mile Creek watershed and support the Master Community Plan Study.

The Study Area includes the current Smithville urban settlement area and 425 gross hectares (4.25 square kilometres) of potentially developable land surrounding Smithville, known as the Smithville Development Study Area.

The Smithville Master Community Plan project was commenced under the direction of the Township in collaboration with Niagara Region following an update to the Region's Growth Management Strategy, which forecasted new population and employment targets for West Lincoln and designates Smithville as the location for most of the Township's anticipated future growth.

Population and employment growth within the community will require an expansion to the urban area. The Master Community Plan process will determine the location and amount of potentially developable land.

In preparation of developing the Smithville Master Community Plan, accompanying technical studies were undertaken during the preliminary phase of the project to provide background information to understand the existing character of Smithville and the Study Area, including the opportunities and challenges that must be taken into consideration when planning for future growth inside and outside of the approved urban boundary.

This report focuses on the Stage 1 archaeological assessment report as a supporting document for the Smithville Master Community Plan and Integrated Municipal Class Environmental Assessment study.

1.2 Planning Context

The Master Community Plan is being developed under the Planning Act and is integrated with the infrastructure planning in accordance with the requirements of the Municipal Engineers Association's Municipal Class Environmental Assessment for Water, Wastewater and Roads (as amended in 2015) Master Plan Approach #4. This

approach is desirable for long term planning where interdependent decisions which impact servicing and land use are being made and the range of servicing alternatives needs to be addressed in an integrated fashion, so as to recommend the best overall solution for the community.

Together with the Environmental Assessment Act, the Master Community Plan will include the location of arterial and collector roads, distribution and density of land uses, water and wastewater (including stormwater) servicing, environmental protection and sustainable design policies. The Plan will identify the preferred approach to phasing that will guide future development and address all infrastructure requirements for the selected urban expansion area(s). The Plan will also support amendments to the Regional Municipality of Niagara and Township of West Lincoln Official Plans.

1.3 Development Context

AECOM Canada Ltd. (AECOM) was retained by Township of West Lincoln to complete a Stage 1 archaeological assessment in support of the Master Community Plan for Smithville, in the Township of West Lincoln, Ontario (**Figure 1**). Historically, the study area is found within Lots 3-11, Concession 9, Lots 4-11, Concession 8, Geographic Township of Grimsby and Lots 28-35, Concession 6, Geographic Township of Gainsborough, Counties of Lincoln and Welland, Community of Smithville, now the Township of West Lincoln. The study area encompasses the current Smithville Urban Area and the Smithville Development Study Area (SDSA). The SDSA encompasses approximately 425 gross hectares of developable land located north, west, and south of the urban area of Smithville. The Master Community Plan is being undertaken as part of an Integrated Municipal Class Environmental Assessment (EA).

The Stage 1 archaeological assessment was completed under the project direction of Glenn Kearsley [License #P123] and PIF#123-0450-2020 (AECOM). Documentary sources, historic maps, detailed mapping and satellite imagery were analyzed in order to evaluate the archaeological potential found within the study area. This report provides the results of the Stage 1 archaeological assessment and recommendations.

1.3.1 Objectives

The objective of the Stage 1 background study is to document the archaeological and land use history and current conditions within the study area. This information will be used to support recommendations regarding cultural heritage values or interests as well

as assessment and mitigation strategies. The results of Stage 1 archaeological assessment presented in this report are drawn in part from:

- Recent and historical maps of the study area;
- Reports of previous archaeological assessments within 50 m of the study area;
- The Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) Archaeological Sites Database (OASD) for a listing of registered archaeological sites within a 1 km radius of the study area;
- A visual inspection of the existing conditions of the study area and surroundings; and,
- Archaeological management plans or other archaeological potential mapping, where available.

The Stage 1 archaeological assessment has been conducted to meet the requirements of the MHSTCI *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). The objective of this Stage 1 background report is to provide a high-level assessment of archaeological potential within the study area, and to provide recommendations to assist in determining the appropriate Stage 2 archaeological assessment strategy for those areas with archaeological potential that will be impacted by the project.

1.4 Historical Context

Years of archaeological research and assessments in southern Ontario have resulted in a well-developed understanding of the historic use of land in the Counties of Lincoln and Welland from the earliest First Nation people to the more recent Euro-Canadian settlers and farmers. **Table 1** provides a breakdown of the cultural and temporal history of past occupations in the Counties of Lincoln and Welland.

Table 1: Cultural Chronology the Counties of Lincoln and Welland

Archaeological Period	Time Period	Characteristics
Early Paleo	9000-8400 BC	<ul style="list-style-type: none"> ■ Fluted Points ■ Arctic tundra and spruce parkland, caribou hunters
Late Paleo	8400-8000 BC	<ul style="list-style-type: none"> ■ Holcombe, Hi-Lo and Lanceolate Points ■ Slight reduction in territory size
Early Archaic	8000-6000 BC	<ul style="list-style-type: none"> ■ Notched and Bifurcate base Points ■ Growing populations

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Archaeological Period	Time Period	Characteristics
Middle Archaic	6000-2500 BC	<ul style="list-style-type: none"> ■ Stemmed and Brewerton Points, Laurentian Development ■ Increasing regionalization
Late Archaic	2000-1800 BC	<ul style="list-style-type: none"> ■ Narrow Point ■ Environment similar to present
Late Archaic	1800-1500 BC	<ul style="list-style-type: none"> ■ Broad Point ■ Large lithic tools
Late Archaic	1500-1100 BC	<ul style="list-style-type: none"> ■ Small Point ■ Introduction of bow
Terminal Archaic	1100-950 BC	<ul style="list-style-type: none"> ■ Hind Points, Glacial Kame Complex ■ Earliest true cemeteries
Early Woodland	950-400 BC	<ul style="list-style-type: none"> ■ Meadowood Points ■ Introduction of pottery
Middle Woodland	400 BC – AD 500	<ul style="list-style-type: none"> ■ Dentate/Pseudo-scallop Ceramics ■ Increased sedentism
Middle Woodland	AD 550-900	<ul style="list-style-type: none"> ■ Princess Point ■ Introduction of corn horticulture
Late Woodland	AD 900-1300	<ul style="list-style-type: none"> ■ Agricultural villages
Late Woodland	AD 1300-1400	<ul style="list-style-type: none"> ■ Increased longhouse sizes
Late Woodland	AD 1400-1650	<ul style="list-style-type: none"> ■ Warring nations and displacement
Contact Period	AD 1600-1875	<ul style="list-style-type: none"> ■ Early written records and treaties
Historic	AD 1749-present	<ul style="list-style-type: none"> ■ European settlement (French and English)

Notes: Taken from Ellis and Ferris (1990)

The following sections provide a detailed summary of the archaeological cultures that have settled in the vicinity of the study area. As Chapman and Putnam (1984) illustrate, the modern physiography of southern Ontario is largely a product of events of the last major glacial stage and the landscape is a complex mosaic of features and deposits produced during the last series of glacial retreats and advances prior to the withdrawal of the continental glaciers from the area. Southwestern Ontario was finally ice free by 12,500 years ago. With continuing ice retreat and lake regressions the land area of southern Ontario progressively increased while barriers to the influx of plants, animals, and people steadily diminished (Karrow and Warner 1990). The lands within the Counties of Lincoln and Welland have been extensively utilized by pre-contact Indigenous people who began occupying southwestern Ontario as the glaciers receded from the land, as early as 11,000 BC.

1.4.1 Pre-Contact First Nation Settlement

The Paleo Period

In this area the first human settlement can be traced back to 11,000 BC; these earliest well-documented groups are referred to as Paleo which literally means old or ancient. During the Paleo period people were non-agriculturalists who depended on hunting and gathering of wild food, they moved their encampments on a regular basis to be in the locations where these resources naturally became available, and the size of the groups occupying any particular location would vary depending on the nature and size of the available food resources (Ellis and Deller 1990). The picture that has emerged for the early and late Paleo is of groups at low population densities who were residentially mobile and made use of large territories during annual cycles of resource exploitation.

The Archaic Period

The next major cultural period following the Paleo is termed the Archaic, which is broken temporally into the Early, Middle, and Late Archaic periods. There is much debate on how the term Archaic is employed; general practice bases the designation off assemblage content as there are marked differences in artifact suites from the preceding Paleo and subsequent Woodland periods. As Ellis *et al.* (1990) note, from an artifact and site characteristic perspective the Archaic is simply used to refer to non-Paleo manifestations that pre-date the introduction of ceramics. Ellis *et al.* (1990) stress that Archaic groups can be distinguished from earlier groups based on site characteristics and artifact content.

Early Archaic sites have been reported throughout much of southwestern Ontario and extend as far north as the Lake Huron Basin region and as far east as Rice Lake. A lack of excavated assemblages from southern Ontario has limited understandings and inferences regarding the nature of stone tool kits in the Early Archaic and tool forms other than points are poorly known in Ontario; however, at least three major temporal horizons can be recognized and can be distinguished based on projectile point form (Ellis *et al.* 1990). These horizons are referred to as Side-Notched (*ca.* 8,000-7,700 BC), Corner-Notched (*ca.* 7,700-6,900 BC), and Bifurcated (*ca.* 6,900-6,000 BC) (Ellis *et al.* 1990). Additional details on each of these horizons and the temporal changes to tool types can be found in Ellis *et al.* (1990).

The Middle Archaic period (6,000-2,500 BC), like the Early Archaic, is relatively unknown in southern Ontario. Ellis *et al.* (1990) suggest that artifact traits that have come to be considered as characteristic of the Archaic period as a whole, first appear in the Middle Archaic. These traits include fully ground and polished stone tools, specific

tool types including banner stones and net-sinkers, and the use of local and/or non-chert type materials for lithic tool manufacture (Ellis *et al.* 1990).

The Late Archaic begins around approximately 2,000 BC and ends with the appearance of ceramics and the Meadowood Phase at roughly 950 BC. Much more is known about this period than the Early and Middle Archaic and a number of Late Archaic sites are known. Sites appear to be more common than earlier periods, suggesting some degree of population increase. True cemeteries appear and have allowed for the analysis of band size, biological relationships, social organization, and health. Narrow and Small point traditions appear as well as tool recycling wherein points were modified into drills, knives, end scrapers, and other tools (Ellis *et al.* 1990). Other tools including serrated flakes used for sawing or shredding, spokeshaves, and retouched flakes manufactured into perforators, gravers, micro-perforators, or piercers. Tools on coarse-grained rocks such as sandstone and quartz become common and include hammerstones, net-sinkers, anvils, and cobble spalls. Depending on preservation, several Late Archaic sites include bone and/or antler artifacts which likely represent fishing toolkits and ornamentation. These artifacts include bone harpoons, barbs or hooks, notched projectile points, and awls. Bone ornaments recovered have included tubular bone beads and drilled mammal canine pendants (Ellis *et al.* 1990).

Throughout the Early to Late Archaic periods the natural environment warmed, and vegetation changed from closed conifer-dominated vegetation cover, to the mixed coniferous and deciduous forest in the north and deciduous vegetation in the south we see in Ontario today (Ellis *et al.* 1990). During the Archaic period there are indications of increasing populations and decreasing size of territories exploited during annual rounds; fewer moves of residential camps throughout the year and longer occupations at seasonal campsites; continuous use of certain locations on a seasonal basis over many years; increasing attention to ritual associated with the deceased; and, long range exchange and trade systems for the purpose of obtaining valued and geographically localized resources (Ellis *et al.* 1990).

The Woodland Period

The Early Woodland period is distinguished from the Late Archaic period primarily by the addition of ceramic technology, which provides a useful demarcation point for archaeologists but is expected to have made less difference in the lives of the Early Woodland peoples. The settlement and subsistence patterns of Early Woodland people shows much continuity with the earlier Archaic with seasonal camps occupied to exploit specific natural resources (Spence *et al.* 1990). During the Middle Woodland well-defined territories containing several key environmental zones were exploited over the yearly subsistence cycle. Large sites with structures and substantial middens appear in

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the Middle Woodland associated with spring macro-band occupations focussed on utilizing fish resources and created by consistent returns to the same site (Spence *et al.* 1990). Groups would come together into large macro-bands during the spring-summer at lakeshore or marshland areas to take advantage of spawning fish; in the fall inland sand plains and river valleys were occupied for deer and nut harvesting and groups split into small micro-bands for winter survival (Spence *et al.* 1990). This is a departure from earlier Woodland times when macro-band aggregation is thought to have taken place in the winter (Ellis *et al.* 1988; Granger 1978).

The period between the Middle and Late Woodland period was both technically and socially transitional for the ethnically diverse populations of southern Ontario and these developments laid the basis for the emergence of settled villages and agriculturally based lifestyles (Fox 1990). The Late Woodland period began with some groups shifting settlement and subsistence patterns, involving an increasing reliance on corn horticulture. Corn may have been introduced into southwestern Ontario from the American Midwest as early as 600 AD. However, it did not become a dietary staple until at least three to four hundred years later. The first agricultural villages in southwestern Ontario date to the 10th century A.D. Unlike the riverine base camps of the Middle Woodland period, Late Woodland sites are located in the uplands, on well-drained sandy soils.

In the Late Woodland period, between 900-1300 AD, villages tended to be small settlements with nearby camps and hamlets that served as temporary spaces for hunting game and gathering resources outside of the villages. At this time, small village sites were characterized by the presence of longhouses with villages being occupied considerably longer than later in the Woodland period. Villages tended to be moved when nearby soils had been depleted by farming and conveniently collected firewood grew scarce. The Jesuits reported that the Huron moved their villages once every 10-15 years as they relied less heavily on corn than did later groups, and since their villages were much smaller, there was less demand on nearby resources. Small amounts of corn appear to have been a dietary component at this time; however, archaeological evidence suggests that its role was not as a dietary staple at this time but was possibly supplemental in nature.

Between 1300 and 1400 AD, village sizes grew significantly, resulting in the development of complex community political systems. This period also marks the emergence of fully developed horticulture, including the cultivation of corn, beans, and squash. Additionally, changes in ceramic styles may reflect increasing levels of inter-community communication and integration. This is supported by Michi Saagiig (Mississauga Anishinaabeg) oral histories, which speak to the coming of the corn

growers and the symbiotic relationships that Algonkian speaking groups had with the Huron-Wendat in particular.

By the beginning of the fourteenth century, larger fortified village sites were often cleared to accommodate the cultivation of corn, beans, and squash as a result of an increasing reliance on horticulture. Longhouses also continued to grow in size until 1450 AD when a decrease in house length is observed. This decrease in house length may be partially attributed to large scale drops in population size associated with the introduction of European diseases.

1.4.2 Post-Contact Period Settlement

The post-contact occupation of southern Ontario was heavily influenced by the dispersal of Iroquoian speaking peoples, such as the Huron-Wendat, Petun and Neutral by the New York State Confederacy of Iroquois, followed by the arrival of Algonkian speaking groups from northern Ontario. The Ojibwa of southern Ontario date from about 1701 and occupied the territory between Lakes Huron, Erie and Ontario (Schmalz 1991). This is also the period in which the Mississaugas are known to have moved into southern Ontario and the Great Lakes watersheds (Konrad 1981) while at the same time the members of the Three Fires Confederacy, the Chippewa, Ottawa and Potawatomi were immigrating from Ohio and Michigan (Feest and Feest 1978).

As European settlers encroached on their territory the nature of Indigenous population distribution, settlement size and material culture changed. Despite these changes it is possible to correlate historically recorded villages with archaeological manifestations and the similarity of those sites to more ancient sites reveal an antiquity to documented cultural expressions that confirms a long historical continuity of systems of ideology and thought (Ferris 2009).

The study area falls in the Treaty 3 Between the Lakes Purchase. The Treaty was signed in 1792 between the Principal Chiefs of the Messissague Nation and John Graves Simcoe, a representative of the Province and Crown. The Treaty covers the territory lying and being between Lake Ontario, and Lake Erie (Whose Land 2020).

It is important to note that, when discussing the historical documentation of the movement of Indigenous people, what has been documented by early European explorers and settlers represents only a very small snap-shot in time. Where Indigenous groups were residing during European exploration and settlement is restricted to only a very short period of time and does not reflect previous and subsequent movements of these groups. This brief history does not reflect the full picture of the pre- or post-contact period occupation of Indigenous groups or cultures. As such, relying on historic documentation in regard to Indigenous occupation and movement across the landscape

can lead to misinterpretation. For example, historic documentation of the movement of Indigenous groups into an area may suggest to the reader that these groups had not occupied the area previously; however, this is not the case. It is clear from Indigenous oral histories and the archaeological record that pre-contact Indigenous populations were extremely mobile and not tied to any one specific area. Over the vast period of time prior to the arrival of Europeans, Indigenous groups, language families, and cultures were fluid across the landscape.

1.4.3 Euro-Canadian Settlement

The study area is found in the Community of Smithville, within Lots 3-11, Concession 9, Lots 4-11, Concession 8, Geographic Township of Grimsby and Lots 28-35, Concession 6, Geographic Township of Gainsborough, County of Lincoln.

Lincoln County

The study area is located in the historical Counties of Lincoln and Welland, part of the Niagara Peninsula facing the United States across the Niagara River. Lincoln County was formed in 1792 and in 1845 the southern end was separated to form Welland County. In 1970, Lincoln and Welland Counties were amalgamated to form the Regional Municipality of Niagara. The first townships to be surveyed were along the river in 1787. The layout of these is quite different from the rectilinear pattern of later townships, with their orderly numbering of lots from 1 to about 35 in evenly measured concessions. In the aftermath of the American Revolution this frontier was one of the locations where Loyalists and Pacifists funneled across the new border into British North America to escape retribution, and to remain under British rule. The earliest settlers in the area arrived before the official evacuation and resettlement of Loyalists was undertaken in 1783. Many of the new arrivals were Mennonites from Pennsylvania, and from the 1780s there was a Mennonite Meeting House and community around Black Creek. The proximity of this area to the United States has made it vulnerable to attack, and it was the principal battle zone during the War of 1812-14. It was also subjected to cross-border raids by the Fenians after the American Civil War, 1866-71.

Gainsborough Township

One of the first settlers to Gainborough Township was John Dochstader, who arrived in 1783 (Exploring Niagara 2020). By 1800, there was a small schoolhouse located at Snyder's Mills and a Presbyterian Church in the Township, and by 1818, there was also a Methodist Church and an Inn. The Township played an important role in the War of 1812, providing supplies such as beef, pork, rye and wheat to troops stationed at Niagara, proving the establishment of the area.

Grimsby Township

Grimsby Township was originally referred to as Township No. 6 but was renamed after the English Township of the same name (Exploring Niagara 2020). In 1833 the Township was divided into North and South Grimsby. Smithville was the head of the newly formed South Township, with an excellent position for settlement along the Twenty Mile Creek.

Smithville

The community of Smithville began as a post village in Lincoln County. The community is found on the Jordan or Twenty-Mile Creek approximately 21 miles south-west of Hamilton. In 1906, the community had 6 Churches (Roman Catholic, Episcopal, Methodist, Presbyterian, Disciples and Universalist), 10 stores, 2 hotels, a bank (Union Bank of Canada), library, high school and public school (Krassoc 2015). It also had 2 foundries and machine shops, a grist and seed cleaning mill, job printing office, 4 blacksmith shops, a pump factory, and a station on the Toronto, Hamilton & Buffalo Railway. The first settler was Richard Griffin, who cleared several lots along the ninth concession beginning in 1787. By 1849 the population had reached about 150 and a post office was opened. In 1889 it became part of South Grimsby Township and in 1970 it became part of the Township of West Lincoln (WikiTree 2018). The construction of the Toronto, Hamilton & Buffalo Railway was granted in 1884, and a station was built in Smithville in 1895. Following a fire, the station was rebuilt in 1903 and it still stands to this day.

1.5 Archaeological Context

1.5.1 Natural Environment

The study area is located within the Haldimand Clay Plain physiographic regions of southern Ontario. The Haldimand Clay Plain covers an area approximately 3,500 km² and spans from the Niagara Escarpment to the north shore of Lake Erie (Chapman and Putnam 1984: 156). This clay plain was submerged by glacial Lake Warren approximately 12,000 years ago and, as a result, is characterized by a scattered group of gently rolling drumlins that are partially buried in moderately dissected clay beds (Chapman and Putnam 1984: 157). The underlying rocks consist mainly of sedimentary Paleozoic beds that dip slightly south underneath Lake Erie. In some areas, such as the nearby Lake Erie shoreline, exposed outcrops of these rocks contain sources of Onondaga chert that would have been utilized by pre-contact peoples. The soils in the study areas range from poorly drained (to the north of the interchange) to imperfectly drained clay (south of the interchange).

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The single most important environmental feature necessary for extended human occupation is potable water. As such, proximity to water is regarded as a useful index for the determination of potential for the presence of archaeological resources. Twenty Mile Creek runs through the study area and Lake Ontario is located approximately 10 km north of the study area.

These environmental characteristics would have provided an ideal environment for both temporary and permanent settlement throughout the pre-and post-contact periods. These water sources would have served as important pre- and post-contact transportation routes as well as sources of potable water and riverine resources.

During the 19th and 20th century, rapid deforestation resulted in significant land clearance across Grimsby and Gainsborough Townships and over time, the once diverse forest life and wide range of tree species and natural resources would have also been depleted as agricultural and modern residential and commercial development continued. As a result of continuing urban development, this part of southern Ontario is almost completely deforested today.

1.5.2 Previous Archaeological Work

To inform the current Stage 1 archaeological assessment and further establish the archaeological context of the study area, a search of the OASD was conducted by AECOM to determine if any previous archeological work has been completed within the current study area or within 50 m of the study area boundaries. **Table 2** lists reports regarding previous archaeological work relevant to the study area.

Table 2: Archaeological Reports with Relevant Background Information

Year	Title	Author	PIF Number
2006	<i>Stage 4 Excavation of Area 2 (AgGv-66), Smithville Estates Property, Town of Smithville, Regional Municipality of Niagara</i>	New Directions Archaeology Limited	P018-135-2006
2014	<i>Archaeological Assessment (Stages 1, 2), Part of Lots 20, 56 and 57, Registered Plan M-88, Town of Smithville, Geographical Township of West Lincoln, Historical Township of Grimsby, Historical County of Lincoln, Region of Niagara</i>	Detritus Consulting Ltd.	P230-0007-2014

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Year	Title	Author	PIF Number
2015	<i>Stage 1-2 Archaeological Assessment, Griffin Place (Shurie Road), Part of Lot 31, Concession 6, (Geographic Township of Gainsborough) Township of West Lincoln, County of Lincoln</i>	AMICK Consultants Limited	P1024-0101-2015
2016a	<i>Stage 4 Excavation Report: NRWC-43 (AgGu-214) Niagara Region Wind Project Part of Lot 22, Concession 5, Geographic Township of Gainsborough, now Township of West Lincoln, Regional Municipality of Niagara, Ontario</i>	Stantec	P001-0854-2015
2016b	<i>Stage 1-2 Archaeological Assessment: Proposed Temporary Access and Workspaces in Lincoln and Welland Counties, Various Integrity Digs (SWP 1538S), Enbridge Line 10 Part of Various Lots and Concessions, Various Geographic Townships, former Lincoln and Welland Counties, now Regional Municipality of Niagara, Ontario</i>	Stantec	P256-0369-2015
2016c	<i>Stage 1-2 Archaeological Assessment: Smithville Northwest Subdivision Development, Lot 10, Concession 9, Geographic Township of South Grimsby, now Township of West Lincoln, Regional Municipality of Niagara, Ontario</i>	Stantec	P415-0080-2016
2016d	<i>Stage 2 Archaeological Assessment: Modified Alternate Transmission Route, Niagara Region Wind Project Part of Lots 1 to 3, Gore A, Between 7th and 8th Concessions and the Road Allowance Between Lots 11 and 12, Concessions 8 and 9, Geographic Township of Grimsby, former Lincoln County, Township of West Lincoln, now Regional Municipality of Niagara, Ontario</i>	Stantec	P001-0885-2016
2016e	<i>Stage 2 Archaeological Assessment: Hydro Pole Investigations, Niagara Region Wind Project, Part of Lot 11, Concession 9, Geographic Township of Grimsby, former Lincoln County, Township of West Lincoln, now Regional Municipality of Niagara, Ontario</i>	Stantec	P001-0886-2016
2016f	<i>Stage 3 Archaeological Assessment: Historic Site #1 (AgGv-137) Hydro Pole Investigations, Niagara Region Wind Project, Part of Lot 11, Concession 9, Geographic Township of Grimsby, former Lincoln County, now Township of West Lincoln, Regional Municipality of Niagara, Ontario</i>	Stantec	P256-0407-2016

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Year	Title	Author	PIF Number
2016	<i>Stage 2 Archaeological Assessment Regional Road 20, From Streamside Drive to South Grimsby Road 5, Township of West Lincoln, Niagara Region, Ontario</i>	Amec Foster Wheeler	P141-0248-2016
2017a	<i>Stage 1 and 2 Archaeological Assessment of 173 St. Catharines Street, Lot 51 and Lot 52, Registered Plan 30M-90, and part of Lot 47, part of Lot 7, Concession 9, Geographic Township of Grimsby, County of Lincoln, now in the Town of Smithville, Township of West Lincoln, Regional Municipality of Niagara</i>	ASI	P046-0243-2016
2017b	<i>Stage 3 Archaeological Assessment of the West Limit of the Smithville Union Cemetery, Lot 51 and Lot 52, Registered Plan 30M-90, and part of Lot 47, part of Lot 6, Concession 9, Geographic Township of Grimsby, County of Lincoln, now in the Town of Smithville, Regional Municipality of Niagara, ON</i>	ASI	P046-0269-2016
2017	<i>Stage 1-2 Archaeological Property Assessment, Industrial Road & Regional Road 20 Subdivision, Part of Lots 4, Concession 9, (Geographic Twp. of Grimsby, County of Lincoln), Part of the North Half of Lot 29, Concession 6 (Geographic Twp. of Gainsboro, County of Lincoln), Township of West Lincoln (Smithville), Regional Municipality of Niagara.</i>	AMICK Consultants Limited	P384-0140-2014
2017a	<i>Stage 4 Archaeological Mitigation: Historic Site #1 (AgGv-137), Hydro Pole Investigations, Niagara Region Wind Project, Part of Lot 11, Concession 9, Geographic Township of Grimsby, former Lincoln County, now Township of West Lincoln, Regional Municipality of Niagara, Ontario</i>	Stantec	P256-0408-2016
2017b	<i>Stage 1-2 Archaeological Assessment: Smithville, Northwest Subdivision Development Additional Lands, Part of Lot 11, Concession 8, Geographic Township of South Grimsby, now Township of West Lincoln Regional Municipality of Niagara, Ontario</i>	Stantec	P256-0445-2016
2017c	<i>Stage 2 Archaeological Assessment: Additional Finds, Niagara Region Wind Farm, Various Lots and Concessions, Geographic Township of Gainsborough, former Lincoln County, now Regional Municipality of Niagara, and Part of Lot 4, North of Forks Road, Geographic Township of Moulton, Haldimand County, Ontario</i>	Stantec	P415-0081-2016

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In 2006, NDA Ltd. completed a Stage 4 mitigation of the AgGv-66 site within the current study area. A total of 52 one metre square units recovered a small secondary lithic reduction campsite with one hearth feature (NDA Ltd 2006). The area is considered to be free of further archaeological potential.

In June 2014, AMICK Consultants Ltd. completed a Stage 1-2 archaeological assessment of an area that overlaps with the current study area. No archaeological resources were encountered, and the area is considered free of further archaeological concern (AMICK 2017).

Detritus Consulting Ltd. (2014) completed a Stage 1-2 archaeological assessment of a property south of Townline Road in Smithville, which is found within the current study area. Test pit survey was completed, and the entire study area was cleared of further archaeological concern.

AMICK Consulting Ltd. (2015) completed a Stage 1-2 archaeological assessment of a portion of lot 31, concession 6, in the geographic Township of Gainsborough, which is found within the current study area. Following their Stage 2 survey, it was recommended that the study area be considered clear of further archaeological concern as no archaeological resources were located.

In 2016, Stantec completed a Stage 4 mitigation of the AgGu-214 site as part of the Niagara Region Wind Project, which is found within the current study area (Stantec 2016a). This assessment cleared the site of further archaeological concern.

Stantec (2016b) completed a Stage 1-2 archaeological assessment of the for proposed temporary access roads and workspaces associated with an Enbridge project. This study area overlaps with a portion of the current study area, and their Stage 2 test pit and pedestrian survey cleared the area of further archaeological concern.

Stantec completed a Stage 1-2 archaeological assessment in 2016 of the Smithville Northwest Subdivision Development (Stantec 2016c). Located in the northwestern section of the current study area, a non-diagnostic findspot consisting of a scraper was recovered. However, the findspot did not qualify for additional archaeological assessment and the study area was cleared of further archaeological concern.

Stantec completed an additional Stage 2 archaeological assessment for additional lands associated with the Niagara Region Wind Project, and as no archaeological resources were located the study area was considered clear of further archaeological concern (2016d).

An additional Stage 2 that same year (2016e) for the Niagara Region Wind Project was completed, where a single historic site, Historic Site # 1 (AgGv-137), was located and

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recommended for further archaeological work. All other lands in this study area were cleared of further archaeological concern. The Stage 3 archaeological assessment of the Historic Site # 1 (AgGv-137) was completed in 2016 for a portion of the site prior to the installation of a proposed hydro pole (Stantec 2016f). The portion of the site that was assessed through Stage 3 was recommended for Stage 4 assessment, and the remaining portions of the site additional Stage 3 assessment if future ground disturbance was to occur.

Amec Foster Wheeler (2016) completed a Stage 2 archaeological assessment for an area of proposed road improvements along Regional Road 20, which overlaps with the current study area. No archaeological resources were located, and the study area is considered clear of further archaeological concern.

ASI (2017a) completed a Stage 1-2 archaeological assessment for the property located at 173 St. Catharines Street, which overlaps with the current study area. While no archaeological resources were located during this assessment, the Smithville Union Cemetery is located immediately adjacent to the property and grave markers were observed in close proximity to the property limits. Therefore, a Stage 3 cemetery assessment consisting of mechanical topsoil stripping extending to a minimum of 10 m beyond the existing boundary between the cemetery and the subject property to document any unmarked graves that may be present (ASI 2017a:15).

ASI (2017b) completed the Stage 3 cemetery investigations they had previously recommended in their Stage 1-2 archaeological assessment. This work involved the mechanical removal of the topsoil to a distance of 10 m along the length of the study area within the property boundary and did not result in the location of any grave shafts or other features. This area is now considered clear of further archaeological concern.

In 2016, Stantec (2017a) returned to complete Stage 4 archaeological assessment of a portion of the Historic Site # 1 (AgGv-137) as part of a proposed hydro pole location. This portion of the site was cleared of further archaeological concern.

Stantec completed a Stage 1-2 archaeological assessment in 2016 prior to the construction of a subdivision on part of Lot 11, Concession 8, in the Geographic Township of Grimsby (Stantec 2017b). A total of 7 pre-contact findspots were located, although none of them fulfilled the criteria for further archaeological assessment.

An additional Stage 2 archaeological assessment was completed by Stantec as part of the Niagara Region Wind Farm located additional artifacts from seven previously identified sites and identified eight additional locations containing archaeological resources (2017c). NRWC-18 (AGGU-197), NRWC-28 (AGGU-200), NRWC-29 (AFGV-136), NRWC-33 (AGGV-121), NRWC-42 (AGGU-213), and NRWC-56 (AGGV-139) will

require additional Stage 3 archaeological assessment based on the recovery of additional artifacts if they are impacted by future ground disturbance. CL 44 (AGGV-140), CL 45, CL 46 (AGGU-239), CL 47 (AGGU-240), IF 107, IF 108 (AGGU-241), IF 109, IF 110, and IF 111 were small sites or findspots that did not meet the criteria for additional archaeological assessment.

To the best of our knowledge, there are no other reports concerning archaeological work conducted within or in close proximity (i.e. within 50 m) of the study area; however, it should be noted that the MHSTCI does not maintain a database of all properties that have had past archaeological investigations and searches of the MHSTCI public register do not always result in a complete listing of all archaeological work conducted in a given area. In consequence, in some cases the only way a consulting archaeologist will know that a past assessment has been conducted in a given area is if they have personal knowledge of it, or if the assessment resulted in the discovery and registration of one or more archaeological sites.

Archaeological Management Plans

The Archaeological Management Plan for the Region of Niagara is being prepared by Archaeological Services Inc. and is expected to be complete late 2020.

Cemeteries

There are three known cemeteries found within the study area; Smithville Union Cemetery, Saint Luke Anglican Church Cemetery and Smithville United Church Cemetery.

1.5.3 Known Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MHSTCI. This database contains registered archaeological sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and 8.5 km north to south. Each Borden block is referred to by a four-letter designation and sites located within the block are numbered sequentially as they are found. The study area is situated within the Borden blocks AgGv and AgGu.

AECOM conducted a data search of the OASD to determine if any registered archaeological sites are located within the study area as well as within 1 km of the current study area boundaries. This search resulted in the identification of 93 registered archaeological sites, eight of which are located within the current study area. **Table 3** provides details on the registered archaeological sites within 1 km of the current study area.

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Table 3: Registered Archaeological Sites within 1 km of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Further Cultural Heritage Value or Interest
AgGv-90	Tower 170	Post-Contact Euro-Canadian	homestead	No Further CHVI
AgGv-89	New Tower 136	Post-Contact Euro-Canadian	homestead	No Further CHVI
AgGv-88	Tower 162	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-87	By Chance	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-86	Wolf	Indigenous Late Archaic	findspot	No Further CHVI
AgGv-85		Indigenous, Woodland	findspot	No Further CHVI
AgGv-84		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-83		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-82		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-81		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-80		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-79		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-78		Indigenous Early Woodland	Findspot	No Further CHVI
AgGv-77	Bartel Bridge	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-76	Area 12	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-75	Area 11	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-74	Area 10	Indigenous Early Woodland	camp/campsite	No further CHVI
AgGv-73	Area 9	Pre-Contact	camp/campsite	No Further CHVI
AgGv-72	Area 8	Indigenous Early Archaic	camp/campsite, scatter	No Further CHVI
AgGv-71	Area 7	Pre-Contact Indigenous	camp/campsite	Further CHVI
AgGv-70	Area 6	Indigenous Late Woodland, Late Iroquoian, Neutral	camp/campsite	No further CHVI
AgGv-69	Area 5	Indigenous Late Archaic	camp/campsite	No Further CHVI
AgGv-68	Area 4	Pre-Contact Indigenous	camp/campsite	Further CHVI
AgGv-67	Area 3	Indigenous Early Archaic	camp/campsite	Further CHVI
AgGv-66	Area 2	Indigenous Early Archaic	camp/campsite, scatter	No Further CHVI
AgGv-65	Area 1	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-64	Streamside 2	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-63	Streamside 1	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-62		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-61		Pre-Contact Indigenous	Unknown	No Further CHVI
AgGv-60		Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGv-59	Nelson	Pre-Contact Indigenous	camp/campsite, scatter	Further CHVI
AgGv-58	-	Indigenous Late Archaic	findspot	No Further CHVI
AgGv-57	Grassy Knoll	Pre-Contact Indigenous	camp/campsite	No Further CHVI

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Borden #	Site Name	Cultural Affiliation	Site Type	Further Cultural Heritage Value or Interest
AgGv-56	Mini Soccer Field	Pre-Contact Indigenous	camp/campsite	Further CHVI
AgGv-55	North Creek	Indigenous Pre-Contact Early Archaic	camp/campsite	Further CHVI
AgGv-54	Riverview Estates		camp/campsite	No Further CHVI
AgGv-53		Pre-Contact Indigenous	camp/campsite	Unknown
AgGv-52		Pre-Contact Early Archaic	Findspot	Further CHVI
AgGv-51		Pre-Contact Indigenous	findspot	Unknown
AgGv-50	Grimsby Landfill 3	Pre-Contact Indigenous	Unknown	No Further CHVI
AgGv-49	Grimsby Landfill 2	Indigenous Late Archaic	Findspot	No Further CHVI
AgGv-48	Grimsby Landfill 1	Indigenous Late Archaic	findspot	No Further CHVI
AgGv-47		Pre-Contact Indigenous	Findspot	No Further CHVI
AgGv-145				Further CHVI
AgGv-144		Post-Contact Euro-Canadian	homestead	No Further CHVI
AgGv-143		Post-Contact Euro-Canadian	homestead	Further CHVI
AgGv-142	Location 7	Pre-Contact Indigenous	Scatter	No Further CHVI
AgGv-141	Location 2	Indigenous Late Archaic	Findspot	No Further CHVI
AgGv-138	AC 45	Pre-Contact Indigenous	scatter	No Further CHVI
AgGv-137	Historic Site # 1	Post-Contact Euro-Canadian	farmstead	Further CHVI
AgGv-131		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-130		Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-123		Pre-Contact Indigenous	camp / campsite, scatter	No Further CHVI
AgGv-115	LACI			Unknown
AgGv-109	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-108	-	Pre-Contact Indigenous	camp/campsite, findspot	No Further CHVI
AgGv-107	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-106	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-105	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGv-104	-	Pre-Contact Indigenous	findspot	No Further CHVI
AgGv-103		Pre-Contact Indigenous	Unknown	No Further CHVI
AgGv-102		Pre-Contact Indigenous	scatter	No Further CHVI
AgGv-101	Debono	Pre-Contact Indigenous	scatter	No Further CHVI
AgGv-100	Tower 153	Post-Contact Euro-Canadian, Pre-Contact Indigenous	scatter	No Further CHVI
AgGv-1	Kimbo			Unknown
AgGu-8	Van Nostrand			Unknown
AgGu-58	Meadowview	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGu-57	Bob-o-Link	Pre-Contact Indigenous	camp/campsite	No Further CHVI
AgGu-56	Andy Smith	Indigenous Late Woodland, Iroquoian		Further CHVI
AgGu-55	Hickory	Pre-Contact Indigenous	camp/campsite	No Further CHVI

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Borden #	Site Name	Cultural Affiliation	Site Type	Further Cultural Heritage Value or Interest
AgGu-3	St. Anns Ossuary	Indigenous Late Woodland, Iroquoian, Neutral	ossuary	Further CHVI
AgGu-240		Pre-Contact Indigenous	findspot	No Further CHVI
AgGu-239		Pre-Contact Indigenous	findspot	No Further CHVI
AgGu-215	SE53-3	Pre-Contact Indigenous	camp / campsite	No Further CHVI
AgGu-214	SE53-2	Pre-Contact Indigenous, Early Woodland, Late Woodland, Middle Woodland	camp / campsite	No Further CHVI
AgGu-213	SE53-1	Indigenous, Late Archaic	scatter	Further CHVI
AgGu-180				Further CHVI
AgGu-172		Indigenous Early Archaic	findspot	No Further CHVI
AgGu-171		Pre-Contact Indigenous	scatter	No Further CHVI
AgGu-170		Pre-Contact Indigenous	scatter	No Further CHVI
AgGu-169		Pre-Contact Indigenous	scatter	No Further CHVI
AgGu-168				No Further CHVI
AgGu-167		Pre-Contact Indigenous	Unknown	No Further CHVI
AgGu-166		Pre-Contact Indigenous	Unknown	No Further CHVI
AgGu-165		Pre-Contact Indigenous	camp / campsite	No Further CHVI
AgGu-164		Pre-Contact Indigenous	camp / campsite	No Further CHVI
AgGu-144	-	Post-Contact Euro-Canadian, Pre-Contact Indigenous	scatter	Further CHVI
AgGu-143	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGu-142	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGu-141	-	Pre-Contact Indigenous	findspot	Further CHVI
AgGu-140	-	Indigenous Early Archaic	scatter	Further CHVI
AgGu-139	-	Pre-Contact Indigenous	scatter	Further CHVI

Note: * Bolded sites are located within the study area and require further archaeological assessment

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The Area 7 site (AgGv-71) consists of 36 lithics, including 2 utilized flakes and 34 flakes manufactured from Onondaga chert, from the surface of a 20 m by 10 m area. Further work is required prior to any ground disturbance.

The Area 4 site (AgGv-68) consists of 39 lithics, including 1 scraper, 4 bifaces (2 collected), and 34 Onondaga chert flakes (not collected), from the surface of a 30 m by 20 m area. Prior to any future ground disturbance, further archaeological assessment must be completed.

The Area 3 site (AgGv-67) was located during pedestrian survey and resulted in the recovery of 32 lithics, including 1 projectile point, 1 bipolar wedge, and 30 Onondaga chert flakes, from the surface of a 15 m by 40 m area. Prior to any future ground disturbance, further archaeological assessment must be completed.

The North Creek site (AgGv-55) was located during pedestrian survey in 1997 and consisted of two clusters. The north cluster was comprised of 50 artifacts in a 20 m by 40 m area, while the south cluster contained 57 artifacts in a 50 m x 30 m area.

The AgGv-145 site was found in 2019 during pedestrian survey and was recommended for further Stage 3 archaeological assessment. No other information is available in past portal.

The Historic Site # 1 (AgGv-137) was subject to partial Stage 3 and 4 archaeological assessment as part of the Niagara Region Wind Project. The portion of the site within the project has been cleared of further work, but the remaining portions outside this area will require additional Stage 3 and 4 archaeological assessment prior to any future ground disturbance.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act (FIPPA)*. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MHSTCI will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

1.5.4 Existing Conditions

The study area is composed of both residential and commercial areas, with large swaths of agricultural lands surrounding the developed area. The Twenty Mile Creek is found running southeast to northwest through the centre of the community, as well as the Canadian Pacific Railway.

2. Analysis and Conclusions

2.1 Determination of Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Criteria commonly used by the MHSTCI to determine areas of archaeological potential are listed in Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). Distance to modern or ancient water sources is generally accepted as the most important element for past human settlement patterns and when considered alone may result in a determination of archaeological potential. In addition, any combination of two or more of the listed criteria indicates archaeological potential.

Based on a review of the historical, environmental, and archaeological context of the study area, it has been determined that potential for the recovery of pre- and post-contact First Nation and 19th century Euro-Canadian archaeological resources within the study area is high based on the presence of the following features:

- Proximity to previously identified archaeological sites (93 registered sites, 6 of which require additional work within the study area);
- Distance to various types of water sources (Twenty Mile Creek);
- Soil texture and drainage;
- Glacial geomorphology, elevated topography and the general topographic variability of the area;
- Resource areas including food or medicinal plants, scarce raw materials and early Euro-Canadian industry;
- Areas of early Euro- Canadian settlement and early transportation routes;
- Properties listed on municipal register of properties designated under the *Ontario Heritage Act* (Government of Ontario 1990b); and

Certain features indicate that archaeological potential has been removed, such as land that has been subject to extensive and intensive deep land alterations that have severely damaged the integrity of any archaeological resources. This includes landscaping that involves grading below the topsoil level, building footprints, quarrying and sewage and infrastructure development (Ontario Government 2011). Areas of low archaeological potential within the study area include 20th century subdivision and commercial developments as well as road construction. Additionally, several previous

archaeological assessments have cleared various properties of archaeological concerns and these areas are considered to be cleared of further archaeological potential.

2.2 Conclusions

AECOM's Stage 1 background study of the Master Community Plan for Smithville study area has determined that the potential for the recovery of archaeological resources is high, given the proximity of the study area to previous archaeological sites, water sources, soil texture and drainage, topography, early Euro-Canadian industries, settlement and transportation routes. Archaeological potential has been removed from areas determined to have been subject to deep and extensive land alterations that have significantly compromised the recovery of archaeological material, and areas cleared through previous archaeological assessment. Areas identified as retaining archaeological potential through previous assessments must be subject to further archaeological assessment. Areas identified as retaining moderate to high archaeological potential must be subject to Stage 2 archaeological assessment.

This Stage 1 background archaeological assessment and review is necessarily high level due to the early stage of planning. As the design is refined and there is a better understanding of the planned impacts, areas that require further archaeological assessment will be examined against the type of impact planned to formulate the appropriate Stage 2 archaeological assessment strategy on a property by property basis.

3. Recommendations

In light of these results, prior to any ground disturbing activities, a Stage 2 archaeological assessment is recommended for all land identified as retaining archaeological potential.

1. Stage 2 archaeological assessments must be conducted for all areas identified in this report as retaining moderate to high archaeological potential shaded in green on **Figure 6**.
2. Areas that are marked in hatching on **Figure 6** have been subject to previous archaeological assessment that have cleared the land of archaeological concerns, therefore no further archaeological work is recommended for those areas.
3. Areas with yellow shading indicate areas of low archaeological potential and will require a comprehensive property inspection as part of the Stage 2 field survey in order to determine the extent of previous disturbance (**Figure 6**).
4. Further archaeological assessments must be conducted by a licensed archaeologist and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). The requirements for standard surface archaeological survey include:
 - i. Test pit survey at 5 m intervals in all areas that will be impacted by the project and where ploughing is not possible (e.g., woodlots, overgrown areas, manicured lawns);
 - ii. Pedestrian survey at 5 m intervals where ploughing is possible (e.g. agricultural fields). This assessment will occur when agricultural fields have been recently ploughed, weathered, and exhibit at least 80% surface visibility.
5. It should be noted that special consideration and recommendations must be made for land within the cemeteries located within the study area, including Smithville Union Cemetery, Saint Luke Anglican Church Cemetery and Smithville United Church Cemetery (**Figure 6**).
 - i. Given the early-19th century establishment of the cemeteries, current fence lines or marked cemetery boundaries do not necessarily represent the limits of the cemetery below ground.
 - ii. As a precautionary measure, it is recommended that after Stages 1 and 2 archaeological assessments are completed, should any ground disturbing

activities be conducted adjacent to the cemeteries located within the study area, a Stage 3 Cemetery Investigation must be conducted around the cemetery in a buffer of 10 m to determine if human remains are present. Recommendations for the Stage 3 Cemetery Investigation are as follows:

- a. Mechanical topsoil removal is required to determine if deeply buried archaeological resources or human remains are present. Mechanical topsoil removal must be conducted in the presence of a licensed archaeologist as per Section 3.3.3 of the Standards and Guidelines for Consultant Archaeologists (Ontario Government 2011);
 - b. The results and effectiveness of this protection strategy must be reported to the MHSTCI as part of a Stage 3 cemetery investigation. This report will document the monitoring of the mechanical topsoil removal and will provide details on any findings related to the presence or absence of grave shafts and/or human remains;
 - c. If human remains are encountered during construction, work must cease immediately, the police or Regional Coroner should be contacted, as well as the Registrar of Burial Sites, War Graves, Abandoned Cemeteries, and Cemetery Closures of the Ministry of Consumer Services.
6. The six registered archaeological sites (AgGv-71, AgGv-68, AgGv-67, AgGv-55, AgGv-145, and AgGv-137) within the study area which still retain cultural heritage value or interest and should be subject to further archaeological assessment by a licensed consultant archaeologist, in accordance with the previous consultants' recommendations outlined in **Section 1.1.3** of this report and the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011) prior to any ground disturbing activities (found in the **Supplementary Documentation, Figure 8**).

4. Advice on Compliance with Legislation

This report is submitted to the Ontario 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 Heritage, Sport, Tourism, and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force in 2012) require that any person discovering human remains must notify the police or coroner and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries, and Cemetery Closures.

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6. Figures

All figures pertaining to the Stage 1 archaeological assessment for the Master Community Plan for Smithville study area in the Township of West Lincoln, Ontario are provided on the following pages.

Figure 1: Location of the Study Area

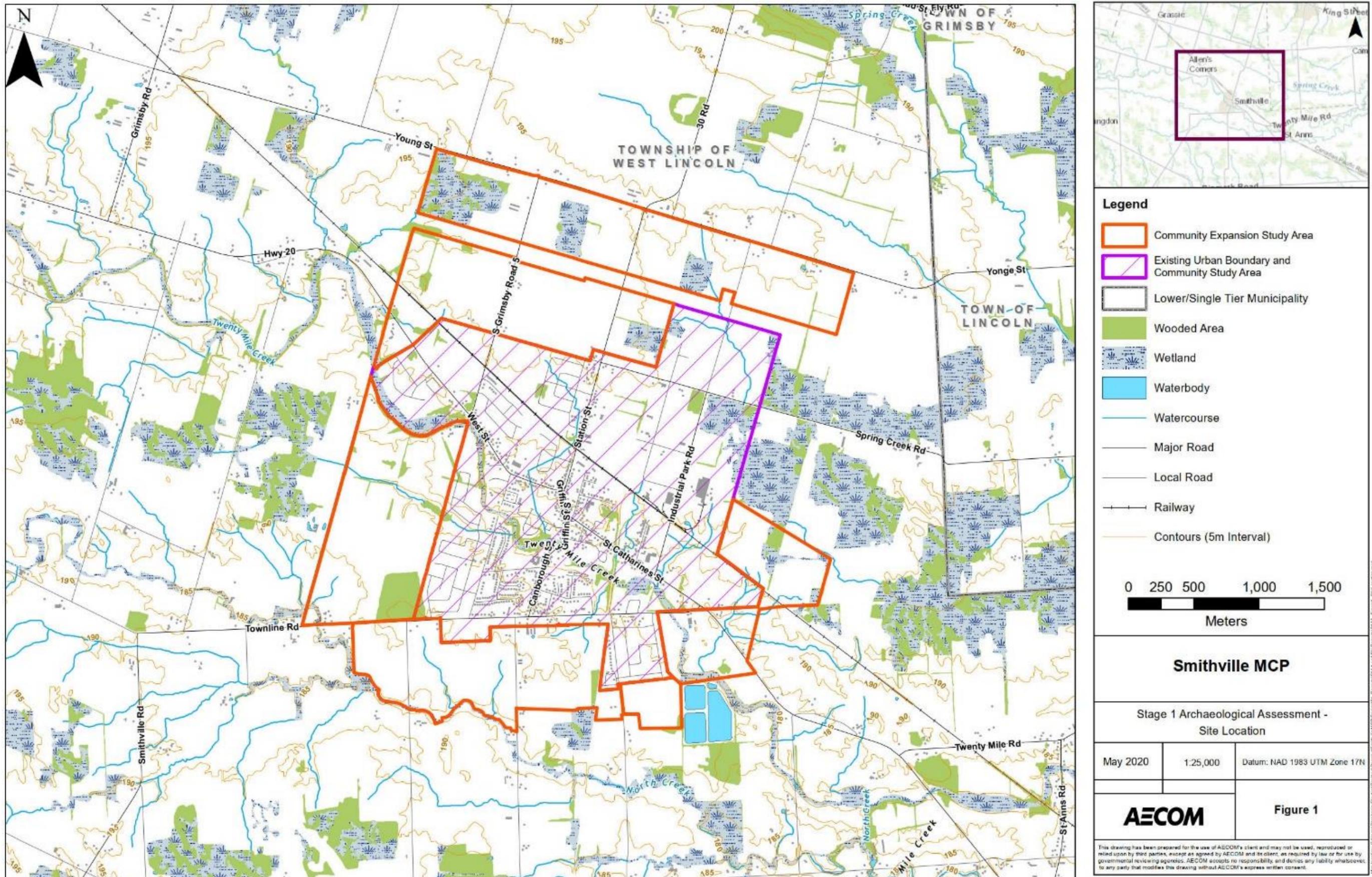
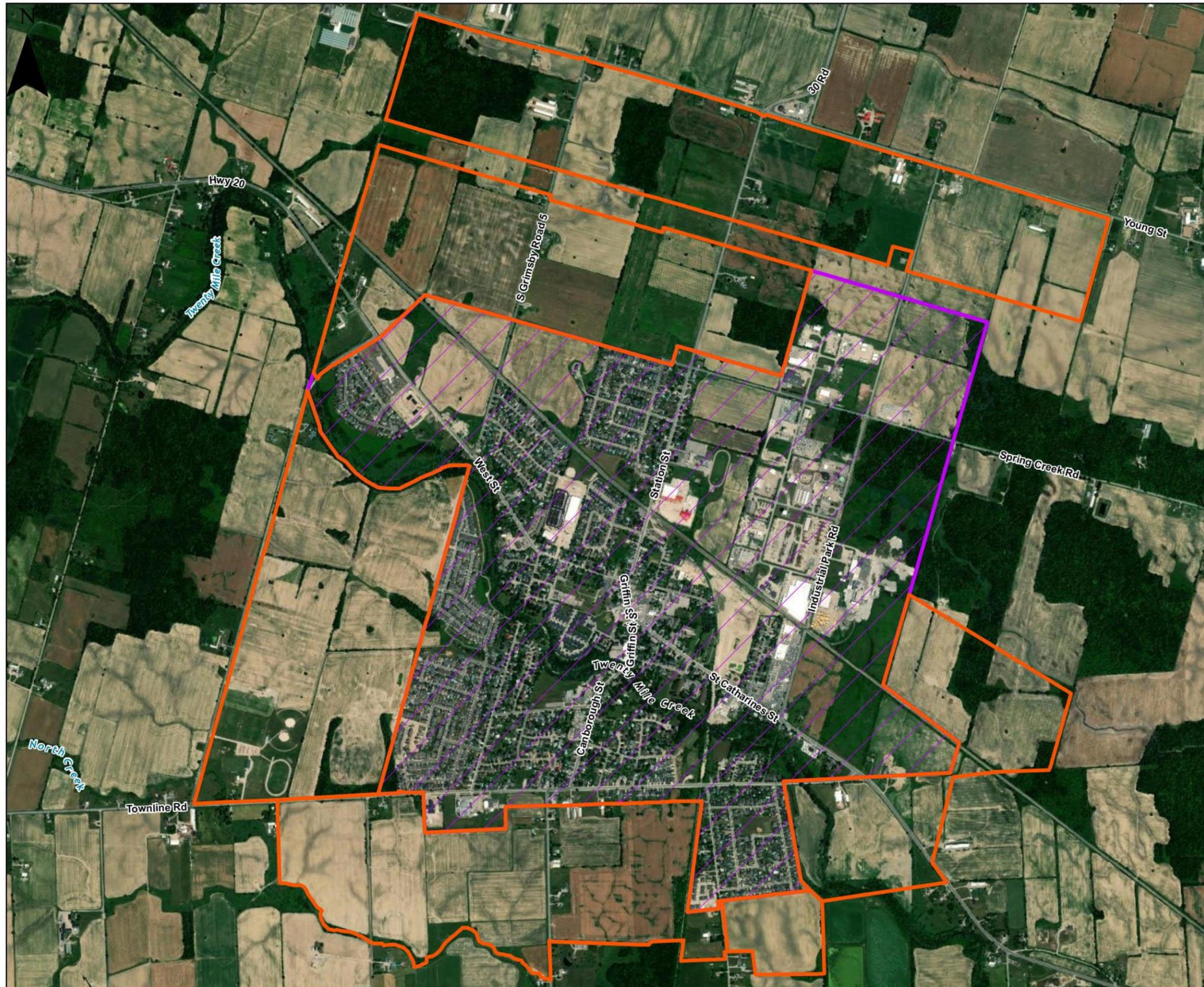
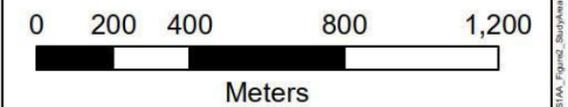


Figure 2: Study Area in Detail



- Legend**
- Community Expansion Study Area
 - Existing Urban Boundary and Community Study Area



Smithville MCP		
Stage 1 Archaeological Assessment - Study Area		
May 2020	1:17,000	Datum: NAD 1983 UTM Zone 17N
AECOM		Figure 2
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Figure 3: Ontario Treaties Map – Toronto Purchase (Between the Lakes Purchase Treaty No. 3)

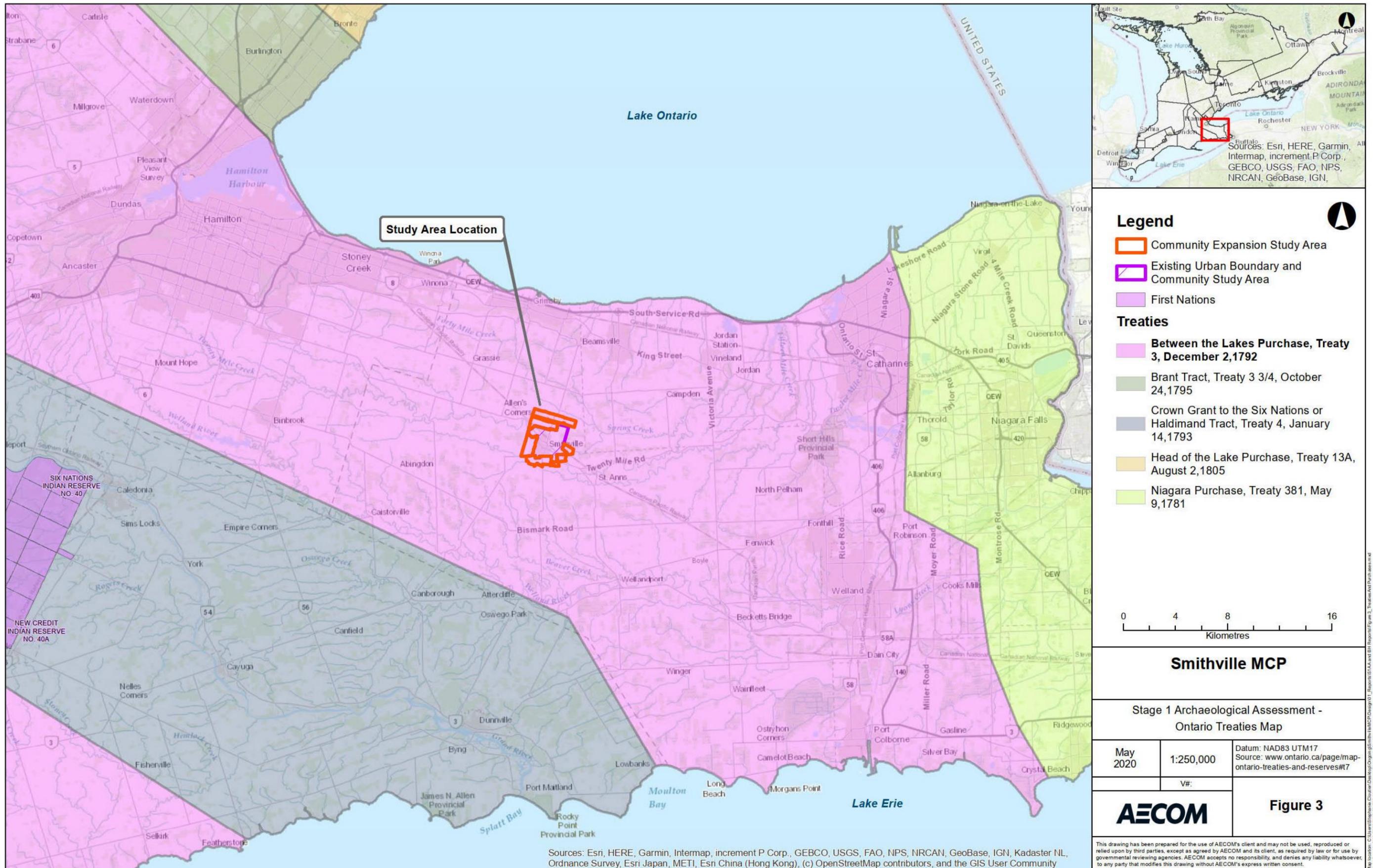
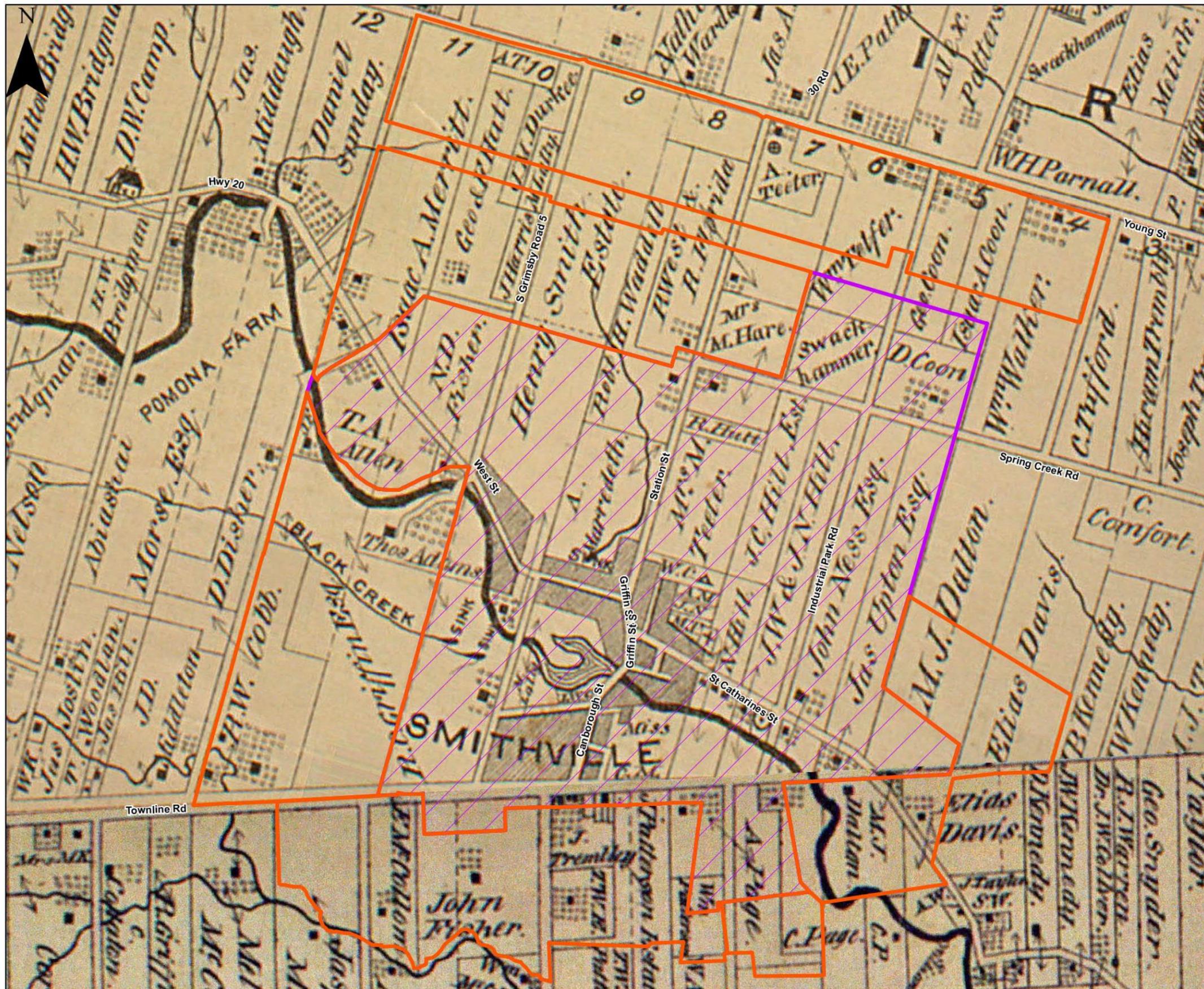
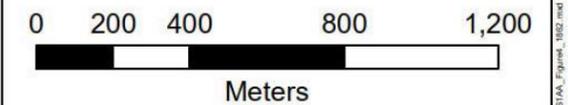


Figure 4: Portion of the Historic 1862 Tremaine Map



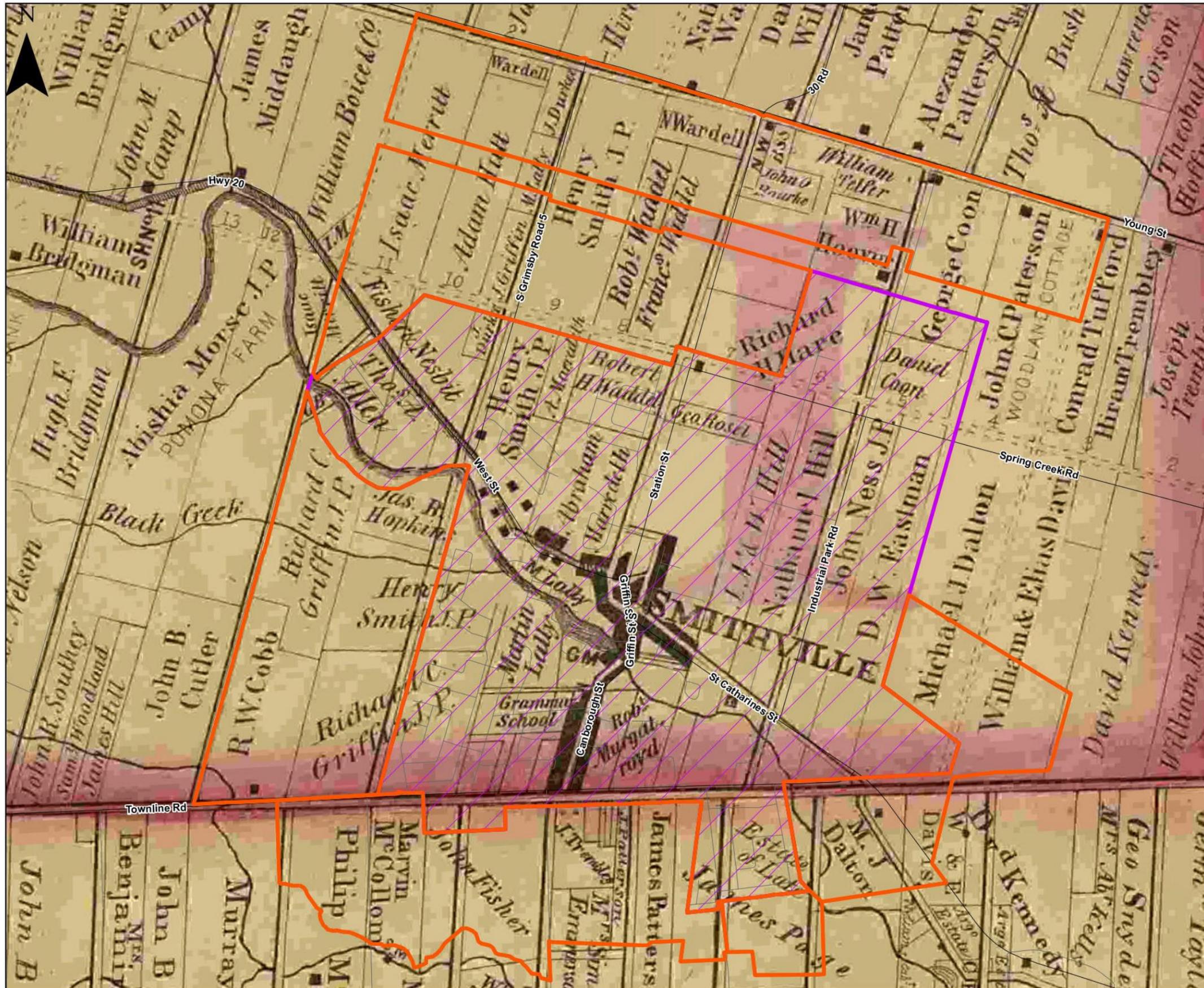
- Legend**
- Community Expansion Study Area
 - Existing Urban Boundary and Community Study Area



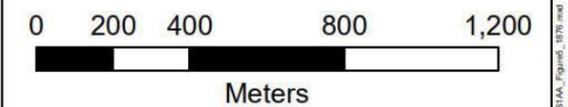
Smithville MCP		
Stage 1 Archaeological Assessment - Study Areas in Relation to the 1862 Tremaine Map Lincoln County/ South Grimsby Township		
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AECOM		Figure 4
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Figure 5: Portion of the 1876 Historic Atlas Map of Lincoln County



- Legend**
- Community Expansion Study Area
 - Existing Urban Boundary and Community Study Area



Smithville MCP

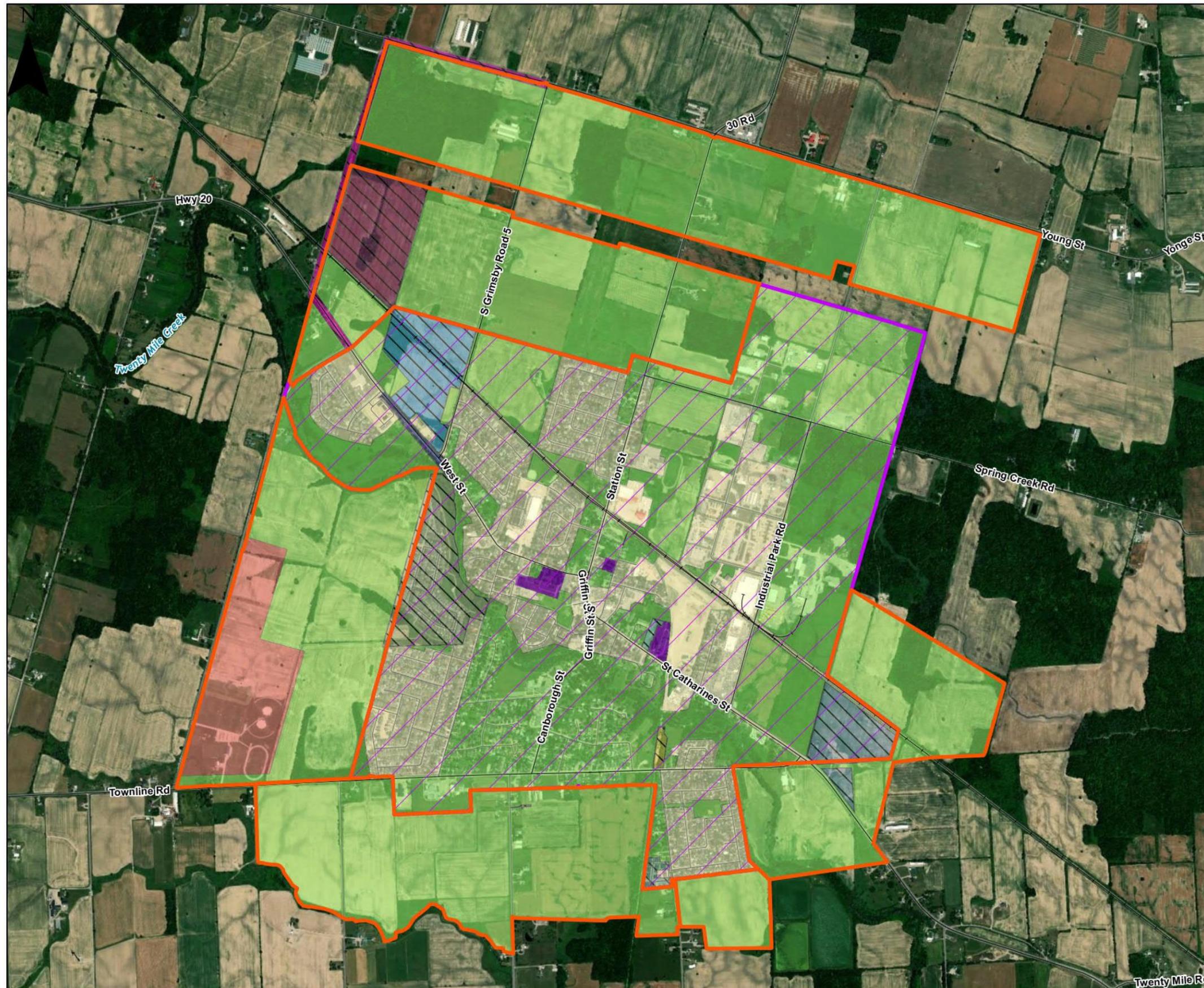
Stage 1 Archaeological Assessment - Study Areas in Relation to the 1876 County Atlas Map of Lincoln County/South Grimsby Township

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Figure 6: Results of Previous Archaeological Assessments



Legend

- Community Expansion Study Area
- Existing Urban Boundary and Community Study Area

Stage 1 Results

- Areas of Moderate or High Archaeological Potential
- Areas of Low Archaeological Potential
- Cemetery

Previous Assessments

- Stantec (2016e, 2016f, 2017a), Stage 2-4 complete, further work required for a portion of the study area
- AMICK (2015), Stage 1-2 complete, no further work required
- AMICK (2017), Stage 1-2 complete, no further work required
- ASI (2017a, 2017b), Stage 1-2 complete, Stage 3 cemetery assessment complete, no further work required
- Amec (2016), Stage 2 complete, no further work required
- Detritus Consulting Ltd. (2014), Stage 1-2 complete, no further work required
- NDA (2006), Stage 4 complete, no further work required
- Stantec (2016b), Stage 1-2 complete, no further work required
- Stantec (2016c), Stage 1-2 complete, no further work required
- Stantec (2016d), Stage 1-2 complete, no further work required
- Stantec (2017b), Stage 1-2 complete, no further work required

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Smithville MCP

Stage 1 Results

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AECOM Figure 6

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Figure 7: Cemeteries located within the Study Area Requiring Stage 3 Assessments

