Stage 1 and 2 Archaeological Assessment of 436 Quaker Road, Part of Lot 174, Former Geographic Township of Thorold, County of Welland, Now in the Cities of Welland and Thorold, Regional Municipality of Niagara

Revised Report 2

Prepared for:

Primont (Thorold/Welland) Inc.

9130 Leslie Street, Suite 301

Richmond Hill, Ontario, L4B 0B9

905-770-7002

Archaeological Licence: P398 (Houston-Dickson)

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Executive Summary

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of 436 Quaker Road, Part of Lot 174, in the former Geographic Township of Thorold, County of Welland, now in the Cities of Welland and Thorold, Regional Municipality of Niagara. The overall size of the subject property is approximately 20 hectares; the south half (approximately 9.5 hectares) falls within the modern limits of the City of Welland and the north half (approximately 10.5 hectares) falls within modern limits the City of Thorold. Permission to access the property and to carry out all activities necessary for the completion of the assessment was granted by the proponent on June 9, 2021.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the property, along with nineteenth- and twentieth-century settlement trends. This research indicated there was potential for encountering both Indigenous and Euro-Canadian archaeological resources within the subject property.

The Stage 2 field assessment was conducted on June 29 and July 6-7, 2021, and on April 29, May 9-13, and May 20, 2022, by means of a combined pedestrian and test pit survey in all areas of archaeological potential. The assessment resulted in the identification of five diagnostic Indigenous sites, six non-diagnostic Indigenous sites, and three Indigenous findspots.

Nine Indigenous sites have been recommended for Stage 3 Archaeological Assessments. The remaining Indigenous sites and findspots do not meet the criteria for Stage 3 Archaeological Assessment and are considered free of any further archaeological concern.

Project Personnel

- **Senior Project Manager:** Jennifer Ley, Honours, Bachelor of Arts (R376), Lead Archaeologist, Manager, Planning Assessment Division
- **Project Manager**: Jamie Houston-Dickson, Master of Arts (P398), Associate Archaeologist, Project Manager, Planning Assessment Division
- **Project Director**: Jamie Houston-Dickson
- **Project Administrator**: Lauren Vince, Honours Bachelor of Arts (R1235), Archaeologist, Project Administrator, Planning Assessment Division
- **Field Director**: Sean Haefner, Bachelor of Science (R1253), Archaeologist, Field Director, Planning Assessment Division
- **Field Archaeologists**: Brian Abfal, Master of Arts; Gareth Nielson; Oli Oliveira, Honours Bachelor of Arts; Kaila Pasceri, Bachelor of Arts; Cedric Sabourin, Honours Bachelor of Arts; Jessica Thomas, Honours Bachelor of Arts
- **Report Preparation**: Sarah-Jane Leipert, Doctor of Philosophy, Archaeologist, Technical Writer, Planning Assessment Division; Jamie Houston-Dickson
- **Geographics:** Peter Bikoulis, Doctor of Philosophy, Archaeologist, Geomatic Imaging Systems Technician, Operations Division; Andrew Clish, Bachelor of Environmental Science (P046), Senior Archaeologist, Senior Field Director, Laboratory and Fieldwork Services, Operations Division; Jonas Fernandez, Master of Science (R281), Lead Archaeologist, Manager, Geomatics, Operations Division; Robin Latour, Master of Philosophy, Postgraduate Diploma, Associate Archaeologist, Geomatics Specialist, Operations Division; Carolyn Nettleton, Bachelor of Arts, Archaeologist, Geographic Imaging Systems Technician, Operations Division
- **Artifact Processing**: Rebecca Weston, Master of Arts, Archaeologist, Lab Technician, Laboratory and Fieldwork Services, Operations Division
- **Artifact Photography:** Jamie Houston-Dickson
- **Lithic Artifact Analysis:** Deborah Steiss, Master of Arts (P049), Senior Associate

- **Report Reviewers**: Jamie Houston-Dickson; Jennifer Ley; Sara Cherubin, Master of Science (P223), Senior Archaeologist, Manager, Indigenous Sites, Mitigation Division

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1.0 Project Context

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of 436 Quaker Road, Part of Lot 174, in the former Geographic Township of Thorold, County of Welland, now in the cities of Welland and Thorold, Regional Municipality of Niagara (Figure 1). The overall size of the subject property is approximately 20 hectares; the south half (approximately 9.5 hectares) falls within the modern limits of the City of Welland and the north half (approximately 10.5 hectares) falls within the modern limits of the City of Thorold.

1.1 Development Context

This assessment was conducted under the senior project management of Jennifer Ley (R376) and the project management and project direction of Jamie Houston-Dickson (P398); the work was completed under Ministry of Citizenship and Multiculturalism (hereafter referred to as the Ministry) Project Information Form P398-0102-2021. All activities carried out during this assessment were completed as due diligence prior to a proposed development application and conform to the requirements of the Provincial Policy Statement (Ministry of Municipal Affairs and Housing, 2020) under Section 3 of the Planning Act (Ministry of Municipal Affairs and Housing, 1990).

All work was completed in accordance with the *Ontario Heritage Act* (Ministry of Culture [now the Ministry], 1990) and the *Standards and Guidelines for Consultant Archaeologists* (hereafter referred to as the Standards) (Ministry of Tourism and Culture [now the Ministry], 2011).

Permission to access the subject property and to carry out all activities necessary for the completion of the assessment was granted by the proponent on June 9, 2021. Buried utility locates were obtained prior to the initiation of fieldwork.

1.2 Historical Context

The purpose of this section is to describe the past and present land use and settlement history, and any other relevant historical information gathered through the Stage 1 background research.

Historically, the subject property was located in part of Lot 174, in the Geographic Township of Thorold, County of Welland. Currently, the subject property overlaps the modern limits of the City of Welland (south half) and the City of Thorold (north half), while the northwest boundary borders the modern limits of the Town of Pelham (see Figure 1). The property consists primarily of ploughed agricultural fields, with a rural residential lot (436 Quaker Road) and old farm buildings located at the south end of the property fronting Quaker Road.

1.2.1 Pre-Contact Settlement

Southern Ontario has a cultural history that begins approximately 13,500 years ago and continues to the present. As there tends to be less widespread awareness of the depth of this pre-contact settlement history, or general knowledge of the societies that inhabited Ontario prior to the onset of Euro-Canadian settlement, a brief review of the prehistory of the area is necessary in order to provide an understanding of the various natural and cultural forces that have operated to create the archaeological sites that are found today.

Table 1 provides a general summary of the pre-contact Indigenous settlement history of southern Ontario from approximately 11,500 Before Common Era (B.C.E.) to the year 1650 Common Era (C.E.).

Table 1: Pre-contact Indigenous Temporal Culture Periods in Southern Ontario

Period	Description
Paleo > 11,500 – 8,500 B.C.E.	• First human occupation of Ontario • Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • Language Unknown • Small occupations • Non-stratified populations
Archaic 8,500 – 1,000 B.C.E.	• Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • Small occupations • Non-stratified populations • Mortuary ceremonialism • Extensive trade networks for raw materials and finished objects
Early Woodland 1,000 – 450 B.C.E.	• Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • General trend in spring/summer congregation and fall/winter dispersal • Small and large occupations • First evidence of community identity • Mortuary ceremonialism • Extensive trade networks for raw materials and finished objects

Period	Description
Middle Woodland 450 B.C.E. – 750 C.E. Transitional Woodland 600 – 900 C.E.	• Astronomers/ Artists/ Hunters/ Gatherers/ Foragers • A general trend in spring/summer congregation and fall/winter dispersal into large and small settlements • Kin-based political system • Increasingly elaborate mortuary ceremonialism • Incipient agriculture in some regions • Longer term settlement occupation and reuse
Late Woodland (Early) 900 – 1300 C.E.	• Foraging with locally defined dependence on agriculture • Villages, specific and special purpose sites • Socio-political system strongly kinship based
Late Woodland (Middle) 1300 – 1400 C.E.	• Major shift to agricultural dependency • Villages, specific and special purpose sites • Development of socio-political complexity
Late Woodland (Late) 1400 – 1650 C.E.	• Complex agricultural society • Villages, specific and special purpose sites • Politically allied regional populations

1.2.2 Post-Contact Settlement

Between the Lakes Purchase (Treaty 3)

The subject property is within Treaty 3, the Between the Lakes Purchase. Following the 1764 Niagara Peace Treaty and the follow-up treaties with Pontiac, the English colonial government considered the Mississaugas to be their allies since they had accepted the Covenant Chain. The English administrators followed the terms of the Royal Proclamation and insured that no settlements were made in the hunting grounds that had been reserved for their use (Johnston, 1964; Lytwyn, 2005). In 1784, under the terms of the Between the Lakes Purchase

signed by Sir Frederick Haldimand and the Mississaugas, the Crown acquired over one million acres of land in-part spanning westward from near modern-day Niagara-on-the-Lake along the south shore of Lake Ontario to modern day Burlington (Aboriginal Affairs and Northern Development Canada, 2016).

Township of Thorold

The first legal settlers in Thorold Township were United Empire Loyalists, who arrived during and after the American Revolutionary War. Many of these early settlers were part of Butler's Rangers, Loyalists who fought under Lieutenant Colonel John Butler, arriving between 1784 and 1787. The first township survey was not undertaken until 1788. At that time, Thorold had not yet been named and it was simply known as "Township No. 9." A statement of expenses submitted to the Surveyor General's department for the work in Thorold showed the survey was done at least in part by Augustus Jones. Jones continued to be employed in "making out the Plans of the Townships of this Settlement" in the late autumn of 1791, which included a "List of reduced Provincial Troops" settled in the area, as well as reports on features "towards the public utility" such as waterfalls, minerals and/or quarries, and the quality of the timber (Fraser, 1906:346, 388-389, 426-427; Mika and Mika, 1983:506).

By the early 1800s, roads had been constructed connecting many communities within the township and grist mills and sawmills were built to support the growing farming and lumbering activities. By 1817, the population was 830, and much of the land had been cleared. By 1846, approximately 49% of the privately-owned land in Thorold Township was under cultivation. The township was referred to as one of the "best settled townships in the Niagara District, containing a great number of excellent, well cleared farms." The land was described as "rolling," and well adapted to growing wheat, oats, barley, rye, and other crops. At that time, the township contained eight grist mills and five sawmills. The population stood at 2,284, and the total assessment for property was £49,699. In 1879, the Niagara, St. Catharines and Toronto Railway was extended through the township (Mika and Mika, 1983:505-506; Smith, 1846:191).

Quaker Road

Quaker Road was originally situated on land owned by Hon. Robert Hamilton, a wealthy Queenston merchant who purchased 7,900 acres in Welland County in 1799. The road's name stems from the number of Quakers who chose to settle in the southern part of Thorold Township and in nearby Pelham Corners, situated at the intersection of Quaker Road and Pelham Street. In 1926, the road became the first improved road in Thorold Township (Betti, 1967).

1.2.3 Review of Map Sources

A review of nineteenth- and early twentieth-century mapping was completed to determine if these sources depict any nineteenth-century Euro-Canadian settlement features that may represent potential historical archaeological sites within or adjacent to the subject property. Historical map sources are used to reconstruct/predict the location of former features within the modern landscape by cross-referencing points between the various sources and then georeferencing them in order to provide the most accurate determination of the location of any property from historical mapping sources. The results can be imprecise (or even contradictory) because sources of error, such as the vagaries of map production, differences in scale or resolution, and distortions caused by the reproduction of the sources, introduce error into the process. The impacts of this error are dependent on the size of the feature in question, the constancy of reference points on mapping, the distances between them, and the consistency with which both are depicted on historical mapping.

In addition, not all settlement features were depicted systematically in the compilation of these historical map sources, given that they were financed by subscription, and subscribers were given preference with regards to the level of detail provided. Thus, not every feature of interest from the perspective of archaeological resource management would have been within the scope of these sources.

On the 1862 *Tremaine Map of the Counties of Lincoln and Welland* (Tremaine and Tremaine, 1862) (Figure 2) and the 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland* (Page, 1876) (Figure 3), the subject property comprises all

but a very small section of the east half of Lot 174. The maps identify the owners of the east half as R.S. Garner in 1862 and R.R. Garner in 1876; the adjacent west half of the lot was under the ownership of the Page family during this time. The subject property fronts the historical concession roads of Quaker Road along the south, and Merritt Road to the north. No structures are depicted on the property on the 1862 map, but the 1876 atlas shows a farmstead located at the south end of the property in a location correlating to the general location of the extant residence at 436 Quaker Road; another farmstead is depicted approximately 100 metres to the west on the 1876 atlas, within the adjacent western parcel of Lot 174 belonging to the Page family. No sources of water are illustrated on or near the property on either map.

Early topographic mapping was also reviewed for the presence of potential historical features. Land features such as waterways, wetlands, woodlots, and elevation are clearly illustrated on this series of mapping, along with roads and structure locations. On the 1907 Niagara Topographic Map (Department of Militia and Defence, 1907), the subject property is shown once again situated between Quaker Road and Merritt Road (Figure 4). A frame house is depicted in the south end of the property; despite its position a bit further to the north and west, this house is likely the same structure shown on the earlier 1876 map. A neighbouring frame house depicted approximately 100 metres west of the property on the 1876 atlas is also represented on the 1907 map. The west end of a large woodlot overlaps the north end of the property, with smaller treed areas depicted in the central part of the property and at the south end. A tributary of the Welland River is depicted flowing through the treed southeast corner of the subject property; the watercourse crosses Quaker Road beneath a bridge located at the south property limit. Another tributary is located within 200 metres of the property near the north end. Contour lines within the subject property indicate an elevation of 600 feet (183 metres) above sea level.

1.2.4 Review of Aerial Imagery

In order to further understand the previous land use on the subject property, twentieth and twenty-first-century aerial imagery was reviewed (Figure 5).

The Brock University Digital Archive houses numerous series of historic aerial photographs of Ontario. One such image released by the National Air Photo Library provides a clear view of the conditions of the subject property in 1934 (*Niagara Air Photo Index, 1934 Series*, 1934). In the image, the subject property is within a rural agricultural setting with a farm complex shown set back from Quaker Road at the end of a laneway. An orchard is located within the southwest corner of the subject property fronting Quaker Road and continues beyond the property limits. With the exception of the residential area and orchard, the majority of the subject property is a series of agricultural fields and a scatter of trees at the northern end. Various tributaries of the Welland River traverse the subject property, as seen by the darked shaded areas, in contrast to the 1907 topographic map.

By 2000, land to the west of the subject property is predominantly a residential area with several post-1934 houses along Quaker Road and Rice Road (*Niagara Air Photo Index, 2000 Series*, 2000). The farm complex remains within the south end of the subject property, although the configuration of some of the outbuildings has changed, including what appears to be an addition to the residence to east of the lane. The orchard formerly in the southwest corner has also changed, now replaced by lawn and agricultural lands. Further, the scatter of trees in the north has now expanded into a woodlot in the northeast corner which features various low and wet locales. Similar to the 1934 image, various tributaries of Welland River traverse the subject property.

In 2002, the surrounding landscape and land use remains largely the same as shown in the 2000 aerial image (*Niagara Air Photo Index, 2002 Series*, 2002). However, there is now the addition of a communications tower at the southeast corner of the subject property located on a large, paved pad, with a paved access from Quaker Road.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the subject property, its environment characteristics (including drainage, soils, surficial geology, topography), and current land use and field conditions.

1.3.1 Registered Archaeological Sites

In order that an inventory of archaeological resources could be compiled for the subject property, three sources of information were consulted: the site record forms for registered sites housed at the Ministry, published and unpublished documentary sources, and the files of Archaeological Services Inc.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database, which is maintained by the Ministry. This database contains archaeological sites registered within the Borden system. The Borden system was first proposed by Dr. Charles E. Borden and is based on a block of latitude and longitude. Each Borden block measures approximately 13 kilometres east-west by 18.5 kilometres north-south and is referenced by a four-letter designator. Sites within a block are numbered sequentially as they are found. The subject property is located in the AgGt Borden block.

While no archaeological sites have been registered within the limits the of the subject property, a total of 11 archaeological sites have been registered within a one kilometre-radius (the Ministry, 2022). A summary of these sites is provided in Appendix A. All 11 sites are located more than 500 metres north-northwest of the subject property.

1.3.2 Previous Assessments

In 2020, Archaeological Services Inc. completed a Stage 1 Archaeological Assessment on a 189 hectare study area in the City of Welland, as part of the Northwest Welland Secondary Plan (Archaeological Services Inc., 2020). This study area extended north up to the modern boundary shared by the cities of Welland and Thorold, and thus encompassed the entire south (Welland) half of the current subject property under review at 436 Quaker Road. The report concluded that approximately 99% (187.4 hectares) had the potential for the presence of significant Indigenous and Euro-Canadian archaeological resources, and it was recommended that any future developments within the study area must be preceded by a Stage 2 Archaeological Assessment. With respect to the current subject property under review, the entire south half situated within the study area was identified as an area of Indigenous archaeological potential

(Archaeological Services Inc., 2020: Figure 11), while the southernmost portion of the subject property—specifically the lands immediately surrounding the extant house fronting Quaker Road, was identified as an area of historical archaeological potential (Archaeological Services Inc., 2020: Figure 12).

No other archaeological assessments are known to have been completed within 50 metres of the subject property.

1.3.3 Physiography

The subject property is situated within the sand plains of the Haldimand Clay Plain physiographic region of southern Ontario, which, at approximately 3,500 square kilometres, is among the largest of the 53 defined physiographic regions in southern Ontario (MacDonald, 1980:3; Chapman and Putnam, 1984:156-159). Extending from the Niagara Escarpment to Lake Erie, the clay plain was submerged in glacial Lake Warren around 12,500 years ago. As a result of the heavy lacustrine clay soils and low gradient, drainage is poor over most of the area, although it includes several distinctive landforms, including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins.

Within this part of the Niagara peninsula, a number of environmental sub-regions have been described, including the Niagara Slough Clay Plain, the Fort Erie Clay Plain, the Calcareous Rock Plain (Onondaga Escarpment), the Buried Moraines, the Lake Erie Coast, and the Niagara River Valley (MacDonald, 1980). The distribution and nature of these sub-regions, and the specific environmental features they contain, have influenced land use in the region throughout history and pre-history.

Soils within the subject property consist primarily of fine-textured glaciolacustrine deposits comprised of silt and clay with minor sand and gravel (Ontario Geological Survey, 2000).

The subject property overlaps the Twelve Mile Creek and Beaverdams watershed in the north and the Central Welland River watershed in the south (Niagara Peninsula Conservation Authority, no date). Environmental data recognizes four small, unnamed watercourses traversing the subject property, all part of the

network of tributaries of Welland River located several kilometres to the east. Two of these watercourses, one crossing through the south half and another near the centre of the property, fall within narrow regulated floodplains (Figures 6-7) (Niagara Peninsula Conservation Authority, no date).

There is a rectangular wooded area in the northeast part of the property, part of a much larger woodlot situated primarily on the adjacent east property. The majority of this large woodlot, including all but a small portion of the wooded area situated within the subject property, is classified as a Provincially Significant Wetland (Figure 7) (Niagara Peninsula Conservation Authority, no date). Provincially Significant Wetlands are wetlands that constitute a significant part of Ontario's natural heritage and, in accordance with the 2020 Provincial Policy Statement, Section 2.1.4a under the Planning Act (Ministry of Municipal Affairs and Housing, 2020), cannot be subject to land development and/or site alteration. The limits of the Provincially Significant Wetland within the subject property are further surrounded by buffers of regulated lands (Figure 7) (Niagara Peninsula Conservation Authority, no date).

1.3.4 Existing Conditions

The subject property is approximately 20 hectares and is located within a mixed rural residential and agricultural area just north of the more densely populated neighbourhoods of the City of Welland (Figure 6). The south limit fronts Quaker Road while the north limit borders a narrow, straight east-west segment of unpaved trail that interrupts the alignment of Merritt Road at Rice Road and Cataract Road, approximately 200 metres west and 400 metres east of the subject property, respectively. The west limit of the property is bordered by multiple agricultural fields, residential properties, and scrub, while the east limit is bordered by a large agricultural field and a mix of large, dense scrubland and woodlots.

The subject property consists predominantly of three large agricultural fields separated by small watercourses. At the south end is a residence (436 Quaker Road), swimming pool, and remnants of a former farm complex, including a silo and storage structure, derelict barns, and wooden structures, all surrounded by large, open lawns and scattered trees. A paved driveway extends north from

Quaker Road to the house, which is set back approximately 80 metres from the road. A separate paved driveway extends north from Quaker Road along the east property limit to a small communications tower set back approximately 150 metres. At the northeast end of the property is a large, dense woodlot, the majority of which is classified as Provincially Significant Wetland (Figure 7).

1.3.5 Review of Archaeological Potential

The Standards, Section 1.3.1 stipulates that undisturbed lands within 300 metres of primary water sources (lakes, rivers, streams, creeks), secondary water sources (intermittent streams and creeks, springs, marshes, swamps), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches), and accessible and inaccessible shorelines (bluffs, swamps or marsh fields by the edge of a lake, sandbars stretching into marsh) are considered, at a generic level, to exhibit potential for Indigenous archaeological sites.

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in south-central Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most common variables used for predictive modelling of site location. As outlined in Section 1.3.3 above, multiple watercourses cross through the subject property and there is a recognized Provincially Significant Wetland area in the wooded northeast end.

Other geographic characteristics that can indicate pre-contact archaeological potential include elevated topography (eskers, drumlins, large knolls, plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, and distinctive land formations that might have been special or spiritual places for Indigenous populations, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use by Indigenous peoples, such as burials, structures, offerings, and rock paintings or carvings. Resource areas, including food or medicinal plants (migratory routes, spawning areas, prairie) and scarce raw materials (quartz,

copper, ochre, or outcrops of chert). Are also considered characteristics that indicate pre-contact archaeological potential.

For the post-contact period, Section 1.3.1 of the Standards stipulates those areas of early Euro-Canadian settlement, including places of early military or pioneer settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries, are considered to have archaeological potential. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks. Also considered to have archaeological potential are early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historical landmark or site, and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations.

The majority of early nineteenth century farmsteads, which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth-century maps, are likely to be captured by the basic proximity to the water model, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of concession roads and railroads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 metres of an early historical transportation route are also considered to have potential for the presence of Euro-Canadian archaeological sites.

In addition to the above criteria for Indigenous and historical archaeological potential, the Standards also defines potential buffers of 300 metres around registered Indigenous and historical sites. No archaeological sites have yet been registered within 300 metres of the subject property; however, it is acknowledged that there has been very limited archaeological investigation conducted in the nearby vicinity of the property.

While no archaeological sites have yet been identified nearby, there are multiple sources of water within the subject property and the property also fronts historic

Quaker Road. Furthermore, nineteenth-century mapping identifies a farmstead in the south end of the property by at least the late nineteenth-century. As a result, there is the potential for encountering both Indigenous and Euro-Canadian archaeological sites

2.0 Field Methods

The Stage 2 field assessment was conducted in order to inventory, identify, and describe any archaeological resources extant within the subject property prior to development. The fieldwork took place on June 29 and July 6-7, 2021, and on April 29, May 9-13, and May 20, 2022. All fieldwork was conducted under the field direction of Sean Haefner (R1253) and was carried out in accordance with the Standards. The weather conditions were appropriate for the completion of fieldwork, permitting good visibility of the land features.

Representative photos documenting the field conditions during the Stage 2 fieldwork are presented in Section 8.0 of this report, and photo locations and field observations have been compiled on project mapping (Images 1-22; Figure 8). Field observations and photographs were recorded with a Trimble Catalyst Global Navigation Satellite System receiver using World Geodetic System 1984.

As noted above, some areas of the subject property are recognized as Provincially Significant Wetland or as regulated lands or floodplain (Figure 7). Given the prohibition against any type of land development and/or site alteration, fieldwork within the areas designated as Provincially Significant Wetland was limited to a visual review consisting of photographic documentation. All other portions of the subject property, including any areas of regulated lands or floodplain outside of the limits of the Provincially Significant Wetland, were subject to a complete Stage 2 field survey as dictated by field conditions.

2.1 Areas of No Potential

The assessment was initiated by conducting a visual review in order to identify areas of no archaeological potential. During this review, approximately 17% of the subject property was identified as low and permanently wet (Figure 8). In addition to the designated Provincially Significant Wetland area in the northeast woodlot,

the low and wet areas identified within the subject property include lands bordering several of the watercourses crossing through the agricultural fields (Images 1-5). In accordance with the Standards, Section 2.1, Standard 2a.i., these additional permanently wet areas are considered to have no archaeological potential and were not tested.

In addition to the permanently wet areas, approximately 3% of the subject property was found to be thoroughly disturbed from past grading, construction activities, and structural footprints (Figure 8). These areas of disturbance, all situated at the south end of the property, include the telecommunications tower, the extant residence, swimming pool, remnant farm complex, and driveways (Images 6-11). It is also worth noting that the visual inspection of the house identified a concrete block foundation, indicating the extant residence replaced the original frame house on the property sometime after publication of the 1907 topographic map (see Figure 4). In accordance with the Standards, Section 1.3.2 and Section 2.1, Standard 2b, these areas of deep and extensive land disturbance are considered to have no archaeological potential and were not tested.

Overall, approximately 20% (four hectares) of the subject property was determined to have no archaeological potential (Figure 8).

2.2 Test Pit Survey

Approximately 5% (one hectare) of the subject property, consisting of the lawns surrounding the residence and former farm complex in the south end and small portions of woodlot in the northeast corner outside of the limits of the Provincially Significant Wetland, was assessed by means of a test pit survey (Images 11-14; Figure 8). In accordance with the procedures outlined in the Standards, Section 2.1.2, the test pit survey of these areas of closed surface visibility was initiated at five-metre intervals. As per Section 2.1.8, Standard 2, however, survey intervals were increased to ten metres in areas where significant ground disturbance was encountered; overall, 4% of the subject property was surveyed at five-metre test pit intervals while 1% was tested at ten-metre survey intervals. All test pits were excavated stratigraphically by hand to no less than five centimetres into sterile subsoil, and all soil was screened through six-millimetre mesh to facilitate artifact recovery. Test pits were examined for stratigraphy,

cultural features, and evidence of fill. All test pits were at least 30 centimetres in diameter and excavated within one metre of all structures and/or other disturbances when possible. Upon completion, all test pits were backfilled.

South Residence

Both intact and disturbed soil profiles were encountered during the test pit survey of the lawns surrounding the residence and former farm complex.

The intact soil profiles were encountered throughout the large front lawn and the west part of the back lawn around the old farm buildings. Soil profiles varied somewhat throughout these areas, but the most common profile observed consisted of approximately 20 centimetres of brown (10YR 4/3) clay-loam A-horizon overlying a yellowish brown (10YR 5/6) to dark brown (10YR 3/3) clay B-horizon (Image 15).

Disturbed soil profiles were encountered in the north portion of the former farm complex. These soil profiles consisted of various compact sand and clay fill deposits, often containing gravel or other refuse, over a dark brown (10YR 3/3) clay B-horizon (Image 16).

Northeast Woodlot

Intact soil profiles were encountered within the limited portion of the northeast woodlot outside the limits of the Provincially Significant Wetland that was subject to test pit survey. The typical soil profile observed in this location consisted of approximately 15 centimetres of a dark brown (7.5YR 3/2) clay-loam A-horizon overlying a dense, waterlogged greyish green (10Y-5GY 5/2) clay B-horizon (Image 17).

2.3 Pedestrian Survey

The balance of the subject property, approximately 75% (15 hectares) consists of ploughed agricultural land that was assessed by means of a pedestrian survey at five-metre intervals (Images 18-22; Figure 8). In accordance with Section 2.1.1 of the Standards, the fields were ploughed and allowed to weather appropriately prior to survey, and ploughing was deep enough to provide total topsoil exposure

but did not extend beyond the depth of previous ploughing. Visibility conditions were excellent at well over 80% and the Layer 1 ploughzone soils consisted of clay loam.

When archaeological resources were encountered, survey transects were decreased to one-metre intervals over a 20-metre radius around all surface artifacts to determine whether they were isolated finds or part of a larger scatter. All artifacts from individual findspots and smaller scatters were collected, while representative samples of artifacts, including all diagnostic artifacts, were collected from larger scatters. The locations of all recovered artifacts were recorded using a Trimble Catalyst Global Navigation Satellite System receiver with sub-metre accuracy.

3.0 Record of Finds

Three Indigenous findspots and 11 Indigenous sites were identified during the pedestrian survey (see Supplementary Documentation: Figures 1-4). All sites have been registered into the Ontario Archaeological Sites Database. The three Indigenous findspots did not meet the requirements for registry as defined by the Standards.

All artifacts were collected from findspots or loci numbering fewer than 25 artifacts, while representative samples were collected from loci numbering 25 or more artifacts. Each collected artifact was recorded individually according to provenience.

3.1 Inventory of Documentary and Material Records

The documentation and materials related to this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to His Majesty the King in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the Ontario Ministry of Citizenship and Multiculturalism, and any other legitimate interest groups.

Table 2 provides an inventory and location of the documentary and material record for the project in accordance with Sections 6.7 and 7.8.2.3 of the Standards.

Table 2: Inventory of Documentary and Material Record

Material	Location	Comments
Written Field Notes, Annotated Field Maps, Global Positioning Logs, etc.	Archaeological Services Inc., 528 Bathurst Street, Toronto, ON, M5S 2P9	Hard copy notes stored in company project folder 21PL-131; location coordinates and digital information stored on company network servers.
Field Photography (Digital)	Same as above.	Stored on company network servers.
Research, Analysis, and Reporting Materials (Various Formats)	Same as above.	Digital files stored on company network servers.
Artifacts	Same as above.	All artifacts collected stored by class and provenience. Artifacts stored in 12.7-centimetre by 20.32-centimetre plastic bags and further separated into 5.08-centimetre by 7.62-centimetre plastic bags. All material housed in a standard banker's box (width 30 centimetres, depth 38 centimetres, height 25 centimetres). Artifact assemblage stored in one box labeled: 21PL-131 Quaker Road West, Welland and Thorold, Stage 1-2.

3.2 Indigenous Locations

A pre-contact Indigenous site is distinguished from a findspot by either the quantity of material encountered (three or more artifacts) or by the presence of a diagnostic artifact, for example, a projectile point. Whenever artifacts were encountered, a unique field designation (P-number) was assigned.

After completion of the intensified survey, it was observed that, other than the occasional isolated lithic findspot, the Indigenous artifacts encountered on the field surface formed very distinct clusters, or loci, often with a minimum 10-metre distance separating one locus from the next nearest locus or findspot. To best preserve the distinctive spatial distribution observed during the survey, each clearly defined locus or isolated findspot was initially assigned a separate P-number (P1-P31), with each P-number documented and collected individually. After review of the completed artifact analysis and survey mapping, several of these P-numbers were amalgamated into single site locations based on proximity to the next nearest artifact location; the distance threshold for amalgamating P-numbers was 20 metres. Following this process, the total number of distinct pre-contact locations was reduced to 14, of which 11 met the criteria for registry in the Ontario Archaeological Sites Database. The three remaining findspots consisted of fewer than three non-diagnostic surface artifacts.

As stated in Section 3.0 above, all material from findspots or loci numbering fewer than 25 artifacts was collected, while representative samples were collected from loci numbering 25 or more artifacts. It is important to note, however, that while several of the amalgamated sites consist of one or more loci where only a sample of artifacts was collected, the precise limits of each individual artifact locus and findspot comprising these sites was recorded at the time of survey. Accordingly, the limits of the individual loci at amalgamated sites AgGt-300, AgGt-305, AgGt-307, and AgGt-311 have been included on the relevant Supplementary Documentation mapping. It must be emphasized that all areas outside of the identified loci within the limits of these four amalgamated sites were entirely devoid of surface artifacts at the time of survey except for the two isolated outliers recorded at AgGt-300 and AgGt-307 and the single outlier recorded at AgGt-311.

3.2.1 Findspots

A total of three isolated, non-diagnostic Indigenous findspots were documented across the subject property (see Supplementary Documentation: Figures 1-4). Findspot P7 consists of two halves of a single lithic biface found less than one metre apart, while P16 and P19 are each comprised of a single lithic biface; all are Onondaga chert. A full catalogue of all findspot material is presented in Appendix B and the artifacts are displayed in Section 8.0 (Images 23-25). No Indigenous findspots require further assessment.

3.2.2 Sites

With the exception of site AgGt-297, which is an isolated diagnostic projectile point, and AgGt-298, which consists of one diagnostic projectile point and one non-diagnostic projectile point approximately 14 metres apart, all Indigenous sites consist of surface scatters of more than ten artifacts (see Supplementary Documentation: Figures 1 and 3-4). The artifact assemblages of the Indigenous sites are comprised solely of lithic material.

A full catalogue of material from all Indigenous sites is presented in Appendix B and samples of these artifacts are displayed in Section 8.0 (Images 26-45). Table 3 provides a summary of the approximate size of each site, the number of artifacts collected versus the total number observed in the field, the types of artifacts collected, and any other relevant comments. For greater accuracy, the site size reflects the maximum length and width, independent of cardinal direction.

Table 3: Indigenous Sites Documented within the Subject Property

Borden	Site Size (Metres)	Artifacts Collected	Artifact Types Collected	Comments
AgGt-297	1 by 1	1 of 1	1 projectile point	Located 21 metres southeast of AgGt-303; One Late Woodland triangular point
AgGt-298	14 by 1	2 of 2	2 projectile points	One Early Woodland Meadowood point and one non-diagnostic point 14 metres apart
AgGt-300	83 by 36	42 of 118	17 flake fragments, 14 secondary retouch flakes, 5 bifaces, 2 projectile points, 2 secondary knapping flakes, 1 drill, 1 scraper	Two main artifact loci 21 metres apart with two isolated outliers; two non-diagnostic points
AgGt-301	36 by 16	23 of 23	11 flake fragments, 7 secondary retouch flakes, 4 secondary knapping flakes, 1 projectile point	One Middle Archaic Brewerton Side-Notch point

Table 3: Indigenous Sites Documented within the Subject Property

Borden	Site Size (Metres)	Artifacts Collected	Artifact Types Collected	Comments
AgGt-302	29 by 18	32 of 188	18 flake fragments, 5 bifaces, 4 secondary retouch flakes, 3 secondary knapping flakes, 1 projectile point, 1 scraper	One Late Archaic Crawford Knoll point
AgGt-303	8 by 3	11 of 11	5 flake fragments, 3 secondary retouch flakes, 1 biface, 1 projectile point, 1 secondary knapping flake	Located 21 metres northwest of AgGt-297; one non-diagnostic point
AgGt-305	73 by 20	50 of 102	26 flake fragments, 15 secondary retouch flakes, 4 secondary knapping flakes, 2 projectile points, 2 bifaces, 1 multi-directional core	One large scatter with smaller locus 11 metres to north; two Late Archaic Crawford Knoll points
AgGt-306	19 by 13	13 of 71	6 secondary retouch flakes, 5 flake fragments, 1 biface, 1 secondary knapping flake	

Table 3: Indigenous Sites Documented within the Subject Property

Borden	Site Size (Metres)	Artifacts Collected	Artifact Types Collected	Comments
AgGt-307	36 by 18	15 of 37	8 secondary retouch flakes, 4 flake fragments, 3 bifaces	One scatter (16 by 16 metres) with two isolated outliers 18 metres to west and south
AgGt-311	65 by 65	89 of 250	51 flake fragments, 22 secondary retouch flakes, 11 secondary knapping flakes, 2 primary thinning flakes, 1 biface, 1 graver, 1 scraper	Comprised of seven isolated, tightly concentrated loci and one outlier
AgGt-312	35 by 16	20 of 168	10 flake fragments, 6 secondary retouch flakes, 3 secondary knapping flakes, 1 primary thinning flake	Single large, dense scatter 22 metres east of AgGt-311

Lithic Artifacts

At least four different lithic material types are present within the various site assemblages, with two of the sites yielding more than one material type.

Onondaga chert accounts for all but five of the lithic artifacts retained during the assessment and is represented at each site and findspot on the subject property. Three of the five non-Onondaga chert artifacts were recovered from AgGt-305: one biface of Bois Blanc chert, one secondary retouch flake of Haldimand chert, and another secondary retouch flake of an unknown black, vitreous material with inclusions. The two remaining artifacts consists of another biface of Bois Blanc chert from AgGt-311 and one biface of an indeterminate chert from AgGt-302.

Lithic Tools

Diagnostic tools were recovered from five sites.

Site AgGt-301, a diffuse scatter of 23 lithics, yielded one Brewerton Side-Notch projectile point of Onondaga chert dating to the Middle Archaic period circa 5,000-4,500 B.C.E. (Ellis et al., 1990). The point measures 74 millimetres in length, 43 millimetres in width, and 11 millimetres in thickness and features a reworked tip and lateral margin (cat. #1; Image 33).

One Crawford Knoll projectile point dating to the Late Archaic period circa 1,300-900 B.C.E (Ellis et al., 1990; Kenyon, 1980) was recovered from AgGt-302 and two additional Crawford Knoll points were recovered from AgGt-305; all three points are Onondaga chert. The Crawford Knoll point from AgGt-302, a large, dense scatter of 188 lithics, measures 23 millimetres in length, 13 millimetres in width, and 3 millimetres in thickness, features serration on one side, and exhibits signs of thermal alteration (cat. #1; Image 34). In addition to the diagnostic point, AgGt-302 also yielded six non-diagnostic tools, including five bifaces (cats. #2, #3, #4, #5, and #22) and a scraper (cat. #17).

The two Crawford Knoll points from AgGt-305 were recovered separately from the two loci that comprise this large site. The first point, found in the smaller northern locus of 14 lithics, measures 26 millimetres in length, 15 millimetres in

width, and 3 millimetres in thickness and features side-notching (cat. #37; Image 36). The second Crawford Knoll point from AgGt-305, found in the much larger southern locus of 88 lithics, measures 20 millimetres in length, 17 millimetres in width, and 4 millimetres in thickness and features corner-notching (cat. #1; Image 37). The two points were located approximately 52 metres apart. Two bifaces (cats. #8 and #23) and a multi-directional core (cat. #5) were also recovered from AgGt-305.

Site AgGt-298 consists of two projectile points, one of which is a Meadowood point of Onondaga chert dating to the Early Woodland period circa 1,000-500 B.C.E. (Kenyon, 1980; Spence et. al., 1990). The point measures 36 millimetres in length, 24 millimetres in width, and 6 millimetres in thickness (cat. #1; Image 27). The other point recovered from the site is non-diagnostic (cat. #2; Image 28).

Site AgGt-297 consists of a single triangular projectile point of Onondaga chert characteristic of the Late Woodland period circa 800-1600 C.E. (Fox, 1990). The point measures 22 millimetres in length, 12 millimetres in width, and 2 millimetres in thickness (cat. #1; Image 26).

Five other sites also yielded non-diagnostic lithic tools. Five bifaces (cats. #2, #3, #5, #14, and #41), two non-diagnostic projectile points (cats. #4 and #26), one scraper (cat. #12), and one drill (cat. #42) were recovered from AgGt-300 (Images 29-32). Three bifaces (cats. #66, #77, and #80), one graver (cat. #89), and one scraper (cat. #32) were recovered from AgGt-311 (Images 41 and 43). Three bifaces were recovered from AgGt-307 (cats. #13, #14, and #15; Images 39-40). One non-diagnostic projectile point (cat. #1) and one biface (cat. #5) were recovered from AgGt-303 (Image 35). Lastly, one biface was recovered from AgGt-306 (cat. #2; Image 38).

4.0 Analysis and Conclusions

Archaeological Services Inc. was contracted by Primont (Thorold/Welland) Inc. to undertake a Stage 1 and 2 Archaeological Assessment of 436 Quaker Road, part Lot 174, in the former Geographic Township of Thorold, County of Welland, now in the Cities of Welland and Thorold, Regional Municipality of Niagara. The subject property is approximately 20 hectares.

The Stage 1 background research entailed consideration of the proximity of previously registered archaeological sites and the original environmental setting of the property, along with nineteenth- and twentieth-century settlement trends. This research indicated there was potential for encountering both Indigenous and Euro-Canadian archaeological resources within the subject property.

The Stage 2 field assessment was conducted on June 29 and July 6-7, 2021, and on April 29, May 9-13, and May 20, 2022, by means of a combined pedestrian and test pit survey in all areas of archaeological potential. During the Stage 2 assessment, three Indigenous findspots and 11 Indigenous sites were identified.

4.1 Indigenous Locations

Due to the abundance of water, evidence of pre-contact Indigenous activity within the subject property was considered probable.

The presence of three dispersed, isolated non-diagnostic lithic findspots across the subject property is evidence of past travel through this area for hunting, resource procurement, or loss events on route to other destinations. These findspots represent ephemeral activity and/or casual losses. The dispersed nature of these findspots does not reflect loci of prolonged activity or occupation, and none of these findspots meet the criteria for cultural heritage value or interest outlined in the Standards, Section 2.2, Standard 1 for requiring Stage 3 Archaeological Assessment.

Of the 11 Indigenous sites, two are isolated diagnostic sites: AgGt-297 is a single triangular projectile point dating to the Late Woodland period and AgGt-298 consists of two projectile points, one of which is a Meadowood point dating to the Early Woodland period. In accordance with the Standards, Section 2.2, Standard 1, neither of these sites meets the criteria for Stage 3 Archaeological Assessment.

The other nine sites all consist of surface scatters containing more than ten lithic artifacts. Of these nine sites, three are diagnostic: AgGt-301 dates to the Middle Archaic period while AgGt-302 and AgGt-305 date to the Late Archaic period. In accordance with the Standards, all three diagnostic scatters meet the criteria for

cultural heritage value or interest requiring Stage 3 Archaeological Assessment as they each yielded at least one diagnostic artifact (Section 2.2, Standard 1 a.i [1]) in addition to yielding more than ten artifacts within a ten-metre by ten-metre pedestrian survey area (Section 2.2, Standard 1 a.i [3]).

The remaining six sites are non-diagnostic lithic scatters. All six sites yielded ten or more artifacts within a ten-metre by ten-metre pedestrian survey area, and therefore they all meet the criteria for cultural heritage value or interest and will require Stage 3 assessment, in accordance with the Standards, Section 2.2, Standard 1 a.i (3).

Table 4 provides a summary of the nine Indigenous sites within the subject property that require Stage 3 Archaeological Assessment (see Supplementary Documentation: Figure 5).

Table 4: Indigenous Sites Requiring Stage 3 Archaeological Assessment

Borden	Artifacts Collected	Temporal/ Cultural Affiliation	Criteria (Ministry Standards)
AgGt-300	42 of 118	Non-diagnostic	Section 2.2, Standard 1 a.i (3)
AgGt-301	23 of 23	Middle Archaic	Section 2.2, Standard 1 a.i (1) and Standard 1 a.i (3)
AgGt-302	32 of 188	Late Archaic	Section 2.2, Standard 1 a.i (1) and Standard 1 a.i (3)
AgGt-303	11 of 11	Non-diagnostic	Section 2.2, Standard 1 a.i (3)
AgGt-305	50 of 102	Late Archaic	Section 2.2, Standard 1 a.i (1) and Standard 1 a.i (3)
AgGt-306	13 of 71	Non-diagnostic	Section 2.2, Standard 1 a.i (3)

Table 4: Indigenous Sites Requiring Stage 3 Archaeological Assessment

Borden	Artifacts Collected	Temporal/ Cultural Affiliation	Criteria (Ministry Standards)
AgGt-307	15 of 37	Non-diagnostic	Section 2.2, Standard 1 a.i (3)
AgGt-311	89 of 250	Non-diagnostic	Section 2.2, Standard 1 a.i (3)
AgGt-312	20 of 168	Non-diagnostic	Section 2.2, Standard 1 a.i (3)

5.0 Recommendations

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

1. Given the isolated and non-diagnostic nature of Indigenous findspots P7, P16, and P19, these locations do not exhibit cultural heritage value or interest and may be considered free of any further archaeological concern.

2. Given the ephemeral and low artifact densities of Indigenous diagnostic sites AgGt-297 and AgGt-298, these sites do not exhibit cultural heritage value or interest and may be considered free of any further archaeological concern.

3. Indigenous non-diagnostic sites AgGt-303, AgGt-306, AgGt-307, and AgGt-312 are considered archaeological resources of cultural heritage value or interest. As such, it is recommended that each site be subject to a comprehensive Stage 3 Archaeological Assessment in order to fully identify the character, extent, and significance of the archaeological deposits, in accordance with the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*, Section 3.2.1 and Table 3.1, Standards 1-2.

    a) Each Stage 3 Archaeological Assessment should commence with the creation of a recording grid on a fixed datum, the position of which has been recorded using a Global Positioning System unit. As each site was documented during pedestrian survey within a ploughed

context, a controlled surface collection must first be conducted at each location to precisely define the nature and extent of the sites. This work will require the site areas be re-ploughed and allowed to weather for at least one substantial rainfall prior to commencing the work. The precise location of each artifact should be recorded, and a surface distribution map produced for each site.

b) A series of one-metre-square test units must then be excavated across each site area at five-metre intervals within an established grid in order to determine the nature and extent of the cultural deposits. An additional 20% of the total initial number of units excavated on the grids must be strategically excavated around units of high artifact counts or in other significant areas of the sites. The test units must be excavated five centimetres into the sterile subsoil and the soil fills screened through six-millimetre wire mesh to facilitate artifact recovery. The sterile subsoil should be troweled, and all soil profiles examined for undisturbed cultural deposits.

c) The results of the Stage 3 assessments will be used to evaluate the significance of each site and to develop a series of recommendations concerning any further mitigative options that may be necessary.

4. Indigenous non-diagnostic sites AgGt-300 and AgGt-311 represent large, plough-disturbed lithic scatters that are considered archaeological resources of cultural heritage value or interest. As such, it is recommended that each site be subject to a comprehensive Stage 3 Archaeological Assessment in order to fully identify the character, extent, and significance of the archaeological deposits, in accordance with the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*, Section 3.2.1 and Table 3.1, Standards 5-7.

a) Each Stage 3 Archaeological Assessment should commence with the creation of a recording grid on a fixed datum, the position of which has been recorded using a Global Positioning System unit. As each site was documented during pedestrian survey within a ploughed context, a controlled surface collection must first be conducted at each location to precisely define the nature and extent of the sites. This work will require the site areas be re-ploughed and allowed to

weather for at least one substantial rainfall prior to commencing the work. The precise location of each artifact should be recorded, and a surface distribution map produced for each site.

b) For each site, a series of one-metre-square test units must then be excavated across multiple grids over identified loci of artifact concentrations at five-metre intervals within the established site grid in order to determine the nature and extent of the cultural deposits. An additional 20% of the total initial number of grid units must then be excavated between identified loci of artifact concentrations to document areas of lower concentration. A further 10% of the total initial number of grid units must be excavated on the periphery of the surface scatter to determine the extent of the site and to sample the site periphery. The test units must be excavated five centimetres into the sterile subsoil and the soil fills screened through six-millimetre wire mesh to facilitate artifact recovery. The sterile subsoil should be troweled, and all soil profiles examined for undisturbed cultural deposits.

c) The results of the Stage 3 assessments will be used to evaluate the significance of each site and to develop a series of recommendations concerning any further mitigative options that may be necessary.

5. Indigenous diagnostic sites AgGt-301 and AgGt-302 are considered archaeological resources of cultural heritage value or interest. As such, it is recommended that each site be subject to a comprehensive Stage 3 Archaeological Assessment in order to fully identify the character, extent, and significance of the archaeological deposits, in accordance with the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*, Section 3.2.1 and Table 3.1, Standards 1-2.

d) Each Stage 3 Archaeological Assessment should commence with the creation of a recording grid on a fixed datum, the position of which has been recorded using a Global Positioning System unit. As each site was documented during pedestrian survey within a ploughed context, a controlled surface collection must first be conducted at each location to precisely define the nature and extent of the sites.

This work will require the site areas be re-ploughed and allowed to weather for at least one substantial rainfall prior to commencing the work. The precise location of each artifact should be recorded, and a surface distribution map produced for each site.

e) A series of one-metre-square test units must then be excavated across each site area at five-metre intervals within an established grid in order to determine the nature and extent of the cultural deposits. An additional 20% of the total initial number of units excavated on the grids must be strategically excavated around units of high artifact counts or in other significant areas of the sites. The test units must be excavated five centimetres into the sterile subsoil and the soil fills screened through six-millimetre wire mesh to facilitate artifact recovery. The sterile subsoil should be troweled, and all soil profiles examined for undisturbed cultural deposits.

f) The results of the Stage 3 assessments will be used to evaluate the significance of each site and to develop a series of recommendations concerning any further mitigative options that may be necessary.

6. Indigenous non-diagnostic sites AgGt-300 and AgGt-311 represent large, plough-disturbed lithic scatters that are considered archaeological resources of cultural heritage value or interest. As such, it is recommended that each site be subject to a comprehensive Stage 3 Archaeological Assessment in order to fully identify the character, extent, and significance of the archaeological deposits, in accordance with the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*, Section 3.2.1 and Table 3.1, Standards 5-7.

a) Each Stage 3 Archaeological Assessment should commence with the creation of a recording grid on a fixed datum, the position of which has been recorded using a Global Positioning System unit. As each site was documented during pedestrian survey within a ploughed context, a controlled surface collection must first be conducted at each location to precisely define the nature and extent of the sites. This work will require the site areas be re-ploughed and allowed to weather for at least one substantial rainfall prior to commencing the

work. The precise location of each artifact should be recorded, and a surface distribution map produced for each site.

b) For each site, a series of one-metre-square test units must then be excavated across multiple grids over identified loci of artifact concentrations at five-metre intervals within the established site grid in order to determine the nature and extent of the cultural deposits. An additional 20% of the total initial number of grid units must then be excavated between identified loci of artifact concentrations to document areas of lower concentration. A further 10% of the total initial number of grid units must be excavated on the periphery of the surface scatter to determine the extent of the site and to sample the site periphery. The test units must be excavated five centimetres into the sterile subsoil and the soil fills screened through six-millimetre wire mesh to facilitate artifact recovery. The sterile subsoil should be troweled, and all soil profiles examined for undisturbed cultural deposits.

c) The results of the Stage 3 assessments will be used to evaluate the significance of each site and to develop a series of recommendations concerning any further mitigative options that may be necessary.

7. Indigenous diagnostic site AgGt-305 represents a large, plough-disturbed lithic scatter that is considered an archaeological resource of cultural heritage value or interest. As such, it is recommended that the site be subject to a comprehensive Stage 3 Archaeological Assessment in order to fully identify the character, extent, and significance of the archaeological deposit, in accordance with the Ministry of Citizenship and Multiculturalism's 2011 *Standards and Guidelines for Consultant Archaeologists*, Section 3.2.1 and Table 3.1, Standards 5-7.

a) The Stage 3 Archaeological Assessment should commence with the creation of a recording grid on a fixed datum, the position of which has been recorded using a Global Positioning System unit. As the site was documented during pedestrian survey within a ploughed context, a controlled surface collection must first be conducted to precisely define the nature and extent of the site. This work will

require the site area be re-ploughed and allowed to weather for at least one substantial rainfall prior to commencing the work. The precise location of each artifact should be recorded, and a surface distribution map produced for the site.

b) A series of one-metre-square test units must then be excavated across multiple grids over identified loci of artifact concentrations at five-metre intervals within the established site grid in order to determine the nature and extent of the cultural deposits. An additional 20% of the total initial number of grid units must then be excavated between identified loci of artifact concentrations to document areas of lower concentration. A further 10% of the total initial number of grid units must be excavated on the periphery of the surface scatter to determine the extent of the site and to sample the site periphery. The test units must be excavated five centimetres into the sterile subsoil and the soil fills screened through six-millimetre wire mesh to facilitate artifact recovery. The sterile subsoil should be troweled, and all soil profiles examined for undisturbed cultural deposits.

c) The results of the Stage 3 assessment will be used to evaluate the significance of the site and to develop a series of recommendations concerning any further mitigative options that may be necessary.

8. Prior to the initiation of the Stage 3 Archaeological Assessments, it is requested that partial clearance be given to areas within the subject property where there are no further concerns for impacts to archaeological sites, provided the following conditions have been fulfilled to the satisfaction of the Ministry of Citizenship and Multiculturalism.

a) As stated in the Standards, Section 7.8.5, Standard 1 e.i, a map illustrating the sites recommended for Stage 3 Archaeological Assessment, along with 20-metre protective buffers and further 50-metre construction monitoring buffers around each of these recommended sites, is provided within the supplementary documentation associated with this report (see Supplementary Documentation: Figure 5).

b) It is recommended that the limits of the 20-metre protective buffers of the sites be fenced under the supervision of a licensed archaeologist prior to any on-site activity. Subsequent to the placement of the fence, the proponent is required to have a licensed archaeologist monitor all construction and earth-moving activities within the 50-metre construction monitoring buffers. Once the archaeological monitoring of the buffers has been completed, and assuming no archaeological deposits associated with the sites are encountered, these areas may be considered free of further archaeological concern.

c) In order to prevent any impact to the archaeological sites, the fence delineating the limits of the 20-metre protective buffers must remain in place until the Stage 3 Archaeological Assessments of the sites have been completed.

d) Written confirmation from the proponent regarding their commitment to implement this strategy and confirmation that any potential ground alterations will avoid the fenced archaeological sites is included in the supplementary documentation associated with this report. In addition, this documentation will confirm that the proponent has agreed that the consultant archaeologist is empowered to stop construction or any form of earth-moving activities within the monitoring buffers should the consultant identify an impact to an archaeological site.

No grading or other activities that may result in the destruction or disturbance of the archaeological sites documented by this assessment are permitted until notice of Ministry of Citizenship and Multiculturalism's acceptance has been received.

NOTWITHSTANDING the results and recommendations presented in this study, Archaeological Services Inc. notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural

Programs Unit of the Ministry of Citizenship and Multiculturalism must be immediately notified.

The above recommendations are subject to Ministry approval and it is an offence to alter any archaeological site without Ministry of Citizenship and Multiculturalism. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of the Ministry approval has been received.

6.0 Advice on Compliance with Legislation

Archaeological Services Inc. advises compliance with the following legislation:

- This report is submitted to the Ministry of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 2005, c.0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological field work and report recommendations ensure the conservation, preservation and protection of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism , a letter will be issued by the Ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.

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

- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48

(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with 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 or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Government and Consumer Services is also immediately notified.

- Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, nor may artifacts be removed from them, except by a person holding an archaeological license.

7.0 Bibliography and Sources

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Niagara Air Photo Index, 2000 Series. (2000). [Map]. Brock University Maps, Data and GIS. https://www.arcgis.com/apps/webappviewer/index.html?id=33873be71555423db62472eebf317042

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8.0 Images

Image 1: View of conditions within the Provincially Significant Wetland.

Image 2: View of conditions within the Provincially Significant Wetland.

Image 3: View of wet area covered in marsh grass vegetation.

Image 4: View of low floodplain separating north and central agricultural fields with standing water, marsh grass, and other wetland vegetation.

Image 5: View of low floodplain separating central and south agricultural fields with standing water, marsh grass, and other wetland vegetation.

Image 6: View of south ploughed field with communications tower along east limit of subject property; pedestrian survey in progress.

Image 7: View of extant house at south end of property.

Image 8: View of former swimming pool.

Image 9: View of old derelict farm buildings.

Image 10: View of old, derelict wooden barn.

Image 11: View of manicured lawn surrounding old farm building; test pit survey in progress.

Image 12: View of manicured lawn bordered by overgrown scrub; test pit survey in progress.

Image 13: View of manicured front lawn near south limit near Quaker Road; test pit survey in progress.

Image 14: View of portion of northeast woodlot outside limits of Provincially Significant Wetland; test pit survey in progress.

Image 15: View of intact soil profile at south end of subject property.

Image 16: View of disturbed soil profile at south end of subject property.

Image 17: View of intact soil profile in northeast woodlot.

Image 18: View of conditions across north ploughed field.

Image 19: View of conditions across southern part of north ploughed field; surface artifacts marked by coloured pin flags.

Image 20: View of conditions across central ploughed field; pedestrian survey in progress.

Image 21: View of conditions across central ploughed field; pedestrian survey in progress.

Image 22: View of conditions in south ploughed field; pedestrian survey in progress.

Image 23: Lithic artifacts from P7.

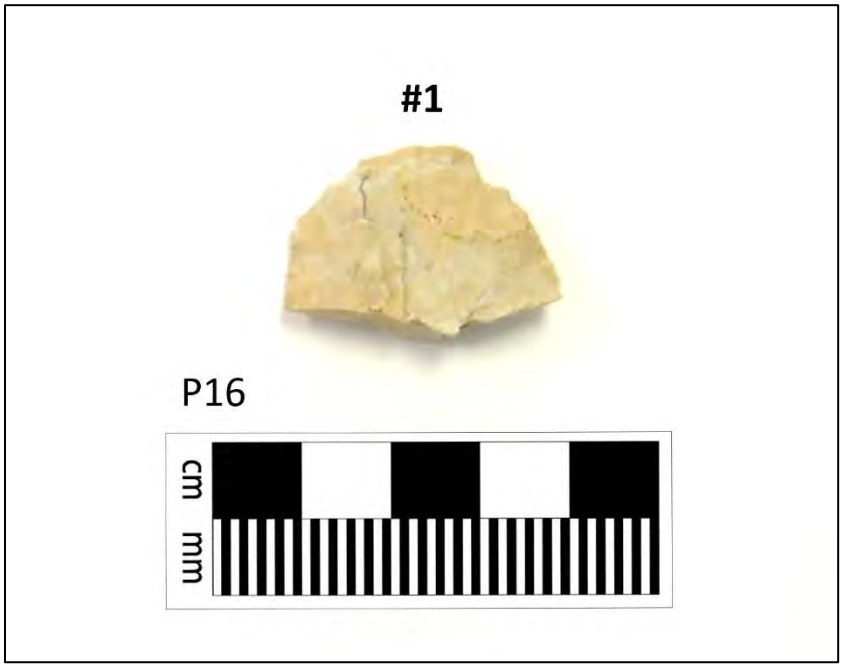


Image 24: Lithic artifact from P16.

Image 25: Lithic artifact from P19.

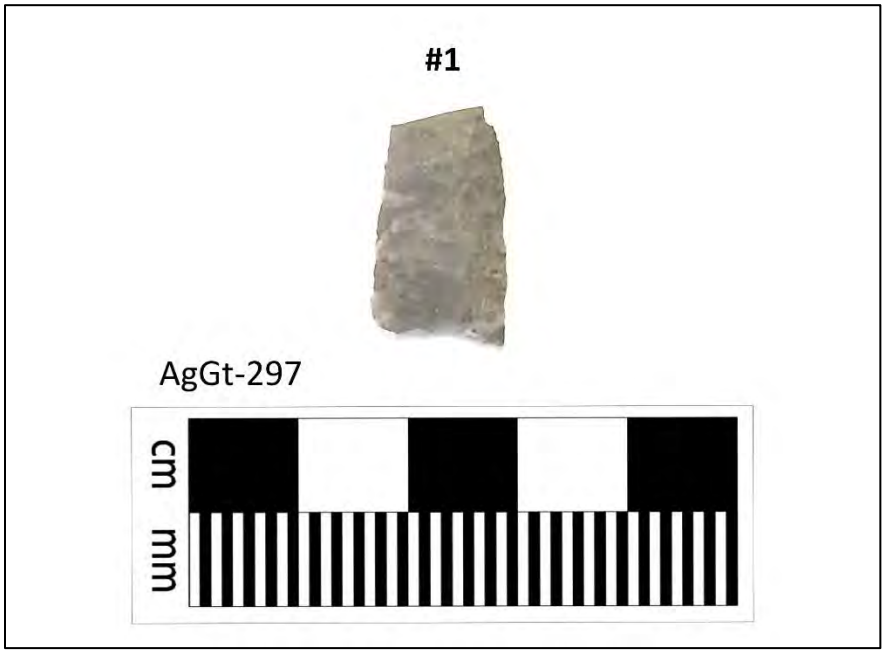


Image 26: Lithic artifact from AgGt-297.

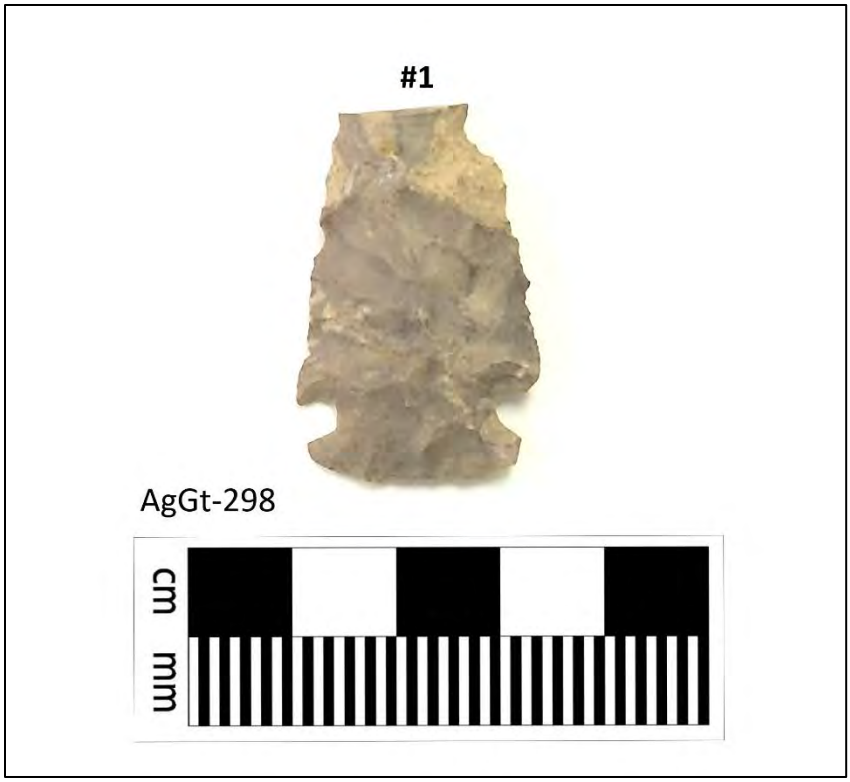


Image 27: Lithic artifact from AgGt-298.

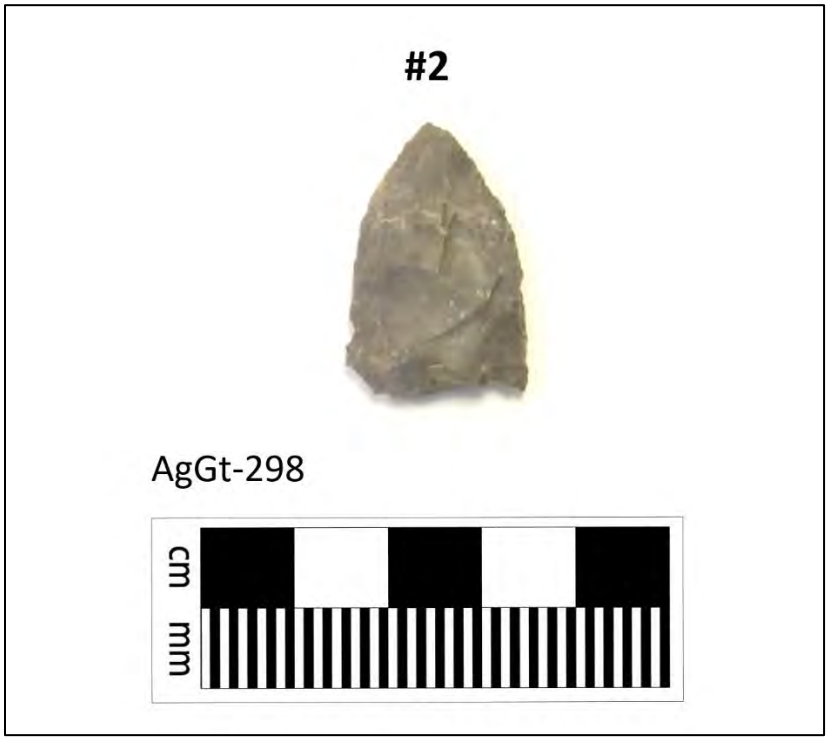


Image 28: Lithic artifact from AgGt-298.

Image 29: Lithic artifacts from AgGt-300.

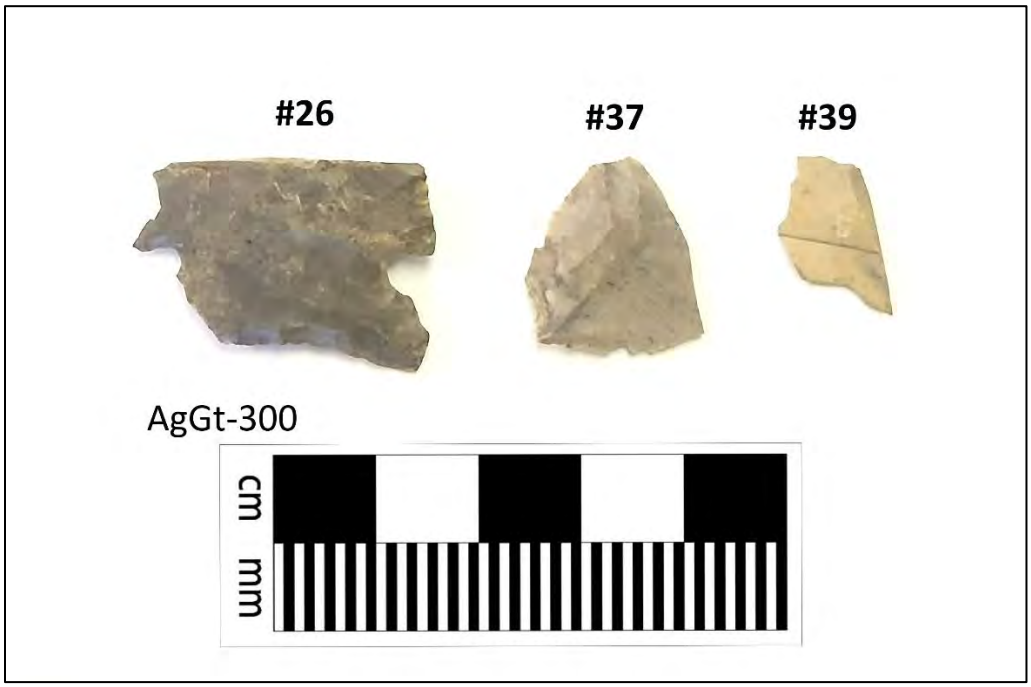
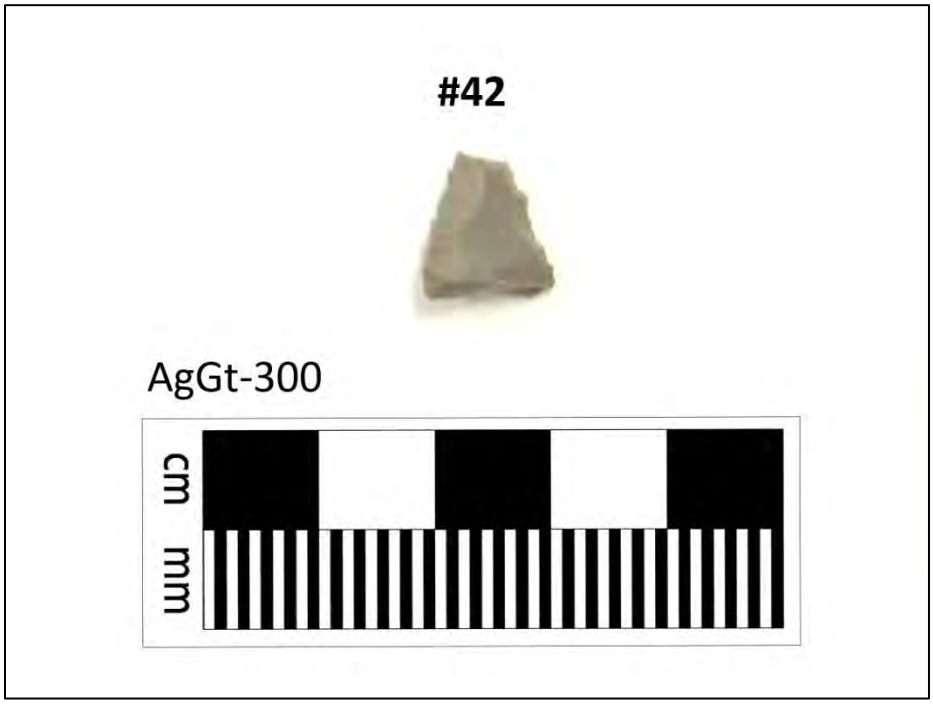


Image 30: Lithic artifacts from AgGt-300.

Image 31: Lithic artifact from AgGt-300.



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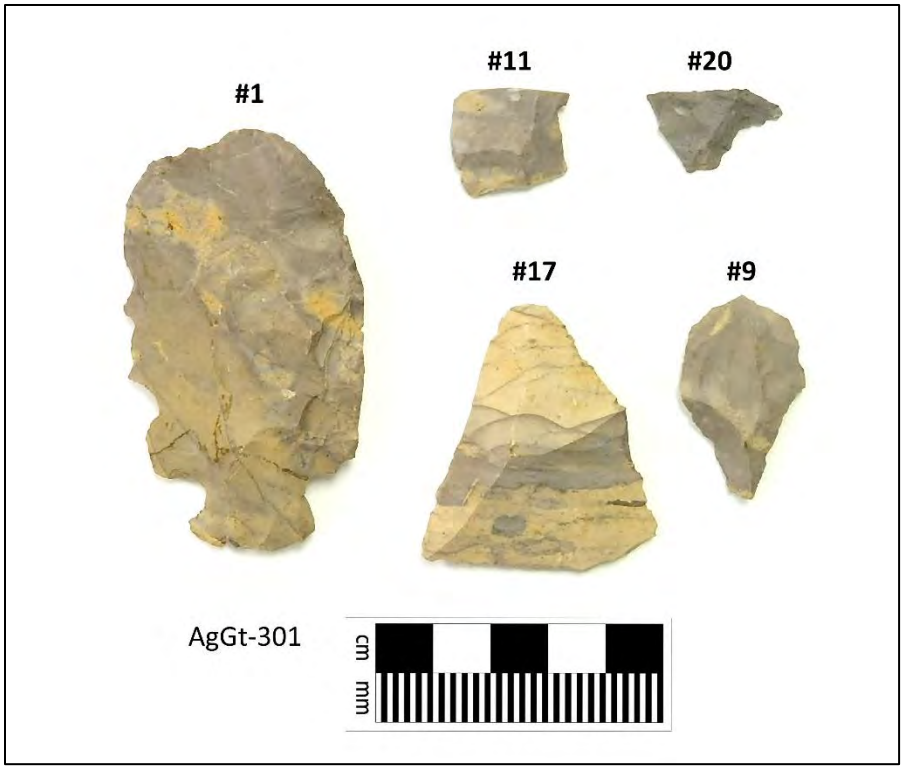

Image 33: Lithic artifacts from AgGt-301.

Image 34: Lithic artifacts from AgGt-302.

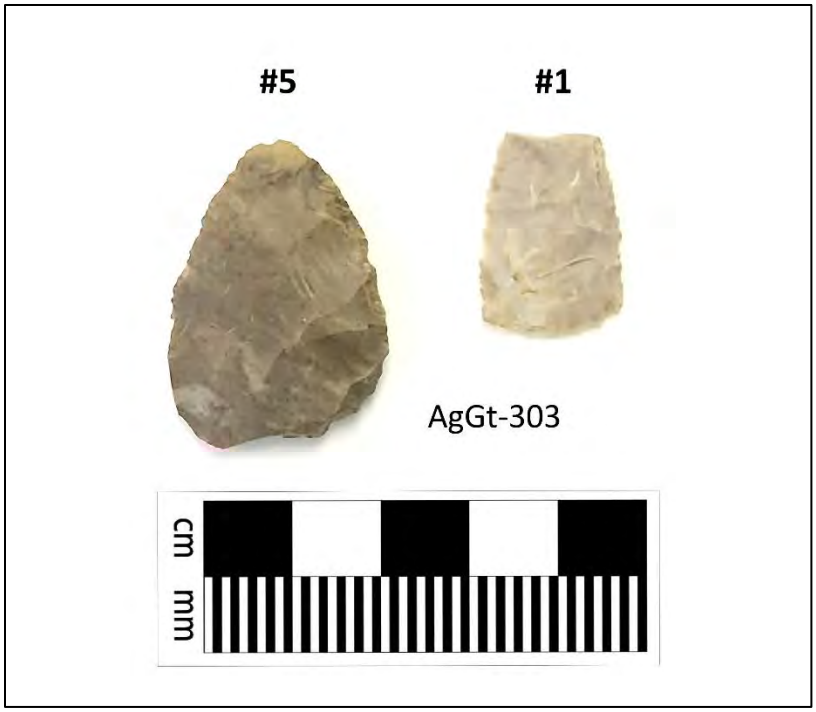

Image 35: Lithic artifacts from AgGt-303.

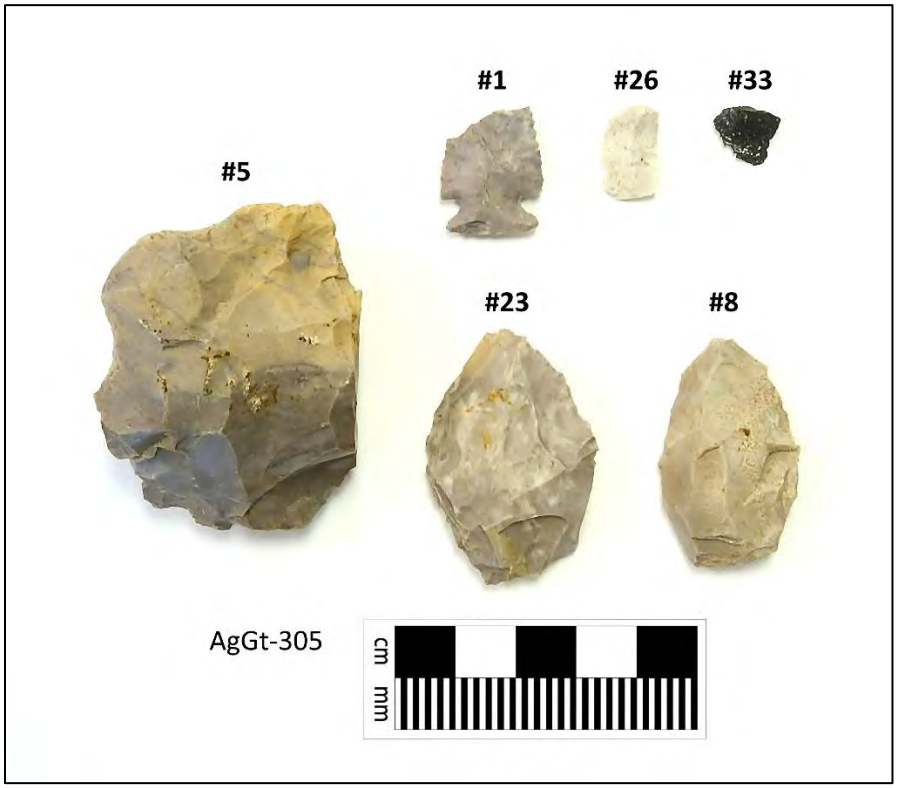

Image 36: Lithic artifacts from AgGt-305.

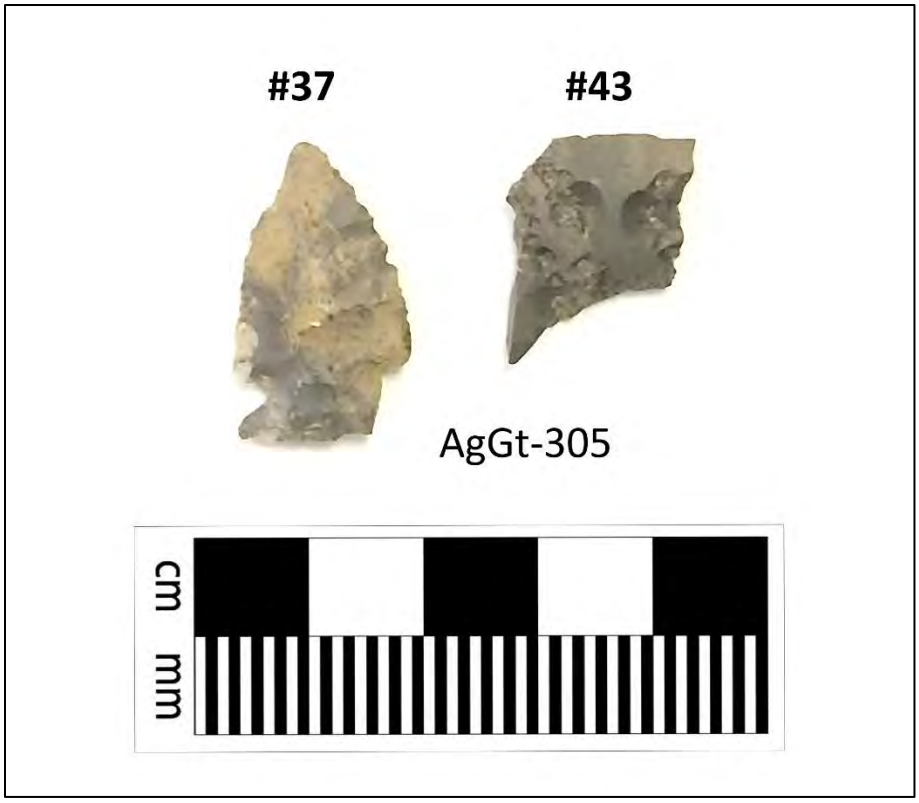

Image 37: Lithic artifacts from AgGt-305.

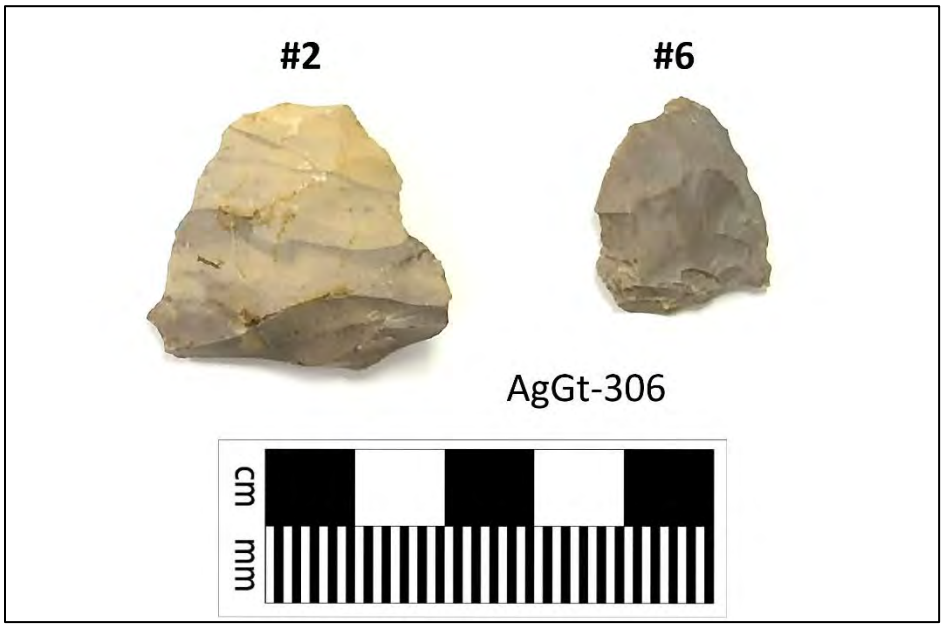

Image 38: Lithic artifacts from AgGt-306.

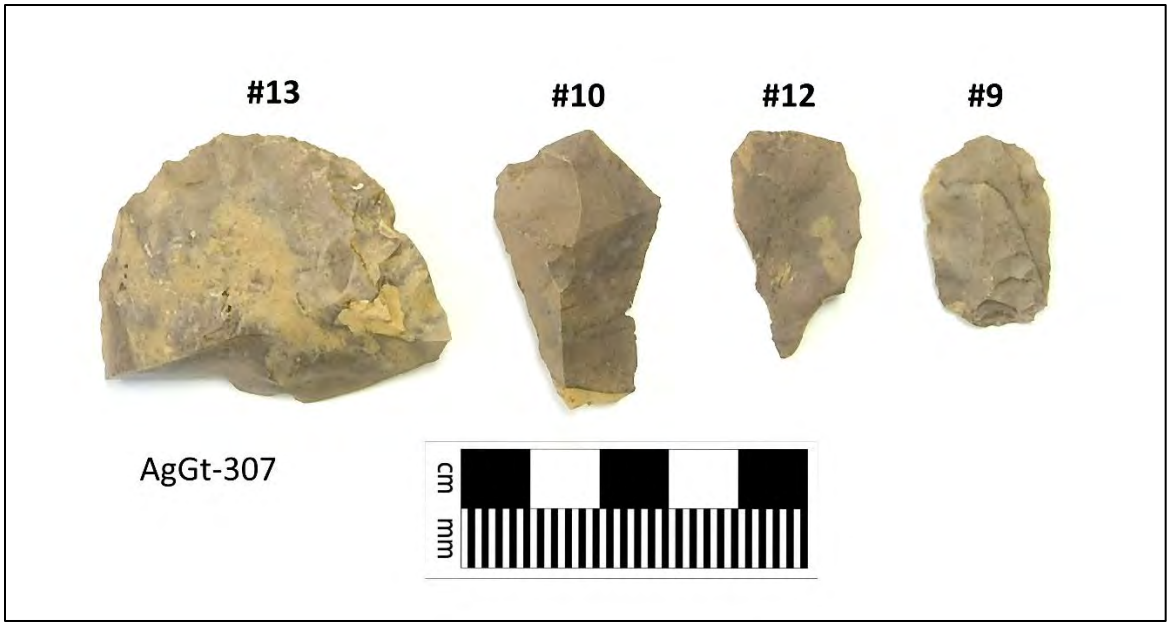

Image 39: Lithic artifacts from AgGt-307.

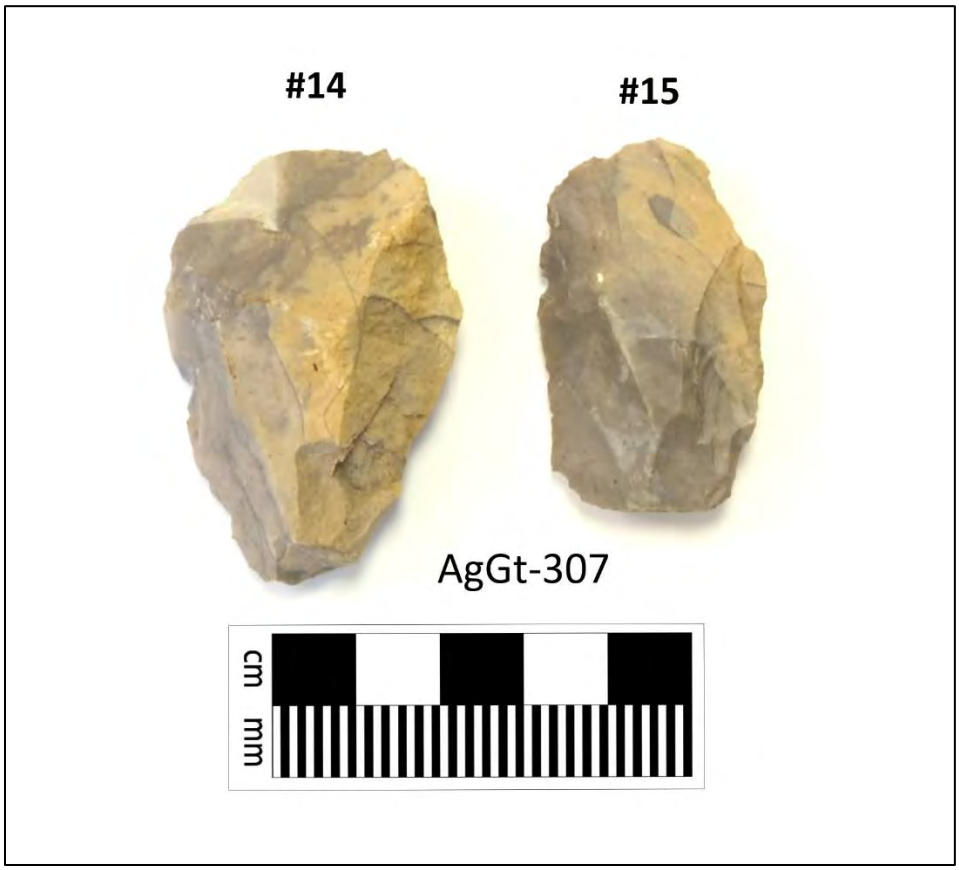

Image 40: Lithic artifacts from AgGt-307.

Image 41: Lithic artifacts from AgGt-311.

Image 42: Lithic artifacts from AgGt-311.

Image 43: Lithic artifacts from AgGt-311.

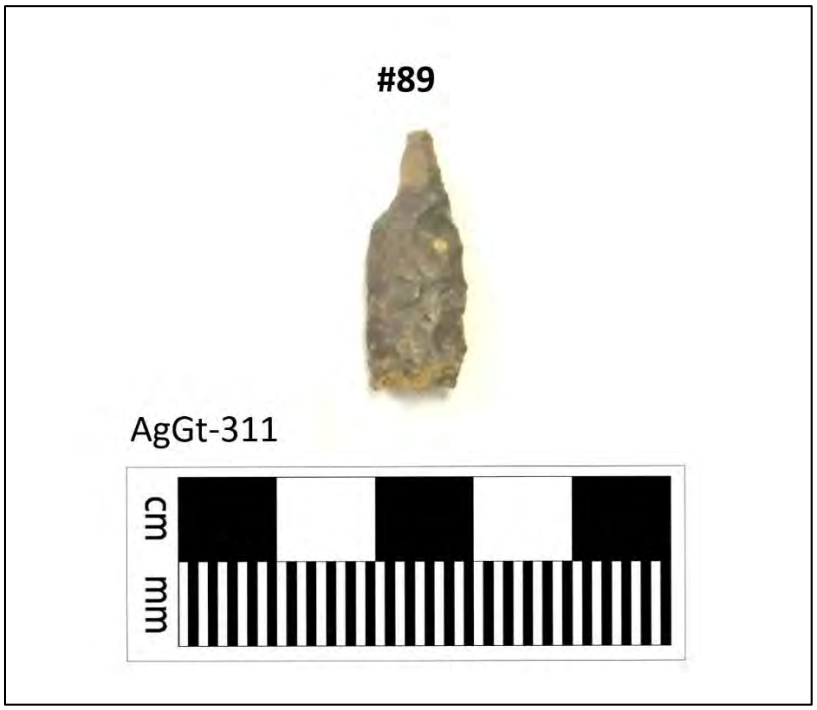

Image 44: Lithic artifact from AgGt-311.

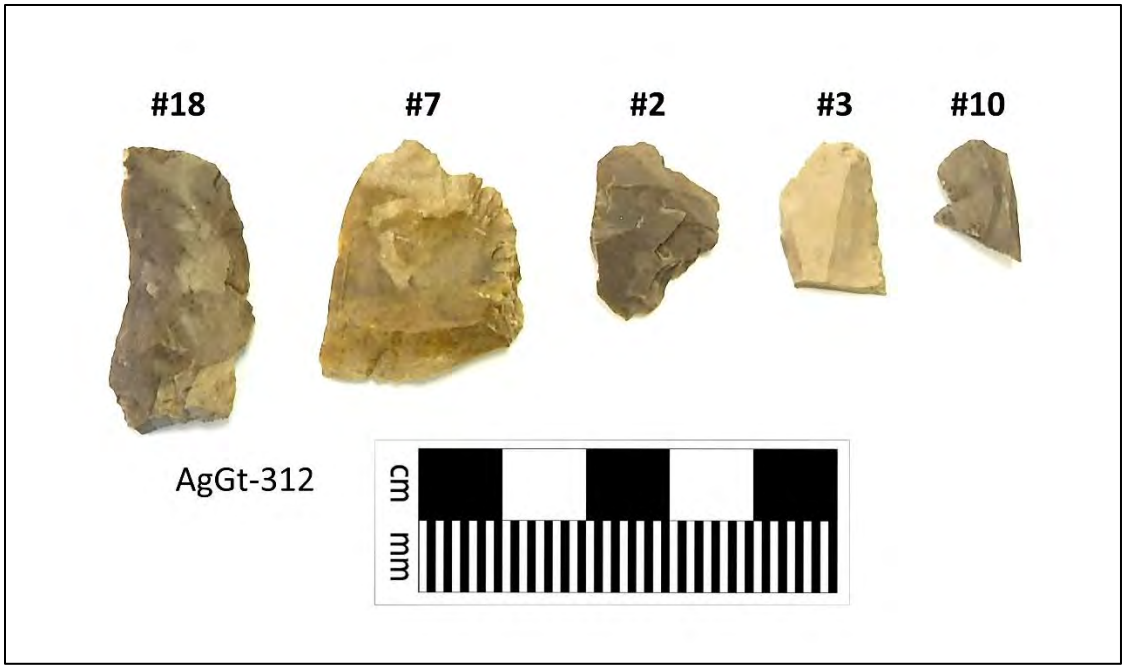

Image 45: Lithic artifacts from AgGt-312.

9.0 Maps

See following pages for detailed assessment mapping and figures.

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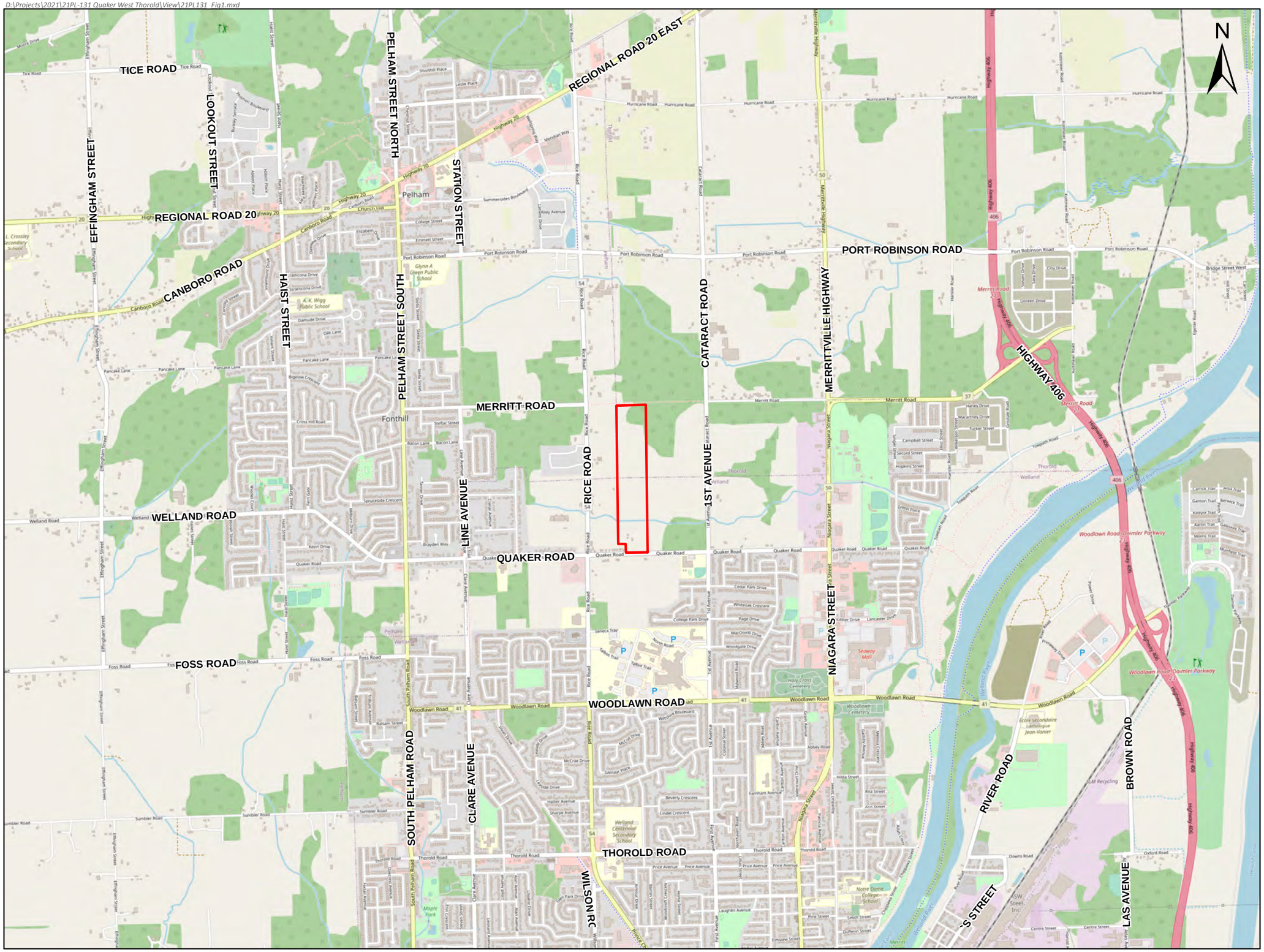

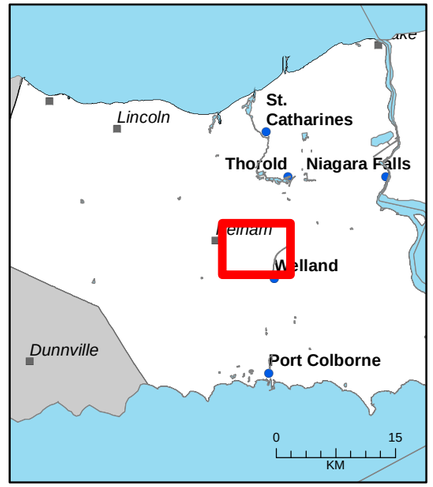

SUBJECT PROPERTY

Sources:
Open Street Map

Projection: NAD 1983 UTM Zone 17N

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Kilometres

ASI PROJECT NO.: 21PL-131
DATE: 2021-07-21

DRAWN BY: A.C., C.N.
FILE: 21PL131_Fig1

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

Figure 1: Location of the Subject Property

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Figure 2: Subject Property Located on the 1862 *Tremaine Map of the Counties of Lincoln and Welland*

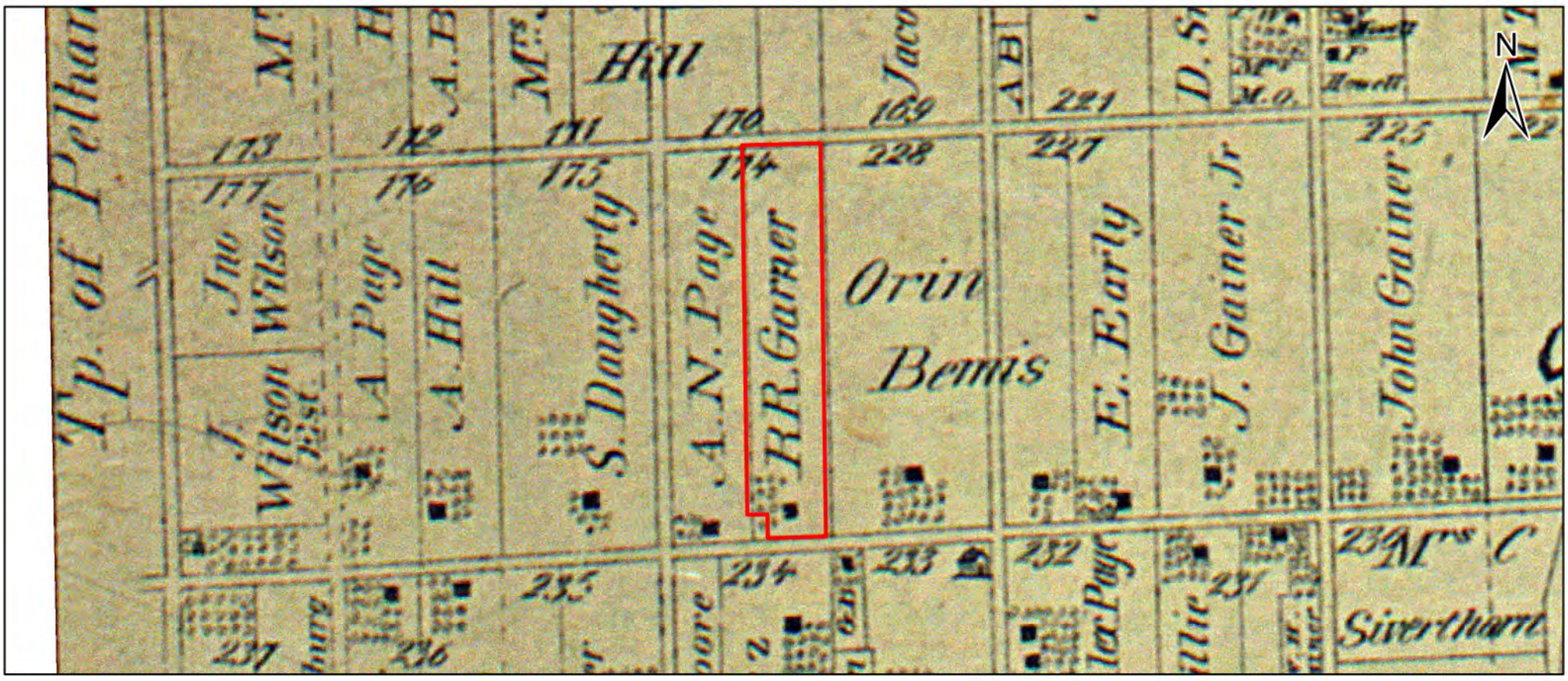

Figure 3: Subject Property Located on the 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland*

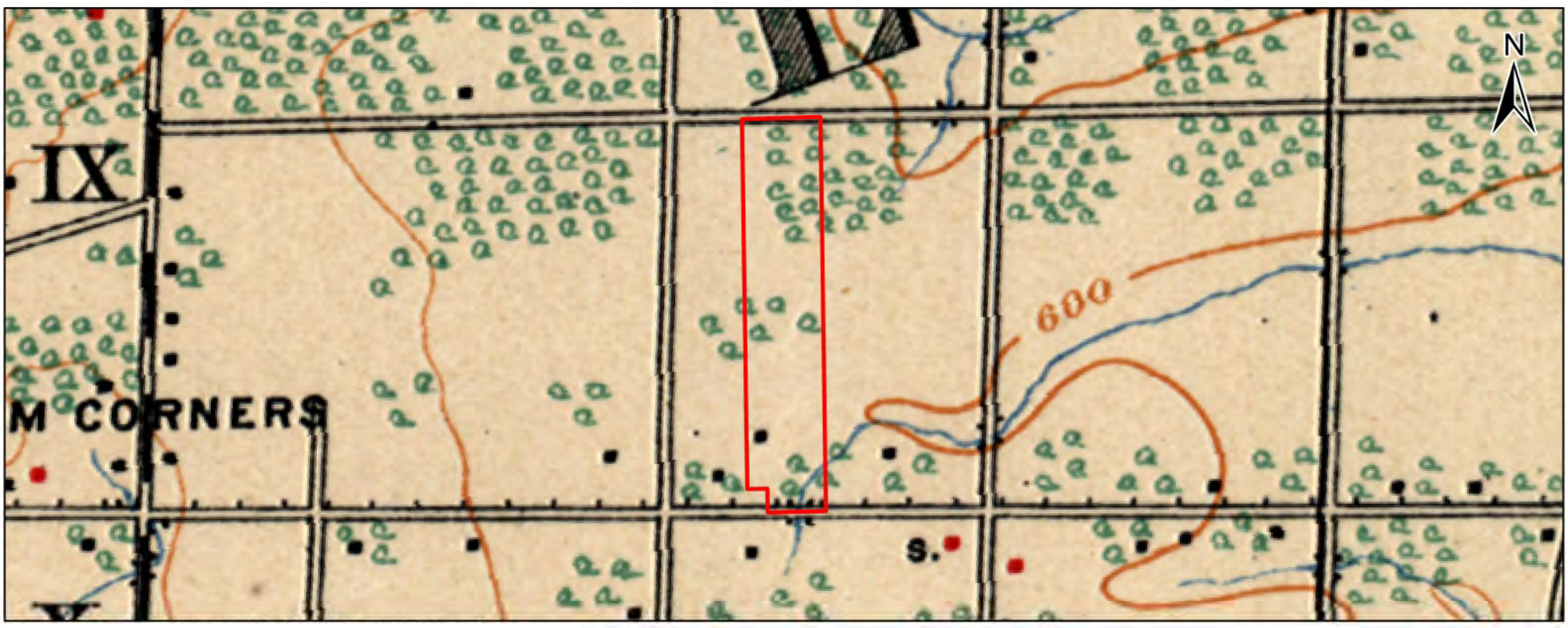

Figure 4: Subject Property Located on the 1907 Niagara Topographic Map

ASI	SUBJECT PROPERTY	Sources: Fig 2: Tremaine Map, Lincoln & Welland (Tremaine & Tremaine, 1862) Fig 3: Illustrated Historical Atlas, Lincoln & Welland (Page, 1876) Fig 4: Niagara Sheet (Department of Militia and Defence, 1907)	0 500 Metres
		Projection: NAD 1983 UTM Zone 17N Scale: 1:15,000 Page Size: 11 x 17	ASI Project No.: 21PL-131 Date: 7/21/2021 4:26 PM Drawn By: cnettleton File: 21PL131_Hist_3Panel

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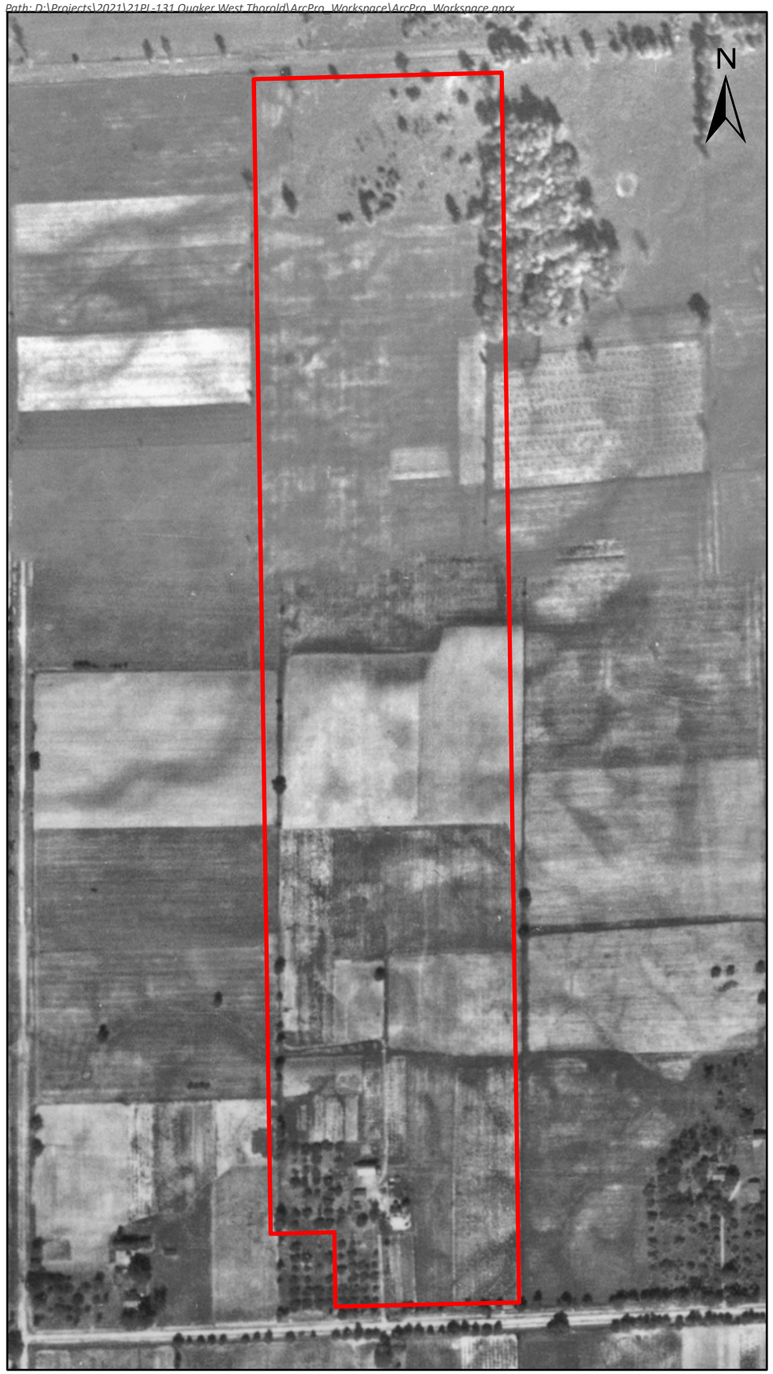
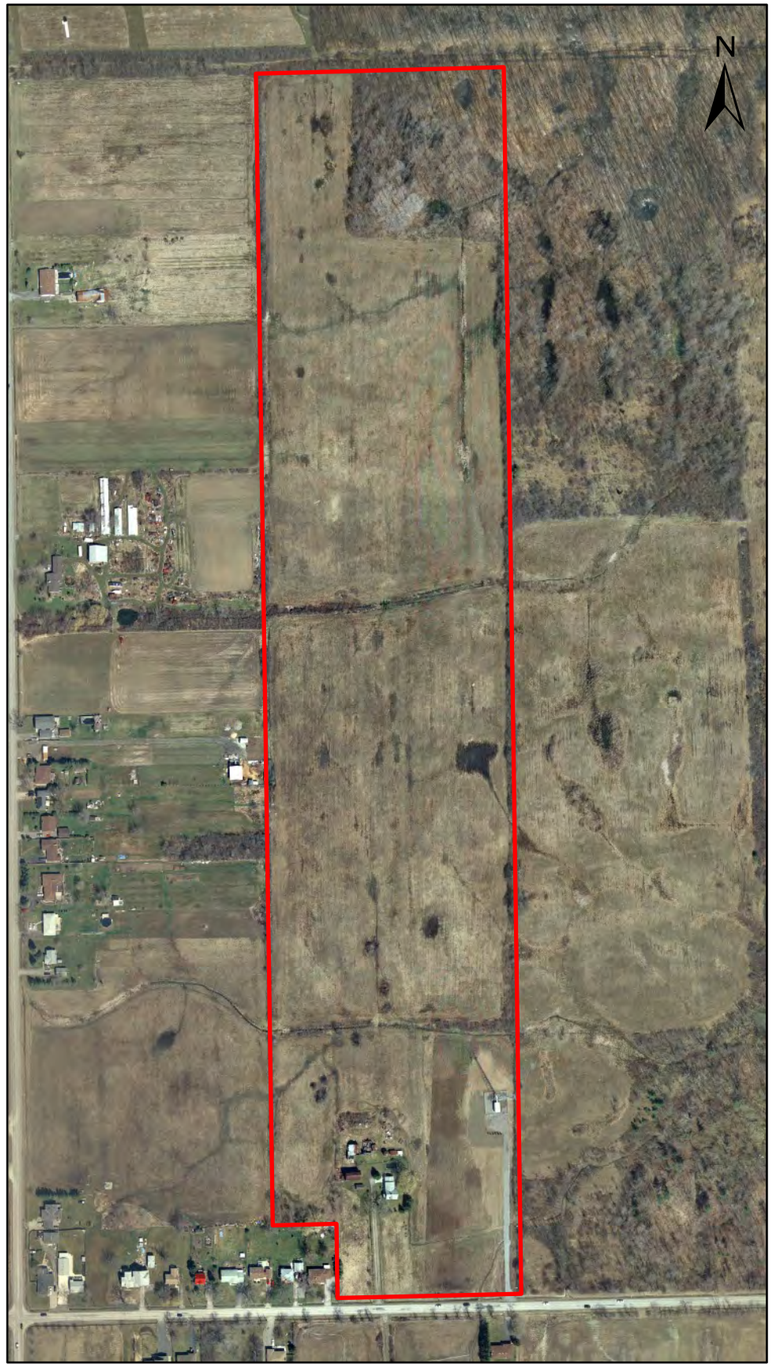


1934

2000



2002

SUBJECT PROPERTY

Source:
Niagara Air Photo Index, Brock University Maps, Data & GIS

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Metres

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Scale: 1:4,912
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-131
DATE: 7 /05/2021

DRAWN BY: jfernandez
FILE: 21PL131_Fig5_6_landscape

Figure 5: Subject Property Located on 1934, 2000, and 2002 Aerial Imagery

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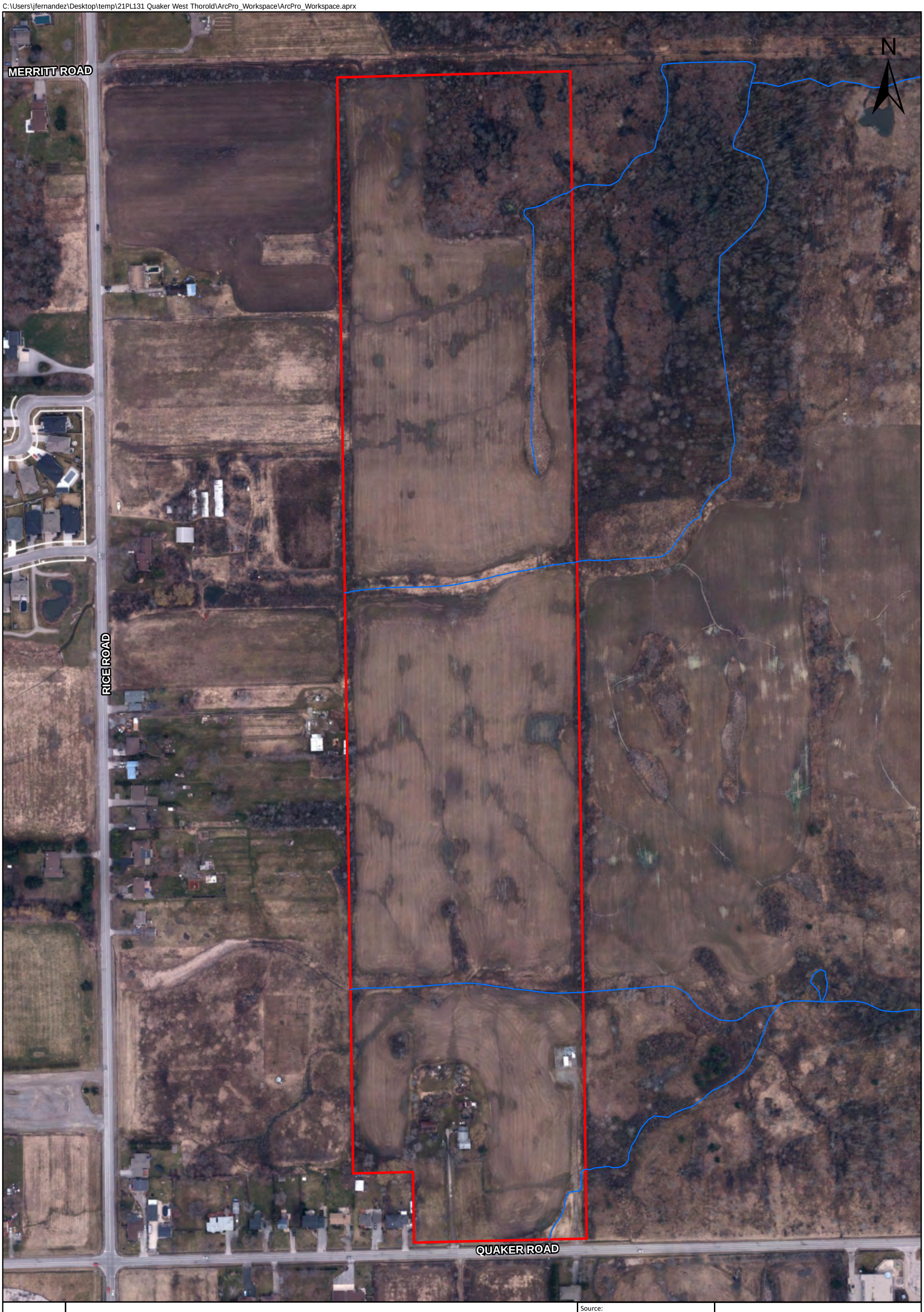

SUBJECT PROPERTY

WATERCOURSE

Source:
City of Welland, Maxar, Microsoft

0 100
Metres

Projection: NAD 1983 UTM Zone 17N
Scale: 1:2,978
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-131
DATE: 8/23/2022

DRAWN BY: jfernandez
FILE: 21PL131_FigX_Existing

Figure 6: Existing Conditions of the Subject Property

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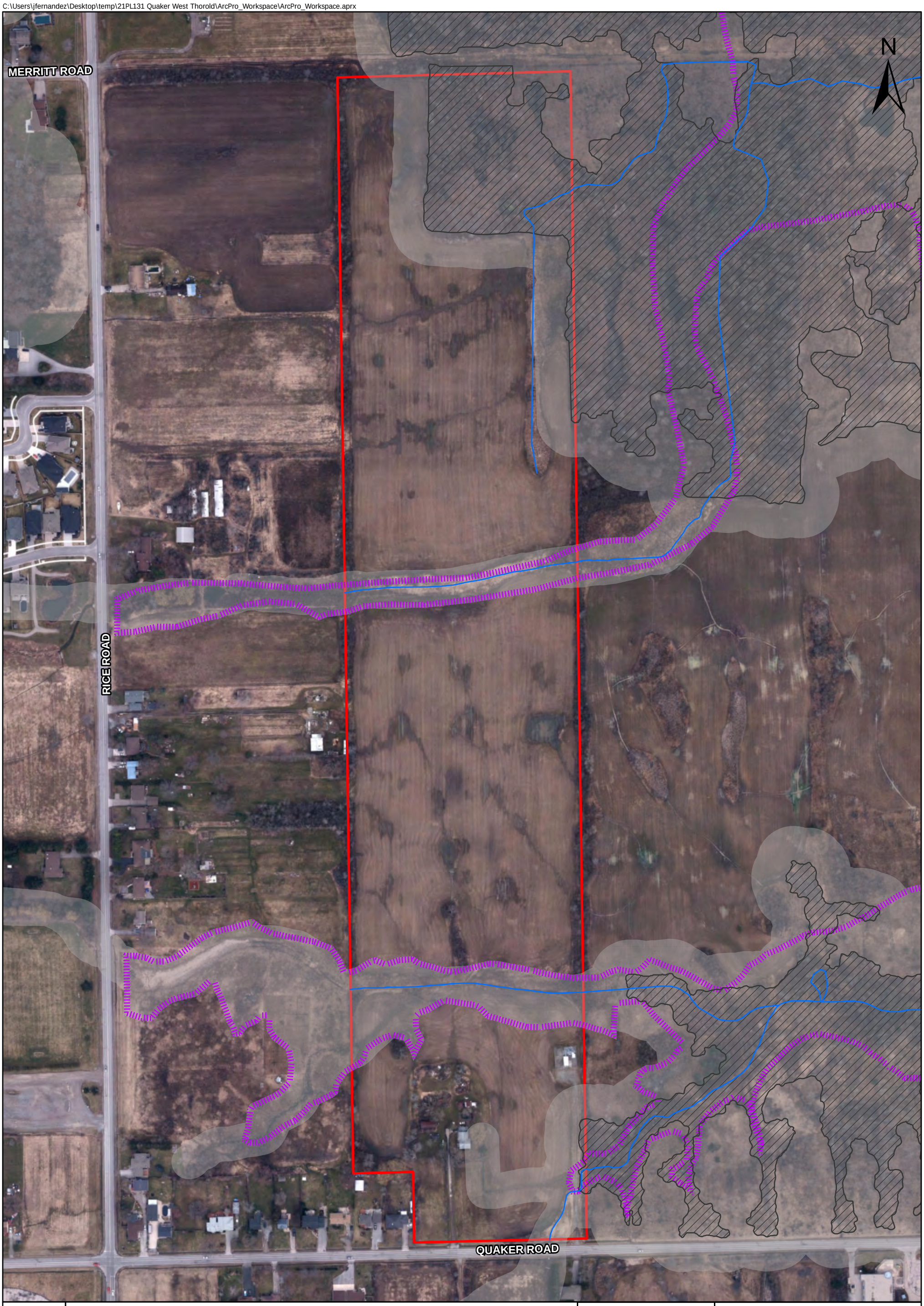

SUBJECT PROPERTY
PROVINCIALLY SIGNIFICANT WETLAND
REGULATED FLOODPLAIN (NIAGARA PENINSULA CONSERVATION AUTHORITY
REGULATION LIMITS (NIAGARA PENINSULA CONSERVATION AUTHORITY)
WATERCOURSE

Source:
City of Welland, Maxar, Microsoft.

GEI Consultants, Inc. (Savanta),
2020 Welland Constraints Report
(Figure 2: Landscape Setting).

0 100
Metres

Projection: NAD 1983 UTM Zone 17N
Scale: 1:2,978
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-131
DATE: 8/23/2022

DRAWN BY: jfernandez
FILE: 21PL131_Fig7_Existing_V3

Figure 7: Conservation and Wetland Constraints Limits

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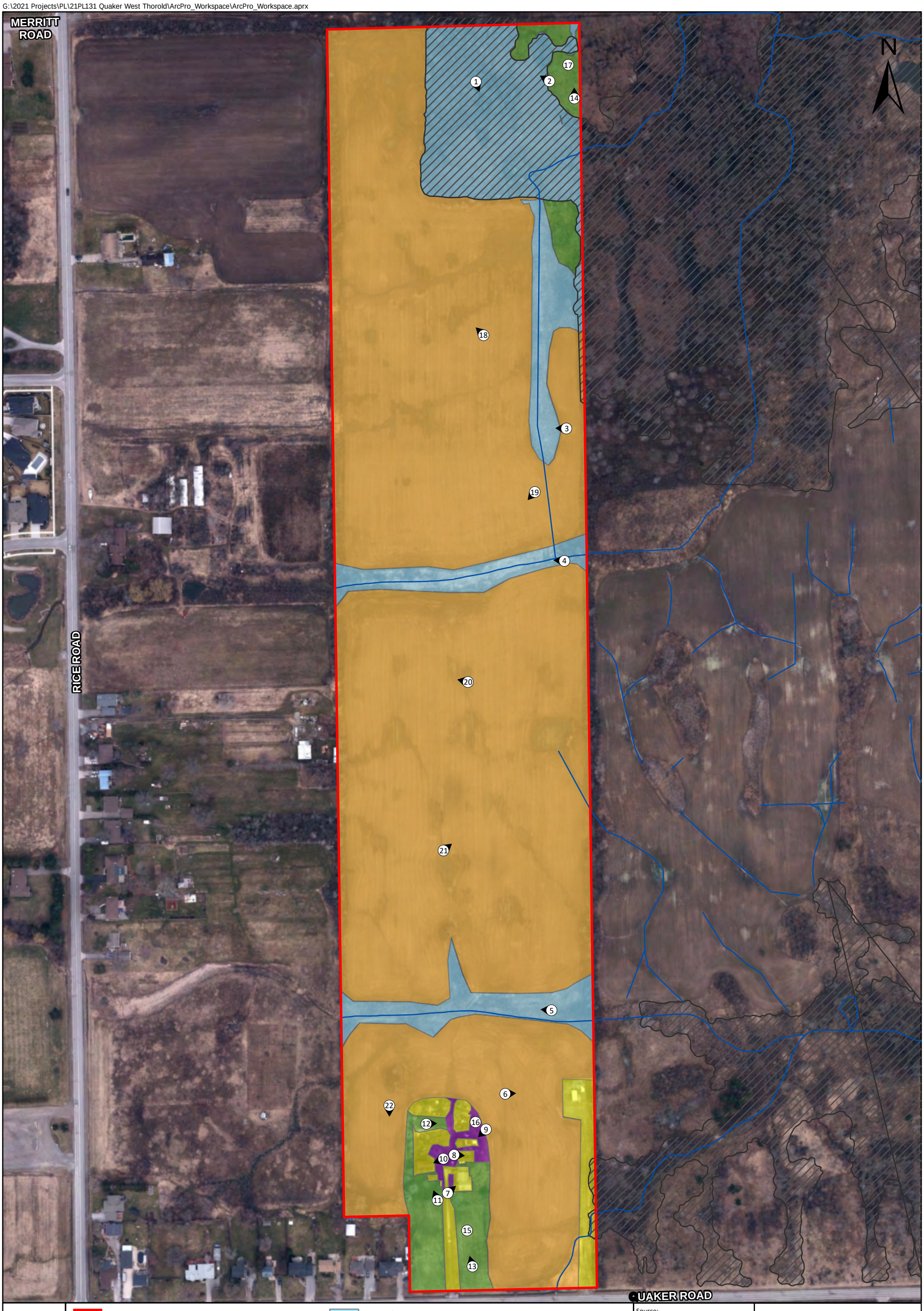

ASI

SUBJECT PROPERTY
PROVINCIALLY SIGNIFICANT WETLAND
WATERCOURSE
PHOTO LOCATION

LOW/PERMANENTLY WET - NO POTENTIAL
DISTURBED - NO POTENTIAL
PEDESTRIAN SURVEY (5 m)
TEST PIT SURVEY (5 m) - INTACT SOIL PROFILES
TEST PIT SURVEY (10 m) - DISTURBED SOIL PROFILES

Source:
City of Welland, Maxar, Microsoft

0 100
Metres

Projection: NAD 1983 UTM Zone 17N
Scale: 1:2,750
Page Size: 11 x 17

ASI PROJECT NO.: 21PL-131
DATE: 8/29/2022

DRAWN BY: rlatour
FILE: Stg2

Figure 8: Stage 2 Archaeological Assessment Results

Appendix A: Registered Sites Within One Kilometre of the Subject Property

Borden	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AgGt-163	N/A	Euro-Canadian	House, scatter	Stantec Consulting, 2008; Detritus Consulting 2014
AgGt-166	N/A	Indigenous	Scatter	Stantec Consulting, 2008; Detritus Consulting 2014
AgGt-203	N/A	Paleo (Hi-Lo)	Findspot	Detritus Consulting, 2014; 2015
AgGt-216	N/A	Late Archaic (Crawford Knoll, Normanskill)	Campsite	Detritus Consulting, 2015; 2016
AgGt-217	N/A	Middle Archaic (Brewerton); Late Archaic (Crawford Knoll)	Campsite	Detritus Consulting, 2015; 2016

Borden	Site Name	Temporal/Cultural Affiliation	Site Type	Researcher
AgGt-219	P1	Indigenous	Scatter	Detritus Consulting, 2014
AgGt-262	N/A	Paleo (Plano)	Campsite	Detritus Consulting, 2018; 2021
AgGt-263	N/A	Indigenous	Unknown	Detritus Consulting, 2018
AgGt-288	Location 1	Early Paleo (Gainey); Early Archaic; Middle Archaic; Woodland; Euro-Canadian	Indigenous campsite; Euro-Canadian dump	Stantec Consulting, 2021; 2022
AgGt-289	Location 2	Indigenous, Euro-Canadian	Scatter	Stantec Consulting, 2020
AgGt-290	Location 3	Indigenous	Findspot, campsite	Stantec Consulting, 2020; 2021

Appendix B: Indigenous Lithic Artifact Catalogue

Appendix B: Indigenous Lithic Artifact Catalogue

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
P7						
1	1	Surface	Layer 1	Biface	Onondaga Chert	L:55 mm W:55 mm T:12 mm; L1 and L2 are 2 halves of a complete biface with a transverse break through the middle; semi-refined
2	1	Surface	Layer 1	Biface	Onondaga Chert	L:60 mm W:53 mm T:19 mm; L1 and L2 are 2 halves of a complete biface with a transverse break through the middle; semi-refined
Total : 2 artifacts						
P16						
1	1	Surface	Layer 1	Biface	Onondaga Chert	L:22 mm W:30 mm T:8 mm; tip/base fragment; semi-refined
Total : 1 artifact						
P19						
1	1	Surface	Layer 1	Biface	Onondaga Chert	L:54 mm W:29 mm T:12 mm; complete; beveled and retouched lateral edge for likely scraper use
Total : 1 artifact						
AgGt-297						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Triangular (Late Woodland Period: 800 CE - 1600 CE); L:22 mm W:12 mm T:2 mm; missing tip; collateral flaking; slightly concave base
Total : 1 artifact						
AgGt-298						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Meadowood (Early Woodland Period: 1000 BCE - 500 BCE); Side-Notching (W 15 mm); L:36 mm W:24 mm T:6 mm; broken at tip
2	1	Surface	Layer 1	Projectile Point	Onondaga Chert	L:29 mm W:20 mm T:4 mm; blade portion; broken at base; continuous retouch along both lateral margins; non-diagnostic
Total : 2 artifacts						
AgGt-300						
1	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	denticulated lateral retouch creating serrated edge
2	1	Surface	Layer 1	Biface	Onondaga Chert	L:46 mm W:39 mm T:8 mm; fragment; refined; retouched margins
3	1	Surface	Layer 1	Biface	Onondaga Chert	L:43 mm W:34 mm T:8 mm; complete; semi-refined
4	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Side-Notching; basal grinding; L:10 mm W:18 mm T:4 mm; base fragment; non-diagnostic; retouched base
5	1	Surface	Layer 1	Biface	Onondaga Chert	L:62 mm W:47 mm T:18 mm; complete; refined; plano-convex cross-section
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
7	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	ventral lateral retouch
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
12	1	Surface	Layer 1	Scraper	Onondaga Chert	L:40 mm W:24 mm T:4 mm; secondary flake with steep lateral retouch along beveled edge
13	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
14	1	Surface	Layer 1	Biface	Onondaga Chert	L:43 mm W:46 mm T:10 mm; proximal portion; semi-refined
15	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
16	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
17	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
18	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal utilization/retouch
19	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
21	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
22	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
23	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
24	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
25	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
26	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Corner-Notching; L:21 mm W:30 mm T:6 mm; base fragment; non-diagnostic
27	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
28	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
29	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
30	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
31	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
32	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
33	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	thermally-altered
34	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
35	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
36	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
37	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
38	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
39	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
40	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
41	1	Surface	Layer 1	Biface	Onondaga Chert	L:38 mm W:41 mm T:15 mm; fragment; semi-refined; retouch along 1 edge
42	1	Surface	Layer 1	Drill	Onondaga Chert	L:12 mm W:12 mm T:4 mm; medial fragment; lateral edge retouch
Total : 42 artifacts						

AgGt-301

1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Brewerton Side-Notched-like (Middle Archaic Period: 6000 BCE - 2000 BCE); Side-Notching; L:74 mm W:43 mm T:11 mm; unrefined; broken tip that has been reworked; reworked lateral margin

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
2	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	utilized edge
3	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
4	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
5	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
6	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
7	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
8	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral utilization/retouch
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch/utilization
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
12	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
13	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
14	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
15	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
16	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	retouch along distal edge
17	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	retouched distal edge; lateral edge retouch
18	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
19	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
21	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
22	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
23	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
Total : 23 artifacts						

AgGt-302

1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Crawford Knoll (Late Archaic Period: 1300 BCE - 900 BCE); Corner-Notching; serration; thermally-altered; L:23 mm W:13 mm T:3 mm; broken tip and base; serration on one side
2	1	Surface	Layer 1	Biface	Onondaga Chert	L:68 mm W:26 mm T:9 mm; complete; laurel-shaped biface; refined with continuous retouch along beveled side
3	1	Surface	Layer 1	Biface	Onondaga Chert	L:20 mm W:41 mm T:10 mm; base/tip fragment; semi-refined
4	1	Surface	Layer 1	Biface	Onondaga Chert	L:33 mm W:51 mm T:10 mm; medial fragment; refined
5	1	Surface	Layer 1	Biface	Onondaga Chert	L:20 mm W:12 mm T:4 mm; tip fragment
6	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
7	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
10	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
12	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
13	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral retouch/utilization
14	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	distal retouch/utilization
15	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
16	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
17	1	Surface	Layer 1	Scraper	Onondaga Chert	L:42 mm W:26 mm T:7 mm; unifacial; made on a flake; steep distal retouch
18	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
19	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
21	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
22	1	Surface	Layer 1	Biface	Indeterminate	thermally-altered; L:29 mm W:19 mm T:4 mm
23	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
24	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
25	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
26	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
27	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
28	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch
29	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
30	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
31	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
32	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch
Total : 32 artifacts						

AgGt-303

1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	serration; L:23 mm W:16 mm T:3 mm; broken tip; retouched/thinned base; refined flaking; non-diagnostic
2	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
3	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
4	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
5	1	Surface	Layer 1	Biface	Onondaga Chert	L:34 mm W:25 mm T:8 mm; complete; semi-refined; oblique flaking; lateral retouch
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
7	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch/utilization
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
Total : 11 artifacts						

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
AgGt-305						
1	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Crawford Knoll (Late Archaic Period: 1300 BCE - 900 BCE); Corner-Notching (W 10 mm); serration; L:20 mm W:17 mm T:4 mm; base and partial blade fragment; serration
2	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral utilization/retouch
3	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal utilization/retouch
4	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
5	1	Surface	Layer 1	Multi-Directional Core	Onondaga Chert	L:54 mm W:43 mm T:28 mm
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
7	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
8	1	Surface	Layer 1	Biface	Bois Blanc Chert	L:37 mm W:22 mm T:9 mm; complete; semi-refined
9	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	dorsal lateral utilization/retouch
12	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	dorsal lateral retouch
13	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
14	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	notched retouch on distal edge
15	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
16	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	ventral lateral utilization
17	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
18	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
19	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
21	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral utilization
22	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	thermally-altered
23	1	Surface	Layer 1	Biface	Onondaga Chert	L:41 mm W:29 mm T:11 mm; complete; semi-refined
24	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
25	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch/utilization
26	1	Surface	Layer 1	Secondary Retouch Flake	Haldimand Chert	
27	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
28	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
29	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
30	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
31	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
32	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
33	1	Surface	Layer 1	Secondary Retouch Flake	Indeterminate	unknown black, vitreous material with inclusions
34	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	distal retouch/utilization
35	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
36	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
37	1	Surface	Layer 1	Projectile Point	Onondaga Chert	Crawford Knoll (Late Archaic Period: 1300 BCE - 900 BCE); Side-Notching (W 10 mm); serration; L:26 mm W:15 mm T:3 mm; complete except for missing basal corner; collateral flaking
38	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
39	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
40	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
41	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
42	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
43	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
44	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
45	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
46	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
47	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
48	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
49	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
50	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
Total : 50 artifacts						

AgGt-306

1	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
2	1	Surface	Layer 1	Biface	Onondaga Chert	L:30 mm W:35 mm T:8 mm; tip/base portion; semi-refined
3	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
4	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal utilization/retouch
5	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	distal retouch/utilization
7	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch and concave distal retouch
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
12	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
13	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
Total : 13 artifacts						

AgGt-307

1	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
2	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch/utilization
3	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
4	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
5	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
7	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
9	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
10	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	ventral lateral utilization/retouch
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
12	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
13	1	Surface	Layer 1	Biface	Onondaga Chert	L:52 mm W:45 mm T:11 mm; semi-refined
14	1	Surface	Layer 1	Biface	Onondaga Chert	L:53 mm W:38 mm T:14 mm; fragment; semi-refined
15	1	Surface	Layer 1	Biface	Onondaga Chert	L:45 mm W:28 mm T:11 mm; complete; semi-refined
Total : 15 artifacts						

AgGt-311

1	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
2	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	bi-lateral retouch
3	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
4	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	lateral retouch
5	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal retouch/utilization
6	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral utilization/retouch
7	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
8	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral retouch/utilization
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
10	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
11	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
12	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
13	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
14	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
15	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
16	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
17	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal utilization/retouch
18	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
19	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
21	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
22	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
23	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
24	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
25	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
26	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
27	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	distal utilization
28	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
29	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral utilization
30	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
31	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
32	1	Surface	Layer 1	Scraper	Onondaga Chert	L:41 mm W:20 mm T:5 mm; steep distal edge retouch
33	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
34	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
35	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
36	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
37	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
38	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral retouch
39	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
40	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
41	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
42	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
43	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
44	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
45	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
46	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	lateral utilization
47	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
48	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
49	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
50	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
51	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral utilization
52	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
53	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
54	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
55	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	dorsal lateral retouch
56	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
57	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	concave lateral retouch/utilization
58	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
59	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
60	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
61	1	Surface	Layer 1	Primary Thinning Flake	Onondaga Chert	overshot flake
62	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
63	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
64	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
65	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	alternate edge lateral retouch
66	1	Surface	Layer 1	Biface	Bois Blanc Chert	L:43 mm W:25 mm T:9 mm; complete; semi-refined
67	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
68	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
69	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
70	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
71	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
72	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
73	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
74	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	lateral utilization/retouch
75	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
76	1	Surface	Layer 1	Primary Thinning Flake	Onondaga Chert	
77	1	Surface	Layer 1	Biface	Onondaga Chert	L:37 mm W:18 mm T:9 mm; fragment; semi-refined
78	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
79	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	concave lateral retouch/utilization
80	1	Surface	Layer 1	Biface	Onondaga Chert	L:23 mm W:33 mm T:6 mm; base/tip fragment; refined
81	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
82	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
83	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	lateral and distal retouch
84	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
85	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
86	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
87	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
88	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
89	1	Surface	Layer 1	Graver	Onondaga Chert	L:27 mm W:10 mm T:4 mm; complete; bifacial with fine retouched graver tip
Total : 89 artifacts						

AgGt-312

1	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
2	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	distal utilization
3	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	lateral retouch
4	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
5	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
6	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	

Cat#	Qty	Provenience	Stratum	Type	Material	Comments
7	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
8	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
9	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
10	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
11	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	thermally-altered
12	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
13	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
14	1	Surface	Layer 1	Secondary Knapping Flake	Onondaga Chert	
15	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
16	1	Surface	Layer 1	Primary Thinning Flake	Onondaga Chert	
17	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
18	1	Surface	Layer 1	Secondary Retouch Flake	Onondaga Chert	
19	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
20	1	Surface	Layer 1	Flake Fragment	Onondaga Chert	
Total : 20 artifacts						

Grand Total : 302 artifacts