STAGE 1 and 2 ARCHAEOLOGICAL ASSESSMENT
FOR THE
WHITE’S BRIDGE UPGRADE PROJECT,
ON THE ROAD ALLOWANCE FOR COLUMBUS ROAD and
PART OF LOT 31, CONCESSIONS 6 and 7,
GEOGRAPHIC FORMER TOWNSHIP OF WHITBY, COUNTY OF ONTARIO,
NOW IN THE TOWN OF WHITBY,
REGIONAL MUNICIPALITY OF DURHAM

Submitted to:
SRM Associates
110 Scotia Court
Unit 41
Whitby, ON
L1N 8Y7
(905) 686-6402
Fax: (905) 432-7877
Contact: Ms. Erica Tsang

Prepared By:
Advance Archaeology
P.O. Box 493,
Port Hope, ON
L1A 3Z4
(905) 342-3250
Fax: (905) 342-3250

Licensed to: Donna Morrison
License #: P121
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1.0 INTRODUCTION

A contract to carry out a Stage 1 and 2 archaeological assessment for the proposed White’s Bridge Upgrade Project in the Town of Whitby, Regional Municipality of Durham, was awarded to Advance Archaeology (CIF #: P121-086-2010) by SRM Associates. As shown on Figure 1, below, White’s Bridge is located northwest of the village of Brooklin; it crosses Lynde Creek on Columbus Road, between Country Lane (to the east) and Coronation Road (to the west). The subject property consists primarily of the road allowance for Columbus Road (including White’s Bridge), plus small adjacent sections extending 15m south of the road allowance on Lot 31, Concession 6, on the south side of the road, and 15m north of the road allowance on Lot 31, Concession 7, on the north side (see Figures 2 and 3).

Permission to access the subject property was granted to Advance Archaeology by the proponent and private landowners for the purpose of conducting a Stage 1 and 2 archaeological assessment, including the collection of any artifacts, if found. Fieldwork took place under excellent weather and lighting conditions on November 22 and December 3, 2010; there was no frost in the ground. The project director was Donna Morrison, the field directors were Donna Morrison and Marika Atfield, and the field technicians were Justin Tyghe, Marika Atfield, and Myles Allen. This report was prepared by Donna Morrison with mapping by Dale Bateman (the base maps for Figures 2, 3 and 5 were provided by the proponent).
Figure 2: Aerial Photograph Showing the Subject Property (shaded in blue).
Figure 3: Plan of the Subject Property (Study Area).
2.0 STAGE 1 ASSESSMENT

2.1 Regional Physiography

The subject property is located in the South Slope physiographic region of southern Ontario (Chapman and Putnam 1984; Ontario Dept. of Mines and Northern Affairs Map #2226). The South Slope lies between Lake Ontario and the Oak Ridges Moraine, and is just north of the near-shore lakebed of glacial Lake Iroquois, which formed about 12,600 B.P. and was drained by about 11,500 B.P., in the Ontario basin. It extends from the Niagara Escarpment to the Trent River, a distance of roughly 940 miles. The central portion of the South Slope in the Regional Municipality of Durham is drumlinized, and streams (such as Lynde Creek, on the subject property) flow directly down the slope. A succession of valleys and gullies has been created by these streams.

The South Slope lies across limestones of the Verulam and Lindsay formations, the grey shales of the Georgian Bay formation, and the reddish shales of the Queenston formation. East of Oshawa, the till is highly calcareous and the cultivated soils often contain free lime carbonates on the surface. There are few stones in the till, which consists of lacustrine clay and silt reworked by the glacier (Chapman and Putnam 1984).

Locally, the subject property is situated within a large, broad Drumlinized Till Plain zone that stretches for many kilometres north of the glacial Lake Iroquois strandline in this region.

2.2 Existing Conditions on the Subject Property

The subject property is located on the north and south sides of Columbus Road where White’s Bridge crosses Lynde Creek; it extends roughly 30m east of the east end of the existing bridge, and roughly 65m west of the existing bridge’s west end. It includes the road allowance as well as 15m beyond the road allowance, on both the north and south sides of Columbus Road. The east and west approaches to the bridge are on fairly steep slopes, the sides of which are covered mainly in a mixture of mature cedars, pines, beeches, and other large trees (see Plate 1). The existing roadbed and roadside areas (which include ditches and graded banks or cuts) have been heavily disturbed in the past during the course of road and bridge construction, paving operations, and various upgrades over the years. In addition to the existing road, the northwest and northeast quadrants also include relatively undisturbed sections of manicured lawns (see Plate 4), as well as the wooded slopes leading down to Lynde Creek and its flat floodplain (see Plate 2). On the south side of Columbus Road, the southeast quadrant also includes part of an overgrown agricultural field edge, with long grass, scrub vegetation, and weeds; it then slopes steeply down to a flat floodplain area adjacent to the creek. Similarly, the southwest quadrant includes flat floodplain lands, a steep slope, and a flat area with mature trees and long grasses at the top of the slope (the southwest edge of the subject property – see Plate 3). Immediately adjacent to Lynde Creek are some sections of standing water or waterlogged soils within the floodplain zones. Apart from the existing bridge, there are no structures or structural remains on the subject property. These conditions are shown on Plates 1 to 4 and Figures 2 and 5.
Plate 1: View to East of Subject Property and White’s Bridge on Columbus Road.

Plate 2: View to Northwest of Steep Slopes and Waterlogged Soils Adjacent to Lynde Creek on East and West Sides of White’s Bridge.
2.3 Historical Research

The subject property includes the lands within the road allowance for Columbus Road as well as two other sections: (1) on the south side of Columbus Road, a 15m-wide area south of the road allowance on the northernmost edge of Lot 31, Concession 6, of geographic Township of Whitby, and (2) on the north side of Columbus Road, a 15m-wide area north of the road allowance on the southernmost edge of Lot 31, Concession 7, of geographic Township of Whitby, which was originally part of Ontario County (now in the Town of Whitby, Regional Municipality of Durham). Ontario County was originally part of York County (the East Riding), one of the 19 counties proclaimed by Lieutenant Governor Simcoe in 1792. Principal immigration and settlement of Ontario County took place between the War of 1812 and the 1837 Rebellion. Ontario County was officially separated on January 12, 1854 (Beers and Co. 1877).

In 1791, the Township of Whitby was partially surveyed, and in 1795 the full township was laid out. One of the first recorded settlers was Jabez Lynde, who settled in 1804 along the creek now known by his name. Settlement in the Brooklin area expanded rapidly in the first half of the 1800s. The village was originally named Winchester, but was renamed “Brooklin” in 1847. A flour mill on Lynde Creek was established there by John and Robert Campbell, along with numerous other services and industries. The loamy clay soils of Whitby Township were also sought after for farming.

The 1877 *Beers & Company* historical atlas map for the Township of Whitby shows the locations of the lots and concessions as well as historical railways, roads, and buildings, if present, at that time. Figure 4, below, shows the location of the subject property superimposed on the 1877 map of this area. Based on this historical atlas map, the subject property included the road allowance that separates Concession 6 from Concession 7 of Whitby Township, and part of the northernmost edge of Lot 31, Concession 6 (which is adjacent to the south side of Columbus Road); this part of Lot 31 was owned at that time by “W. Green”, who also owned part of Lot 30, where a house was located. The subject property on the north side of Columbus Road included part of the southernmost edge of Lot 31, Concession 7, which was owned at that time by “F. Waring”. Waring owned the south half of that lot, which was 100 acres in size, and had a house in the southeast corner of the lot, roughly 180m east of the subject property. A schoolhouse is shown opposite this house, on Lot 30, Concession 7, although it is about 250m from the subject property. There are three houses shown on Lot 32, although these are well to the west of the subject property.

In summary, there were no known houses, churches, cemeteries, schoolhouses, tollhouses, or other similar features or buildings shown on the subject property on the 1877 township map. White’s Bridge, in its current form, was built during the early 1930s. It is a poured concrete structure with a support pier on each bank of Lynde Creek (see Plate 2, above). A low metal railing was built on the north and south sides of the bridge, and modern metal guardrails have been added on the east and west approaches to the bridge. With respect to this bridge, the checklist entitled “Screening for Impacts to Built Heritage and Cultural Heritage Landscapes” has been submitted to the Ministry of Tourism and Culture, separately.
Figure 4: Location of Subject Property on 1877 Historical Atlas Map of Geographic Whitby Township, Ontario County (after Beers and Company).
2.4 Previous Archaeological Research

A search of the archaeological sites database (which is maintained by the Ontario Ministry of Tourism and Culture) was carried out by Ministry Data Coordinator, Robert von Bitter, on November 19, 2010. The search determined that there are no registered sites on the subject property itself, and there are none registered within a radius of 2 km. However, the lack of registered sites may simply be a reflection of a general lack of development and archaeological research in this part of Durham region and does not necessarily indicate a low potential for the presence of archaeological sites.

2.5 Assessment of Archaeological Potential

According to the Ontario Ministry of Culture’s primer on “Archaeology, Land Use Planning, and Development in Ontario” (1998), and in draft versions of the proposed new Standards and Guidelines for Consultant Archaeologists (OMCL 2009), any undisturbed lands within 300m of a primary water source or within 200m of a secondary watercourse are considered to have a high potential for the presence of archaeological or cultural heritage resources. This is because potable water is one of the most important factors in human survival; therefore, proximity to water is considered to be an excellent indicator of high archaeological site potential. Other factors such as suitable topography, lack of soil disturbance, and the presence of, or proximity to, known precontact or historic sites or features such as roads are also good indicators of archaeological potential.

In terms of the subject property itself, it is part of a well-established 19th-century transportation corridor (Columbus Road), which provided significant connections during the 1800s with the village of Brooklin and smaller surrounding settlements such as Ashburn, Myrtle, and Columbus. Although no houses or other structures are shown on the 1877 map of the subject property, there is a house roughly 180m to the northeast of the subject property (on Lot 30, Concession 7) and a schoolhouse on the next lot to the east. In addition, a secondary watercourse (Lynde Creek) flows southward through the centre of the subject property, which would have been topographically suitable for Euro-Canadian or Aboriginal use and habitation.

Given the intensity of local historic settlement, the presence of a secondary watercourse, as well as the presence of some relatively undisturbed lands on either side of Lynde Creek, the subject property was considered to have generalized potential for the presence of archaeological sites or other cultural heritage resources. Therefore, it was necessary to carry out a Stage 2 archaeological assessment on any sections of the subject property with high archaeological potential. However, any portions of the subject property that have been adversely affected or disturbed by prior road and bridge construction are considered to have low archaeological potential, as are any steep slopes and sections of standing water or waterlogged soils adjacent to Lynde Creek. Areas of low archaeological potential are exempt from Stage 2 assessment.
3.0 STAGE 2 ASSESSMENT

3.1 Zones of Potential (including Special Conditions Zones) and Stage 2 Fieldwork Methodology Used

Since the Stage 1 background research had determined that there was good potential for the presence of archaeological sites or heritage resources on parts of the subject property, a Stage 2 archaeological assessment was required. The Stage 2 work was carried out in accordance with the current Technical Guidelines used by the Ontario Ministry of Culture, Tourism and Recreation (1993) so that, if present, any archaeological resources on the subject property would be properly identified. At present, the Ontario Ministry of Culture requires all licensees to follow the 1993 Archaeological Assessment Technical Guidelines, although new guidelines (OMCL 2009) have been drafted that will replace the 1993 ones, beginning in 2011.

The first step in a Stage 2 assessment is to determine the specific zones of archaeological potential across a property, and the fieldwork methodology that is appropriate for each of these zones. Based on the results of the Stage 1 assessment, it was determined that, in general, the subject property was considered to have archaeological potential, since it was close to a 19th-century transportation corridor (Columbus Road) and includes a secondary water course (Lynde Creek). Zones with high archaeological potential are shown in orange on Figure 5, below. However, there were also three types of “special conditions” zones that were considered to have low archaeological potential and were therefore exempt from Stage 2 fieldwork. These included: (1) any sections of slopes on either side of Lynde Creek that were too steep to permit shovel testing, (2) any sections immediately adjacent to Lynde Creek that had pools of standing water or waterlogged soils, and (3) any sections that had previously undergone extensive soil disturbance, such as the existing asphalt road, the gravel shoulders, as well as any ditches and graded banks or road cuts. These low-potential zones are shown in green, grey, and grey stripes on Figure 5, below.

Since it was impossible to plough any of the subject property, the Stage 2 fieldwork consisted entirely of the hand-excavation of shovel tests carried out at high-potential 5m survey intervals in all of the high-potential zones. All shovel tests were excavated down to sterile subsoil, and all soil was screened through 6mm (¼-inch) mesh rocker screens. All shovel tests were backfilled. Plates 1 to 4 illustrate the conditions on the subject property and Figure 5 shows the zones of archaeological potential and Stage 2 fieldwork methodology used.

3.2 Results of the Stage 2 Assessment

Shovel testing at 5m intervals was carried out on the subject property. The sandy loam topsoil ranged from 25 to 35cm in depth, and there was no frost present in the ground. Despite the close-interval testing, nothing of archaeological significance, dating to either the historic or the precontact time periods, was recovered during the Stage 2 shovel testing operations. No artifacts or other cultural heritage resources were found in the test pits and no structural remains were noted.
**Figure 5:** Zones of Archaeological Potential and Stage 2 Fieldwork Methodology Used.
Plate 3: View to East of Stage 2 Shovel Testing in Southwest Quadrant of Subject Property.

Plate 4: View to South of Stage 2 Shovel Testing in Northeast Quadrant of Subject Property.
4.0 CONCLUSIONS

4.1 Summary

The Stage 1 assessment determined that the subject property had some sections of relatively undisturbed lands with high archaeological potential. This is because the subject property fronts on a significant 19th-century transportation corridor (Columbus Road), is topographically suitable for past settlement or use by Euro-Canadian or Aboriginal groups, and includes a secondary watercourse (Lynde Creek). Also, the surrounding area has a well-documented history of Euro-Canadian settlement, with known agricultural and industrial uses of the nearby lands. Together these factors indicated the potential for the presence of historic and pre-contact archaeological sites or cultural heritage resources on the dry and undisturbed portions of the subject property; however, sections of steep slopes, standing water, and extensive prior soil disturbance were considered to have low archaeological potential. The subsequent Stage 2 assessment used shovel testing methods at high-potential 5m survey intervals to test for the presence of artifacts, structural remains, or other archaeological features in the high-potential zones. However, nothing of cultural heritage significance, dating to either the historic or the precontact time periods, was found and no structural remains were encountered.

4.2 Recommendations

Based on this Stage 1 and 2 archaeological heritage resource assessment, we offer the following two recommendations. Please also read the caution in Section 4.3, below.

(1) Since nothing of archaeological or heritage significance, from either the historic or precontact time periods, was discovered on the subject property during the Stage 1 and 2 assessment, our recommendation is for complete clearance of the archaeological condition on the subject property.

(2) No construction work or soil disturbance of any kind may be undertaken anywhere on the subject property until a signed clearance letter has been issued by the Ministry of Tourism and Culture.

4.3 Development Caution

There is always the possibility that deeply buried heritage resources or human burials can exist on site and were not identifiable during a standard archaeological assessment. Therefore, if deeply buried archaeological resources, either precontact or historic, are encountered on the subject property during construction, the proponent must stop work immediately and contact Mr. Jim Sherratt of the Heritage Operations Unit of the Ontario Ministry of Tourism and Culture at (416) 314-7132. If human remains are encountered anywhere on the subject property during construction, the proponent must stop work immediately and contact the Registrar (Mr. Michael D’Mello) or Deputy Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Consumer Services at (416) 326-8404, as well as the Heritage Operations Unit, as above. Please also contact the archaeological consultant at (905) 342-3250.
5.0 REFERENCES

Beers, J. H. and Company
1877  *The Illustrated Historical Atlas of the County of Ontario.*  Toronto.

Chapman, L.J. and D. F. Putnam.

Ontario Geological Survey

Ontario Ministry of Culture, Tourism, and Recreation (OMCTR)
1993  *Archaeological Assessment Technical Guidelines (Stages 1-3 and Reporting Format).*  Prepared by the Cultural Programs Branch, Archaeology and Heritage Planning Unit.  Toronto.

Ontario Ministry of Culture (OMCL)