Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

Appendix B: Stage 1 Archaeological Assessment (2017)



ORIGINAL REPORT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT FOR A SECTION OF LAKESHORE ROAD WEST, FROM MISSISSAGA STREET TO DORVAL DRIVE LOCATED ON PART OF LOTS 17 TO 31 BROKEN FRONT TRAFALGAR, AND PART OF LOTS 17 TO 20, CONCESSION III SOUTH IN THE FORMER TOWNSHIP OF TRAFALGAR, HALTON COUNTY, NOW IN THE TOWN OF OAKVILLE, ONTARIO

Submitted to:

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AND

THE ONTARIO MINISTRY OF TOURISM, CULTURE AND SPORT

Submitted by:

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Distribution: Town of Oakville – 1 Copy & 1 Electronic Copy Ontario Ministry of Tourism, Culture and Sport – 1 Electronic Copy Amec Foster Wheeler Environment & Infrastructure –1 Copy



EXECUTIVE SUMMARY

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited ("Amec Foster Wheeler Environment & Infrastructure") was retained by the Town of Oakville (the "CLIENT") to conduct a Stage 1 background study and property inspection in support of anticipated road improvements for a section of Lakeshore Road West, from Mississaga Street to Dorval Drive, in Oakville Ontario. Historically, the study area is located on Part of Lots 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 27, 29, 30, and 31, Concession Broken Front Trafalgar and Part of Lots 17, 18, 19 and 20, Concession III South, in the Former Township of Trafalgar, Halton County, now in the Town of Oakville, Halton Region, Ontario. The total study area is approximately 14 ha, and consists of lands fronting onto residential, commercial, institutional and public properties.

This archaeological assessment was triggered by a Class Environmental Assessment (EA) for anticipated road improvements. The archaeological assessment was conducted prior to any project related land alterations. A development plan is currently unavailable.

The Stage 1 background study was conducted under Ontario Professional Licence to Conduct Archaeological Fieldwork (P141) held by Dr. Shaun Austin, Associate Archaeologist at Amec Foster Wheeler Environment & Infrastructure. The project information was acknowledged by the Ministry of Tourism, Culture and Sport on 19 January, 2017 with the approval of PIF number P141-0265-2017. The background research by Mr. Jason Seguin (P354) was supplemented by a property inspection carried out under the direction of Cara Howell (R180) with the assistance of Devon Brusey (R410). The property inspection took place on 24 January, 2017 and included a walk-through of each of the study subareas at 10-m intervals. The temperature that day was approximately 2 to 4 degrees Celsius. There were overcast skies and it was cool. These weather conditions did not impede the property inspection in any way.

The Stage 1 background study concluded that undisturbed portions of the study area have archaeological potential for three principal reasons: 1) the study corridor is in close proximity to Lake Ontario, and crosses four creeks, as illustrated in Figures 1-3 and Figures 4b and 5 (Appendix A); 2) a clear pattern of pre-contact Aboriginal and historic Euro-Canadian land use in the vicinity as demonstrated by the presence of 11 previously registered archaeological sites within a 1-km radius; and 3) Lakeshore Road is an historic transportation route (see Figures 4b and 5 in Appendix A) that also traverses a portion of the historic Bronte Village.

It has been concluded that areas where potential has been removed as a result of previous road and sidewalk construction, disturbed shoulders, driveways and boulevards comprise approximately 88% (12.5 ha) of the total study area, while areas of low potential due to



excessive slope constitute approximately 1% (0.13 ha). The potential for archaeological resources exists within 11% (1.1 ha) of the total study area (Appendix A: Figures 6a-6y).

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

- A Stage 2 archaeological assessment in accordance with Section 2.1 of the MTCS Standards and Guidelines for Consultant Archaeologist (2011) is required prior to any form of land alteration within the areas of archaeological potential that are noted for portions of Lakeshore Road West as shown in Appendix A, Figures 6a-6y. As the sections of the study area that retain archaeological potential cannot be ploughed due to their limited spatial extent and the presence of buried utilities, Stage 2 assessment should be carried out by means of hand shovel test pitting at 5-metre intervals.
- 2. If construction related activities extend past the current right-of-way fronting St. Jude's Cemetery (located at 258 Lakeshore Road West in Oakville, Figure 6y in Appendix A), a cemetery investigation may be required.
- 3. No further archaeological assessment is required for the remainder of the study area, as noted in Appendix A. Figures 6a-6y.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.



PROJECT PERSONNEL

Project Manager:Jason Seguin, M.A. (P354)Field Director:Cara Howell, B.A. (R180)Field Archaeologist:Devon Brusey, H.B.A. (R410)Report Preparation:Jason Seguin, M.A.Graphics:Cara Howell, B.A.Report Reviewer:Shaun Austin, Ph.D. (P141)



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1.0 PROJECT CONTEXT

1.1 Development Context

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All aspects of the Stage 1 background study were conducted in accordance with the MTCS's *Standards and Guidelines for Consultant Archaeologists* (2011).

This report presents the results of the Stage 1 background study and makes pertinent recommendations.



1.1.1 Scope of Work

A Stage 1 archaeological assessment is a systematic qualitative process executed in order to assess the archaeological potential of a property based on its historical use and its potential for early Euro-Canadian (early settler) and pre-contact Aboriginal occupation. The objectives of a Stage 1 background study are: 1) to provide information about the property's geography, history, previous archaeological fieldwork and current land condition; 2) to evaluate in detail the property's archaeological potential which will support recommendations for Stage 2 property assessment for all or parts of the property if warranted; and, 3) to recommend appropriate strategies for Stage 2 property assessment if warranted.

The scope of work consisted of the following tasks:

- Contact the MTCS to determine if recorded archaeological sites exist in the vicinity (1-km radius) of the property, through a search of the Ontario Archaeological Sites Database maintained by that Ministry;
- Contact the MTCS to determine if previous archaeological assessments have been conducted within a radius of 50 m around the study area;
- Review all relevant previous research;
- A desktop review of the study area's physical setting to determine its potential for both historic and pre-contact human occupation, including its topography, hydrology, soils, vegetation, and proximity to important resources and historic transportation routes;
- A visual assessment of the study area on order to gather first-hand and current evidence of the property's physical setting, and to aid in delineating areas where archaeological potential may have been impacted or removed by previous landuse practices;
- Mapping, photographing and other relevant graphics;
- Review the potential for historic occupation as documented in historical atlases and other archival sources; and
- Prepare a report of findings with recommendations regarding any further archaeological work that may be deemed necessary.

1.1.2 Physical Setting

The study area is situated within the Iroquois Plain physiographic region of southern Ontario, which is a lowland sand plain bordering Lake Ontario. This region is



characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of approximately 300 km (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements.

Glacial Lake Iroquois came into existence approximately 12,000 before present (BP) as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift and the blockage of subsequent lower outlets by glacial ice produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 BP, water levels started to drop during the next few centuries in response to sill elevations at the changing outlet. By approximately 11,500 BP, when the St. Lawrence River outlet became established, the initial phase of Lake Ontario began and this low water phase appears to have lasted until at least 10,500 BP. During this period the waters stood as much as 100 m below current levels. At this time isostatic uplift had started to raise the outlet around Kingston so that by 10,000 BP the water level had risen to approximately 80m below present. Uplift has continued to tilt Lake Ontario upward to the northeast, propagating a gradual and transgressive expansion throughout the basin (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1990 in ASI 2014:8).

The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building materials, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196). This narrow strip is the most densely inhabited area due to its proximity to Lake Ontario and its climatic influences, as well its favourable soil conditions.

It is crucial to consider the proximity of modern and relict water sources in any evaluation of archaeological potential because the availability of water is arguably the single most important determinant of human land use, past and present. The *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) lists proximity to water as one of the prime indicators of potential for the presence of archaeological sites. Distance from potable water has been one of the most commonly used variables for predictive modeling of site location. Water, both potable and non-potable, also facilitated the transportation of people and goods and served to focus animal and vegetable resources.

There are four creek crossings within the study area, including a major crossing over Bronte Creek. In addition, the shoreline of present day Lake Ontario is within 300 m of portions of the study area.

Current Conditions



Lakeshore Road West within the study area currently operates as a two lane roadway. East of East Street, the roadway is a semi-rural cross section with roadside ditches and inconsistent boulevard treatments (sidewalks, paths, trails). The section west of East Street is part of the urbanized Bronte Village Growth Areas and Main Street District. There are four creek crossings within the study area, including a major crossing over Bronte Creek (Section 4 RFP #Prop-37-2016). Photographic documentation of the current conditions of the study area can be found in Appendix B. The lands within the study area lie within the current public ROW and front onto residential, commercial, institutional and public properties (Appendix A: Figures 1, 2 and 3).

1.2 Historical Context

Historically, the study area was located on Part of Lots 17 to 31 Broken Front Trafalgar, and Part Lots 17 to 20, Concession III South, in the Former Township of Trafalgar, Halton County, now in the Town of Oakville, Halton Region, Ontario.

The Township of Trafalgar

The lands within the Township of Trafalgar were acquired by the British from the Mississaugas in 1795. In 1806, Samuel Wilmot surveyed the townships of Nelson, Trafalgar and Toronto, from land acquired from this purchase, using Dundas Street (Highway 5) as a baseline from which to survey two concessions north and four concessions south. Dundas Street had been surveyed earlier in 1793 as Military road (see Appendix A: Figure 4a). Early settlement in Trafalgar was much like that in other townships and was influenced by the presence of watercourses. The development of the network of concession roads and railroads throughout the course of the 19th century also influenced the settling of farmsteads and early industries.

As mentioned, Dundas Street, the baseline survey road in Trafalgar Township had been surveyed in 1793. It was surveyed as a military road connecting Lake Ontario, Lake Erie, Lake St. Clair and Lake Huron. It was a road used to aid Loyalist settlement and deter American expansionism in Upper Canada. Once the two concessions south of Dundas Street were opened, two new east-west concession line access roads, the Upper Middle Road and the Lower Middle Road, were surveyed. These early east-west roads were later complemented (1832) by the Lakeshore Road, which was constructed nearby and parallel to an aboriginal pathway skirting Lake Ontario. The concession roads of the 1806 survey and the line roads running perpendicular, blocked out the township in areas a mile and a quarter square (approximately 324 ha) with five 200-acre (approximately 81 ha) lots to a square. Running between every five lots was a line road (Mathews 1971: 45, in ASI 2014).



Trafalgar Township, was originally named "Grant Township" in honour of Alexander Grant, the administrator of Upper Canada. In 1806, it was renamed in honour of the victory by Horatio Viscount Nelson at Cabo Trafalgar in Spain the previous year. Nelson was initially settled by the children of the Loyalists, soldiers who served during the War of 1812, and by immigrants from England, Scotland and Ireland. By the 1840s, the township was noted for its well cultivated farms (Armstrong 1985:148; Rayburn 1997:348; Smith 1846:197 in ASI 2014).

The earliest families to settle within the township included: Sovereign; Proudfoot; Katting; Freeman; Post; Biggar; Mulholland; Kenney; Chalmer; Albertson,; Chisholms; Sproat; Brown; and Hagar. The 1877 historic atlas indicates that the township then contained 548 inhabitants, and had one grist mill and four saw mills that were established in 1817 (Walker & Miles 1877: 81).

The Town of Oakville

The Town of Oakville was historically situated on part Lots 12 - 16 Concession 3 South of Dundas Street and on part Lots 11 - 17 in the Broken Front Concession, Trafalgar Township. It was developed as a town site in 1827 by William Chisholm, merchant-miller. Originally named Sixteen Mile Creek, the name was changed to "Oakville" at the suggestion of Robert Baldwin Sullivan, on account of the large amount of white oak that grew in the area.

Two wharves extended into Lake Ontario at the mouth of Sixteen Mile Creek which formed a protective harbour, and Oakville was a port of entry. Registered plans of subdivision for this village date from 1837-1861. The town was also served by the Hamilton and Toronto Branch of the Great Western Railroad (now part of the Canadian National Railroad CNR). The original depot was located in the vicinity of the present Oakville GO Station. In 1877, the town contained a square reserved for a market as well as a town hall. There were five churches, stores, hotels, mills and factories, ship building yards, two telegraph offices and a newspaper that ran weekly. There was a population of approximately 1,684 (Crossby 1873:232; Mathews 1971; Rayburn 1997:252; Scott 1997:165; Winearls 1991: 757-758: Young 1957 in ASI 2014).

Bronte Village

The study area runs through the historic Bronte village on Part of Lots 28, 29, 30 and 31, Broken Front Concession. Bronte Village is situated at the mouth of Bronte Creek on Lake Ontario. It lies approximately 32 km from Toronto and 21 km from Hamilton. In 1876 it had an approximate population of 300. The first settlers were believed to be the Sovereign and



Belyea families (Walker & Miles 1877: 81). The harbor was owned by the Bronte Harbor Company of which R.K. Chisholm of Oakville was the principal stockholder. From this particular harbor port an annual 80,000 bushels of grain were shipped (Walker & Miles 1877: 81). The principal buyers included Messrs MacDougald, Chisholm and Hagaman, all of whom owned large warehouses (Walker & Miles 1877: 81). There were seven vessels owned by the residents of the village. A saw mill, owned and operated by Wm. McCraney, M.P., turned out large quantities of lumber that were shipped to all points on the lake. Not surprisingly, the fishing interest was considerable and was an important source of employment for many (Walker & Miles 1877: 81). The principal business of the village was carried on by the following: J.H. Thomas, who ran a General store and Telegraph Office; W.A. Johnson, Grocer; L. Lucas, Grocer; and S. Adams, Blacksmiths. The agricultural society was organized in 1853, with the first Exhibition held on June 15th of the same year (Walker & Miles 1877: 81).

1.2.1 Review of Historical Records

The following historical records and mapping were examined for evidence of early Euro-Canadian use of the study corridor: the 1806 *Plan of the Second Township in the Tract of Land Purchased from the Mississauga Indians* (Samuel Wilmot, June 28, 1806, Appendix A: Figure 4a), the 1858 *Tremaine Map of the County of Halton* (G.R. & G.M. Tremaine, Appendix A: Figure 4b), and the 1876 *Illustrated Historical Atlas of Halton* (Page, H.R, Appendix A: Figure 5).

Figure 4a, Appendix A shows the approximate placement of the study corridor on the 1806 Wilmot Plan. Table 1 lists the property owner(s) and historic features illustrated within or adjacent to the study corridor on that map.

Table 1: Pro	Table 1: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Area - 1806 Plan of the Second Township				
Lot	Concession	Owner(s)	Illustrated Feature(s)		
17	Broken Front Trafalgar	Illegible	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.		
17	III South	"Crown N 45 W 124"	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.		
18	Broken Front Trafalgar	"Wm Stanton"	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.		



Table 1: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Area - 1806 Plan of the Second Township				
Lot	Concession	Owner(s)	Illustrated Feature(s)	
18	III South	"John Wise (?)"	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.	
19	Broken Front Trafalgar	"Wm Stanton"	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.	
19	III South	"William W. GrannyLease" remainder is illegible.	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.	
20	Broken Front Trafalgar	"B" "Cranny", remainder is illegible	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.	
20	III South	"Joseph Young"	There are no features illustrated within the study corridor. The study corridor is illustrated to be part of an early concession road.	
21	Broken Front Trafalgar	"George" remainder is illegible	There are no features illustrated within the study corridor. There is one structure illustrated in close proximity to the shoreline of Lake Ontario.	
22	Broken Front Trafalgar	"George" remainder is illegible	There are no features illustrated within the study corridor.	
23	Broken Front Trafalgar	"Wm Hamton" questionable legibility	There are no features illustrated within the study corridor.	
24	Broken Front Trafalgar	"Capt James Gibson" remainder is illegible	There are no features illustrated within the study corridor.	
25	Broken Front Trafalgar	Illegible	There are no features illustrated within the study corridor.	
26	Broken Front Trafalgar	"Wm Classon" questionable legibility	There are no features illustrated within the study area.	
27	Broken Front Trafalgar	"John" remainder is illegible	There are no features illustrated within the study corridor.	
28	Broken Front Trafalgar	Illegible	There are no features illustrated within the study corridor.	
29	Broken Front Trafalgar	"Plains"	The study corridor is illustrated to run through the "plains".	
30	Broken Front Trafalgar	"Plains"	The study corridor is illustrated to run through the "plains". It is illustrated over a section of Bronte Creek.	
31	Broken Front Trafalgar	"Plains"	The study corridor is illustrated to run through the "plains". It is illustrated over a section of Bronte Creek.	



As noted in Table 1, and visually represented in Figure 4a, Appendix A, numerous recorded names are of questionable legibility on the only copy of this map available. In 1806, when Samuel Wilmot completed his Plan, the study corridor was not yet a roadway. The southwestern-most section of the corridor crosses Bronte Creek, and then runs eastward through what was then called the "Plains" (the present day Village of Bronte). As the study area continues east-northeast, the corridor would have traversed through portions of private land, although, as noted in Table 1, there are no historic features illustrated within or directly adjacent to the study corridor at this time. Creeks and tributaries that are illustrated on later historical mapping are also not shown (see Figures 4b and 5, Appendix A). As the study corridor passes through lots 17 to 20 Concession III and the Broken Front Concession, it is illustrated as an early concession road.

Figures 4b, Appendix A shows the approximate placement of the study area on the 1858 *Tremaine Map of the County of Halton*. Table 2 lists the property owner(s) and historic features illustrated on that map within or adjacent to the study area.

Table 2: Pro	Table 2: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Area - 1858 Tremaine Map				
Lot	Concession	Owner(s)	Illustrated Feature(s)		
17	Broken Front Trafalgar	"G. Yard Parson"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
17	III South	" M Thomas"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
18	Broken Front Trafalgar	"Josh Kenney"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
18	III South	East part, "Andrew Lebar Jun" West part, "Andrew Lebar"	The study area is corridor as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
19	Broken Front Trafalgar	Josh Kenney"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
19	III South	East part, ""Geo Washington Retreat", West part, "Widow Ribbet"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
20	Broken Front Trafalgar	"M.S. M ^c Craney"	The study corridor is illustrated as a road. A creek is illustrated within the study corridor.		
20	III South	"M.S. M ^c Craney"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		
21	Broken Front Trafalgar	"B & W.E. Hagaman"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.		



Table 2: Pro	Table 2: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Area - 1858 Tremaine Map					
Lot	Concession	Owner(s)	Illustrated Feature(s)			
22	Broken Front Trafalgar	"Thos Hinton"	The study corridor is illustrated as a road. The shore line of Lake Ontario is illustrated less than 300 m from portions of the study corridor. A creek is illustrated within the study corridor.			
23	Broken Front Trafalgar	"Robt Smith"	The study corridor is illustrated as a road. The shore line of Lake Ontario is illustrated less than 150 m from portions of the study corridor.			
24	Broken Front Trafalgar	"Stewart English"	The study corridor is illustrated as a road. There are no features illustrated in or adjacent to the study corridor at this time.			
25	Broken Front Trafalgar	"Wm Ribbel"	The study area is corridor as a road. There are no features illustrated in or adjacent to the study corridor at this time.			
26	Broken Front Trafalgar	"Rachel Bray"	There are no features illustrated in or adjacent to the study corridor at this time.			
27	Broken Front Trafalgar	"Mahlon Bray"	There are no features illustrated in or adjacent to the study corridor at this time.			
28	Broken Front Trafalgar	"Mahlon Bray"	There are no features illustrated in or adjacent to the study corridor at this time.			
29	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte			
30	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. It is illustrated over a section of Bronte Creek.			
31	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. It is illustrated over a section of Bronte Creek.			

By 1858, with the exception of the western-most portion of Lot 25 and Lots 26, 27, 28, Broken Front Concession, the study corridor was illustrated as an historic road. Along the southwest-most section of the study corridor, the lands once called the "Plain(s)" had become known as the Village of Bronte. The portion of the study corridor within the Village of Bronte crosses Bronte Creek. Other segments of the study corridor on Lots 19, 20 and 22, Broken Front Concession cross three creeks, and the section of the study corridor within Lots 21 to 31, Broken Front Concession lie within 300 metres of the shoreline of Lake Ontario. There are no other features of archaeological potential illustrated within or adjacent to the study corridor at this time.

Figures 5a, Appendix A shows the approximate placement of the study area on the 1877 *Illustrated Atlas of the County of Halton.* Table 2 lists the property owner(s) and historic features illustrated within or adjacent to the study subareas on that map.



Table 3: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor - 1877 Illustrated Atlas of Halton County				
Lot	Concession	Owner(s)	Illustrated Feature(s)	
17	Broken Front Trafalgar	"Oakville"	The study corridor is illustrated as a road. No other features are illustrated.	
17	III South	"Mrs. Thomas"	The study corridor is illustrated as a road. There is one house and an orchard illustrated in close proximity of the study corridor.	
18	Broken Front Trafalgar	"Capt. M. Felin"	The study corridor is illustrated as a road. There is one house and a large orchard illustrated. A small section of the parcel in the upper northeast is a cemetery.	
18	III South	"Andrew Le Barre"	The study corridor is illustrated as a road. There are four houses and a large orchard situated directly to the west side of the study corridor.	
19	Broken Front Trafalgar	"J.E. Kenney"	The study corridor is illustrated as a road. A creek is illustrated running through the centre of the parcel and into Lake Ontario. On the far east of the lot there is a house and large orchard illustrated along with the letters "O B". Directly to the east is a section containing an orchard and a house along with the initials "W W K" illustrated.	
19	III South	East part "Hugh Pullen", West part "J.F. Howell"	The study corridor is illustrated to be a road. The east part of the lot one house and an orchard are illustrated as well as a creek. The west part has one house and orchard illustrated in close proximity to the study corridor.	
20	Broken Front Trafalgar	East part "Geo K M°Craney", West part "Mrs. R. M°Craney"	The study corridor is illustrated to be a road. The east part of the lot and in close proximity to the study corridor a house and orchard is illustrated. The west part a section of a creek that flows into Lake Ontario is present. There is one house and an orchard illustrated in close proximity to the study corridor.	
20	III South	East part "M.S. M°Craney", West part "J.W. M°Craney"	The study corridor is illustrated to be a road. There is one house and orchard illustrated in close proximity to the study corridor on the east part. The west part has one house, an orchard and a school illustrated in the upper west section of the lot. A creek is illustrated within the study corridor.	
21	Broken Front Trafalgar	"Benj. Hagaman"	The study corridor is illustrated to be a road. There is one house and orchard illustrated in proximity of the study corridor. A creek is illustrated within the study corridor.	



Table 3: Pro	Table 3: Property Owner(s) and Historic Feature(s) Illustrated Within or Adjacent to the Study Corridor - 1877 Illustrated Atlas of Halton County				
Lot	Concession	Owner(s)	Illustrated Feature(s)		
22	Broken Front Trafalgar	"Jno Mitchell"	The study corridor is illustrated to be a road. A creek is illustrated within the study corridor. There is one house and orchard illustrated close to Lake Ontario. The south boundary of the lot on the west side of the study corridor are the letters "A.S." and on the east side at the same location the letters "J.S". One house and an orchard are illustrated.		
23	Broken Front Trafalgar	Not illustrated	The study corridor is illustrated as a road. There is one structure illustrated on the west side of the study corridor. The study corridor is illustrated to be approximately 150 m from the shoreline of Lake Ontario.		
24	Broken Front Trafalgar	"Stewart English"	The study corridor is illustrated as a road. There is one house and a large orchard illustrated to the west of the study corridor.		
25	Broken Front Trafalgar	West ½ "Jos Bunston", East ½ "Benj Hagaman"	The study corridor is illustrated as a road. The West ½, middle west portion of the lot a farmhouse and small orchard is illustrated approximately 160 m from the study corridor. The East ½ fronting Lake Ontario has a large orchard and a house illustrated. On the East ½, west side of the study corridor a small orchard and house are illustrated.		
26	Broken Front Trafalgar	"Jos Orr"	The study corridor is illustrated as a road. There is a small orchard illustrated approximately 150 m northeast, a house and large orchard illustrated approximately 150 m southeast of the study corridor.		
27	Broken Front Trafalgar	"Malon Bray"	The study corridor is illustrated as a road. Outside of the study corridor but in the upper northeast portion of the lot there is a house and an orchard illustrated.		
28	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. No other features are illustrated.		
29	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. No other features are illustrated.		
30	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. No other features are illustrated.		
31	Broken Front Trafalgar	"Bronte"	The study corridor is illustrated as a road which runs through the Village of Bronte. It is illustrated over a section of Bronte Creek.		

A search of the Patrons' Directory for the Township of Trafalgar was also undertaken for the names presented in Table 3. "Capt. M. Felin" (Lot 18, Broken Front Concession)



emigrated from Ireland in 1853. His occupation is recorded as a fruit grower. "Stewart English," (Lot 24, Broken Front Concession) was born in Ireland, but unfortunately the date of his settlement in Canada is not legible. His occupation is recorded as a farmer and fruit grower. "Joseph Bunston" (west ½ of Lot 25, Broken Front Concession) had emigrated from England in 1872. His occupation is recorded as a farmer and fruit grower. "John Mitchell" (Lot 22, Broken Front Concession) was born in Canada and settled in 1872. His occupation is recorded as a farmer and fruit grower. "John Mitchell" (Lot 22, Broken Front Concession) was born in Canada and settled in 1872. His occupation is recorded as a farmer and settled in 1872. His occupation is recorded as a farmer and settled in 1872. His occupation is recorded as a farmer and settled in 1872. His occupation is recorded as a farmer and settled in 1872.

There is no information recorded for the following: "Mrs. Thomas" (Lot 17, Concession III South); "Jos Orr" (Lot 26, Broken Front); "Andrew Le Barre" (Lot 18, Concession III South); "J.E. Kenney" (Lot 19, Broken Front Concession); "J.F. Howell" and "Hugh Pullen" (Lot 19, Concession III South); "Mrs. R. M°Craney" or "Geo. K. M°Craney" (Lot 20, Broken Front Concession); "J.W. M°Craney" and "M.S. M°Craney" (Lot 20, Concession III South); and "Benj Hagaman" (Lot 25, Broken Front Concession).

In addition, a review of the Biographical Sketches contained in the 1877 Illustrated Atlas of the County of Halton was also undertaken (p.84). This review indicated that McCraney's who are illustrated on Lot 20, Concession III South and Lot 20, Broken Front Concession, are the descents of Hiram M^cCraney, Esq., who was the father of William M^cCraney, M.P., who was born in Canada, on the Grand River, in Brant County in 1801. William, along with his family, settled in the Halton County in 1805, on what was then called the "New Purchase" (see Figure 4a, Appendix A) in the Township of Trafalgar, near Oakville, making him one of the earliest settlers in Halton County (ibid 1877: 84). Louisa McCraney (nee English), was the wife of Hiram M^cCraney and the mother of William M^cCraney, Esg. She was born near Belfast, Ireland in 1800. She is of both Scottish and English descent, and along with her parents, emigrated to Canada around 1814. They settled near Oakville, in Trafalgar. The family consisted of eight children, three boys and five girls. The elder Mr. M^cCraney was engaged in both farming and lumbering. He built two saw mills and several other buildings near Oakville, and cleared approximately 300 acres of land in the vicinity. Both he and his wife were members of the Methodist Church for approximately 50 years and he was noted as a zealous advocate for temperance and religion. William M^oCraney, the eldest son of Hiram and Louisa M^cCraney was born on the 15th of December, 1831 in Trafalgar Township. Aside from three years that he spent in California, his occupation consisted of farming and lumbering. William is said to have cleared over 500 acres of land, and to have built three saw mills in Halton and one in North Simcoe. He is also credited with building a large number of farm houses and other building near Oakville, as well as both erecting and refitting at least 18 houses in the town, of which he owned 11. He was



married on 24th May, 1857, to Elizabeth Coote. They had 10 children, eight of which survived (two boys and six girls). In 1869, William was elected to the Common Council and Grammar School Trusteeship, and continued to hold those positions until 1872, when he was elected as Mayor of Oakville by acclamation. He remained in that position until 1874. Thereafter he was elected Reeve for the next two years and only left that position in 1876 because he declined to run again. William was noted as having a "deep interest in all the affairs pertaining to the improvement of the County of Halton and the welfare of her people; her roads and railways have always had his sympathy" (ibid 1877: 84). He was also the President of the Trafalgar Agricultural Society and served as Director for a number of different Trafalgar and County Societies.

1.3 Archaeological Context

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referred to by a four letter designation and sites located within the block are numbered sequentially as they are found. The study area is within the AiGw Borden Blocks. According to the OASD there are 11 archaeological sites registered within a 1-km radius (MTCS correspondence 20 January, 2017).

Table 4	Table 4: Registered Archaeological Sites within a One-Kilometre Radius				
Borden Number	Site Name	Cultural Affiliation	Site Type	Researcher (Year Researched)	
AiGw-108	Fred Fell	Late Archaic	Unknown	- (1975)	
AiGw-109	Flummerfelt	Archaic	Unknown	- (1975)	
AiGw-110	Subdivision	-	-	- (1975)	
AiGw-115	Cudmore	Archaic	Unknown	- (1973)	
AiGw-258	Lisonally Farm	Post-Contact	Homestead	Ronald Williamson (1994)	
AiGw-338	Rebecca	Pre-Contact	Scatter	Ronald Williamson (1999)	



Table 4	Table 4: Registered Archaeological Sites within a One-Kilometre Radius				
Borden Number	Site Name	Cultural Affiliation	Site Type	Researcher (Year Researched)	
AiGw-452	Glendella Hotel	Pre-Contact Aboriginal / Post- Contact Euro- Canadian	Midden / Foundation	Andrew Clish (2006 & 2007)	
AiGw-459	P1	Pre-Contact / Late Archaic	Campsite	Shaun Austin (2007)	
AiGw-460	Bronte Village	Pre-Contact Aboriginal / Post- Contact Euro- Canadian	Scatter / Homestead	Shaun Austin (2007)	
AiGw-536	-	Euro-Canadian	Farmstead / Midden	Garth Grimes (2009)	
AiGw-552	P1	Pre-Contact Archaic	Scatter	Bruce Welsh (1974 & 1990)	

("-"denotes Information not recorded on electronic site record form)

As noted in Table 4, there is little information available for Site AiGw-110. Two of the listings in Table 4 refer to multicomponent sites (AiGw-452 and AiGw-460); one is a post-contact homestead (AiGw-258); one is a Euro-Canadian farmstead (AiGw-536); and six are Archaic period findspots or lithic scatter sites (AiGw-338, AiGw-552, AiGw-108, AiGw-109, AiGw-115 and AiGw-459).

OASD results also indicated that further work was recommended for Sites AiGw-536, AiGw-338, and AiGw-258. The remaining eight registered sites (AiGw-108, AiGw-109, AiGw-110, AiGw-115, AiGw-452, AiGw-459, AiGw-460, and AiGw-552) have no recorded information regarding the need for further assessments

The closest registered site to the study area is the Lisonally Farm site (AiGw-258), discovered by Ronald Williamson in 1994 and recorded as a post-contact Euro-Canadian homestead. The 2017 search of the OASD stated that in 1994, historic material was recovered from eight test units that extended over an area of 700 square metres. A 7 x 7 metre depression was observed at the East of the study area. A total of 29 historic artifacts were found over an unspecified area. Site AiGw-258 was recorded to contain midnineteenth century artifacts that can be related through historical documentation to the John Hinton family, who operated an early local business, a saw mill circa 1833 – 1855. Their home was noted to be situated on Lakeshore Road (an early transportation route). Further investigations in 1994 were noted to be aimed at locating subsurface features. Since 1994 the site location has been developed into a residential area and collections



relating to Site AjGw-258 have been transferred to the Oakville Museum at the Erchless Estate from ASI.

Table 5 provides a simplified regional chronology pertinent to the study area.

Table 5: Simplifie	Table 5: Simplified Cultural Chronology of Southern and Eastern Ontario			
Period	Archaeological Complexes/Cultures			
Early Paleo-Indian (9000–8500 B.C.)	Fluted points. Small nomadic hunter-gatherer bands. EPI rarely found in Eastern Ontario			
Late Paleo-Indian (8500–7500 B.C.)	Small nomadic hunter-gatherer bands.			
Early Archaic (7500– 6000/4500 B.C.)	Small nomadic hunter-gatherer bands.			
Middle Archaic (6000/4500–2500 B.C.)	Transition to territorial settlements. Seasonal round of subsistence introduced.			
	Laurentian Complex (6000 B.C2500 B.C.) (Eastern Ontario)			
Late Archaic (2500– 1000 B.C.)	More numerous territorial hunter- gatherer bands, increasing use of exotic materials and artistic items for grave offerings, regional trade networks.			
	Terminal Archaic (1100–1000 B.C.) Glacial Kame Complex.			
Early Woodland (1000–	Pottery introduced.			
400 B.C.)	Meadowood Complex (1000–400 B.C.).			
	Middlesex Complex (650–400 B.C.). Introduction of true cemeteries.			
Middle Woodland (400	Point Peninsula Complex (Southcentral and Eastern Ontario)			
B.C.–A.D. 500/900)	Saugeen Complex (southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River)			
	Couture Complex (Lake St. Clair and the western end of Lake Erie). Burial ceremonialism.			
Transitional Woodland	Agriculture introduced.			
(A.D. 500–900)	Princess Point Complex (Eastern end of Lake Erie and the western end of Lake Ontario).			
	Sandbanks Complex (Kingston area).			



Table 5: Simplified Cultural Chronology of Southern and Eastern Ontario		
Period	Archaeological Complexes/Cultures	
Late Woodland (A.D. 900–1650)	 Tribal differentiation. Transition to settled village life. Ontario Iroquoian and St. Lawrence Iroquoian Traditions (Southcentral and Eastern Ontario, respectively). Algonkian Western Basin Tradition (Lake St. Clair and the western end of Lake Erie). 	
Early Post-Contact (A.D. 1650–1763)	Iroquoian, Algonkian migrations and resettlement. French exploration and colonization	
Late Post-Contact (A.D. 1763–1867)	Iroquoian, Algonkian migrations and resettlement. British and other Euro-Canadian immigration increases.	

Additionally, the Master Plan of Archaeological Resources of the Regional Municipality of Halton (2008 Update, dated April 3, 2009 ASI) was reviewed. Figure 2 of the Archaeological Master Plan entitled Historic Features indicated that Lakeshore Road is an historic road. Along the section that is included in the current study area there are three historic structures, 26 historic homesteads and two historic settlements.

A search for previous archaeological reports within 50 m of the study was also placed through Past Portal. The following three reports came back from the search:

- The Stage 1-2 Archaeological Assessment of 3059 Lakeshore Road West, Part of Lot 48, Plan M-10, Town of Oakville, Halton Region (P361-001-2012 [Brown]).
- Stage 1 Archaeological Assessment (Background Study) Prosed Navy Street and Water Street WWPS Municipal Class Environmental Assessment Study, former Township of Trafalgar, Halton County, Town of Oakville, Regional Municipality of Halton, Ontario (P392-0048-2014 [Ritchie] ASI file 13EA-169).
- Archaeological Assessment (Stage 1, 2 and 3) 394 Lakeshore Road West, Part of Lots 18 and 19, Concession 4 (Trafalgar) South of Dundas Street, in the Town of Oakville, in the Regional Municipality of Halton (P.I.F. No's P017-162, 163-209) [Detritus Consulting]).

Copies of each of above noted reports were obtained by Amec Foster Wheeler and reviewed in the preparation of this report.



1.3.1 Summary of Archaeological Potential

In summary, undisturbed portions of the study area have archaeological potential for three principal reasons: 1) the study corridor is in close proximity to Lake Ontario, and crosses four creeks, as illustrated in Figures 1-3 and Figures 4b and 5 (Appendix A); 2) a clear pattern of pre-contact Aboriginal and historic Euro-Canadian land use in the vicinity as demonstrated by the presence of 11 previously registered archaeological sites within a 1-km radius; and 3) Lakeshore Road is an historic transportation route (see Figures 4b and 5 in Appendix A) that also traverses a portion of the historic Bronte Village.

2.0 STAGE 1 PROPERTY INSPECTION

2.1 Methodology

Amec Foster Wheeler conducted a visual inspection of the study area under the field direction of Cara Howell (R180) with the assistance of Devon Brusey (R410) on 24 January, 2017 in order to: 1) identify the presence or absence of features of archaeological potential; 2) confirm that previously identified features of archaeological potential are present where they were previously identified; and 3) determine if modern development and/or landscaping alterations have removed archeological potential. The temperature that day was approximately 2 to 4 degrees Celsius. There were overcast skies and it was cool. These weather conditions did not impede the property inspection in any way.

The Stage 1 property inspection was conducted within the current right-of-way and included a walk-through of the entire study area (14 ha) at 10-m intervals. The property inspection was thoroughly photo-documented and field observations were recorded on aerial maps and field forms.

Areas identified as disturbed have had the integrity of the topsoil compromised by earth moving activities to the point where archaeological potential has been removed. Areas of excessive slope (>20°) were deemed to have low archaeological potential. Superficially landscaped sections of the study area where present were assumed to have retained archaeological potential. All land conditions were recorded as shown in Appendix A: Figure 6a-6y and Appendix B: Photographs 1 - 79).



3.0 RECORD OF FINDS

The following table provides the inventory of documentary records accumulated as part of this assessment.

Table 6: Inventory of Documentary Record			
Study Area	Map and Photographs	Field Notes	
Lakeshore Road West, from Mississaga Street to Dorval Drive, Part Lots 17 to 31 Broken Front Trafalgar, and Part Lots 17 to 20 Concession III South, in the Former Township of Trafalgar, Halton County, now in the Town of Oakville, Ontatrio.	12 Field Maps, 79 Stage 1 Photographs	Stage 1 Forms, Photo Logs and Field Notes	

Documentation related to the archaeological assessment of this project will be curated by Amec Foster Wheeler until such time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the MTCS and any other legitimate interest groups.



4.0 STAGE 1 ANALYSIS AND CONCLUSIONS

Undisturbed portions of the study area have archaeological potential for three principal reasons: 1) the study corridor is in close proximity to Lake Ontario, and crosses four creeks, as illustrated in Figures 1-3 and Figures 4b and 5 (Appendix A); 2) a clear pattern of pre-contact Aboriginal and historic Euro-Canadian land use in the vicinity as demonstrated by the presence of 11 previously registered archaeological sites within a 1-km radius; and 3) Lakeshore Road is an historic transportation route (see Figures 4b and 5 in Appendix A) that also traverses a portion of the historic Bronte Village.

It has been concluded that areas where potential has been removed as a result of paved roads, shoulders and sidewalks, disturbed gravel shoulders, paved driveways and boulevards comprise approximately 88% of the study area, or 12.5 ha. An additional 1% of the study area, or 0.13 ha, contains excessive slope. The remainder of the study area (11% or 1.1 ha) exhibits archaeological potential, mainly small sections of manicured lawns fronting residential and private properties within the existing right-of-way (Appendix A: Figures 6a-6y).



5.0 **RECOMMENDATIONS**

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

- A Stage 2 archaeological assessment in accordance with Section 2.1 of the MTCS Standards and Guidelines for Consultant Archaeologist (2011) is required prior to any form of land alteration within the areas of archaeological potential that are noted for portions of Lakeshore Road West as shown in Appendix A, Figures 6a-6y. As the sections of the study area that retain archaeological potential cannot be ploughed due to their limited spatial extent and the presence of buried utilities, Stage 2 assessment should be carried out by means of hand shovel test pitting at 5-metre intervals.
- If construction related activities extend past the current right-of-way fronting St. Jude's Cemetery (located at 258 Lakeshore Road West in Oakville, Figure 6y in Appendix A), a cemetery investigation may be required.
- 3. No further archaeological assessment is required for the remainder of the study area, as noted in Appendix A. Figures 6a-6y.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.



6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

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

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

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

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

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



7.0 ASSESSOR QUALIFICATIONS

This report was prepared and reviewed by the undersigned, employees of Amec Foster Wheeler Environment & Infrastructure, a division of Amec Foster Wheeler Americas Limited. Amec Foster Wheeler Environment & Infrastructure is one of North America's leading engineering firms, with more than 50 years of experience in the earth and environmental consulting industry. The qualifications of the assessors involved in the preparation of this report are provided in Appendix C.



8.0 CLOSURE

This report was prepared for the exclusive use of the Town of Oakville and is intended to provide a Stage 1 background study and property inspection for a section of Lakeshore Road West, from Mississaga Street to Dorval Drive, in the Town of Oakville, Ontario. Historically, the study area was located on Part of Lots 17 to 31 Broken Front Trafalgar and Part of Lots 17 to 20 Concession III South, in the Former Township of Trafalgar, Halton County, now in the Town of Oakville, Halton Region, Ontario.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. Should additional parties require reliance on this report, written authorization from Amec Foster Wheeler Environment & Infrastructure will be required. With respect to third parties, Amec Foster Wheeler has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The report is based on data and information collected during the Stage 1 background study and property inspection by Amec Foster Wheeler. Except as otherwise maybe specified, Amec Foster Wheeler disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to Amec Foster Wheeler after the time during which Amec Foster Wheeler conducted the background study.

In evaluating the study area, Amec Foster Wheeler has relied in good faith on information provided by other individuals noted in this report. Amec Foster Wheeler has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the Client. Amec Foster Wheeler accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

Amec Foster Wheeler makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel. This report is also subject to the further Standard Limitations contained in Appendix D.



We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited

Prepared by:

Reviewed by:

hann Anstri

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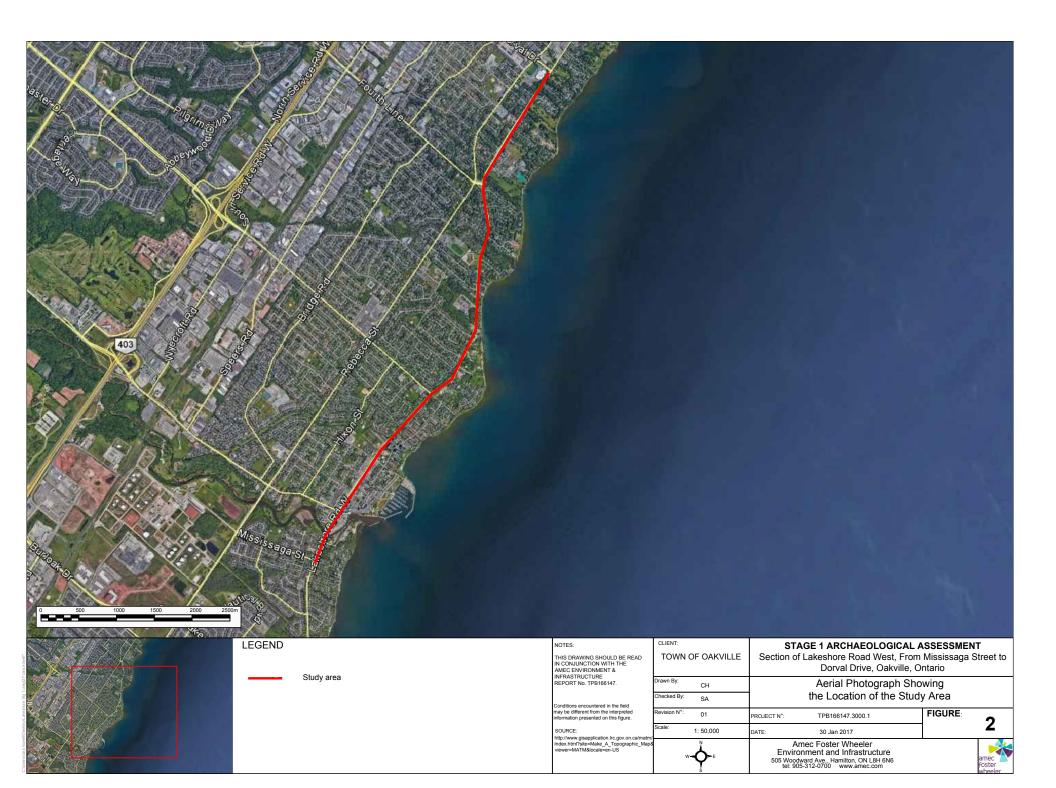


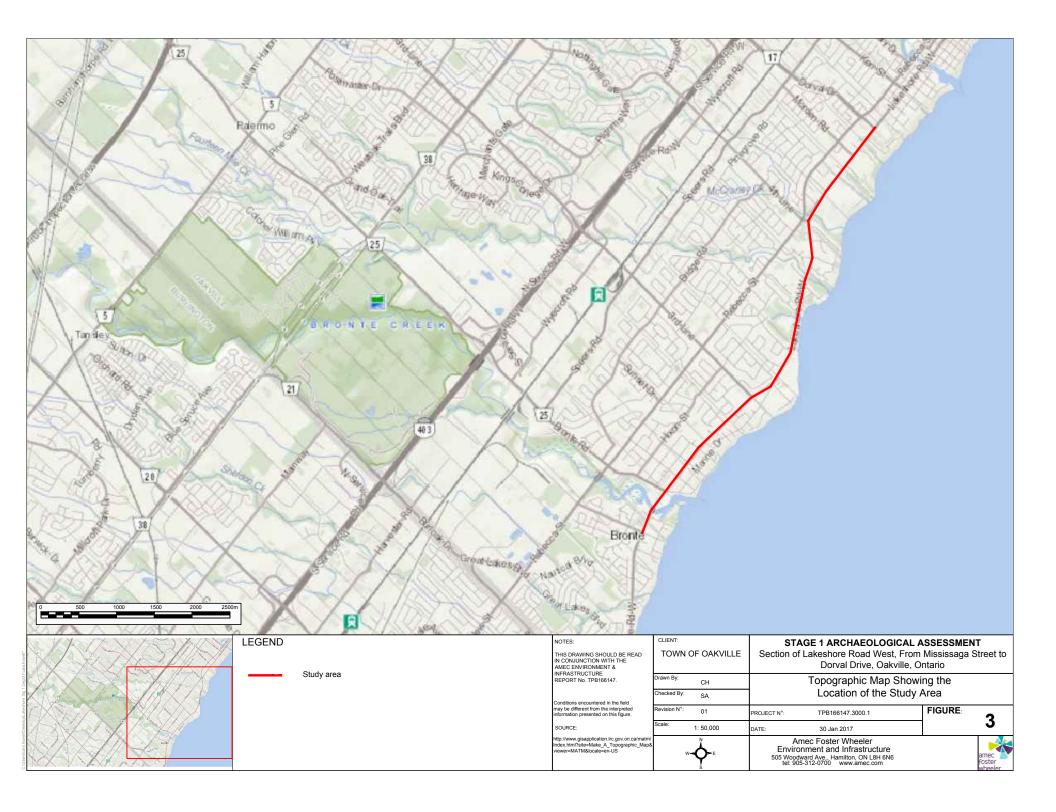
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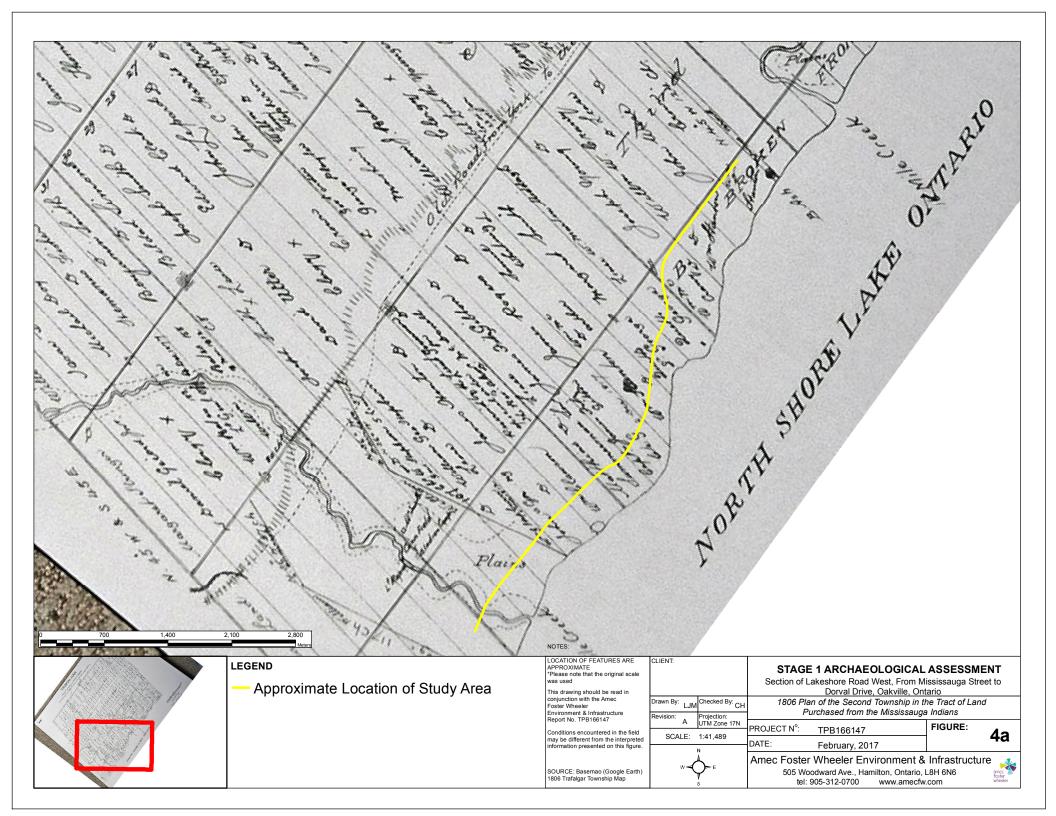


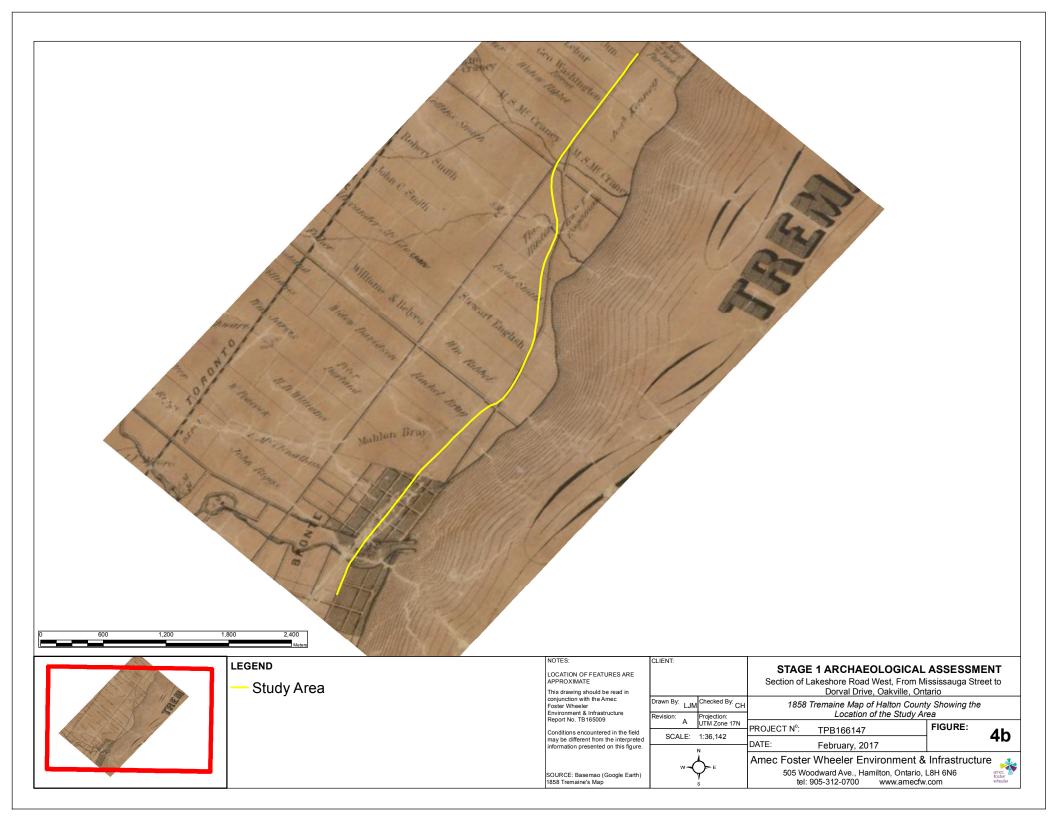
APPENDIX A FIGURES

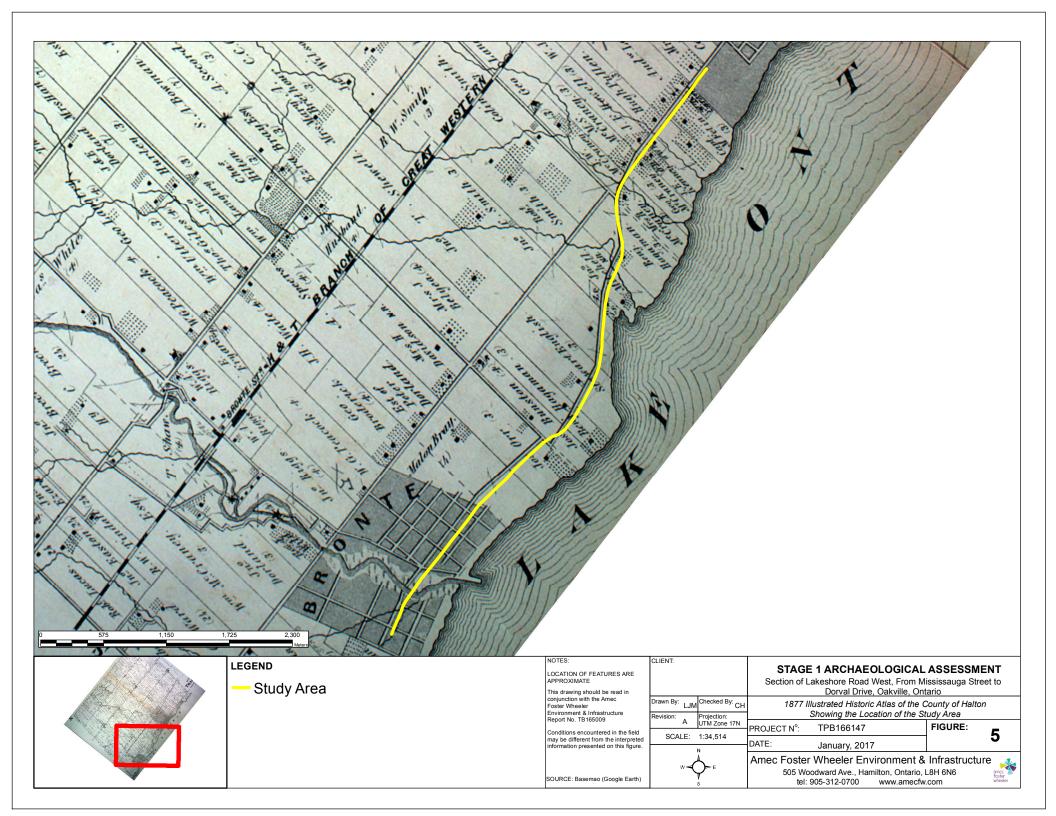


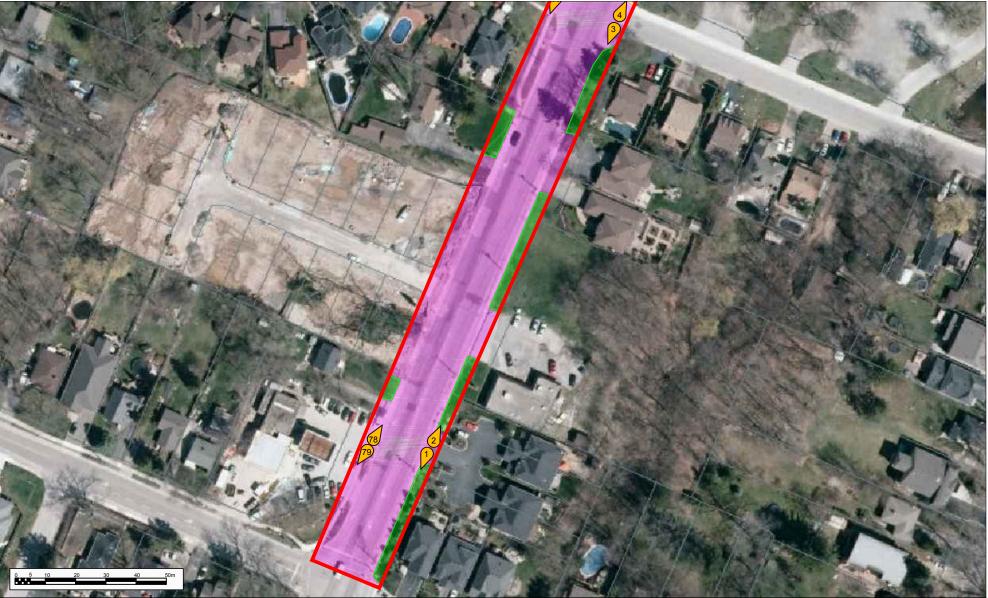












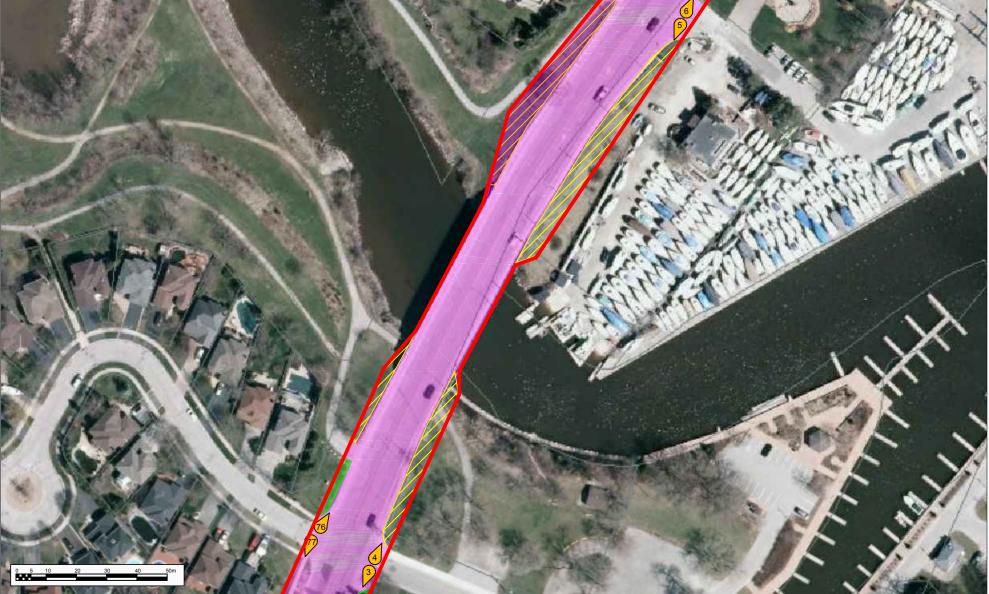


Study area

Area of archaeological potential, intensive testing required

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

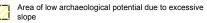
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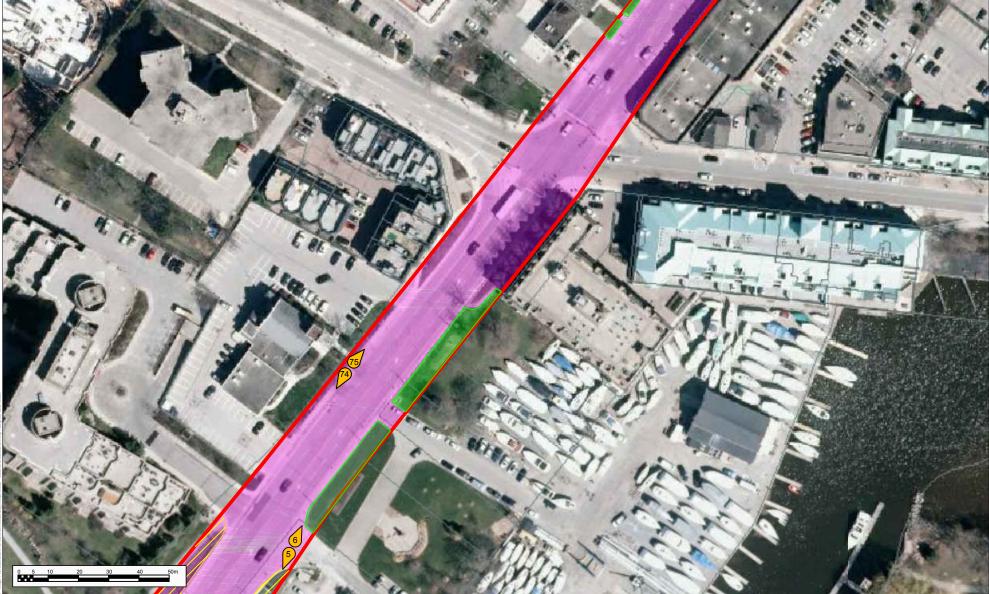
Study area

Area of archaeological potential, intensive testing required

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards



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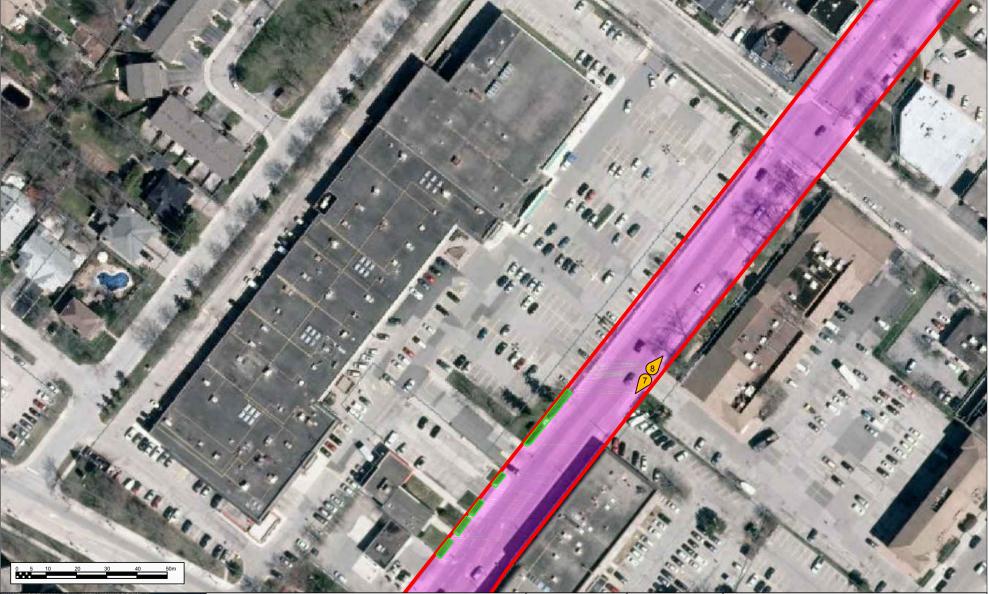


Study area
 Area of archaeological potential, intensive testing
 required

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

Area of low archaeological potential due to excessive slope

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Study area

Area of archaeological potential, intensive testing required

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

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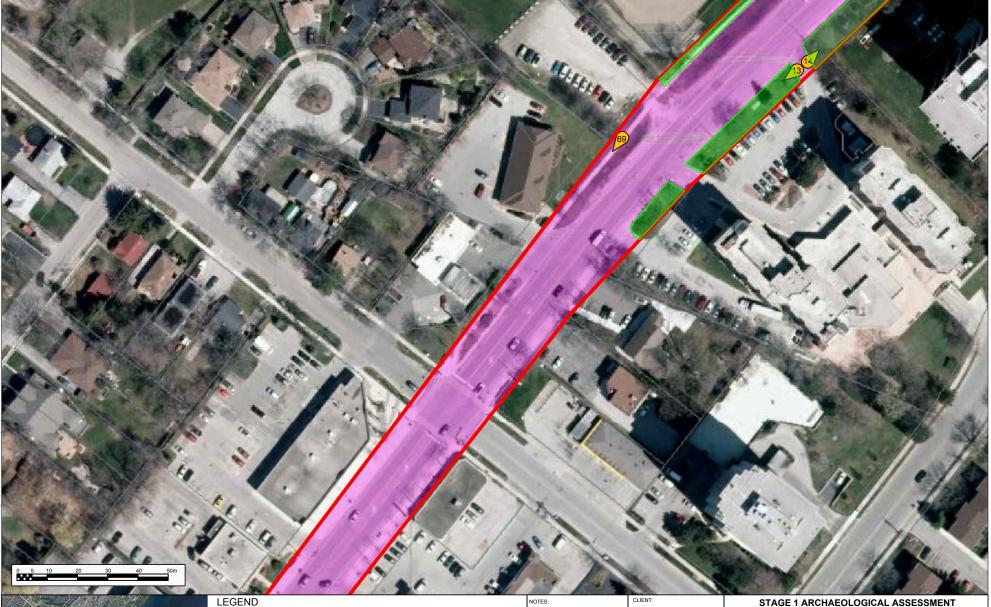


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Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

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Study area Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards Area of archaeological potential, intensive testing required

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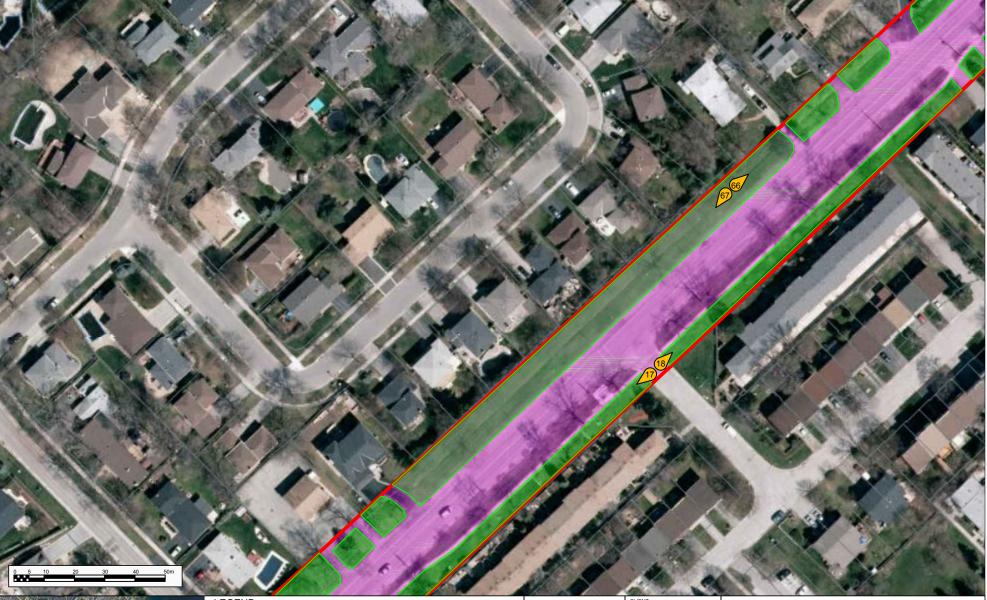




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Study area
 Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards
 Area of archaeological potential, intensive testing required

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Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

Area of archaeological potential, intensive testing required

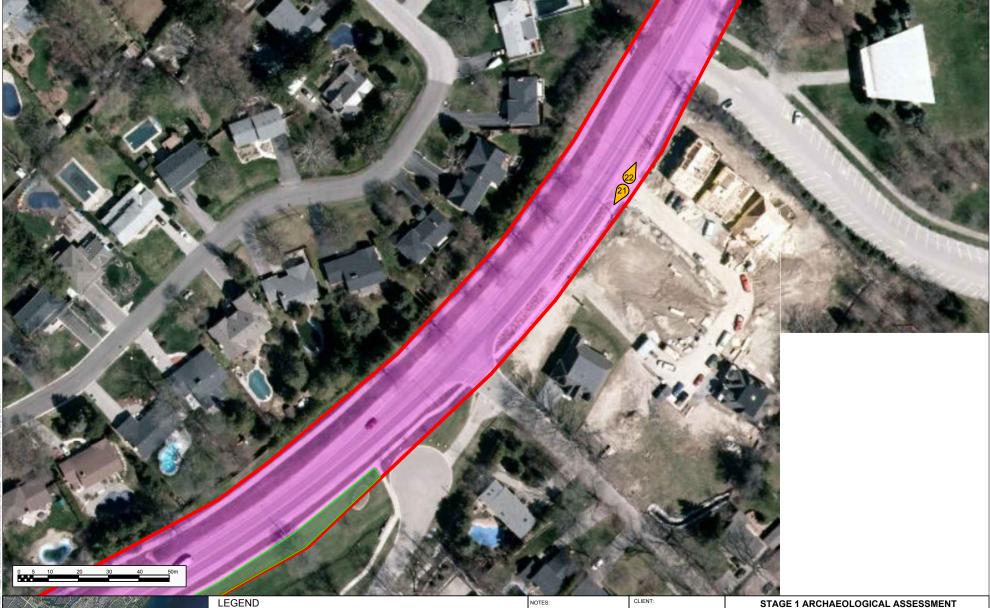
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 Study area
 Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards
 Area of archaeological potential, intensive testing required

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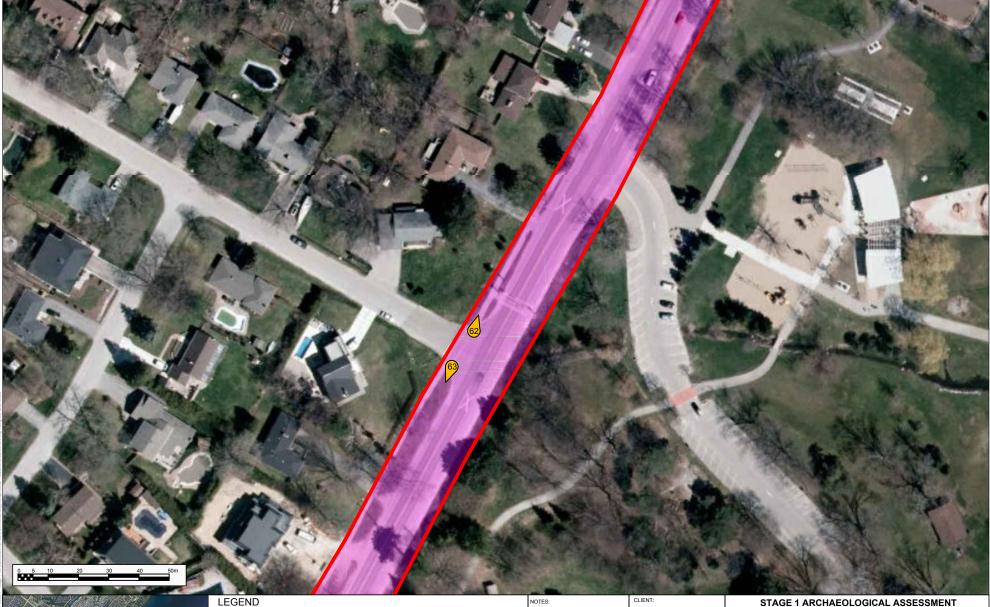




Study area

Area of low archaeological low potential due to road, gravel shoulder, sidewalks, driveways and boulevards Area of archaeological potential, intensive testing required

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EGEND Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

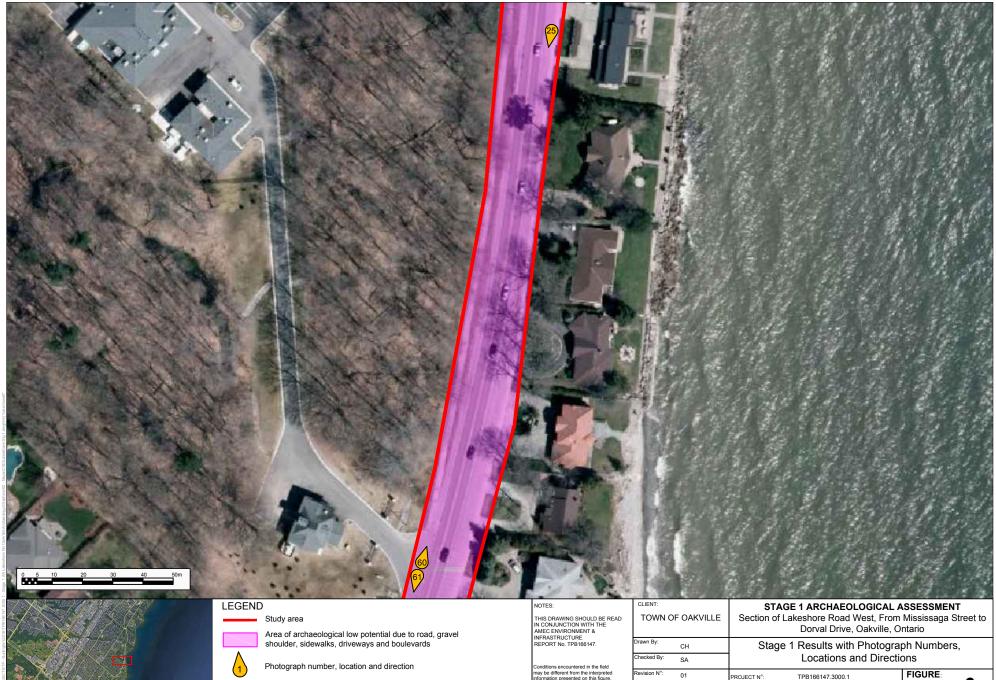
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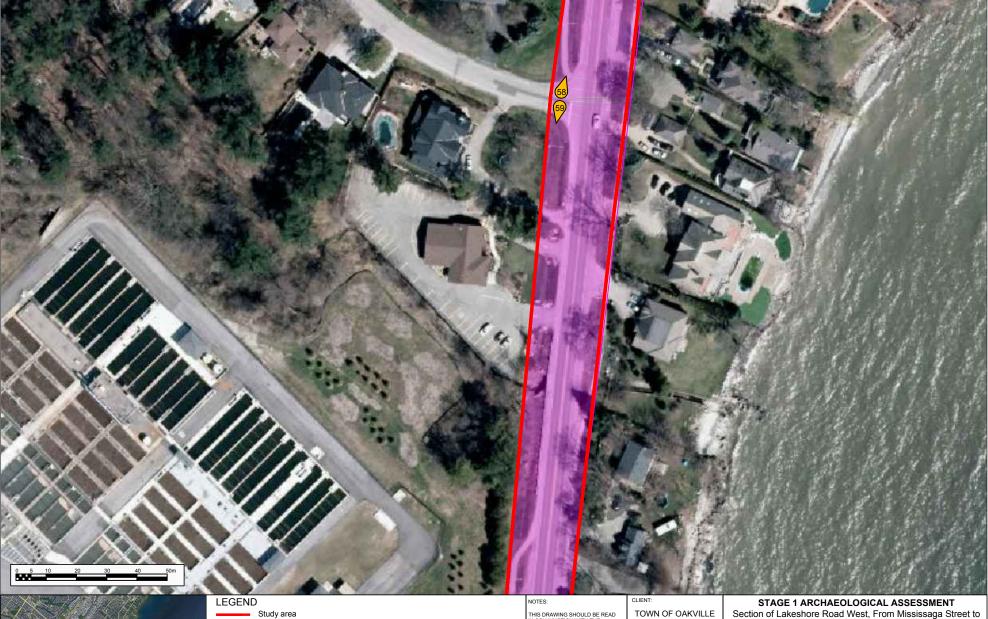
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Area of archaeological potential, intensive testing required

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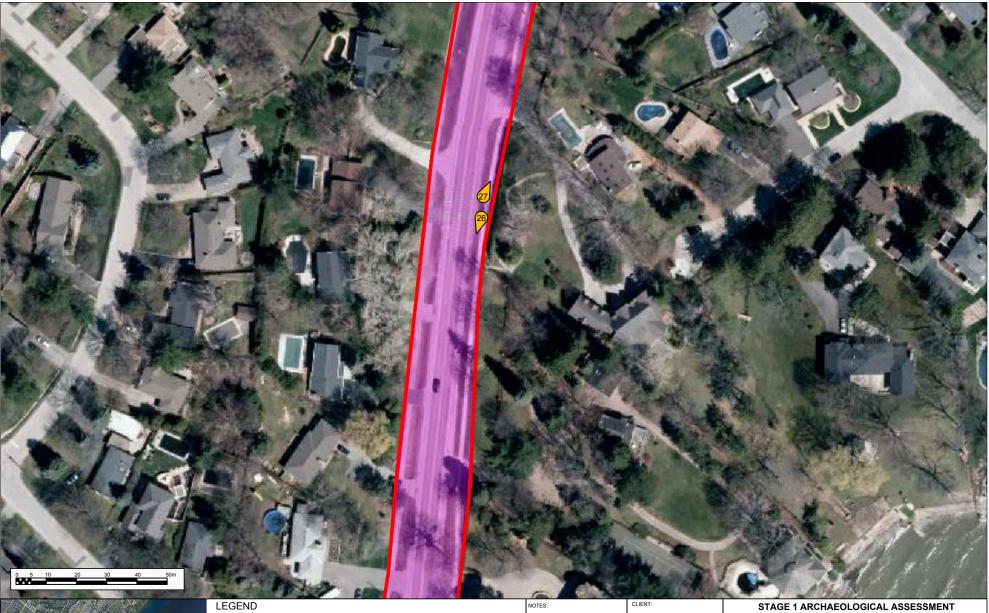
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Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

Photograph number, location and direction

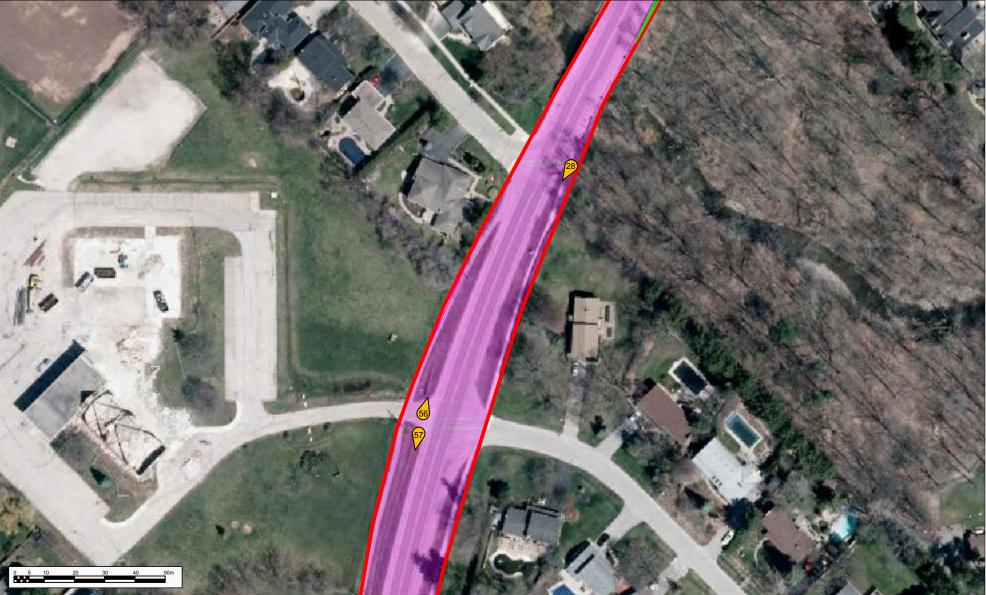
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Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

NOTES: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC ENVIRONMENT & INFRASTRUCTURE	CLIENT: TOWN OF OAKVILLE	STAGE 1 ARCHAEOLOGICAL ASSESSMENT Section of Lakeshore Road West, From Mississaga Street Dorval Drive, Oakville, Ontario		
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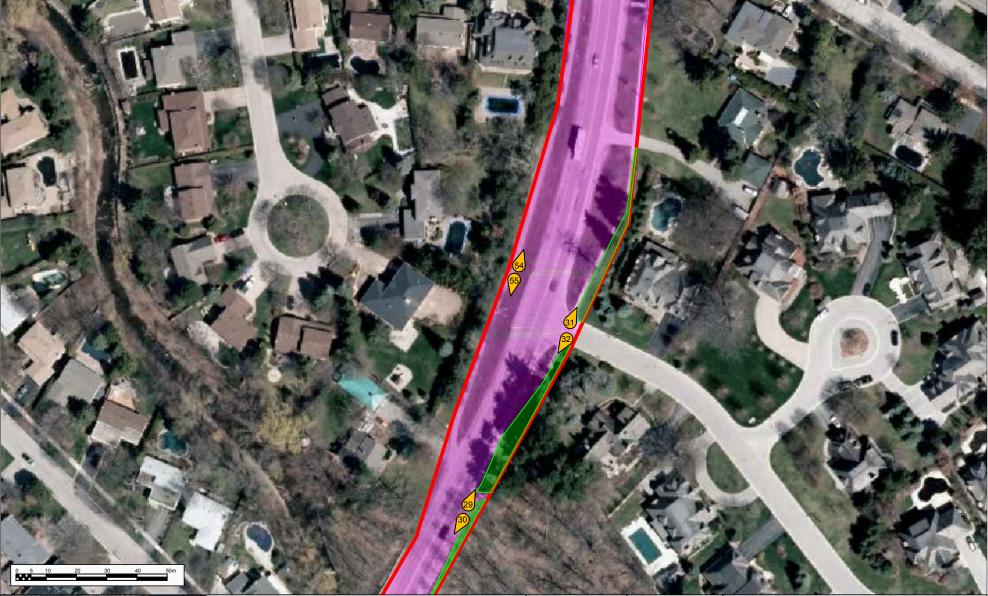




Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

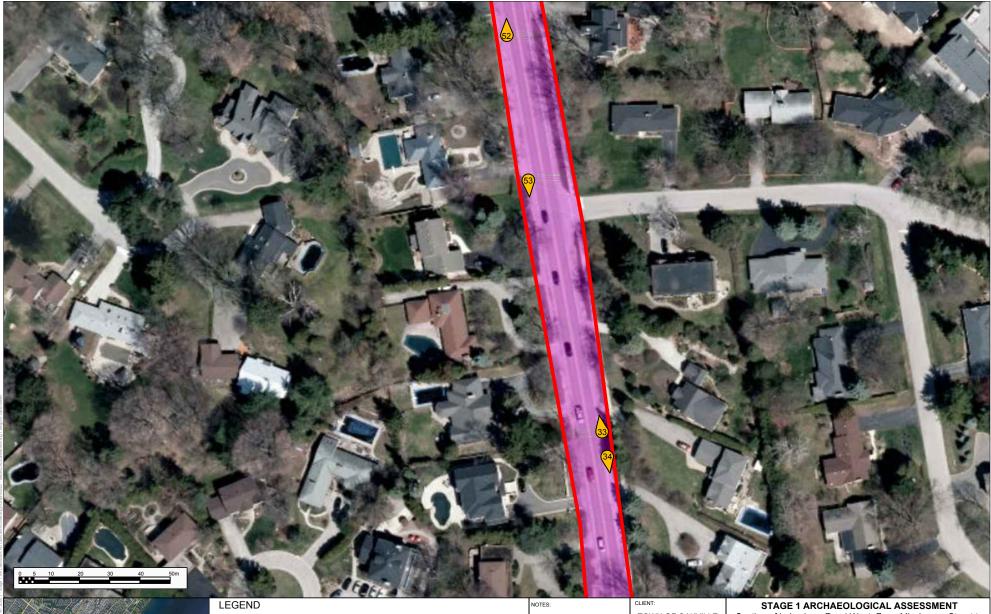
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Study area

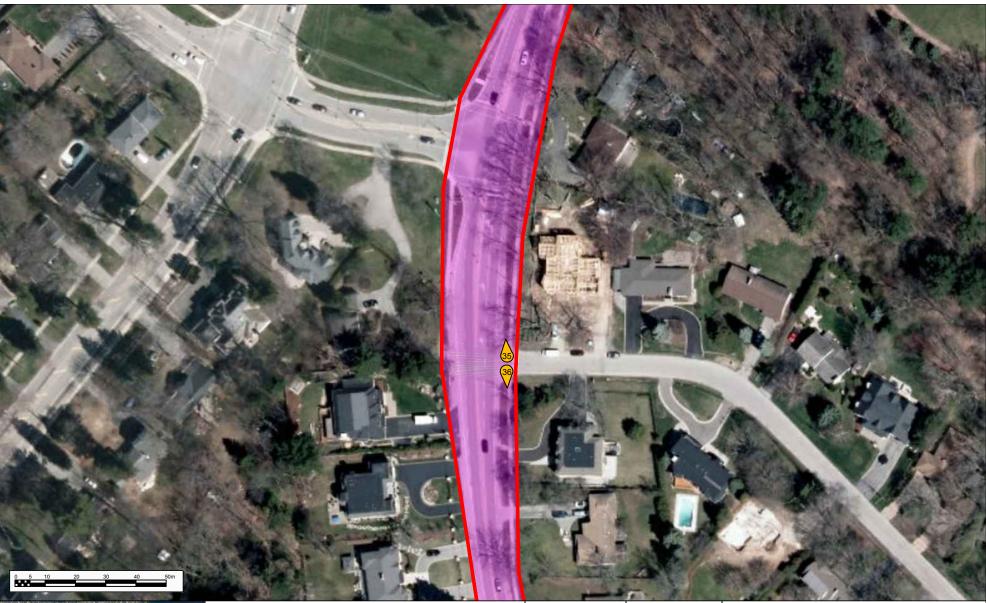
Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards Area of archaeological potential, intensive testing required

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 Study area Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

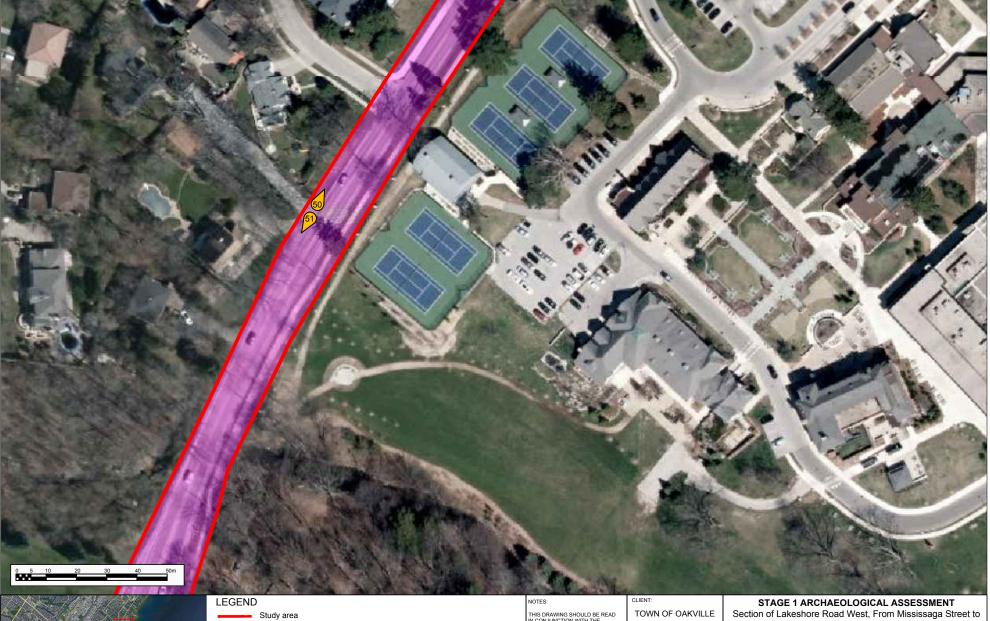
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Study area

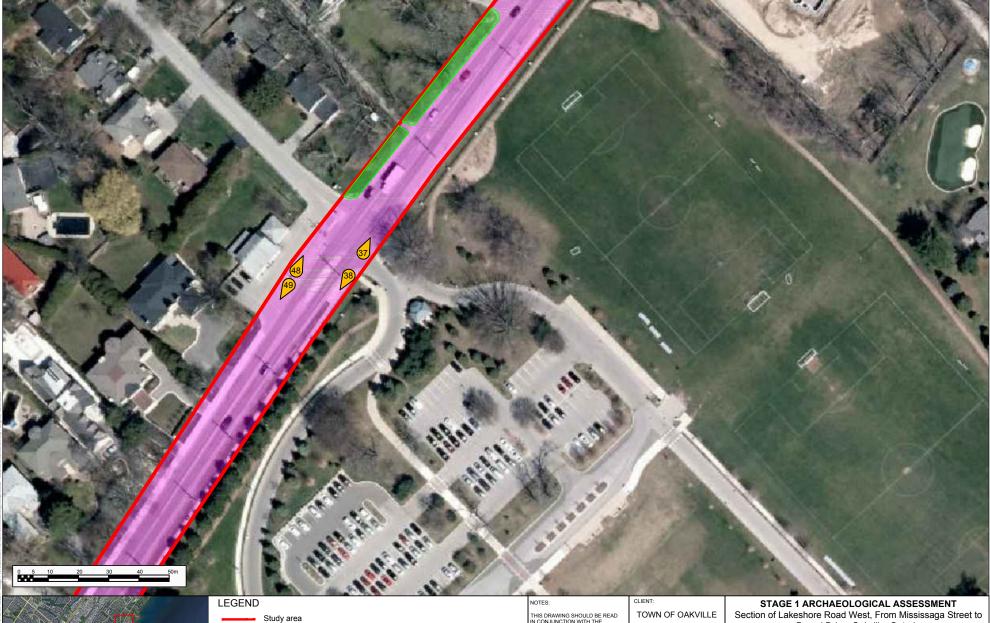
Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

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Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

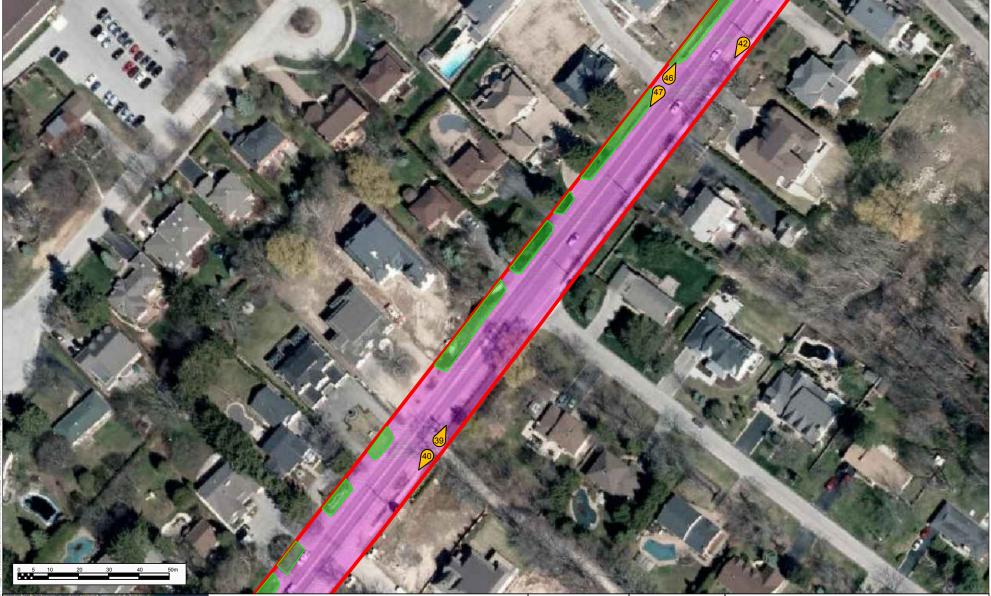
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Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards Area of archaeological potential, intensive testing required

NOTES: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC ENVIRONMENT & UNFRASTRUCTURE	CLIENT: TOWN OF OAKVILLE	STAGE 1 ARCHAEOLOGICAL A Section of Lakeshore Road West, From Dorval Drive, Oakville, Or	Mississaga Street to
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Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

Area of archaeological potential, intensive testing required

NOTES: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC ENVIRONMENT &	CLIENT: TOWN OF OAKVILLE	STAGE 1 ARCHAEOLOGICAL ASSESSMENT Section of Lakeshore Road West, From Mississaga Street Dorval Drive, Oakville, Ontario		
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Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

1

Area of archaeological potential, intensive testing required

NOTES: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC ENVIRONMENT &	CLIENT: TOWN OF OAKVILLE	STAGE 1 ARCHAEOLOGICAL ASSESSMENT Section of Lakeshore Road West, From Mississaga Street to Dorval Drive, Oakville, Ontario
INFRASTRUCTURE REPORT No. TPB166147.	Drawn By: CH Checked By: SA	Stage 1 Results with Photograph Numbers, Locations and Directions
Conditions encountered in the field may be different from the interpreted information presented on this figure.	Revision N°: 01	PROJECT N°: TPB166147.3000.1 FIGURE:
SOURCE:	Scale: 1:1,250	DATE: 24 Mar 2017
http://www.gisapplication.lrc.gov.on.ca/matm/ Index.html?site=Make_A_Topographic_Map& viewer=MATM&locale=en-US	W S E	Amec Foster Wheeler Environment and Infrastructure 505 Woodward Ave., Hamilton, ON LBH 6N6 tel: 905-312-0700 www.amec.com

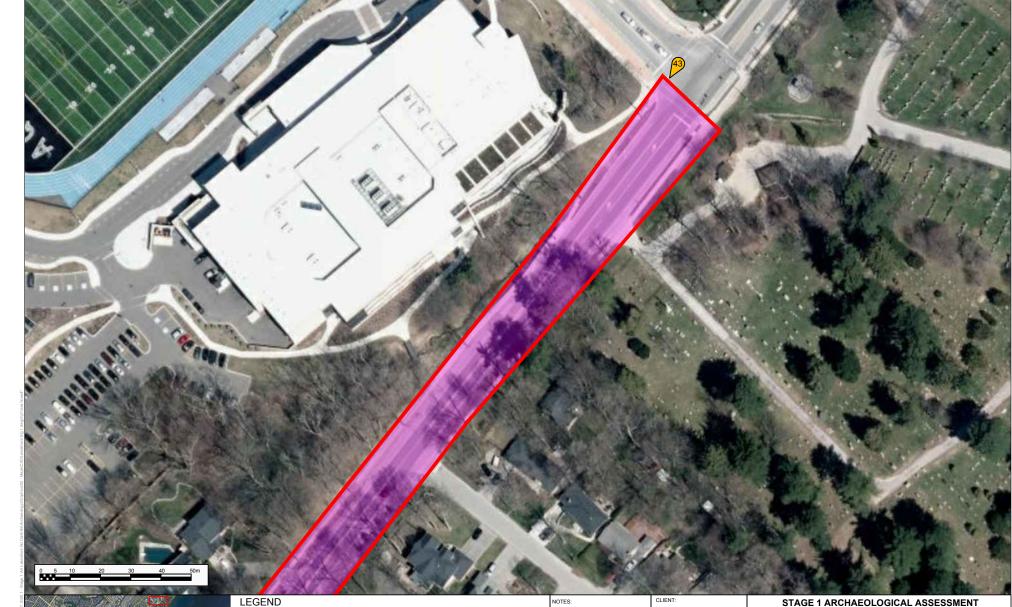


Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

Photograph number, location and direction

(1)

		STAGE 1 ARCHAEOLOGICAL A Section of Lakeshore Road West, From Dorval Drive, Oakville, Or	Mississaga Street to
REPORT No. TPB166147.	Drawn By: CH	Stage 1 Results with Photograp	
Conditions encountered in the field	Checked By: SA	Locations and Direction	ons
may be different from the interpreted information presented on this figure.	Revision N°: 01	PROJECT N°: TPB166147.3000.1	FIGURE
SOURCE:	Scale: 1:1,250	DATE: 24 Mar 2017	0X
http://www.gisapplication.lrc.gov.on.ca/matm/ Index.html?site=Make_A_Topographic_Map& viewer=MATM&locale=en-US		Amec Foster Wheeler Environment and Infrastructure 505 Woodward Ave., Hamilton, ON L8H 6N6 tel: 905-312-0700 www.amec.com	amec foster wheeler



1

Study area

Area of low archaeological potential due to road, gravel shoulder, sidewalks, driveways and boulevards

NOTES: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC ENVIRONMENT & INFRASTRUCTURE	CLIENT: TOWN OF OAKVILLE	STAGE 1 ARCHAEOLOGICAL ASSESSMEN Section of Lakeshore Road West, From Mississaga Dorval Drive, Oakville, Ontario		
REPORT No. TPB166147.	Drawn By: CH	Stage 1 Results with Photograph Numbers,		
	Checked By: SA	Locations and Directions		
Conditions encountered in the field may be different from the interpreted information presented on this figure.	Revision N°: 01	PROJECT N°: TPB166147.3000.1 FIG		
SOURCE:	Scale: 1:1,250	DATE: 24 Mar 2017	Oy	
http://www.gisapplication.lrc.gov.on.ca/matm/ Index.html?site=Make_A_Topographic_Map& viewer=MATM&locale=en-US		Amec Foster Wheeler Environment and Infrastructure 505 Woodward Ave., Hamilton, ON L8H 6N6 tel: 905-312-0700 www.amec.com	amec	

Stage 1 Archaeological Assessment for a Section of Lakeshore Road West, from Mississaga Street to Dorval Drive, Part of Lots 17 to 31 Broken Front Trafalgar, and Part of Lots 17 to 20 Concession III South, in the Former Township of Trafalgar, Halton County, now in the Town of Oakville, Ontario.



APPENDIX B

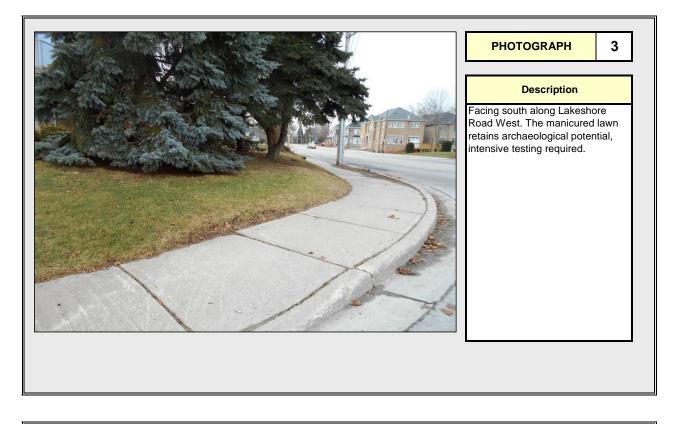
PHOTOGRAPHS





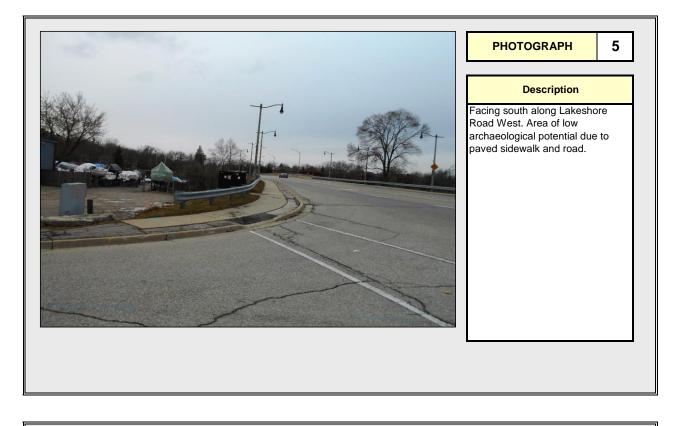






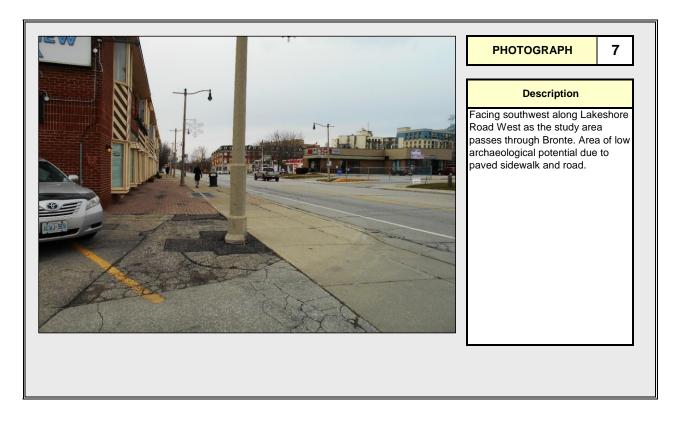






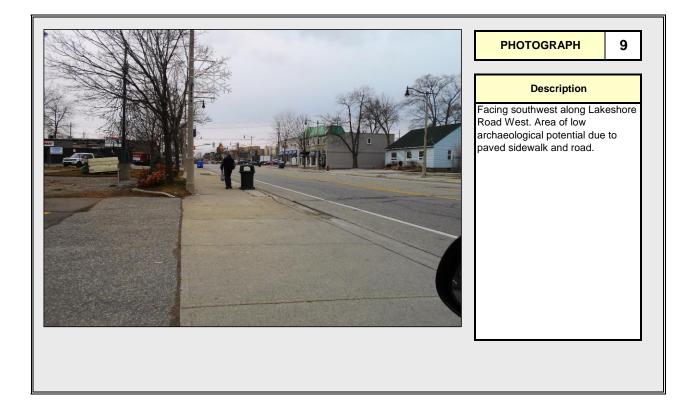






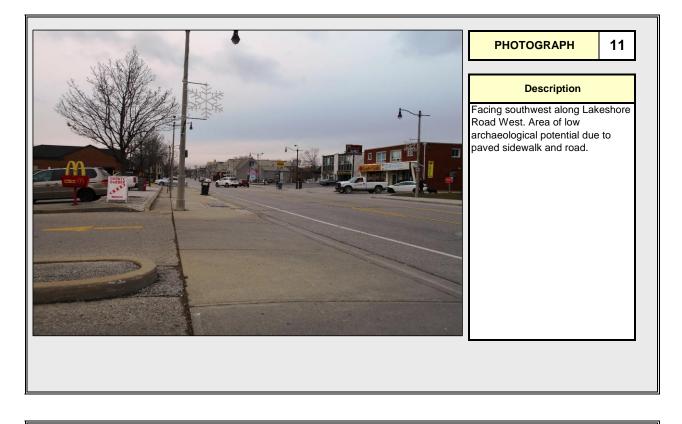






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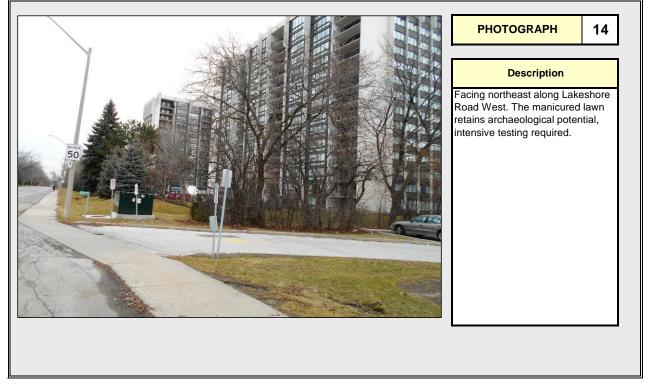




PHOTOGRAPH	12
Description Facing northeast along Lak Road West. Area of low archaeological potential due paved sidewalk and road.	











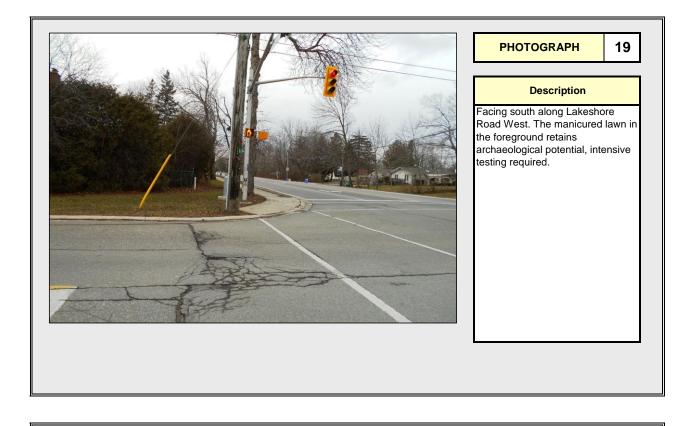






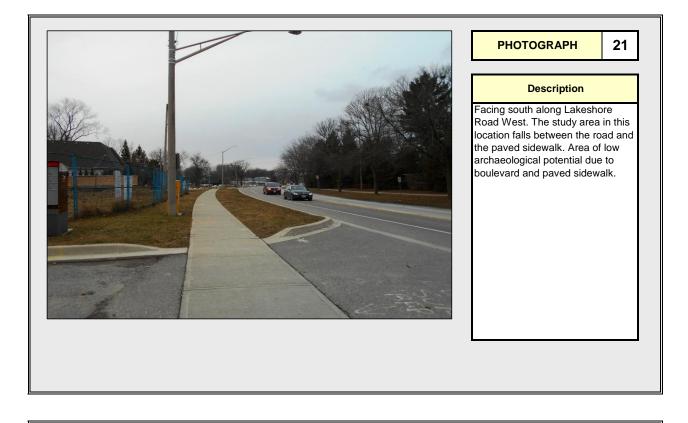






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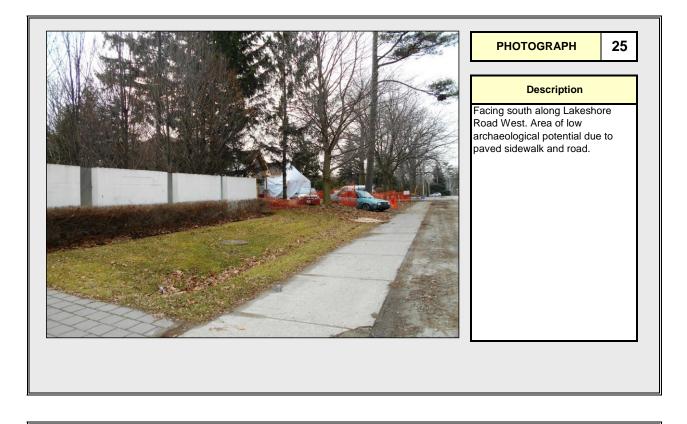


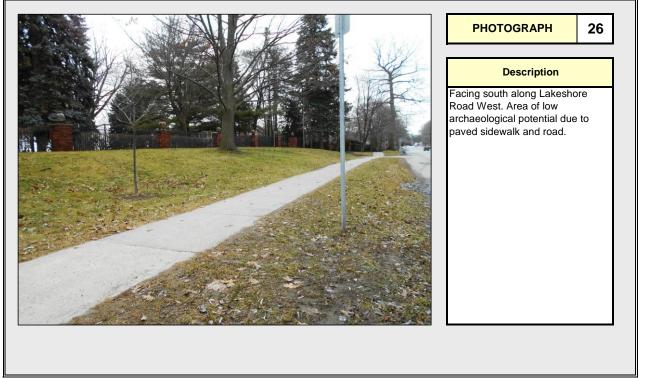














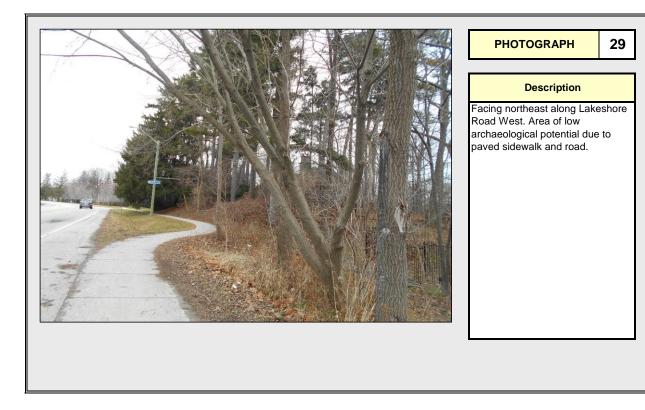


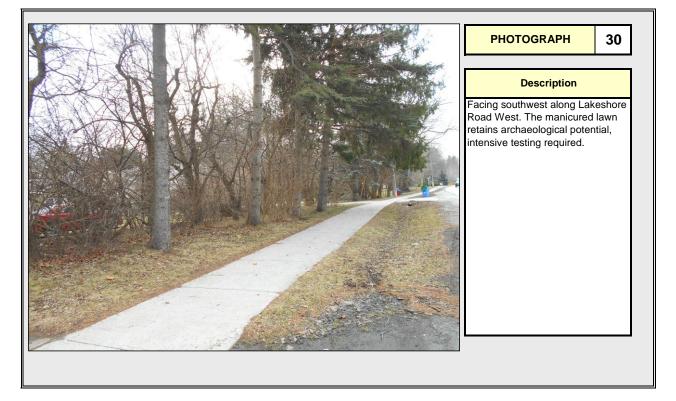






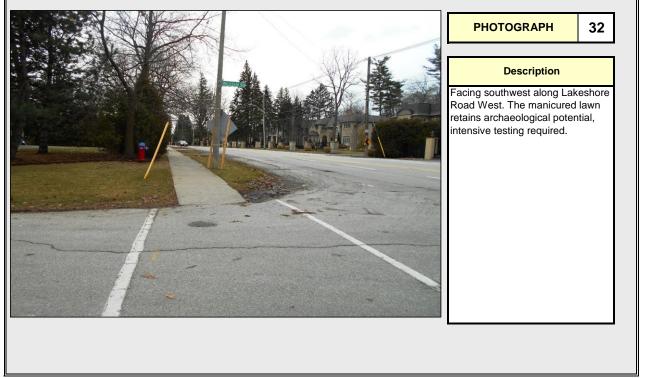




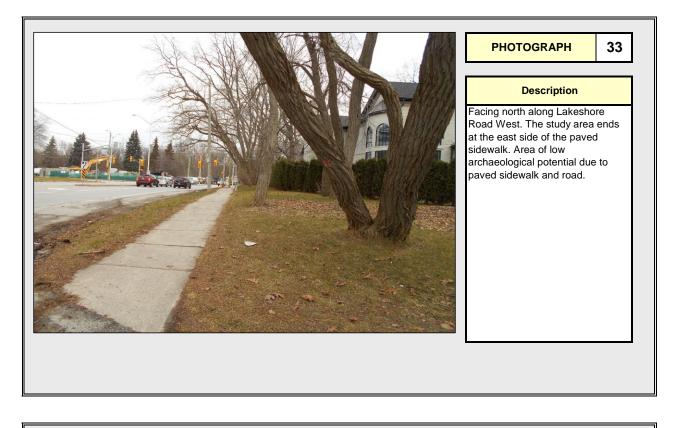


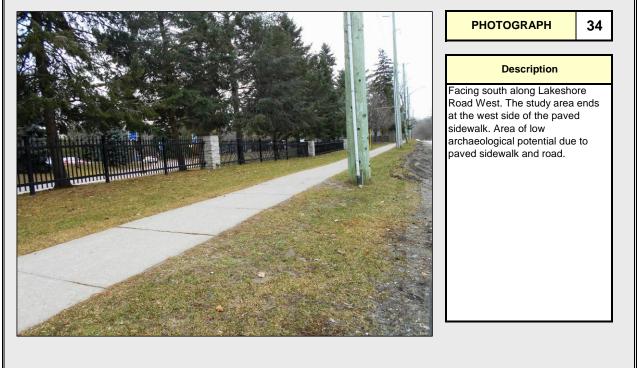










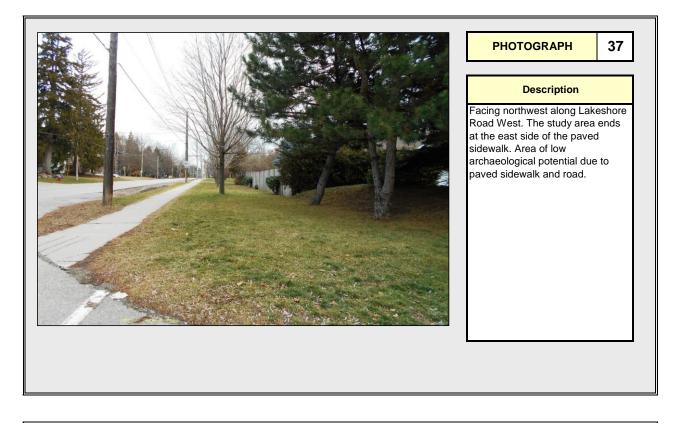


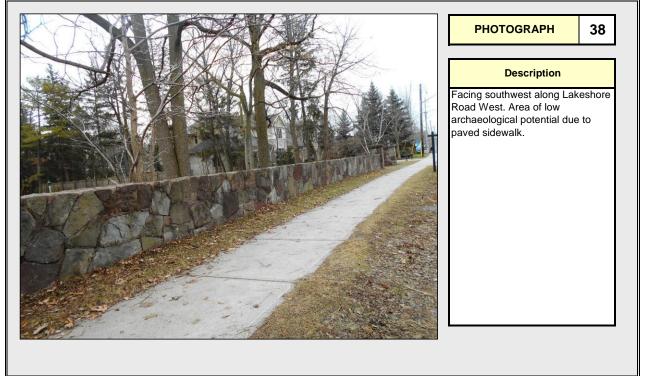




	PHOTOGRAPH	36
<image/>	Description Facing south along Lakesh Road West. Area of low archaeological potential du paved sidewalk and road.	







Lakeshore Road West, Oakville Ontario

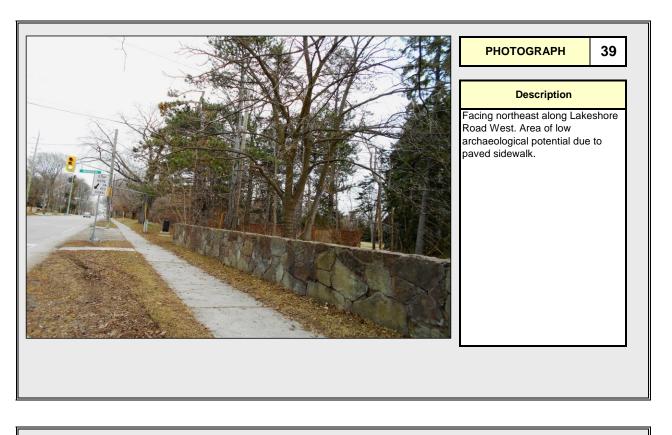
PROJECT NO.

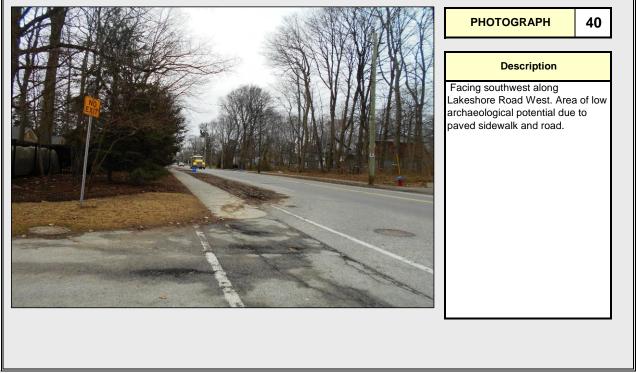
PROJECT

LOCATION







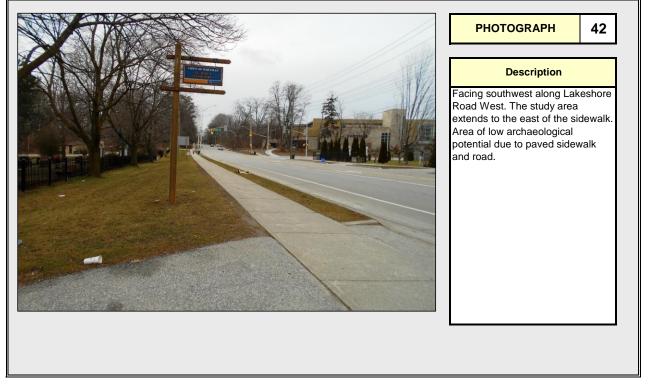




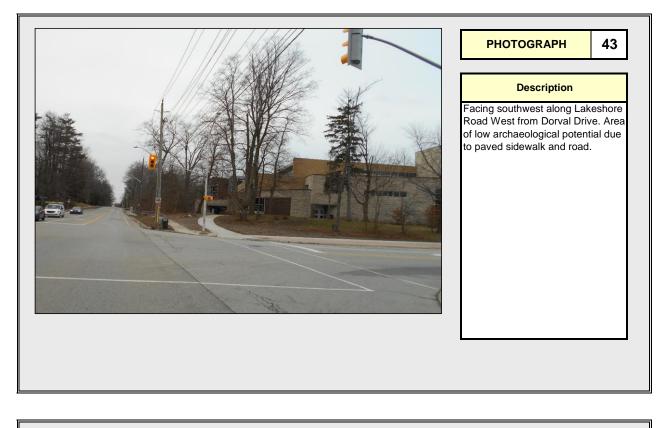






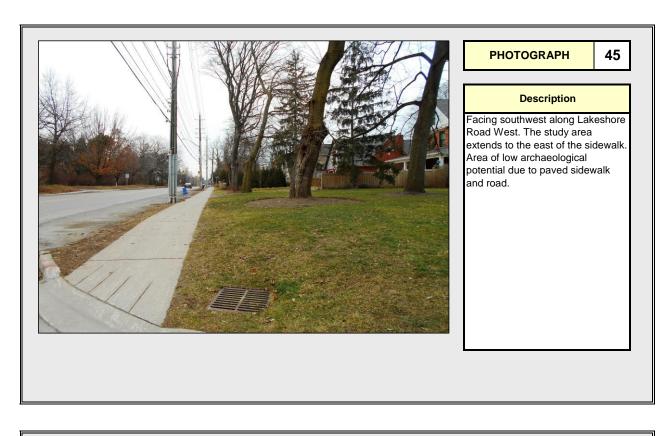






<image/> <section-header></section-header>	PHOTOGRAPH	44
	Facing northeast along Lak Road West. Area of low archaeological potential due	





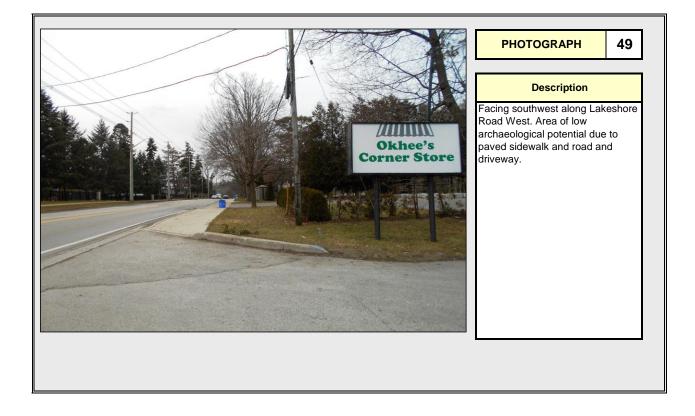






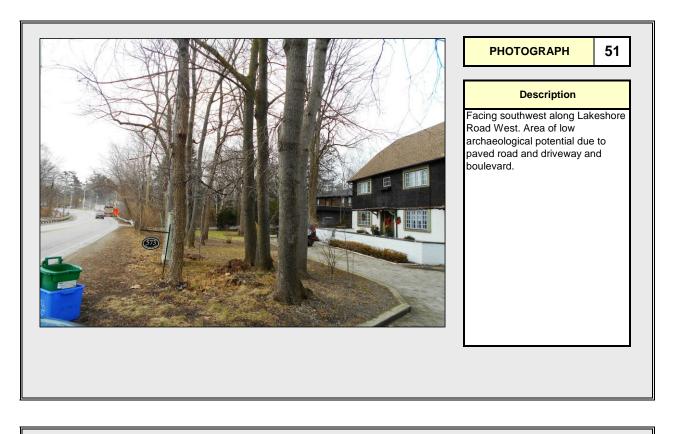
HURST AND	PHOTOGRAPH	48
	Description Facing northeast along Lal Road West. Area of low archaeological potential du paved sidewalk and road a driveway.	e to

















	PHOTOGRAPH	54
<image/>	Description Facing north along Lakesho Road West. Area of low archaeological potential du paved road, gravel sloped s and paved sidewalk.	Dre e to





PHOTOGRAPH 56	
Description Facing north along Lakeshore Road West. Area of low archaeological potential due to paved road, gravel sloped shoulder and paved sidewalk.	

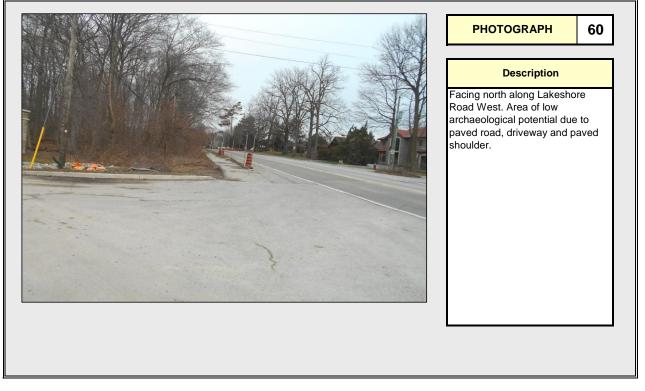




PHOTOGRAPH	58
Description Facing north along Lakesho Road West. Area of low archaeological potential dur paved road, sidewalk and disturbed shoulder.	





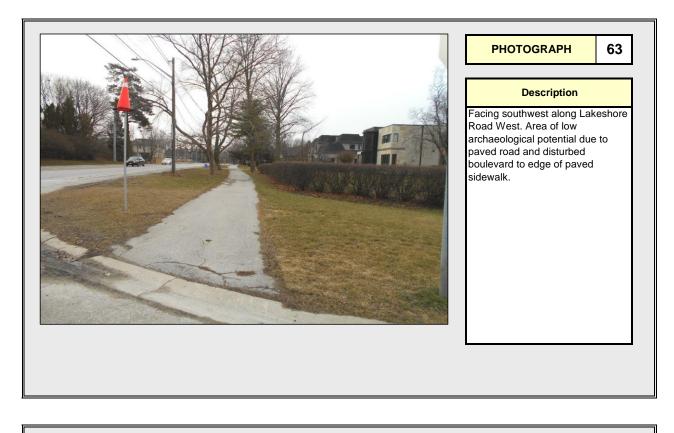




	PHOTOGRAPH 61
<image/>	Description Facing south along Lakeshore Road West. Area of low archaeological potential due to paved road, driveway and paved shoulder.

PHOTOGRAPH 62
Description Facing northeast along Lakeshore Road West. Area of low archaeological potential due to paved road, and sidewalk.





PHOTOGRAPH 64
Description Facing east along Lakeshore Road West. Area of low archaeological potential due to paved road and disturbed gravel shoulder to edge paved sidewalk.

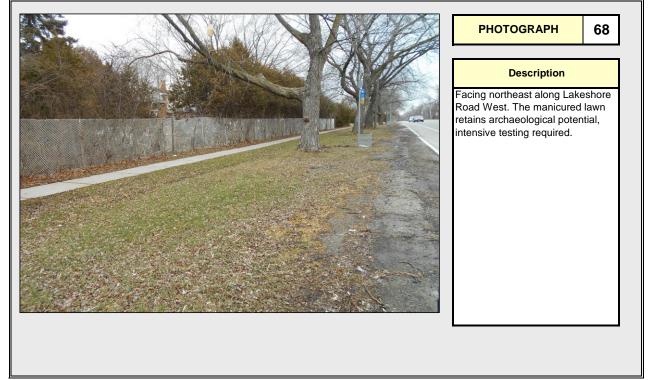




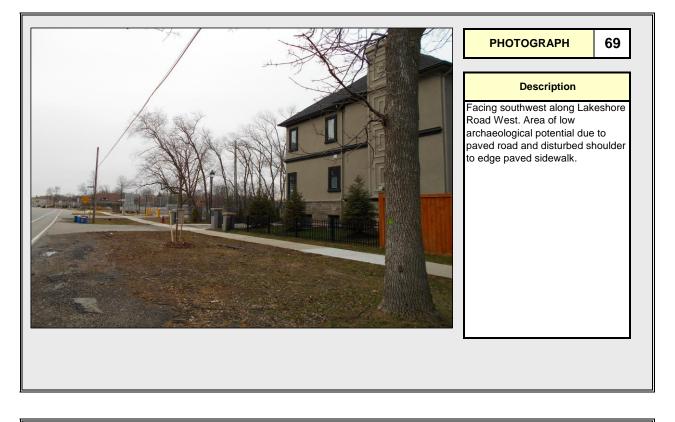
PHOTOGRAPH 66
Description 66 Facing northeast along Lakeshore Road West. The manicured lawn retains archaeological potential, intensive testing required.











	PHOTOGRAPH	70
	Description	
	Facing northeast along Lal Road West. Area of low archaeological potential du paved road, sidewalk and driveway.	





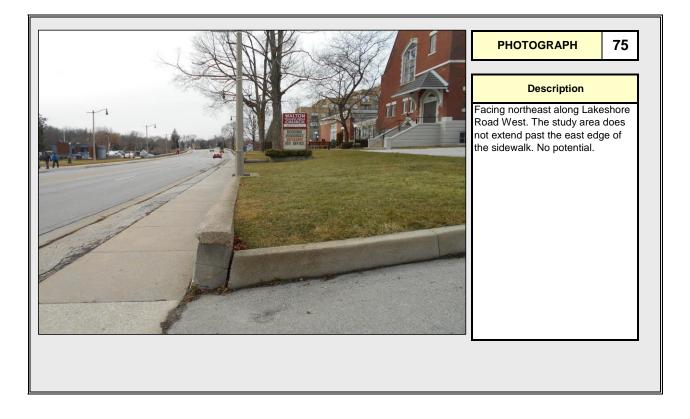






PHOTOGRAPH 74 Description Facing southwest along Lakeshore Road West. Area of low archaeological potential due to paved road, sidewalk and disturbed boulevard.	





PHOTOGRAPH	76
Description	
Facing northeast along Lak Road West. The manicured retains archaeological poter intensive testing required.	lawn

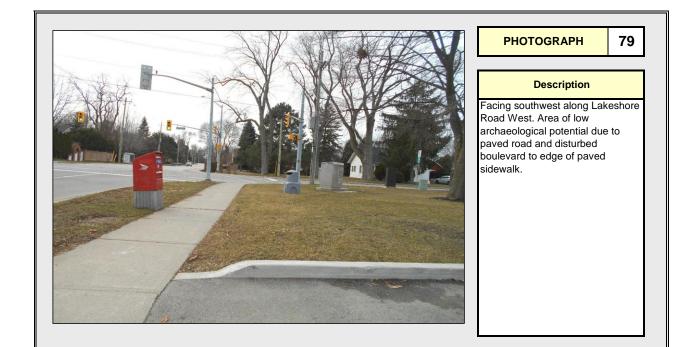






- PROJECT NO. TPB166147.3000.1
- PROJECT Stage 1 Archaeological Assessment
- LOCATION Lakeshore Road West, Oakville Ontario







APPENDIX C

ASSESSOR QUALIFICATIONS



ASSESSOR QUALIFICATIONS

Shaun Austin, Ph.D., Associate Archaeologist – Dr. Austin is the leader of Amec Foster Wheeler's cultural heritage resources group and is based in 'the Company's' Hamilton Office. He has been working in Canadian archaeology and heritage since 1976 and as an archaeological and heritage consultant in Ontario since 1987. He is a dedicated cultural heritage consultant with repeated success guiding projects through to completion to the satisfaction of the development proponent, the cultural heritage community and all other stakeholder groups. His areas of interest and expertise include pre-contact Aboriginal lithics and ceramics. Dr. Austin holds a **Professional Archaeology License (P141)** issued by the Ontario Ministry of Tourism, Culture and Sport, is MTO RAQs certified in Archaeology/Heritage and is a member of the Ontario Association of Professional Archaeologists.

Jason Seguin, M.A., Senior Archaeologist – Mr. Seguin has been engaged in archaeology since 2004. Mr. Seguin has conducted stage 1 to 4 archaeological assessments including background searches, field surveys, and excavations, analysis of cultural artifacts, laboratory work and reporting. Mr. Seguin is involved in project management and supervision as well as being an archaeological laboratory director. Mr. Seguin's education and work experience have provided him with an extensive knowledge base, consisting of theoretical and practical experience in cultural resource management in Canada and Central America, as well as curatorial, archival and museum management experience. Mr. Seguin holds a Master's Degree in Anthropology from Trent University, and a Post-Graduate Certificate in Museum Management and Curatorship from Sir Sandford Fleming College. Mr. Seguin holds a **Professional Archaeology License (License P354)** issued by the Ontario Ministry of Tourism and Culture.

Cara Howell B.A., Senior Archaeologist – Ms. Howell has been working in consulting archaeology since 1999. During this time she has acquired a full range of archaeological skills, from background research to Stage 4 excavation. She has developed a comprehensive understanding of all aspects of material culture and has a specialized interest in historic Euro-Canadian artifacts. As Laboratory Director for Amec Foster Wheeler's Archaeology Group, she was instrumental in creating and implementing cataloguing systems for all types of recovered artifacts. Mr. Howell also serves as lead liaison with First Nations communities. She holds a B.A. in Physical Anthropology and a B.A. in Classical Archaeology from McMaster University, and an **Applied Research License (R180)** issued by the Ontario Ministry of Tourism, Culture and Sport.



Devon Brusey B.A. Hon., Staff Archaeologist – Ms. Brusey has worked as a consultant archaeologist since 2007. She holds an honorary bachelors degree in Anthropology and Japanese Studies from McMaster University. Ms. Brusey has worked on over 250 Stage 1 through Stage 4 archaeological assessments throughout Ontario, many of which have been completed as part of the environmental assessment process for the development of wind and solar farms, hydro line corridors and municipal roadway improvements. Ms. Brusey has also been instrumental in the processing and analysis of artifacts and other data in the laboratory. Recently, she acted as crew supervisor for the Stage 4 salvage excavation of an extensive multi-component pre-contact and historic site in Burlington, Ontario. She has also acted as the project manager, field director and report writer for numerous other projects. Ms. Brusey holds an **Applied Research License (R410)** issued by the Ontario Ministry of Tourism, Culture and Sport.



APPENDIX D

LIMITATIONS



LIMITATIONS

- 1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - (a) The Standard Terms and Conditions which form a part of our Professional Services Contract;
 - (b) The Scope of Services;
 - (c) Time and Budgetary limitations as described in our Contract; and,
 - (d) The Limitations stated herein.
- 2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
- 3. The conclusions presented in this report were based, in part, on visual observations of the Study Area. Our conclusions cannot and are not extended to include those portions of the Study Area which were not reasonably available, in Amec Foster Wheeler's opinion, for direct observation.
- 4. The potential for archaeological resources, and any actual archaeological resources encountered, at the Study Area were assessed, within the limitations set out above, having due regard for applicable heritage regulations as of the date of the inspection.
- 5. Services including a property inspection and background study were performed. Amec Foster Wheeler's work, including property inspection and archival studies were conducted in a professional manner and in accordance with the Ministry of Tourism and Culture's guidelines. It is possible that unforeseen and undiscovered archaeological resources may be present at the Study Area.
- 6. The utilization of Amec Foster Wheeler's services during the implementation of any further archaeological work recommended will allow Amec Foster Wheeler to observe compliance with the conclusions and recommendations contained in the report. Amec Foster Wheeler's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
- 7. This report is for the sole use of the parties to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or in part, or any reliance thereon, or decisions made based on any information of conclusions in the report, is the sole responsibility of such third party. Amec Foster Wheeler accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
- 8. This report is not to be given over to any third-party other than a governmental entity, for any purpose whatsoever without the written permission of Amec Foster Wheeler, which shall not be unreasonably withheld.