Stage 1 Archaeological Assessment
(Background Study and Property Inspection)

Light Rail Vehicle Fleet Maintenance and Storage Facility,
City of Toronto, Ontario

Prepared for:

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EXECUTIVE SUMMARY

Archaeological Services Inc. (ASI) was contracted by AECOM, Markham, on behalf of the Toronto Transit Commission (TTC), to conduct a Stage 1 Archaeological Assessment (background study and property inspection) for the proposed Light Rail Vehicle (LRV) Fleet Maintenance and Storage Facility, in the City of Toronto, Ontario. The study area includes the area located north of the existing Ashbridges Bay Wastewater Treatment Plant, west of Leslie Street and south of Lake Shore Boulevard East. In addition, the study area includes a Leslie Street corridor between Lake Shore Boulevard East and Queen Street for connecting tracks between the proposed LRV Fleet Maintenance and Storage Facility and the existing streetcar tracks along Queen Street.

The Stage 1 Archaeological Assessment determined that no archaeological sites have been registered within or immediately adjacent to the study area. However, a single archaeological site has been registered within 1 km of it. A review of the geography and local nineteenth century land use of the study area suggested that the potential for the recovery of Aboriginal or early Euro-Canadian cultural material within the proposed LRV Fleet Maintenance and Storage Facility is low. However, there is potential for the recovery of Aboriginal and early Euro-Canadian cultural material along the corridor for the connecting tracks to Queen Street East.

Based on the results of the property inspection, it has been determined that both the proposed new LRV fleet maintenance and storage facility and the connecting tracks to Queen Street East have been previously disturbed, negating archaeological potential.

In light of these results, the following recommendation is made:

1. The proposed LRV Fleet Maintenance and Storage Facility study area does not require additional archaeological assessment.
ARCHAEOLOGICAL SERVICES INC.
ENVIRONMENTAL ASSESSMENT DIVISION

PROJECT PERSONNEL

Senior Project Manager: Robert Pihl, MA, CAHP [MCL license P057]
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1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by AECOM, Markham, on behalf of the Toronto Transit Commission (TTC), to conduct a Stage 1 Archaeological Assessment (background study and property inspection) for the proposed Light Rail Vehicle (LRV) Fleet Maintenance and Storage Facility, in the City of Toronto, Ontario (Figure 1). The study area includes the area located north of the existing Ashbridges Bay Wastewater Treatment Plant, west of Leslie Street and south of Lake Shore Boulevard East. In addition, the study area includes a Leslie Street corridor between Lake Shore Boulevard East and Queen Street for connecting tracks between the proposed LRV Fleet Maintenance and Storage Facility and the existing streetcar tracks along Queen Street.

Figure 1: Location of the study area.

Base Map: NTS Sheet 30 M/11 (Toronto)

Authorization to carry out the activities necessary for the completion of the Stage 1 assessment was granted to ASI by AECOM on September 18, 2009.
The objectives of this report are:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the study area;

- To evaluate in detail the archaeological potential of the study area which can be used, if necessary, to support recommendations for Stage 2 survey for all or parts of the property; and

- To recommend appropriate strategies for Stage 2 survey, if necessary.

2.0 BACKGROUND RESEARCH

The Stage 1 Archaeological Assessment of the general study area was conducted in accordance with the Ontario Heritage Act (2005) and the Ontario Ministry of Culture’s (MCL) Draft Standards and Guidelines for Consultant Archaeologists (2009). A Stage 1 Archaeological Assessment involves a background study to provide detailed documentary research on the archaeological and land use history and present conditions of the study area. Specifically, the background study provides information about previous archaeological fieldwork around the study area, its geography and history, and current land conditions.

2.1 Previous Archaeological Research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: the site record forms for registered sites housed at the MCL; published and unpublished documentary sources; and the files of ASI.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MCL. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in Borden block AjGt.

According to the OASD (email communication, Robert von Bitter, MCL Data Coordinator, October 5, 2009), a single archaeological site, the Ashbridge site (AjGt-1), has been registered within 1 km of the study area. John and Jonathan Ashbridge received Crown grants from Governor Simcoe in 1796. The houses and lands on this site were continuously occupied by the Ashbridge family until the 1856 house, which still stands today, was acquired by the Ontario Heritage Foundation. The Ashbridge family greatly contributed in the improvements of Kingston Road and the development of the area. The earliest dwellings at the Ashbridge site, including a log cabin (ca. 1794) and a frame house (ca. 1809-1811) have been subject to numerous excavations by students participating in public archaeology programs or archaeological field schools. The 1856 house, known as the Ashbridge Estate, was acquired by the Ontario Heritage Foundation. The property also contains an Aboriginal site. In addition, evidence of Aboriginal occupation was recorded at this site.
2.2 Geography

The Toronto waterfront is an area in which massive landscape changes have occurred. In the vicinity of the study area, the most dramatic changes began to occur during the late-nineteenth century, with the filling of Ashbridge’s Bay.

While the study area consists entirely of made land, it essentially lies within the Iroquois Plain physiographic region (Chapman and Putnam 1984), which is the former bed of glacial Lake Iroquois. In the Toronto area, the Lake Iroquois strand is situated approximately 4.5 km inland from the current Lake Ontario shore. Below the strand, the quaternary sediments are dominated by outwash sands typical of near-shore deposits. The balance of the plain, towards the modern lake shore, is dominated by fine sediments of silt and clay, typical of off-shore deposits, overlying till (Chapman and Putnam 1984; Gravenor 1957).

Glacial Lake Iroquois came into existence by about 12,000 B.P. as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift of its outlet, combined with blockage of subsequent lower outlets by glacial ice, produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 B.P., water levels dropped stepwise during the next few centuries in response to sill elevations at the changing outlet. By about 11,500 B.P., 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 B.P. At this time the waters stood as much as 100 m below current levels. However, isostatic uplift was already raising the outlet at Kingston so that by 10,000 B.P., the water level had risen to about 80 m below present. Uplift since then has continued to tilt Lake Ontario upward to the northeast, propagating a gradual transgressive expansion throughout the basin. The flooded mouths of creeks and rivers that rim the basin provide visible reminders of this process (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1988, 1990).

In the vicinity of the study area, it has been estimated that the earliest Lake Ontario shoreline (circa 10,400 B.P.) was about 5 km south of its present location. Over the following millennia, the shoreline gradually moved northward. Even by about 5,000 B.P., however, it is still unlikely that Toronto waterfront, protected by the submerged bank of sediment associated with the emergent Toronto spit, had yet begun to fill. Between about 5,000 and 4,000 B.P., the Nipissing Flood phase increased water levels dramatically, moving the shore some distance inland from its nineteenth century position. Levels subsided by 3 to 4 m again between about 4,000 and 3,500 years ago, and by circa 3,000 B.P., the shoreline was established more or less in the location at which it stood at the time of the founding of York in the 1790s.

The forests out of which York was carved had become established shortly after 7,000 B.P. Under median moisture regimes and eco-climates, the climax forest of the Toronto lakeshore region was likely co-dominated by hard maple (*Acer saccharum*) and beech (*Fagus grandifolia*), in association with basswood (*Tilia americana*), red oak (*Quercus rubra*), white oak (*Quercus alba*), shagbark hickory (*Carya ovata*) and bitternut hickory (*C. cordiformis*) (Hills 1958; Burgar 1993).

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in south central Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for
predictive modeling of site location. Before recorded history, Toronto was a junction point of land and water routes, with trails running northward from the shoreline along river routes.

The MCL’s Draft Standards and Guidelines for Consultant Archaeologists (2009:5) stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential. The study area is situated just north of Lake Ontario.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas, prairie) and scarce raw materials (quartz, copper, ochre, or outcrops of chert) are also considered characteristics that indicate archaeological potential (MCL 2009:5-6). If present, these characteristics will be described in Section 3.0.

Despite the fact that the Toronto area lakeshore in general, and more particularly the mouths of the creeks and rivers flowing into it, would have been extremely attractive to Aboriginal peoples, the potential for the recovery of Aboriginal material within the proposed LRV Fleet Maintenance and Storage Facility is nil. However, there may be potential for the recovery of Aboriginal cultural material along the corridor for the connecting tracks to Queen Street East.

### 2.3 Land-Use History

The land now encompassed by the City of Toronto has a cultural history which begins approximately 10,000 years ago and continues to the present. This section provides the results of historical research of the general area. A brief review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of Euro-Canadian settlement and land-use.

#### 2.3.1 Historic Map Review

The 1878 Illustrated Historical Atlas of the County of York, Ontario was reviewed to determine the potential for the presence of historical archaeological remains within the study area during the nineteenth century (Figure 2).

As mentioned in Section 2.2, the Toronto waterfront is an area in which massive landscape changes have occurred. Historically, the proposed new LRV fleet maintenance and storage facility would have been located in the former Township of York (southeast), within Ashbridge’s Bay. The connecting tracks to Queen Street East are located on Park Lot 11, Broken Front Concession, in the former Township of York (southwest). Leslie Street splits Lot 11 in half. The western portion of the lot was occupied by the Toronto
Nurseries, which was owned and operated by George Leslie & Sons. No property owners or features are illustrated on the east half of the lot. It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the 1878 atlas.

The “Park Lots” were 100 acre tracts of land which were reserved by Lieutenant Governor Simcoe and granted primarily to government officials and members of the Executive Council as compensation for loss of improvements made by them on premises which they occupied while the seat of government was located at Newark (Niagara). Lot 11 was patented to Benjamin Mosley in 1796.

Benjamin Mosley was a native of Pennsylvania who came to Upper Canada with his father, Sergeant George Mosley, who served in the 45th Regiment and also in the Engineer’s Department as artificer during the Revolutionary War. George Mosley had died sometime before 1797, while Benjamin was noted as a resident of York from 1797 until as late as 1816. He was overseer of highways in 1799, 1804, 1806 and 1811. Mosley was a carpenter by trade. He repaired the Rouge River Bridge in 1813, and was ordered to examine the state of the Humber River Bridge the same year (Firth 1962:291; Mosser 1984:106, 113; Centennial of the Settlement of Upper Canada, 215 and 311).

Leslieville was described in 1873 as “a thriving post village [that] contains a telegraph office, the Toronto nurseries covering 150 acres, several brickfields, and 8 stores.” The population in 1873 was 400 (Crossby 1873:171).

Figure 2: The study area overlaid on the map of York (Southeast) Township in the 1878 Illustrated Historical Atlas of the County of York.
For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be captured by the basic proximity to the water model outlined in Section 2.2, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of concession roads and railroads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 m of an early settlement road, such as Leslie Street and Queen Street, are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The MCL’s Draft Standards and Guidelines for Consultant Archaeologists (2009: 6) stipulates that that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries, are considered to have archaeological potential. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the Ontario Heritage Act or a federal, provincial, or municipal historic landmark or site, and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations are also considered to have archaeological potential.

Therefore, due to the proximity of early Euro-Canadian settlement and early historical transportation routes, it may be concluded that there is potential for the recovery of historic cultural material along the corridor for the connecting tracks to Queen Street East.

3.0 ANALYSIS: ARCHAEOLOGICAL POTENTIAL EVALUATION

The MCL’s Draft Standards and Guidelines for Consultant Archaeologists list characteristics that indicate where archaeological resources are most likely to be found (2009: 5-6). Archaeological potential is confirmed when one or more feature of archaeological potential is present.

Per Section 1.3.1 of the MCL standards and guidelines, the proposed new LRV fleet maintenance and storage facility does not meet the criteria used for determining archaeological potential. The corridor for the connecting tracks to Queen Street East, however, meets three of the criteria used for determining archaeological potential:

- Water sources: primary water source, secondary water source, or a past water source (i.e. Lake Ontario);
- Areas of early Euro-Canadian settlement (i.e. Leslierville); and
- Early historical transportation routes (i.e. Leslie Street, Queen Street).

These criteria characterize the corridor for the connecting tracks to Queen Street East as having potential for the identification of Aboriginal and Euro-Canadian archaeological sites.
4.0 PROPERTY INSPECTION

A property inspection of the study area was conducted by Caitlin Lacy (R303), ASI, on October 5, 2009, in order to gain first-hand knowledge of its geography, topography, and current conditions, and to evaluate and map its archaeological potential. It is a visual inspection only and does not include excavation or collection of archaeological resources. Weather conditions during the property inspection were sunny, with a few clouds, and 10°C. Field observations have been compiled onto maps of the study area (Figures 3 and 4). Associated photography can be found in Section 7.0.

The study area can be divided into two sections: the proposed new LRV fleet maintenance and storage facility (Figure 3), and the connecting tracks to Queen Street East (Figure 4).

The proposed new LRV fleet maintenance and storage facility is situated on lands that consist of entirely made land, where massive landscape changes have occurred, including the creation of large berms to block the view of the sewage treatment plant (Plates 1 to 6). Archaeological potential has therefore been removed completely from this portion of the study area due to extensive and deep land alterations (Figure 3, areas marked in yellow). Please note that lake fill is not typically considered to be of archaeological significance.

The connecting tracks to Queen Street East will be installed within the existing Leslie Street roadway. Archaeological potential has also been completely removed along the Leslie Street corridor due to extensive and deep land alterations associated with typical road construction that have severely damaged the integrity of any archaeological resources (Plate 7 to 12; Figure 4, areas marked in yellow).

5.0 RECOMMENDATIONS AND COMPLIANCE ADVICE

Based on the results of the property inspection, it has been determined that the both the proposed new LRV fleet maintenance and storage facility and the connecting tracks to Queen Street East have been previously disturbed, negating archaeological potential.

In light of these results, the following recommendation is made:

1. The proposed LRV Fleet Maintenance and Storage Facility study area does not require additional archaeological assessment.

ASI advises compliance with the following legislation:

- This report is submitted to the Minister of Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 1990, c 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, preservation and protection of the cultural heritage of Ontario;

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.
Figure 3: Light Rail Vehicle Fleet Maintenance and Storage Facility - Results of the Stage 1 Property Inspection.
Figure 4: Light Rail Vehicle Fleet Maintenance and Storage Facility (Connecting track to Queen Street East) - Results of the Stage 1 Property Inspection.
immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*; and

- The *Cemeteries Act* requires that any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Consumer Services.

The documentation related to this archaeological assessment will be curated by Archaeological Services Inc. until such a 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.

### 6.0 REFERENCES CITED

Anderson, T. W. and C. F. M. Lewis  

Burger, D.  

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

Gravenor, C.P.  

Hills, G. A.  

Karrow, P.F.  

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1878 *Illustrated Historical Atlas of the County of York*. Toronto, Miles & Co.
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7.0 PHOTOGRAPHY

7.1 Proposed New LRV Fleet Maintenance and Storage Facility

Plate 1: View north-northwest along western edge of study area.

Plate 2: View north-northeast toward man-made berm.

Plate 3: View east-northeast along northern edge of study area.

Plate 4: View east toward man-made berm.

Plate 5: View northeast along southern edge of study area.

Plate 6: View west toward man-made berm.
7.2 Connecting tracks to Queen Street East

Plate 7: View north-northwest along disturbed Leslie St. corridor.

Plate 8: View south-southeast along disturbed Leslie St. corridor.

Plate 9: View northwest across Lakeshore Rd/Leslie St. intersection.

Plate 10: View south-southeast along disturbed Leslie St. corridor.

Plate 11: View north-northwest across Eastern Ave. along disturbed Leslie St. corridor.

Plate 12: View south-southeast across Queen St. along disturbed Leslie St. corridor.