

Victoria Square Boulevard Class
Environmental Assessment

Woodbine Avenue (north
connection) to Woodbine Avenue
(south connection)

Environmental Study Report

Appendix

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Stage 1 and 2 Archaeological Assessment Report



27 April 2018

STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT

**Victoria Square Boulevard Class
Environmental Assessment Between North
and South Connections to Woodbine
Bypass, Part of Lots 21-28, Concessions 3
and 4, Geographic Township of Markham,
now City of Markham, Regional
Municipality of York, Ontario**

REVISED REPORT

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EXECUTIVE SUMMARY

A Stage 1 and 2 archaeological assessment was conducted on behalf of City of Markham through HDR, by Golder Associates Ltd. (Golder), for a roadway improvement Project Area on part of Lots 21-28, Concessions 3 and 4, Geographic Township of Markham, former County of York, now City of Markham, Regional Municipality of York, Ontario (Map 1). The Stage 1 and 2 assessments were conducted in support of a Municipal Class Environmental Assessment (Schedule C) for improvements to Victoria Square Boulevard, from Woodbine Bypass North Connection to Woodbine Bypass South Connection.

The Project Area is currently comprised of a long linear road corridor encompassing Victoria Square Boulevard (formerly Woodbine Avenue) between the Woodbine Bypass (north and south connections), and the associated right-of-way (ROW) on both the east and west side of the road. The Project Area runs north-south and is predominately lined on the east and west sides with residential lots and agricultural fields that have been graded and cleared of topsoil in advance of residential development.

The objective of the Stage 1 archaeological assessment was to compile available information about the known and potential archaeological resources within the Project Area and to determine if a field survey (Stage 2) is required, as well as to recommended Stage 2 strategies if required. Areas of previous disturbance identified within the Project Area exhibit low potential for the recovery of archaeological remains. No further assessment is recommended for these areas.

The objectives of the Stage 2 archaeological assessment were to provide an overview of archaeological resources on the property and to determine whether any of the resources might be artifacts and archaeological sites with cultural heritage value or interest and to provide specific direction for the protection, management, and/or recovery of these resources. Areas found to exhibit archaeological potential were surveyed by test pit survey at an interval of five metres.

The Stage 2 assessment of the Project Area resulted in the identification of one historical Euro-Canadian site, as well as indicators for the potential for intact deeply buried remains at the intersection of Victoria Square Boulevard and Elgin Mills Road; further details regarding recommendations can be found in Section 5.0.

Furthermore, two cemeteries are located adjacent to the Project Area. Given the historical nature of the cemeteries and the close proximity of grave markers at both cemeteries to the roadway, further assessment is required should the design plan document any impacts within 10 metres of the two cemeteries; further details regarding recommendations can be found in Section 5.0.

The MTCS (Ministry of Tourism, Culture and Sport) is asked to review the results and recommendations presented herein and accept this report into the Provincial Register of archaeological reports. The MTCS is also asked to provide a letter concurring with the results presented herein.

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.



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APPENDIX A

MTCS Correspondence



1.0 PROJECT CONTEXT

1.1 Development Context

A Stage 1 and 2 archaeological assessment was conducted on behalf of City of Markham through HDR, by Golder Associates Ltd. (Golder), for a roadway improvement Project Area on part of Lots 21-28, Concessions 3 and 4, Geographic Township of Markham, former County of York, now City of Markham, Regional Municipality of York, Ontario (Map 1). The City of Markham is initiating a Municipal Class Environmental Assessment study to review potential improvements to Victoria Square Boulevard, from Woodbine Bypass (north connection) to Woodbine Bypass (south connection).

The objective of the Stage 1 archaeological assessment was to compile available information about the known and potential archaeological resources within the Project Area and to determine if a field survey (Stage 2) is required, as well as to recommended Stage 2 strategies if required.

In compliance with the provincial standards and guidelines set out in the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the objectives of the Stage 1 archaeological assessment were as follows:

- To provide information about the Project Area's geography, history, previous archaeological fieldwork, and current land conditions;
- To evaluate in detail the Project Area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives Golder archaeologists employed the following research strategies:

- A review of relevant archaeological, historic, and environmental literature pertaining to the Project Area;
- A review of the land use history, including pertinent historic maps;
- An examination of the Ontario Archaeological Sites Database (OASD) to determine the presence of known archaeological sites in and around the project area; and
- A property inspection.

The objectives of the Stage 2 archaeological assessment were to provide an overview of archaeological resources on the property and to determine whether any of the resources might be artifacts and archaeological sites with cultural heritage value or interest and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the objectives of the Stage 2 property assessment are as follows:

- To document all archaeological resources on the property;
- To determine whether the property contains archaeological resources requiring further assessment; and
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.



The Stage 1 and 2 assessment of the Project Area was conducted under archaeological consulting licence P1056, issued to Jamie Lemon of Golder. Due to extenuating personal circumstances the PIF was transferred in November 2017 from Jamie Lemon to Rhiannon Fisher (P468), also of Golder, who will take on the responsibility of the Stage 1 and 2 reporting (PIF P468-004-2017). Permission to enter private properties was not required, as all visual assessments were made from the Victoria Square Boulevard Right-of-Way (ROW); permission to conduct test pit survey within the ROW was provided by the City of Markham through HDR.

1.2 Historical Context

1.2.1 Post-Contact Aboriginal Occupation of Southern Ontario

The post-contact Aboriginal occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples by the New York State Iroquois and the subsequent arrival of Algonkian-speaking groups from northern Ontario at the end of the 17th century and beginning of the 18th century (Schmalz 1991).

Following the introduction of Europeans to North America, the nature of First Nations settlement size, population distribution, and material culture shifted as settlers began to colonize the land. Despite this shift in First Nations life ways, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009:114). As a result, First Nation peoples of southern Ontario have left behind archaeologically significant resources throughout southern Ontario which show continuity with past peoples, even if this connection has not been recorded in historical Euro-Canadian documentation.

The Project Area is situated within the former Geographic Township of Markham, County of York, Ontario. The Project Area is within lands that were part of Treaty Number 13, conducted between the Mississaugas and the Crown in 1785. Treaty 13, also known as the Toronto purchase is described as follows:

On the 23rd day of September, 1787, ... Sir John Johnson, representing the King and Wabukanyne, Neace and Paquan, Principal Chief and Warchiefs of the Mississa[auga] Nation at the Carrying Place, did execute an agreement for the purpose of conveying a tract of land to the King, but it has been ascertained that the Instrument was defective and imperfect, and nothing was done about carrying it out until the first day of August, 1805, an Indenture was made, at the Rive Credit at Lake Ontario, between William Claus, Esquire, Deputy Superintendent General and Deputy Inspector General of Indians and of their Affairs, for and in behalf of Our Sovereign Lord the King and the Principal Chiefs, Warriors and people of the Mississa[uga] Nation of Indians. This purchase ..., is known as the Toronto Purchase and described as follows: “Commencing at the east bank of the south outlet of the River Etobicoke; thence up the same following the several windings and turnings of the said river to a maple tree, blazed on 4 sides at a distance of three quarters in a straight line from the mouth of the said river; thence north twenty-two degrees west twenty-four miles and one quarter; thence north sixty-eight degrees east fourteen miles; thence south twenty-two degrees east twenty-eight miles more or less to Lake Ontario; then westerly along the water’s edge of Lake Ontario, to the eastern bank of the south outlet of the River Etobicoke, being the place of beginning, together with all the woods and waters thereon.” This last described parcel is only a small portion of the parcel, supposed to have been conveyed by the



Indians, September 23rd, 1787, and the consideration demanded by the Indians was only ten shillings.

Morris 1943: 21-22

1.2.2 Euro-Canadian Settlement

1.2.2.1 Geographic Township of Markham

The former Township of Markham, named after William Markham, the Archbishop of York, England, was first surveyed in 1793-1794 as part of the larger survey of the County of York and contained 67,578 acres (27,348 ha). The survey organized the territory into ten north-south concessions each 1¼ miles apart, running from Yonge Street and Vaughan Township in the west to Pickering Township in the east. The concessions were divided by six east-west side roads, also 1¼ miles apart. At the time of the survey, these side roads were little more than blazes on trees indicating where the roads would eventually be opened. The township was bounded by the Whitchurch Town Line (Gormley Sideroad) on the north, Yonge Street on the west, the Scarborough Town Line (now Steeles Avenue) on the south and Pickering Township on the east. Concessions were divided into 200 acre lots. In 1791, the Constitutional Act reserved a seventh-part of all lands granted in new townships for the Protestant clergy. In 1792, Simcoe similarly reserved a seventh-part of all lands granted for the Crown. Thus, it was that two of every seven lots in Markham Township were Crown and Clergy Reserves, with the exception of lots fronting Yonge Street. The reservation of lots hindered settlement in the township by blocking access to water sources and leaving roads unopened adjacent to the Reserve lots (Champion 1979:9). By the mid-1800s both the Crown and Clergy lots had been released and sold to private owners.

The first major wave of European settlement in Markham Township was led by William Moll Berczy (aka Johann Albrecht Ulrich Moll, aka Wilhelm Albert Ulrich von Mollo, aka Albert-Guillaume Berczy) (b. 1744, d. 1813). Berczy was a German merchant, painter and, eventually, developer who recruited over 200 people from northern Germany to settle in the Genesee area of New York State on behalf of the British based Genesee Association (Stagg 1983). The first group of settlers arrived in America in 1792, and spent the next two years engaged in legal battles to get access to their promised land and supplies. Seeking to remedy the situation, Berczy assisted with the formation of the German Company intent on acquiring land in Upper Canada. In 1794, the German Company was granted 64,000 acres (25,900 ha) west of the Grand River with the promise of more when the land was settled. The settlers travelled to Newark (Niagara-on-the-Lake) in June of 1794 and were informed that Simcoe had altered their agreement and they were now to settle in Markham Township due to Lieutenant Governor Simcoe's desire to see development in the vicinity of the newly formed Town of York. The German Company settlers once again packed their belongings and moved en masse to Markham Township. Approximately 190 German Company settlers, including some Pennsylvanians who had joined Berczy's group as they traveled, spent the winter of 1794 camping in the uncleared forests of Markham Township. The next two years were no easier for the settlers and several of them died of starvation in 1795 and 1796 (Champion 1979:13).

Other groups of early settlers in Markham Township included a collection of people known as the French *émigrés*, and the Pennsylvania Dutch. The French *émigrés* included a group of approximately 30 French aristocrats who had fled France to England to escape the French Revolution. By 1799, the *émigrés* had traveled to York and were settled on lots fronting Yonge Street in Markham Township. The settlement of the aristocrats in Markham was a failure and, with the exception of Laurent Quetton St. George, who prospered through trade connections with local First Nations and other settlers, all of the *émigrés* had returned to France by 1815 (Champion 1979:26).



The Pennsylvania Dutch, who were in fact Germans or German speaking Swiss, had settled in America as early as the 17th century. The confusion in the name seems to derive from the similarity between the word 'Deutsch' and the word 'Dutch'. Towards the end of the 1700s many Pennsylvanian Dutch families began migrating into Upper Canada which offered farmland at a much better price than could be acquired in Pennsylvania at the time. At the turn of the 18th century, numerous Pennsylvanian Dutch families made the eight week journey to Markham Township where they purchased land or occasionally traded their sturdy Conestoga horses for land. Most of the Pennsylvania Dutch settled in the eastern half of Markham Township (Champion 1979:27). The Markham Pennsylvania Dutch were mostly Mennonites, whose communal, self-sufficient lifestyle was well suited to the hardships of settlement in Upper Canada.

The remainder of settlers in early Markham Township tended to be of American or British origin and included English, Irish, and Scots all fleeing from European famine and poverty. The first settlers to complete their settlement duties, including clearing land and roads and constructing housing, were Thomas Kinnear, Lot 48, Concession 1, Nicholas Miller, Lot 34, Concession 1 and John Lyons Lot 33, Concession 1. These men received their land deeds in 1796 (Bruce and Gohn 1950:5). All of these settlers were located on the western border of the township fronting Yonge Street.

The majority of free lots in Markham Township were partially cleared and had buildings erected on them, in accordance with the duties of settlement, by 1809 (Greenwald 1973:46). The Reserve Lots were mostly leased to settlers by the 1820s.

Early roads in Markham Township, as elsewhere, tended to follow the topography of the landscape rather than the straight survey lines. It was not until the early 20th century, with the increase in large engineering works that many of these roads were straightened out through the construction of iron and concrete bridges across the Rouge River and its associated tributaries.

In 1817 the Township of Markham had 14 mills in operation, including both grist mills and saw mills. Twelve of the mills were located on the Rouge River and two of the mills were located on the Don River (Champion 1979:116). By 1824, three wool dressing mills were in operation and the number of grist and saw mills had increased to a total of 10 sawmills and 5 grist mills. Two decades later, in 1842, the population of Markham Township had increased to 5,698 and the number of mills in operation had more than doubled to 24 sawmills and 11 grist mills (Robinson 1885 Part II:120).

By 1850 the population of Markham Township had increased slightly to 6,868 and there were also a few more mills in operation: 27 sawmills and 13 grist mills. The farm productivity recorded for the township in 1849 was: 150,000 bushels of wheat, 11,000 bushels of barley, 7,000 bushels of rye, 145,000 bushels of oats, 45,000 bushels of peas, 55,000 bushels of potatoes, 3,000 bushels of turnips, and 3,000 tons of hay. (Robinson 1885 Part II:120).

The population of Markham Township continued to increase over the next two decades and by 1871 it was 8,152 (Robinson 1885 Part II:121). The population of the township dropped to 6,375 by 1881, however this was caused by a reduction in land area assigned to the township due to the incorporation of the villages of Markham, Richmond Hill and Stouffville, rather than a reduction in the number of people living in the region. The area of the township was reduced to 66,475 acres (26,901 ha).



York County was abolished in 1971 and replaced by the Regional Municipality of York. At this time, the northern portion of the Township of Markham was annexed into Richmond Hill, which had been elevated from a village to a town in 1957, and the newly formed Town of Whitchurch-Stouffville, an amalgamation of the former Township of Whitchurch and the former Village of Stouffville. The southern portion of the Township of Markham was transformed into the Town of Markham.

Victoria Square is an unincorporated community in the City of Markham, centered at the intersection of Victoria Square Boulevard and Elgin Mills Avenue East. The following is an excerpt of a City of Markham report (City of Markham 2012:2-3):

Victoria Square is one of Markham's oldest communities. Unlike many other villages and hamlets in Markham's early history, this community did not evolve around a mill site or railway; rather it developed at the crossroads of Woodbine Avenue and the Markham and Elgin Mills Plank Road. Initially, European settlement took the form of farms settled by American immigrants of Pennsylvania-German origin, including the Heise, Schell and Horner families, as well as English families such as the Reads and Frisbys. The core of the community began with the establishment of Primitive Methodist and Wesleyan Methodist churches during the 1830s-1840s, followed by the emergence of typical 19th century businesses such as an inn serving travelers on the plank road, general stores, blacksmith shops, boot and shoe makers, and carriage makers. Village lots were subdivided from farm properties at the crossroads to accommodate the businesses and industries, as well as providing building lots for the people employed in these enterprises. A post office was established in 1854.

The village was formed from the subdivision of four, 200-acre lots: the east halves of Lots 25 and 26, Concession 3, and the west halves of Lots 25 and 26, Concession 4. Originally settled by two members of Berczy's original party—Henry Pingle and Henry Schnell—and John Kennedy between 1799 and 1801, the lots were subsequently divided and sold in the first decades of the 19th century to a number of individuals, families, and businesses. The community grew steadily, emerging as a result of the Primitive and Wesleyan Methodists establishing their meeting houses at the crossroads in the 1830s and 1840s. An inn, a general store, blacksmith shops, wagonmakers, and Temperance hall soon followed, and into the early years of the 20th century a post office, stores, and service station had been added to support the surrounding farms. However, this commercial core began declining in the 1960s, with some of the businesses and church properties being incrementally replaced by residential housing (MHBC 2014:8-16).

1.2.2.2 Lots and Concessions within Project Area

The Project Area is located on part of Lots 21-28, Concessions 3 and 4, Geographic Township of Markham. Map 2 illustrates the Project Area in relation to these lots. All of the lots adjacent to the Project Area have listed owners in 1860, with many lots having structure on them. Aside from the village of Victoria Square, no structures on other lots are located within the Project Area.

Map 3 illustrates the Project Area within the Township of Markham on the 1878 map from the *Illustrated Historical Atlas of the County of York* (Mile and Co. 1878). As with the 1860 map, aside from the village of Victoria Square, no structures on other lots are located within the Project Area.



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Further to the above description of the village of Victoria Square, various components of the historic community were located in close proximity to the Project Area including the post office, two churches, and associated cemeteries, several stores and an inn; these components are illustrated on Map 2 and Map 3. The Victoria Square United Church and cemetery is located on the west side of the Project Area, south of Elgin Mills Road East, while the Primitive Methodist Church was located on the east side of the Project Area, north of Elgin Mills Road East; the cemetery associated with the Methodist Church is also located adjacent to the roadway. A schoolhouse is also noted on the 1878 map (Map 3), located in close proximity to the southern part of the Project Area on the east side.

1.3 Archaeological Context

1.3.1 The Natural Environment

The Project Area is situated within the “Peel Plain” physiographic region; as described by Chapman and Putnam (1984: 174):

The Peel plain is a level-to-undulating tract of clay soils (Photo 70) covering 300 square miles across the central portions of the Regional Municipalities of York, Peel, and Halton. The general elevation is from 500 to 750 feet a.s.l. and there is a gradual and fairly uniform slope toward Lake Ontario. Across this plain the Credit, Humber, Don, and Rouge Rivers have cut deep valleys, as have other streams such as the Bronte, Oakville, and Etobicoke Creeks.

The soils of the Project Area consist predominantly of imperfectly drained clay, clay-loam, and loam soils that lend themselves well to agricultural practices. According to Hoffman and Richards (1955) Chinguacousy clay loam and Milliken loam make up the majority of the soils contained within the Project Area, with a small area of Peel Clay in the north part of the Project Area. These three soil types are typically used for general farming and are well suited to the production of cereal crops. These types of soils would have been acceptable for pre-contact Aboriginal agricultural practices. The closest potable water source in pre-contact times would have been a creek tributary of the Rouge River watershed, which runs parallel to the Project Area, between 50 and 60 metres (m) from the Project Area, along the east side of the southern third of the Project Area, before crossing the Project Area. The topography of the area is gently rolling with an overarching slope to the south towards Lake Ontario, which is located approximately 25 kilometers (km) south of the Project Area.

1.3.2 General Overview of the Pre-Contact Period in Southern Ontario

The culture history of south-central Ontario, based on Ellis and Ferris (1990), is summarised in Table 1.

Table 1: Pre-contact cultural chronology for south-central Ontario

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 – 8000 B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (narrow points)	2000 - 1800 B.C.	increasing site size
	Broadpoints	1800 - 1500 B.C.	large chipped lithic tools



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Table 1: Pre-contact cultural chronology for south-central Ontario

Period	Characteristics	Time Period	Comments
	Small Points	1500 – 1100 B.C.	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 B.C.	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 B.C. - A.D. 500	increased sedentism
	Princess Point	A.D. 550 - 900	introduction of corn
Late Woodland	Early Ontario Iroquoian	A.D. 900 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Various Algonkian Groups	A.D. 1700 - 1875	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1796 - present	European settlement

1.3.3 Pre-contact Aboriginal Documentation

Previous archaeological assessments and research surveys have demonstrated that the area now occupied by Markham was intensively occupied by pre-contact Aboriginal people.

The following subsections outline the cultural or temporal periods recognized for southern Ontario more generally.

1.3.3.1 Paleo-Indian Period

The first human occupation of south-central Ontario begins just after the end of the Wisconsin Glacial Period. Although there were a complex series of ice retreats and advances which played a large role in shaping the local topography, south-central Ontario was finally ice free by 12,500 years ago.

The first human settlement can be traced back 11,000 years, when this area was settled by Native groups that had been living south of the Great Lakes. The period of these early Native inhabitants is known as the Paleo-Indian Period (Ellis and Deller 1990).

Our current understanding of settlement patterns of Early Paleo-Indian peoples suggests that small bands, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending over large territories. One of the most thoroughly studied of these groups followed a seasonal round that extended from as far south as Chatham to the Horseshoe Valley north of Barrie. Early Paleo-Indian sites tend to be located in elevated locations on well-drained loamy soils. Many of the known sites were located on former beach ridges associated with glacial lakes. There are a few extremely large Early Paleo-Indian sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares. It appears that these sites were formed when the same general locations were occupied for short periods of time over the course of many years. Given their placement in locations conducive to the interception of migratory mammals such as caribou, it has been suggested that they may represent communal hunting camps. There are also smaller Early Paleo-Indian camps scattered throughout the interior of southwestern and south-central Ontario, usually situated adjacent to wetlands.



The most recent research suggests that population densities were very low during the Early Paleo-Indian Period (Ellis and Deller 1990:54). Archaeological examples of Early Paleo-Indian sites are rare.

The Late Paleo-Indian Period (8400-8000 B.C.) has been less well researched, and is consequently more poorly understood. By this time the environment of south-central Ontario was coming to be dominated by closed coniferous forests with some minor deciduous elements. It seems that many of the large game species that had been hunted in the early part of the Paleo-Indian Period had either moved further north, or as in the case of the mastodons and mammoths, become extinct.

Like the Early Paleo-Indian peoples, Late Paleo-Indian peoples covered large territories as they moved about in response to seasonal resource fluctuations. On a province wide basis Late Paleo-Indian projectile points are far more common than Early Paleo-Indian materials, suggesting a relative increase in population.

The end of the Late Paleo-Indian Period was heralded by numerous technological and cultural innovations that appeared throughout the Archaic Period. These innovations may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

1.3.3.2 *Archaic Period*

During the Early Archaic Period (8000-6000 B.C.), the jack and red pine forests that characterized the Late Paleo-Indian environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis *et al.* 1990:68-69). One of the more notable changes in the Early Archaic Period is the appearance of side and corner-notched projectile points. Other significant innovations include the introduction of ground stone tools such as celts and axes, suggesting the beginnings of a simple woodworking industry. The presence of these often large and not easily portable tools suggests there may have been some reduction in the degree of seasonal movement, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic Period (6000-2500 B.C.) the trend to more diverse toolkits continued, as the presence of netsinkers suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured.

Bannerstones are carefully crafted ground stone devices that served as a counterbalance for *atlatls* or spear-throwers. Another characteristic of the Middle Archaic is an increased reliance on local, often poor-quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, it was possible for them to visit a primary outcrop of high quality chert at least once during their seasonal round. However, during the Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high quality raw material. In these instances, lower quality materials which had been deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size was probably the result of gradual region-wide population growth which led to the infilling of the landscape. This process forced a reorganization of Native subsistence practices, as more people had to be supported from the resources of a smaller area. During the latter part of the Middle Archaic, technological innovations such as fish weirs have been documented as well as stone tools especially designed for the preparation of wild plant foods.



It is also during the latter part of the Middle Archaic Period that long distance trade routes began to develop, spanning the northeastern part of the continent. In particular, native copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis et al. 1990:66). By 3500 B.C. the local environment had stabilized in a near modern form (Ellis et al. 1990:69).

During the Late Archaic (2500-950 B.C.) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had definitely expanded. It is during the Late Archaic that the first true cemeteries appear. Before this time individuals were interred close to the location where they died. During the Late Archaic, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery. Consequently, it is not unusual to find disarticulated skeletons, or even skeletons lacking minor elements such as fingers, toes, or ribs, in Late Archaic burial pits.

The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses.

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also during the Late Archaic the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods. Other artifacts such as polished stone pipes and banded slate gorgets also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the *birdstone*. Birdstones are small, bird-like effigies usually manufactured from green banded slate.

1.3.3.3 *Woodland Period*

The Early Woodland Period (950 to 400 B.C.) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples. The first pots were very crudely constructed, thick walled, and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil. These vessels were not easily portable, and individual pots must not have enjoyed a long use life. There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that these poorly constructed, undecorated vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this limited ceramic technology, the life-ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic Period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads.

Likewise, the thin, well-made projectile points which were produced during the terminal part of the Archaic Period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.



The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland Period. During the last 200 years of the Early Woodland Period, projectile points manufactured from high quality raw materials from the American Midwest begin to appear on sites in southwestern Ontario.

In terms of settlement and subsistence patterns, the Middle Woodland (400 B.C. to 500 A.D.) provides a major point of departure from the Archaic and Early Woodland Periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish were becoming an even more important part of the diet.

In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often heavily decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland Period that rich, densely occupied sites appear along the margins of major rivers and lakes. While these areas had been utilized by earlier peoples, Middle Woodland sites are significantly different in that the same location was occupied off and on for as long as several hundred years and large deposits of artifacts often accumulated. Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on over the course of the year. There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special purpose camps from which localized resource patches were exploited. This shift towards a greater degree of sedentism continues the trend witnessed from at least Middle Archaic times, and provides a prelude to the developments that follow during the Late Woodland Period.

The Late Woodland Period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990:185; Smith 1990; Williamson 1990:312). Corn may have been introduced into southwestern Ontario from the American Midwest as early as 600 A.D. or a few centuries before. Corn did not become a dietary staple, however, until at least three to four hundred years later, and then the cultivation of corn gradually spread into south-central and southeastern Ontario.

During the early Late Woodland, particularly within the Princess Point Complex (circa A.D. 500-1050), a number of archaeological material changes have been noted: the appearance of triangular projectile point styles, first seen during this period begin with the Levanna form; cord-wrapped stick decorated ceramics using the paddle and anvil forming technique take over from the mainly coil-manufactured and dentate stamped and pseudo-scallop shell impressed ceramics; and if not appearance, increasing use of maize (*Zea mays*) as a food source (e.g., Bursey 1995; Crawford et al. 1997; Ferris and Spence 1995:103; Martin 2004 [2007]; Ritchie 1971:31-32; Spence et al. 1990; Williamson 1990:299).

The Late Woodland Period is widely accepted as the beginning of agricultural life ways in south-central Ontario. Researchers have suggested that a warming trend during this time may have encouraged the spread of maize into southern Ontario, providing a greater number of frost-free days (Stothers and Yarnell 1977). Further, shifts in the location of sites have also been identified with an emphasis on riverine, lacustrine, and wetland occupations set against a more diffuse use of the landscape during the Middle Woodland (Dieterman 2001).



The first agricultural villages in southern Ontario date to the 10th century A.D. Unlike the riverine base camps of the Middle Woodland Period, these sites are located in the uplands, on well-drained sandy soils. Categorized as "Early Ontario Iroquoian" (900-1300 A.D.), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which later inhabited southern Ontario at the time of first European contact, back to these early villagers.

Village sites dating between 900 and 1300 A.D., share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were actually not all that large, averaging only 12.4 m in length (Dodd et al. 1990:349; Williamson 1990:304-305). It is also quite common to find the outlines of overlapping house structures, suggesting that these villages were occupied long enough to necessitate re-building.

The Jesuits reported that the Huron moved their villages once every 10-15 years, when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2010). It seems likely that Early Ontario Iroquoians occupied their villages for considerably longer, as they relied less heavily on corn than did later groups, and their villages were much smaller, placing less demand on nearby resources.

Judging by the presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits, agriculture was becoming a vital part of the Early Ontario Iroquoian economy. However, it had not reached the level of importance it would in the Middle and Late Ontario Iroquoian Periods. There is ample evidence to suggest that more traditional resources continued to be exploited, and comprised a large part of the subsistence economy. Seasonally occupied special purpose sites relating to deer procurement, nut collection, and fishing activities, have all been identified. While beans are known to have been cultivated later in the Late Woodland Period, they have yet to be identified on Early Ontario Iroquoian sites.

The Middle Ontario Iroquoian Period (1300-1400 A.D.) witnessed several interesting developments in terms of settlement patterns and artifact assemblages. Changes in ceramic styles have been carefully documented, allowing the placement of sites in the first or second half of this 100-year period. Moreover, villages, which averaged approximately 0.6 hectares in extent during the Early Ontario Iroquoian Period, now consistently range between one and two hectares.

House lengths also change dramatically, more than doubling to an average of 30 m, while houses of up to 45 m have been documented. This increase in longhouse length has been variously interpreted. The simplest possibility is that increased house length is the result of a gradual, natural increase in population (Dodd et al. 1990:323, 350, 357; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around 1300 A.D. Other possible explanations involve changes in economic and socio-political organization (Dodd et al. 1990:357). One suggestion is that during the Middle Ontario Iroquoian Period small villages were amalgamating to form larger communities for mutual defense (Dodd et al. 1990:357). If this was the case, the more successful military leaders may have been able to absorb some of the smaller family groups into their households, thereby requiring longer structures. This hypothesis draws support from the fact that some sites had up to seven rows of palisades, indicating at least an occasional need for strong defensive measures. There are, however, other Middle Ontario Iroquoian villages which had no palisades present (Dodd et al. 1990). More research is required to evaluate these competing interpretations.



The lay-out of houses within villages also changes dramatically by 1300 A.D. During the Early Ontario Iroquoian Period villages were haphazardly planned, with houses oriented in various directions. During the Middle Ontario Iroquoian Period villages are organized into two or more discrete groups of tightly spaced, parallel aligned, longhouses. It has been suggested that this change in village organization may indicate the initial development of the clans which were a characteristic of the historically known Iroquoian peoples (Dodd et al. 1990:358).

Initially at least, the Late Ontario Iroquoian Period (1400-1650 A.D.) continues many of the trends which have been documented for the proceeding century. For instance, between 1400 and 1450 A.D. house lengths continue to grow, reaching an average length of 62 m. One longhouse excavated on a site southwest of Kitchener was an incredible 123 m (Lennox and Fitzgerald 1990:444-445). After 1450 A.D., house lengths begin to decrease, with houses dating between 1500-1580 A.D. averaging 30 m in length.

Why house lengths decrease after 1450 A.D. is poorly understood, although it is believed that the even shorter houses witnessed on Historical Period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990:405, 410).

Village size also continues to expand throughout the Late Ontario Iroquoian Period, with many of the larger villages showing signs of periodic expansions. The Late Middle Ontario Iroquoian Period and the first century of the Late Ontario Iroquoian Period was a time of village amalgamation. These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

1.3.4 Previously Identified Archaeological Sites and Surveys

Previous archaeological assessments and research surveys have demonstrated the lands that later became the County of York were utilized by pre-contact Aboriginal peoples. A review of the OASD maintained by the MTCS determined that 17 previously registered archaeological sites are located within 1 km of the Project Area including nine pre-contact Aboriginal site and eight historical Euro-Canadian sites. Eight of the previously identified sites are located within the 300 m of the Project Area (Table 2).

Multiple archaeological assessments have previously been completed within and adjacent to the Project Area, resulting in the identification of many of the sites listed in Table 2. In the north part of the corridor, east of Victoria Square Boulevard, Archaeological Services Inc. (ASI) completed two Stage 1 and 2 archaeological assessments. A large section of Lot 24, Concession 4 was subject to Stage 1 and 2 archaeological assessment; three historical Euro-Canadian sites, Peach 1 (AIGu-462), Peach 2 (AIGu-463), and Peach 3 (AIGu-464) were identified during the Stage 2 survey (ASI 2011). Stage 3 archaeological assessment was recommended for all three sites to define the nature, extent, and significance of each site.

The Stage 3 assessments of Peach 1 (AIGu-462) and Peach 2 (AIGu-463) revealed these areas had been impacted by 20th century landscaping activities; no in situ 19th century deposits were discovered at either site and no further assessment was recommended (ASI 2012a, 2012b). The Stage 3 assessment of Peach 3 (AIGu-464) yielded an area of 19th century domestic artifacts; this site was recommended for Stage 4 mitigation by excavation ahead of development of the property (2012c).



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The Stage 4 mitigation by excavation of Peach 3 (AIGu-464) resulted in the recovery of 33,277 historical artifacts, dating from the 1830s to the early 20th century. The site was attributed to both the Peach and Stoutenburgh families, who occupied this part of Lot 27 at different times through the 19th century (ASI 2014a). A stone-lined cellar, drain, well, and various other cultural features and posts were also identified.

The second assessment in the north part of the Project Area was a Stage 1 and 2 assessment of 10925 and 10945 Woodbine Avenue (ASI 2014b). No archaeological resources were identified during the Stage 2 survey and no further archaeological assessment was recommended for this property.

In the south end of the Project Area, on the east side of Victoria Square Boulevard, a Stage 1 and 2 archaeological assessment was completed ahead of a residential development (Archeoworks 2001). Two archaeological sites were identified, H1 and P1 (AIGu-237). Due to the low yield and non-diagnostic nature of the historical cluster it was determined further assessment of this site was unlikely to contribute significantly to the understanding of the history of Markham; no further archaeological assessment was recommended for H1. P1 (AIGu-237) was an isolated pre-contact biface tool; due to the isolated and non-diagnostic nature of the recovery, no further archaeological assessment was recommended for P1 (AIGu-237).

In the south end of the Project Area, on the west side of Victoria Square Boulevard, a Stage 1 and 2 archaeological assessment was completed ahead of a residential development (ASI 2005). Two pre-contact Aboriginal sites were identified during the Stage 2 survey, the Cathedral Town site (AIGu-322), and the Golden Tower site (AIGu-303). An isolated pre-contact Aboriginal Middle Archaic projectile point was recovered from the Cathedral Town site (AIGu-322); no further archaeological assessment was recommended for the Cathedral Town site (AIGu-322). A total of 53 lithic artifacts were recovered from the Golden Tower site (AIGu-303) over a 40 m by 40 m area; the Golden Tower site (AIGu-303) was recommended for Stage 3 assessment, as it potentially represented a significant pre-contact Aboriginal resources. Stage 3 assessment was conducted on the site, however only one additional lithic artifact was recovered; no further archaeological assessment was recommended (ASI 2003).

A number of areas adjacent to the Project Area appear to have been developed into residential areas within the last 10 years; these areas include neighbourhoods in the northwest, centre-east, centre-west, and southeast portions of the corridor. Archaeological assessments would have been undertaken in these areas; unfortunately, a search of the Ontario Provincial Reports Register maintained by the MTCS did not yield any results for archaeological assessment reports in these areas.

Table 2: Previously Identified Archaeological Sites within 1 Kilometre of Project Area

Borden Number	Site Name	Site Type	Time Period
AIGu-462*	Peach 1	Homestead	Euro-Canadian
AIGt-463*	Peach 2	Homestead	Euro-Canadian
AIGu-464*	Peach 3	Homestead	Euro-Canadian
AIGu-237*	AIGu-237	Findspot	Pre-Contact
AIGu-301*	Carver	Dump Site	Euro-Canadian
AIGu-304*	The Carlton Creek Site	Scatter	Pre-Contact
AIGu-302*	Dietzmann	Homestead	Euro-Canadian



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Table 2: Previously Identified Archaeological Sites within 1 Kilometre of Project Area

Borden Number	Site Name	Site Type	Time Period
AlGu-305*	Carlton Creek Northeast	Findspot	Pre-Contact, Middle Archaic
AlGu-471	P5	Unknown	Pre-Contact, Paleo-Indian and Middle Archaic
AlGu-499	Berczy H5 Site	Homestead	Euro-Canadian
AlGu-497	Berczy H3 Site	Homestead	Euro-Canadian
AlGu-4	Heise	Other-Camp / Campsite	Pre-Contact
AlGu-322	Cathedral Town	Findspot	Pre-Contact, Middle Archaic
AlGu-300	The Klinck Site	Homestead	Euro-Canadian
AlGu-11	Barker	Campsite	Pre-Contact
AlGu-303	Golden Tower	Campsite	Pre-Contact, Late Archaic
AlGu-306	Carlton Creek Northwest	Findspot	Pre-Contact

*Located within 300 m of Project Area



2.0 FIELD METHODS

2.1 Existing Conditions and Land Use

The Project Area is currently comprised of a long linear road corridor encompassing Victoria Square Boulevard (formerly Woodbine Avenue) between Woodbine Bypass (north and south connections), and the associated ROW on both the east and west side of the road. The Project Area runs north-south and is predominately lined on the east and west sides with residential lots and agricultural fields that have been graded and cleared of topsoil in advance of residential development. Lots abutting the ROW for Victoria Square Boulevard fall into three types. The first being those lots that are developed and have recently built homes on them, the second being those lots that are developed and have older 19th and 20th century homes on them, and the third being agricultural fields that have been graded, removed of topsoil, and are in various stages of pre-development. Due to this difference in lot types along the length of Victoria Square Boulevard, there is a narrowing and widening of the ROW as well as an increase or decrease in the amount of buried utilities and infrastructure within the ROW in relation to the type of lots directly adjacent at a given point.

The Stage 1 property inspection of the Project Area was conducted on April 12, 2016 under archaeological consulting licence P1056, issued to Jamie Lemon of Golder. The weather at the time of the property visit was ideal with partly cloudy skies, light snow flurries at times and temperatures that ranged from 0 - 4 degrees Celsius. Field and lighting conditions during the assessment were excellent and at no time were field conditions found to be detrimental to the completion of the property inspection.

The Stage 2 test pit survey was conducted on June 13, 2017 under archaeological consulting licence P1056, issued to Jamie Lemon of Golder. The weather at the time of the property visit was ideal with partly cloudy skies, with mild temperatures and intermittent rain drizzle. Field and lighting conditions during the assessment were excellent and at no time were field conditions found to be detrimental to the completion of the test pit survey.

Field supervision duties were delegated to Mr. Shawn Bayes (R356) (Stage 1 property inspection) and Mr. Chris Lemon (R289) (Stage 2 test pit survey) of Golder. Mr. Bayes and Mr. Lemon were delegated the responsibility of undertaking the archaeological fieldwork at the study area as per Section 12 of the MTCS 2013 *Terms and Conditions for Archaeological Licences*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*.

2.2 Stage 1 Property Inspection

The property inspection was conducted by Mr. Shawn Bayes (R356) of Golder as delegated by Jamie Lemon as per Section 12 of the MTCS 2013 *Terms and Conditions for Archaeological Licences*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*. The property inspection consisted of inspection of the entire Project Area; whereby, the current conditions of the Project Area were documented, and the entire Project Area was subjected to extensive photo documentation. Map 4 provides an aerial image of the Project Area. Map 5 illustrates the Stage 1 assessment results and provides a photographic key for images presented in this report. Images 1 to 13 illustrates conditions representative of the Project Area.

The Project Area for the Stage 1 archaeological assessment included a 30 m buffer, 15 m east and west from the centre line of Victoria Square Boulevard. The majority of this buffer is contained within the road allowance for Victoria Square Boulevard., however in some areas there is a perceived narrowing of the right of way, and thus a 15 m buffer on either side of the centre line may impact private property.



Approximately three-quarters of the Project Area that fronts onto the Victoria Square Boulevard ROW is comprised of residential lots. Two-thirds of these lots consist of recently built residential structures, a driveway, short boulevard, and lawn area and can be characterized as townhomes or tightly packed free-hold houses. The remaining one-third can be characterized as older homes, either 19th or 20th century homes; this is most evident around the intersection of Victoria Square Boulevard and Elgin Mills Avenue East, where the village of Victoria Square was located. Map 4 illustrates the location of listed heritage properties and properties of cultural heritage value or interest; it is evident the majority of them are clustered around the intersection of Victoria Square Boulevard and Elgin Mills Avenue East.

The remainder of the Project Area is currently divided into park land, school grounds, cemetery grounds, and former agricultural lands that have been graded, topsoil has largely removed and in various stages of pre-residential development. At the time of property inspection, the agricultural fields showed signs of recent soil manipulation and topsoil removal and there is evidence of surveyor staking and possible buried infrastructure.

Overall much of the Project Area was found to be previously disturbed due to the current roadway, roadway shoulder, ditches, sidewalks, and boulevards. Evidence of previous disturbance outside of the roadway was most evident in areas where residential development has been undertaken within the last 10 years, or where development is imminent. Narrow areas within the Project Area that were identified as not obviously disturbed were identified in relation to the older 19th or 20th century homes around the intersection of Victoria Square Boulevard and Elgin Mills Road East. These areas where no obvious disturbance was observed were manicured lawn areas adjacent to previously disturbed roadway infrastructure (Image 5, Image 8).

Two cemeteries are located adjacent to the Project Area (Image 7, Image 10). Both cemeteries have grave markers in close proximity to the roadway.

2.3 Stage 2 Archaeological Assessment

Stage 2 test pit survey was undertaken in areas that were identified during the Stage 1 as exhibiting archaeological potential (Map 5). Prior to undertaking the Stage 2 survey utilities locates were conducted on the property to identify any subsurface utilities infrastructure. The results of the underground utilities locates revealed significant quantities of subterranean infrastructure including Bell telephone lines, cable conduits, and natural gas mains (Map 6).

Due to the existence of significant subterranean infrastructure a modified Stage 2 test pit assessment was conducted in one area that was free of previous disturbance and subterranean infrastructure; the remaining areas of archaeological potential were determined to be previously disturbed by the installation of subsurface utilities and no test pit survey was undertaken in these areas (Map 6). While utilities locates were requested for the Project Area and marked out accordingly, a number of instances of underground utilities being present were identified within the Project Area, in areas that had been cleared by locators. As such it is crucial to examine a work area for signs of unmarked infrastructure prior to excavation and take the necessary measures to avoid damage to these cleared, but unmarked utilities. Based on utilities locates and visible previous ground disturbance only one area was found to present the potential for the recovery of intact cultural remains (Map 6). Due to the limitations of space imposed by the Project Area boundaries and existing infrastructure it was only possible to safely excavate two test pits on the northwest corner of Victoria Square and Elgin Mills; these test pits were approximately 5 m apart. The test pits were positioned between utilities infrastructure within the limits of the Project Area. Each test pit was a minimum of 30 cm in diameter and excavated 5 cm into subsoil. All test pit soil was screened through



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6 mm hardware cloth to facilitate the recovery of artifacts. The excavated test pits consisted of dark brown sandy loam over grey stony clay subsoil; the topsoil ranged in depth from 45 to 49 cm. All test pits were backfilled and returned to grade.

Both test pits yielded 19th century historical artifacts (see Section 3.1). Because of the confines imposed by the limits of the Project Area and the presence of subterranean infrastructure in close proximity to the excavated test pits, intensification of the test pits was deemed to be unsafe due to the presence of gas lines and potential Bell and cable infrastructure. All identified artifacts were recovered and returned to the lab for analysis. GPS coordinates for recorded for both test pits; test pit locations were recorded using a Garmin GPS Map62s with 3 m accuracy (Supplement B).

The remaining areas identified in the Stage 1 as exhibiting archaeological potential were photographed to show the presence of subterranean infrastructure and signs of previous disturbance.

Images 13 to 16 illustrate all aspects of the Stage 2 field work conducted as well as all field conditions encountered. All photographs were taken using an Olympus Stylus Tough 12 megapixel digital camera.



3.0 RECORD OF FINDS

Table 3 provides an inventory of the Stage 1 documentary record generated in the field and Table 4 provides an inventory of the Stage 2 documentary record generated in the field.

Table 3: Inventory of Stage 1 Documentary Record

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder office in Whitby	12 pages in field book and stored digitally on the Golder server
Hand Drawn Maps	Golder office in Whitby	1 maps (photo locations and assessment findings)
Maps Provided by Client	Golder office in Whitby	1 map stored digitally in project file
Digital Photographs	Golder office in Whitby	197 photographs stored digitally in project file

Table 4: Inventory of Stage 2 Documentary Record

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder office in Whitby	2 pages in field book and stored digitally on the Golder server
Hand Drawn Maps	Golder office in Whitby	2 maps (photo locations and assessment findings)
Maps Provided by Client	Golder office in Whitby	1 map stored digitally in project file
Digital Photographs	Golder office in Whitby	21 photographs stored digitally in project file

3.1 Stage 2 Results – Location 1

The Stage 2 test pit survey resulted in the discovery that most of the areas identified during the Stage 1 as requiring Stage 2 assessment had been previously impacted by the installation of subterranean infrastructure. A small relatively undisturbed area on the northwest corner of Victoria Square and Elgin Mills was subject to test pit survey; two test pits were excavated resulting in the recovery of 19th century historical artifacts. Because of the confines imposed by the limits of the Project Area and the presence of subterranean infrastructure in close proximity to the excavated test pits, intensification of the test pits was deemed to be unsafe due to the presence of gas lines and potential Bell and cable infrastructure.

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 and resulted in the recovery of 27 artifacts. The complete catalogue of all artifacts recovered during the Stage 2 assessment is provided in Table 7. Supplementary Document A, which illustrates the location of the archaeological site, and Supplementary Document B, which lists the UTM coordinates, are included as supplementary documents to this report.

Material culture recovered from this assessment is contained in one banker's box and will be temporarily housed at Golder's Whitby office until formal arrangements can be made for their transfer to an MTCS collections facility.



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Location 1 yielded 27 historical Euro-Canadian artifacts from two positive test pits; the summary of the recovered artifacts is presented in Table 5. Artifact counts and general dates of production are discussed below, as are artifacts of unique or special interest. Images 17 and 18 illustrate the artifacts recovered from Location 1.

Table 5: Total Stage 2 Recovered Artifacts

Artifact	Freq.	%
Ceramic	17	62.96
Structural	9	33.33
Glass	1	3.70
Total Stage 2 Artifacts	27	100

3.1.1 Ceramic Artifacts

A total of 17 ceramic fragments were recovered (all from test pit 1) during the Stage 2 assessment of Location 1, including 12 pieces of pearlware, four pieces of refined white earthenware (RWE), and one utilitarian fragment. Table 6 provides a breakdown of the ceramic assemblage by ware type.

Table 6: Total Stage 2 Recovered Ceramic Artifacts by Ware Type

Ceramic	Freq.	%
Pearlware	12	70.59
Refined White Earthenware	4	23.53
Coarse Earthenware	1	5.88
Total Stage 2 Ceramics	17	100

Pearlware

A total of 12 pieces of pearlware were recovered during the Stage 2 assessment of Location 1. Pearlware, sometimes referred to as “China glazed”, is a variety of earthenware that was popular from 1780 to 1840. Pearlware is often difficult to recognize because of its similar appearance to later whiteware ceramics, however because of the addition of cobalt, the glaze has a light blue to blue-green tint. When placed on white earthenware bisque, this glaze gave the impression of a “whiter” ware than the earlier yellow tinted creamware. All of the recovered pearlware was decorated with painted floral patterns.

The earliest painted designs on pearlware were done using only one colour, blue, with their appearance beginning in the late eighteenth century and declining in popularity around 1830. “Early Palette” colours, such as muted shades of blue, yellow, orange, brown, and green were manufactured from as early as 1795 to 1815 (Noel Hume 1969). More brilliant colours such as red, pink, bright yellow, and bright green were not used until as late as 1840 and referred to as the “Late Palette” colours (Noel Hume 1969).

Eleven of the pearlware pieces form part of a teacup decorated with a monochromatic blue floral with a band of blue around the rim on both the interior and exterior of the cup. The remaining piece was also decorated with blue floral painted patterns but originates from an alternate vessel.



RWE (Refined White Earthenware)

A total of four pieces of RWE (refined white earthenware) were recovered from Location 1, representing 23.53% of the ceramic assemblage for the property. RWE is also known in literature as “whiteware”. RWE is a variety of earthenware with a near colourless glaze that replaced earlier near white ceramics such as pearlware and creamware in the late 1820s and early 1830s, however the initial manufacture date of what archaeologists call “whiteware” is not known. Early RWE tends to have a porous paste, with more vitrified, harder, ceramics becoming increasingly common later in the 19th century.

A total of two pieces of sponged RWE were recovered from Location 1. Sponged RWE ceramics were a form of inexpensive tableware for which a sponge was used to apply an underglaze pigment. All over sponging was popular by the 1830s and remained common until the 1870s. Both of the recovered sponged fragments were decorated with blue.

A single piece of painted RWE was recovered during the Stage 2 assessment. As the name suggests painted RWE had its decorative motifs applied by an artisan using a small brush who painted the pattern directly onto the object. Painted wares can be distinguished from other decorative techniques because the brush strokes are visible in the art work. The fragment recovered from test pit 1 was decorated with a background of pink and black dot.

A single piece of blue edged RWE was recovered from Location 1. The piece is an unscalloped rim with an impressed repeating pattern and feathered blue paint which dates approximately to 1840-1860 (Miller et al. 2000).

Utilitarian

A single utilitarian fragment was recovered from Location 1, a piece of coarse red earthenware. Coarse red and yellow earthenware vessels were manufactured throughout the late 18th and 19th centuries and were the most common utilitarian ware in the first half of the 19th century, eventually being replaced by more durable stoneware vessels.

3.1.2 Structural Artifacts

A total of nine structural artifacts were recovered during the Stage 2 assessment of Location 1. The recovered artifacts include five machine cut nails, three red brick fragments, and one wire drawn nail.

The recovered nail assemblage includes machine cut and wire drawn nails. Machine cut nails were cut from a sheet of metal and have a flat head. They were in use as early as 1790, but did not become common in Ontario until 1830 (Noel Hume 1969). Wire drawn nails are identical to the type of nails in current use today, with a flat, round head and a wire shaft. Wire drawn nails became popular in the 1890s. The nail assemblage of Location 1 is comprised primarily of machine cut nails (n=5, 83.33%), though the inclusion of a wire drawn nail indicates continued use into the late nineteenth century.

3.1.3 Glass Artifacts

A single non-structural glass artifact was recovered from the test pit survey of Location 1; a clear piece of bottle glass. Bottle glass colour is extremely limited with regards to providing a temporal sequence for a site; however, the most common use of clear/colourless glass seems to be post-1870 (Lindsay 2017).



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Table 7: Location 1 Stage 2 Artifact Catalogue

Cat. #	Context	Level	Artifact	Freq.	Comments	Category	Class	Object/Function
1	Test Pit 1	TS	RWE, sponged	2	body, blue	Domestic	Ceramic	
2	Test Pit 1	TS	brick	2	red	Structural	Ceramic	Brick
3	Test Pit 1	TS	earthenware, red	1	glazed	Domestic	Ceramic	Utilitarian
4	Test Pit 1	TS	nail, machine cut	1		Structural	Metal	Nail
5	Test Pit 1	TS	RWE, painted	1	body, green leaf	Domestic	Ceramic	hollowware
6	Test Pit 1	TS	RWE, edged	1	rim, blue, straight, inc. lines, feathered	Domestic	Ceramic	flatware
7	Test Pit 1	TS	pearlware, painted	11	mono blue floral, rim band int/ext (2 plain but match)	Domestic	Ceramic	teacup
8	Test Pit 1	TS	pearlware, painted	1	blue rim, floral	Domestic	Ceramic	
9	Test Pit 2	TS	brick	1	red	Structural	Ceramic	Brick
10	Test Pit 2	TS	glass, bottle	1	clear	Domestic	Glass	
11	Test Pit 2	TS	nail, machine cut	4		Structural	Metal	Nail
12	Test Pit 2	TS	nail, wire drawn	1		Structural	Metal	Nail



4.0 ANALYSIS AND CONCLUSIONS

4.1 Stage 1 - Assessing Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks);
 - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 - Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 - Accessible or inaccessible shoreline (e.g., high bluffs, swamps, or marsh fields by the edge of a lake; sandbars stretching into marsh);
- 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;
 - Scarce raw minerals (e.g., quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of Euro-Canadian settlement; and
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a Project Area, MTCS stipulates the following:

- No areas within 300 m of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;
- No areas within 100 m of early transportation routes can be recommended for exemption from further assessment; and



- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

4.1.1 Potential for Pre- and Post-Contact Aboriginal Archaeological Resources

Following the criteria outlined above in Section 4.1 to determine pre- and post-contact Aboriginal archaeological potential, two key factors can be highlighted. The Project Area is in close proximity to potable water, and the soils of the Project Area would have been suitable for pre-contact Aboriginal agriculture. Additionally, there have been nine pre-contact Aboriginal archaeological sites identified within 1 km of the Project Area (three sites identified within 300 m of Project Area).

When the above noted archaeological potential criteria are applied to the Project Area, the Project Area exhibits archaeological potential for the identification of pre-contact and post-contact Aboriginal sites. While areas of previous disturbance eradicate the potential for the recovery of archaeological resources (Section 4.1.3), areas of no or low levels of previous disturbance retain their archaeological potential. Map 5 illustrates areas of known disturbance, as well as areas retaining potential that are recommended for Stage 2 assessment; these areas include the areas of manicured lawns adjacent to previously disturbed areas associated with the roadway.

4.1.2 Potential for Historical Euro-Canadian Archaeological Resources

Following the criteria outlined above in Section 4.1 to determine historical Euro-Canadian archaeological potential, a number of factors can be highlighted. The Project Area is located on the historic road grid; historic mapping illustrates that in 1860 and 1878 the Project Area bisected the village of Victoria Square, and many other lots adjacent to the Project Area had structures located in close proximity to the corridor. Additionally, eight historical Euro-Canadian archaeological sites have been previously identified within 1 km of the Project Area (five sites identified within 300 m of Project Area).

When the above noted archaeological potential criteria were applied to the Project Area, the Project Area exhibits archaeological potential for the identification of historical Euro-Canadian sites. While areas of previous disturbance eradicate the potential for the recovery of archaeological resources (Section 4.1.3), areas of no or low levels of previous disturbance retain their archaeological potential. Map 5 illustrates areas of known disturbance, as well as areas retaining potential that are recommended for Stage 2 assessment; these areas include the areas of manicured lawns adjacent to previously disturbed areas associated with the roadway.

4.1.3 Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists states that:

Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources.

MTCS 2011:18



The types of disturbance referred to above includes, but is not restricted to, quarrying, sewage, and infrastructure development, building footprints, and major landscaping involving grading below topsoil.

Areas identified as being previously disturbed include the current roadway, roadway shoulder, ditches, sidewalks, and boulevards

4.2 Stage 2 Analysis and Conclusions

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 and resulted in the recovery of 27 19th century historical artifacts. Because of the confines imposed by the limits of the Project Area and the presence of subterranean infrastructure in close proximity to the excavated test pits, intensification of the test pits was deemed to be unsafe due to the presence of gas lines and potential Bell and cable infrastructure.

Positive test pits associated with Location 1 were situated on a vacant lot that was known to be the location of Heise Store, built before 1860; the lot is also within the proposed Victoria Square Heritage Conservation District (Golder 2017). This lot, the former Heise Store site, has been inventoried in the *Victoria Square Heritage Conservation District Building and Property Inventory 2010*. Mapping in 1860 and 1878 (Map 2, Map 3) illustrate the northwest corner of Victoria Square Boulevard and Elgin Mills Road to, at this time, be a cluster of buildings associated with the village of Victoria Square. According to the *Victoria Square Heritage Conservation District Building and Property Inventory 2010* the store was a hardware and dry goods store in a brick building.

The most prominent artifact recovered from Location 1 were ceramic pearlware fragments (n=12, 70.6% of ceramic assemblage); pearlware is a variety of earthenware that was popular from 1780 to 1840. A small component RWE (n=4) was recovered; RWE replaced earlier near white ceramics such as pearlware and creamware in the late 1820s and early 1830s. The recovered nail assemblage includes machine cut (n=5) and one wire drawn nail. Machine cut nails were in use as early as 1790, but did not become common in Ontario until 1830 (Noel Hume 1969); wire drawn nails became popular in the 1890s.

The analysis of the recovered artifacts suggests this site area may pre-date the operation of the Heise Store, particularly given the inclusion of pearlware ceramics. This lot was owned by Jacob Heise in the early part of the 1800s, who sold it to James Stoutenburgh in 1850; Mr. Stoutenburgh sold the lot back to Jacob Heise in 1856 (MHBC 2014). It is possible the site corresponds to the perceived occupation of the lot by Jacob Heise prior to 1850.

Location 1 is considered to exhibit cultural heritage value and interest related to the 19th century use of this lot. Recommendations for further assessment of Location 1 are provided in Section 5.0. Location 1 has been registered with the MTCS under Borden number AIGu-510.

Given the issues encountered during the test pit survey at the location of AIGu-510, including evidence of numerous subsurface utilities in the area, the MTCS was consulted as to how best to approach Stage 3 archaeological assessment at this site. This correspondence is documented in Appendix A. Based on the correspondence with the MTCS, it may be possible to complete the Stage 3 archaeological assessment during the detailed design phase, if private and public utilities identify areas where numerous one-metre square test units can be excavated. During the course of public and private utilities locates if it is determined there is no safe area for the excavation of Stage 3 test units, the Stage 3 assessment will need to be conducted during the construction



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phase, in tandem with the removal of the utilities in this area ahead of road improvements. Section 5.0 provides further details on recommended Stage 3 assessment strategies.



5.0 RECOMMENDATIONS

5.1 Stage 1

The Stage 1 archaeological assessment found the Project Area located on part of Lots 21-28, Concessions 3 and 4, Geographic Township of Markham, former County of York, now City of Markham to exhibit potential for the recovery of intact archaeological deposits. Once a design plan for the proposed improvements to Victoria Square Boulevard is complete, Stage 2 is required within the project limits prior to construction for all areas determined to retain archaeological potential (see Map 5). This will include all sections within the proposed new ROW as well as staging and storage areas required for construction. The following methods are recommended for the Stage 2 property survey:

- 1) Areas of manicured lawn that appear to be relatively undisturbed exhibit archaeological potential for the recovery of archaeological remains. Stage 2 test pit survey at an interval of 5 m is recommended for these areas prior to ground disturbance activities. Test pits should be approximately 30 cm in diameter and excavated to subsoil. If artifacts are recovered their location should be recorded with a GPS unit and test pit intervals reduced to 2.5 m within 5 m of the positive test pit, as well as a one-metre test unit if necessary.
- 2) Areas of previous disturbance exhibit low potential for the recovery of archaeological remains. No further assessment is recommended for these areas.

Furthermore, two cemeteries are located adjacent to the Project Area. Given the historical nature of the cemeteries and the close proximity of grave markers at both cemeteries to the roadway, further assessment is required should the design plan document any impacts within 10 m of the two cemeteries.

- 1) It is recommended that should any planned impacts associated with this Class EA occur within 10 m of the cemeteries, Stage 3 archaeological assessment shall be undertaken to determine whether any grave shafts or burials are present. The Stage 3 archaeological assessment will include the following tasks:
 - a) Mechanical excavation of the 10 m area followed by archaeological examination of the exposed subsoil to confirm the presence or absence of grave shafts; and
 - b) Determine the need for mitigation of development impacts on any archaeological resources identified and recommend appropriate strategies for mitigation should it be required.

5.2 Stage 2

A review of the 1860 and 1878 historic mapping (Map 2, Map 3) suggests Victoria Square was a thriving village by the mid-19th century. The narrow nature of Victoria Square Boulevard suggests this area retains potential for the identification of intact deeply buried remains to be present within this area. All surrounding land outside the currently identified study area retains archaeological potential and any alteration to the current development plan will require additional archaeological assessment.

The Stage 2 archaeological assessment of the Project Area located on part of Lots 21-28, Concessions 3 and 4, Geographic Township of Markham, former County of York, now City of Markham resulted in the following recommendations:



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In order to safely excavate additional test pits and test units in the area of the artifact bearing test pits it will be necessary to have all subterranean infrastructure marked out in exact detail so that additional work can be conducted in a safe non-disruptive manner.

It is recommended the following occur:

- 1) Areas of previous disturbance due to the presence of subsurface utilities were identified in several of the areas recommended for Stage 2 survey; these areas are considered to be previously disturbed and no further assessment is recommended (Map 6).
- 2) Victoria Square 1 (AIGu-510) is considered to exhibit cultural heritage value and interest related to the 19th century occupation of this lot and it is recommended that Stage 3 archaeological assessment of this site be undertaken prior to any ground disturbance activities (Supplement A).

The Stage 3 assessment of Victoria Square 1 (AIGu-510) should include the hand excavation of a series of one-metre square units by stratigraphic level at an interval of 5 m, or as best managed given the presence of sub-surface utilities in this area. Additional infill units (20% of grid total) should be excavated in areas of interest within the Stage 3 grid, or as best managed give the presence of sub-surface utilities in this area.

In the context of the Class EA for improvements to Victoria Square Boulevard it is recommended that prior to the Stage 3 archaeological assessment commencing, HDR accurately mark out within the lot where road improvements will extend to; it is then recommended public and private locators be engaged to accurately mark out the location of subsurface utilities in this area, to confirm if there are any appropriate areas for the excavation of Stage 3 test units. Should it be determined Stage 3 test unit(s) can be excavated it is recommended a private locator be retained to confirm the test unit areas are clear of utilities once the units are measured in. Pending the results of the public and private locates, it may be possible to complete the Stage 3 assessment during the detailed design phase.

During the course of public and private utilities locates if it is determined there is no safe area for the excavation of Stage 3 test units, the Stage 3 assessment will need to be conducted during the construction phase, in tandem with the removal of the utilities in this area ahead of road improvements, per the advice provided by the MTCS on this file (Appendix A). It is recommended the archaeologist retained to complete the Stage 3 assessment correspond regularly with the MTCS during the Stage 3 assessment, and Stage 4 mitigation if necessary.

All Stage 3 test units should be excavated to subsoil, at which time the subsoil should be assessed for signs of cultural features. Should signs of cultural features be identified the cleaned subsoil will be drawn, photographed, and covered with geo-textile fabric before being backfilled to protect the features. Should subsoil not reveal any signs of cultural interest excavation will resume and continue into the first 5 cm of subsoil. All soils excavated from the test units will be screened through hardware cloth with an aperture no larger than 6 mm, to facilitate the recovery of any artifacts that may be present.

The following points will need to be considered during the Stage 3 assessment field work (MTCS 2014:13):

- *Any obvious areas of artifacts concentration should be tested;*
- *Investigate any spatial variability in the assemblage. For example, if the artifact assemblage displays a different character in one area than in another, both areas should be tested; and*



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- *Test units should be excavated around the extent of the site such that the limits of the site are evident.*

All recovered artifacts should be bagged in the field according to their context and be subject to laboratory analysis. A Stage 3 archaeological assessment report should include all details related to the field work and laboratory analysis.

Should the Project limits extend beyond the current Project Area, archaeological assessment in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) should be undertaken.

The MTCS is asked to review the results and recommendations presented herein and accept this report into the Provincial Register of archaeological reports. The MTCS is also asked to provide a letter concurring with the results presented herein.



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 VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.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, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.

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

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

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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 licence.



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8.0 IMAGES



Image 1: Area of previous disturbance, facing southeast



Image 2: Area of previous disturbance, facing south-southeast



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Image 3: Area of previous disturbance, facing south-southeast



Image 4: Area of previous disturbance, buried utilities to left of ditch, facing south-southeast



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Image 5: Area of previous disturbance, area of archaeological potential to right of ditch, facing north-northwest



Image 6: Area of previous disturbance, narrow ROW, facing south-southeast



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Image 7: Area of previous disturbance with historic cemetery to left, facing south-southeast



Image 8: Area of archaeological potential, facing south-southeast



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Image 9: Area of previous disturbance, facing south-southeast



Image 10: Area of previous disturbance with historic cemetery to right, facing south-southeast



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Image 11: Area of previous disturbance, graded boulevard up to townhomes, facing south-southeast



Image 12: Area of previous disturbance, facing south-southeast



Image 13: Area of previous disturbance due to gas line adjacent to ditch, facing south



Image 14: Evidence of buried telecommunications and sewer lines, facing east



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Image 15: Area of previous disturbance, flagged in gas line adjacent to slope down from road, facing north



Image 16: Area of Stage 2 test pit survey, evidence of buried utilities, facing southwest



Image 17: Select artifacts from test pit 1, clockwise from top left: painted RWE, sponged RWE, red earthenware, painted pearlware, painted pearlware, edged RWE



Image 18: Select artifacts from test pit 2, clockwise from top left: wire drawn nail, bottle glass, brick, machine cut nails



9.0 MAPS

All mapping will follow on succeeding pages.



LEGEND

- BIKE LANE
- SHARED PATHWAY (IN-BOULEVARD)
- SHARED ROADWAY (SIGNED ROUTE)
- INTERMITTENT WATERCOURSE
- PERMANENT WATERCOURSE
- WATERBODY
- WETLAND
- WOODED AREA
- STUDY AREA

0 500
1:11,000 METRES

REFERENCE(S)

1. BASEDATA MNRF 2016
2. IMAGERY: © 2017 DIGITALGLOBE IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS
SIO © 2017 MICROSOFT CORPORATION
3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17

CLIENT
CITY OF MARKHAM

PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE
LOCATION OF STUDY AREA

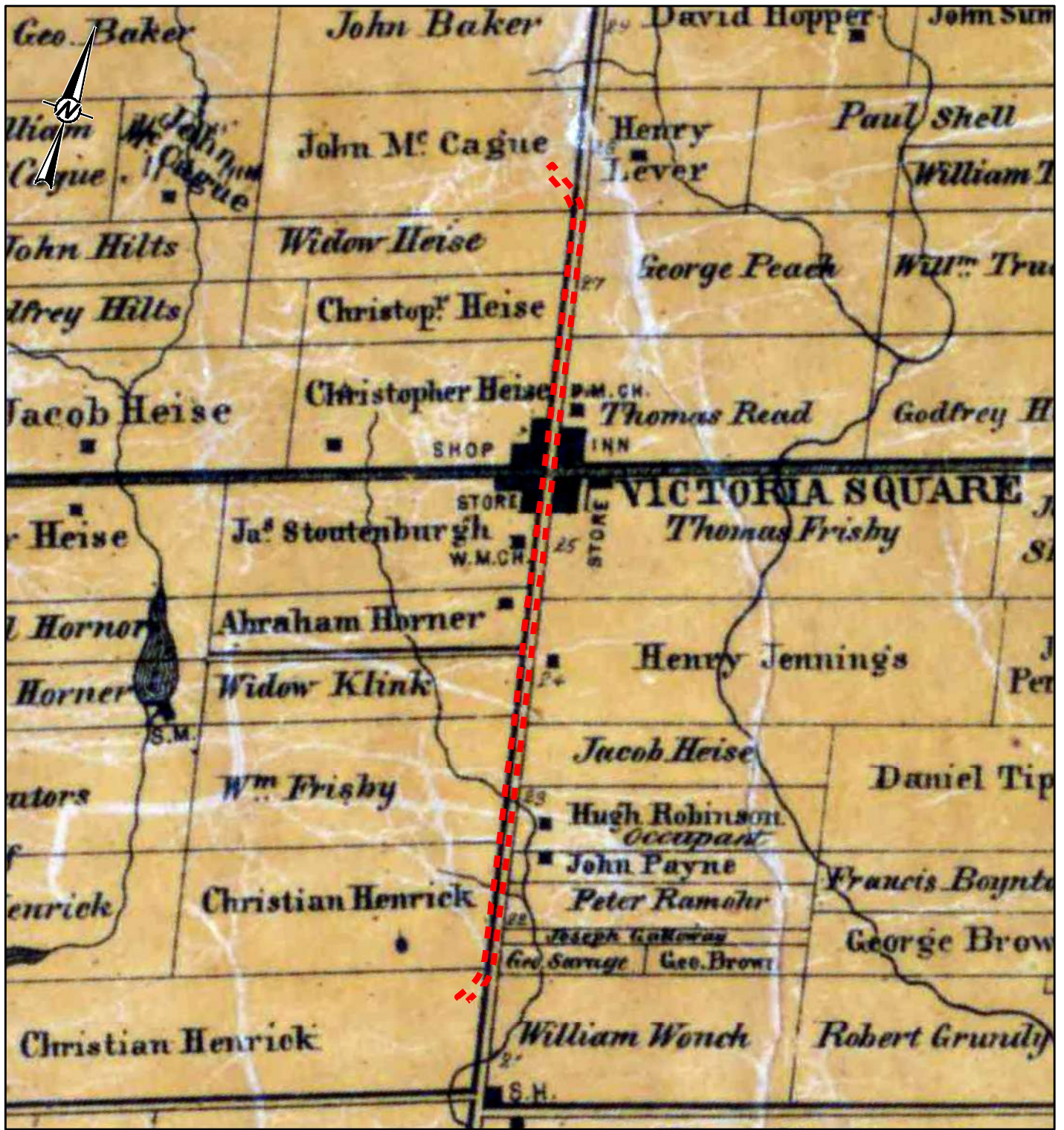
CONSULTANT	YYYY-MM-DD	2017-07-04
DESIGNED	JMC	
PREPARED	JMC/SFC	
REVIEWED	JL	
APPROVED		

PROJECT NO.
1544413 (5000)

CONTROL
0005

REV.
A

MAP
1



LEGEND

 STUDY AREA



REFERENCE(S)

1. TREMAINE'S MAP OF THE COUNTY OF YORK CANADA WEST, COMPILED AND DRAWN BY GEO. R. TREMAINE FROM ACTUAL SURVEYS TORONTO PUBLISHED BY GEO. C. TREMAINE 1860

CLIENT
CITY OF MARKHAM

PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE
STUDY AREA IN 1860

CONSULTANT



YYYY-MM-DD 2017-07-04

DESIGNED

PREPARED PR/SFC

REVIEWED JL

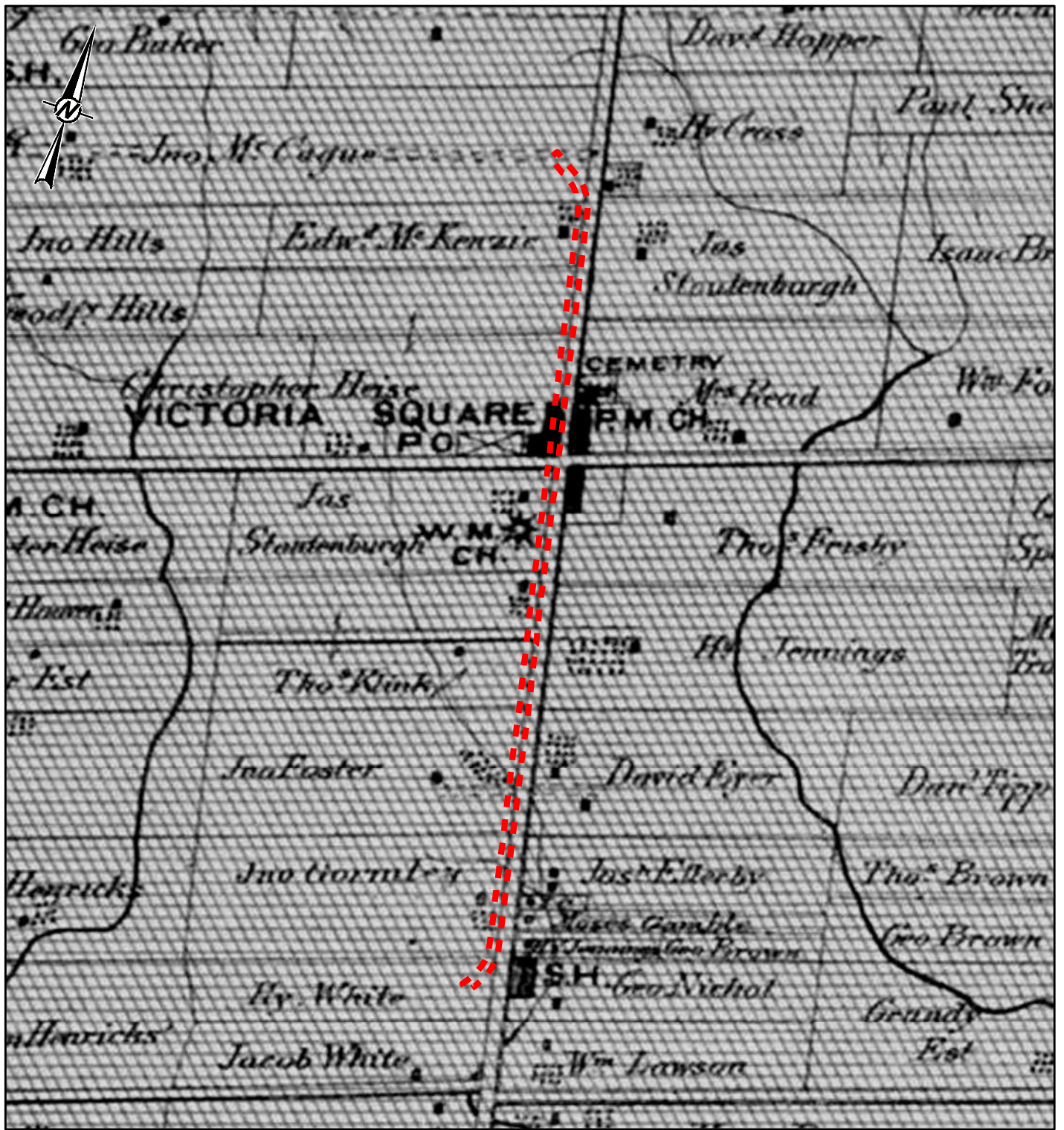
APPROVED

PROJECT NO.
1544413 (5000)

CONTROL
0005

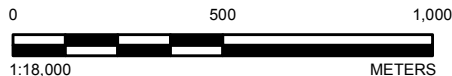
REV.
A

MAP
2



LEGEND

 STUDY AREA



REFERENCE(S)

1. MILES & CO. (1878) ILLUSTRATED HISTORICAL ATLAS OF THE COUNTY OF YORK, ONT. MILES & CO., TORONTO

CLIENT
CITY OF MARKHAM

PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE
STUDY AREA IN 1878

CONSULTANT

YYYY-MM-DD 2017-07-04

DESIGNED

PREPARED PR/SFC

REVIEWED JL

APPROVED



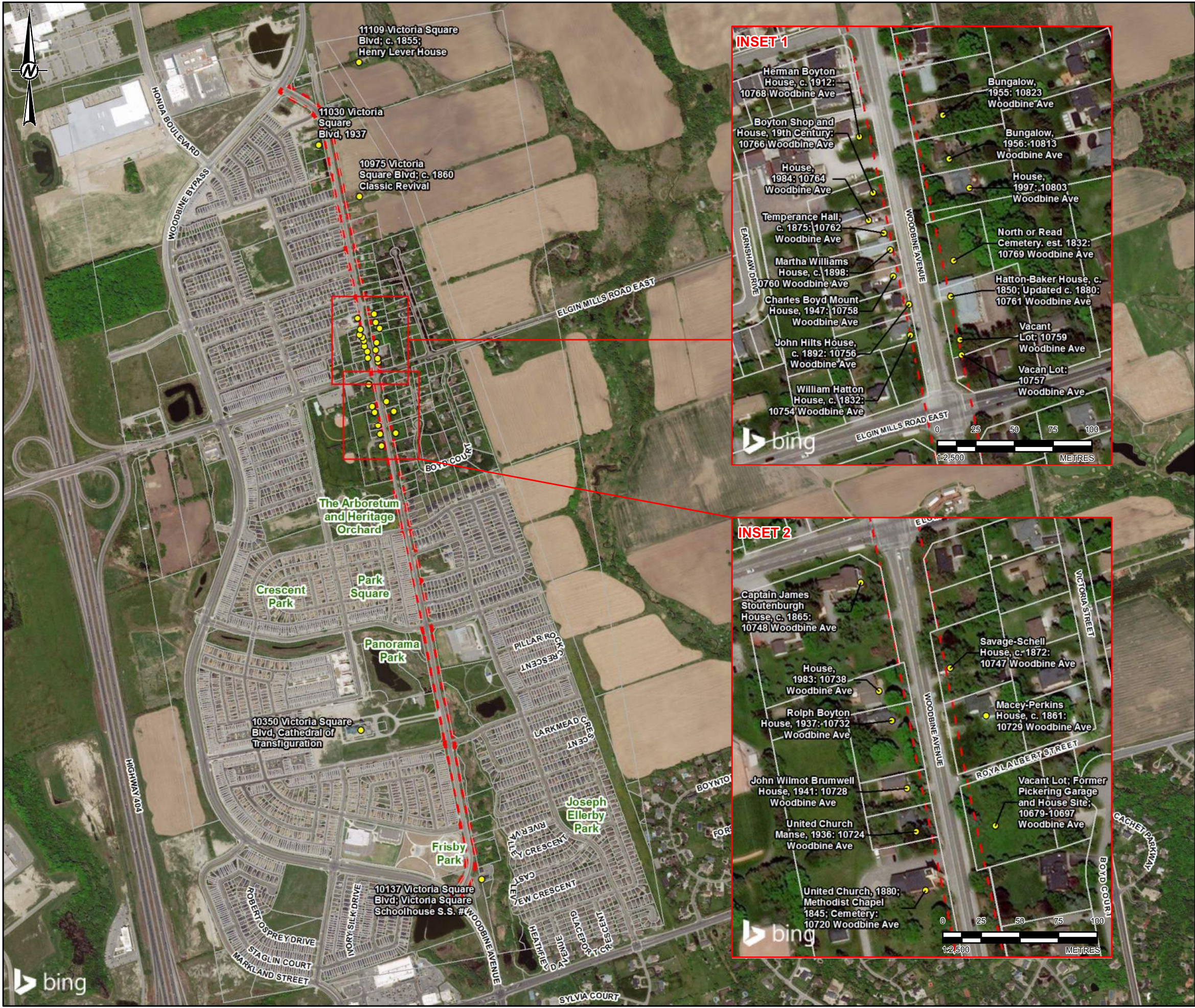
PROJECT NO.
1544413 (5000)

CONTROL
0005

REV.
A

MAP
3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm



LEGEND

- HERITAGE PROPERTIES AND PROPERTIES OF CULTURAL HERITAGE VALUE OR INTEREST
- STUDY AREA
- PROPERTY BOUNDARY

0 500 1,000

1:12,500 METRES

REFERENCE(S)

1. BASEDATA MNRF 2016, YORK REGION 2016
2. IMAGERY: © 2017 DIGITALGLOBE IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © 2017 MICROSOFT CORPORATION
3. HERITAGE PROPERTIES AND PROPERTIES OF CULTURAL HERITAGE VALUE OR INTEREST OBTAINED FROM THE VICTORIA SQUARE HCD INVENTORY AND CITY OF MARKHAM REGISTER OF PROPERTIES OF CULTURAL HERITAGE VALUE OR INTEREST OBTAINED, 2016
4. PROPERTY BOUNDARIES PROVIDED BY THE CITY OF MARKHAM, 2016

PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17

CLIENT
CITY OF MARKHAM

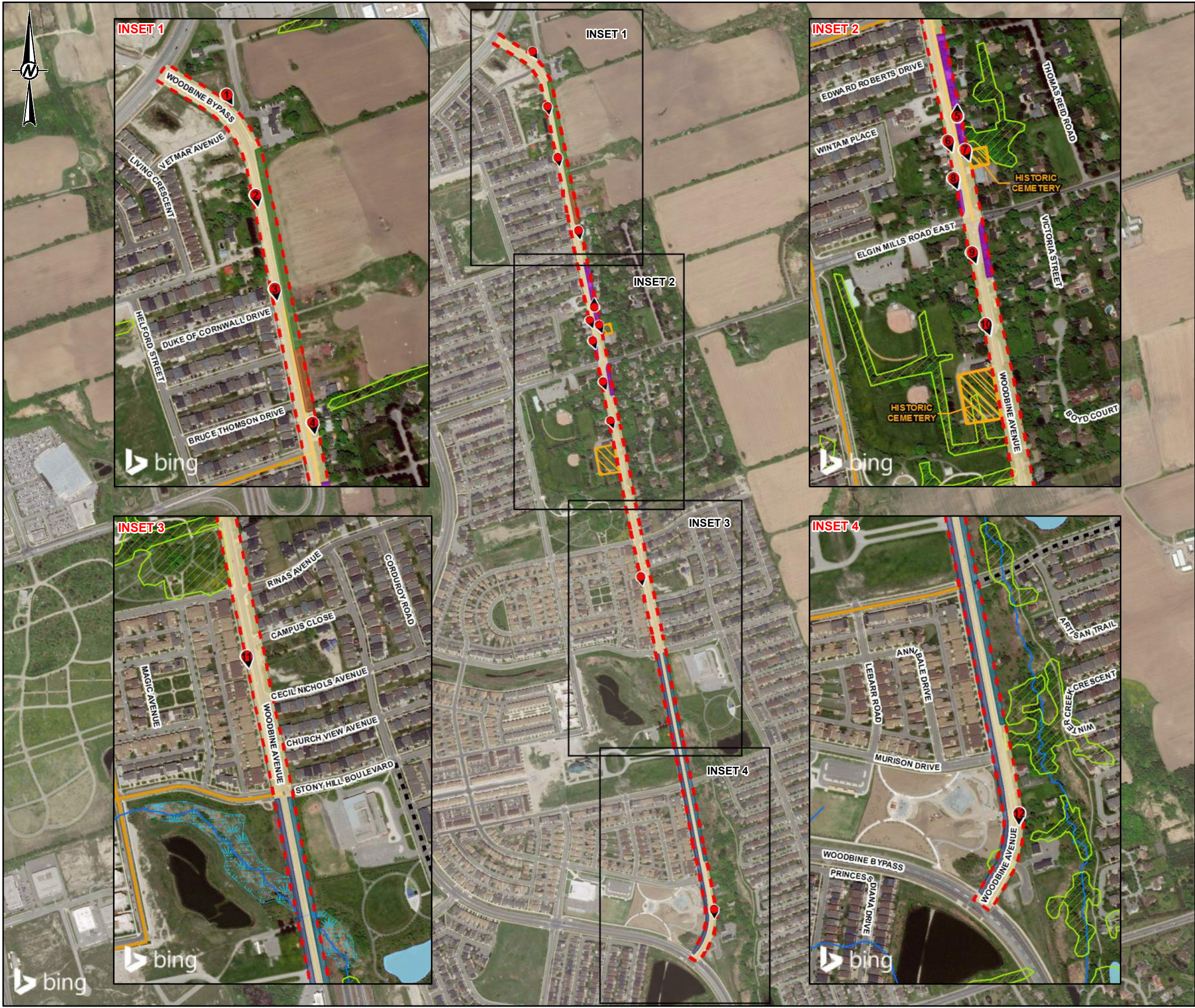
PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE
LISTED HERITAGE PROPERTIES AND PROPERTIES OF CULTURAL HERITAGE VALUE OR INTEREST

CONSULTANT	YYYY-MM-DD	2017-07-04
DESIGNED	JMC	
PREPARED	PR/SFC	
REVIEWED	HC/CP	
APPROVED		

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PROJECT NO. 1544413 (5000)	CONTROL 0005	REV. A	FIGURE 4
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LEGEND

- PHOTO LOCATION AND DIRECTION
- PREVIOUSLY ASSESSED (ASI 2011)
- PREVIOUSLY ASSESSED (ASI 2014B)
- PREVIOUSLY ASSESSED (ASI 2005)
- PREVIOUSLY ASSESSED (ARCHEOWORKS INC. 2001)
- AREA OF ARCHAEOLOGICAL POTENTIAL – STAGE 2 TEST PIT SURVEY RECOMMENDED
- HISTORIC CEMETERY - STAGE 3 TRENCHING REQUIRED WITHIN 10 M OF CEMETERY BOUNDARY
- PREVIOUS DISTURBANCE – NO FURTHER ASSESSMENT RECOMMENDED
- INTERMITTENT WATERCOURSE
- PERMANENT WATERCOURSE
- STUDY AREA
- WETLAND
- WATERBODY
- WOODED AREA

REFERENCE(S)

- BASEDATA MNRF 2016
- IMAGERY: © 2017 DIGITALGLOBE IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © 2017 MICROSOFT CORPORATION
- PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17

CLIENT
CITY OF MARKHAM

PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE
STAGE 1 ASSESSMENT RESULTS AND PHOTOGRAPHIC KEY

CONSULTANT	YYYY-MM-DD	2017-07-04
DESIGNED	JMC	
PREPARED	JMC/SFC	
REVIEWED	JL	
APPROVED		

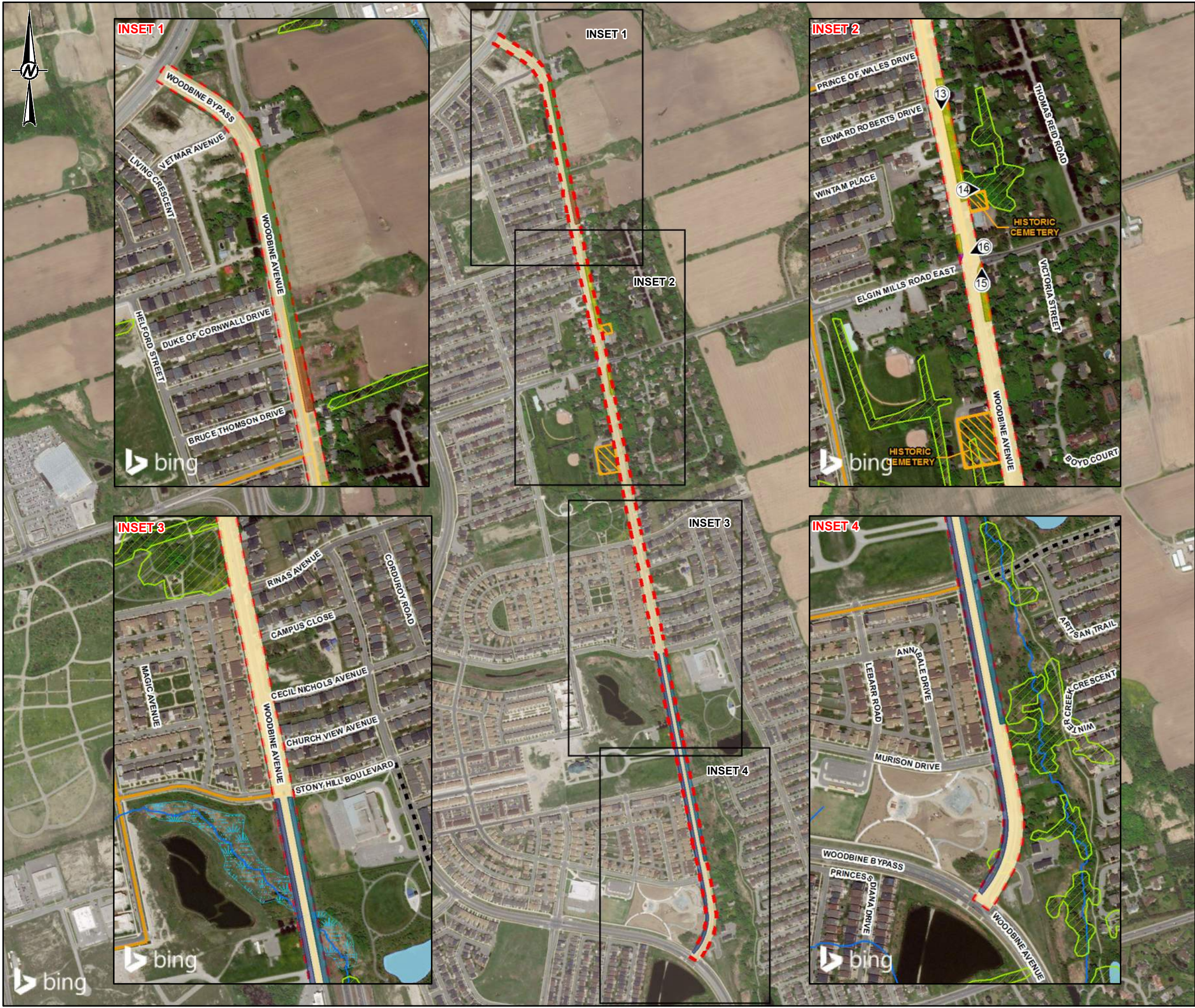
PROJECT NO.
1544413 (5000)

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0005

REV.
A

MAP
5

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LEGEND

- PHOTO LOCATIONS
- PREVIOUSLY ASSESSED (ASI 2011)
- PREVIOUSLY ASSESSED (ASI 2014B)
- PREVIOUSLY ASSESSED (ASI 2005)
- PREVIOUSLY ASSESSED (ARCHEOWORKS INC. 2001)
- AREA OF ARCHAEOLOGICAL POTENTIAL – STAGE 2 TEST PIT SURVEY AT 5 M INTERVALS UNDERTAKEN
- AREA OF PREVIOUS DISTURBANCE BASED ON IDENTIFICATION OF SUBSURFACE UTILITIES, NO FURTHER ASSESSMENT RECOMMENDED
- HISTORIC CEMETERY - STAGE 3 TRENCHING REQUIRED WITHIN 10 M OF CEMETERY BOUNDARY
- PREVIOUS DISTURBANCE – NO FURTHER ASSESSMENT RECOMMENDED
- INTERMITTENT WATERCOURSE
- PERMANENT WATERCOURSE
- STUDY AREA
- WETLAND
- WATERBODY
- WOODED AREA

0 500

1:11,000 METRES

REFERENCE(S)

1. BASEDATA MNRF 2016
2. IMAGERY: © 2017 DIGITALGLOBE ©CNES (2017) DISTRIBUTION AIRBUS DS © 2017 MICROSOFT CORPORATION
3. PROJECTION: TRANSVERSE M ERICATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17

CLIENT

CITY OF MARKHAM

PROJECT

STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT

VICTORIA SQUARE BOULEVARD, MARKHAM, ONTARIO

TITLE

STAGE 2 ASSESSMENT RESULTS AND PHOTOGRAPHIC KEY

CONSULTANT	YYYY-MM-DD	2017-12-21
DESIGNED	JMC	
PREPARED	JMC/SFC	
REVIEWED	JL	
APPROVED		

PROJECT NO.

1544413 (5000)

CONTROL

0005

REV.

A

MAP

6

25mm



10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed, or implied is made.

This report has been prepared for the specific site, design objective, developments, and purpose described to Golder by HDR (the Client). The factual data, interpretations, and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

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Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling, and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism, Culture and Sport's 2011 *Standards and Guidelines for Consultant Archaeologists*.



Report Signature Page

GOLDER ASSOCIATES LTD.

Rhiannon Fisher, M.Sc.
Project Archaeologist

Carla A. Parslow, Ph.D.
Associate, Senior Archaeologist

CWL/JL/RF/lb/wlm/mp

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n:\active\2015\3 proj\1544413 hdr_ea victoria sq blvd_markham\3 - discipline working files\archaeology stage 1-2\report\final\revised report april 2018\p1056-0053-
2016_27april2018_rr.docx



APPENDIX A

MTCS Correspondence

Lemon, Jamie

From: Horne, Malcolm (MTCS) <Malcolm.Horne@ontario.ca>
Sent: June-20-17 11:25 AM
To: Lemon, Jamie
Cc: Archaeology (MTCS)
Subject: Advice re Archaeological Site within a Narrow Utility Filled Space, Improvements to Victoria Square Boulevard, Markham, P1056-0053-2016, MTCS File 0004407
Attachments: 1544413-0004-HA-0005.pdf; Victoria Square Blvd - Roll Plot 2.pdf; View of NW Quadrant.JPG

Hi, Jamie. Given the challenges that you are encountering, it appears that you will have to work with construction personnel as they go through the process of finding utilities and moving them around in order to do what they have to do. Though not 'deeply buried', the work should in general conform to the principles found in Section 3.3.3 as the most comparable process under the S&Gs. If there are means for the archaeologists to work by hand in a controlled fashion, then we would expect that to be done as per Standard 1. However, if that is not viable (as appears to be the case), then archaeology will have to be addressed in conjunction with construction excavation. Given that you will have to work along with the construction excavation and given the presence of various utilities, you may find yourself in the position of having to complete Stage 4 work immediately or the site (or the information and artifacts that are present) may be compromised or lost. If it is not possible to stop work and make more careful plans for Stage 4, please do proceed with the Stage 4 work immediately – please be fully prepared to do so. It will, of course, be critical to have a plan for coordinating with the contractor(s) and for addressing any contingencies as per Standard 4b.

As far as PIFs go, take out a Stage 3 PIF to begin with; if you find that you must proceed directly into Stage 4, please submit the Stage 4 PIF as soon as possible after being required to start that Stage 4 work.

Please include a PDF copy of this advice as supplementary documentation to your project report package.

As a standard part of all advice provided to licensees, please note that this advice has been provided by MTCS under the assumption that the information submitted by the licensed archaeologist is complete and accurate. The advice provided applies only to the project in question and is not to be used as a precedent for future projects. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or if the information provided by the licensed archaeologist is otherwise found to be inaccurate, incomplete, misleading, or fraudulent.

Sincerely,

Malcolm Horne
Archaeology Review Officer
Archaeology Programs Unit
Ministry of Tourism, Culture and Sport
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel. 416-314-7146
Fax 416-314-7175
Email: Malcolm.Horne@ontario.ca



From: Lemon, Jamie [<mailto:Jamie.Lemon@golder.com>]
Sent: June 20, 2017 10:31 AM
To: Archaeology (MTCS)
Subject: Request for Advice - P1056-0053-2016

Good morning,

I am writing to seek advice on recommendations for (potential) further archaeological assessment under PIF P1056-0053-2016.

This PIF relates to a Stage 1-2 assessment of road corridor improvements to Victoria Square Blvd in Markham. Golder recently completed the Stage 2 test pit survey. We knew in advance of the field work it would be difficult to place test pits, due to the utilities located we obtained in advance, combined with the very narrow Project Area.

In the NW quadrant of the intersection of Victoria Square Blvd and Elgin Mills Road two test pits were able to be excavated approx. 5 metres apart in between utility lines, in an area determined to exhibit archaeological potential. Nineteenth century historic artifacts were recovered from both test pits. The narrow nature of the corridor and the frequency of utilities in the area made it not possible to intensify test pits or excavate a one-metre unit; however in normal circumstances I would be comfortable with recommending Stage 3 with what was recovered, without the addition of a one-metre Stage 2 unit.

My question is, if we had these types of difficulties with test pit and unit placement in Stage 2, I do not believe it is possible to undertake a "normal" Stage 3 in this area. What has the MTCS recommended previously in situations like this? Can we consider construction monitoring in lieu of a standard Stage 3? Our field supervisor noted the possibility of the artifacts relating to the extant house on this lot (see attached).

Thank you,

Jamie

Jamie Lemon (M.A.) | Archaeologist | **Golder Associates Ltd.**
100 Scotia Court, Whitby, Ontario, Canada L1N 8Y6
T: +1 (905) 723 2727 | **D:** +1 (905) 723-2727 x6822 | **F:** +1 (905) 723 2182 | **C:** +1 (647) 272-0247 | **E:** jlemon@golder.com | www.golder.com

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