

**Stage 1 Archaeological Resource Assessment
of the
Queen's Quay Boulevard Revitalization,
City of Toronto, Ontario**

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EXECUTIVE SUMMARY

A Stage 1 Archaeological Resource Assessment of Queens Quay from approximately Spadina Avenue to Jarvis Street was undertaken as part of the Municipal Class Environmental Assessment for the Queen's Quay Revitalization project, in the City of Toronto. The study area is entirely comprised of artificial land formed in the early to mid-twentieth century; the fills and any retaining structures associated with these landmaking activities are not considered to be of any cultural heritage value or interest as they are essentially modern. Nevertheless, the research undertaken for this study resulted in the identification of six features or feature complexes of potential heritage interest within the study area. These have been evaluated using the system prepared as part of Waterfront Toronto's *Archaeological Conservation and Management Strategy*, with the resulting conclusion that two of the features present within the study area, the remains of the heads of a series of wharves located in the vicinity of York Street, and the intake system for the late nineteenth-early twentieth-century Toronto water supply system, which traverses the study area between the Rees and Peter Street slips, are of limited potential significance. In light of these considerations it is recommended that any construction activities that are likely to result into impacts upon these deeply buried features should be subject to archaeological monitoring. The balance of the Queen's Quay Revitalization project may be considered clear of any further archaeological concern, with the proviso that the appropriate authorities must be notified should deeply buried archaeological or human remains be encountered during any future work within the study area.

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1.0 INTRODUCTION

Archaeological Services Inc. was retained by Waterfront Toronto to conduct the Stage 1 archaeological assessment component of the Municipal Class Environmental Assessment for the Queen's Quay Revitalization. Located on the central waterfront in the City of Toronto, the Queen's Quay study area extends from approximately Spadina Avenue to Jarvis Street and encompasses an area of 21.1 hectares (Figure 1). The study area comprises the existing Queen's Quay right-of-way and portions of adjacent properties, the majority of which are open/public spaces.

The study area is entirely comprised of artificial land formed in the twentieth century, as has been documented in numerous studies, most recently the *Waterfront Toronto Archaeological Conservation and Management Strategy* (ASI et al. 2008), which is currently in development.

This assessment was conducted under the project management of Mr. David Robertson and project direction of Ms. Debbie Steiss under archaeological license P049 (MCL CIF P049-253-2008) issued to Ms. Steiss pursuant to the Ontario Heritage Act. Waterfront Toronto granted Archaeological Services Inc. permission to access the subject property and to carry out the activities necessary for the completion of the assessment on December 19, 2007.

2.0 BACKGROUND RESEARCH

2.1 Physiographic Setting

The Toronto waterfront is an area in which massive landscape changes have occurred. In the vicinity of the subject property, the most dramatic changes began to occur during the mid-nineteenth century, in association with the development of the railway facilities along the edge of the harbour.

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

Glacial Lake Iroquois came into existence by about 12,000 B.P. as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift of its outlet, combined with blockage of subsequent lower outlets by glacial ice, produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 B.P., water levels dropped stepwise during the next few centuries in

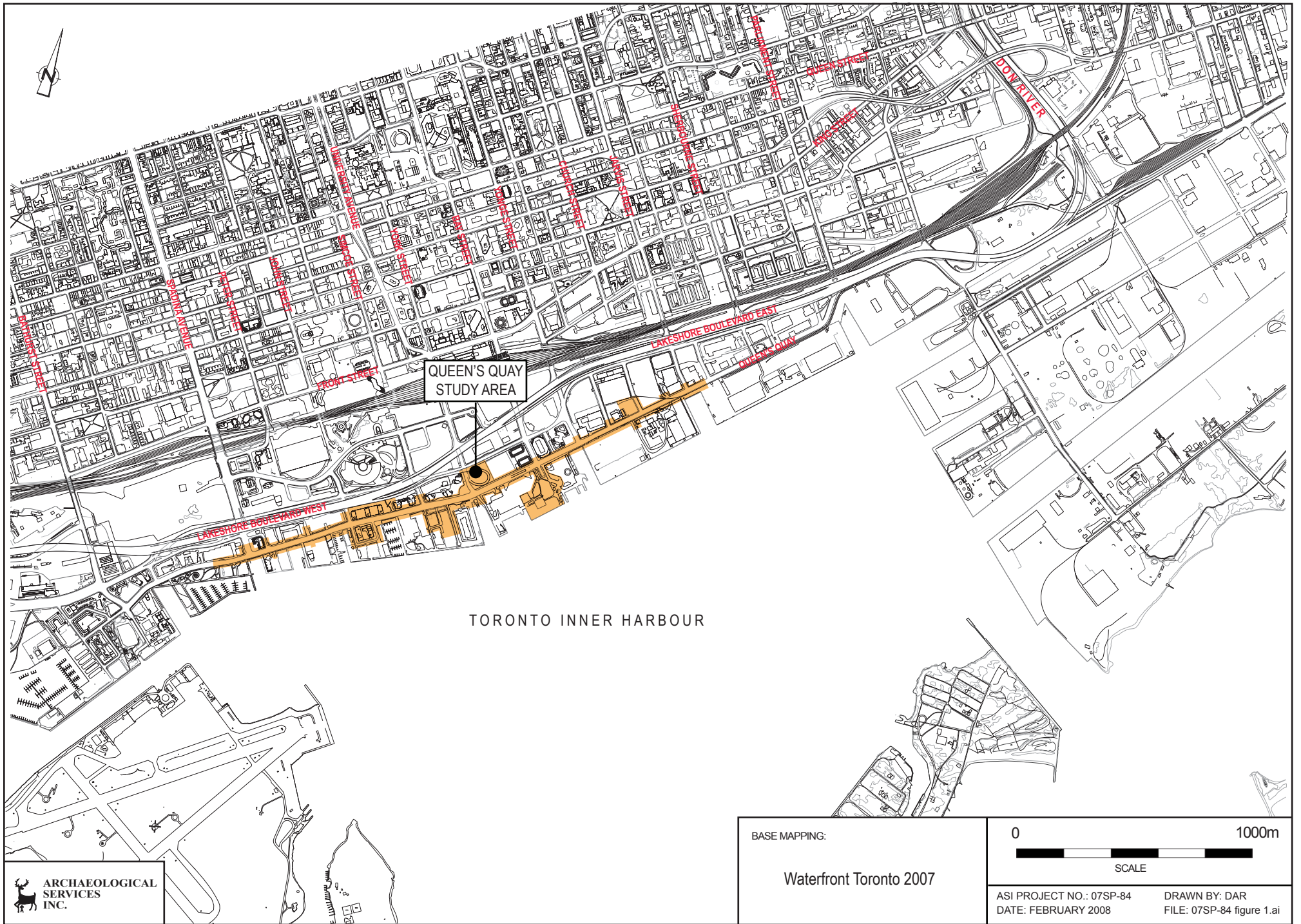


Figure 1: The location of the Queen's Quay Revitalization EA Stage 1 Archaeological Assessment study area.

response to sill elevations at the changing outlet. By about 11,500 B.P., when the St. Lawrence River outlet became established, the initial phase of Lake Ontario began, and this low water phase appears to have lasted until at least 10,500 B.P. At this time the waters stood as much as 100 metres below current levels. However, isostatic uplift was already raising the outlet at Kingston so that by 10,000 B.P., the water level had risen to about 80 metres below present. Uplift since then has continued to tilt Lake Ontario upward to the northeast, propagating a gradual transgressive expansion throughout the basin. The flooded mouths of creeks and rivers that rim the basin—such as are preserved at Grenadier Pond and the mouth of the Humber—provide visible reminders of this process (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1988, 1990).

In the vicinity of the study area it has been estimated that the earliest Lake Ontario shoreline (circa 10,400 B.P.) was about five kilometres south of its present location. Over the following millennia, the shoreline gradually moved northward. Even by about 5,000 B.P., however, it is still unlikely that Toronto Harbour, protected by the submerged bank of sediment associated with the emergent Toronto spit, had yet begun to fill. Between about 5,000 and 4,000 B.P., the Nipissing Flood phase increased water levels to near or slightly above nineteenth century levels (Anderson and Lewis 1985; Weninger and McAndrews 1989). Levels subsided by three to four metres again between about 4,000 and 3,500 years ago, and by circa 3,000 B.P., the shoreline was established more or less in the location at which it stood, in the vicinity of Front Street, at the time of the founding of York in the 1790s.

The present study area likely stands in the approximate position of the circa 5,000-3,000 B.P shore. Despite the fact that the Toronto area lakeshore in general, and more particularly the mouths of the creeks and rivers flowing into it, would have been extremely attractive to precontact aboriginal peoples, the potential for the recovery of precontact aboriginal material within the study area is nil. Sites dating to the circa 5,000-3,000 B.P. period are unlikely to have survived the historic development activities (i.e., dredging, filling, etc.) that have disturbed the original topography of the lakebottom.

2.2 Previous Archaeological Research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: the site record forms for registered sites housed at the Ministry of Culture (MCL); published and unpublished documentary sources; and files located at Archaeological Services Inc., including the research materials related to the City of Toronto Archaeological Master Plan and the Waterfront Toronto Archaeological Conservation and Management Strategy.

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

Fourteen archaeological sites have been documented previously within approximately one kilometre of the study area (Table 1), all of which are associated with the nineteenth-century development of the city.

Table 1: Registered Archaeological Sites within an Approximate 1km Radius of the Subject Property

Borden	Site Name	Cultural Affiliation	Site Type	Researcher
AjGu-15	Front Street	Euro-Canadian	Public Building	R. O'Brien (no date)
AjGu-17	St. James Cathedral	Euro-Canadian	Cemetery	S. Janusas 1985
AjGu-21	Navy Wharf	Euro-Canadian	Commercial/Transport Structure	MPP 1986
AjGu-23	Esplanade Crib	Euro-Canadian	Commercial/Transport Structure	MPP 1986
AjGu-24	Furniss Water Works Wharf	Euro-Canadian	Commercial/Transport Structure	MPP 1986
AjGu-25	1894 Landfill	Euro-Canadian	Commercial/Transport Structure	MPP 1986
AjGu-26	Fort York Garrison	Euro-Canadian	Military	D. Spittal 2006
AjGu-34	Southtown	Euro-Canadian	Commercial/Transport Structure	ASI 1995
AjGu-35	Worts Estate	Euro-Canadian	Residence	ASI 1996
AjGu-41	First Parliament	Euro-Canadian	Public Building	ASI 2000
AgGu-46	Gooderham Mill	Euro-Canadian	Industrial	ASI 2003
AjGu-49	Bishop's Block	Euro-Canadian	Residential	ASI 2006
AjGu-51	Toronto General Hospital	Euro-Canadian	Institutional	ASI 2006
AjGu-54	Barchard Box Factory	Euro-Canadian	Industrial	ASI 2007

MPP=Mayer, Pihl, Poulton and Associates

ASI=Archaeological Services Inc.

2.3 The Twentieth Century Development of the Study Area

The lands within, and flanking, the study area were all formed during early- to mid-twentieth-century landmaking operations. The earliest relevant developments were those that extended the shoreline wharves between Simcoe Street and Church Street to the New Windmill Line, which was established in 1893 and followed roughly the alignment preserved by Harbour Street. These shoreline features were quickly succeeded by the massive campaigns of filling to the Harbour Head Line, which is essentially the modern shoreline. Construction of the Harbour Head Line began in 1916 at the foot of Bathurst and had reached the foot of Yonge Street by 1923. The shorewalls, slips and docks associated with this section of the Head Line were formed by timber cribbing capped with concrete. The areas behind were filled using hydraulic dredges working in the harbour. Use of this material for the fill behind the Head Line had the advantage of deepening the harbour at the same time.

Filling of the area behind the Harbour Head Line between Yonge Street and Jarvis was completed in the mid- to late 1920s. This work also involved construction of a timber retaining wall, known as the Pierhead or Bulkhead Line, located along the future alignment of Queen's Quay), stretching from Yonge Street to Berkeley Street. This feature was built using timber piles driven to bedrock and joined by waling and was faced, on the south side, with sheet piling which also extended to bedrock depth. Steel rods that were run to anchor piles on the inland side were used to reinforce the structure (Stinson and Moir 1991). The final campaign of filling, to the Harbour Head Line, which achieved the modern configuration of the central waterfront, took place between the 1930s and the 1950s across the central waterfront.

Following the basic proposal outlined in the 1912 Harbour Commission Plan, the areas developed in the twentieth century were occupied by a mix of industrial concerns. Proceeding from west to east, north of the Pierhead Line, developments on the lands formed in the 1920s included the emergence of a largely industrial precinct at the foot of Bathurst Street; the reconfiguration and expansion of the Canadian National Railway's Spadina Yard; the continued use of the Canadian Pacific Railway's John Street Yard; and the construction of as many as 17 commercial and civic wharves between Simcoe and Jarvis streets.

Two short-lived developments of note in the central and eastern sections of the study area were the Air Harbour at the foot of Freeland Street (1929-1939) and the Royal Canadian Air Force's Equipment Depot No. 1 (1940-1946), which encompassed the grounds between Yonge, Sherbourne and Fleet (Lakeshore Boulevard) and Queen's Quay.

At the west end of the study area, the yards of the Dominion Shipbuilding Company were located on Spadina Quay. It was the largest of Toronto's shipbuilders during the First World War. After the operations closed in 1921, the site was taken over by a variety of other industries, chiefly those that required large scale-storage space for bulk materials. During the Second World War, however, the shipyards were re-commissioned. Other prominent features include the Terminal Warehouse, and the Playfair and Canada Malting elevators, opened in 1928 near the foot of Bathurst.

Expansion of the commercial, industrial and warehousing functions of the waterfront continued through to the 1950s. The most notable of the warehousing and shipping concerns were the Canada Steamship Lines' piers and warehouses on Piers 6-8 between York and Yonge streets, and the marine terminals of the Queen Elizabeth Docks built to the east of Yonge Street.

3.0 INVENTORY OF FEATURES

The inventory of the study area (Figures 2-5) has been compiled using selected cartographic sources from the late-nineteenth through mid-twentieth centuries, as well as other reconstructions of site locations prepared for previous historical/archaeological studies. These have been overlaid on the modern base map for the project. The process of overlaying historic maps on the modern streetscape, using common reference points between the various sources is one in which there are numerous potential sources of error, given the vagaries of map production (both past and present), the need to resolve differences of scale and resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping. In present exercise, there has been considerable variation in all dimensions. In view of these constraints, it must be emphasized that the location or configuration of any feature relative to a particular parcel of land is only approximate.

The mapping identifies both the features of potential archaeological interest—as established through the work of the *Archaeological Conservation and Management Strategy*, with particular focus upon those which fall within the study area (in whole or in part)—as well as a variety of more recent features that were formerly located within the study area.

The inventory of resources of potential archaeological interest (Figures 2-5) consists of a total of six features, or complexes of features. These are:

- the site of the Dominion Shipbuilding Company, which occupied the waterfront on either side of Spadina Avenue (ACMS Inventory CW-9);

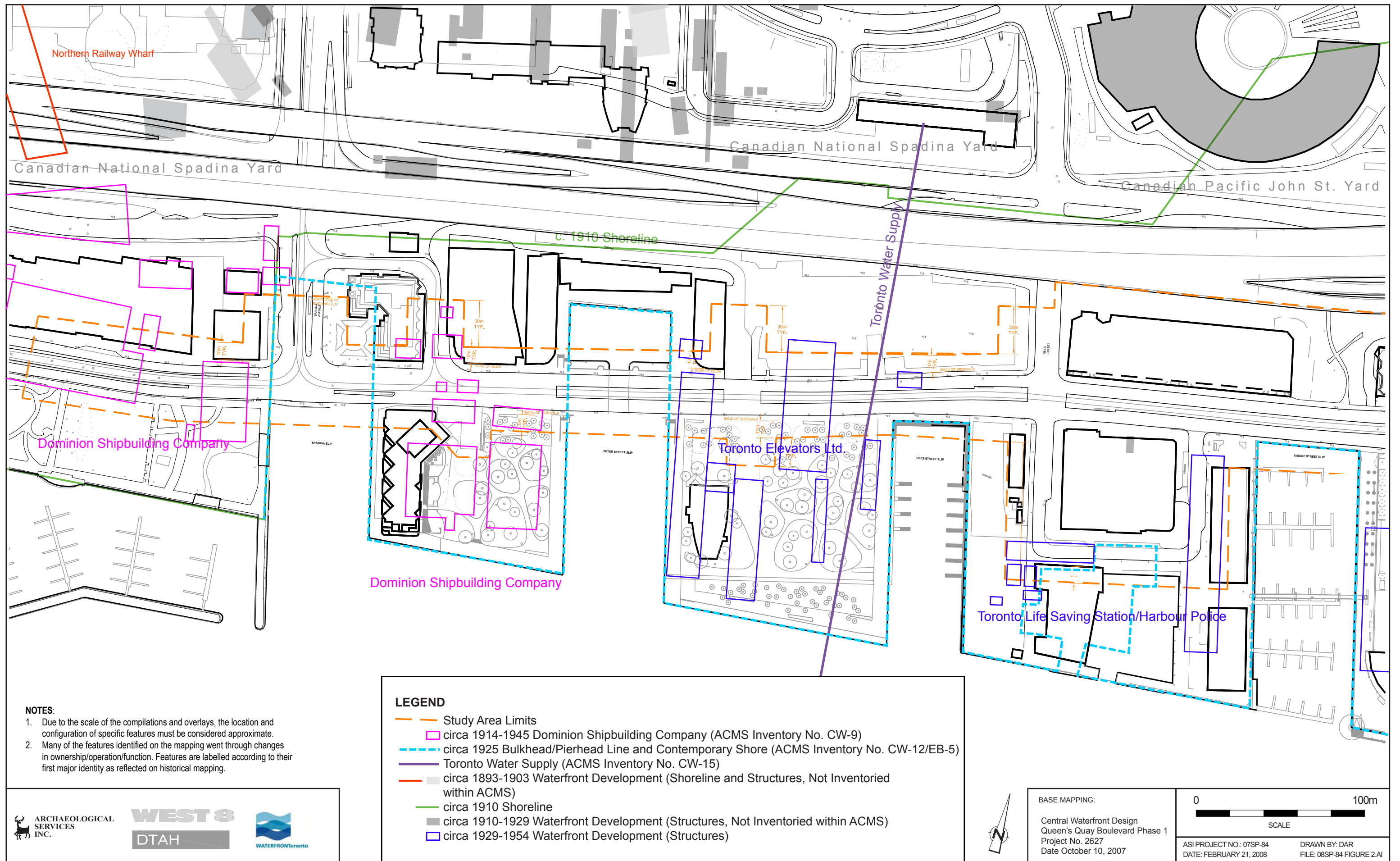


Figure 2: Queen's Quay Revitalization Stage 1 Archaeological Resource Assessment — Feature Inventory (Spadina Slip to Simcoe Street Slip)

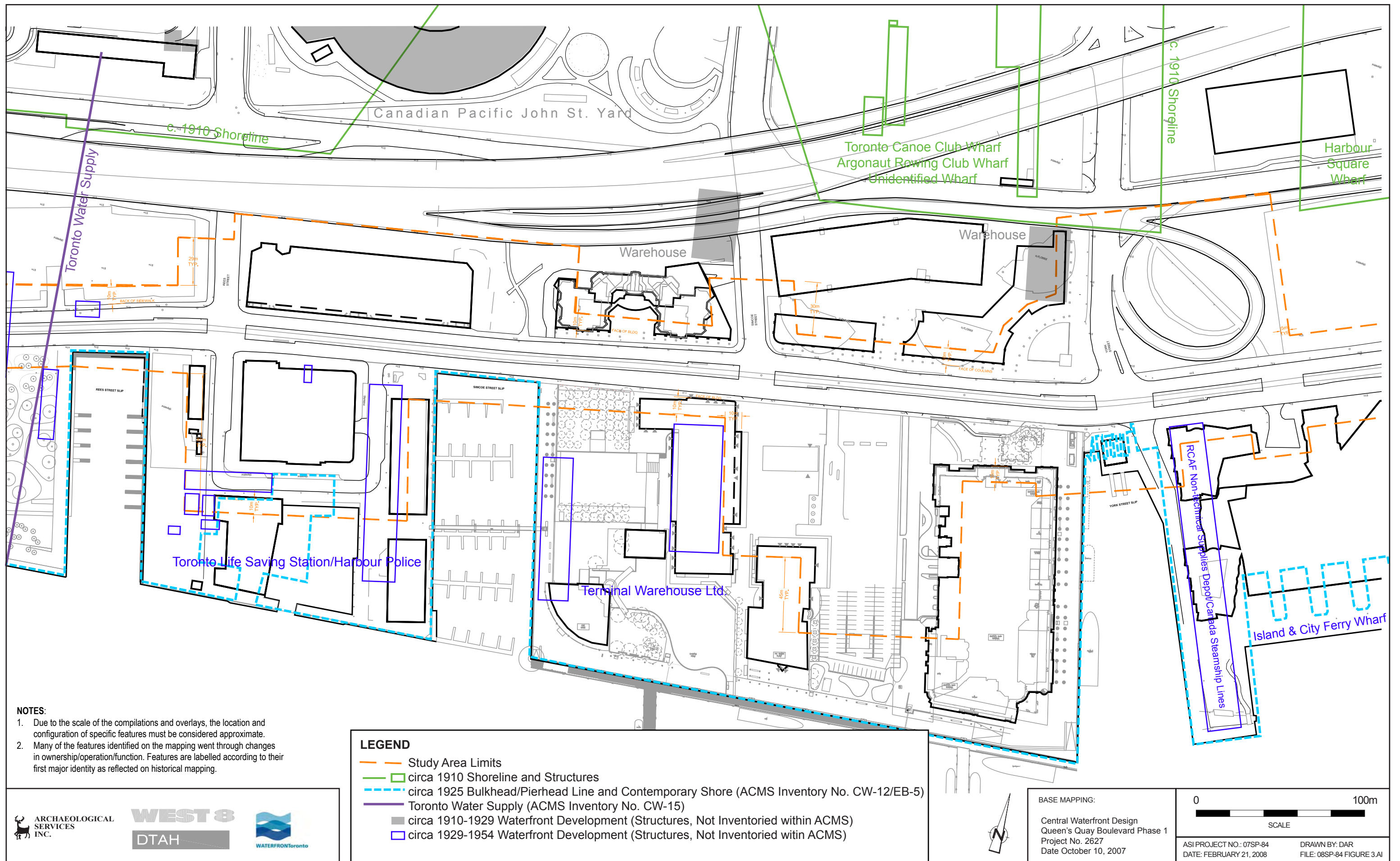


Figure 3: Queen's Quay Revitalization Stage 1 Archaeological Resource Assessment — Feature Inventory (Rees Street Slip to York Street Slip)

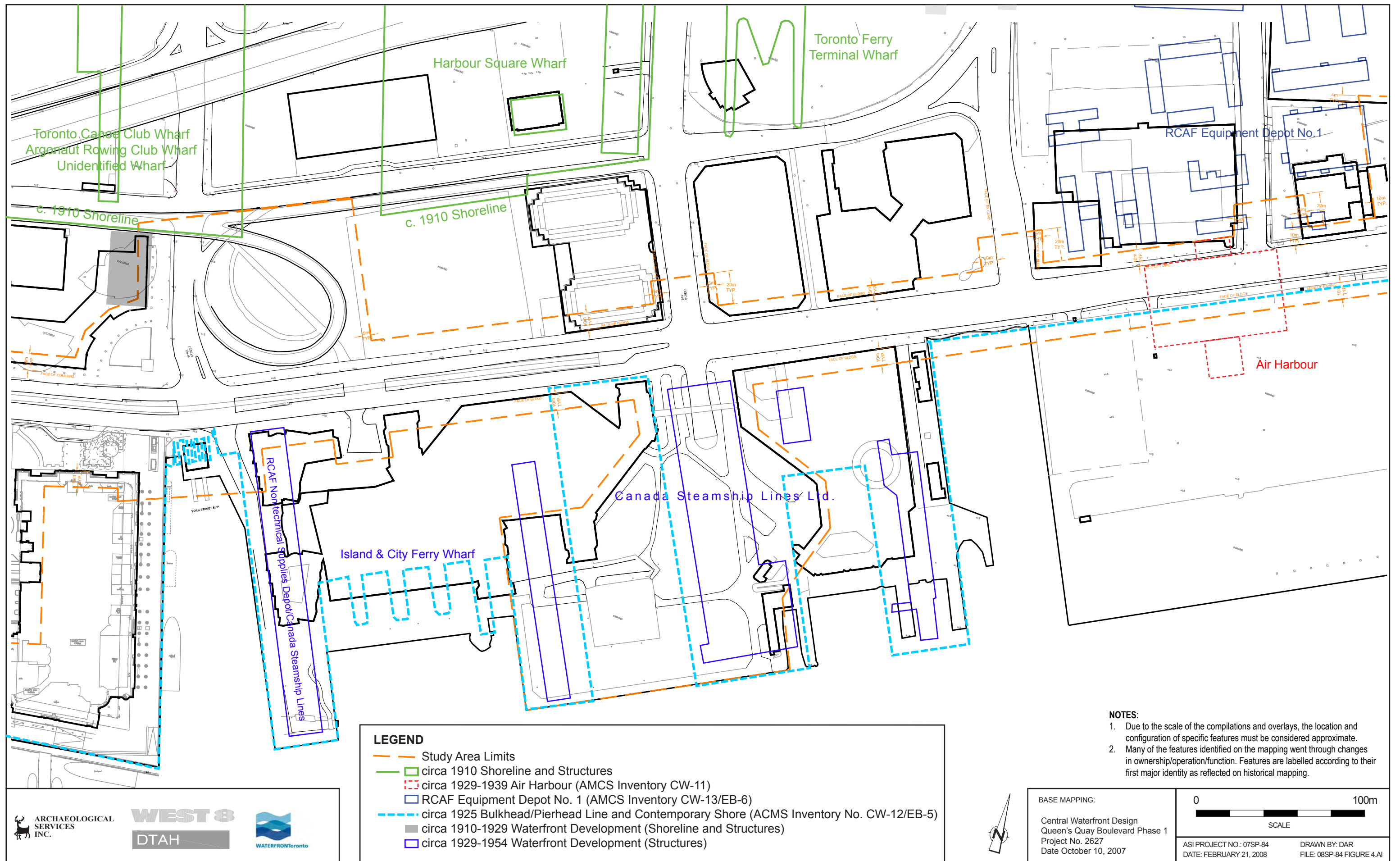


Figure 4: Queen's Quay Revitalization Stage 1 Archaeological Resource Assessment — Feature Inventory (York Street Slip to Yonge Street Slip)

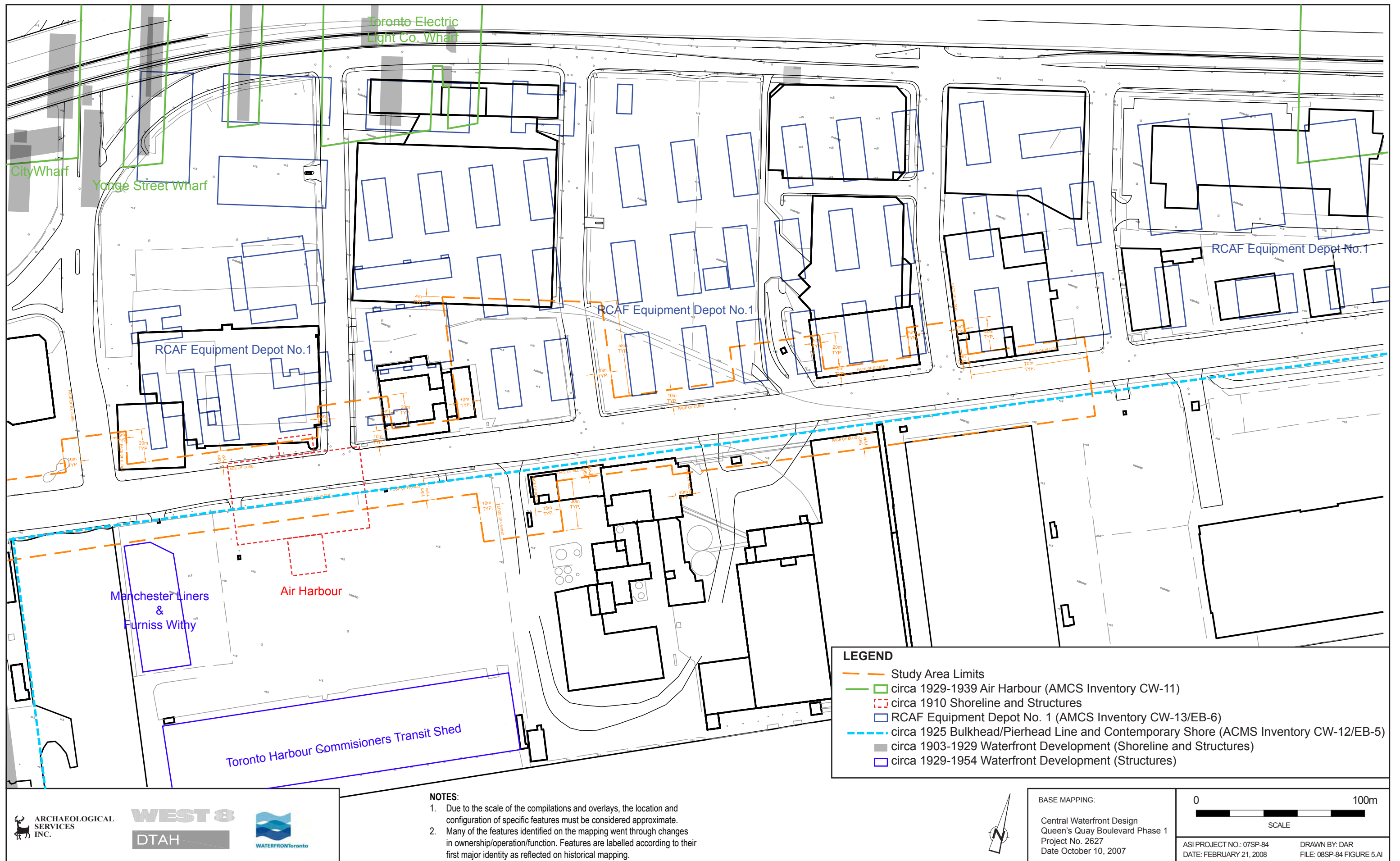


Figure 5: Queen's Quay Revitalization Stage 1 Archaeological Resource Assessment — Feature Inventory (Yonge Street Slip to Jarvis Street Slip)

- the circa 1925 Bulkhead/Pierhead line and contemporary shorewall constructions which occur throughout the study area (ACMS Inventory CW-12/EB-5);
- the Toronto water supply intake lines and tunnel between the John Street Pumping Station and the Toronto Islands (ACMS Inventory CW-15);
- small portions of the southernmost heads of a series of wharves in the area of York Street that originally belonged to private boating clubs, but which were later redeveloped for commercial uses (ACMS Inventory CW-4, 5, and 6);
- the short-lived Air Harbour (ACMS Inventory CW-11); and the
- even more short-lived Royal Canadian Air Force Equipment Depot No. 1 (ACMS Inventory CW-13/EB-6).

Summary descriptions of these features are provided in Table 2.

Resource/Feature	Description
Dominion Shipbuilding Company (CW-9)	First and Second World War shipyard located on Spadina Quay. The site was variously occupied by other industrial operations. Virtually all of the lands associated with the operations have been extensively redeveloped. No significant remains are expected to have survived.
Bulkhead/Pierhead Line (CW-12/EB-5)	Circa 1925 limit of lake fill operations between Yonge and Berkeley streets. The feature was built using timber piles driven to bedrock and joined by waling and was faced, on the south side, with sheet piling which also extended to bedrock depth. Steel rods that were run to anchor piles on the inland side were used to reinforce the structure. The waters to the south of this structure were filled between the 1930s and 1950s. Substantial portions of the feature may be expected to have survived. It is probable that roughly contemporary secondary fill retaining structures, sewage outfall features, etc. survive to the north of the Bulkhead Line.
Toronto Water Supply Intake System (CW-15)	Municipal waterworks developed in 1872 to take over the inefficient private system. In 1875, the City of Toronto completed a 36-inch cast iron pipe from the John Street waterworks to an infiltration basin constructed on the shore of Toronto Island. Additional capacity became available in 1890-1891 when a 48-inch steel pipe was laid parallel to the first pipe. Both pipes were laid on the lakebed in trenches dredged through the lakebottom sediments. The inability of the system to provide an adequate supply was demonstrated when the low hydrant water pressure hampered efforts to contain the Great Fire of 1904. A new brick-lined tunnel, measuring eight feet high and up to eight feet wide, was completed by 1908. This feature was tunnelled through bedrock.
Toronto Canoe Club Wharf (CW-4) Argonaut Rowing Club Wharf (CW-5) Unidentified Wharf (CW-6)	The heads of the Toronto Canoe Club Wharf (also known as Wharf 16), the Argonaut Rowing Club Wharf (also known as Wharf 17), and an unnamed wharf extend south of Lakeshore Boulevard into the study area. These sections of the wharves were built between 1903 and 1910. The complex was expanded to the east between circa 1903 and 1910 (Wharf 25). Various structures were located on the decks of these structures. The slips between this and the adjacent wharves had been filled in by 1923. The site was subsumed by lake fill between 1926 and 1928. Substantial portions of the foundation cribs may be expected to have survived. It may be assumed that the wharf featured timber cribbing ballasted with rock and miscellaneous fills. It is less likely that remains of the superstructure (i.e., the active working surface of the facility) are preserved.
Air Harbour (CW-11)	Seaplane base for mail and passenger traffic located at the foot of Freeland Street. The facility originally opened in 1929, but closed two years later due to a combination of high costs and low levels of use. It was reopened in 1934 and

Resource/Feature	Description
	operated until 1939 when it was superseded by the Toronto Island Airport. Its facilities included a 100x36 foot wooden ramp, floating docks, and buildings for passengers, customs and immigration, all of which were demolished when the site went out of use (Stinson and Moir 1991).
Royal Canadian Air Force Equipment Depot No. 1 (CW-13/EB-6)	1940-1946 military base. The majority of the 65 buildings that made up the base were temporary frame-built structures that were removed after the war.

4.0 ARCHAEOLOGICAL POTENTIAL AND RESOURCE EVALUATION

4.1 Aboriginal Archaeological Potential

As noted in section 2.1, there is no potential for the survival of precontact Aboriginal archaeological resources within the study area.

4.2 Identified Euro-Canadian Resource Evaluations

In order to assess the potential archaeological significance of any material remains associated with the inventoried features, it is necessary to evaluate their character and the likely contribution that any detailed archaeological investigations of these sites may be expected to provide.

The first comprehensive archaeological evaluation system for the Toronto waterfront was developed in the 1980s by Historica Research Limited for "Railway Lands Precinct A," which consisted of major portions of the lands between Spadina Avenue and Yonge Street, and the railway lines and Lakeshore Boulevard (HRL 1986). This system was adapted from the Toronto Historical Board's evaluation process for built heritage features and involved the definition of a series of overlapping evaluation criteria, to be applied on a case-by-case-basis, to rank sites according to their relative significance.

In the subsequent 20 years, the basic evaluation criteria were used, with slight modifications, in numerous studies carried out along portions of the waterfront between Bathurst Street and the Don River, for both large-scale, broad-brush reviews and detailed, property-specific studies (e.g., ASI and HRL 1992, 2004; HHI 1994; HRL 1989). The criteria, which are currently being refined for the Waterfront Toronto Archaeological Conservation and Management Strategy, consist of the following:

Site/Feature Type: the site/feature is illustrative of patterns of cultural, political, military, economic or industrial history (e.g., an industry typical of a particular activity in Toronto).

Site/Feature Integrity: the degree to which a site/feature has been physically altered or disturbed. The integrity of the site/feature will affect the importance of the feature type.

Age: importance of sites/features is often based upon arbitrary time periods (e.g., pre-1850). Nevertheless, age alone is not a criterion of significance; it must be combined with another characteristic. A relatively unique twentieth-century site/feature for which little documentation exists, for example, may be important. Conversely, an older site/feature which is typical of numerous others may be relatively unimportant.

Historical Importance: the site/feature is associated with a person, or group of people, of local, provincial, national or international importance; or associated with an event or process of local, provincial, national or international importance. This may include a short time period, such as a military battle, or an activity that occurred over a long time period. A process may include manufacturing, repair or servicing that form an integral part of the design of a structure.

Landscape Setting: applies to sites/features manifested as visible ruins or earthworks. The removal of the ruin or earthworks, even if fully documented, or changes to the surrounding landscape, may modify society's perception of the area. This type of feature would be landmark; one that forms an essential part of a distinctive skyline; or defines or terminates a vista.

Quality of Documentary Material: applies only to large scale features that cover large areas (e.g., cribbing). If good quality drawings, illustrations and written records are available or other portions of the feature have been subject to archaeological investigation and recording, little additional *new* or *non-redundant* information may be obtained from the archaeological investigation of the feature. If, however, little documentation exists, or it is contradictory, physical examination may be necessary.

Consideration of these basic criteria were used to assign significance ratings for individual features to one of four basic categories:

- **Grade 1:** Historically significant feature for which field work (e.g., archaeological test excavations, possible mitigation) is recommended.
- **Grade 2:** Historically important feature for which limited archaeological fieldwork (monitoring) is recommended. This grade also applies to sites that would otherwise be ranked as Grade I, but cannot be mitigated as such for technical reasons or because of economic constraints.
- **Grade 3:** Feature of little historical significance, or for which the significance is not apparent; no form of mitigation or monitoring is necessary.
- **Grade 4:** Lakefill within Toronto Harbour.

For a variety of logistical and administrative reasons, subsequent practice has seen this system reduced to two levels of significance in day-to-day practice along the waterfront: those resources that require some form of Stage 4 mitigation (typically monitoring), and those that do not. Coincidentally, this situation is mirrored, in some respects, by the generic significance evaluation process outlined in the Ministry of Culture's 2006 draft *Standards and Guidelines for Consultant Archaeologists*, even though this document is focused largely on the archaeological assessment process in rural/greenfield contexts (and the site types encountered in those settings) and generally assumes that the evaluation exercise for specific identified

archaeological resources will not be carried out until the completion of at least Stage 2 of the overall assessment process.

The Ministry of Culture system (MCL 2006a: Unit 1E) divides the evaluation criteria to be considered into three basic categories: information value, community value and value as a public resource.

Information value refers to the likelihood that investigation of a site will contribute to an increased understanding of the past. Such an assessment must be carried out through consideration of several major criteria: the degree to which a site will contribute to our understanding of the past (its cultural, historical and scientific value); the relative rarity or ubiquity of similar sites locally or regionally; the site's productivity or richness in terms of the artifacts it contains; and the degree to which the site has been disturbed by more recent land uses or natural processes.

Value as a public resource refers to the degree that a site will contribute to an enhanced understanding and appreciation of Ontario's past on the part of the general public.

Value to a community refers to whether or not the site has intrinsic value to a particular community, First Nation or other group.

It seems that consideration of these criteria is also expected to lead to a comparatively straight-forward "yes/no" decision; either the archaeological resource is of "high heritage value or interest" (i.e., significance) and requires further investigation and/or mitigation, or it is of "low or no heritage value or interest" and does not require further action.

Although there are differences in terminology and organization between the criteria outlined in the original HRL Toronto waterfront system and the generic system presented in the Ministry of Culture's 2006 *Draft Standards and Guidelines for Consultant Archaeologists*, the fundamental criteria and the concepts behind them are, essentially, the same. Likewise, there is also overlap between the HRL system and that presented in the Ministry of Culture's *Ontario Heritage Tool Kit: Heritage Property Evaluation* document (MCL2006b:23).

The evaluation of the archaeological significance of the potential resources identified in the present inventory follows the same general outline originally developed by Historica Research Limited for the central Toronto waterfront, with the following modifications, which reflect the refinements introduced through the *Waterfront Toronto Archaeological Conservation and Management Strategy*:

- The ranking of a particular resource as either Grade 1, 2 or 3 should be regarded as a statement concerning its potential *archaeological* significance, rather than its overall *historical* significance, as expressed in the original Historica Research Limited-based system. This is a subtle, but important, distinction. While a feature may be of relatively high historical significance in the development of the waterfront, its archaeological investigation may not lead to any new insights into its character or function, or have any meaningful role in any effort to preserve, commemorate and interpret any surviving physical remains of the site.

- The *Quality of Documentation* criterion has not been used in this exercise. The inventory compilation has not entailed the extensive research that would be carried out for a Stage 1 Archaeological Assessment of a specific property or site. Thus the necessary data to permit a sound evaluation of the physical character—or extent of the documentation that is available—for individual features is lacking. This hinders the development of any research questions that archaeology is particularly well-suited to addressing.
- The Grade 4 category, which included lakefills of all types, has not been utilized, as such materials, in and of themselves, are not considered to be archaeological resources.

Each resource within the inventory has been ranked on a scale of 0 to 5 points for each significance criterion, to arrive at a total score out of a possible total of 25 points. The results are presented in Table 3.

Features that score 10 points or less are assigned a Grade 3 ranking (no form of mitigation or monitoring is considered necessary). Four features have been ranked as Grade 3: the Dominion Shipbuilding Company (CW-9), the Air Harbour (CW-11); the Bulkhead/Pierhead Line (CW-12/EB-5), and the RCAF Equipment Depot (CW-13/EB-6).

Those that score from 11 to 17 are assigned a Grade 2 ranking, for which limited archaeological fieldwork (monitoring) is recommended. Two features have been ranked as Grade 2: the wharves associated with the private boating clubs and later commercial operations (CW-4, 5, and 6); and the Toronto Water Supply Pipe System (CW-15). The portions of the wharves that fall within the study area are likely to have been extensively damaged, if not destroyed, by the construction of the Gardiner Expressway off-ramp at York Street.

Finally, Grade 1 resources (for which archaeological test excavations and possible mitigation efforts are necessary) are those that score 18 or higher. No feature within the study area has been assigned a Grade 1 ranking.

Table 3: Summary of Features and Significance Evaluations												
Inventory No.	Feature/Resource	Summary Description	Significance Evaluation Criteria (Each criterion rated on a scale of 0-5)								Significance Ranking and Recommended Action	Comments
			Feature Type	Feature Integrity	Age	Historical Importance	Landscape Setting	Quality of Documentation	Total Score			
CW-4 CW-5 CW-6	Toronto Canoe Club Wharf Argonaut Rowing Club Wharf Unidentified Wharf	The head of the Toronto Canoe Club wharf (also known as Wharf 16).	3	3	3	2	0	—	11	Grade 2: Documentation during construction monitoring.	Substantial portions of the foundation cribs may be expected to have survived. It may be assumed that the wharf featured timber cribbing ballasted with rock and miscellaneous fills. It is less likely that remains of the superstructure (i.e., the active working surface of the facility) are preserved. However, the integrity of those portions of the features within the study area is likely to have been severely compromised by the construction of the York Street exit ramp from the Gardiner Expressway.	
CW-9	Dominion Shipbuilding Company	World War I and II shipyard.	3	0	2	3	0	—	8	Grade 3: No archaeological action required.	No significant remains of this operation are expected to have survived later redevelopment activities. This assessment is consistent with the criteria outlined in the Ministry of Culture 2006 Draft Archaeology in Ontario Standards and Guidelines (MCL 2006a).	
CW-11	Air Harbour	1929-1939 seaplane base.	3	3	1	2	0	—	9	Grade 3: No archaeological action required.	From an archaeological perspective, none of these features are considered to be of potential high heritage value. This assessment is consistent with the criteria outlined in the Ministry of Culture 2006 Draft Archaeology in Ontario Standards and Guidelines (MCL 2006a).	
CW-12/EB-5)	Bulkhead/Pierhead Line	Circa 1925 limit of lake fill operations between Yonge and Berkeley Streets.	1	3	1	1	4	—	10	Grade 3: No archaeological action required.	Substantial portions of the feature may be expected to have survived. It is probable that roughly contemporary secondary fill retaining structures, sewage outfall features, etc. survive to the north of the Bulkhead Line. From an archaeological perspective, none of these features are considered to be of potential high heritage value.	
CW-13/EB-6)	Royal Canadian Air Force Equipment Depot No. 1	1940-1946 military base.	3	2	1	2	0	—	8	Grade 3: No archaeological action required.	While subsurface remains of this occupation may survive within portions of the study area, archaeological remains of this period of the precinct's history are not considered to be of potential high heritage value. This assessment is consistent with the criteria outlined in the Ministry of Culture 2006 Draft Archaeology in Ontario Standards and Guidelines (MCL 2006a).	
CW-15	Toronto Water Supply Pipe System	1872-1905 intake pipes and 1908 tunnel between the John Street Pumping Station and Toronto Island	3	4	2	3	0	—	12	Grade 2: Documentation during construction monitoring.	The pipes survive as deeply buried features. A previous assessment report recommended that monitoring of any undertakings that might uncover the feature would be an appropriate strategy (HRL 1986).	

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Stage 1 archaeological assessment of the Queen's Quay Revitalization project, in the City of Toronto, resulted in the identification of six features or feature complexes of potential significance. These consist of:

- the site of the Dominion Shipbuilding Company, which occupied the waterfront on either side of Spadina Avenue (ACMS Inventory CW-9);
- the Bulkhead/Pierhead line and contemporary shorewall constructions which occur throughout the study area (ACMS Inventory CW-12/EB-5);
- the Toronto water supply intake tunnel between the John Street Pumping Station and the Toronto Islands (ACMS Inventory CW-15);
- a small portion of the southernmost head of a series of wharves in the area of York Street that originally belonged to private boating clubs but which were later redeveloped for commercial uses (ACMS Inventory CW-4, 5, and 6);
- the short-lived Air Harbour (ACMS Inventory CW-11); and
- the even more short-lived Royal Canadian Air Force Equipment Depot No. 1 (ACMS Inventory CW-13/EB-6).

These features have been evaluated according to the criteria utilized in Waterfront Toronto's *Archaeological Conservation and Management Strategy*, resulting in the determination that the wharves and the Toronto water supply intake lines are of Grade 2 archaeological significance. Depending upon the scope of impacts that will occur in the areas of these features, limited archaeological mitigation measures may be necessary.

The upper portions of the wharf features may be expected to occur at and below an elevation of approximately 75 metres ASL (the former median lake level), roughly two metres below the current grade (~77 metres ASL) of the site. It is unlikely that any portions of the cribwork that extended above the waterline or the superstructures that it carried have survived. In terms of their overall general construction, the cribs are likely to be comparable to other late nineteenth-early twentieth century waterfront structures that have been documented in the City of Toronto, although, as is always the case, minor variations in design, materials and construction techniques are to be expected.

The water supply structures that extended from the John Street Pumping Station to the Toronto Island infiltration basin are likely to be much deeper. The circa 1872-1905 intake pipes were likely laid in trenches dredged through the lakebed sediments. Historic mapping of the harbour prior to any major dredging activities indicates that the lake was 18-24 feet (5.4-7.3 metres) deep in the vicinity of Queen's Quay. The pipes are unlikely, therefore, to be encountered at an elevation much higher than 72 m ASL. The 1908 tunnel, on the other hand, will be even deeper as it was tunnelled through bedrock.

The remaining four features are of Grade 3 significance for which no mitigative actions are required.

On the basis of these findings it is recommended that:

1. Should any construction activities associated with the Queen's Quay Revitalization project in the vicinity of those portions of the Toronto Canoe Club, Argonaut Rowing Club and later wharves

that fall within the study area extend to such depths that these features are likely to be impacted (i.e., 2.0 metres below grade), it is recommended that this work be subject to archaeological monitoring. If such impacts will not occur, then there are no further archaeological concerns with respect to those portions of the feature located within the study area.

2. Should any construction activities associated with the Queen's Quay Revitalization project in the vicinity of the Toronto water supply intake features extend to such depths that these features are likely to be impacted (i.e., 5.0+ metres below grade), it is recommended that these be subject to archaeological monitoring. If such impacts will not occur, then there are no further archaeological concerns with respect to those portions of the feature located within the study area.

Should archaeological monitoring be required in the case of either of these resources, such a program should proceed whereby the site is visited on a regular basis to inspect the progress of the excavations and to document, through photography and the preparation of measured drawings, any significant exposed features that exhibit notable design or construction attributes. In the absence of an archaeological monitor on site, any significant feature encountered during the excavations should be preserved intact for a period of 24-48 hours to allow a licensed archaeologist to visit the site and record its salient attributes.

It should be noted that given the depths at which the Grade 2 features are anticipated, the feasibility of monitoring is, to a large degree, dependent upon the scale of the construction excavations.

3. The balance of the Queen's Quay Revitalization study area, as depicted in Figures 2-5, may be considered free of further archaeological concern.
4. In the event that unanticipated deeply buried archaeological remains are found within the study area during construction activities, the Heritage Operations Unit of the Ministry of Culture should be notified immediately.
5. In the event that human remains are encountered during construction, the proponent should immediately contact both MCL, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services (416) 326-8404.

The documentation related to this archaeological assessment will be curated by Archaeological Services Inc. until such a time that arrangement for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the Ontario Ministry of Culture, and any other legitimate interest groups.

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