

Via e-mail: [debbie.cashion-kalinowski@edmonton.ca](mailto:debbie.cashion-kalinowski@edmonton.ca)

February 16, 2016

HRM Project File: 4725-15-0018  
Permit File: 2015-186  
OPaC HR Appl: 008021125

Debbie Cashion-Kalinowski  
City of Edmonton  
12th Flr, CN Tower  
10004, 104 Ave NW  
Edmonton AB  
T5J 2R7

Dear Ms. Cashion-Kalinowski:

**SUBJECT: HISTORICAL RESOURCES ACT APPROVAL WITH CONDITIONS  
4725-15-0018-002  
CITY OF EDMONTON  
FORT EDMONTON PARK - UTILITY UPGRADES  
LSDs 2 - 10, SECTION 23, TOWNSHIP 52, RANGE 25, W4M  
HISTORIC RESOURCES IMPACT ASSESSMENT - FINAL REPORT**

Acting on behalf of City of Edmonton (Proponent) and in accordance with Section 37(2)(a)(b) of the *Historical Resources Act*, Circle CRM Group Inc.:

- carried out a Historic Resources Impact Assessment for the Fort Edmonton Park - Utility Upgrades (Project); and,
- provided Alberta Culture and Tourism with copies of a final report summarizing the assessment, *Final Report Historical Resources Impact Assessment City of Edmonton Fort Edmonton Park - Utility Upgrades* (Permit: 2015-186).

## **HISTORIC RESOURCES IMPACT ASSESSMENT**

### **Terms of Reference**

The terms of reference for the Historic Resources Impact Assessment were outlined in the Schedule "A" of the letter dated August 26, 2015. These requirements included a targeted Historic Resources Impact Assessment for archaeological resources of high potential landforms in areas with minimal previous disturbance.

### **ARCHAEOLOGICAL RESEARCH PERMIT NO. 2015-186**

Under Archaeological Research Permit No. 2015-186, Circle CRM Group Inc. conducted an assessment of lands with high archaeological potential. The field assessment consisted of a pedestrian traverse, intensive examination of fortuitous exposures, shovel testing and an auger testing program.

## RESULTS

**Previously Recorded Historic Resources:** One archaeological site (FjPj-68) had been previously recorded within the proposed Project footprint. FjPj-68 yielded minimal cultural material and no further studies are required.

**Newly Recorded Historic Resources:** Circle CRM Inc. Inc. did not identify any new historic resources during the conduct of the impact assessment.

### ***HISTORICAL RESOURCES ACT APPROVAL WITH CONDITIONS***

Based upon the results of the Historic Resources Impact Assessment, *Historical Resources Act* approval is granted to the Proponent for the Project, as illustrated on the attached plan and subject to the requirements outlined in the attached Schedule.

#### **Conditions of Approval**

The attached Schedule outlines Alberta Culture and Tourism's requirements for the proposed footprint of the Project. These requirements involve construction monitoring in targeted areas. The Proponent is granted *Historical Resources Act* approval to proceed with development of the remainder of the project on the understanding that the required construction monitoring will be conducted.

Should you require additional information or have any questions concerning this approval, contact George Chalut, Land Use Planner, at 780-431-2329 (toll-free by first dialing 310-0000) or [george.chalut@gov.ab.ca](mailto:george.chalut@gov.ab.ca).

I would like to thank representatives of the City of Edmonton for their cooperation in our endeavour to document the Province's historic resources.

Sincerely,



David Link, PhD  
Assistant Deputy Minister

Attachments

## Historic Resources Application

### Activity Administration

Date Received: January 20, 2016

HRA Number: 4725-15-0018-002

Project Category: Recreation and Tourism (4725)

Application Purpose:  Requesting HRA Approval / Requirements

Lands Affected  Additional Lands

Project Type:  Water Supply      GIS Shapefiles are attached      yes  
 Electrical / Utility      (yes/no)  
 Waste Management      Approximate Project Area (ha)      22.5

Project Name: Fort Edmonton Park - Utility Upgrades

Additional Name(s):

Key Contact:	Kristin E Soucey	Affiliation:	Circle CRM Group Inc.
Address:	211, 10544 106 Street	City / Province:	Edmonton, AB
Postal Code:	T5H 2X6	Phone:	(780) 423-5840
E-mail:	kristin@circleconsulting.ca	Fax:	() -
		Your File	
		Number:	

Proponent:	City of Edmonton	Contact Name:	Debbie Cashion-Kalinowski
Address:	12th Flr, CN Tower 10004, 104 Ave NW	City / Province:	Edmonton, AB
Postal Code:	T5J 2R7	Phone:	(780) 944-7539
E-mail:	debbie.cashion-kalinowski@edmonton.ca	Fax:	() -

Proposed Development Area					Land Ownership			
MER	RGE	TWP	SEC	LSD List	FRH	SA	CU	CT
4	25	52	23	2-10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Historical Resources Impact Assessment:

For archaeological resources:

Has a HRIA been conducted?  Yes  No

Permit Number (if applicable): 15-186

For palaeontological resource:

Has a HRIA been conducted?  Yes  No

Permit Number (if applicable):

*Historical Resources Act* approval is granted for the activities described on this application and its attached plan(s)/sketch(es) subject to the conditions specified in the attached document(s).



\_\_\_\_\_  
David Link

February 17, 2016

\_\_\_\_\_  
Date

**HISTORICAL RESOURCES ACT APPROVAL WITH CONDITIONS**

**CITY OF EDMONTON  
FORT EDMONTON PARK - UTILITY UPGRADES  
WATER SUPPLY, ELECTRICAL / UTILITY, WASTE MANAGEMENT**

**HISTORIC RESOURCES MANAGEMENT PROJECT FILE: 4725-15-0018-002**

**SCHEDULE**

For the purposes of this Schedule City of Edmonton shall be referred to as the “Proponent” and Fort Edmonton Park - Utility Upgrades shall be referred to as the “Project”.

The following *Historical Resources Act* approval is based upon the results of the Historic Resources Impact Assessment carried out by Circle CRM Group Inc. under Archaeological Research Permit No. 15-186 and reported upon in *Final Report Historical Resources Impact Assessment City of Edmonton Fort Edmonton Park - Utility Upgrades*.

Part I provides the Proponent with *Historical Resources Act* approval for components of the Project while Part II outlines the terms and conditions attached to this approval.

**I. HISTORICAL RESOURCES ACT APPROVAL**

*Historical Resources Act* approval is granted to the Proponent for the Project, as illustrated on the attached plan.

**II. CONDITIONS OF APPROVAL**

Historical Resources Act approval is granted on the understanding that a construction monitoring program will occur, as outlined below.

**1.0 ARCHAEOLOGICAL RESOURCES**

The potential for the Project to affect archaeological resources is high.

## 1.1 Historic Resources Requirements

Pursuant to Section 37(2) of the *Historical Resources Act*, additional studies are to be conducted on behalf of the Proponent by an archaeologist qualified to hold an archaeological research permit within the Province of Alberta. A permit must be issued by Alberta Culture and Tourism prior to the initiation of any archaeological field investigations. Please allow ten working days for the permit application to be processed.

### 1.1.1 Alberta Regulation 254/2002

Archaeological investigations conducted under permit in Alberta are subject to the conditions stated within Alberta Regulation 254/2002, *Archaeological and Palaeontological Research Permit Regulation*, conditions set forth in the approved permit, and any other conditions that the Minister of Alberta Culture and Tourism imposes under Section 30 of the *Historical Resources Act*.

### 1.1.2 Contacting the Archaeological Survey

For further information regarding the acquisition of an archaeological research permit and/or consulting archaeologists' obligations under Alberta Regulation 254/2002, please contact Martina Purdon, Head, Regulatory Approvals & Information Management, at 780-431-2331 (toll-free by first dialing 310-0000) or [martina.purdon@gov.ab.ca](mailto:martina.purdon@gov.ab.ca).

### 1.1.3 Coverage

A construction monitoring program must be undertaken in the following targeted locations:

- 1) Target Area 2 (Shovel Test Area 8) within LSD 4-23-52-25-W4M
- 2) Target Area 8 (Shovel Test Area 5) within LSD 6-23-52-25-W4M
- 3) Target Area 15 (Shovel Test Area 3) within LSD 7-23-52-25-W4M

Should significant archaeological resources be encountered during the conduct of the monitoring program contact Eric Damkjar at 780-431-2346 (toll-free by first dialing 310-0000) or [eric.damkjar@gov.ab.ca](mailto:eric.damkjar@gov.ab.ca). It may then be necessary for Alberta Culture and Tourism to issue further instructions regarding these resources.

### 1.1.4 Timing

No excavation activities are to take place in the targeted areas until a professional consulting archaeologist is on-site to monitor construction activities.

## **1.2 Reporting the Results of Archaeological Resources Studies**

### **1.2.1 Submission of Archaeological Site Inventory Data Forms**

The Proponent's consulting archaeologist is required to submit site inventory data forms for each archaeological site recorded or re-examined during the conduct of the required studies. The discovery of a site must be reported within 30 days following the date of discovery. Site data forms are to be submitted within 30 days of the date on which the permit period ends or prior to the submission of any interim report or the final report, whichever comes first.

### **1.2.2 Submission of Final Report**

The final report must be submitted within 180 days after the expiration of the permit or upon completion of a required monitoring program, whichever comes first. Copies of the final report are to be submitted by the Proponent's consulting archaeologist to the Archaeological Survey, Historic Resources Management Branch, Heritage Division, Alberta Culture and Tourism, Old St. Stephen's College, 8820 – 112 Street, Edmonton, Alberta, T6G 2P8.

## **2.0 FURTHER SALVAGE, PRESERVATIVE OR PROTECTIVE MEASURES**

Based upon the results of the Historic Resources Impact Assessment, the Proponent may be ordered to undertake further salvage, preservative or protective measures or take any other actions that the Minister responsible for the *Historical Resources Act* considers necessary.

## **3.0 PRE-EMINENCE OF HISTORICAL RESOURCES ACT REQUIREMENTS**

Should conditions included within this Schedule be at variance with any instructions associated with the *Listing of Historic Resources* and/or the permit application(s), the conditions of the Schedule take precedence. Following instructions as outlined in this Schedule should result in the granting of *Historical Resources Act* approval and/or the issuance of requirements regarding further historic resources studies in a timely manner.

## **4.0 COMPLIANCE IS MANDATORY**

These conditions shall be considered directions of the Minister of Alberta Culture and Tourism under the *Historical Resources Act*. The Proponent and agents acting on behalf of the Proponent are required to become knowledgeable of the conditions. Failure to abide by the conditions will result in *Historical Resources Act* approval being delayed or not granted.

## ATTACHMENT 1

### STANDARD REQUIREMENTS UNDER THE *HISTORICAL RESOURCES ACT*: REPORTING THE DISCOVERY OF HISTORIC RESOURCES

---

If proponents and/or their agents become aware of historic resources during the course of development activities, they are required, under Section 31 of the *Historical Resources Act*, to report these discoveries to the Heritage Division of Alberta Culture and Tourism. This requirement applies to all activities in the Province of Alberta.

#### 1.0 REPORTING THE DISCOVERY OF ARCHAEOLOGICAL RESOURCES

The discovery of archaeological resources is to be reported to Eric Damkjar, Head, Archaeology, at 780-431-2346 (toll-free by first dialing 310-0000) or [eric.damkjar@gov.ab.ca](mailto:eric.damkjar@gov.ab.ca).

#### 2.0 REPORTING THE DISCOVERY OF PALAEOONTOLOGICAL RESOURCES

The discovery of palaeontological resources is to be reported to Dan Spivak, Head, Resource Management, Royal Tyrrell Museum of Palaeontology, at 403-820-6210 (toll-free by first dialing 310-0000) or [dan.spivak@gov.ab.ca](mailto:dan.spivak@gov.ab.ca).

#### 3.0 REPORTING THE DISCOVERY OF HISTORIC PERIOD SITES

The discovery of historic period sites is to be reported to Brenda Manweiler, Manager, Historic Places Research and Designation Program, at 780-431-2309 (toll-free by first dialing 310-0000) or [brenda.manweiler@gov.ab.ca](mailto:brenda.manweiler@gov.ab.ca). Please note that some historic period sites may also be considered Aboriginal traditional use sites.

#### 4.0 REPORTING THE DISCOVERY OF ABORIGINAL TRADITIONAL USE SITES

The discovery of any Aboriginal traditional use site that is of a type listed below is to be reported to Valerie Knaga, Director, Aboriginal Heritage Section, at 780-431-2371 (toll-free by first dialing 310-0000) or [valerie.k.knaga@gov.ab.ca](mailto:valerie.k.knaga@gov.ab.ca).

Aboriginal Traditional Use sites considered by Alberta Culture and Tourism to be historic resources under the *Historical Resources Act* include:

Historic cabin remains;  
Historic cabins (unoccupied);  
Cultural or historical community camp sites;

## ATTACHMENT 1

### STANDARD REQUIREMENTS UNDER THE *HISTORICAL RESOURCES ACT*: REPORTING THE DISCOVERY OF HISTORIC RESOURCES

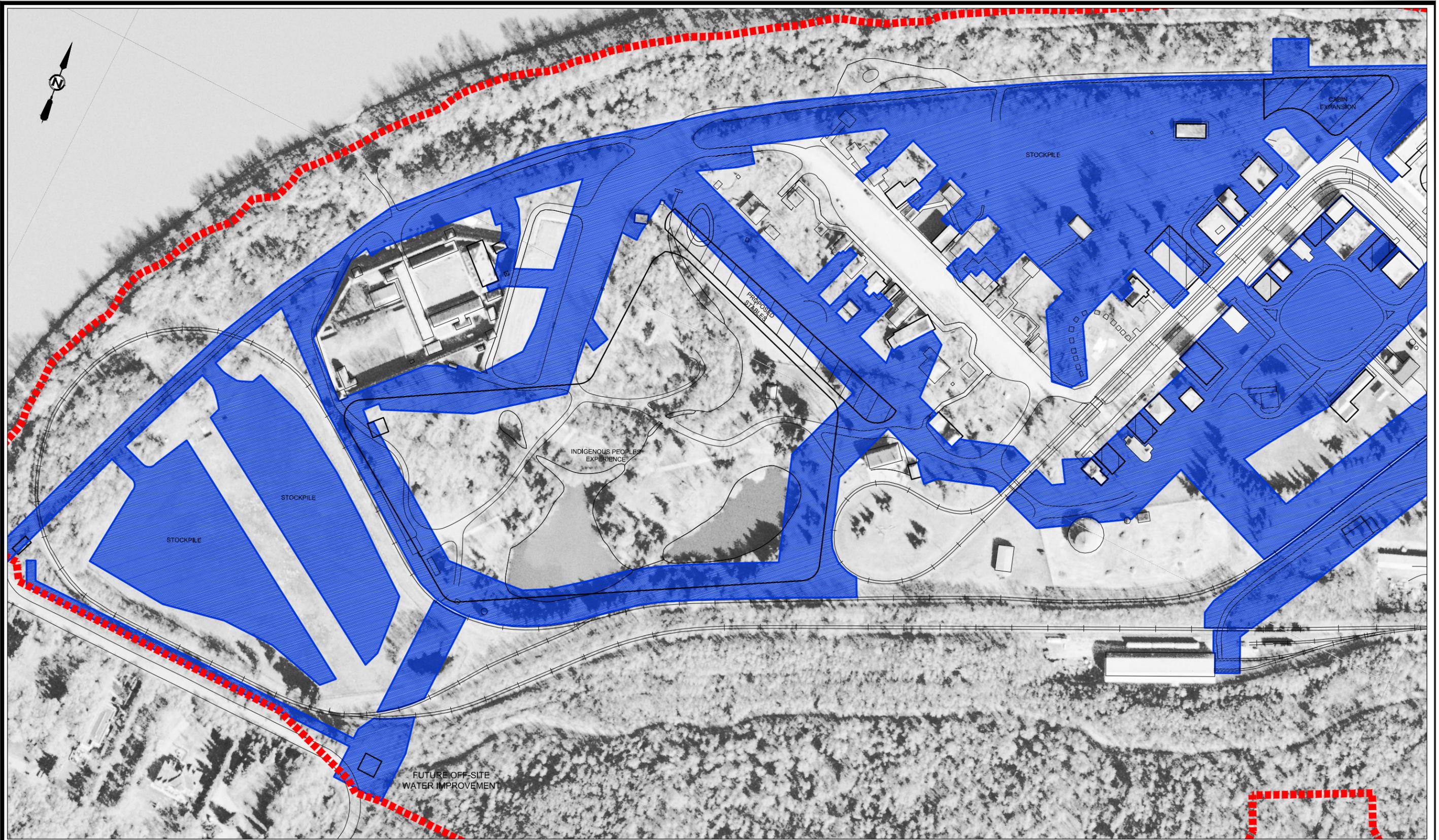
---

Ceremonial sites/Spiritual sites;  
Gravesites;  
Historic settlements/Homesteads;  
Historic sites;  
Oral history sites;  
Ceremonial plant or mineral gathering sites;  
Historical Trail Features; and,  
Sweat/Thirst/Fasting Lodge sites

#### **5.0 FURTHER SALVAGE, PRESERVATIVE OR PROTECTIVE MEASURES**

If previously unrecorded historic resources are discovered, proponents may be ordered to undertake further salvage, preservative or protective measures or take any other actions that the Minister of Alberta Culture and Tourism considers necessary.

This Drawing is For The Use Of The Client And Project Indicated  
No Representations Of Any Kind Are Made To Other Parties



C:\Users\jgibson\Documents\2012\01000\Fort Edmonton Utility Replacement\DWG\19-2\19-2-1\WORK AREA 1.dwg  
DATE: 2014 APR 11 10:00 AM

NO.	DATE	ENG.	BY	SUBJECT
D	2014APR11	AM	NS	SCHEMATIC DESIGN
C	2014MAR14	AM	NS	SCHEMATIC DESIGN
B	2014FEB12	AM	NS	SCHEMATIC DESIGN
A	2014JAN25	AM	NS	SCHEMATIC DESIGN

REVISIONS

DRAWING  
REDUCED TO  
HALF SIZE



PROJECT No.	20123701
SCALE	1:1000
DRAWN	N. SCHERER
DESIGNED	A. MILLER

**THE CITY OF**  
**Edmonton**

CONSTRUCTION IMPACT AREA WEST

FORT EDMONTON PARK UTILITY REPLACEMENT		
DRAWING NUMBER	REV. NO.	SHEET
FIGURE 19-2	D	1 2



Final Report  
Historical Resources Impact Assessment  
City of Edmonton  
Fort Edmonton Park - Utility Upgrades

ASA Permit 15-186

*Prepared for:*

City of Edmonton  
12<sup>th</sup> Floor, CN Tower  
10004- 104 Avenue NW  
Edmonton, AB  
T5J 2R7

*On behalf of:*

Associated Environmental  
1000, 10909 Jasper Avenue  
Associated Engineering Plaza  
Edmonton, AB  
T5J 5B9

*By:*

Kristin Soucey, M.A., M.Sc.  
Circle CRM Group Inc.  
Suite 304, 716 3 Ave NW  
Calgary, AB  
T2N 0J1

This report, including appendices, contains confidential and/or privileged material intended solely for use in the planning of the investigated project(s). No information or data contained herein is to be released to any other party without the express written permission of the Historic Resources Management Branch, Alberta Culture and Tourism.

December 2, 2015



## EXECUTIVE SUMMARY

This report details the results of an Historical Resources Impact Assessment (HRIA) conducted for the proposed City of Edmonton Fort Edmonton Park - Utility Upgrades Project. Methods of investigation, which included in-field survey, as well as the writing and submission of this final report, incorporate archaeological permit obligations as set out by the *Guidelines for Archaeological Permit Holders in Alberta*, the *Archaeological and Palaeontological Research Permit Regulation (Alberta Regulation 254/2002)* and the *Historical Resources Act*, as well as the associated Schedule A (HRA Requirements Project File: 4725-15-0018-001).

The current HRIA did not result in the identification of, or revisit to, any historic resource sites, previously unknown or otherwise. HRIA investigations were conducted on November 9, 13 and 18, 2015. Shovel testing (n=30) did not result in the identification of surface or subsurface cultural material. During the course of the HRIA, deeply buried palaeosols indicative of long periods of landform stability were identified in select areas. Due to the presence of the palaeosols, and the potential for deeply buried cultural resources, **it is recommended that the City of Edmonton Fort Edmonton Park - Utility Upgrades Project be granted *Historical Resources Act* clearance as per the survey plans in Appendix A and in accordance with the Schedule A (HRA Requirements Project File 4725-15-0018-001) on the condition that construction monitoring be conducted in Target Areas 2, 8 and 15 within LSDs 4, 6 and 7 of 23-52-25-W4M as identified in this report.** These recommendations are subject to the approval of Alberta Culture and Tourism.

## CREDITS

*Permit Holder:*

Kristin Soucey, M.A., M.Sc.

*Field Supervisor:*

Kristin Soucey, M.A., M.Sc.

*Field Assistant:*

Sheila Macdonald, M.A.

*Report Author:*

Kristin Soucey, M.A., M.Sc.

*Senior Edit:*

Margarita de Guzman, M.A.

# TABLE OF CONTENTS

	<i>Page</i>
EXECUTIVE SUMMARY .....	iii
CREDITS.....	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES .....	vi
LIST OF TABLES .....	vii
1.0 INTRODUCTION.....	1
2.0 SCOPE.....	1
3.0 BACKGROUND.....	3
3.1 ENVIRONMENT .....	3
3.2 CULTURE HISTORY.....	5
3.3 PREVIOUS WORK.....	8
3.3.1 Archaeological Sites .....	8
3.3.2 Historic Sites.....	9
4.0 METHODOLOGY .....	10
5.0 RESULTS.....	12
5.1 NE and SE of 23-52-25-W4M.....	16
5.2 SW of 23-52-25-W4M.....	20
6.0 SUMMARY AND RECOMMENDATIONS .....	33
REFERENCES CITED.....	34
APPENDIX A: DEVELOPMENT PLAN.....	37
APPENDIX B: SCHEDULE A .....	38

## LIST OF FIGURES

	<i>Page</i>
Figure 1. Map showing location of the current proposed development. ....	2
Figure 2. Natural regions and subregions of Alberta (from NRC 2006). ....	4
Figure 3. Culture-historical model of central Alberta (from Vickers 1986, Dyck 1983)...	6
Figure 4. Map showing the Project overlying an aerial photograph from 1924. ....	13
Figure 5. Map showing the Project overlying an aerial photograph from 1969. ....	14
Figure 6. Map showing the location of HRIA target areas identified within the Project during the initial pedestrian traverse. ....	15
Figure 7. Map showing the location of the survey route and shovel tests within the NE of 23-52-25-W4M. ....	17
Figure 8. Photograph of STA 1, view east with the bus parking lot in the background to the right. ....	18
Figure 9. Photograph showing the soil profile at STA 1. ....	19
Figure 10. Photograph showing the location of STA 2, view north-northeast. ....	19
Figure 11. Photograph showing the soil profile at STA 2. ....	21
Figure 12. Photograph showing the location of STA 3, view north. ....	21
Figure 13. Photograph showing the soil profile in STA 3. ....	22
Figure 14. Map showing the location of the survey route and shovel tests in the SW of 23-52-25-W4M. ....	23
Figure 15. Photograph showing the location of STA 4, view northeast. ....	25
Figure 16. Photograph showing the soil profile at STA 4. ....	25
Figure 17. Photograph showing the location of STA 5, view west. ....	26
Figure 18. Photograph showing the location of STA 6, view southeast. ....	27
Figure 19. Photograph showing the soil profile at STA 6. ....	27
Figure 20. Photograph showing the location of STA 7, view south. ....	28
Figure 21. Photograph showing the soil profile at STA 7. ....	28
Figure 22. Photograph showing the location of STA 8 between the horse pasture (background) and east to west oriented berm (left), view southeast. ....	30
Figure 23. Photograph showing terraforming in the horse pasture south of STA 8. ....	30

Figure 24. Photograph showing the soil profile at STA 8. ....	31
Figure 25. Photograph showing the location of STA 9, view southwest.....	31
Figure 26. Photograph showing the soil profile at STA 9. ....	32

## LIST OF TABLES

	<i>Page</i>
Table 1. Known historic resource sites within 1 km of proposed development. ....	9
Table 2. Summary of HRIA under the current permit. ....	12

## 1.0 INTRODUCTION

An Historical Resources Impact Assessment (HRIA) was conducted for the City of Edmonton Fort Edmonton Park - Utility Upgrades Project (the Project), following the receipt of archaeological research permit 15-186 on November 4, 2015. *Historical Resources Act* Requirements for an archaeological HRIA were issued under the Schedule A for the Project, citing high potential to affect archaeological resources (Project File 4725-15-0018-001). Archaeological survey and in-field site assessments were conducted on November 9, 13 and 18, 2015; no historic resource sites were identified and no previously recorded sites were revisited.

This report details the physical and cultural history of the area, and the methodologies used during the current HRIA; these are in accordance with the *Guidelines for Archaeological Permit Holders in Alberta*, the *Archaeological and Palaeontological Research Permit Regulation* (Alberta Regulation 254/2002) and the *Historical Resources Act*. Ensuing sections detail the results of the pre-field research and the in-field archaeological survey, with recommendations for all associated historic resources.

## 2.0 SCOPE

The Project occurs within the boundaries of Fort Edmonton Park (the Park), located on an elevated terrace along the south shore of the North Saskatchewan River within the southwestern quadrant in the City of Edmonton (the City) (Figure 1; Appendix A). The City proposes to upgrade existing utilities and lay new utility lines, however, the exact location of the upgrades is currently unknown. Therefore, large areas for possible upgrades were identified throughout the Park, with the extent and depth of potential disturbances also unknown. One known HRV 0 site, FjPj-68, is recorded as being within the eastern portion of the Project.

Archaeological survey, which included foot-traversing to identify target areas, as well as subsurface testing in select target areas, occurred on November 9, 13 and 18, 2015. No new historic resource sites were identified and no known sites were revisited. The results of this assessment follow a discussion of the environmental and cultural background of the project area, as well as the methodologies used to ensure compliance with the *Historical Resources Act*.

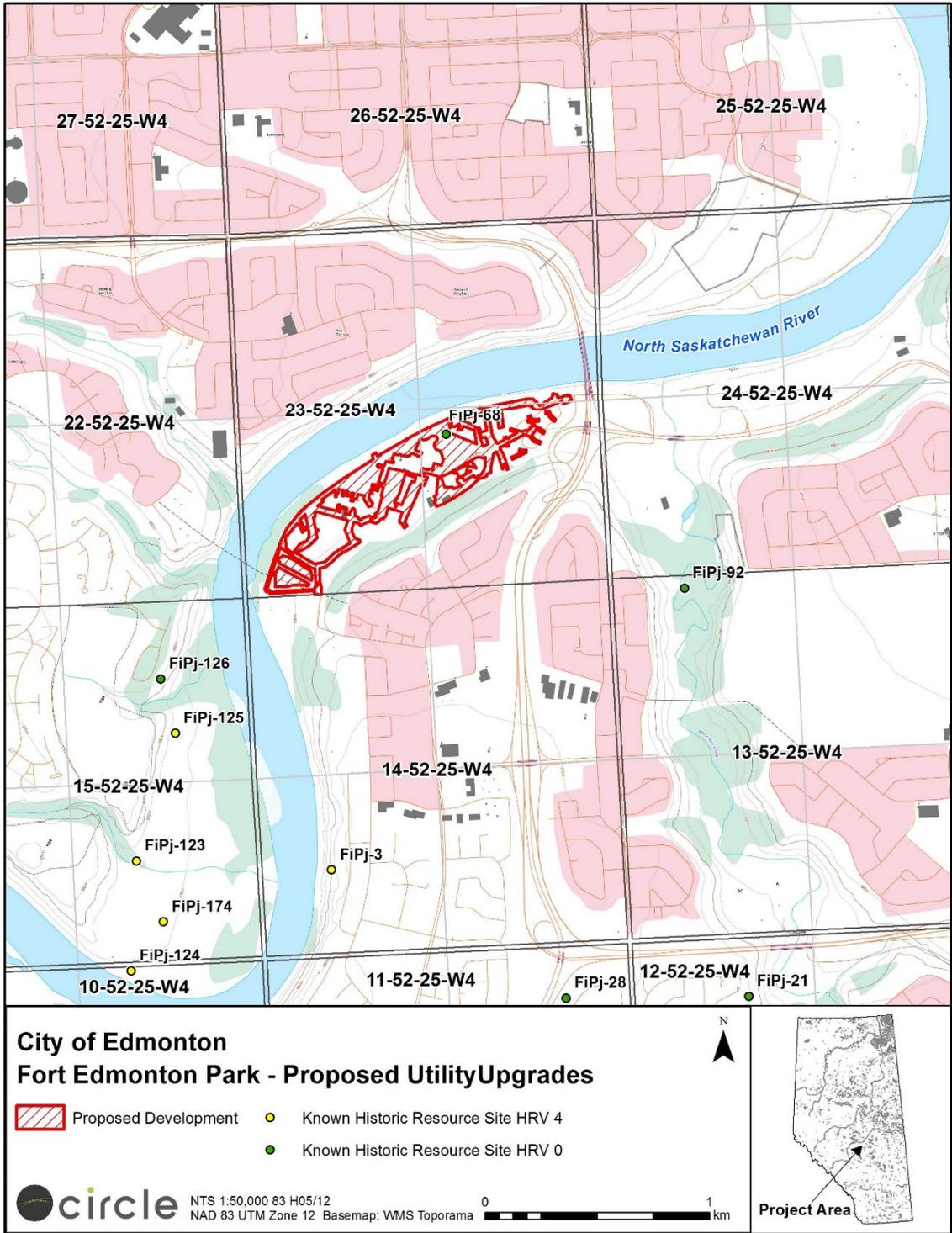


Figure 1. Map showing location of the current proposed development.

### **3.0 BACKGROUND**

Pre-field research was conducted to ensure a clear understanding of the development area, in terms of environmental surroundings, the archaeology, and local history, as it pertains to the potential for identifying further cultural deposits. This research includes, but is not limited to, the review of relevant references, existing site forms, and reports for previous investigations, as well as updated information with regard to known and previously unrecorded sites and local histories. Comparing the location, as well as the context and significance, of known sites in relation to topographic and historic maps will reveal the potential for identifying further archaeological sites, as well as further identifying the extent of necessary field investigations.

### **3.1 ENVIRONMENT**

The earliest evidence for human occupation in Alberta dates back almost 12,000 years, during the Pleistocene-Holocene transition, when the Cordilleran and Laurentide ice sheets began to retreat, creating a habitable corridor along the eastern slopes of the Rocky Mountains (Dyke 2004; Frison & Bonnichsen 1996; see also Catto & Mandryk 1990, Wedel 1953). The beginning of the Holocene period witnessed increases in temperature and decreases in precipitation, to which human populations were forced to continually adapt. Continued climatic variations have resulted in the development of a wide-ranging biotic landscape. These landscapes have been classified into a number of natural regions, according to landscape patterns, vegetation, soil and physiographic features, as well as other features, such as climate, topography, geology and wildlife distribution patterns (NRC 2006; see also Fenton *et al.* 2013 and Strong & Leggat 1992).

The current development occurs in the Central Parkland Subregion of the Parkland Natural Region (Figure 2). The Central Parkland encompasses over 8% of the province, consisting predominately of cultivated lands with small remnants of native parkland. Wetlands occupy about 10%; less than 2% is occupied by lakes and streams (NRC 2006).

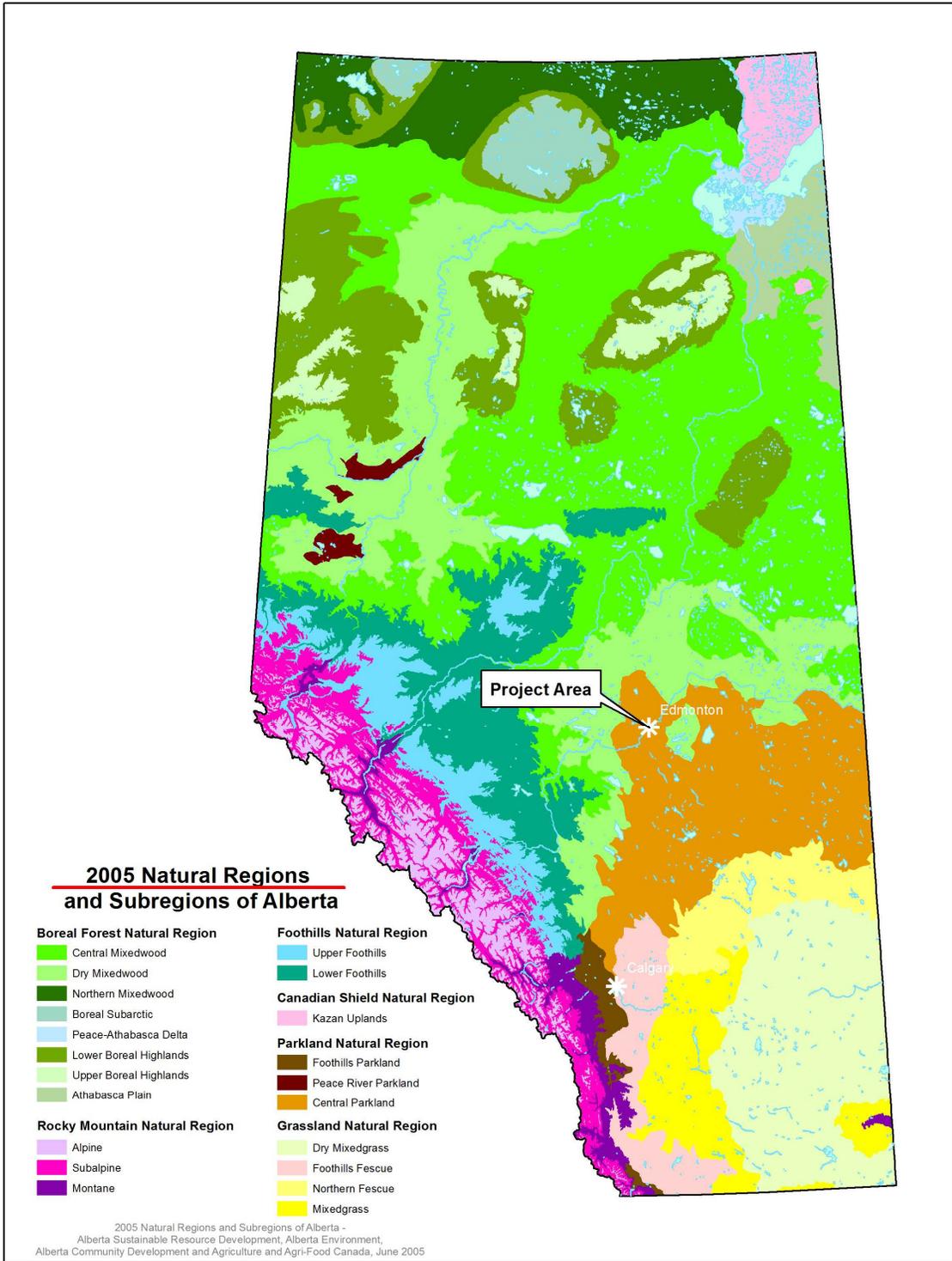


Figure 2. Natural regions and subregions of Alberta (from NRC 2006).

The Central Parkland consists predominately of aspen; wetlands are commonly surrounded by black spruce and tamarack. Soils are predominantly Black Chernozems, with Dark Gray Chernozems, Gleysols, Solonetzic and organic soils occurring in wetter areas along lower slopes and in valley bottoms. The underlying geology consists mainly of Upper-Cretaceous sandstone and mudstone with some marine shales, generally overlain by fine textured till and glaciolacustrine and glaciofluvial sediments (Fenton *et al.* 2013; NRC 2006).

Characteristic wildlife populations have historically included Bison, as well as moose, black bear and white-tailed deer. Smaller species include the Snowshoe hare, cottontail rabbit, red fox, northern pocket gopher, Franklin's ground squirrel and a wide variety of avifauna (*ibid.*).

### **3.2 CULTURE HISTORY**

The chronological sequence that defines the culture history of Alberta is based essentially on projectile point styles recovered throughout the Plains (Figure 3). First defined in the late 1960s (Wormington & Forbis 1965; Reeves 1969), the culture-historical model defines three main periods prior to European contact, namely, the Early Prehistoric (11,500 – 7,500 BP), the Middle Prehistoric (7,500 – 2,000 BP) and the Late Prehistoric (2,000 – 250 BP); these periods have been further defined with the identification, recovery and analysis of new materials (Vickers 1986; Peck 2010, 2011). The Protohistoric Period is defined by the acquisition of the horse (ca. 250 BP) and ends with the first documented contact with Europeans. European contact marks the beginning of the Historic Period, which extends to approximately 50 years ago.

The Early Prehistoric Period is characterized by spear points and big game hunting, and is first associated first with the Clovis point (ca. 11,000 – 10,900 BP) thus far. Clovis points have only been identified in surface finds and artifact collections; they have yet to be recovered from an excavated component (Wormington & Forbis 1965; Reeves 1969). Similarly, fluted Folsom (ca. 10,900 – 10,200 BP) and Basally Thinned Triangular (ca. 10,500 BP) points are limited to surface finds in Alberta; these are associated with communal hunting of bison elsewhere in the plains.

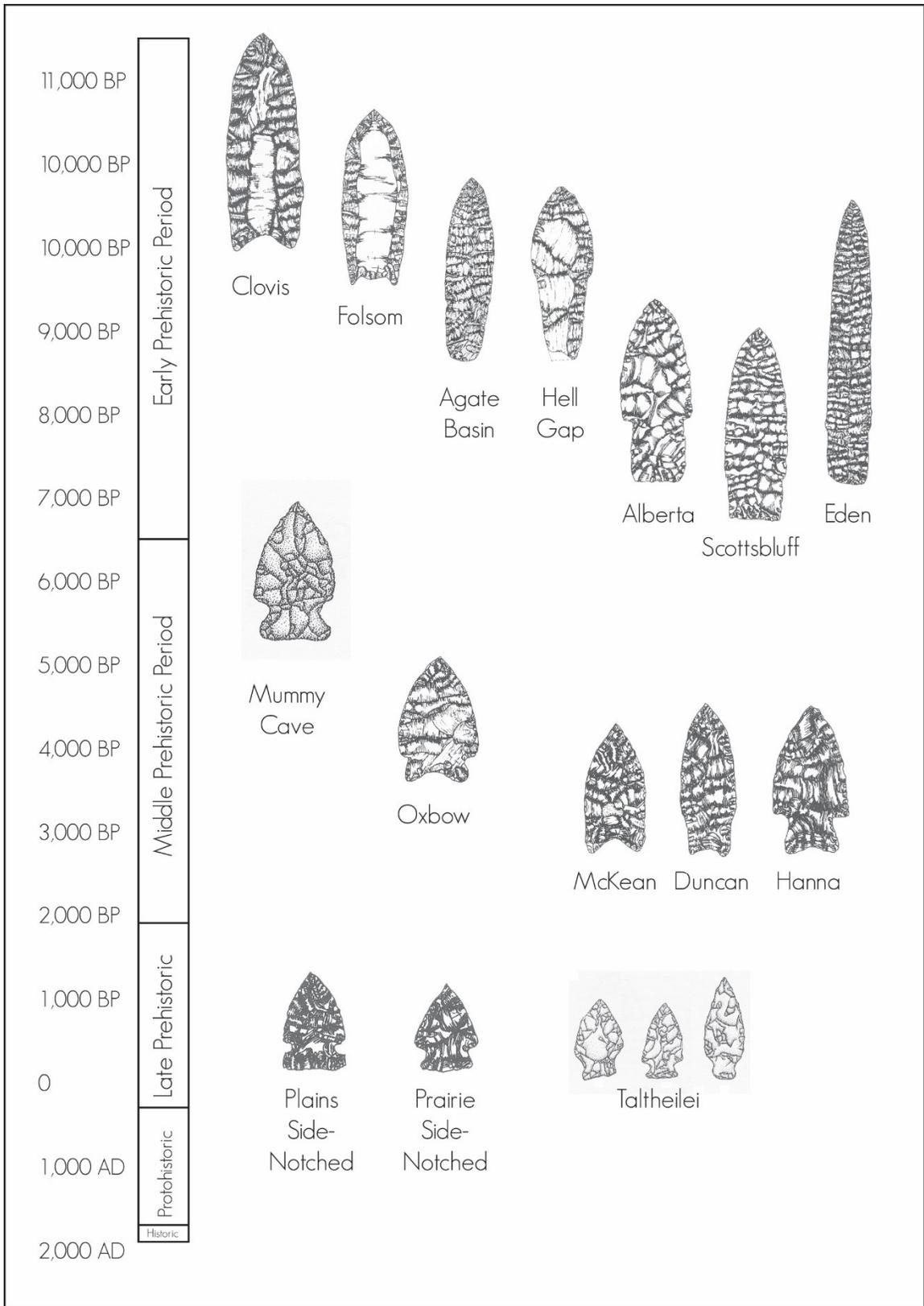


Figure 3. Culture-historical model of central Alberta (from Vickers 1986, Dyck 1983)

Points from this era are generally large and lanceolate in shape, reflecting their use on thrusting spears as opposed to the dart/atlatl system of the following Middle Prehistoric Period (Vickers 1986). A number of Clovis, Folsom and other early points have been recovered from the Edmonton area, however, the vast majority of these finds were from disturbed contexts, such as ploughed fields.

The Middle Prehistoric Period is characterized by the appearance of relatively smaller, side-notched projectile points. These ‘dart’ points were used in association with the atlatl (or spear thrower) and enabled the hunter to propel his spear a greater distance with a more forceful impact. Form variability among projectile points of this period resulted in a series of points being collectively referred to as the Mummy Cave Complex (7,300 – 4,500 BP). Subsequent complexes include Oxbow (4,500 – 4,100 BP) and McKean (4,200 – 3,500 BP), the latter of which also includes Duncan and Hanna dart points, each with distinct basal features. The Middle Prehistoric Period is well represented in Edmonton and the surrounding areas, with a number of sites found within the valley of the North Saskatchewan River, such as the Strathcona Site (FjPi-29) (Ives 1979).

The Late Prehistoric Period is characterized as representing two themes: a continued presence of Plains influences as evidenced by a variety of small, notched points and a connection to groups in the north through the presence of Taltheilei projectile points (LeBlanc 2004: 142). Projectile points of this time period are smaller, more finely worked and are also generally side-notched. Increased sedentism and the introduction of the bow and arrow are also characteristic of this time period. Additionally, the presence of pottery is a key characteristic, but has limited representation. The Late Prehistoric Period is also well represented within Edmonton with a number of sites found within the river valley.

The Protohistoric Period is marked by the use of the introduction of European goods. Items of European manufacture such as metal projectile points, metal pots, and glass beads have been found in the archaeological record indicating European goods first arrived in the mid-18th century (Byrne 1973; Gillespie 1976; Smith 1976).

While these trade goods are indicative of European contact, there is no documentation of this exchange until the arrival of Anthony Henday, an explorer for the Hudson’s Bay Company, in 1754. The competitive fur trade led to the increased establishment of posts throughout the prairies, and encouraged explorers and mappers to

expand their horizons. Explorers such as Peter Pond, Alexander Mackenzie, David Thompson, Simon Fraser, Peter Fidler, and later, John Palliser, expanded fur trade, as well as scientific knowledge, north and west, establishing important new posts and establishing new areas for trade and settlement. In 1795, the first Fort Edmonton was established in Fort Saskatchewan, and in the early 19<sup>th</sup> century, the fort was moved to lands east of the Provincial Legislature building, overlooking the North Saskatchewan River in Edmonton. In 1870, John A. Macdonald and his Canadian government's National Policy sought to build the Dominion of Canada, establishing high protective tariffs, constructing a transcontinental railway, and encouraging immigration and settlement of western Canada. In 1873, the North West Mounted Police were established, with posts erected throughout the province. In 1874, the first of three treaties affecting Alberta's First Nations groups were signed, followed by Treaties 6, 7 and 8, which were signed in 1876 (central Alberta), 1877 (southern Alberta) and 1899 (northern Alberta) respectively. Edmonton became a Town in 1894, then a City in 1904; shortly thereafter, Edmonton was named the capital of Alberta.

### **3.3 PREVIOUS WORK**

The majority of newly identified historic resource sites continue to be discovered in the course of HRIAs in association with future developments. Known historic resource sites are recorded on Archaeological and Historic Site Inventory Data forms, which are kept on file with the Historic Resources Management Branch of Alberta Culture and Tourism. Newly identified archaeological sites are designated a Borden number (Borden 1952) and assigned a historic resource value (HRV) ranging from 1 to 4 in decreasing significance; sites with an HRV 1 are generally World Heritage Sites or Provincial Historic Resources, while sites with an HRV 4 indicate potential significance. Sites with no further significance are assigned an HRV of 0.

#### **3.3.1 Archaeological Sites**

There are three known sites within one kilometre of the project area (Table 1). FiPj-68 is mapped within the Project area; however, FiPj-68 was identified in advance of the construction of Midway Treats and Treasures building, which is now standing.

Furthermore, the recorded site location in the HRIA final report is not the same as the mapped site location; the mapped location of the site in the final report for ASA 04-159 shows the site within the footprint of the Midway Treats and Treasures building (Kowal 2006). As this site has already been impacted (and is of limited significance), it was not revisited under the current permit.

Remaining sites within 1 km of the Project are located on the opposite side of the river and are not subject to impact. As such, these sites were not subject to revisit.

<b>Borden No.</b>	<b>Location</b>	<b>Site Type</b>	<b>HRV</b>	<b>Distance from Development</b>
FiPj-68	7-23-52-25-W4M	Scatter <10	0	n/a – in project area
FiPj-125	9-15-52-25-W4M	Killsite	4	750 m southwest
FiPj-126	16-15-52-25-W4M	Scatter>10; workshop	0	600 m southwest

Table 1. Known historic resource sites within 1 km of proposed development.

### 3.3.2 Historic Sites

Historic sites are designated unique HS numbers; these sites often replicate archaeological sites but focus on the historic portion of the site, i.e., standing structures, above-ground features, as opposed to the archaeological portion, i.e. buried, or once-buried, cultural material. Much of the recorded information is limited to general location and site name, as many site forms have not been updated for over 10 to 20 years. Regardless, their presence is indicative of historic occupation in the area. No Historic Sites have been recorded within the proposed Project area.

## 4.0 METHODOLOGY

Field investigations are conducted in accordance with the *Historical Resources Act*, the *Guidelines for Archaeological Permit Holders in Alberta*, the *Archaeological and Palaeontological Research Permit Regulation* (Alberta Regulation 254/2002), and all applicable Historic Resources Management Branch (HRMB) “Survey Notes” and “Information Bulletins,” with the objective of identifying previously unknown archaeological and historic sites within the project area, as well as assessing the impact of the current development to any known heritage resources.

Fieldwork was undertaken in late fall/early winter conditions, i.e., under snow-free conditions with occasional areas having frozen ground. Traditional techniques of archaeological survey were employed, including pedestrian reconnaissance of the Project, along with subsurface testing where landforms and vegetation reveal a moderate to high potential for deep deposition and/or the identification of intact buried cultural material. Eroded profiles and any upturned soils were also examined for evidence of historic resources. Areas with archaeological potential received judgmental subsurface testing; a total of 30 subsurface tests were excavated during the current HRIA. Shovel test areas were selected based on target areas identified during pre-field research and submitted to the regional archaeologist prior to the commencement of in-field investigations, as well as in-field professional judgment; areas within the project area that were not shovel tested were deemed in the field to be of limited potential, i.e., previously disturbed to depths below the mineral soil, poorly-drained, poorly defined, featureless or sloping.

Shovel tests, which were strictly limited to project boundaries, were approximately 40-cm by 40-cm. The City advised that backhoe testing was not permissible anywhere within the Project; therefore, deep testing by way of hand auger was undertaken in each of the shovel test areas, augured from the base of one or more shovel tests, per test area. Following consultation with the regional archaeologist, Caroline Hudecek-Cuffe, on November 13 at the Park, it was decided that due to the amount of surface disturbances within the Project and the limits of hand auguring on a project of this size, the HRIA should focus on determining areas with deeply buried sediments and intact palaeosols below surface disturbances in large, open areas in order to select areas to recommend for construction monitoring (pers. comm). Shovel tests were

excavated to 30-100 cm below the surface (cmbs) and select tests were then augured to depths up to 300 cm below surface. Occasionally, shovel tests were halted at shallower depths due to dense tree roots; the City of Edmonton forbade the cutting of tree roots greater than two inches in diameter. Shovel tests were placed judgementslly in all shovel test areas. All sediments removed from shovel tests were hand sorted and observed for cultural material, before being returned, as best as possible, to their original state. For each test area, the stratigraphy of each test was noted and representative photographs, as well as detailed notes, were taken.

The ensuing section details the field investigations conducted with regard to the City of Edmonton Fort Edmonton Park - Utility Upgrades Project; reporting is also in accordance with the *Historical Resources Act*, the *Guidelines for Archaeological Permit Holders in Alberta* and the *Archaeological and Palaeontological Research Permit Regulation* (Alberta Regulation 254/2002), as well as the associated Schedule A.

## 5.0 RESULTS

The purpose of these investigations was to assess unknown historic resources in potential conflict with the current development. Field investigations, including ground reconnaissance and subsurface testing, were conducted on November 9, 13 and 18, 2015. Pre-field research shows the Project encompasses 20.6 ha of disturbed land within Fort Edmonton Park. Review of historic aerial photographs shows that the Project area has been under cultivation since 1924, and possibly earlier (Figure 4). The land remained under cultivation until it was purchased from the Mellon family by the City for the purpose of constructing Fort Edmonton Park in the late 1960s/early 1970s (Figure 5).

Following receipt of the permit, a pedestrian reconnaissance of the Project was undertaken under snow-free conditions on November 9, 2015 to identify areas with potential to contain deeply buried, intact archaeological deposits. A total of twenty areas were selected as HRIA target areas (Figure 6). These target areas were subject to pedestrian reconnaissance by foot, with shovel testing conducted in areas deemed to have potential to contain intact, subsurface archaeological deposits on November 13 and 18, 2015. During these investigations, no previously recorded sites were revisited and no new sites were identified; none of the subsurface tests (n=30) were positive for cultural material (Table 2). For ease of discussion, the Project will be discussed by quarter section.

Location	Topography/Vegetation	# of Shovel Tests/ Exposures	Historic Resources	Recommendation
NE of 23-52-25-W4M	Flat terrain, aspen forest	0/0	n/a	HRA* Clearance
SE of 23-52-25-W4M	Flat terrain, non-native species & mixed aspen forest	14/0	FjPj-68	HRA Clearance with condition that construction monitoring be conducted in LSD 7
SW of 23-52-25-W4M	Steeply sloping to flat terrain, mixed aspen forest	16/0	n/a	HRA Clearance with condition that construction monitoring be conducted in LSDs 4 and 6

\*Historic Resources Act

Table 2. Summary of HRIA under the current permit.

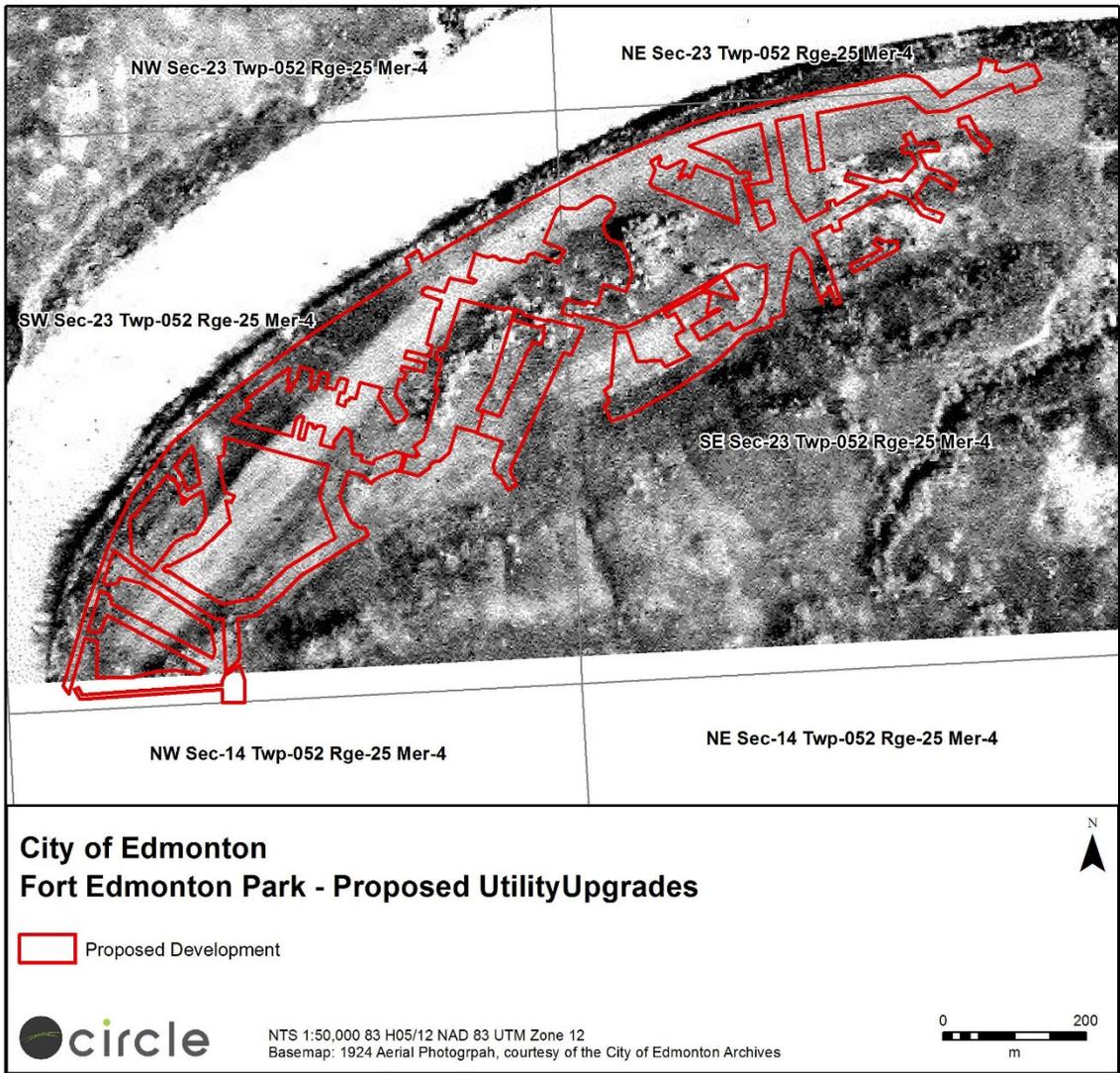


Figure 4. Map showing the Project overlying an aerial photograph from 1924.

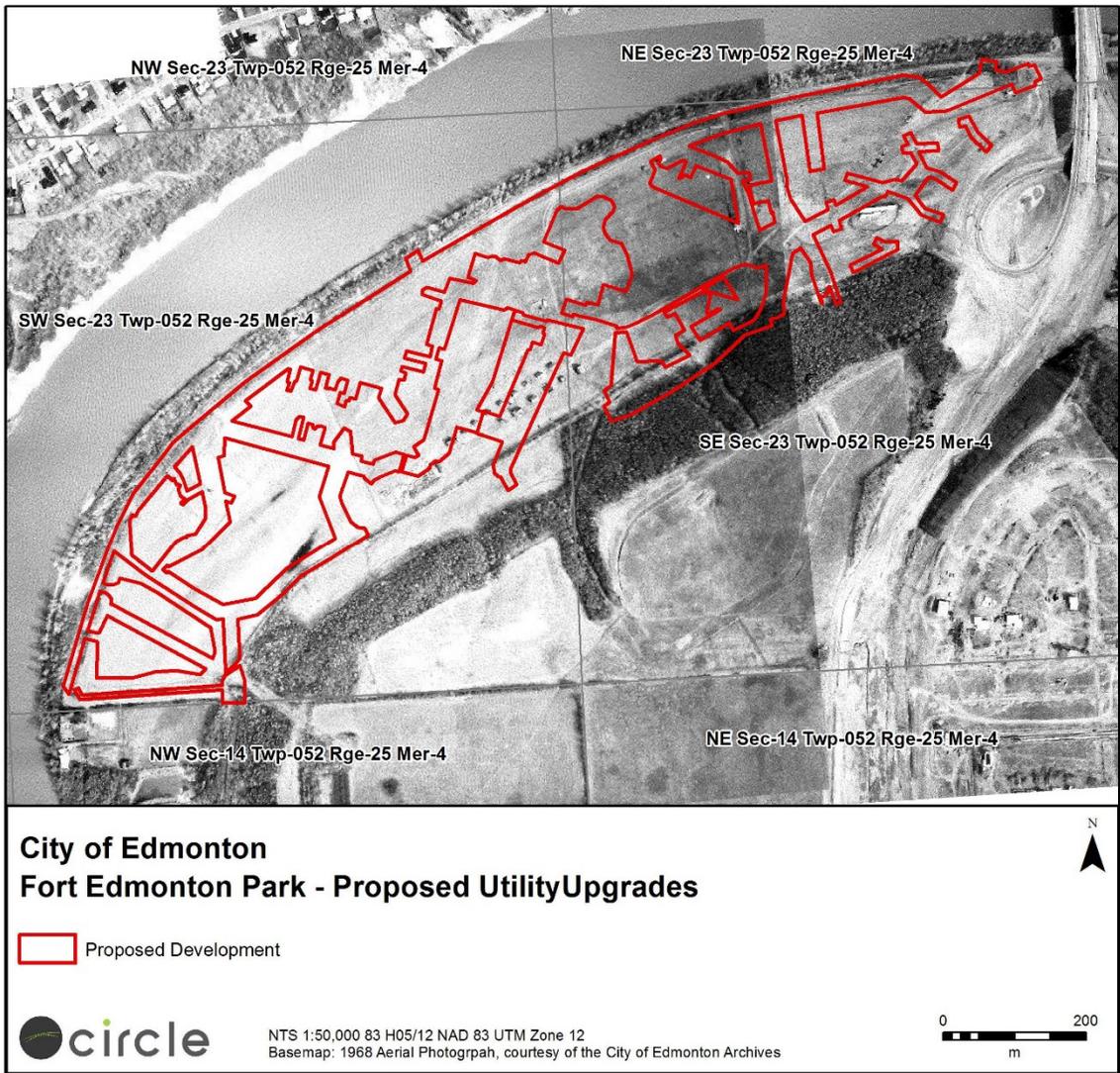


Figure 5. Map showing the Project overlying an aerial photograph from 1969.

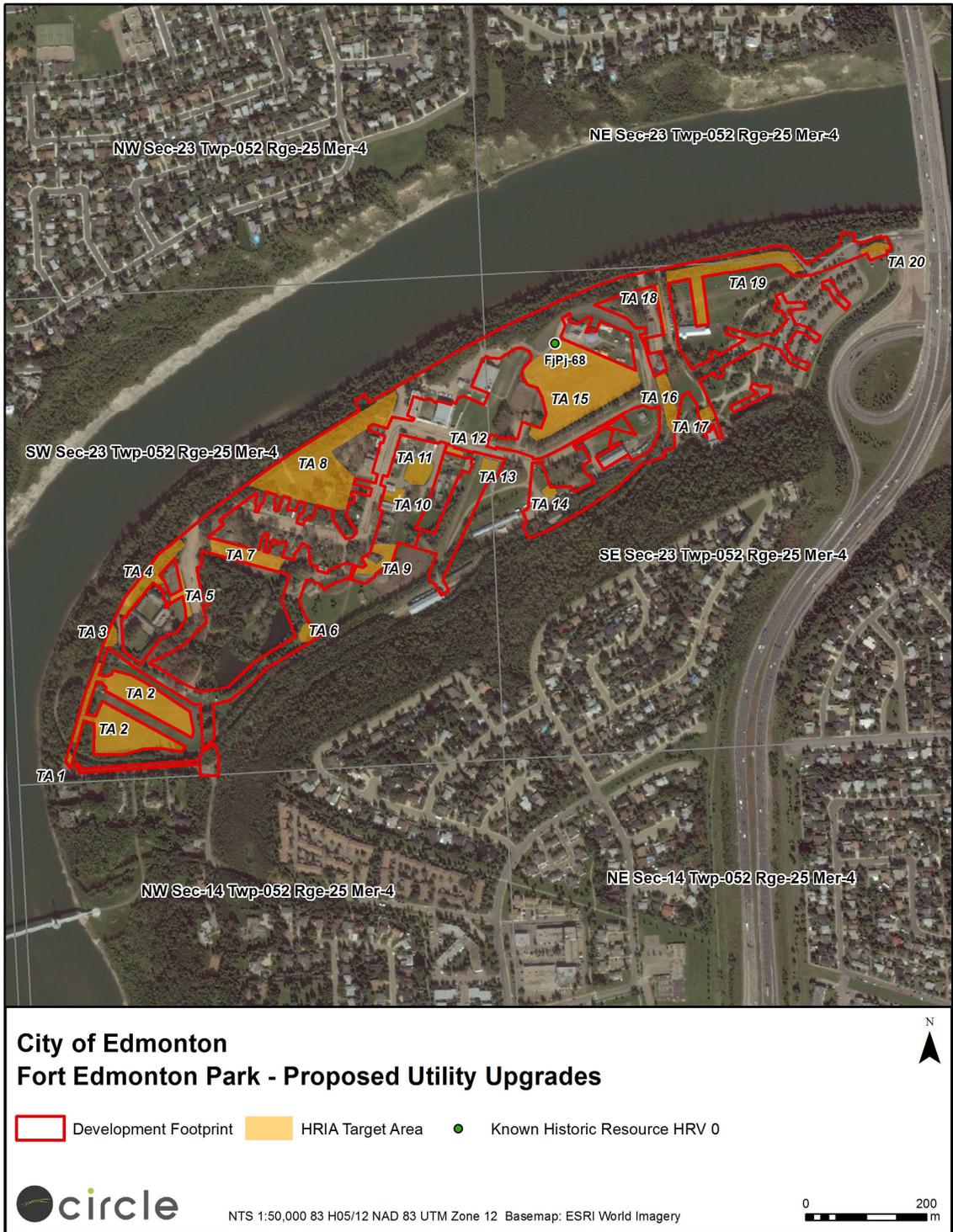


Figure 6. Map showing the location of HRIA target areas identified within the Project during the initial pedestrian traverse.

## 5.1 NE and SE of 23-52-25-W4M

The eastern portion of the Project occurs within the SE and NE of 23-52-25-W4M (Figure 7). Approximately one quarter of the Project occurs outside of Fort Edmonton Park; this area contains modern developments such as the parking lots for the John Janzen Nature Centre and Fort Edmonton Park, walking trails and terraforming. Inside the Park gates, modern disturbances include the train station, the midway, rail lines, various shops and agricultural outbuildings, terraforming, streets and walkways, landscaping, and a cultivated field.

During the walkthrough on November 9, a total of seven HRIA target areas were identified. All of the target areas occur on generally flat terrain. Shovel testing was conducted in three of these target areas on November 13 and 18, 2015. The target areas not shovel tested were either deemed to be small and enclosed (TA 16, TA 17, TA18) or had several buried utilities in close proximity to one other (TA 20).

Shovel test area 1 (STA 1; TA 19) occurs within a roughly 200 m long by 20 m wide area with aspen forest along the south side of an access road, outside of the Park's gates (Figure 8). The terrain within the shovel test area was generally flat with a shallow ditch that paralleled the road, within one metre of the road edge. This narrow wooded area is at the same elevation as the road to the north and the grass covered bus parking lot to the south until approximately 80 m from the west, where the land slumps down by 50 cm between the road and the bus parking lot. The road to the north and the lot to the south remain at the higher elevation. A total of six shovel tests were excavated under snow-free and frost-free conditions. Tests were placed in a line parallel to the road to the north and spaced 25 to 50 m apart.

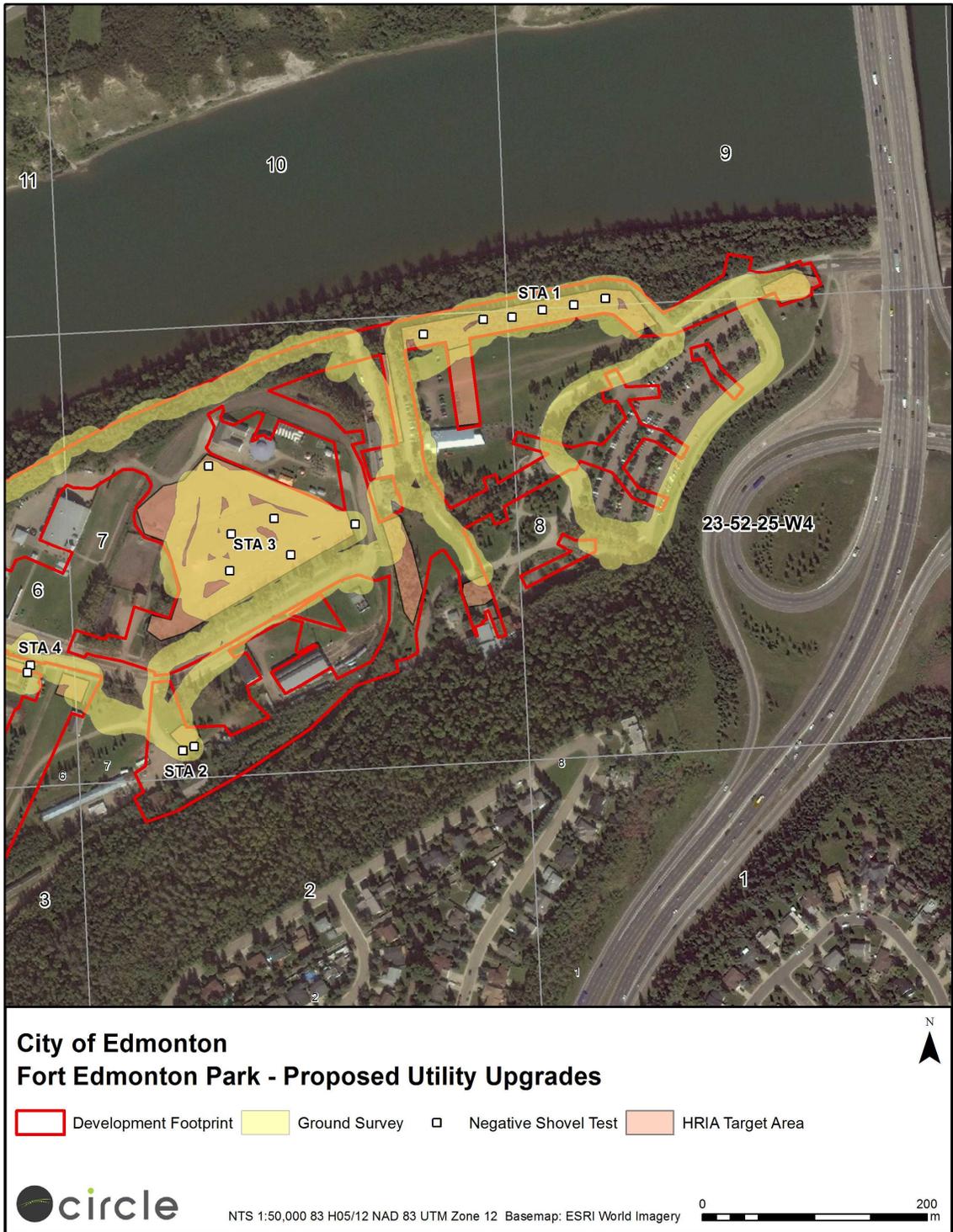


Figure 7. Map showing the location of the survey route and shovel tests within the NE of 23-52-25-W4M.



Figure 8. Photograph of STA 1, view east with the bus parking lot in the background to the right.

Four shovel tests were excavated to 100 cmbs, then two of those tests were hand augured to 200-250 cmbs. Two additional tests were halted at 30 cmbs due to dense tree roots; one test was hand augured to 250 cmbs. The soil profile consisted of 20-30 cm of dark brown clayey silt plough soil mixed with overburden underlain by mottled brown silty clay to 50 cmbs followed by homogenous brown silty clay to 250 cmbs (Figure 9). No palaeosols were identified in any of the shovel tests in this area and none of the tests contained cultural material.

Within the Park, two target areas were selected for shovel testing in LSD 7. Shovel test area 2 (STA 2; TA 14) is located on a small, level terrace in the southwestern corner of 7-23-52-25-W4M (Figure 10). The portion of the terrace within the Project area measures approximately 18 m west-southwest to east-northeast by 40 m north-northwest to south-southeast. Ground cover consisted of a well-maintained grass lawn. A gravel road delineates the target area on the terrace; it passes to the west and south of the shovel test area.



Figure 9. Photograph showing the soil profile at STA 1.



Figure 10. Photograph showing the location of STA 2, view north-northeast.

To the north, the terrace slopes down at 45° for 4-5 m and to the east, south and west the ground remains flat, continuing outside of the Project area. Two shovel tests were excavated under frozen conditions to 15 cmbs, approximately 5 m apart. The shovel tests were excavated to 50 cmbs then hand augured to 100 cmbs. The soil profile consisted of dark brown plough soil mixed with frequent small gravels to 20 cmbs underlain by brown silty clay to 26 cmbs followed by light beige silty clay with occasional charcoal inclusions to 30 cmbs followed by clean, brown basal clay to 100 cmbs (Figure 11). All tests were negative for cultural material.

Shovel test area 3 (STA 3; TA 15) is located within the cultivated field (Figure 12). The field measures 162 m east to west at its widest and 107 m north to south at its longest and is bound by the midway to the northeast, an access road to the east, south and north and more fields to the west. Six shovel tests were excavated under frost-free conditions, all to 100 cmbs, and two tests were hand augured to 250-300 cmbs. The soil stratigraphy was the same across all six shovel tests, with occasional variation in the depths of the deposits. The soil profile consisted of dark brown plough soil to 30 cmbs underlain by light brown silt to 35 cmbs followed by a well-developed, 5 cm thick palaeosol to 40 cmbs then light brown silt to 50 cmbs followed by a palaeosols to 52 cmbs underlain by light brown silt to 100 cmbs (Figure 13). The light brown silt continued to 300 cmbs with two additional palaeosols identified between 100 and 300 cmbs during auguring. All tests were negative for cultural material.

Due to the presence of intact palaeosols within an area of minimal surface disturbance, **construction monitoring is recommended in 7-23-52-25-W4M.**

## **5.2 SW of 23-52-25-W4M**

The western portion of the Project occurs within SW 23-52-25-W4M (Figure 14). Previous disturbances within this portion of the Project include terraforming, railway tracks, various roads, 1885 Street, 1905 Street and 1920 Street, all with associated buildings, outbuildings, yards and an animal stockade.

During the walkthrough on November 9, a total of 13 HRIA target areas were identified. All of the target areas occur on generally flat terrain. Shovel testing was conducted in six of these target areas on November 13 and 18, 2015.



Figure 11. Photograph showing the soil profile at STA 2.



Figure 12. Photograph showing the location of STA 3, view north.



Figure 13. Photograph showing the soil profile in STA 3.

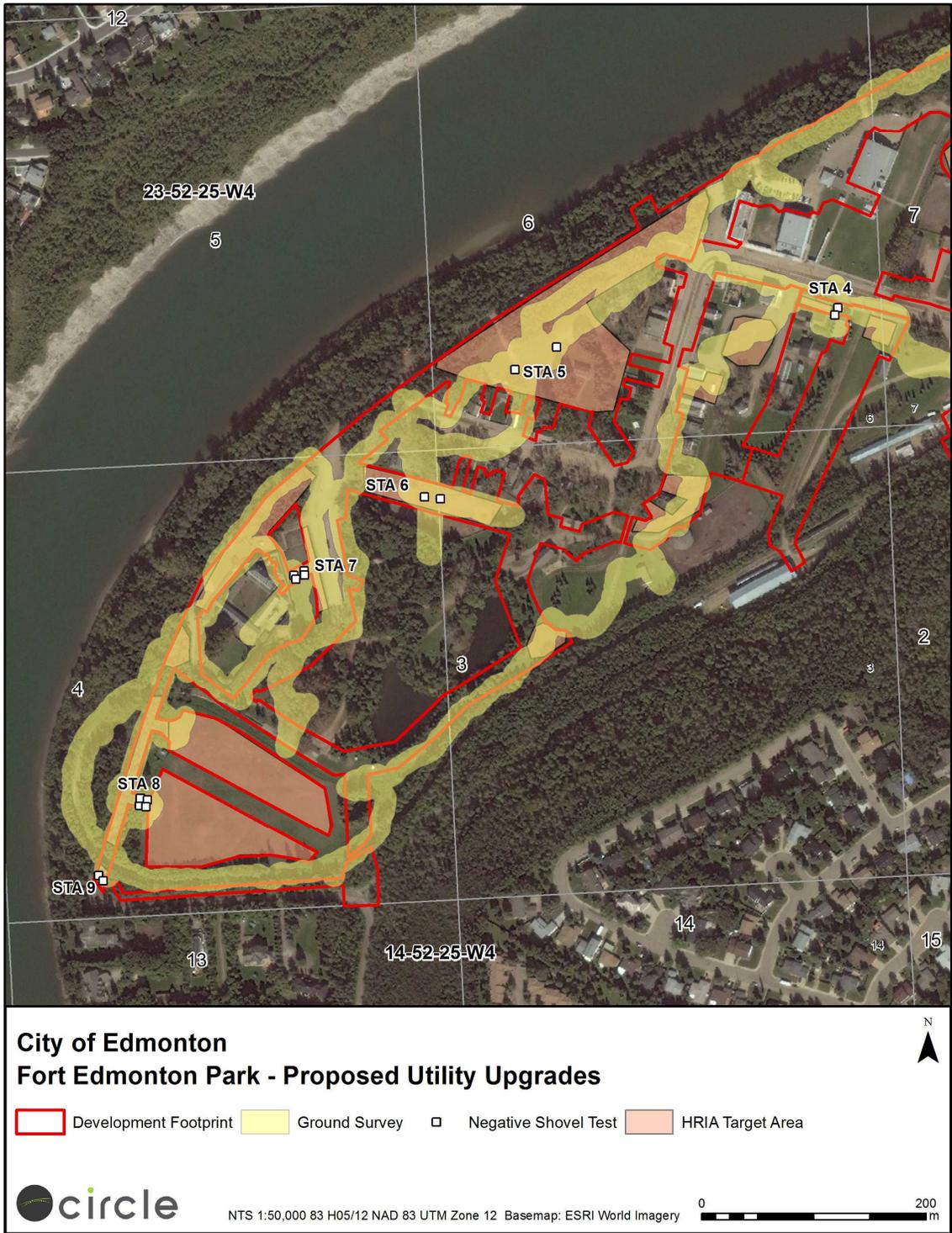


Figure 14. Map showing the location of the survey route and shovel tests in the SW of 23-52-25-W4M.

The areas not shovel tested include those small in size (TA 6, TA 9, TA 10), a small square behind 1905 and 1920 Streets as it was being used to stockpile roofing materials for a nearby roof replacement (TA 11), a small patch of aspen forest northwest of the 1846 Fort that been terraformed and partially disturbed by road construction (i.e., ditches and push piles; TA 3) and the back lawn of the 1846 Fort, which was continually in use as an activity area for school groups (TA 4).

Shovel test area 4 (STA 4; TA 12) is located in a peony garden on the northwest side of the AGT building on 1920 Street (Figure 15). The Project is limited to the north half of the garden, and measures 30 m east to west by 10 m north to south. Review of aerial photographs show that the Park rail line passed through this area in 1978. A total of two shovel tests were excavated in the garden under frozen conditions. The soil profile consisted of dark brown silty clay plough soil to 25 cmbs followed by dark brown garden soil with frequent small, rounded and sub-angular gravels underlain brown silty clay with occasional coal inclusions to 60 cmbs followed by brown clayey silt that gradually transitions to a homogenous brown silty clay to 150 cmbs (Figure 16). No cultural material was identified.

Shovel test area 5 (STA 5; TA 8) is located within an empty, grassed lot on the east side of 1885 Street (Figure 17). The target area is bound to the west by 1885 Street, to the south by 1905 Street, to the east by a playground and the north by the project boundary. A 30 m wide, east to west orientated swath of aspen forest occurs along the northern boundary of the target area. Close inspection of the forested area showed that it has been disturbed by push piles and a shallow ditch that parallels an access road to the north. Several large pieces of farming machinery and implements were also observed in the forested area. Due to the disturbances within the forested area, shovel tests were excavated in the open field. A total of two shovel tests were excavated under frozen conditions, with a soil profile consisting of dark brown plough soil to 30 cmbs, which was frozen from 0-25 cmbs, followed by brown silty clay to 50 cmbs underlain by clean, homogenous brown silt to 250 cmbs (No photograph available). No palaeosols were identified. Due to the large size of this minimal disturbed area and the potential for deeply buried archaeological deposits, **construction monitoring is recommended in 6-23-52-25-W4M.**



Figure 15. Photograph showing the location of STA 4, view northeast.



Figure 16. Photograph showing the soil profile at STA 4.



Figure 17. Photograph showing the location of STA 5, view west.

Shovel test area 6 (STA 6; TA 7) is located within a pig and sheep enclosure on the southwest side of 1885 Street (Figure 18). The area had been terraformed, however, there were no less disturbed areas to test, therefore, two shovel tests were excavated under frozen conditions. The soil profile consisted of frozen mulch and animal waste to 40 cmbs followed by clean clay to 125 cmbs (Figure 19). No cultural material was identified.

Shovel test area 7 (STA 7; TA 5) is located within a vegetable patch adjacent to the east side of the 1846 Fort (Figure 20). A narrow section of the Project measuring 10 m north to south crosses east to west across the vegetable patch. A total of four shovel tests were excavated under frost-free conditions, revealing dark brown plough soil to 30 cmbs followed by brown sandy silt to 60 cmbs underlain by compact clay with frequent gravel inclusions to 100 cmbs (Figure 21). Testing was halted at 100 m due to the densely packed gravel within a solid clay matrix which was presumed to be basal sediments. No cultural material was identified.



Figure 18. Photograph showing the location of STA 6, view southeast.



Figure 19. Photograph showing the soil profile at STA 6.



Figure 20. Photograph showing the location of STA 7, view south.



Figure 21. Photograph showing the soil profile at STA 7.

Shovel test area 8 (STA 8; TA 2) is located 70 m east of STA 4 and immediately north of the horse pasture (Figure 22). This area was chosen from within a much larger target area that included inside the horse pasture, as it had been minimally disturbed in comparison to the other portions of the target area. The horse pasture to the south was extensively terraformed and is underlain by utilities and a pipeline right-of-way (Figure 23). To the north, the Project encompasses a 2 m high berm that follows the length of the Project from east to west. The minimally disturbed area had aspen forest with a rose and willow understory. A total of four shovel tests were excavated within an area measuring 13 m north to south by 17 m east to west. The soil profile consisted of dark brown plough soil to 30 cmbs followed by brown silt to 40 cmbs underlain by a palaeosol to 43 cmbs followed by brown silt to 100 cmbs underlain by a palaeosol to 105 cmbs followed by undifferentiated brown silt to 250 cmbs (Figure 24). All tests were negative for cultural material. Due to the presence of intact palaeosols below surface disturbances, **construction monitoring is recommended in 4-23-52-25-W4M.**

Shovel test area 9 (STA 9, in TA 1) is located on an elevated terrace at the northwestern extent of the project, approximately 45 m inland from the river (Figure 25). Two shovel tests were excavated in an area measuring 15 m northwest to southeast by 18 m northeast to southwest. A railway track bounds the STA to the east and project boundaries delineated the remaining sides. The terrace is elevated approximately 1 m above the railway track to the east, and is level with a residential road located to the west, outside of the Project. The soil profile consisted of dark brown silty clay plough soil and overburden to 60 cmbs followed by mottled yellow-brown clay to 70 cmbs underlain by undifferentiated brown silt to 100 cmbs (Figure 26). Shovel tests were halted at 100 cmbs due to roots greater than two inches in diameter.



Figure 22. Photograph showing the location of STA 8 between the horse pasture (background) and east to west oriented berm (left), view southeast.



Figure 23. Photograph showing terraforming in the horse pasture south of STA 8.



Figure 24. Photograph showing the soil profile at STA 8.



Figure 25. Photograph showing the location of STA 9, view southwest.



Figure 26. Photograph showing the soil profile at STA 9.

## 6.0 SUMMARY AND RECOMMENDATIONS

On October 23, 2015, an HRIA was conducted for the City of Edmonton Fort Edmonton Park - Utility Upgrades Project. The Project is located on an elevated terrace on the south bank of the North Saskatchewan River in the southwest quadrant of the City of Edmonton.

Project lands within the target areas were subject to pedestrian reconnaissance, as well as subsurface testing. A total of nine areas were selected for shovel testing, with 30 shovel tests excavated; none of the subsurface tests were positive for cultural material. Shovel tests were excavated to depths of 30 to 100 cmbs and select tests in each shovel test area were then hand augured up to 300 cmbs, identifying basal deposits in several instances. Deeply buried palaeosols were identified in two of the shovel test areas. There areas have potential to contain buried, intact cultural deposits.

Given the results of the HRIA, **it is recommended that the City of Edmonton Fort Edmonton Park - Utility Upgrades Project be granted *Historical Resources Act* clearance as per the survey plans in Appendix A and in accordance with the Schedule A (HRA Requirements Project File 4725-15-0018-001) on the condition that construction monitoring be conducted in Target Areas 2, 8 and 15 within LSDs 4, 6 and 7 of 23-52-25-W4M as identified in this report.** These recommendations are subject to the approval of Alberta Culture and Tourism.

## REFERENCES CITED

Borden, C.E.

1952 A Uniform Site Designation Scheme for Canada. *Anthropology in British Columbia* 3:44-48.

Byrne, William J.

1973 The Archaeology and Prehistory of Southern Alberta as Reflected by Ceramics. National Museum of Man Mercury Series, Archaeological Survey of Canada Paper 14, Ottawa.

Catto, N. and C.A. Mandryk

1990 Geology of the Postulated Ice-Free Corridor. In Larry D. Agenbroad, J.I. Mead and L.W. Nelson (editors), *Megafauna and Man: Discovery of America's Heartland*. The Mammoth Site of Hot Springs, South Dakota, Inc. Scientific Papers, Volume 1. Hot Springs, South Dakota.

Dyck, Ian

1983 The prehistory of southern Saskatchewan. In Henry T. Epp and Ian Dyck, eds., *Tracking Ancient Hunters: Prehistoric Archaeology in Saskatchewan*, Saskatchewan Archaeological Society, Regina.

Dyke, Arthur

2004 An Outline of North American Deglaciation with Emphasis on Central and Northern Canada. In *Quaternary Glaciations-Extent and Chronology, Part II: North America*, edited by Jürgen Ehlers and P.L. Gibbard, Quaternary Science Vol. 26: 373-424. Elsevier, Amsterdam.

Fenton, M.M., Waters, E.J., Pawley, S.M., Atkinson, N., Utting, D.J. and McKay, K.

2013 Surficial Geology of Alberta. Alberta Geological Survey Map 601, Alberta Energy Regulator and Alberta Geological Survey, Edmonton.

Frison, G.C. and R. Bonnichsen

1996 The Pleistocene-Holocene Transition on the Plains and Rocky Mounts of North America. In Straus, L.G., B.V. Eriksen, J.M. Erlandson and D.R. Yesner (editors), *Humans at the End of the Ice Age: The Archaeology of the Pleistocene-Holocene Transition*. Plenum Press, New York.

Gillespie, Beryl

1976 Changes in Territory and Technology of the Chipewyan. *Arctic Anthropology* 13(1): 6-11.

Heritage Community Foundation

2005a Alberta: How the West was Young. AlbertaSource.ca, the Alberta Online Encyclopedia.

2005b Alberta: Home, Home on the Plains. AlbertaSource.ca, the Alberta Online Encyclopedia.

- Historic Resources Management Branch  
 2015 Listing of Historic Resources (September 2015 edition). Alberta Culture and Tourism, Edmonton.  
 Hudecek-Cuffe, Caroline  
 2015 Personal communication. November 13, 2015.
- Ives, John W.  
 1979 The results of the mitigative excavations during the fall of 1979, Strathcona Science Park Archaeological site (FjPi-29). Unpublished consultant's report on file with the Archaeological Survey of Alberta. Edmonton, Alberta.
- LeBlanc, Raymond J.  
 2004 Archaeological Research in the Lesser Slave Lake Region: A Contribution to the Pre-Contact History of the Boreal Forest of Alberta. Archaeological Survey of Canada Mercury Series Paper No.166, Canadian Museum of Civilization, Gatineau.
- McCullough, Edward J.,  
 1982 Prehistoric Cultural Dynamics of the Lac La Biche Region. Archaeological Survey of Alberta, Occasional Paper No. 18, Edmonton.
- Natural Regions Committee  
 2006 Natural Regions and Subregions of Alberta. Compiled by D.J. Downing and W.W. Pettapiece. Government of Alberta. Pub. No. T/852.
- Peck, Trevor R.  
 2010 Grey Matter: Refining Alberta Plains Prehistory. Presentation made at the 43<sup>rd</sup> Canadian Archaeological Association – 35<sup>th</sup> Archaeological Society of Alberta Conference, April 28- May 2, 2010, Calgary.  
 2011 Light from Ancient Campfires: Archaeological Evidence for Native Lifeways on the Northern Plains. Athabasca University Press, Edmonton.
- Reeves, Brian O.K.  
 1969 The Southern Alberta Palaeo-Cultural - Palaeo-Environmental Sequence. In: Post-Pleistocene Man and His Environment on the Northern Plains, edited by R.G. Forbis, L.B. Davis, O.A. Christensen, and G. Fedirchuk. University of Calgary Archaeological Association, Calgary, pp. 6-46.
- Smith, James G.E  
 1976 Local Band Organization of the Caribou Eater Chipewyan. Arctic Anthropology 13(1): 12-24
- Strong, W.L. and K.R. Leggat  
 1992 Ecoregions of Alberta. Alberta Forestry, Lands and Wildlife, Edmonton, AB. Pub. No. T/245. Map at 1:1,000,000.

Vickers, J.R.

1986 *Alberta Plains Prehistory: A Review*. Archaeological Survey of Alberta  
Occasional Paper No. 27, Edmonton.

Wedel, W.

1953 Some aspects of human ecology in the central Plains. *American Anthropologist*  
55(4): 499-514.

Wright, J.V.

1975 The Prehistory of Lake Athabasca: An Initial Statement. National Museum of  
Man, Mercury Series No. 29, Ottawa.

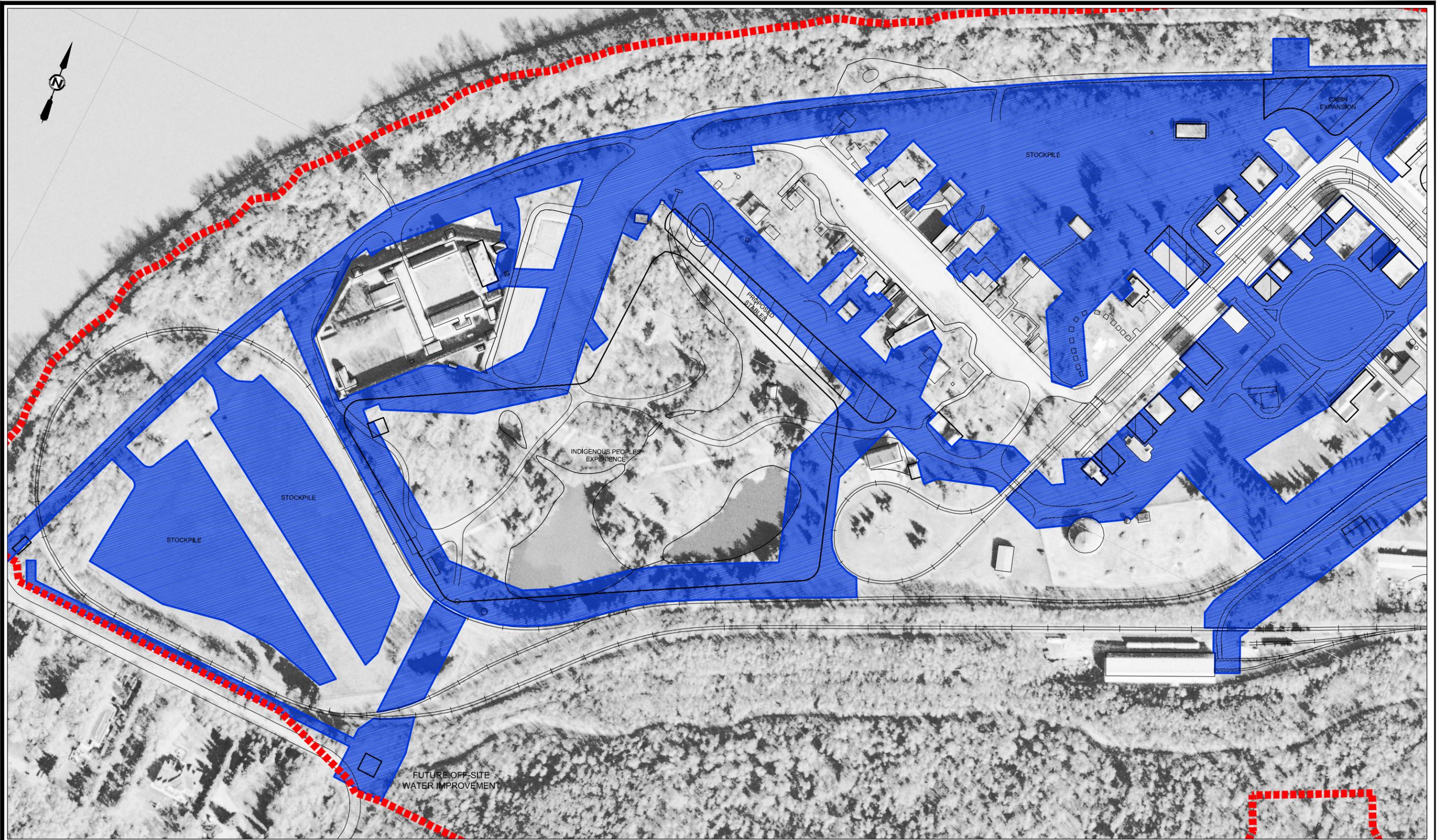
Wormington, H. M and R. G. Forbis

1965 An Introduction to the Archaeology of Alberta, Canada. Proceedings No. 11,  
Denver Museum of Natural History.

# **APPENDIX A: DEVELOPMENT PLAN**

City of Edmonton  
Fort Edmonton Park - Utility Upgrades

This Drawing is For The Use Of The Client And Project Indicated  
No Representations Of Any Kind Are Made To Other Parties



C:\Users\jgibson\Documents\2012\01000\Fort Edmonton Utility Replacement\DWG\19-2\19-2-1\WORK AREA 1.dwg  
DATE: 2014 APR 11 10:00 AM

NO.	DATE	ENG.	BY	SUBJECT
D	2014APR11	AM	NS	SCHEMATIC DESIGN
C	2014MAR14	AM	NS	SCHEMATIC DESIGN
B	2014FEB12	AM	NS	SCHEMATIC DESIGN
A	2014JAN25	AM	NS	SCHEMATIC DESIGN

REVISIONS

DRAWING  
REDUCED TO  
HALF SIZE



PROJECT No.	20123701
SCALE	1:1000
DRAWN	N. SCHERER
DESIGNED	A. MILLER

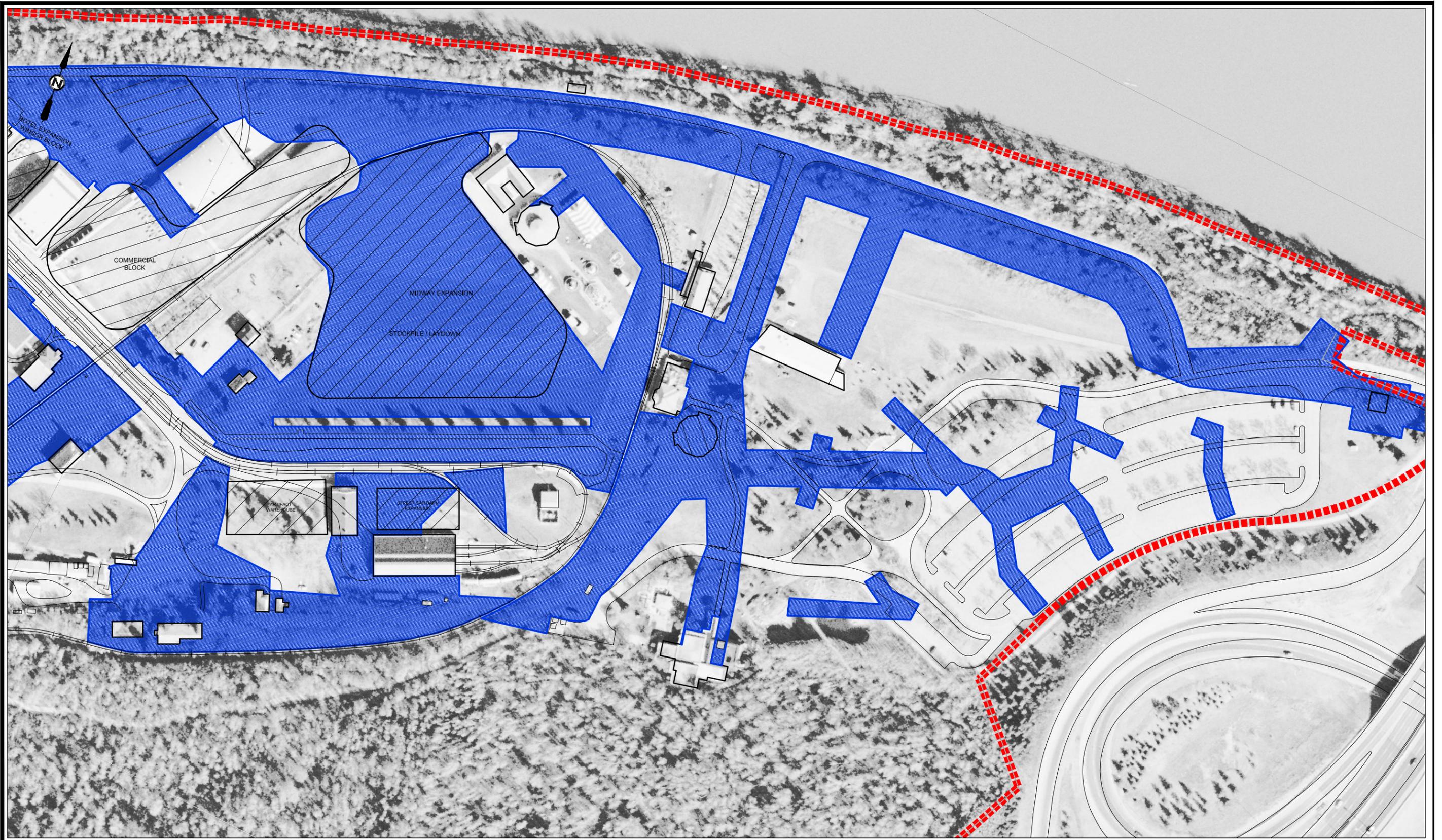
  
 THE CITY OF  
**Edmonton**

CONSTRUCTION IMPACT AREA WEST

FORT EDMONTON PARK UTILITY REPLACEMENT		
DRAWING NUMBER	REV. NO.	SHEET
FIGURE 19-2	D	1 2



This Drawing is For The Use Of The Client And Project Indicated  
No Representations Of Any Kind Are Made To Other Parties



C:\Users\jgibson\Documents\2012\20120100\Fort Edmonton Utility\DWG\19-3 PRELIMINARY DESIGN\Figure 19-3 - WOPK AREA 1.dwg  
 DATE: 2014 JAN 28 10:00 AM

NO.	DATE	ENG.	BY	SUBJECT
D	2014APR10	AM	NS	SCHEMATIC DESIGN
C	2014MAR14	AM	NS	SCHEMATIC DESIGN
B	2014FEB12	AM	NS	SCHEMATIC DESIGN
A	2014JAN28	AM	NS	SCHEMATIC DESIGN

REVISIONS

DRAWING  
 REDUCED TO  
 HALF SIZE



PROJECT No.	20123701
SCALE	1:1000
DRAWN	N. SCHERER
DESIGNED	A. MILLER



<b>FORT EDMONTON PARK          UTILITY REPLACEMENT</b>		
DRAWING NUMBER	REV. NO.	SHEET
FIGURE 19-3	D	2 / 2

CONSTRUCTION IMPACT AREA EAST



# **APPENDIX B: SCHEDULE A**

HRA Requirements File: 4725-15-0018-001

**HISTORICAL RESOURCES ACT REQUIREMENTS**

**CITY OF EDMONTON  
FORT EDMONTON PARK AREA - UTILITY REPLACEMENT AND  
REDEVELOPMENT PROJECTS  
CULTURAL / ENTERTAINMENT FACILITY, PARK DEVELOPMENT, ACCESS  
ROAD, WATER SUPPLY, ELECTRICAL / UTILITY, WASTE MANAGEMENT**

**HRA REQUIREMENTS PROJECT FILE: 4725-15-0018-001**

**(Schedule "A")**

For the purposes of this Schedule City of Edmonton shall be referred to as the "Proponent" and Fort Edmonton Park Area - Utility Replacement and Redevelopment Projects shall be referred to as the "Project".

**1.0 ARCHAEOLOGICAL RESOURCES**

The potential for the Project to affect archaeological resources is high.

**1.1 Historic Resources Impact Assessment**

Pursuant to Section 37(2) of the *Historical Resources Act* a Historic Resources Impact Assessment (HRIA) for archaeological resources and any work resulting from this assessment is to be conducted on behalf of the Proponent by an archaeologist qualified to hold an Archaeological Research Permit within the Province of Alberta. In order to conduct the HRIA, the archaeological consultant must submit "An Application for an Archaeological Research Permit - Mitigative Research Project" to the Historic Resources Management Branch, Heritage Division, Alberta Culture and Tourism. Please allow ten working days for the permit to be processed. An approved permit must be issued prior to the initiation of any archaeological field investigations.

**1.1.1 Alberta Regulation 254/2002**

Archaeological investigations conducted under permit in Alberta are subject to the conditions stated within Alberta Regulation 254/2002, Archaeological and Palaeontological Research Permit Regulation, conditions set forth in the approved permit, and any other conditions that the Minister imposes under Section 30 of the Historical Resources Act.

**1.1.2 Contacting the Archaeological Survey**

For further information regarding the acquisition of a Permit to Excavate Archaeological Resources and/or archaeological consultants obligations under Alberta Regulation

254/2002, please contact Martina Purdon, Head, Archaeological Information & Regulatory Approvals at 780-431-2331 (toll-free 310-0000) or [martina.purdon@gov.ab.ca](mailto:martina.purdon@gov.ab.ca)

### **1.1.3 Coverage**

The HRIA must target high potential landforms where significant project impacts are anticipated in areas of minimal previous disturbance.

### **1.1.4 Timing**

The HRIA is to be carried out prior to the initiation of any land surface disturbance activities under snow-free, unfrozen ground conditions.

### **1.1.5 Deep Testing**

A deep testing program is required in areas that exhibit elevated sedimentation potential.

### **1.1.6 Location of HRIA studies**

Within the final report and any interim report(s) the location of pedestrian surveys, deep testing program(s) and the location and number of shovel tests must be discussed and clearly illustrated.

## **1.2 Reporting the results of archaeological resources HRIA**

### **1.2.1 Submission of “Archaeological Site Inventory Data” forms**

The Proponent’s archaeological consultant is required to submit “Archaeological Site Inventory Data” forms for each prehistoric and historic archaeological site recorded or re-examined during the conduct of the HRIA. While the discovery of a site must be reported within 30 days following the date of discovery, site data forms are to be submitted within 30 days of the date on which the permit period ends, or at the same time or prior to the submission of any interim report or the final report, whichever comes first.

### **1.2.2 Submission of HRIA final report**

The final report must be submitted within 180 days after the expiration of the permit, or at least six weeks prior to the anticipated conduct of land surface disturbance activities, whichever comes first. Copies of the final report and any interim reports are to be submitted to the Historic Resources Management Branch, Heritage Division, Alberta Culture and Tourism, Old St. Stephen’s College, 8820 – 112 Street, Edmonton, Alberta, T6G 2P8.

### **1.2.3 Submission of interim report(s)**

Should the Proponent find it necessary to obtain *Historical Resources Act* approval for portions or all of the lands affected by the Project prior to the submission of the final

report, Alberta Culture and Tourism will consider accepting the submission of an interim report, or reports.

## **2.0 REPORTING THE DISCOVERY OF HISTORIC RESOURCES**

During the conduct of historic resources studies a consultant may encounter historic resources that are not the subject of their field of expertise. Under this circumstance, the consultant must follow instructions included in Attachment 1, *Standard Requirements under the Historical Resources Act, Reporting the Discovery of Historic Resources*.

The Proponent must also comply with standard conditions under the *Historical Resources Act*, which are applicable to all land surface disturbance activities in the Province. Standard conditions require applicants to report the discovery of historic resources. These requirements are stated in Attachment 1- *Standard Requirements under the Historical Resources Act, Reporting the Discovery of Historic Resources*.

## **3.0 FURTHER SALVAGE, PRESERVATIVE OR PROTECTIVE MEASURES**

Based upon the results of the HRIA(s), reporting the discovery of archaeological resources, palaeontological resources, historic period sites and/or Aboriginal Traditional Use Site(s) of a type described in Attachment 2, the Proponent may be ordered to undertake further salvage, preservative or protective measures or take any other actions that the Minister responsible for the *Historical Resources Act* considers necessary.

## **4.0 REQUESTS FOR HISTORICAL RESOURCES ACT APPROVAL**

Based upon the results of the HRIA studies, Alberta Culture and Tourism may consider granting *Historical Resources Act* approval to all or portions of the Project area. In the final report, and any interim report(s) the Proponent's consultant(s) must clearly identify and illustrate those portions of the Project area for which *Historical Resources Act* approval is requested.

## **5.0 PRE-EMINENCE OF HISTORICAL RESOURCES ACT REQUIREMENTS**

Should the contents of conditions included within this Schedule be at variance with any instructions associated with the *Listing of Historic Resources* and/or the permit application, the conditions of the Schedule take precedence. Following instructions as outlined in this Schedule should result in the granting of *Historical Resources Act* approval and/or the issuance of requirements regarding further historic resources studies in a timely manner.

## **6.0 COMPLIANCE IS MANDATORY**

These conditions shall be considered directions of the Minister of Alberta Culture and Tourism under the *Act*. The Proponent and agents acting on behalf of the Proponent are required to become knowledgeable of the conditions. Failure to abide by the conditions will result in *Historical Resources Act* approval not being granted, or delayed.

November 10<sup>th</sup>, 2015

TO: Sarina Loots  
Summit Environmental

FROM: Brittany Davey  
Urban Ecology  
City of Edmonton

SUBJECT: **BD15-36 IPR for Fort Edmonton Park Redevelopment –  
Historical Resources Impact Assessment**

---

The Urban Ecology Unit has completed our review and has no further concerns. This letter is an environmental sign off and approval for your project to proceed. Provided locally accepted construction practices and restoration techniques are followed, I would anticipate that this project can be carried out without significant adverse impacts to the river valley and the surrounding lands. The following are conditions for the sign off:

1. All mitigation measures and commitments outlined by City reviewers and in the IPR must be incorporated into the construction work plan.
2. This sign off satisfies the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188.
3. The proponent is responsible for seeking approval for any other regulatory permits from provincial and federal agencies.
4. Please attach this letter for any further City approvals.

Please call me at 780-442-3261 if you or the proponent has any questions.

Regards,

Brittany Davey  
Ecological Planner