



The City of Calgary

Canadian Environmental Assessment Agency Project Description

Green Line Maintenance and Storage Facility

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Contents

- 1. General Information and Contacts..... 1
 - 1.1 Nature of the Designated Project and Proposed Location 1
 - 1.2 Proponent Information 1
 - 1.3 Summary of Parties Engaged to Date..... 2
 - 1.4 Requirements Under Other Jurisdictions..... 5
 - 1.4.1 Federal Jurisdiction 5
 - 1.4.2 Provincial Requirements 5
 - 1.4.3 Municipal and Regional Requirements..... 7
 - 1.5 Regional Environmental Studies 8
- 2. Project Information 9
 - 2.1 General Project Description 9
 - 2.2 Designated Physical Activities..... 9
 - 2.3 Components and Activities 10
 - 2.3.1 Physical Works..... 10
 - 2.3.2 Production Capacity 15
 - 2.3.3 Expansion Component of the Project 17
 - 2.3.4 Incidental Activities..... 17
 - 2.4 Emissions, Discharges and Waste..... 18
 - 2.4.1 Atmospheric Emissions 18
 - 2.4.2 Liquid Discharges 22
 - 2.4.3 Waste 24
 - 2.5 Project Phases and Schedule..... 25
 - 2.5.1 Key Project Phases 25
 - 2.5.2 Main Activities 26



- 3. Project Location.....29
 - 3.1 Location Description.....29
 - 3.1.1 Project Coordinates.....29
 - 3.1.2 Site Location Plan and Map29
 - 3.1.3 Location of Project Components and Activities Map29
 - 3.1.4 Photographs of Work Locations.....29
 - 3.1.5 Proximity to Other Land Uses and Other Aspects.....29
 - 3.2 Land and Water Use.....30
 - 3.2.1 Zoning Designation.....30
 - 3.2.2 Legal Land Description.....30
 - 3.2.3 Land Use and Management or Conservation Plans31
 - 3.2.4 Traditional Land Use32
- 4. Federal Involvement - Financial Support, Lands and Legislative Requirements34
 - 4.1 Federal Financial Support34
 - 4.2 Federal Lands.....34
 - 4.3 Federal Permits, Licences or Authorization.....34
- 5. Environmental Effects.....35
 - 5.1 Site Conditions35
 - 5.1.1 Local and Regional Vegetation.....35
 - 5.1.2 Wildlife and Habitat35
 - 5.1.3 Soil Quality.....37
 - 5.1.4 Surface Water and Drainage.....37
 - 5.1.5 Groundwater37
 - 5.1.6 Air Quality and Noise.....38
 - 5.1.7 Historical Resources41



5.2	Potential Environmental Effects.....	41
5.2.1	Fish and Fish Habitat.....	42
5.2.2	Marine Plants	42
5.2.3	Migratory Birds.....	43
5.3	Potential Effects Related to Interprovincial/Federal/International Lands.....	44
5.4	Potential Effects on Indigenous Peoples	45
6.	Engagement with Indigenous Groups/Communities.....	47
6.1	Potentially Interested or Affected Groups/Communities.....	47
6.2	Indigenous Groups/Communities Engagement	48
6.3	Indigenous Groups/Communities Concerns.....	48
6.4	Indigenous Groups/Communities Engagement Program	52
7.	Engagement with the Public and Other Parties	54
7.1	Key Comments and Concerns.....	54
7.2	Ongoing or Proposed Stakeholder Engagement.....	54
7.3	Engagement with Other Jurisdictions.....	55
8.	Summary of the Project Description	56
9.	References	57

Tables within Text

Table 1-A	Public Engagement Completed for the Green Line and the Project	2
Table 1-B	Regulatory Engagement Completed for the Green Line and the Project.....	3
Table 1-C	Indigenous Groups/Communities Engagement Completed for the Green Line and the Project.....	4
Table 2-A	Project Components with Associated Tracks.....	12
Table 2-B	Anticipated Operation Related Emissions	18
Table 2-C	Anticipated Construction Related Emissions	20



Table 2-D	Tank Summary.....	23
Table 2-E	Anticipated Liquid Discharges	24
Table 2-F	Anticipated Wastes.....	25
Table 2-G	High Level Project Schedule	26
Table 3-A	Calgary Transit Environmental Policies.....	32
Table 5-A	Baseline Concentrations and AAAQOs.....	40
Table 6-A	Indigenous Groups/Communities with Potential Interest in the Project for Subsequent Engagement	47
Table 6-B	Concerns Expressed During Engagement	48

Figures

Figure 1	Project Location Map
Figure 2	Regional Features and Location Map
Figure 3	Project Location Relative to Provincial and International Boundaries
Figure 4	Project Layout
Figure 5	Location of Federal Lands Relative to the Proposed Project Footprint
Figure 6	Environmental Investigation and Biophysical Assessment Areas
Figure 7	Nearest Residences and Historical Resources

Appendices

Appendix 1	Provincial EIA Requirement Verification
Appendix 2	Designated Activity Communications
Appendix 3	Project Location Photographs
Appendix 4	Land Titles
Appendix 5	Historical Wildlife Occurrences
Appendix 6	First Nations Consultation Summary Report
Appendix 7	Indigenous Groups/Communities Notification Package

List of Acronyms

Acronym	Definition
AAAQO	Alberta Ambient Air Quality Objectives
ABMI	Alberta Biodiversity Monitoring Institute
ABWRET-A	Alberta Wetland Rapid Evaluation Tool-Actual
AEP	Alberta Environment and Parks
AGRASID	Agricultural Region of Alberta Soil Inventory Database
APTA	American Public Transportation Association
ARP	Area Redevelopment Plan
ASIC	Alberta Soil Information Centre
BIA	Biophysical Impact Assessment
CAAQS	Canadian Ambient Air Quality Standards
CAC	Criteria Air Contaminants
CCME	Canadian Council of Ministers of the Environment
CEAA	Canadian Environmental Assessment Agency
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
CRAZ	Calgary Region Air Zone
dBA	Decibels
DC	Direct Control
EC	Electrical Conductivity
ECCC	Environment and Climate Change Canada
ECO	Environmental Construction Operations

Acronym	Definition
EIA	Environmental Impact Assessment
EPEA	<i>Environmental Protection and Enhancement Act</i>
FTP	File Transfer Protocol
GHG	Greenhouse Gas
Green Line	Green Line Light Rail Transit Project
GreenTRIP	Green Transit Incentives Program
HC	Hydrocarbon
HRIA	Historical Resources Impact Assessment
HRO	Historical Resources Overview
HRV	Historical Resource Value
LEED	Leadership in Energy and Environmental Design
LRT	Light Rail Transit
LRU	Line Replaceable Unit
LRV	Light Rail Vehicle
MBCA	<i>Migratory Birds Convention Act, 1994</i>
mbgs	Metres Below Ground Surface
NFPA	National Fire Protection Association
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
O ₃	Ozone
OCS	Overhead Catenary System
pHRIA	Paleontological Historical Resources Impact Assessment
PM _{2.5}	Particulate Matter Less Than 2.5 Microns (µ) in Diameter



Acronym	Definition
PM ₁₀	Particulate Matter Less Than 10 μ in Diameter
PNSA	Preliminary Natural Site Assessment
PPM	Planned Preventative Maintenance
PTIF	Public Transit Infrastructure Fund
PVC	Polyvinyl Chloride
ROW	Right-of-way
SAIT	Southern Alberta Institute of Technology
SARA	<i>Species at Risk Act</i>
S-CRI	Special Purpose – City and Regional Infrastructure
SO ₂	Sulfur Dioxide
TCRP	Transit Cooperative Research Program
TSP	Total Suspended Particulates
US EPA	United States Environmental Protection Agency
VDE	Vehicle Dynamic Envelope

1. General Information and Contacts

This Project Description document has been prepared in accordance with the Canadian Environmental Assessment Agency (CEAA) Guidance document (CEAA 2015) with the objective of conforming to the requirements set out in the *Prescribed Information for a Description of a Designated Project Regulations* (Government of Canada [GoC] 2018a) under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) (GoC 2018b). This Project Description has been prepared for the purpose of determining whether a federal environmental assessment is required for a designated project pursuant to CEAA 2012.

1.1 Nature of the Designated Project and Proposed Location

The City of Calgary plans to construct, own and operate the Green Line Maintenance and Storage Facility (the Project) in Calgary, Alberta. Figure 1 shows the Project location as related to the proposed associated Green Line Light Rail Transit (LRT) Project (referred to as the Green Line). Figure 2 indicates that the Project will be situated within an area directly adjacent to industrial operations and within an area that is generally commercial and industrial in nature. Figure 3 shows the Project location relative to provincial and international boundaries. Figure 4 shows the proposed Project layout. Figure 5 shows the location of federal lands relative to the Project.

The proposed development location is currently on vacant land at 12725 52nd Street SE and the westerly adjacent parcel at 12525 52nd Street SE, Calgary, Alberta within legal subdivisions 1 and 2 of Section 10 Township 23 Range 29 West of the 4th Meridian (1&2-10-23-29-W4M).

The centre of both properties is approximately:

- Latitude: 50.9375; and
- Longitude: -113.9641.

The Project will provide the maintenance and storage services for Light Rail Vehicles (LRVs) associated with the Green Line, a new major light rail transit system that will ultimately span the current length of Calgary (north to south). The Maintenance and Storage Facility rail yard component (i.e. the Project) of the Green Line is the only component that meets the definition of a designated physical activity as defined in the *Regulations Designating Physical Activities* (GoC 2018a). Since Stage 1 of the Green Line is estimated to be only 20 km it is not considered a designated physical activity, which CEAA has confirmed.

The Project will include 28 sidings with approximately 17.5 kilometres (km) of track. The Project will comprise tracks for heavy and light duty maintenance bays, wash bays, paint bays and equipment testing areas. The entire Project will occupy an area of approximately 226,700 square metres (m²). The City of Calgary has purchased vacant land within a commercial and industrial area of Calgary for the purpose of constructing the Project (Figure 2).

1.2 Proponent Information

Name of the Project:	Green Line Maintenance and Storage Facility
Name of the Proponent:	The City of Calgary
Address of the Proponent:	P.O. Box 2100, Station Main #211 Calgary, AB, T2P 2M5



Chief Executive Officer or Equivalent

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1.3 Summary of Parties Engaged to Date

The following Table 1-A, Table 1-B and Table 1-C highlight the public, regulatory, and Indigenous Peoples engagement that has taken place to date.

Table 1-A Public Engagement Completed for the Green Line and the Project

Date of Engagement	Community/Neighbourhood	Purpose
2015, June 8	Auburn Bay, Mackenzie Towne, Mahogany, Copperfield, Douglas Glen, Ramsay, and Cranston	Construction Information Session
2016, February 10	Inglewood and Ramsay	Area Redevelopment Plans (ARP) Presentation
2016, February 17	South Hill Station Area (Riverbend, Quarry Park, Douglas Glen, South Foothills and Foothills)	South Hill Station Area Plan Public Engagement
2016, February 17	Lynwood, Millican and Ogden	ARP Presentation
2016, April 26	South Hill Station Area (Riverbend, Quarry Park, Douglas Glen, South Foothills and Foothills)	Public Open House
2016, April 26	Lynwood, Millican and Ogden	Public Open House
2016, April 28	Inglewood and Ramsay	Information Café
2016, June 1	Beltline	Beltline Public Open House
2016, June 22	Lynwood, Millican, Ogden and South Hill Station Area (Riverbend, Quarry Park, Douglas Glen, South Foothills and Foothills)	Public Open House



Date of Engagement	Community/Neighbourhood	Purpose
2016, July 7 – August 29	Downtown, Inglewood, Chinook, Country Hills, Riverbend, Harvest Hills, Mackenzie Towne, New Brighton, Bowness, Marda Loop, Douglas Glen and Victoria Park	Green Line Ambassador Team attended a number of summer events across Calgary to provide Green Line information
2017, March 2	Beltline, Inglewood and Ramsay	Information Session

Note: Table data referenced from The City of Calgary Public Engagement records (The City of Calgary 2017a).

Table 1-B Regulatory Engagement Completed for the Green Line and the Project

Date	Regulator	Purpose
2015, September 29	Alberta Culture and Tourism	Issuance of a Schedule A document providing a list of appropriate contact for information regarding Indigenous Traditional Use Site of Significance
2017, November 23	Alberta Environment and Parks (AEP)	Confirmation of no provincial Environmental Impact Assessment (EIA) requirement
Various Dates	The City of Calgary	Confirm requirements for development permit, land use redesignation, and land consolidation
Various Dates	CEAA	Confirmation of designated activity status; Introduction of Project; Confirmation of Indigenous Groups/Communities suggested by CEAA for engagement

Table 1-C Indigenous Groups/Communities Engagement Completed for the Green Line and the Project

Date	Indigenous Groups/Communities	Purpose
Initial Engagement (completed under Alberta Culture and Tourism)		
2016, February 16	Siksika Nation, Tsuut'ina Nation, Blood Tribe and Piikani Nation	Notification Letter
2016, March 31	Blood Tribe and Siksika Nation	Initial Meeting
2016, April 8	Tsuut'ina Nation	Initial Meeting
2016, May 16	Piikani Nation	Initial Meeting
2016, May 25	Siksika Nation	Preliminary Driving Tour
2016, May 28	Siksika Nation	Traditional Knowledge Site Visit
2016, June 10	Siksika Nation	Non-Objection Letter Received
2016, July 27	Blood Tribe	Preliminary Driving Tour
2016, July 28	Blood Tribe	Traditional Knowledge Site Visit
2016, September 27	Piikani Nation	Preliminary Driving Tour
2016, September 28	Piikani Nation	Traditional Knowledge Site Visit
2016, October 25	Piikani Nation	Non-Objection Letter Received
2016, November 9	Blood Tribe	Non-Objection Letter Received
2016, December 1	Tsuut'ina Nation	Preliminary Driving Tour
2016, December 2	Tsuut'ina Nation	Traditional Knowledge Site Visit
2017, January 6	Tsuut'ina Nation	Non-Objection Letter Received
Secondary Engagement (completed as part of Project Description development)		
2018, July 30	21 Indigenous Groups/Communities (see Table 6-A)	Project Notification Package Sent
2018, August 29	Blood Tribe	Meeting

Date	Indigenous Groups/Communities	Purpose
2018, September 25	Samson Cree Nation	Meeting
2018, October 15	Ermineskin Cree Nation	Traditional Knowledge Site Visit
2018, October 30	Blood Tribe	Tobacco Offering Ceremony
2018, November 2	Métis Nation of Alberta – Region 3	Meeting
2018, November 9	Montana First Nation	Traditional Knowledge Site Visit
2018, November 27	Siksika Nation	Meeting

1.4 Requirements Under Other Jurisdictions

1.4.1 Federal Jurisdiction

- The *Rail Safety Act* (GoC 2018c) and Canada’s *Transportation of Dangerous Goods Act* (GoC 2018d) apply to passenger railways in Canada. These Acts do not denote approval or environmental investigation requirements for Urban Transit Systems and therefore are not applicable to the Project.
- The *Migratory Birds Convention Act, 1994* ([MBCA]; GoC 1994) requirement to protect migratory birds and their nests will be enforced throughout construction and operation of the Project. The construction, operation and decommissioning of the Project must not harm migratory birds and must not cause disturbance or destruction of their nests and eggs.
- The *Species at Risk Act* ([SARA]; GoC 20) indicates that species must not be harmed by the construction, operation, or decommissioning of Project works. It is illegal to kill, harm, harass, capture, or take in any way any species listed under SARA.
- The *Fisheries Act* (GoC 1985) focuses on conservation and protection of fish habitat essential to sustaining freshwater and marine fish species. The construction, operation and decommissioning of the Project must not harm fish that are part of a commercial, recreational or Indigenous Peoples fishery. There are no anticipated impacts to fish or fish habitat as a result of the Project. There are no fisheries or fish habitat on the Project site. A *Fisheries Act* permit is not required for the Project. See Section 5.2.1.1 for additional details.

Excluding the *Rail Safety Act* (not applicable), additional information on how these Acts apply to the Project are discussed in detail in Section 5.

1.4.2 Provincial Requirements

Provincial environmental initiatives in relation to air, land and water mandate that regional management policies and management programs be established to govern development and operation. These regional policies/programs are governed by the *Land Stewardship Act* (Province of Alberta [PoA] 2013), *Water Act* (PoA 2017a), *Alberta Weed Control Act* (PoA 2008) and the *Environmental Protection and Enhancement Act*

(EPEA; PoA 2017b) all of which further refine their requirements through regulations, codes of practice, standards, guides or manuals for a very wide variety of Project aspects (waste and recycling management, release reporting, conservation and reclamation, and air, land, water and wastewater management).

- EPEA – EIA
 - Pursuant to Schedule 1 of the Alberta EPEA *Environmental Assessment (Mandatory and Exempted Activities) Regulation* (PoA 1993), there are no provincial EIA requirements for the proposed Green Line, including the Project, as confirmed by AEP in 2017 (Appendix 1). Within the *Activities Designation Regulation* (PoA 2017c) under Alberta’s EPEA (PoA 2017b) the construction and operation of the Project does not trigger any approval, registration or notification.
- EPEA – Approval
 - The Project is not included as an activity identified in Schedule 1 (Divisions 1, 2, and 3) of the *EPEA Activities Designation Regulation*; therefore, no industrial approval is required.
- *Water Act / Public Lands Act* – Wetlands
 - A Level 1 Biophysical Impact Assessment (BIA), also known as a Preliminary Natural Site Assessment (PNSA), was conducted for the proposed Green Line, including the Project. The BIA addressed biological resources and physical features with the potential to be affected/impacted by construction including, but not limited to, wildlife, vegetation, water bodies and fish and fish habitat. The study area, that included the Project footprint, is shown on Figure 6. As related to the *Water Act*, the BIA concluded that there were no wetlands present within the local study area (i.e. 50 m buffer from the Green Line track; Tetra Tech Canada Inc. [Tetra Tech] 2018). A cursory review of aerial photography (conducted by Advisian) revealed there may be wetlands of low permanence within the Project area. Therefore, prior to development at the Project site, a complete wetland assessment (i.e. desktop mapping, field assessment, wetland classification) will be completed. As required by AEP, for those wetlands determined to require a *Water Act* approval (based on assessed permanence), a detailed wetland assessment will be conducted including an Alberta Wetland Rapid Evaluation Tool-Actual (ABWRET-A). The ABWRET-A will be submitted to AEP to aid in the determination of the relative value of the wetland for compensation purposes. The *Water Act* application will include a Wetland Assessment and Impact Report (WAIR), an Avoidance and Minimization Plan and a Mitigation Plan.
- *Historical Resources Act* – Historical and Paleontological Resources
 - A Historical Resource Impact Assessment (HRIA; Bison Historical Services 2017) and a Paleontological Historical Resources Impact Assessment ([pHRIA]; Nautilus Paleontology Inc. 2016) were completed for the southeast segment of the Green Line, which covered the proposed Project location. The HRIA and pHRIA were conducted as required by Alberta Culture and Tourism. No archaeological or paleontological sites were identified in the assessments and clearance to proceed with construction was provided, with a condition that historical resources monitoring be conducted at two specific locations during construction. The locations noted for further monitoring are within the larger Green Line footprint (southeast segment) and are not associated with the Project footprint.

- *Railway (Alberta) Act*
 - Urban railway transit systems are not included within the *Railway (Alberta) Act* (PoA 2010) which approves public railway systems; as such there are no provincial regulatory requirements for the Project.
- *Municipal Government Act*
 - Under the *Municipal Government Act* ([MGA]; (PoA 2018), municipalities are charged with the responsibility to provide good government; to provide services, facilities or other things that, in the opinion of council, are necessary or desirable for all or a part of the municipality; and to develop and maintain safe and viable communities. The MGA forms the basis of many of the municipal requirements outlined in the next section.

1.4.3 Municipal and Regional Requirements

Pursuant to development within Calgary, the following municipal and regional plans, initiatives and bylaws apply:

- The City of Calgary Municipal Development Plan (The City of Calgary 2013);
- Calgary Region Airshed Zone (CRAZ) Particulate Matter and Ozone Management Plan (CRAZ 2014);
- Calgary Land Use Bylaw (Land Use Bylaw Sustainment Team, Development and Building Approvals, Planning Implementation 2008);
- South Saskatchewan Regional Plan (PoA 2014a);
- South Saskatchewan Region Air Quality Management Framework (PoA 2014b);
- South Saskatchewan Region Surface Water Quality Management Framework (PoA 2014c);
- The City of Calgary's Environmental Management System and Policies (The City of Calgary 2017b, 2017c); and
- Too Good to Waste (PoA 2017d).

The City of Calgary requires that the following permits be obtained prior to development:

- Development Permit;
- Land Consolidation Permit;
- Land Use Re-designation;
- Drainage Permit and Wastewater Discharge Permit;
- Street Use Permit (if street use is required for construction activities);
- Building Permit; and
- Trades Permits (as applicable).

The City of Calgary requires the construction and operation of the Project to comply with the following:

- Contractor Responsibility Package;
 - Project Environmental Construction Operations (ECO) Plan (environmental plans) reviewed and approved by The City of Calgary.
- Streets Bylaw;
- Community Standard Bylaw;
- Land Use Bylaw;
- Wastewater Bylaw;
- Drainage Bylaw:
 - Code of Practice for Drainage.
- Spill Reporting Procedure; and
- Waste and Recycling Bylaw.

1.5 Regional Environmental Studies

There are no regional studies as defined under the *Canadian Environmental Assessment Act, 2012* (GoC 2018b) that apply to the property in which the Project is to be located (Tiege 2018a, pers. comm.).

2. Project Information

2.1 General Project Description

The City of Calgary has purchased vacant land within a commercial and industrial area of Calgary for the purpose of constructing the Project. The Project will service a new major light rail transit system that will ultimately span the current length of The City of Calgary (north to south)¹.

The Project will provide the maintenance and storage services for LRVs associated with the Green Line. The Project will include 28 sidings with approximately 17.5 km of track. The Project will comprise tracks for heavy and light duty maintenance bays, wash bays, paint bays and equipment testing areas. The entire Project will occupy an area of approximately 226,700 m².

The components of the Project include a Maintenance Facility including maintenance bays, LRV Servicing (cleaning platform and wash bays), Body Repair and Paint Shop, Test Track, LRV Storage Barn, an Administration Building and Staff Facilities, and parking. See Figure 4 for the Project layout.

The City of Calgary is investigating low-floor LRVs for the Green Line. A low-floor LRV is a type of LRV that provides, or provides near to, level boarding from a platform that is only slightly above sidewalk level. This elevation is achieved by reducing the height of the vehicle's passenger floor to between 300 mm and 350 mm from the top of rail. In order to accommodate this reduction in floor height, low-floor vehicles are designed with walk-through or U-shaped train wheel sets, and roof-mounted equipment. As a high platform is no longer required to achieve level boarding, the reduction in floor height allows for somewhat reduced station infrastructure on the Green Line.

Low-floor vehicles are not compatible with The City of Calgary's existing high-floor rail lines and existing high-floor maintenance facilities. Therefore, a completely separate rail line, the Green Line, and maintenance and storage facility, the Project, is being specified and constructed to meet the operational and maintenance requirements of the low-floor LRVs.

2.2 Designated Physical Activities

Physical activities that are required to undergo a screening under CEAA 2012 (GoC 2018b) are defined in the *Regulations Designating Physical Activities* (the Regulations) (GoC 2018a). Pursuant to item 25(b) of the Regulations, the following defines a designated physical activity which is required to undergo a screening under CEAA 2012:

¹ The new transit line, the Green Line, is designed to provide efficient service and connections to destinations throughout The City of Calgary, and areas where people can live affordably with access to amenities, services and sustainable mobility options. The initial stage (Stage 1) of the Green Line construction is 20 km in length and will include 14 stations connecting 16 Avenue North (Crescent Heights) to 126 Ave Southeast (Shepard). Stage 1 of the Green Line is estimated to serve between 60,000 to 65,000 customers on opening day and generate public transit availability to 191,000 existing jobs. The first stage of construction is scheduled to be completed by 2026.

The “construction, operation, decommissioning and abandonment of a new railway yard with seven or more yard tracks or a total track length of 20 km or more”.

Consequently, since the Project consists of approximately 17.5 km of track with 28 sidings, the proposed Project is considered to be a designated physical activity.

The Project will provide the maintenance and storage services for the new fleet of low-floor LRVs associated with the Green Line. Since Stage 1 of the Green Line is estimated to be only 20 km it is not considered a designated physical activity, which CEAA has confirmed. See Appendix 2 for related correspondence between CEAA and The City, which confirms that the Green Line is not considered a designated physical activity.

2.3 Components and Activities

2.3.1 Physical Works

The Project will consist of approximately 17.5 km of track with 28 sidings, associated buildings, equipment and utilities. There are no current structures present on the Project footprint and therefore construction of each of the components will be required as part of the Project. The main components of the Project include:

- Maintenance Facility including maintenance bays;
- LRV Servicing (cleaning platform and wash bays);
- Body Repair and Paint Shop;
- Test Track;
- LRV Storage Barn;
- Administration Building and Staff Facilities; and
- Parking (employee and visitor).

The Project will require connection to existing City of Calgary utility services. The connection points (noted on Figure 4) and on-site utilities will remain under the care and control of The City of Calgary during facility operation. The anticipated utility details include:

- Wastewater (Sanitary): connect to existing line using a 300-millimetre (mm) diameter polyvinyl chloride (PVC) pipe;
- Stormwater: connect to existing line using a 300-mm diameter PVC pipe;
- Water Supply: connect to existing line using a 250-mm diameter PVC pipe. The annual water demand has been estimated at 7,000 cubic metres (m³).
- Natural Gas, Electrical and Telecommunications: connection details not yet available at this design stage.

A full review of the design of the Project track work and structures will be undertaken once the LRV specification has been further defined; The City of Calgary has not yet selected a vendor for the LRVs at this time. LRV design specifications can vary quite significantly when considering various manufacturers. Although many LRV suppliers can supply the type of low-floor LRV under consideration, the option finally selected

could still have an impact on the workshop provision required. The Project design will need to be tailored to the intrinsic characteristics of the selected low-floor LRV, but also consider other vehicles that will be operating on-site within the Project, such as road/rail maintenance vehicles, delivery trucks, etc. In addition to vehicle width, height and length implications generally around the site, any later changes to vehicle length could have significant impact on the design, construction and operability of the Project buildings.

The vehicle dynamic envelope (VDE) of an LRV is the maximum space that the vehicle may occupy as it moves along the track. The VDE includes many factors due to the normal actions of the vehicle's suspension system, such as car-body roll (side sway) and lateral movement between stops. The VDE also includes lateral free-play between wheels and rail with both in their maximum wear condition as well as abnormal conditions that may result from failure of suspension elements (e.g. failure of the primary coil spring) (Transit Cooperative Research Program [TCRP] Report 155 "Track Design Handbook for Light Rail Transit").

The VDE is used during the design of the Green Line track to ensure that suitable clearances will exist between wayside infrastructure and a moving LRV. Within the proposed Project, LRVs will move at much lower speeds and around much tighter radius curves than occurs on the Green Line, therefore the physical shape and dynamic characteristics of the design LRV will also be taken into account during the design of the Project.

The VDE and clearance considerations include but are not limited to the following:

- track horizontal alignment and curvature;
- size of turnouts;
- swept path analysis on tight radius curves;
- storage track spacing;
- position of overhead catenary system (OCS) poles and other structures;
- high-level access platforms within the maintenance and servicing workshop;
- height allowances for lifting jacks and crane requirements;
- clearances to walls and other fixed infrastructure where pedestrians have access; and
- location and type of lifting jacks.

The number of sidings and track design is currently modeled to accommodate the storage and maintenance needs of the final capacity requirements of the Green Line.

The rail ties utilized for LRV are markedly different from non-LRV train systems. No creosote-soaked timber will be installed. The type of rail ties will be confirmed through detailed design. The connections will be solely to municipal light rail networks and not to regional, provincial or national rail networks.

Traffic flow within the Project area was a primary design criterion. A fully bi-directional flow around the Project gives the operator options on how servicing activities and revenue service launch are handled. This design option will save time and create efficiencies for both the service and Green Line operations.

Two separate leads each allowing access and egress from the Project are included to ensure that a derailment or other obstruction on one lead does not isolate the Project from the Green Line.

The track summary for the main components of the Project are provided below in Table 2-A.

Table 2-A Project Components with Associated Tracks

Project Component	Track Type	Number of Tracks	Approximate Length of Tracks (m) ¹	Number of Bays
Maintenance Facility including maintenance bays	Light repair	5	550	8
	Heavy repair	2	200	4
	Wheel truing	1	150	1
LRV Servicing	Cleaning platform and wash bays	2	500	2
Body Repair and Paint Shop	Body repair and paint	2	500	6
Test Track	Test	1	1,350	N/A
LRV Storage Barn	Storage	7	2,700	N/A
	Future storage	8	3,100	N/A
Total		28	9,050	21

Notes:

1. Track lengths measured between turnouts, and exclude other rail yard tracks. Total track length for the Project is approximately 17.5 km.

Additional detail regarding the purpose, approximate dimensions, and capacity of each of the above-noted components is provided below.

2.3.1.1 Maintenance Facility Including Maintenance Bays

Maintenance is responsible for servicing and maintaining the fleet of LRVs. Maintenance activities (further defined in Section 2.3.2) will include, but are not limited to:

- Light repair such as preventative maintenance, door function, controls function, and overhead equipment;
- Heavy repair such as train wheel set repair, wheels and tires, welding and fabrication and electronics repair;

- Dedicated roof maintenance bays that involves the removal of a subsystem off of the vehicle and to repair/rebuild it in a dedicated work area; and
- Wheel truing or lathe bay for the truing or profiling of LRV wheel sets without removing from the vehicle.

Due to the climate of The City of Calgary, the Maintenance Facility and associated bays will be in a climate controlled building. Each bay will have capacity to house a single car. The Maintenance Facility footprint has been established at approximately 50,500 m² comprising the following:

- 27,200 m² for the LRV Storage Barn;
- 20,300 m² for the Maintenance Facility; and
- 3,000 m² for Administration Building and Staff Facilities.

2.3.1.2 LRV Servicing

The LRV Servicing area will include washing, cleaning and sanding bays and will have a footprint of 2,300 m² consisting of two tracks running through the building with a cleaning platform at one end and a wash bay at the other. The components of the LRV Servicing area will include:

- Automated drive through wash system that will include reclaimed water systems with a possible reverse osmosis final rinse system. The washer may also include a blower system for drying and a wash equipment room to accommodate all associated wash equipment, reclamation sumps and water storage tanks;
- Cleaning platform for routine interior servicing of LRVs, daily inspections and replacement of windshield washer fluid as required; and
- Traction sand filling station (incorporated into the cleaning platform) for replacement of traction sand as required. Traction sand is a requirement on LRVs and is free of salt and other contaminants that could solidify if wet. Traction sand is stored in a specialty silo that is sealed and dry. Each LRV is equipped with a sanding system to assist with traction and braking when the tracks are wet, snow covered, icy or obscured with debris.

2.3.1.3 Body Repair and Paint Shop

The Body Repair and Paint Shop aligns three functions of media blasting (i.e. bead/sandblasting to roughen a surface, shape a surface or remove surface contaminants), preparation and painting and will occupy 1,600 m² of the Project footprint of which 1,350 m² is the Body Repair Shop and 250 m² is the Paint Shop. Areas for all three functions will be contained separately to prevent dust and particulates from spreading around the shop, ensuring worker safety. The Body Repair Shop will dismantle damaged or weathered LRV train car body parts. Once the parts are off the vehicle, technicians will repair/restore the parts and prepare them for the paint process. The Body Repair Shop activities could include patching, sanding, bead/sandblasting, forming, dusting, welding or fabricating replacement body parts.

Rail car and component painting will take place within a dedicated Paint Shop. The Paint Shop will be used to apply paint to the repaired/restored parts. The parts will remain in the Paint Shop until the paint is fully cured. Once the paint is finished curing, the parts will be moved back to the Body Shop to be reinstalled on the LRV.

The Paint Shop and associated systems will meet the requirements of National Fire Protection Association (NFPA) Standard 33, 2011 Edition and Alberta Building Code 2014.

Though the exact composition of the Paint Shop atmospheric emissions is unknown at this point in the design, during operation and consistent with industry standards, atmospheric emissions will be handled by make-up air filters and exhaust air arrestor filters that are designed to filter 99.8% of particulates. The Body Repair and Paint Shop will be designed, operated and maintained in a manner similar to other body shops in Calgary.

All paints and solvents will be stored in chemical lockers designed for the safe storage of paints and solvents. When in use, the solvent is stored in a dedicated paint mixing room attached to the Paint Shop. Liquid wastes (i.e. waste paints and solvents) will be stored in chemical lockers designed for safe storage of paints and solvents prior to disposal off-site or recycling off-site by a qualified third party.

All storage rooms or lockers will be vented separately. Exhaust from these areas will use the same make-up air filters and air arrestor filters used by the Paint Shop which are designed to filter 99.8% of particulates.

2.3.1.4 Test Track

A test track is required to test low-floor LRVs after corrective or heavy maintenance actions. Testing is done to ensure there are no issues before the LRV is used on the Green Line. The Project test track will also be used to receive and test new low-floor LRVs to ensure the fleet is ready and competent for service start.

The test track configuration will be approximately 1,350 m in length considering a minimum curve radius of 35 m. The use of 25 m radius curves was dismissed due to increased maintenance and risk of derailment as well as possible restrictions on the type of maintenance equipment which can be accommodated.

2.3.1.5 LRV Storage Barn

The LRV Storage Barn is an indoor, climate controlled component of the Project that is used to protect and stage LRVs while they are awaiting maintenance or while they are waiting to start revenue service on the Green Line. The LRVs are stored in a compact and efficient configuration. No heavy maintenance activities are anticipated to be performed in the LRV Storage Barn. If heavy maintenance is required, the LRV is moved to the Maintenance Facility. Minor repairs may be conducted in this area to avoid needless movement of the LRVs.

The LRV Storage Barn will have a final footprint of 19,600 m² to meet the minimum capacity requirement. The footprint was calculated by estimating that the pairs of tracks would be set at 3 m apart centre-to-centre with a 1 m walkway on each side of a set of two tracks to keep the building as narrow as possible. This track and walkway layout may change as the design is progressed. There are seven sidings scheduled for the first stage of the LRV Storage Barn with an additional eight sidings scheduled for future development. The eight future sidings are included in the overall total of 28 sidings proposed for the Project. The staged development is a function of available funding. The current funding has been assigned to construct Stage 1 of the Green Line, which requires seven sidings at the Project site for maintenance purposes. As ridership increases and additional funding becomes available to expand the Green Line, the fleet will increase to support the new stage(s) and additional tracks will be required at the Project site to service the larger fleet. At present, there is no future funding planned for the Green Line.

2.3.1.6 Administrative Building and Staff Facilities

The Administrative Building will house offices, training rooms, change rooms, meeting rooms, and other support spaces. It is currently estimated to be a two-story building attached to the Maintenance Bays, covering a footprint of 11,000 m².

2.3.1.7 Parking

The parking lots will accommodate parking for staff, visitors, and deliveries and will be controlled by a security gate. The parking lot size will be confirmed through detailed design, however, the parking lots indicated on Figure 4 are considered to be the maximum size required to accommodate the Project.

2.3.1.8 Stormwater Management System

The Project will use several dry storm ponds that work in parallel to capture and convey stormwater off-site. Under normal service, these storm ponds are dry, with no permanent stormwater depth. Final, detailed design of the ponds has not yet been completed but the ponds will be lined with an industry standard product to eliminate infiltration.

Dry ponds are considered surge segments to the pipe system (minor system) where, if The City of Calgary storm sewers reach flow capacities, they overflow into the pipe system and dry ponds. Therefore, the dry ponds are, more often than not, dry and empty and are only filled during large storm events to offer stress relief to the minor system. Dry ponds have grated top catch basin drains at the bottom of each pond that act as 'inlet structures' and are directly connected to the minor system which is connected to The City of Calgary's main storm pipe system. Further, an outlet control structure (i.e. a weir) controls discharge and manages off-site flow between the stormwater ponds and the storm sewer system. The stormwater discharge quality will meet The City of Calgary discharge standards by including an oil and grit Separator at the downstream end of the pipe system. The oil and grit Separator will be sized to meet The City of Calgary stormwater quality target, which is 85% total suspended solids removal. The preliminary stormwater system design meets both design requirements stipulated by The City of Calgary: flow rate and water quality.

The Project will use underground storage tanks (each with a 1,000 m³ capacity) for roof drainage collection. These tanks attenuate roof runoff that can be reused for gray water application if desired, which includes site irrigation or wash bay water reuse. Prior to re-use, this collected stormwater will be treated using filtration, an oil and grit separator and ultraviolet treatment. Stormwater quality will be monitored as part of the re-use system. These tanks offer additional active storage volume during large storm events that are then discharged to the main storm pipes that are connected to the storm ponds. To avoid potential groundwater impacts from these tanks, an impermeable liner will be installed around the storage tanks.

2.3.2 Production Capacity

The exact service and maintenance schedule will be modeled once the LRV manufacturer is selected. At this time The City of Calgary has not yet chosen a specific LRV to employ. The outcome of the selected maintenance schedule will be to reduce the potential for spills or incidents that may cause environmental impacts.

The City of Calgary will apply the maintenance strategy from the current transit system to the new LRV system. This maintenance strategy includes the following definitions for the levels of maintenance utilized:

- Level 1, Light and Routine Maintenance: Maintenance practices and activities that occur on the LRV itself including vehicle cleaning and servicing, mechanical adjustments, replacement of line replaceable units (LRUs) or replacement of a vehicle subsystem as a unit. The intent of this level of maintenance is to return the LRV to service in the shortest time possible.
- Level 2, Corrective Maintenance: Maintenance practices and activities that involve repair of a subsystem off of the vehicle, often on a workbench or in an area with equipment specific to the repair being carried out. An example is corrective maintenance of an LRU through the fault-finding and eventual replacement of a lowest line replaceable unit or subcomponent such as a circuit board. The intent of this level of maintenance is to return LRUs to serviceable condition and replace them into stock such that they can be used during Level 1 maintenance activities.
- Level 3, Heavy Maintenance: Maintenance practices and activities that involve the overhaul of a vehicle or vehicle subsystem. These activities are major interventions that are typically triggered by a predefined maintenance interval that is specific to the equipment being overhauled. Level 3 maintenance activities can be done onsite within the Project, off-site in another location, or where specific knowledge and equipment doesn't exist in Calgary Transit, the equipment can be transferred to a third party for overhaul. An example of a Level 3 maintenance activity would be the overhaul and rebuild of LRV train wheel sets involving a multi-day major intervention maintenance activity to remove, tear down, inspect, rebuild, test, and return to service.

The maintenance strategy will help define the type and frequency of activities to be carried out and will be supplemented by industry guidance such as the American Public Transportation Association's (APTA) Fixed Structures Inspection and Maintenance suite of recommended practices. A typical frequency for distance-based planned preventative maintenance (PPM) for low-floor LRV fleets are in the order of magnitudes shown below:

- 5,000 km - light maintenance;
- 30,000 km - routine maintenance; and
- 180,000 and 240,000 km – heavy maintenance.

These distances are to be updated/confirmed when more detailed information comes to hand on the supplier of the new fleet of LRVs during the procurement phase. Based on the length of the Stage 1 Green Line and the distance each train will cover daily it is expected that for Stage 1 operation the LRVs will undergo:

- light maintenance monthly (for all cars);
- routine maintenance every seven months; and
- heavy maintenance every 3.4 to 4.5 years.

The current assumption is that the following cleaning schedule will be applied:

- For daily LRV cleaning:
 - exterior wash using washing plant;
 - floor sweep and mop;
 - wipe handrails;

- clean windows and interior glass;
- wipe driver's cab desk surfaces; and
- examine seats and interior hard surfaces for dirty marks and graffiti.
- For monthly LRV cleaning:
 - As for daily clean and additionally:
 - wash all visible interior hard surfaces except ceilings;
 - clean exterior louvres, pockets, etc.;
 - clean driver's seat (or replace seat cover with clean); and
 - change any passenger seat covers that are soiled or damaged.
- For six monthly LRV cleaning:
 - As for monthly and additionally:
 - wet vacuum (or equivalent) all passenger cab upholstery and seat covers; and
 - clean ceilings and lighting diffusers.

The water supply for the Project will be municipal and based on the usage from other light rail facilities in Calgary it is anticipated that the Project will consume about 7,000 m³ of water annually. The grey water will be reused for LRV wash and it is anticipated that 70% of water used will be recycled water.

2.3.3 Expansion Component of the Project

The Project and the affiliated Green Line are not considered to be an expansion of any other existing facility; it is an entirely new project. The Project has been designed to serve the needs of the Green Line.

2.3.4 Incidental Activities

All of the Project components as noted under Sections 2.3.1.1 to 2.3.1.8 are essentially incidental activities. The Project aspect for which a Project Description is required under the Regulations is defined in Section 2.2 of this document. Ancillary to the sidings and track length is the maintenance, storage and administrative buildings previously identified, all of which are complimentary to the designated aspect of the Project.

Construction of the Project will be carried out by a contractor who will have care of construction execution and commissioning. The City of Calgary will maintain control over the construction and commissioning and have direct influence over the contractor. Once construction is completed The City of Calgary will take over care and control of facility operation – for use by The City of Calgary, only.

The designated Project and the affiliated Green Line is for the benefit of the public and will be operated in accordance with the appropriate federal and provincial safety regulations. Further discussion of applicable regulatory requirements is found in Section 1.4 of this document.

2.4 Emissions, Discharges and Waste

2.4.1 Atmospheric Emissions

During the life of the Project, emissions of criteria air contaminants (CACs), greenhouse gases (GHGs) and dust/particulate are expected. The CACs typically include hydrocarbons (HC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO) and suspended particulates in various sizes such as total suspended particulates (TSP), particulates with a diameter less than 10 microns (PM₁₀) and PM_{2.5}. GHG emissions are typically reported as carbon dioxide equivalent (CO₂e).

There are several ambient air quality monitoring stations in The City of Calgary. The closest active stations are Calgary Central Inglewood, Calgary Northwest, and Calgary Southeast. Monitored ambient air quality results from these stations are used to represent baseline air quality of the Project area and are summarized in Section 5.1.6. Throughout construction and operations phases, ambient air quality will be measured continuously at these existing monitoring stations. Should any changes be noted that are related to the Project, facility construction and operation procedures will be reviewed and additional mitigations will be installed/initiated as appropriate.

The anticipated GHG emissions from facility operation include natural gas boilers and vehicular traffic. There are no dust/particulate emissions anticipated during facility operation as the Project parking lots/roadways will be paved and the rail traffic will operate on tracks. The estimated annual operational emission activities indicated in Table 2-B have been modeled after an existing facility in Calgary (Oliver Bowen Facility). The boiler emissions were calculated using publicly available emission factors such as Canada’s National Inventory Report 1990-2016 (UNFCCC 2018) and conversions published by Natural Resources Canada. For vehicular traffic, the estimation was based on one round trip per staff/day from the gate to the parking lots (300 m) and 365 days/year of operations. Vehicle type is assumed to be light-duty diesel trucks.

Table 2-B Anticipated Operation Related Emissions

Activity	Fuel Consumed	CO ₂ e (tonnes/year)
Boilers	42,000 GJ/year	2.205
Vehicular Traffic	188 staff/day	270

During the construction phase of the Project, air emissions will include dust/particulate emissions and GHG emissions associated with the construction equipment. Vehicle emissions will be limited by reducing idling time for the construction equipment and dust/particulate emissions will be limited by employing standard dust control measures as outlined in the ECO Plan (to be prepared by the selected contractor). The City of Calgary will require the selected contractor to develop an ECO Plan for the Project which will include details such as the scope of work overview, compliance requirements, site characteristics, potential environmental impacts and mitigations, sediment and erosion control, tree protection, hazardous material management, waste management, monitoring and reporting, emergency prevention and response, and ECO Plan implementation. The development and implementation of an ECO Plan is a requirement of The City of Calgary. The ECO Plan will be executed and upheld by the contractor throughout construction. Contractor performance will be audited by The City of Calgary and/or its designated representative. Construction will employ

equipment that meets the US Environmental Protection Agency (US EPA) Tier 4 Standards for non-road engine and vehicles (US EPA 2016).

Construction-related GHG emissions are estimated using activity-based fuel consumption rates for the following construction activities: land clearing, grading track work, and building the Project. Diesel equipment such as scrapers, excavators, dump trucks, concrete mixer truck, front end loader, bulldozer, concrete pumper truck, hydraulic truck crane, track ballast regulator, track tamper, skid steer and pickup trucks are expected during the construction phase. The equipment required and the emissions estimated using emission factors from Canada's National Inventory Report 1990-2016 (UNFCCC 2018), presented in CO₂e are included in Table 2-C. The total amount of GHG emissions during the construction phase is estimated to be approximately 15,448 tonnes per year (t/a) of CO₂e, which accounts for 0.0059% of the 2016 Alberta GHG emissions (UNFCCC 2018).

In addition to dust and GHG emissions during construction, fuel combustion from construction equipment will result in emissions of CACs such as NO_x, CO and PM_{2.5}. Construction CAC emissions could result in small detectable quantities of these contaminants relative to background levels. Any occurrences of elevated CAC emissions resulting from Project-related construction activities will be immaterial and short-lived due to the temporal and spatial characteristics of the Project-related construction activities.

The anticipated construction equipment presented in Table 2-C indicates that the operational periods of each piece of the equipment are temporal (i.e., non-continuous). The hours provided are periods of the equipment available for use but not necessarily in operation at the maximum power output. Most of the construction equipment is used only within the construction area except for vehicles. The equipment will not be used simultaneously as some are only used 52 day/year while some are used almost daily (312 day/year). The location of the equipment is also changing within the construction area as the construction proceeds.

Based on the GHG emission summary in Table 2-C, the construction equipment is estimated to emit a total of approximately 15.5 kilotonnes per year (kt/a) of CO₂e. Based on Community-Wide GHG inventory in Calgary (The City of Calgary 2019), The City of Calgary emitted approximately 17,679 kt of CO₂e in 2018. The Project construction GHG emissions are estimated to be approximately 0.087% of The City of Calgary's annual emissions. Although the emission rates for CACs would differ from that of GHGs, this information can represent the immateriality of the emissions from construction equipment within The City of Calgary.

Table 2-C Anticipated Construction Related Emissions

Equipment ¹	Model ¹	Power Output ²	Fuel Consumption ³	No of Units ¹	Hrs/day ¹	Days/year ^{1, 5}	CO ₂ e ⁴	Total Fuel	CO ₂ e
		hp	L/hr ³				kg/L	L	tonnes/year
Scrapers	CAT 631G	500	92.6	4	12	130	3.0	577,824	1,741
Hydraulic Excavator	CAT 385CL	513	101.0	2	12	208	3.0	504,192	1,519
Flatbed Dump Trucks	CAT 725	309	84.7	4	12	130	3.0	528,528	1,592
Concrete Mixer Truck	McNeilus Standard Mixer	505	69.0	4	12	78	3.0	258,336	778
Front End Loader	CAT 962G	210	41.4	1	12	208	3.0	103,334	311
Bulldozer	CAT D7E	235	33.5	2	12	130	3.0	104,520	315
Concrete Pumper Truck	42Z-Meter Boom Truck	505	69.0	1	12	78	3.0	64,584	195
Hydraulic Truck Crane	Liebherr LTM 1070-4.2	367	83.7	1	12	182	3.0	182,801	551
Dump Truck	Kenworth T800	500	84.7	2	12	130	3.0	264,264	796



Equipment ¹	Model ¹	Power Output ²	Fuel Consumption ³	No of Units ¹	Hrs/day ¹	Days/year ^{1, 5}	CO ₂ e ⁴	Total Fuel	CO ₂ e
		hp	L/hr ³				kg/L	L	tonnes/year
Track Ballast Regulator	Harsco BE-KR	260	35.0	1	12	52	3.0	21,810	66
Track Tamper	Harsco Mark IV	230	30.9	1	12	52	3.0	19,282	58
Skid Steer	Bobcat S510	49	10.0	2	12	234	3.0	56,160	169
Pickup Truck	Ford F150 (2016)	385	65.2	10	12	312	3.0	2,441,799	7,357
Total								15,448	

Notes:

1. Based on information provided by The City of Calgary.
2. Based on manufacturer information available online.
3. Based on manufacturer information available online or the Springbank Off-Stream Storage Reservoir Environmental Impact Assessment (Stantec 2018).
4. Canada's National Inventory Report 1990-2016 Greenhouse Gas Sources and Sinks in Canada, Part 2 (UNFCCC 2018).
5. Construction is expected to extend for approximately 5 years (2019 to 2024).

2.4.2 Liquid Discharges

Liquid waste will primarily consist of rail car wash water and stormwater runoff.

LRV wash water will be managed through a recycling system that is expected to consist of a collection and settling vessel and will function to recycle approximately 70% of the fresh water used. The LRV wash water is anticipated to contain road treatment products such as sand, salt and washing detergent. The LRV wash water that cannot be re-used will be discharged into The City of Calgary's existing sanitary sewer system for treatment at The City of Calgary's effluent treatment plant. The City of Calgary maintains discharge quality requirements for accepting wastewater into the sewer system. All discharge must comply with The City of Calgary Bylaw Number 45M2016 regulating wastewater disposal and protecting the wastewater system or its processes from damage, obstruction, toxic upsets or loss of efficiency (The City of Calgary 2012) as it outlines the restricted and prohibited discharge substances. Wash water will be collected in underground sumps and tested prior to discharge to The City of Calgary's sanitary system. Should the wash water not meet The City of Calgary discharge quality requirements, then the water will be removed from the Project site for disposal by a licensed contractor.

The stormwater runoff will be managed through the use of several dry stormwater ponds that work in parallel to capture and convey stormwater off-site (Figure 4). The dry ponds have grated top catch basin drains at the bottom that are directly connected to the minor pipe system which is connected to the main storm pipes, allowing water to be shared between the two systems, and act as 'inlet structures' for the stormwater ponds. The ponds will be lined with an industry standard product such that no infiltration will occur at the ponds, managing potential groundwater contamination. For the most part, these dry ponds will only fill during large storm events when storm sewers are at capacity. Outlet control structures, upstream of discharge locations provide control in managing off-site flow between the stormwater ponds and the storm sewer system. This flow is restricted to a maximum flow rate release. Once that point has been reached, the dry ponds will fill as needed. The stormwater is anticipated to be relatively clean though it may contain oil and grease, lubricants, sand/soil and salt. An oil and grit separator will be installed at the discharge end of the pipe system. Although the dry ponds will offer surge relief to the pipe system during large storm events, most contaminants are contributors during small storm events, so contact between contaminants and dry ponds is expected to be very limited.

The City of Calgary maintains runoff discharge requirements in accordance with Bylaw Number 47M2016 for accepting runoff from industrial operations (The City of Calgary 2005) and the Code of Practice for Drainage Activities (The City of Calgary 2016a). It is expected that stormwater quality will meet municipal stormwater discharge limits, as the water is primarily un-impacted rainfall runoff. An oil and grit separator will be installed at the discharge end of the pipe system. The design, construction and operation of the Project have been tailored to ensure that stormwater quality will meet The City of Calgary's Bylaw requirements.

During construction, surface water runoff will be managed in accordance with The City of Calgary-approved ECO Plan that will be prepared by the contractor. There are no other liquid discharges anticipated during construction. The ECO Plan will include best management practices for the management of accidental releases (i.e. unforeseen leak/spill of oil and lubricants, gasoline from construction equipment). Any accidental release will be reported to The City of Calgary and will be appropriately remediated.

Areas where chemicals will be stored will have sumps and emergency response plans to contain potential spills. All maintenance activities will be conducted within buildings on concrete pads which will contain any spills and restrict the potential for impacts to the surrounding environment, including stormwater runoff.

Another anticipated liquid waste stream includes oil and other lubricants required for LRV maintenance and operation. Used oils and lubricants will be disposed of in accordance with the *Lubricating Oil Material Recycling and Management Regulation* (PoA 2016a). There will be no discharge of oily waste to land or water. All oil products and other lubricants will be stored in tanks that meet the Canadian Council of Ministers of the Environment (CCME) code of practice for tanks containing petroleum and allied petroleum products, PN 1326 (CCME 2003). Details for all tanks associated with the Project are summarized in Table 2-D.

Table 2-D Tank Summary

Tank ID	Tank Location	Tank Contents	Maximum Capacity (L)	Above Ground or Below Ground	Secondary Containment
1	Maintenance Facility	Waste Oil Tank (gear and hydraulic oil)	1,250	Above Ground	Double-walled tank
2	Outside, adjacent to the LRV Servicing area	Windshield washer fluid	4,500	Above Ground	Double-walled tank

In addition, secondary containment for the tanks must meet the Calgary Transit Secondary Containment Guidelines (Calgary Transit 2004). Secondary containment for the tanks will be designed to contain a spill from the largest vessel plus 10% of all the other containers in the design area. Containment will be constructed of non-combustible material and have a liquid tight seal. Secondary containment for indoor storage of small quantities may be comprised of readily available absorbent material and/or portable dikes. Under no circumstances is outdoor storage allowed without secondary containment and weather protection.

Paint will be disposed of in accordance with the EPEA (PoA 2017b). There will be no discharge of paint waste to land or water.

Domestic sewage will be discharged to The City of Calgary sewage system through a 300-mm diameter PVC pipe connected to an existing line. The discharge line will remain under that care and control of The City of Calgary.

Anticipated liquid waste streams are summarized in Table 2-E.

Table 2-E Anticipated Liquid Discharges

Liquid Waste	Source	Containment	Disposal	Potential Residual Effects on the Environment
LRV Wash Water (may contain sand, salt and washing detergent)	LRV Servicing	Sumps contained within the Maintenance Facility (3 sumps)	On-site recycle (up to 150 cycles); off-site disposal to The City of Calgary’s sanitary system following testing	None; wash water will be sampled prior to discharge
Surface Water Runoff (may contain oil and grease, lubricants, soil/sand and salt)	Rain/Snow	Engineered stormwater dry ponds on-site (7 ponds)	Discharge to The City of Calgary storm sewer	None; stormwater will be required to meet City of Calgary Bylaw Number 47M2016 to be accepted into the municipal storm system

2.4.3 Waste

General waste is expected to comprise electronics, domestic waste from the administration building, and maintenance waste from the maintenance buildings (expected to be oily cloths, oil filters, metal parts, electronic components, and batteries). Waste management areas will be contained within buildings. The Project will generate both recyclable and non-recyclable solid and liquid wastes. Recyclable material will be separated into labelled containers and removed from the Project site for recycling by a qualified carrier. Some used mechanical parts will be eligible for returning to the manufacturer when replaced in accordance with the regular maintenance schedule. Non-recyclable waste will be collected on-site and then sent off-site for disposal through a qualified carrier. The volume of waste generated will be managed through The City of Calgary waste and recycling pick-up program. Any waste that is not able to be picked up will be disposed of through a contracted qualified carrier.

During construction, any non-contaminated surplus soil will be stockpiled within the Green Line footprint for future use or used immediately elsewhere within the Green Line footprint. Soil stockpiles will not be located within the Project footprint. The stockpile(s) will be seeded to reduce erosion potential.

All waste, as summarized in Table 2-F, will be disposed of at an approved waste management facility appropriate to the waste type and will be transported by qualified carriers.

Table 2-F Anticipated Wastes

Waste	Source	Containment	Disposal	Potential Residual Effects on the Environment
Electronics	Maintenance Facility	Bins (temporary storage)	Off-site disposal or recycle to approved facility as appropriate by qualified carrier	None
Domestic Waste	Administration Building and Staff Facility	Bins	Off-site disposal or recycle to approved facility as appropriate by qualified carrier	None
Maintenance Waste	Maintenance Facility	Labelled Bins	Off-site disposal or recycle to approved facility as appropriate by qualified carrier	None
Non-contaminated Surplus Soil	Site Grading	Stockpile for storage or use off-site	N/A	None
Oils and Lubricants	Maintenance Facility	Approved containers (temporary storage)	Off-site recycle (used oil) or disposal to approved facility by qualified carrier	None
Waste Paint	Body Repair and Paint Shop	Paint cans in Paint Shop	Off-site to recycle depot by qualified carrier	None
Domestic Sewage	Administration Building and Staff Facility	None – connected to existing City of Calgary sewer system	Direct connection to existing City of Calgary sewer system	None

2.5 Project Phases and Schedule

2.5.1 Key Project Phases

Table 2-G provides an overview of the Project schedule.

Table 2-G High Level Project Schedule

Project Task	Planned Timeline	Status
Engagement	2015–2019	Ongoing
Design	2016–2020	Ongoing
Construction	2019–2024	Pending
Commissioning	2024–2026	Pending
Operation	2026–2126	Pending
Decommissioning	Approximately 2126	Pending

2.5.2 Main Activities

2.5.2.1 Engagement

Indigenous Peoples engagement began Q1 2016 and continued through to Q1 2017. The City of Calgary initiated further engagement in July 2018 upon receiving a list from CEAA including recommended Indigenous Groups/Communities for engagement centered around the Project. The City of Calgary delivered a Notification Letter to 21 Indigenous Groups/Communities by registered mail on July 30, 2018. The Notification Letter included a brief description of the proposed Project and figures to indicate the proposed location and facility details. Further details on Indigenous Peoples engagement are noted in Section 6.

Public engagement was carried out through 2016 and into 2017 incorporating information sessions and distribution of printed material. Public engagement is further described in Section 7.

2.5.2.2 Design

The design team (The City of Calgary and Owner’s Engineer) have engaged Calgary Transit to identify the performance requirements for the Project. Once the requirements are established, the Project design team will develop a Reference Concept Design package and Technical Performance Requirements. The Reference Concept Design package will consist of drawings and the Technical Performance Requirements will consist of varying performance-based and prescriptive specifications which must be met in the design, construction testing and commissioning of the Project. Final, detailed design will be conducted by the design/build contractor (to be identified through The City of Calgary’s procurement process). It should be noted that the detailed design is not expected to differ substantially from the current Project design. The Project components, inputs and outputs will remain the same.

2.5.2.3 Construction

Topsoil and subsoil will be stripped, salvaged and stockpiled prior to site grading, placement of fill, and/or site development. Soil will be reused off-site or stockpiled off-site in designated topsoil and subsoil stockpiles.

The site will be fenced off. Roadways and railways into the site will be constructed to connect to existing transportation infrastructure. Site construction infrastructure (e.g. trailers, electricity, natural gas services) will be installed. Construction laydown, storage and fabrication areas will be established.

Grading activities within the Project footprint will include collecting/placing fill with earth-moving equipment to build the subgrade, followed by compacting the subgrade. Once the subgrade has been constructed, the ties and steel rails will be laid by a qualified contractor. Ballast will then be dumped in place. Specialized rail construction equipment will tamp the ties and steel rails so that the ballast settles into place.

Final grading will include contouring drainage ditches to channel water toward the runoff ponds.

The foundations for the maintenance, storage and administrative buildings will be excavated, and concrete poured. Structural steel will then be erected on the foundations. Some modularization and preassembly work will occur where practical to speed building erection. Roof cladding and wall cladding will then be installed to enclose the building while equipment installation continues indoors. Once the building is enclosed, the building may be heated to facilitate work in cold weather.

Temporary structures will be required during construction, including equipment storage, workforce muster points, and for various other functions. The temporary structures will be similar to those typically used on construction sites. All temporary structures will be removed from the site once construction is complete.

2.5.2.4 Commissioning

Prior to Project operation, testing and commissioning of various pieces of equipment and systems will occur. It is expected that the testing and commissioning phase of the Project will span two years subsequent to construction. The Project will then be ready for commercial operation.

2.5.2.5 Operation

The Project is expected to be in operation for a century with daily maintenance, wash and storage of LRVs occurring for 24 hours per day. Additional details regarding the anticipated maintenance, servicing and cleaning schedules are provided in Section 2.3.4. No long-term storage of LRVs at the Project site is anticipated.

2.5.2.6 Decommissioning

Decommissioning will involve the removal of all surface and subsurface installations. The site will be regraded to facilitate positive drainage and clean subsoil and surface soil (ideally from salvage) will be placed at a depth in accordance with the current regulation at the time. Reclamation and remediation of the site will also be consistent with the regulations at the time. Currently there are three management options for contaminated sites under the Alberta reclamation framework: Tier 1, Tier 2, and Exposure Control Guideline (AEP 2016a, 2016b, 2016c). The guideline that is most applicable will be selected for remediation standards and benchmarks. The site will be seeded with a mixture consistent with the surrounding Foothills Fescue Subregion of the Grassland Natural Region as described in Section 5.1.1 of this document. The initial decommissioning activities are expected to be completed within two years. Subsequent to this initial decommissioning, ongoing monitoring will take place to ensure the reclaimed area is developing as expected. Monitoring will be carried out for several growing seasons until there is assurance that the site will ultimately return to a natural state.

The City of Calgary

Canadian Environmental Assessment Agency Project Description
Green Line Maintenance and Storage Facility



Conversely, it is possible that by the end of 100 years of operation of the Project there will be an alternative land use strategy for the site and a future development project will be planned. If the future of the site is development, then The City of Calgary will undertake any remediation required to ensure the site does not contain contaminated soils prior to re-development.

3. Project Location

3.1 Location Description

3.1.1 Project Coordinates

The Project is proposed to take place on two parcels of land owned by The City of Calgary, located in Calgary, that cumulatively amount to approximately 30 hectares (ha) with a centre located at approximately N 50° 56' 15", W 113° 58' 51".

3.1.2 Site Location Plan and Map

Figure 1 shows an overview of the Project location in Calgary and Figure 4 depicts the Project area and components.

3.1.3 Location of Project Components and Activities Map

Figures 2, 3, 5 and 7 identify the Project location in relation to natural features, parks and environmentally sensitive areas, infrastructure and neighbourhoods, nearby residences, nearby Historic Resource Value (HRV) lands and Indigenous Peoples settlement land for engaged groups.

3.1.4 Photographs of Work Locations

Photographs of the Project location are provided in Appendix 3.

3.1.5 Proximity to Other Land Uses and Other Aspects

Directly south of the proposed location is a commercial district of approximately (~) 183 acres (ac; ~780 m north to south by ~985 m east to west); beyond that lies the nearest neighbourhood (~780 m south).

Directly north of the proposed site is a property owned by Crop Production Services of approximately 225 ac (~1,185 m north to south and ~765 m east to west). This area is zoned for future urban development.

The east side of the proposed location is bounded by 52nd Street SE beyond which lies more industrial development and Shepard landfill (operated by The City of Calgary) located on land zoned for special purposes (primarily for infrastructure and utility facilities, including public transportation operated by the federal, provincial and municipal levels of government).

The west is bordered by a community area occupied by businesses.

The City of Calgary sits within Treaty 7 area which comprises the following Indigenous Groups/Communities: Blood Tribe, Piikani Nation, Siksika Nation, Stoney Nakoda First Nations and Tsuut'ina Nation. The City of Calgary recognizes that these Indigenous Groups/Communities, as well as Métis communities and Indigenous Groups/Communities from Treaty 6 and from British Columbia may have traditional territories that overlap with the Project footprint.

The Project will not be located on federal land. The closest federal lands are Tsuut'ina Nation, located approximately 12 km west of the Project. The land for the proposed Project does not contain any settlement land.

The location of the Project in relation to provincial and international boundaries is shown in Figure 3. The distance to the boundaries are as follows:

- Alberta-Saskatchewan border: 277 km;
- Alberta-British Columbia border: 84 km;
- Alberta-Northwest Territories border: 1,008 km; and
- Canada-USA border: 215 km.

3.2 Land and Water Use

The Project will be located on land owned by The City of Calgary and zoned appropriately for the proposed development (as described in Section 3.2.1). There will be no impact on land use zoning in areas surrounding the Project. There is no surface water on or around the Project site. The closest surface water body is the Bow River which is located approximately 1.5 km west of the nearest corner of the Project.

3.2.1 Zoning Designation

In accordance with The City of Calgary Land Use Bylaw Number IP2007 (Land Use Bylaw Sustainment Team, Development and Building Approvals, Planning Implementation 2008) the proposed Project site is located on property zoned DC and S-CRI, defined as follows:

- S-CRI: Special Purpose - City and Regional Infrastructure (S-CRI) District: The S-CRI designation is primarily for infrastructure and utility facilities, including public transportation operated by the federal, provincial and municipal levels of government; and
- DC: Direct Control (DC) District: A DC is a customized land use designation. It has a list of allowable uses and a set of rules specific to a particular property or development. Most DC designations include a cross-reference to the rules of one of the standard designations of the Land Use Bylaw.

3.2.2 Legal Land Description

The location is currently vacant land in Calgary, Alberta within the legal subdivisions 1 and 2 of Section 10 Township 23 Range 29 West of the 4th Meridian (1&2-10-23-29-W4M). The land is owned by The City of Calgary with current land titles included in Appendix 4. The City of Calgary is working on an application to have the parcels consolidated.

There is no surface water within the Project area. The closest surface water body is the Bow River which is located approximately 1.5 km west of the nearest corner of the Project.

3.2.3 Land Use and Management or Conservation Plans

In 2007, the Government of Alberta adopted the Cumulative Effects Management System. The Cumulative Effects Management System applies to all of Alberta and provides a comprehensive integrated and legislated system to protect water, air, land and biodiversity in Alberta.

The three South Saskatchewan Regional Plans identified in Section 1.4.3 of this document are a product of the Alberta Land Use Framework under the Cumulative Effects Management System. The framework is a provincial initiative designed to manage the province's land and natural resources in accordance with the long-term economic, environmental and social goals (AEP 2016d). The framework divides the province into several regions whereby each region develops a plan and issues policy direction and guidelines for the purpose of:

- integrating and coordinating provincial policy and aligning planning and decision making;
- encouraging stewardship and conservation on public and private land;
- clarifying roles and responsibilities for land-use decisions; and
- improving information sharing (AEP 2016d).

The Land Use Framework Initiative incorporated Indigenous Peoples, municipal, and stakeholder engagement (AEP 2016d). The New South Saskatchewan Regional Plan includes the municipality of Calgary. The development of the plan included engagement between 2010 and 2014 in three separate phases (AEP 2016e). These included engagements with Indigenous Groups/Communities, the public and other stakeholders with respect to:

- the planning the development of the South Saskatchewan Regional Plan and topics of concern;
- responding to feedback from the Advisory Council; and
- feedback on the draft South Saskatchewan Regional Plan (AEP 2016e).

The City of Calgary will require the selected contractor to develop an ECO Plan for the Project which will include details such as the scope of work overview, compliance requirements, site characteristics, potential environmental impacts and mitigations, sediment and erosion control, hazardous material management, waste management, monitoring and reporting, emergency prevention and response, and ECO Plan implementation. The development and implementation of an ECO Plan is a requirement of The City of Calgary. The ECO Plan will be executed and upheld by the contractor throughout construction. Contractor performance will be audited by The City of Calgary and/or its designated representative.

General environmental policies that The City of Calgary will abide by throughout Project operations are listed in Table 3-A.

Table 3-A Calgary Transit Environmental Policies

Title	Description/Purpose
Calgary Transit Substance Release Reporting Procedure	Process to respond to, and report, substance releases
ISO 14001: 2015 Transit CT EnviroSystem Manual	Overall environmental management system for Calgary Transit to ensure identification, management, monitoring, and mitigation of environmental issues.
Calgary Transit - Workplace Hazardous Materials Information System Training Policy	Policy to ensure Calgary Transit employees receive WHMIS training in order to understand chemical hazards in the workplace and be able to apply this knowledge to protect health and safety.
Calgary Transit's WHMIS Controlled Products and Harmful Substance Approval Process	Policy to ensure Calgary Staff have appropriate and up-to-date information regarding chemicals used in the workplace.
Environmental Emergency Response Plan	Plan to outline emergency procedures and manage environmental incidents at Calgary Transit facilities and off-site operations.
Calgary Transit Hazardous Waste and Hazardous Recyclables Management Procedure	Procedure to ensure hazardous waste and recyclables are appropriately managed.
Secondary Containment Guidelines	Specifies secondary containment requirements for storage of liquid products within Calgary Transit facilities. Requires secondary containment to be designed to contain a spill from the largest vessel plus 10% of all the other containers in the design area. Containment to be construction of non-combustible material and have a liquid tight seal. Secondary containment for indoor storage of small quantities may comprise readily available absorbent material and/or portable dikes. Under no circumstances is outdoor storage allowed without secondary containment and weather protection.
Forklift pulling/pushing of LRV Cars in Shop and Rail Yard	Only employees who hold current certificate of proficiency with LRV shops and rail yards and forklift may undertake this procedure as either an operator or lookout.

3.2.4 Traditional Land Use

As shown in Figures 2 and 4, the proposed development site is vacant land within The City of Calgary, is surrounded by industrial and commercial developments, and has been securely fenced off from public access at least since the property was purchased by The City of Calgary. As such, there is likely no current land or

resource use by Indigenous Peoples on the Project site. However, The City of Calgary recognizes that the traditional territories of a number of Indigenous Peoples may overlap with the Project footprint. The Indigenous Peoples engagement process currently underway will provide opportunity for concerns regarding traditional land use to be brought forward.

Environmental reviews/investigations were completed in 2016 and 2017 that covered the entire Project footprint (Advisian 2016a, 2016b, 2016c, 2017). The environmental investigation area is shown in Figure 6.

An environmental review was conducted for the east half of the proposed Project location (Advisian 2016a) which included a review of property ownership and examination of aerial photos. The property was previously owned by Telsec Property Corporation (from 2012–2016) and Western Cooperative Fertilizers (from 1967–2000). An aerial photo review demonstrated that the site was used for agricultural purposes from at least the 1940s to the late 1990s which included cultivated land. In the mid-1960s two communication towers were erected, and a third tower along with an access road (on the north boundary) was present by the 1990s. The eastern boundary of the property has been 52nd Street since the 1940s and the southern portion was bound by undeveloped land until the 2000s when a series of commercial buildings were constructed. Land north of the property was developed in association with the Shepard air field until the 1970s. Fertilizer operations were developed in the 1970s to the northeast of the property (Advisian 2016a),

The area surrounding the western half of the property underwent the same review process (Advisian 2016b). The aerial photo review indicated that the site was used for the storage of salvaged soil since the mid-1970s and prior to that was agricultural land dating back to the 1940s. An environmental investigation concluded that electrical conductivity (EC) exceedances in the Project footprint were most likely due to naturally high sulphate concentrations found in Alberta and therefore were the result of natural conditions and not attributable to historical industrial operations (Advisian 2017), supporting the aerial photo evidence that the area has not been used for industrial purposes. From the 1940s, the lands to the west and south were agricultural and undeveloped while the land to the north was part of the Shepard airfield. The first surrounding development occurred in the 1970s with the fertilizer operation taking over a portion of the Shepard air field for use as stormwater ponds (to the north). By the early 1980s, Deerfoot Trail was constructed to the far west of the property, with directly adjacent land on the west continuing to be used for agricultural purposes until the late 1990s when the construction of 40th Street SE began in the area and was completed by the early 2000s. By the mid and late 2000s industrial and commercial development was completed along 40th Street (the property immediately west). At the same time (early 2000s), closure of the fertilizer pond operation began and appears to have concluded with revegetation in the early to mid-2010s (land to the north). Directly south of the property began to be partially developed (the eastern side) in the mid-2000s. On the western side of the same land, and prior to that development, the land had been and continued to be used for agriculture from around 1950 to the early 2010s. The once agricultural portion that remained after development is now an undeveloped, disturbed site.

4. Federal Involvement - Financial Support, Lands and Legislative Requirements

4.1 Federal Financial Support

All three levels of government have committed funding for Stage 1 of the Green Line, which includes the Project.

Federal Government: On July 24, 2015 the Government of Canada made a funding announcement committing \$1.53 billion to the Green Line. This funding was contingent on matching funds from the Provincial and Municipal Governments. This funding announcement was the largest ever contribution by the Government of Canada to an infrastructure project in Alberta.

Provincial Government: On July 6, 2017, the Government of Alberta pledged up to \$1.53 billion over eight years to support Stage 1 construction of the Green Line; with funds anticipated to be derived through the Climate Leadership Plan.

Municipal Government: In December 2015, The City of Calgary committed \$1.56 billion over 30 years, contingent on matching contributions from the Federal and Provincial governments. On June 26, 2017, the Calgary City Council approved the concept alignment plan, of which Stage 1 of approximately 20 km was approved to move forward. The Green Line will be built in stages as funding becomes available. Stage 1 includes the proposed Project to provide the maintenance and storage facilities necessary for the Green Line.

Funding for Green Line Enabling Works projects: On December 3, 2016, the Federal and Provincial Government committed more than \$250 million dollars to fund a series of Enabling Works for the Green Line for 2017-2020. The funding is from the federal Public Transit Infrastructure Fund (PTIF) and the provincial Green Transit Incentives Program (GreenTRIP), and will provide transit infrastructure funding to more than 25 municipalities across Alberta. In Calgary, the funds will help prepare the Green Line right-of-way (ROW) for construction with items such as utilities, environmental remediation and land acquisition. Doing these types of projects proactively will manage project timelines and schedule risks, and will allow future Green Line construction to occur more efficiently.

Stage 1 of construction will extend from 16 Avenue N to 126 Avenue SE (approximately 20 km including the Project) with an expected construction schedule of 2020–2026 and estimated to cost \$4.65 billion.

4.2 Federal Lands

No federal lands will be used for either the Green Line or the Project.

4.3 Federal Permits, Licences or Authorization

No known federal permits, licences or authorizations will be required for the Project.

5. Environmental Effects

Sections 5.1.1 through 5.1.7 describe the available information on the current physical and biological environment at the Project site and surrounding area.

Sections 5.2 through to 5.4 describe potential environmental impacts resulting from the proposed development and include proposed mitigations.

5.1 Site Conditions

5.1.1 Local and Regional Vegetation

The site is within the Foothills Fescue Subregion of the Grassland Natural Region (AEP 2015). The Grassland Region is characterized by rolling prairie and is home to about 25% (125 species) of Alberta's rare vascular plants, about half of which grow in grasslands (the other half in wetlands) (AEP 2015). Prior to development, the site would have likely been populated by mountain rough fescue, bluebunch fescue, juniper June grass, Parry oat grass, pasture sage wort, golden bean and Idaho fescue which is characteristic of the subregion's drier areas (AEP 2015). Wildflowers could have included sticky purple geranium, silvery perennial lupine, three flowered avens, woolly gromwell and western wild parsley (AEP 2015; Downing and Pettapiece 2006). Other common species may have included shrubs such as buckbrush, silverberry, prickly rose and Saskatoon as well as cinquefoil for moderate to well-drained sites, such as this area (Downing and Pettapiece 2006).

The natural vegetation of the proposed Project site was previously disturbed through a combination of industrial and agricultural land use. An aerial photo review demonstrated that the site was used for agricultural purposes from at least the 1940s to the late 1990s which included cultivated land and a lack of woody vegetation (Advisian 2016a, 2016b). The site has remained undisturbed for a sufficient amount of time to have re-established vegetation that is now dominated by agronomic grasses and invasive species. A vegetation field assessment of the site has not been carried out.

A Level 1 BIA concluded that there were no wetlands present within the local study area (i.e. 50 m buffer of the Green Line track) (Tetra Tech 2018). Advisian conducted a cursory review of aerial photography which revealed there may be wetlands of low permanence within the Project area. Prior to Project development, if required by AEP, a complete wetland assessment will be conducted in accordance the provincial *Water Act* requirements to assess the noted wetland features.

5.1.2 Wildlife and Habitat

The surrounding land uses (i.e. residential and commercial development, waste management facilities, and major transportation corridors), past agricultural and industrial disturbance, and present domination by agronomic and invasive vegetation, has likely homogenized the environment, reducing diversity and structure such that a variety of thermal, security, foraging, and nesting habitats are limited. Moreover, surrounding developments likely extend their influence into the site. In this way, sensory disturbances such as noise and light further reduce the attractiveness of the site for wildlife. Consequently, species richness and diversity is

likely low. The Alberta Biodiversity Monitoring Institute's (ABMI) modeling of this area suggests extremely low uniqueness² for (0 to 10%), low species richness³ (20 to 30%) and moderate intactness⁴ (40 to 50%) for all species (ABMI 2018). Although, these have been modeled higher for birds (intactness: 60-70%, richness: 50-60%, uniqueness: 10-20%) and mammals (intactness: 20-80%, richness: 40-50, and uniqueness: 10-20%; ABMI 2018).

Wildlife inhabiting or using the site are likely those that are common and tolerant to the conditions and disturbances typical of urban and disturbed environments. Such species may include small mammals such as mice and voles, coyote (*Canis latrans*), and white-tailed jackrabbit (*Lepus townsendii*). Similarly, migratory birds such as savannah sparrow (*Passerculus sandwichensis*), clay-coloured sparrow (*Spizella pallida*), Brewer's blackbird (*Euphagus cyanocephalus*), species at risk such as barn swallow (*Hirundo rustica*) and common nighthawk (*Chordeiles minor*), and corvids such as American crow (*Corvus brachyrhynchos*), black-billed magpie (*Pica hudsonia*) and common raven (*Corvus corax*) all inhabit and nest in agricultural fields, cleared areas, or grassy areas and could be found at the Project site.

There have been no wildlife surveys completed for the proposed Project site. A search of the AEP Fish and Wildlife Internet Mapping Tool (AEP 2018) revealed that the site is located within sensitive raptor and sharp-tailed grouse ranges. Moreover, the list of wildlife provided in Table A5-1 in Appendix 5 have been historically observed or detected within the Project site or within 5 km of the site. Table A5-1 also indicates the provincial and federal status and general habitat of each species. In total, 28 species (one amphibian, six mammals, and 21 bird species) have historical occurrences within the Project site or within 5 km of the site. Much of the occurrences are likely due to the proximity of the Project to the Bow River, a major wildlife corridor, Fish Creek Provincial Park, and where agricultural and wetland communities occur east of The City of Calgary.

Many of the species with historical occurrences occupy wetland, riparian, or forested communities (Appendix 5, Table A5-1). As such, most (23 of 28 species) are unlikely to occupy the Project site (Appendix 5, Table A5-1). Based on past industrial and agricultural use of the Project site, there are no riparian or forested vegetation communities remaining. The Level 1 BIA concluded there were no wetlands present in the local study area (i.e. the Green Line) (Tetra Tech 2018). A cursory review of aerial photography conducted by Advisian revealed there may be wetlands of low permanence within the Project area. Given their likely temporary nature and the fact they have been cultivated and are likely impacted by invasive species, the wetland communities likely provide little habitat for wildlife. In addition to the fact that most (23 or 28) species are unlikely to occupy the Project site, northern leopard frogs (*Lithobates pipiens*) are known to be extirpated from Calgary (Government of Alberta 2002). Although some at-risk species can occur in disturbed grassy areas (e.g. short-eared owl [*Asia flammeus*], badger [*Taxidea taxus*], or long-tailed weasel [*Mustela frenata*]), the quality of the habitat, and thus the value of the Project site for these species, is likely low: any use of the site would likely be transitory in nature. Potential risks to wildlife will be mitigated by avoiding development in key

² The ABMI has developed indices for measuring biodiversity across Alberta. Uniqueness is a relative measure that identifies the degree to which a species composition in a 1 square kilometre (km²) grid is distinct compared to other grid cells within a Natural Region.

³ Richness is a relative measure of the number of common native species within 1 km² grid around the province.

⁴ Intactness is a reflection of how modifications to habitat as a result of human activities have resulted in changes to species abundance.

periods (e.g. migratory bird breeding season) and conducting wildlife surveys (e.g. nest searches and general wildlife sweeps) prior to vegetation clearing and construction, if necessary.

5.1.3 Soil Quality

Environmental investigations carried out in 2016 and 2017 (Advisian 2016c, 2017) indicate that Calgary is located east of the Rocky Mountain foothills where glacial and pre-glacial sediment overlays a sedimentary bedrock (the Paskapoo formation) of predominantly fine-grained siltstone and mudstone. The environmental investigation area coincides with the Project footprint (Figure 6).

No historical soil surveys exist for the Project site as soils within Calgary are considered to be disturbed. The Agricultural Region of Alberta Soil Inventory Database (AGRASID) classifies soils within Calgary as being Regosols, which are soils that are weakly developed and lack horizon development (Alberta Soil Information Centre [ASIC] 2015). Historically, the soils were likely Orthic Black Chernozems, as the site was used for agriculture. A 1987 soil survey of the Calgary urban perimeter showed that most soils surrounding the Calgary area were Chernozems and Orthic Black Chernozems were found in the area east of the Project site (MacMillan 1987).

Surficial geology of the Project site is primarily silty clay topsoil to a maximum depth of 0.15 metres below ground surface (mbgs). Fill of unknown origin(s) was observed in three locations at the Project site to a maximum depth of 1.5 mbgs. Geologic material is primarily clay with traces of silt, sand and gravel to a maximum depth of 6.75 mbgs. Bedrock of siltstone was found between 4.2 and 15 mbgs. There was no evidence of soil contamination found during these environmental investigations. All salinity, metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons concentrations were found to be lower than the laboratory detection limit or less than the Alberta Tier 1 Soil and Groundwater Remediation Guidelines (AEP 2016a) with the exception of EC which was determined to be most likely due to naturally high sulphate concentrations found in Alberta (Advisian 2016c, 2017).

5.1.4 Surface Water and Drainage

There is no surface water on the Project site. The closest surface water body is the Bow River which is located approximately 1.5 km west of the nearest corner of the Project. The project footprint is bounded on all sides by roads (including Deerfoot Trail), open land, or other development. Runoff will be captured through a stormwater management system comprised of a ditching network connected to runoff ponds. The ponds will discharge into The City of Calgary Storm System and will be required to meet the standards outlined in Bylaw No. 47M2016 (The City of Calgary 2005). There is no possibility of runoff reaching the Bow River; there will be no conveyance of sediment or contaminants.

Site topography is generally flat with a gradual slope toward the northwest moving from approximately 1,040 metres above sea level (masl) to 1,030 masl.

5.1.5 Groundwater

Environmental investigations carried out in 2016 and 2017 within the Project footprint (Figure 6; Advisian 2016c, 2017) identified the regional hydrogeology as follows: the regional piezometric surface of the Paskapoo Formation mimics surface topography. There are no regional-scale confined systems. There appears to be a downward hydraulic gradient across the formation, even in the nearby Bow River valley. The Paskapoo

Formation is highly heterogeneous with the hydraulic conductivity of sandstone core samples averaging 10^{-5} m per second (m/s). Intergranular porosity and the influence of fractures can vary widely. The chemistry of groundwater in the Paskapoo is largely influenced by the composition of the glacial deposits.

At the proposed Project site, the depth to shallow groundwater ranged from between 1.27 and 1.97 mbgs, with 40% of the shallow monitoring wells being dry (groundwater flow direction not inferred). The depth to groundwater within bedrock ranged between 1.55 and 4.78 mbgs. The flow of bedrock groundwater is interpreted by Advisian to be in a southwesterly direction toward other commercial/industrial properties that are adjacent to a primary highway (Deerfoot Trail, HWY #2). The presented data was collected in the fall/winter of 2016 and is representative of typically lower groundwater elevations than in the spring/summer.

Chemical analysis revealed several exceedances of the Alberta Tier 1 Soil and Groundwater Remediation Guidelines (AEP 2016a) in both bedrock and overburden groundwater sources for sulphate, manganese, sodium, total dissolved solids, cadmium, selenium and uranium. The concentrations are observed similarly across Calgary and Alberta indicating they are a reflection of natural conditions (Advisian 2017). Nitrite and nitrates in the overburden also exceeded their respective guidelines which is considered to be attributable to historic agricultural activity or adjacent off-site industrial activity (Advisian 2017). There were no exceedances of the applicable guidelines for hydrocarbons and all results were below the laboratory detection limits.

Any groundwater encountered during construction and operation of the Project will be managed according to the ECO Plan to be developed by the contractor and managed by The City of Calgary.

5.1.6 Air Quality and Noise

5.1.6.1 Noise

The Community Standards Bylaw Number 5M2004 (as amended) regulates noise (The City of Calgary 2016b). The Project will comply with the standards to not disturb or annoy a reasonable person, which includes noise from vehicles and motorized equipment for intermittent and continuous periods (The City of Calgary 2016b). The nearest residence is approximately 500 m away (west) and for the most part is buffered by other commercial and industrial businesses as well as a primary highway (Deerfoot Trail, HWY #2) with a sound barrier installed. Given that the location is not within a residential neighborhood, the specific conditions that will apply to the Project construction are as follows:

32. (1) No Person shall cause or permit to be caused a Continuous Sound that exceeds the greater of:

(a) 85 decibels (dBA) Leq measured over a one-hour period during the Day-time or Night-time; or

(b) 5 dBA Leq over the Ambient Noise measured over a one-hour period during either the Day-time or Night-time; at any Point of Reception within a Non-Residential Development.

(2) No Person shall, in a Non-Residential Development, cause or permit to be caused a Non-Continuous Sound that exceeds 85 dBA Leq measured over a period of one hour during the Day-time or Night-time where the Point of Reception is within a Non-Residential Development.

The same Bylaw provides allowance to obtain a temporary permit for noise that would otherwise violate the Bylaw, the need for which will be assessed for specific construction activities as required.

Noise generated from the operation of the Project is expected to be minimal as the LRV are electric. Maintenance and wash noise will be limited to operating power tools and will be adequately buffered by the buildings. Train movement around the Project site will be limited to 10 km per hour (km/h) and as such will generate minimal noise.

5.1.6.2 Air Quality

GHG emissions expected from operation and construction are identified in Table 2-B and Table 2-C, respectively. In addition to dust and GHG emissions during construction, fuel combustion from construction equipment will result in emissions of CACs such as NO_x , CO and $\text{PM}_{2.5}$. Construction CAC emissions could result in small detectable quantities of these contaminants relative to background levels. Any occurrences of elevated CAC emissions resulting from Project-related construction activities will be immaterial and short-lived due to the temporal and special characteristics of the Project-related construction activities.

Construction will employ equipment that meets the US Environmental Protection Agency Tier 4 Standards for non-road engines and vehicles (US EPA 2016). It is expected that there will be earth moving equipment including, but not limited to, scrapers, excavators, dump trucks, loaders, bulldozers, cranes, as well as light standards, and generators on-site. Operation of the Project is not expected to produce any major emissions. Under The City of Calgary's Sustainable Building Policy (The City of Calgary 2004) all new City-owned, operated or funded buildings in excess of 500 m² in area must meet or exceed the gold standards of LEED (Leadership in Energy and Environmental Design). As the Project progresses through the design phase, the LEED requirements are applied to all relevant design considerations.

There are several ambient air quality monitoring stations in The City of Calgary. The closest active stations are Calgary Central Inglewood, Calgary Northwest, and Calgary Southeast. Monitored ambient air quality results from these stations are used to represent baseline air quality of the Project area. Baseline concentrations and Alberta Ambient Air Quality Objectives (AAAQOs) are presented in Table 5-A. Canadian Ambient Air Quality Standards (CAAQS) are for management of the airshed; therefore, they are not compared to baseline concentrations. Substances monitored are CO, nitrogen dioxide (NO_2), SO_2 , ozone (O_3) and $\text{PM}_{2.5}$. Because the baseline concentrations are not used for modeling, percentiles were not used and only maximums are presented. Results from all three stations are less than the corresponding AAAQOs except $\text{PM}_{2.5}$. CRAZ indicated that the exceedances of $\text{PM}_{2.5}$ were due to smoke from forest fires.

Table 5-A Baseline Concentrations and AAAQOs

Substance	Averaging Period	AAAQO (micrograms per cubic metres [$\mu\text{g}/\text{m}^3$])	Calgary Central – Inglewood		Calgary Northwest		Calgary Southeast	
			Maximum Concentration ($\mu\text{g}/\text{m}^3$)	>75% Data Completeness	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	>75% Data Completeness	Maximum Concentration ($\mu\text{g}/\text{m}^3$)	>75% Data Completeness
CO	1-h	15,000	4,807	Yes	1,602	Yes	1,373	Yes
	8-h	6,000	1,631		1,144		1,030	
NO ₂	1-h	300	160	Yes	112	Yes	193	Yes
	Annual	45	28		19		24	
SO ₂	1-h	450	-	Yes	-	Yes	18	Yes
	24-h	125	-		-		5	
	30-d	30	-		-		2	
	Annual	20	-		-		0.8	
O ₃	1-h	160	139	Yes	133	Yes	131	Yes
PM _{2.5}	24-h	30	48	Yes	68	Yes	52	Yes

Notes:

1. Dash (-) indicates data not available.
2. **Bold** font indicates concentration exceeds AAAQO.

5.1.7 Historical Resources

An HRIA was completed in 2017 for the Green Line and included the Project footprint (Bison Historical Services 2017). The Project site has not previously been identified to contain or been likely to contain any historical resources including any structure, site, or thing that has a historical, archaeological, paleontological or architectural significance to Indigenous Peoples. Figure 7 shows HRV lands listed relative to the Project footprint. Throughout the Indigenous Group/Community engagement activities, a few concerns were expressed regarding the possibility of chance finds during Project construction. A chance-find protocol will be in place should historical or archeological resources be encountered during the construction phase. Should historical items (as defined by the *Historical Resources Act* [PoA 2016b]) be found, construction will stop and the find will be reported. Further excavation and treatment will comply with the Alberta *Historical Resources Act*.

5.2 Potential Environmental Effects

The location of the Project site does not make it ideal wildlife habitat, especially considering the past disturbances (agriculture and industrial), surrounding land uses (residential, commercial development, waste management facilities, and major transportation corridors), and presence of agronomic and invasive vegetation. These factors all contribute to lowering the quality of the habitat present on the Project site and reduce connectivity (at least for terrestrial species) to more natural habitats along the Bow River or outside of The City of Calgary.

Prior to the start of construction, an environmental professional will aid in the large-scale delineation of soil types present on-site for salvage purposes. Soil will be stockpiled with topsoil and subsoil comprising separate piles that are further differentiated by good and fair quality (poor quality will not be salvaged). The resulting stockpiles (to be located off-site) will be seeded to prevent erosion and sedimentation. Soil will be salvaged under appropriate weather conditions such that the quality of the material is not degraded. Seeding will be carried out in accordance with the typical grassy vegetation variations as noted in Section 5.1.1 of this document.

In conjunction with the salvage of subsoil and topsoil, many of the operational activities will take place on concrete surfaces and as such are not anticipated to result in significant soil contamination. Furthermore, the facility will be constructed in such a way as to allow for floor and LRV wash water to be collected within the wastewater management system. Pursuant to the environmental investigations, monitoring wells were installed on the Project site and may serve as monitoring points if (for an unforeseeable reason) they are required in the future. No significant impacts to soils or groundwater are anticipated from construction or operation of the Project.

There are no trees or shrubs on the Project site and as such the potential for nesting birds is reduced to those which are prone to ground nesting. Clearing is expected to begin in Q4 2019 which is outside of the migratory bird nesting season and will avoid potential ground nesting birds. Work planned over the end of April through mid-August (i.e. the migratory birds nesting season for the Project area) in any given year will be carried out in accordance with the results of a wildlife sweep to prevent potential impacts on migratory birds. The sweeps will be designed to identify nesting birds and implement the appropriate mitigation to avoid disruption. Should a nest (or other protected wildlife feature) be encountered during construction, the appropriate buffer will be employed resulting in either the delay of construction or restricted activities on the Project site.

Construction of the Project will employ appropriate techniques to prevent erosion and sedimentation on and off the Project site. Stormwater dry ponds will be utilized to capture and convey stormwater off-site.

Wastewater will be managed separately such that the stormwater ponds will only contain stormwater runoff. The collected runoff will be discharged into The City of Calgary stormwater system in accordance with water quality discharge requirements. Wastewater will be recycled and reused within the wastewater collection system to reduce water use. The wastewater collection system will be connected to The City of Calgary sewer system whereby the small volume (approximately 30%) of wastewater that cannot be recycled will be discharged. Furthermore, there are no surface water features within proximity to the Project that could potentially be impacted; construction and operation of the Project is not anticipated to impact surface water quality.

The Project itself is not anticipated to generate significant air emissions as the buildings are expected to meet or exceed the gold LEED. Noise is not expected to be an operational issue and all construction noise will comply with The City of Calgary Bylaws.

5.2.1 Fish and Fish Habitat

There are no anticipated impacts to fish or fish habitat as a result of the Project. There are no fisheries or fish habitat on the Project site. Wastewater will be directed into the municipal wastewater treatment system and stormwater runoff will be discharged into the municipal stormwater system. Discharges to the wastewater and stormwater systems will be governed by The City of Calgary Bylaws which are protective of aquatic species.

The nearest waterbody supporting fish is the Bow River, which at its closest point is approximately 1.5 km from the western edge of the proposed Project. The Bow River is a prominent watercourse which supports life history stages for many sport fish, coarse fish, and forage fish species, and its importance for aquatic productivity is significant. The provincial Fish and Wildlife Management Information System was consulted, and the list of fish in the database known to be present is extensive (the Bow River is identified by waterbody ID 1988). According to the provincial *Water Act* (PoA 2017a), the Bow River is designated Class C meaning that it is moderately sensitive to disturbance. Spring- and fall-spawning fishes and egg incubation are protected by imposition of a Restricted Activity Period (May 1-July 15 and September 16-April 5) when instream activity should be avoided. The Project includes no activity instream given its distance from the river, and all runoff and water discharge will be directed to municipal collection systems, as indicated. The Project footprint is bounded on all sides by roads (including Deerfoot Trail), open land, or other development. There is no possibility of runoff reaching the Bow River, and erosion will be contained on all sides; there will be no conveyance of sediment or contaminants. It is unlikely that any incremental increase in atmospheric concentrations of particulates or contaminants will be detectable above current inputs from surrounding traffic, industrial activity, and residential communities.

5.2.2 Marine Plants

There are no anticipated impacts to marine plants as a result of the Project. There is no marine environment on or near the Project site. Wastewater will be directed into the municipal wastewater treatment system and stormwater runoff will be discharged into the municipal stormwater system.

5.2.3 Migratory Birds

Given past disturbances, invasive species establishment, and surrounding land uses, migratory bird abundance, diversity, and habitat quality is expected to be low compared to undisturbed and intact communities. Species anticipated to use the site for foraging, resting, and breeding include species common in agricultural and urban environments. Given the lack of tall shrubs and trees, nesting birds are likely those that nest on the ground or in low shrubs. These include species such as savannah sparrow, clay-coloured sparrow, Brewer's blackbird and corvids such as American crow, black-billed magpie, and common raven.

While it is recognized that the Project site does not consist of high quality habitat there is potential for the area to be frequented by migratory birds. As such, the Project has the potential to impact birds through sensory disturbances, direct and indirect mortality, and habitat loss or modification. Despite potential effects, and given anticipated low abundance and diversity of bird species, adverse impacts as a result of the Project are anticipated to be negligible and can be mitigated.

There is likely to be some minor increase in sensory disturbances such as noise, vibrations, and light as a result of Project construction and operation. Noise can mask or lead to modification of signals used for communication, mating, and hunting (Siemers and Schaub 2010; Mason et al. 2010) altering foraging or mating success or impacting physiology (e.g. stress or hearing loss; Shannon et al. 2016). These impacts can ultimately change bird communities (Bayne et al. 2008; Francis et al. 2009). That said, birds can become tolerant to long-term, continuous noise (Shannon et al. 2016). Given that construction will occur in Q4 2019, noise from construction will largely occur outside or prior to the arrival of nesting migratory birds (Environment and Climate Change Canada [ECCC] 2017). Similarly, noise will meet requirements of The City of Calgary Bylaw. Operational noise and vibration is expected to be minimal as the LRV is electric and trains will be limited to a 10 km/h limit within the Project site.

In addition to noise and vibrations, light can also lead to sensory disruption: light can attract and disorient birds disrupting flight paths or inducing behaviours such as territorial singing, thereby increasing energy expenditure leading to reduced survivability, health and fecundity (Longcore and Rich 2004). The increase of light from construction and operations is expected to be negligible compared to surrounding light levels in the adjacent residential, commercial and industrial developments and transportation corridors. Given that the Project site currently is located within a dense, highly impacted inner urban environment, it can be expected that birds inhabiting the wider region are tolerant of current noise, light, and vibration levels.

Direct and indirect mortality could also affect birds as part of Project construction. For example, interactions with construction equipment could lead to mortality (Bishop and Brogan 2013). Construction will be avoided during the breeding bird season, and migratory bird surveys and nest searches will be employed as required to avoid direct interactions with nesting birds. The Project is located in bird nesting Zone B4 and the breeding season for migratory birds is between mid-April and the end of August (ECCC 2017). If vegetation clearing activities and construction fall within the breeding season, a bird nest survey will be conducted to ensure nests and young are protected as required by the MBCA (GoC 1994). If nests are found within the construction area, the appropriate regulatory agencies will be contacted and a satisfactory plan of action will be developed which will include providing required setbacks from the nest(s) to avoid disturbance until such time as the young have fully fledged. During operation, there will be minimal vehicle traffic and LRV will be moving at low speeds. As such, vehicle collisions during operation are not anticipated to have an impact on migratory birds.

Contaminated air and water could lead to direct and indirect mortality or health and fitness consequences for birds (Cox 1991). For example, dry stormwater ponds built to manage surface runoff have the potential to

attract migratory birds following very large storm events. For the most part, these dry ponds will only fill during large storm events when storm sewers are at capacity. Outlet control structures, upstream of discharge locations provide control in managing off-site flow. This flow is restricted to a maximum flow rate release. Once that point has been reached, the dry ponds will fill as needed. It is expected that stormwater quality will meet municipal stormwater discharge limits, as the water is primarily un-impacted rainfall runoff.

During/after large storm events there may be a limited period (i.e. ponds are designed to empty within 24 to 48 hours) when wildlife could be exposed to stormwater within the ponds. In the event of an unforeseen leak/spill of oil and lubricants or gasoline from visiting vehicles, there is the potential for contaminated runoff to reach the stormwater ponds. Immediately following any contaminant detection, a root-cause analysis will be conducted to determine the contaminant source. If the contaminant source was related to a spill, the emergency response plan will be implemented to contain the spill and prevent wildlife from exposure. Such mitigation response which may include, but not be limited to: increased human activity, fladry, visual and audible deterrents, or exclusion fencing. If the source has not been identified as a spill, a wildlife biologist will be consulted to determine what, if any, impacts to wildlife (particularly migratory birds) could be expected. The wildlife biologist will also be consulted to recommend an appropriate mitigation response to be implemented that will be appropriate for the toxicity of the contaminant and the timing of the release. As the ponds will be dry most of the time, access will not be restricted under normal operation and will be similar to dry ponds at other Calgary facilities (e.g. Shepard site and Oliver Bowen Facility).

Air pollution can similarly contribute to direct (acute or chronic toxicity) or indirect mortality (e.g. predation or starvation) and sublethal effects (Cox 1991); however, the Project is expected to have a net positive effect as the Green Line will facilitate emissions reduction. Moreover, all Project buildings are expected to meet or exceed gold LEED standards.

Finally, habitat loss or modification is well known to negatively affect biodiversity, including birds (Fischer and Lindenmayer 2007). However, the Project footprint has undergone previous habitat modification: it has been disturbed by cultivation and industrial development, exotic species have been established, and is situated in an urban environment surrounded by commercial, industrial and residential development. Habitat that is present at the Project site is not limiting on the landscape and is considered to have low uniqueness (ABMI 2018). The habitat available is considered to be of low quality and suitable only for those species that regularly use and are tolerant of conditions in urban areas. Although there will be removal of vegetation and soil leading to a reduction in habitat as part of the development of the Project, this habitat is not limited and surrounding areas will continue to provide space for these species. Construction scheduling (temporal avoidance) will be the primary method of avoiding negative impacts to migratory birds. Soil salvage is scheduled to begin Q4 2019 and as such will not interfere with nesting birds. Should the site be left untouched and subsequent construction be scheduled to begin between April 20 and August 25, bird nest sweeps will be conducted to ensure there are no nesting migratory birds. Any active nests discovered will be buffered appropriately according to the species present. This buffer could result in either construction delays or restricted activities within the Project site.

5.3 Potential Effects Related to Interprovincial/Federal/International Lands

The entire Project area is located in the province of Alberta and The City of Calgary; there are no federal, international or inter-provincial lands involved.

The Project is not located on federal land. The location of the Project relative to federal lands is shown in Figure 5. The Project is not located near a provincial or international border. The location of the Project in relation to provincial and international boundaries is shown in Figure 3. The distance to the boundaries are as follows:

- Alberta-Saskatchewan border: 277 km;
- Alberta-British Columbia border: 84 km;
- Alberta-Northwest Territories border: 1,008 km; and
- Canada-USA border: 215 km.

The closest federal lands are the Tsuut'ina First Nation reserve lands, approximately 12 km west of the Project (Figure 2). Given the distance of the Project to federal lands, it is not anticipated that the off-site dispersion of noise or air emissions will affect those federal lands. Adverse environmental effects are also not anticipated on lands outside of Alberta or Canada.

5.4 Potential Effects on Indigenous Peoples

As noted in Sections 3.2.4 and 5.1.7 there are no anticipated historically significant or archeological resources on the Project site and likely no current land use by Indigenous Peoples. The HRIA completed in 2017 found that the Project site has not previously been identified to contain or been likely to contain any historical resources including any structure, site, or thing that has a historical, archaeological, paleontological or architectural significance to Indigenous Peoples (Bison Historical Services 2017). Furthermore, the Project site is not near or directly adjacent to designated First Nation Reserve Lands. For this reason, Project development is not likely to have environmental, socio-economic, physical, historical or cultural impacts on Indigenous Peoples. However, it is understood that the traditional territories of a number of Indigenous Groups/Communities overlap with the Project site. Throughout the Indigenous Group/Community engagement process, a few concerns were expressed regarding the possibility of chance finds during Project construction and for this reason a chance-find protocol will be in place should historical or archeological items be found during Project site development. Should historical items (as defined by the *Historical Resources Act* [PoA 2016b]) be found, construction will stop and the find will be reported. Further excavation and treatment will comply with the Alberta *Historical Resources Act*. Through the engagement process, the Blood Tribe expressed that they would like to hold a ceremony prior to construction. As such, a tobacco offering ceremony was held on October 30, 2018. The Indigenous Groups/Communities engagement process currently underway will provide additional opportunity for concerns regarding potential effects to be brought forward.

The City of Calgary has developed targets which stipulate that in Calgary "...all public institutions and systems create and implement an urban Indigenous policy that recognizes the detrimental colonial history experienced by First Nations, Métis and Inuit people; reduces barriers to public participation and governance; and supports economic, social and political advancement" (imagineCALGARY 2006). Pursuant to this stipulation, The City of Calgary is aiming to "develop a targeted approach to decrease the social exclusion experienced by First Nations, Métis and Inuit individuals and communities; symptoms are often manifested by poverty, a low sense of community, lack of employment, low levels of education and crime" (imagineCALGARY 2006). In contribution to this effort The City of Calgary uses a sliding scale for transit fares structured to support low income access to community services and facilitate participation (The City of Calgary 2017d). The implementation of the Green Line is expected to increase access for low income areas of The City of Calgary,

The City of Calgary

Canadian Environmental Assessment Agency Project Description
Green Line Maintenance and Storage Facility



connecting them with social services and areas of high employment. The Project as a component of the Green Line will serve to improve the condition of citizens of Calgary, Indigenous Groups/Communities included.

6. Engagement with Indigenous Groups/Communities

6.1 Potentially Interested or Affected Groups/Communities

The following table (Table 6-A) identifies the Indigenous Peoples potentially interested in the Project. See Figure 5 for relative locations of Indigenous Groups/Communities with respect to the Project. The list of potentially interested parties was provided by CEAA and is based on the proximity of reserve lands to the Project area, traditional territory that overlaps with the Project area, and traditional harvesting zones that overlap or are in close proximity with the Project area.

Table 6-A Indigenous Groups/Communities with Potential Interest in the Project for Subsequent Engagement

Group
Alberta
Siksika Nation
Stoney Nakoda Nations (Bears paw First Nation, Chiniki First Nation and Wesley First Nation)
Tsuut'ina Nation
Blood Tribe
Ermineskin Cree Nation
Foothills Ojibway First Nation
Louis Bull First Nation
Montana First Nation
Piikani Nation
Samson Cree Nation
Métis Nation of Alberta – Region 3
Métis Nation of Alberta
British Columbia
Ktunaxa Nation (?Akisq'nuk First Nation, ?aqam First Nation, Lower Kootenay First Nation, Tobacco Plains First Nation)
Shuswap Indian Band

6.2 Indigenous Groups/Communities Engagement

Table 1-C outlines the initial Indigenous Groups/Communities engagement that took place for the Green Line under Alberta Culture and Tourism, which included the Project. Each Indigenous Group/Community that was involved in the initial engagement provided letters of non-objection to the southeast leg of the Green Line (see Appendix 6 for copies of the letters). The summary report for the initial Indigenous Groups/Communities engagement, which includes a log of engagement activities (date and means of communication), is included as Appendix 6 along with the letters of non-objection.

Table 1-C also includes a summary of the secondary Indigenous Groups/Communities engagement that took place for the Project with direction from CEAA.

Table 6-A lists the Indigenous Groups/Communities that were recommended for engagement by CEAA (Tiege 2018b, pers. comm.) as specifically related to this Project Description. These groups were sent a notification letter outlining the proposed Project as it relates to the Green Line. Engagement was executed by Bison Historical Services as was done for the original engagement program. The information package that was delivered by registered mail to the noted Indigenous Groups/Communities is included in Appendix 7. Appendix 6 documentation serves as an example of any follow-up activities that may be held (at the request of the contacted parties) and the record of communications that will be retained for all Indigenous Groups/Communities engagement activities.

6.3 Indigenous Groups/Communities Concerns

The following table (Table 6-B) identifies concerns expressed by Indigenous Groups/Communities during initial and secondary engagement activities and the response by The City of Calgary.

During the initial round of engagement, no concerns were raised that were specific to the Project site. The City of Calgary provided tours of the Green Line which included the portion of the alignment containing the Project site. All groups provided a letter of non-objection (see Appendix 6).

To date, eight of the 21 groups identified for notification by CEAA have requested meetings with The City of Calgary in response to the notification packages delivered on July 30, 2018. These groups include: Métis Nation of Alberta – Region 3, Montana First Nation, Samson Cree Nation, Siksika Nation, Blood Tribe, Tsuut’ina Nation, Stoney Nakoda Nations and Ermineskin Cree Nation. Should any concerns be issued by other groups they will likely be addressed in a manner similar to those of the originally engaged Indigenous Groups/Communities which included further conversation, meetings and site tours.

Table 6-B Concerns Expressed During Engagement

Indigenous Groups/Communities Concerns Expressed	City Response
Blood Tribe	
Meeting 31-Mar-2016: expressed concern over the potential for uncovering artifacts during	Meeting 31-Mar-2016: follow-up to provide alignment drawings and maps with the Tribe to

Indigenous Groups/Communities Concerns Expressed	City Response
<p>construction, other sites in Calgary where artifacts were found, and expressed a desire to review any undisturbed natural areas along the alignment and the alignment past the Fort Calgary area.</p> <p>Email 30-Jul-2018: sent a budget for a meeting and preliminary site tour</p>	<p>delineate site inspection areas.</p> <p>Email 8-Apr-16: included meeting minutes and File Transfer Protocol (FTP) link to download the detailed design drawings.</p> <p>Tour 27-Jul-2016: along the southeast leg of the Green Line including the Project site. The tour focused on locations of interest noted by the Blood Tribe: river bottoms, St. Dunstan’s school site and two burial locations. No locations of interest were located on or near the Project site.</p> <p>Letter 9-Nov-2016: Blood Tribe issued a letter of non-objection related to the Green Line</p> <p>Meeting 29-Aug-2018: Blood Tribe indicated no concerns but would like to hold a ceremony prior to construction</p> <p>Ceremony 30-Oct-2018: tobacco offering ceremony performed by the Blood Tribe</p>
Siksika Nation	
<p>Meeting 31-Mar-2016: expressed concern over the potential for uncovering artifacts during construction, other sites in Calgary where artifacts were found, and expressed a desire to review any undisturbed natural areas along the alignment and the alignment past the Fort Calgary area.</p> <p>Email 29-Jul-2018: meeting request</p>	<p>Meeting 31-Mar-2016: follow-up to provide alignment drawings and maps with the Tribe to delineate site inspection areas.</p> <p>Email 8-Apr-16: included meeting minutes and FTP link to download the detailed design drawings.</p> <p>Tour 27-June-2016: along the southeast leg of the Green Line including the Project site.</p> <p>Letter 6-Oct-2016: Siksika Nation issued a letter of non-objection related to the Green Line</p> <p>Meeting 27-Nov-2018: no concerns expressed, but a site visit was requested</p> <p>Site visit to be scheduled.</p>

Indigenous Groups/Communities Concerns Expressed	City Response
Tsuut'ina Nation	
<p>Meeting 8-April-2016: some concerns about environmental impacts, and potential for future historical resource investigations, interested in site visit.</p> <p>Email 03-Aug-2018: requested face-to-face meeting</p>	<p>Meeting 8-April-2016: follow-up to provide site investigative reports including biophysical impact assessment; note that the potential for further/future archaeological investigations is under the mandate of Alberta Culture and Tourism</p> <p>Email 8-April-2016: FTP site for drawings forwarded.</p> <p>Drop off 21-Oct-2016: drawings dropped off to Tsuut'ina office.</p> <p>Resend all project info 23/24-Nov-2016: all previous info re-sent due to personnel changes.</p> <p>Tour 1-Dec-2016: tour of the southeast alignment of the Green Line including the Project site</p> <p>Letter 21-Dec-2016: Tsuut'ina Nation issued a letter of non-objection related to the Green Line</p> <p>Meeting to be scheduled.</p>
Piikani Nation	
<p>Email 19-Feb-2016: concerned the notification package was not complete and requested: Project Notification Form, Historical Resources Overview (HRO) or HRIA, EIA, Detailed sketch or survey plan, Map of proposed development, Projected revenue.</p> <p>Meeting 16-May-2016: concerns over chance find of historical resources, interest in site review, interest in partnership with University of Calgary or the Southern Alberta Institute of Technology (SAIT) to conduct a Traditional Land Use study.</p>	<p>Meeting 16-May-2016: discuss email (19-Feb-2016) concerns, project team to investigate opportunity with SAIT or University of Calgary, Piikani to be notified of chance-find.</p> <p>Tour 27-Sept-2016: tour of the southeast Green Line alignment including the Project site.</p> <p>Letter 20-Oct-2016: Piikani Nation issued a letter of non-objection related to the Green Line</p>
Montana First Nation	
<p>Email 31-Jul-2018: requesting a site visit, meeting and archaeological analysis of the proposed development lands.</p>	<p>Meeting/Site Visit 9-Nov-2018: site visit conducted</p> <p>Letter 23-Nov-2018: Montana First Nation issued letter of support for the Project</p>

Indigenous Groups/Communities Concerns Expressed	City Response
Samson Cree Nation	
Letter 02-Aug-2018: Samson Cree Nation’s Letter of Interest and Engagement Package.	Meeting 25-Sep-2018: no concerns, letter of no concern to be issued.
Métis Nation of Alberta – Region 3	
<p>Email 29-Jul-2018: requested documentation supporting the claim that “there is no known lands or resources currently being used by Indigenous communities on the site, and there are also no known historical or archaeological resources present.</p> <p>Letter 12-Dec-2018: requested monitoring during construction and access to project documentation; offered monitoring services during construction</p>	<p>Project Summary will be available through CEAA.</p> <p>Meeting 2-Nov-2018: preference to review project with President, City now waiting for feedback; Bison Historical Services presented three resources provided by Alberta Culture and Tourism to archaeological consultants in Alberta: (1) GIS layer of all 4c (traditional use) sites in Alberta, (2) GIS layers that identify the location of all known historic resource sites in Alberta as well as listing the site type and historic resource value of these sites, and (3) a restricted listing of historic resources in Alberta. Bison Historical Services concluded that a preliminary desktop review of these three resources indicated that the Project did not trigger a 4c response by Alberta Culture and Tourism and there are no known archaeological sites within the Project location or within 1 km of the proposed Project footprint.</p> <p>City to respond to 12-Dec-2018 letter.</p>
Stoney Nakoda Nations	
Response to July 30, 2018 information package.	Meeting to be scheduled.
Ermineskin Cree Nation	
<p>Response to July 30, 2018 information package.</p> <p>Letter 16-Oct-2018: Ermineskin Cree Nation summarized the site visit and indicated points of interest related to coyote and badger dens, presence of piezometers and tower anchors</p>	<p>Meeting/field visit held on October 15, 2018; requested archaeological and biophysical reports.</p> <p>Letter 22-Nov-2018: Bison Historical Services responded to 16-Oct-2018 letter and provided information to address all points of interest raised</p>

6.4 Indigenous Groups/Communities Engagement Program

The City of Calgary has developed an Engage Policy with the recognition that decisions are improved through citizen and stakeholder engagement (Customer Service and Communications 2013). The City of Calgary is committed to transparent and inclusive engagement that is responsive and accountable (Customer Service and Communications 2013). In collaboration with Treaty 7 Traditional Knowledge Keepers, The City of Calgary developed an Indigenous Policy as a guide for meaningful long-term efforts to bring Indigenous Groups/Communities identities, histories, cultures, languages, traditions, principles, world views, relationships and ways of knowing into municipal planning, advising and decision-making efforts (The City of Calgary 2017e).

The Indigenous Policy (Calgary Neighbourhoods 2017) identifies that reconciliation will be sustained through investing in ways of knowing, of engaging, of building relationships and ways toward equitable environments. The City of Calgary is committed to improving their relationship with Indigenous Groups/Communities.

The engagement program consists of the following steps as outlined in the Indigenous Policy (The City of Calgary Aboriginal Urban Affairs Committee 2017) and the Project specific Preliminary Work Plan for First Nations Notification (Bison Historical Services 2018):

1. The appropriate contact for each identified community will be delineated.
2. An initial notice will be provided with as much detail as possible regarding the nature of the Project and include an invitation to provide input on the Project:
 - a. The notification letter will incorporate discussion surrounding any known historical resources;
 - b. A map of the Project area;
 - c. Potential short and long-term adverse effects;
 - d. The letter will be clearly understandable; and
 - e. Delivery of the notification letter will be by the means specified by each community (fax, email, registered mail or courier).
3. Notified communities will be allocated five business days to confirm receipt of the notification letter, the absence of a receipt will initiate a follow-up email and/or phone call to ensure arrival of the notification.
4. For the date of receipt, the community will be provided 15 working days to provide a response or description of how specific Treaty rights and/or traditional uses may be adversely impacted by the Project.
5. Communities that do not respond within 15 days will receive a follow-up call and/or email to ensure all communities wish to provide feedback have been provided the opportunity to do so.
6. For some communities a meeting will be held to discuss any concerns or issues and receive any Traditional Knowledge.
7. At the request of the Indigenous Groups/Communities for which a meeting is offered, a tour will be conducted that includes any ceremony as desired.
8. Data request from interested Indigenous Groups/Communities will be fulfilled by The City of Calgary (as deemed reasonable).



9. A record of engagement including specific concerns and how they were addressed will be maintained.
10. Mitigation measures in response to the concerns will be developed and implemented.

The City of Calgary will maintain ongoing engagement as required to follow up on action items resulting from meetings held with Indigenous Groups/Communities. Furthermore, The City of Calgary will continue to engage Indigenous Groups/Communities by providing the results of any historical findings during Project construction. The Green Line Community Engagement Group will develop an engagement schedule to coincide with the start of construction.

7. Engagement with the Public and Other Parties

7.1 Key Comments and Concerns

An extensive engagement process was carried out for the Green Line. While there was much discussion surrounding community development and future transit plans, there was no specific discussion of the Project or its development highlighted by community members. For this reason, there are no key concerns or comments in relation to the Project. The public engagement activities are highlighted in Table 1-A.

7.2 Ongoing or Proposed Stakeholder Engagement

The City of Calgary has developed an Engage Policy (Customer Service and Communications 2013) which outlines the responsibilities for public engagement and provides the guidelines for the engagement process. The Engage Policy is designed to establish an engagement process that:

- Aligns with The City of Calgary Council priorities for citizen-centric service delivery;
- Supports The City of Calgary Council's decision making by providing information about stakeholders' opinions and perspective;
- Provides clear and consistent engagement practices; and
- Enhances The City of Calgary's reputation as an organization that listens to citizens and stakeholders (Customer Service and Communications 2013).

With this policy the City of Calgary prioritizes the appropriate involvement of citizens early on in the Project planning and development process particularly when the decisions impact the lives of Calgarians. The engagement process is designed to be:

- Accountable – demonstrate that the results of the engagement process are consistent with the engagement plans;
- Inclusive – The City of Calgary will reach and involve those who are directly and indirectly impacted with opportunity to be involved at the beginning and throughout a project with the intent to accommodate a diverse range of needs and backgrounds;
- Transparent – clear, timely and complete information will be provided to ensure decision process, procedures and constraints are understood; furthermore, the roles and responsibilities of all parties along with Project context and plans are clearly communicated;
- Committed – The City of Calgary will allocate sufficient resources within its capability to resource effective engagement and ensure that stakeholder time and resources are respected and used efficiently;
- Responsive – The City of Calgary shares what input was received and how input was considered or applied; furthermore, The City of Calgary endeavors to understand concerns and provide input

opportunities that are best suited the audience while ensuring that the feedback is being collected and heard (Customer Service and Communications 2013).

In this instance the engagement process was carried out for the entire Green Line and involved Area Development Plans for each community directly impacted by the construction of the Green Line. The Area Development Plans reach beyond the installation of the Green Line and include a broader neighbourhood visions. Engagement was carried out for neighbourhoods that do not directly touch Stage 1 of the Green Line and input opportunities were provided throughout The City of Calgary on the subject of public transportation.

For communities directly impacted by the Project (the Green Line would be constructed within the neighbourhood) the City of Calgary carried out a multi layered approach that included print advertising inviting the neighbourhood to participate in open house information sessions. The information sessions provided citizens the opportunity to have their opinions heard through asking questions and submitting feedback forms, completing questionnaires in person and online. Each of the directly affected neighbourhoods for Stage 1 had several open house events (minimum 2); ultimately the engagement process recorded the involvement of citizens from 22 different Calgary neighbourhoods.

The City of Calgary will maintain the ongoing engagement programs which target each neighbourhood along the Green Line alignment where any person or stakeholder including Indigenous Peoples are welcome to attend. The Green Line Community Engagement Group will develop an engagement schedule to coincide with the start of construction.

7.3 Engagement with Other Jurisdictions

Regulatory engagement is noted in Table 1-B. The outcome of engagement with these jurisdictions was that there are no environmental assessment or regulatory decision implications for the Project. The engagement noted in Table 1-B involved the following correspondence:

- 29-Sep-2015: meeting with The City of Calgary and Alberta Culture and Tourism regarding the issuance of a Schedule A document providing a list of appropriate contact for information regarding Indigenous Traditional Use Site of Significance;
- 2017: various internal (The City of Calgary) discussions to confirm the municipal permitting requirements;
- 23-Nov-2017: meeting with The City of Calgary and AEP regarding the confirmation of no provincial EIA requirement; and
- 29-Nov-2017: meeting with The City of Calgary (Evan Kortje, Simone Fraser, David Mercer, Ethan Askey) and Infrastructure Canada (Eli Arkin, Danielle Paul) to discuss engagement to date with Stoney Nakoda Nations and Métis Nation of Alberta – Region 3.

8. Summary of the Project Description

A summary of this Project Description has been provided as a separate document. In accordance with the *Official Languages Act*, the summary has been prepared and provided in both English and French. The summary will be posted on the Canadian Environmental Assessment Registry website.

9. References

ABMI, 2018. Available at: <http://www.abmi.ca/home.html>.

Advisian, 2016a. Environmental Review PRV-218 Telsec Property Corporation (12725 52 Street SE). Calgary: Screening Level Environmental Site Assessment for The City of Calgary Sales, Acquisitions and Leases Environmental (S.A.L.E) Policy.

Advisian, 2016b. Phase II Environmental Site Assessment, Southeast Leg of the Green Line Stage Three. Calgary: The City of Calgary.

Advisian, 2016c. Environmental Review PRV-216 First Alliance Church (12345 40 Street SE). Calgary: Screening Level Environmental Site Assessment for The City of Calgary Sales, Acquisitions and Leases Environmental (S.A.L.E) Policy.

Advisian, 2017. Limited Phase II Environmental Site Assessment: Southeast Leg of the Green Line Stage Three. Calgary: The City of Calgary.

AEP (Alberta Environment and Parks), 2015. Natural Regions and Subregions of Alberta. A Framework for Alberta Parks. Edmonton: Alberta Tourism Parks and Recreation.

AEP (Alberta Environment and Parks), 2016a. Alberta Tier 1 Soil and Groundwater Remediation Guidelines. Edmonton: Alberta Environment and Parks, Land Policy Branch.

AEP (Alberta Environment and Parks), 2016b. Alberta Tier 2 Soil and Groundwater Remediation Guidelines. Edmonton: Alberta Environment and Parks, Lands Policy Branch.

AEP (Alberta Environment and Parks), 2016c. Alberta Exposure Control Guide. Edmonton: Alberta Environment and Parks, Land Policy Branch.

AEP (Alberta Environment and Parks), 2016d. Plan for Alberta, Developing a Land-Use Framework. Available at: <https://www.landuse.alberta.ca/PlanforAlberta/DevelopingFramework/Pages/default.aspx>. Retrieved March 21, 2018.

AEP (Alberta Environment and Parks), 2016e. South Saskatchewan Regional Plan Consultation. Available at: <https://landuse.alberta.ca/RegionalPlans/SouthSaskatchewanRegion/SSRPConsultation/Pages/default.aspx>. Retrieved March 21, 2018.

AEP (Alberta Environment and Parks), 2018. Fish and Wildlife Internet Mapping Tool - Public. Available at: https://maps.alberta.ca/FWIMT_Pub/Viewer/?TermsOfUseRequired=true&Viewer=FWIMT_Pub. Retrieved March 26, 2018.

ASIC (Alberta Soil Information Centre), 2015. AGRASID (Agricultural Region of Alberta Soil Inventory Database) Version 4.1. Alberta Soil Information Viewer. Available at: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sag10372](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sag10372). Accessed October 22, 2018.

Bayne, E.M., L. Habib, and S. Boutin. 2008. Impacts of Chronic Anthropogenic Noise from Energy-Sector Activity on Abundance of Songbirds in the Boreal Forest. *Conservation Biology*. 22(5): 1186-1193.

- Bishop, C.A. and J.M. Brogan. 2013. Estimates of Avian Mortality Attributed to Vehicle Collisions in Canada. *Avian Conservation and Ecology*. 8(2): 2.
- Bison Historical Services, 2017. Final Report Historical Resource Impact Assessment, City of Calgary Green Line LRT Project – Southeast Segment. Calgary: The City of Calgary.
- Calgary Neighbourhoods, 2017. Indigenous Policy CP2017-02 CPS2017-0306. Calgary: The City of Calgary.
- Calgary Transit, 2004. Secondary Containment Guidelines. No. S-SP-G-0004. Current to May 31, 2016.
- CCME (Canadian Council of Ministers of the Environment), 2003. Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum and Allied Petroleum Products, PN 1326. Winnipeg.
- CEAA (Canadian Environmental Assessment Agency), 2015. Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act, 2012. Ottawa: Minister of the Environment.
- Cox, C., 1991. Pesticides and Birds: From DDT to Today's Poisons. *Journal of Pesticide Reform*. 11(4):2-6.
- CRAZ (Calgary Region Air Zone), 2014. Calgary Region Airshed Zone Particulate Matter and Ozone Management Plan. Available at: <http://craz.ca/documents/#Documents%2FPMO3-Management-Plan>: CRAZ.
- Customer Service and Communications, 2013. Engage Policy CS009 PFC2013-0235. Calgary: The City of Calgary.
- Downing, D.J. and W. W. Pettapiece, 2006. Natural Regions and Subregions of Alberta. Natural Regions Committee, Government of Alberta, Alberta. 2006.
- ECCC (Environment and Climate Change Canada), 2017. General nesting periods of migratory birds. Available at: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html>. Accessed: October 2018.
- Fischer, J. and D.B. Lindenmayer. Landscape Modification and Habitat Fragmentation: A Synthesis. *Global Ecology and Biogeography*. 16:265-280.
- Francis, C.D., C.P. Ortega, and A. Cruz. 2009. Noise Pollution Changes Avian Communities and Species Interactions. *Current Biology*. 19(16):1415-1419.
- Government of Alberta, 2002. Alberta Northern Leopard Frog Recovery Plan 2010-2015. Prepared for Alberta Environment and Sustainable Resource Development. Alberta Species at Risk Recovery Plan. No. 20. Edmonton, AB. 34pp
- GoC (Government of Canada), 1985. Fisheries Act R.S.C., c. F-14. Available at: <http://laws-lois.justice.gc.ca/eng/acts/f-14/>.
- GoC (Government of Canada), 1994. MBCA; Migratory Birds Convention Act (S.C.1994 c.22). Ottawa: Minister of Justice.

- GoC (Government of Canada), 2018a. Regulations Designating Physical Activities SOR/2012-147. Available at: <http://laws-lois.justice.gc.ca/PDF/SOR-2012-147.pdf>. Published by the Minister of Justice.
- GoC (Government of Canada), 2018b. Canadian Environmental Assessment Act S.C.2012. Available at: <http://laws-lois.justice.gc.ca/PDF/C-15.21.pdf>. Published by the Minister of Justice.
- GoC (Government of Canada), 2018c. Railway Safety Act R.S.C 1985. Available at: <http://laws-lois.justice.gc.ca/PDF/R-4.2.pdf>. Published by the Minister of Justice.
- GoC (Government of Canada), 2018d. Transportation of Dangerous Goods Act S.C. 1992. Available at: <http://lois-laws.justice.gc.ca/PDF/T-19.01.pdf>. Published by the Minister of Justice.
- GoC (Government of Canada), 2018e. A to Z Species Index, Species at Risk Public Registry. Available at: http://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm?styp=species&lng=e&index=1&common=&scientific=&population=&taxid=0&locid=0&desid=0&schid=0&desid2=0&. Retrieved March 26, 2018.
- imagineCALGARY, 2006. Calgary's Plan for Long Range Urban Sustainability. Calgary: The City of Calgary.
- Land Use Bylaw Sustainment Team, Development and Building Approvals, Planning Implementation, 2008. Land Use Bylaw IP2007. Calgary: The City of Calgary.
- Longcore, T. and C. Rich, 2004. Ecological Light Pollution. *Frontiers in Ecology and Environment*. 2(4): 191-198.
- MacMillan, R.A., 1987. Soil survey of the Calgary urban perimeter. Bulletin No. 54. Alberta Research Council. 1987.
- Mason, J.T., C.J.W. McClure, and J.R. Barber. 2016. Anthropogenic Noise Impairs Owl Hunting Behavior. *Biological Conservation*. 199:29-32.
- Nautilus Paleontology Inc., 2016. The palaeontological Historical Resources Impact Assessment of the City of Calgary Green Line Southeast Transitway (C-Trainline) (GL-SE) Rail Project. NPI Report No. 2016-03, RTMP Permit No. 2016-007 and 2015-087, ACT HRA Requirements Project File: 4715-15-0024-001. October 28, 2016.
- PoA (Province of Alberta), 1993. Environmental Protection and Enhancement Act, Environmental Assessment (Mandatory and Exempted Activities) Regulation. Alberta Regulation 111/1993.
- PoA (Province of Alberta), 2008. Weed Control Act W-5.1. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2010. Railway (Alberta) Act 2000 C.R-4. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2013. Alberta Land Stewardship Act, Statutes of Alberta 2009 C. A-26.8. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2014a. South Saskatchewan Regional Plan 2014-2024. <https://landuse.alberta.ca/LandUse.ca>: Alberta Government.

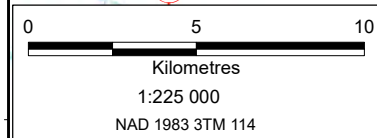
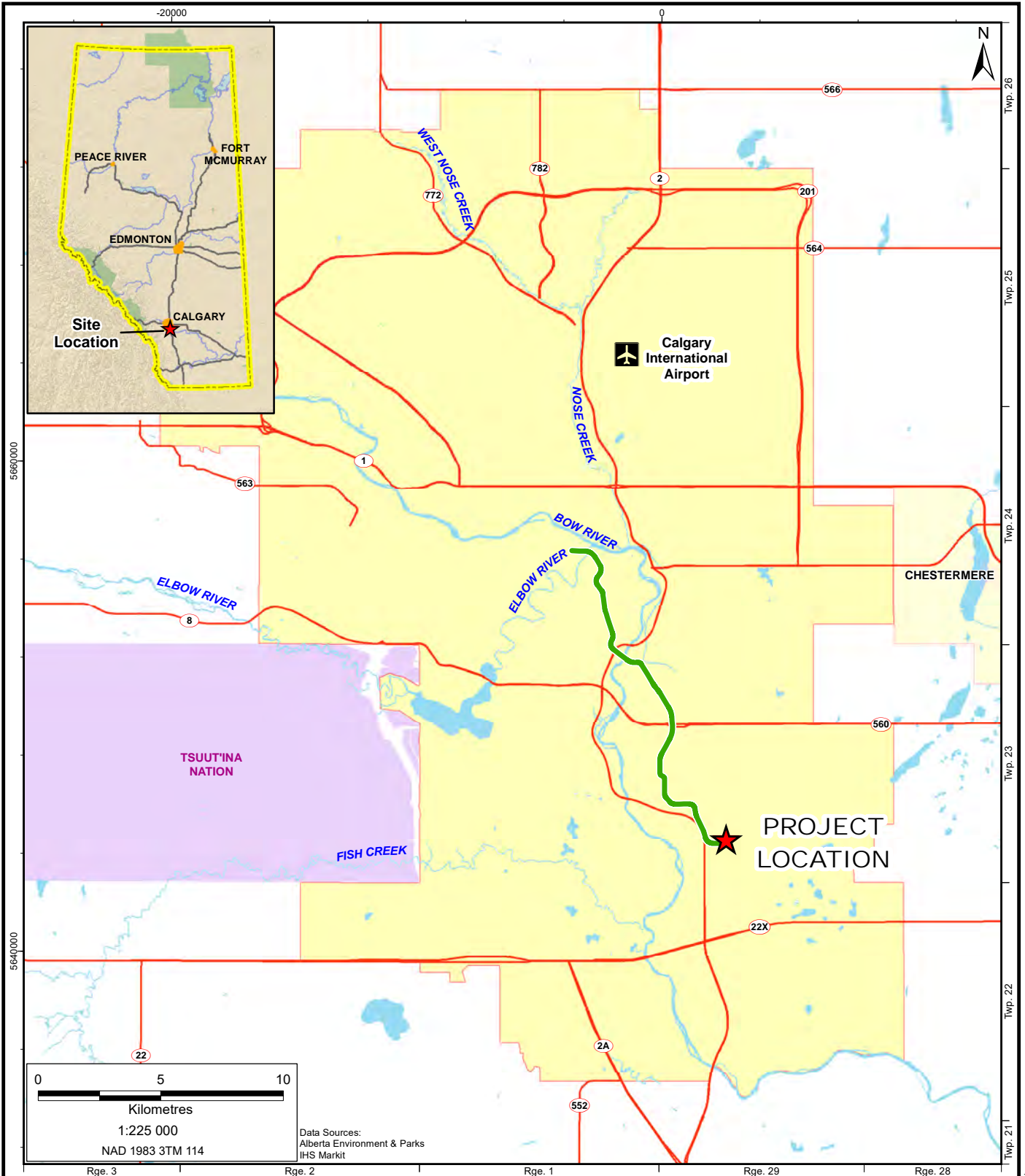
- PoA (Province of Alberta), 2014b. South Saskatchewan Region Air Quality Management Framework. Edmonton: Government of Alberta.
- PoA (Province of Alberta), 2014c. South Saskatchewan Region Surface Water Quality Management Framework. Edmonton: Government of Alberta.
- PoA (Province of Alberta), 2016a. Lubricating Oil Material Recycling and Management Regulation 82/1997. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2016b. Historical Resources Act RS.2000 C.H-9. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2017a. Water Act, Revised Statutes of Alberta 2000 C. W-3. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2017b. Environmental Protection and Enhancement Act C. E-12. Edmonton: Alberta Queen's Printer.
- PoA (Province of Alberta), 2017c. Activities Designation Regulation 276/2003. Edmonton: Alberta Queens Printer.
- PoA (Province of Alberta), 2017d. Too Good to Waste, Making Conservation a Priority. Available at: <http://aep.alberta.ca/waste/documents/TooGoodToWaste-Oct2007.pdf>. Retrieved March 16, 2018.
- PoA (Province of Alberta), 2018. Municipal Government Act. Revised Statutes of Alberta 2000 Chapter M-26.
- Shannon, G., M.F. McKenna, L.M. Angeloni, K.R. Crooks, K.M. Fristrup, E. Brown, K.A Warner, M.D. Nelson, C. White, J. Briggs, S. McFarland, and G. Wittemyer. 2016. A Synthesis of Two Decades of Research Documenting the Effects of Noise on Wildlife. *Biological Reviews*. 91:982-1005.
- Siemers, B.M. and A. Schaub. 2010. Hunting at the highway: traffic noise reduces foraging efficiency in acoustic predators. *Proceedings of the Royal Society B: Biological Sciences*. 278(1712):1-7
- Tetra Tech (Tetra Tech Canada Inc.), 2018. Level 1 Biophysical Impact Assessment – Preliminary Natural Site Assessment Green Line LRT, Douglas Glen Station to Shepard Station Extension and Enabling Works Projects. June 29, 2018.
- The City of Calgary, 2004. Sustainable Building Policy, CS005, UE2004-43. Calgary: Infrastructure and Information Services.
- The City of Calgary, 2005. Bylaw Number 47M2016 Being a Bylaw of The City of Calgary to Regulate Storm Sewers and Storm Drainage in the City of Calgary. The Council of The City of Calgary.
- The City of Calgary, 2012. Bylaw Number 45M2016 Being a Bylaw of The City of Calgary to Regulate Wastewater. The Council of The City of Calgary.
- The City of Calgary, 2013. Municipal Development Plan, Office of Consolidation 2017. The City of Calgary.
- The City of Calgary, 2016a. Code of Practice for Drainage Activities. Calgary: The City of Calgary.

- The City of Calgary, 2016b. Community Standards Bylaw 5M2004 (as amended). Calgary: The City of Calgary.
- The City of Calgary, 2017a. Document Library - Southeast Public Engagement Reports. Available at: <http://www.calgary.ca/Transportation/TI/Pages/Transit-projects/Green-line/document.aspx>. Retrieved March 16, 2018.
- The City of Calgary, 2017b. The City of Calgary's Environmental and Safety Management. Available at: <http://www.calgary.ca/UEP/ESM/Pages/Environmental-Management.aspx>. Retrieved March 15, 2018.
- The City of Calgary, 2017c. EnviroSystem. Available at: <http://www.calgary.ca/UEP/ESM/Pages/Our-Environmental-Management-System/EnviroSystem.aspx>. Retrieved March 15, 2018.
- The City of Calgary, 2017d. Calgary Transit Low Income Monthly Pass Sliding Scale Fare Changes. Available at: <http://www.calgary.ca/CSPS/CNS/Pages/Neighbourhood-Services/sliding-scale-fare-changes.aspx>. Retrieved March 28, 2018.
- The City of Calgary, 2017e. Aboriginal, First Nations, Métis and Inuit. Available at: <http://www.calgary.ca/CSPS/CNS/Pages/First-Nations-Metis-and-Inuit-Peoples/First-Nations-Metis-Inuit-Peoples.aspx>. Retrieved March 28, 2018.
- The City of Calgary, 2019. Community-wide Greenhouse Gas (GHG) Inventory. Available at: <https://data.calgary.ca/Environment/Community-wide-GHG-Inventory-By-Sector/tp2j-ztyy>
- The City of Calgary Aboriginal Urban Affairs Committee, 2017. Indigenous Policy Framework for The City of Calgary.
- Tiege, S., 2018a. CEAA Designated Project Description Overview Meeting (The City of Calgary, Interviewer). March 20, 2018.
- Tiege, S., 2018b. Subject: City of Calgary Green Line LRT - First Nations Consultation. March 14, 2018.
- US EPA (United States Environmental Protection Agency), 2016. Emission Standards Reference Guide, EPA Emission Standards for Nonroad Engines and Vehicles. USA Federal Office of transportation and Air Quality.
- UNFCCC, 2018. Canada's National Inventory Report. Available at: <https://unfccc.int/documents/65715>. Accessed July 2018.



Figures





Data Sources:
 Alberta Environment & Parks
 iHS Market

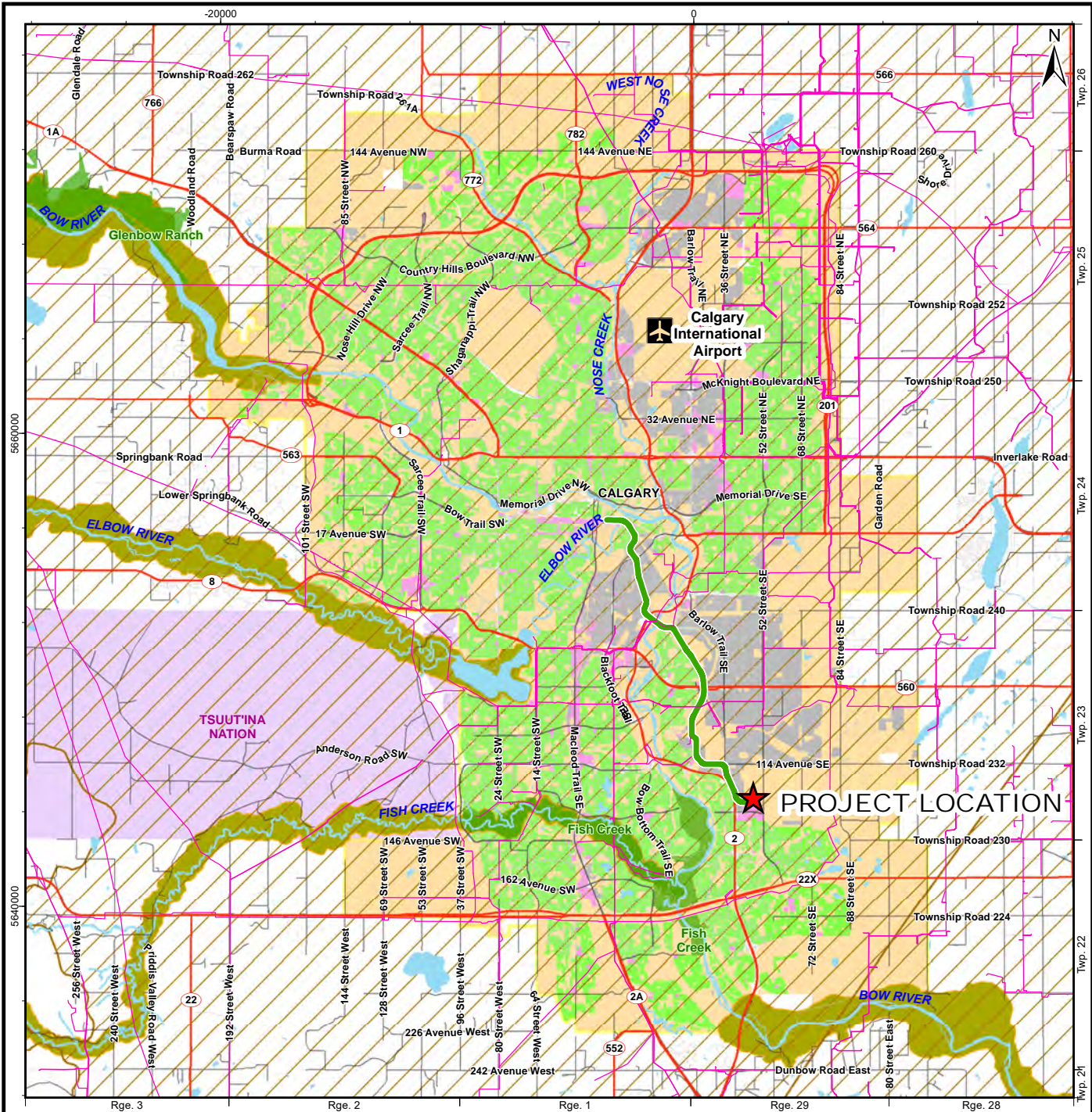
- Project Location
- Green Line South East
- Calgary
- Tsuut'ina Nation
- Communities
- Waterbody
- Watercourse
- Major Road

THE CITY OF CALGARY
GREEN LINE MAINTENANCE AND STORAGE FACILITY
CEAA PROJECT DESCRIPTION

PROJECT LOCATION MAP

	Date: 10-JAN-19	Drawn by: T.G.	Edited by: T.G.	App'd by: G.R.
	WorleyParsons Project No. 307074-02081-800			
	FIG No. 1			REV G

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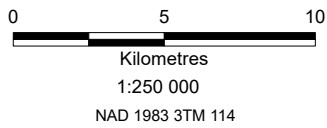


- Project Location
- Green Line South East
- Calgary
- Tsuut'ina Nation
- Provincial Parks and Protected Areas
- Land Use**
- Commercial
- Residential
- Industrial
- Recreational/Mixed Use/Public Infrastructure
- Key Wildlife and Biodiversity Zone
- Sensitive Raptor Range
- Waterbody
- Watercourse
- High Pressure Pipelines
- Major Road
- Collector Road
- Local Road

Data Sources:
 Alberta Environment & Parks
 IHS Market
 City of Calgary

THE CITY OF CALGARY
GREEN LINE MAINTENANCE AND STORAGE FACILITY
CEAA PROJECT DESCRIPTION

REGIONAL FEATURES AND LOCATION MAP



Date: 10-JAN-19	Drawn by: T.G.	Edited by: T.G.	App'd by: G.R.
WorleyParsons Project No. 307074-02081-800			
FIG No 2	REV F		

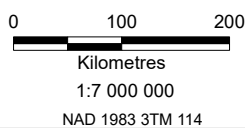
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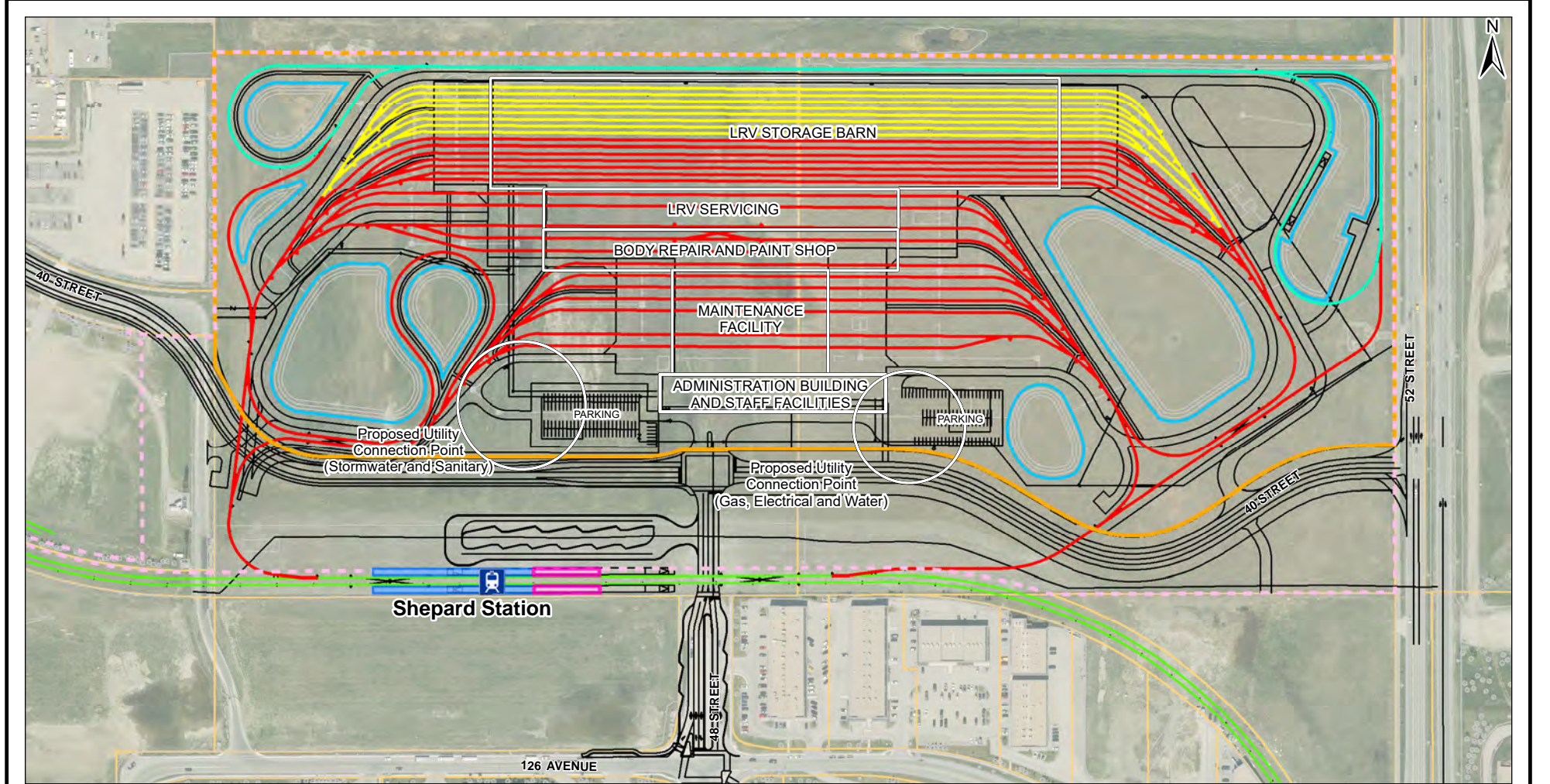
★ Project Location

Data Sources:
IHS Markit

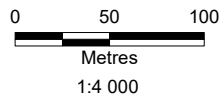


<p>THE CITY OF CALGARY GREEN LINE MAINTENANCE AND STORAGE FACILITY CEAA PROJECT DESCRIPTION</p>			
<p>PROJECT LOCATION RELATIVE TO PROVINCIAL AND INTERNATIONAL BOUNDARIES</p>			
	Date: 10-JAN-19	Drawn by: T.G.	Edited by: T.G.
			App'd by: G.R.
	<p>WorleyParsons Project No. 307074-02081-800</p>		REV C
<p><small>*This drawing is prepared solely for the use of our customers as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing.*</small></p>			

USER NAME: Tom Graham
 ISSUING OFFICE: CALGARY GIS
 FILE NAME: 10/01/2019 8:56:40 AM
 REV: 10/01/2019 8:56:40 AM
 SAVE DATE & TIME: 10/01/2019 8:56:40 AM

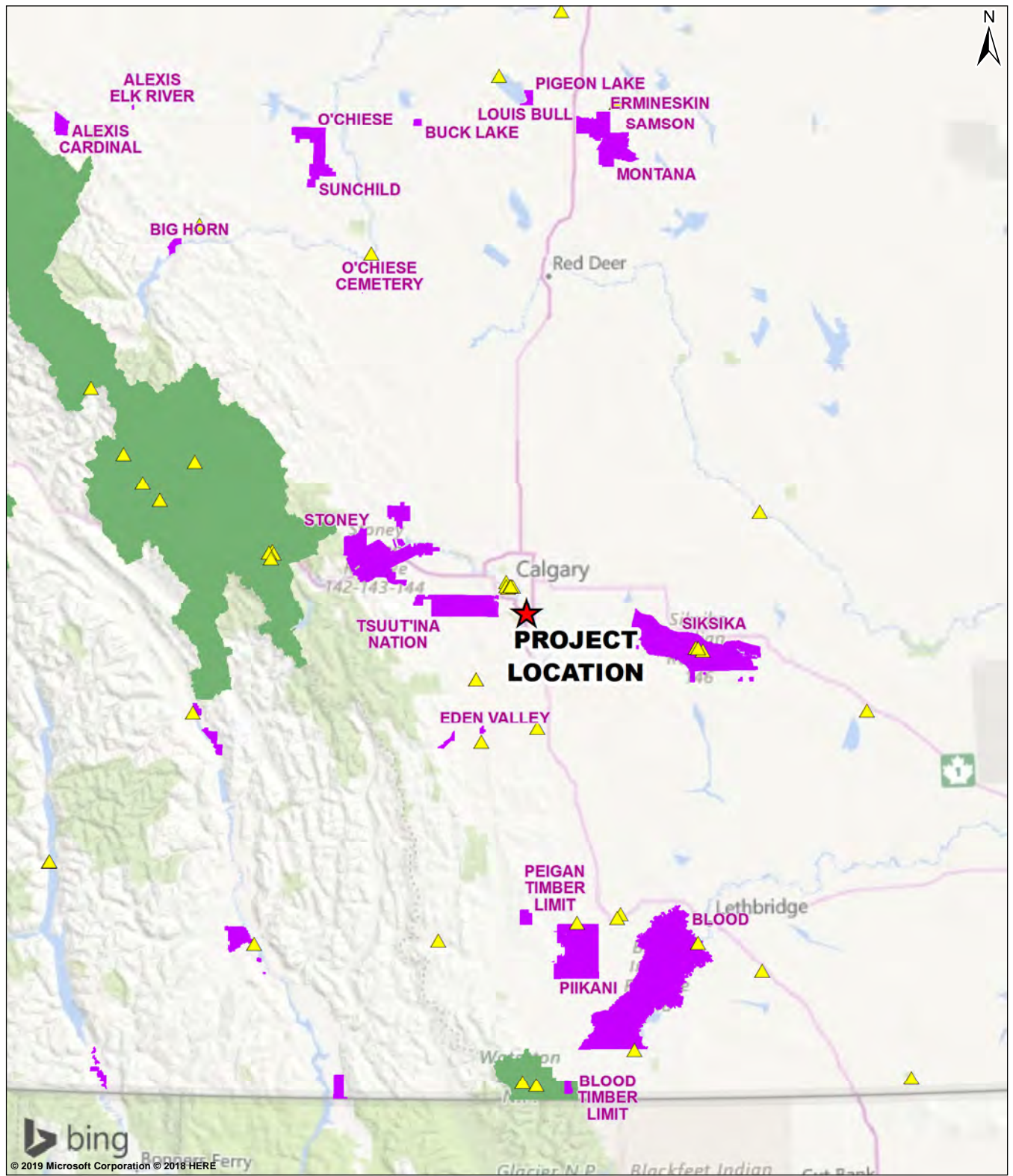


- Proposed Station
- Proposed Platform
- Proposed Platform - future
- Project Footprint
- Ownership Parcel
- Proposed Green Line Track
- Proposed Yard Track
- Future Yard Track
- Test Track
- Proposed Stormwater Pond Location
- Property Line/Legal Boundary



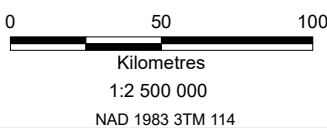
Data Sources:
 The City of Calgary, 2014.
 Road network provided by IHS Markit, 2014.
 Imagery Source: City of Calgary, 2018.

<p>THE CITY OF CALGARY GREEN LINE MAINTENANCE AND STORAGE FACILITY CEEA PROJECT DESCRIPTION</p>			
<p>PROJECT LAYOUT</p>			
Date: 10-JAN-19	Drawn by: T.G.	Edited by: T.G.	App'd by: G.R.
		WorleyParsons Project No. 307074-02081-800	
		FIG No 4	REV M
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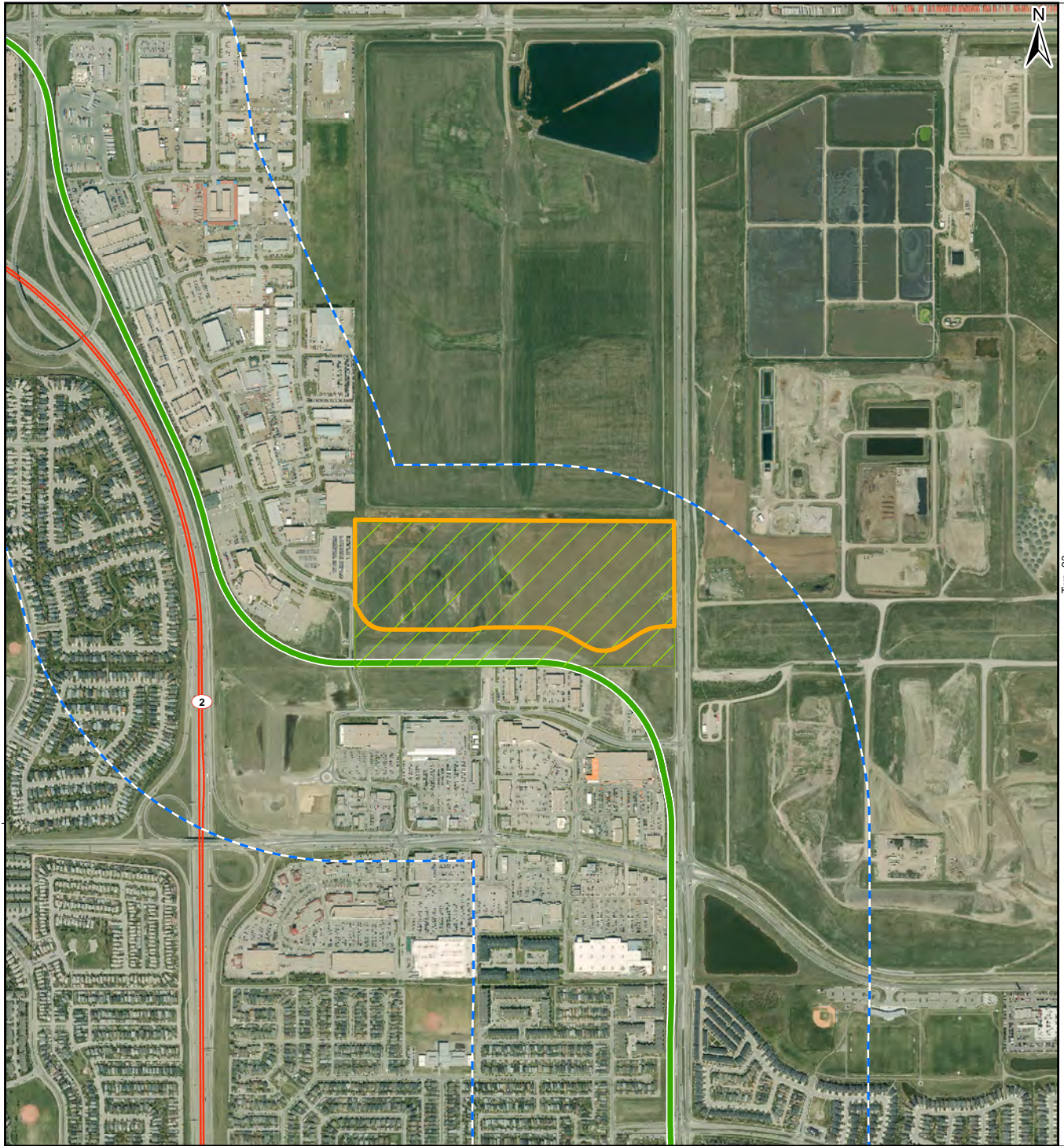


- Project Location
- Reserve Lands of Indigenous Groups
- National Park
- National Historic Site

Data Sources:
IHS Markt

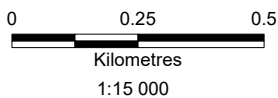


<p>THE CITY OF CALGARY GREEN LINE MAINTENANCE AND STORAGE FACILITY CEAA PROJECT DESCRIPTION</p>			
<p>LOCATION OF FEDERAL LANDS RELATIVE TO THE PROPOSED PROJECT FOOTPRINT</p>			
	<p>Date: 10-JAN-19 Drawn by: T.G. Edited by: T.G. App'd by: G.R.</p>	<p>WorleyParsons Project No. 307074-02081-800</p>	
<p>WorleyParsons Group</p>		<p>FIG No 5</p>	<p>REV F</p>
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- Project Footprint
- Green Line South East
- Major Road
- Environmental Investigation Area
- Biophysical Assessment Area

Data Sources:
 Alberta Environment & Parks
 IHS Markt
 City of Calgary

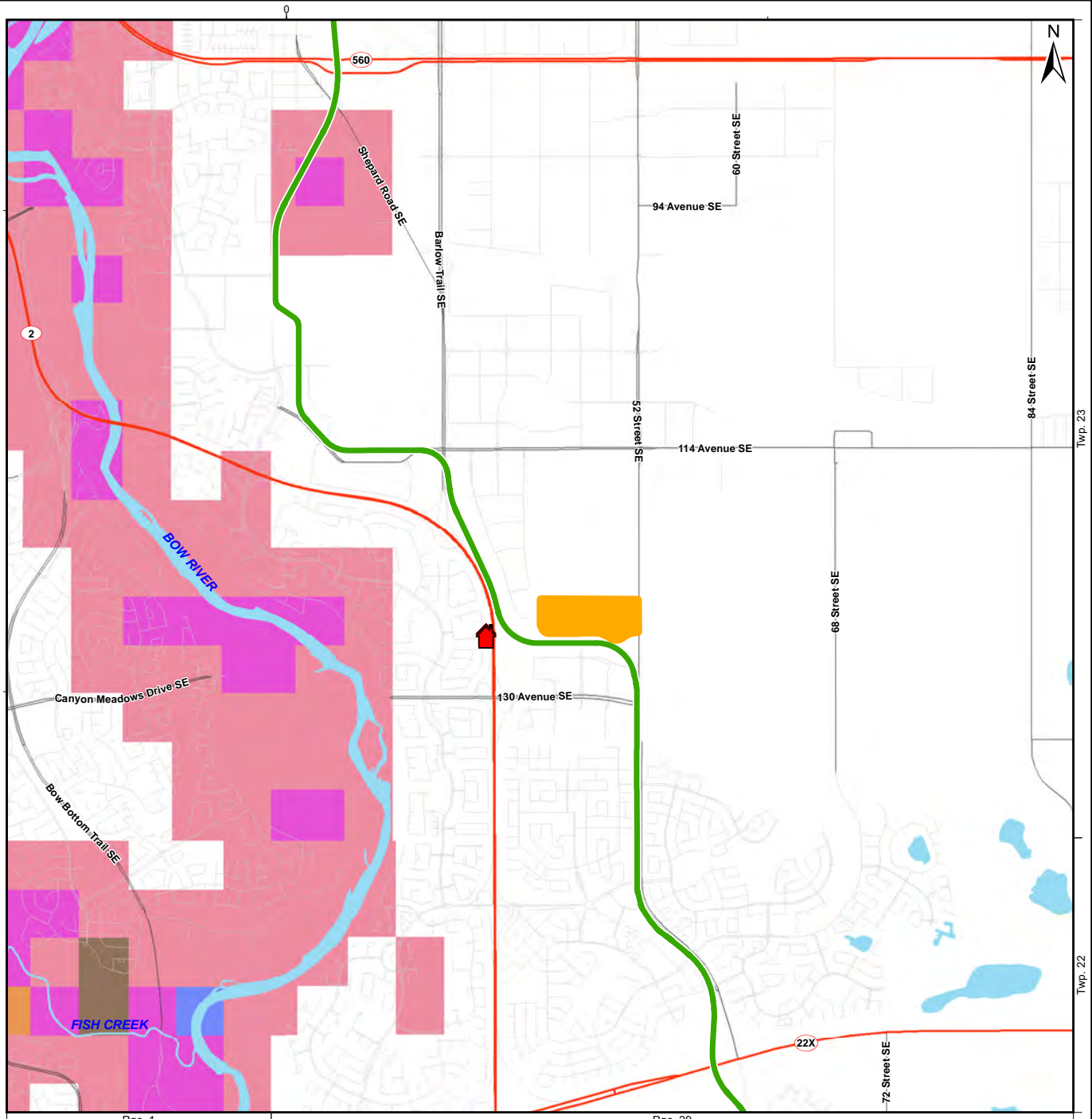


THE CITY OF CALGARY
GREEN LINE MAINTENANCE AND STORAGE FACILITY
CEAA PROJECT DESCRIPTION

ENVIRONMENTAL INVESTIGATION AND
BIOPHYSICAL ASSESSMENT AREAS

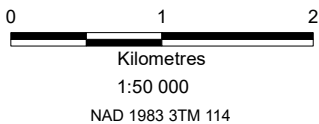
Date: 10-JAN-19	Drawn by: T.G.	Edited by: T.G.	App'd by: G.R.
		WorleyParsons Project No. 307074-02081-800	
		FIG No	REV
		6	D

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- Project Footprint
- Waterbody
- Major Road
- Historic Resources 3, a
- Watercourse
- Collector Road
- Historic Resources 5, a
- Local Road
- Historic Resources 4, a
- Historic Resources 1, h
- Nearest Residence

Data Sources:
 Alberta Environment & Parks
 IHS Markt
 City of Calgary



THE CITY OF CALGARY
GREEN LINE MAINTENANCE AND STORAGE FACILITY
CEAA PROJECT DESCRIPTION

NEAREST RESIDENCES AND HISTORICAL RESOURCES



Date: 23-OCT-18	Drawn by: T.G.	Edited by: T.G.	App'd by: G.R.
WorleyParsons Project No. 307074-02081-800			
FIG No. 7		REV C	

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Appendices



Appendix 1 Provincial EIA Requirement Verification





November 23, 2017

Michael Thompson, P.Eng, MBA
Director
The City of Calgary – Green Line

[Redacted]

Dear Mr.Thompson:

I wish to advise you that pursuant to Section 44 of the *Environmental Protection and Enhancement Act* (EPEA), I have considered the application of the environmental assessment process to your proposed City of Calgary, Green Line LRT. This activity is not a mandatory activity for the purposes of environmental assessment. Having regard to the consideration set out in Section 44(3) of EPEA, I have decided that further assessment of the activity is not required. Therefore, a screening report will not be prepared and an environmental impact assessment report is not required.

Please note this decision is based on the current information about the project and I reserve the ability to review this decision should different and/or new information come to light. The City of Calgary should also note that Section 47 of EPEA gives the Minister of Environment and Parks the authority to order the preparation of an environmental impact assessment report under appropriate circumstances, notwithstanding a director's decision to not require an environmental impact assessment report.

The City of Calgary should be advised that although an environmental impact assessment report is not required for this project, Alberta Environment and Parks may have other regulatory requirements under EPEA and/or the *Water Act*. For more information about regulatory requirements under EPEA and/or the *Water Act*, please contact Ms. Kathleen Murphy ([Redacted]). I suggest that The City of Calgary contact Ms. Tanya Holden with Indigenous Relations at the Aboriginal Consultation Office at ([Redacted]). In addition, for regulatory requirements under the *Public Lands Act* please contact Mr. Jon Murray at ([Redacted]).

If you have any questions or need further information please contact me at [Redacted].

Sincerely,

[Redacted Signature]

Heather Dent
Senior Manager, Environmental Assessment, Assessment and Continuations

Provincial Approvals
(Designated Director, *Environmental Protection and Enhancement Act*)

cc: M. Daneluk (AEP)
K. Murphy (AEP)
T. Holden (IR)
J. Murray (AEP)

Appendix 2 Designated Activity Communications





November 29, 2017

Ms. Susan Tiege
Section Team Lead, Prairie and Northern Region
Canadian Environmental Assessment Agency



Dear Ms. Tiege,

Re: CEAA Determination for The City of Calgary's Green Line LRT Project

Thank you for meeting with us on August 29th, 2017, to discuss the Green Line LRT Project ("the Project"). I am writing to provide further context and rationale as to why The City of Calgary ("The City") is of the opinion that a federal environmental assessment is not required for the Project. The City is building this new light rail transit (LRT) line, approximately 20 km in length, along a combination of existing road right-of-way, freight railway right-of-way (adjacent), and new right-of-way as shown in Attachment 1. The Project will include the construction and operation of a light rail vehicle (LRV) maintenance and storage facility (MSF) located east of Deerfoot Trail at 125 Avenue SE. The *Canadian Environmental Assessment Act (2012)* and Regulations identify the development of "railways" and "railway yards" as projects that may be designated under the Act. The term railway is not defined in the Act or Regulations.

The City requests that the Canadian Environmental Assessment Agency ("the Agency") confirm that federal environmental assessment (EA) will not be required for the Project.

The three possible outcomes of this request are:

1. The Agency confirms that the Project is not a designated project under the Act and Regulations, and that it will not be subject to federal EA;
2. The Agency determines that the Project is a designated project under the Act and Regulations, and that it will not be subject to federal EA; or
3. The Agency determines that the Project is a designated project under the Act and Regulations, and that it will be subject to federal EA.

Information is presented below in support of the first outcome listed above. Additional information presented in Attachment 2 is relevant to the second outcome; there have been several recent determinations made by the Agency where freight railway yards were identified as designated projects but were not required to go through the federal EA process. The City does not anticipate there is a basis for the third conceivable outcome. However, The City requires absolute certainty on this matter for purposes of project planning, procurement, and successful delivery under the terms of provincial and federal funding partnerships.

Within the *Regulations Designating Physical Activities* SOR/2012-147 under the Act, the relevant section is section 25, which identifies as designated projects those activities including:

- 25 The construction, operation, decommissioning and abandonment of a new*
- (a) railway line that requires a total of 32 km or more of new right of way;
 - (b) railway yard with seven or more yard tracks or a total track length of 20 km or more;

- (c) all-season public highway that requires a total of 50 km or more of new right of way; or
- (d) railway line designed for trains that have an average speed of 200 km/h or more.

Sub-sections 25(c) and 25(d) of the Regulations categorically do not apply to the Project. Sub-section 25(a) also does not apply, as the Project under consideration will be approximately 20 km in length and it will comprise a combination of new and (mostly) existing rights-of-way. The ultimate vision for Calgary’s third distinct light rail line is to provide service to the communities farthest to the central north and the southeast of the city, similar to the initial construction and incremental extensions of the Red and Blue Lines over the past 36 years. That vision is anticipated to take decades to realize and, even then, there would likely be less than 32 km of new right-of-way required for the combination of current and future projects.

Of primary interest, therefore, is sub-section 25(b) of the Regulations. Preliminary designs for the proposed MSF at Shepard station (refer to Attachment 3) indicate more than 7 tracks at that facility located on a 25 ha parcel of land, with the combination of 11 tracks mostly enclosed within the storage barn (to accommodate approximately 100 LRVs), 6 tracks for the maintenance shop, 3 tracks for the wash bays, and 2 tracks exterior to the enclosed facilities. However, for sub-section 25(b) to apply in a determination by the Agency, the LRV maintenance and storage facility would have to be considered to be a “railway yard”.

A traditional railway yard for heavy freight trains is altogether a different type of development and land use, with completely different environmental aspects, compared with a light rail transit vehicle MSF. Figure 1, below, presents a summary comparison of the two different types of facilities.

Figure 1: Comparing a typical freight railway yard with a typical light rail vehicle MSF

Aspect	Railway Yard	LRV Maintenance and Storage Facility
Locomotion	Diesel engine	Electric
Fueling	Diesel storage and fueling on site	N/A
Rail car contents	Chemicals, petroleum products, grain, various other revenue freight	Light rail vehicle (LRV) cars empty of passengers
Potential emissions	Diesel exhaust fumes, and fumes or other pollutants from rail cars when uncapped for loading, and from loading rack operations	N/A
Exposure	Rail cars stored and switched in open environment (not in facility)	LRVs stored and maintained within facilities
Noise	Rail car shunting (flat switching) is uncontrolled, with loud impact of steel-on-steel knuckles	Controlled coupling of LRV cars is electronic and quiet
Rail ties	Creosote treated timber	Concrete and composite (no creosote)
Visual impact	Typically no visual buffer, in open	Buildings, typically landscaped
Site drainage	Unpaved sites, surface drainage	Paved and unpaved, sanitary (for LRV wash facilities) and storm sewer collection systems
Rail connections	Connects to railway main lines that are national and international	Connects to municipal light rail network with no regional, provincial or national connections



Further, a straightforward reading of the Act and Regulations suggests that the Agency would not consider the Green Line LRT as a railway, or the MSF as a railway yard, and therefore would not identify it as a designated project. In the Act, reference is made to Section 98 of the *Canada Transportation Act* which applies specifically to federally regulated railways. In Canada, public transit lines that are discontinuous from the general system of interchange (i.e. they are strictly intra-provincial systems) are not considered railways and therefore not regulated under federal legislation. Each of the *Canada Transportation Act* and *Railway Safety Act* define “railway” as follows:

“Railway” means a railway within the legislative authority of Parliament and includes
(a) branches, extensions, sidings, railway bridges, tunnels, stations, depots, wharfs, rolling stock, equipment, stores or other things connected with the railway, and
(b) communications or signaling systems and related facilities and equipment used for railway purposes.

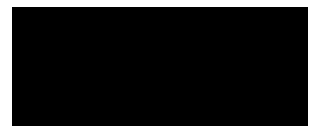
Within provincial jurisdiction, the *Railway (Alberta) Act* defines “railway” as “an undertaking that is operated for the purposes of transporting individuals, goods and commodities or any one or more of them by means of rolling stock operated on track, but does not include an urban rail transit system.” An urban rail transit system is defined to include “light rail transit railways” such as the Green Line. Therefore, if the provincial definition of “railway” were to be considered for the federal EA regime, neither the Green Line nor its MSF would constitute a designated project, notwithstanding the length or number of “railway yard” tracks.

Additional information on the Project is presented in Attachment 4.

As discussed in our introductory meeting, to date we have undertaken extensive stakeholder engagement, preliminary design, environmental site assessments, various other technical assessments, land use planning, land acquisition, and advance enabling works involving utility relocation and landfill removal along the Project alignment. This work will continue as we identify and execute a contracting strategy for delivery of the main Project. A timely determination from the Agency in regard to whether an EA is required for the Project will facilitate the next steps of the Project and The City’s response to your requirements.

We appreciate your time and consideration.

Regards,

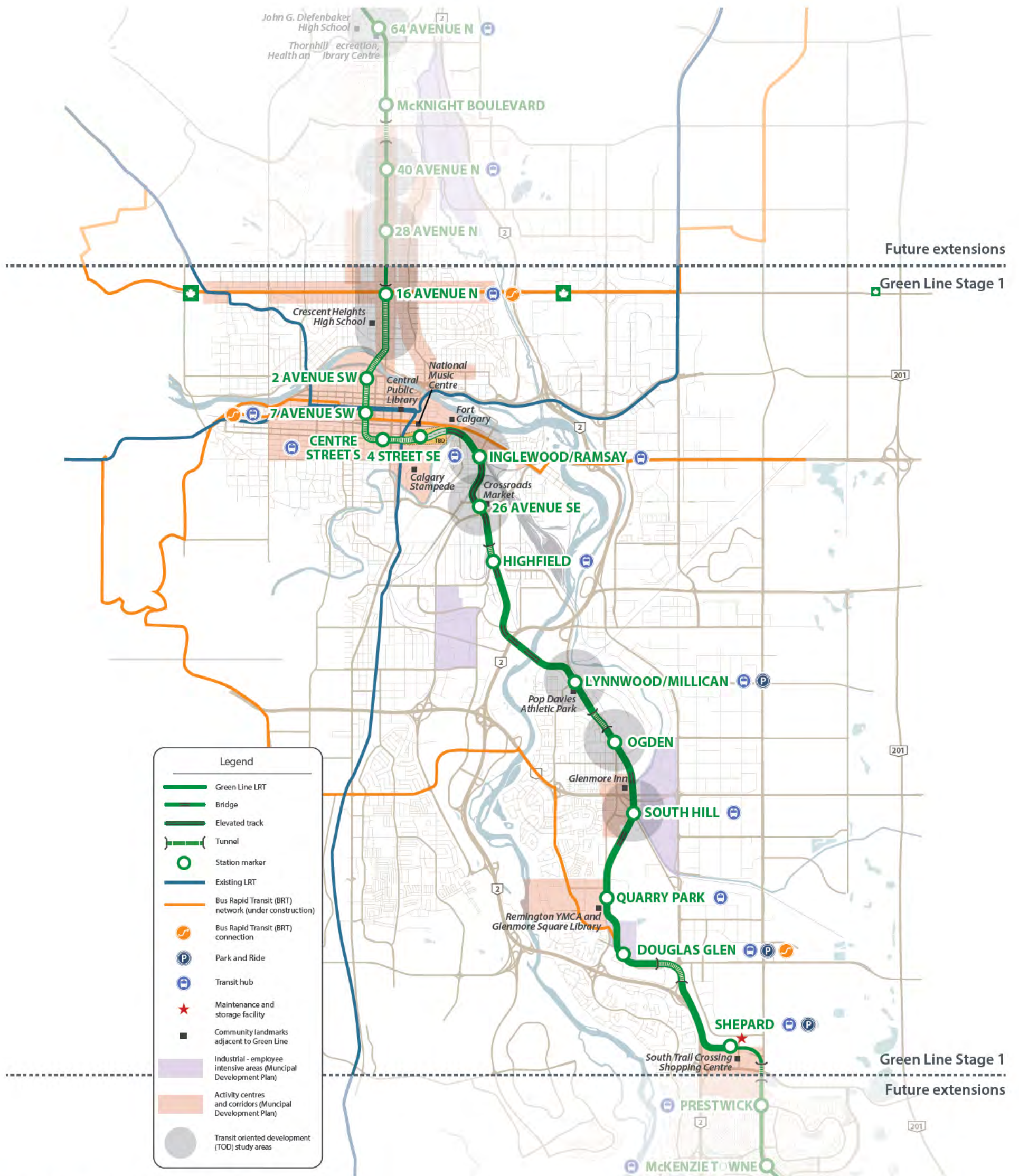


Michael Thompson, P.Eng, MBA
 Director,
 The City of Calgary – Green Line



calgary.ca

- Att. 1: Graphic showing the Green Line project
- Att. 2: Railway yard projects that are Designated Projects under CEAA
- Att. 3: Preliminary design for the LRV maintenance and storage facility
- Att. 4: Copy of Project Summary submitted to Alberta Environment & Parks EIA Division



Transit customer benefits



Ridership

60,000-65,000
LRT passengers



Ride time

34 min
(16 Avenue N - Shepard)



Frequency

Every **10 mins**, **15** hours a day
7 days a week



Reliability

20 km
of dedicated LRT track

Attachment 2

CEAA Determination for The City of Calgary's Green Line Project

Railway Yard projects that are Designated Projects under CEAA

Information downloaded from the CEAA Registry (<http://www.ceaa-acee.gc.ca/050/index-eng.cfm>)

Name:	Redwater Facility Rail Yard Project
Proposal:	Pembina proposed to construct and operate approximately 36 km of new rail tracks and realign 9 km of existing tracks at their existing natural gas Fractionation and Storage Facility near Redwater, AB. As proposed, the project would include the construction of three storm water ponds and allow the facility to trans-load additional products, specifically diesel and biodiesel. The project would increase the existing facility's loading capacity from 184 train cars per day to approximately 260, and the project site would occupy an area of approximately 52 hectares.
CEAA:	Determination that an EA is not required (Sept 2016).

Name:	North American Polypropylene Rail Yard Project
Proposal:	North American Polypropylene ULC proposed the construction and operation of a rail yard located in Fort Saskatchewan, AB. As proposed, the project would include 15 to 25 new rail tracks to allow for the transportation of polypropylene pellets to domestic and international markets. Once constructed, the project site is expected to occupy an area of approximately 11.5 hectares
CEAA:	Determination that an EA is not required (July 2016).

Name:	Lamont Railcar Storage Project
Proposal:	Alberta Midland Rail Terminal Ltd. proposed to construct, operate and decommission a new railcar storage facility, located near Lamont, Alberta. As proposed, the project would consist of 21 rail tracks: 16 for the storage of railcars, and 5 for operational use. The project would have a total track length of 21.6 kilometres and allow the proponent to store and switch up to 850 railcars at any given time. Once constructed, the facility would also be operated and maintained by Canadian Northern Plains Rail Services Ltd. Alberta Midland Rail Terminal Ltd. would remain the owner of the facility.
CEAA:	Determination that an EA is not required (March 2016).

Name:	Fort Saskatchewan Rail Facility Project
Proposal:	Plains Midstream Canada ULC is proposing the construction, operation, and decommissioning of a 31-track rail yard at their existing Fort Saskatchewan Fractionation Plant and Storage Facility, located within the limits of the City of Fort Saskatchewan, Alberta. As proposed, the project would consist of 31 rail tracks totaling 20.2 km in length.
CEAA:	Determination that an EA is not required (August 2014).

Attachment 4

CEAA Determination for The City of Calgary's Green Line Project:

Copy of submission to Alberta Environment & Parks of a completed EIA Project Summary Table (AEP template)

Project Summary Table			
Proponent name:	The City of Calgary	Date:	October 16, 2017
Project name:	Green Line LRT	Company contact name and information:	Michael Thompson, Director, Green Line [REDACTED]
Name of company that will hold approval:	The City of Calgary	Company website:	http://www.calgary.ca
Type of project (e.g., water management, hydroelectric, etc.):	Transportation Infrastructure – development and operation of Light Rail Transit (LRT)	New project, expansion, additional phase or modification:	New project, planned to be built 2020-2026, and in operation starting in 2026.
Project location (legal land description and municipality):	The Green Line LRT will be built in Calgary AB. This project will extend 20 km from 16 th Ave. & Centre St. N. to 126 Ave. SE. Please see attached map for additional details.	Total project area (ha):	20,000m x 50m (approx.) = 1,000,000m ² = 100 ha approximate
Indicate whether the project is on private, federal or provincial land:	Land acquisitions are currently in progress for the Green Line. The Green Line will primarily be built on municipally owned land, with the exception of river crossings, a section of land in the downtown and land directly adjacent to Deerfoot Trail which is owned by the Province.	If project is on or adjacent to public land, list any parks/protected areas/conservation areas, etc., that may be impacted:	The Green Line will cross the Bow river twice, once elevated and once tunneled and elevated over the Elbow River. At the two elevated river crossing locations there are riparian areas that comprise municipal land classified as "Natural Park". City of Calgary biophysical impact assessment of the areas has been done.
Nearest First Nation Reserve(s) and Métis Settlements (name and km):	Tsuu T'ina Nation: 40 km Siksika Nation: 100 km Kainai Nation: 200 km Piikani Nation: 200 km	Nearest waterway/ water body (name and km):	Alignment will cross both the Bow and Elbow River as described above.
Nearest provincial highway (# and distance):	Deerfoot Trail (Hwy 2): Bridge will be constructed for Green Line to cross over Deerfoot Trail	Potential annual water usage and source:	Municipal water supply will be used for the Shepard Transit Storage and Maintenance Facility. Based on water use consumption data for Calgary Transit's Anderson Garage, where the water recycling system for light rail vehicles reuses 70% of gray water and water is used also for bus wash and building maintenance, we anticipate approx. 7,000 cubic metres consumption annually.

Attachment 4

CEAA Determination for The City of Calgary’s Green Line Project:

Copy of submission to Alberta Environment & Parks of a completed EIA Project Summary Table (AEP template)

<p>Expected types of air emissions (e.g., SO₂, NO_x, CO₂, etc.):</p>	<p>Construction-related air emissions are unknown. However, modelling has projected an overall reduction of GHG emissions as well as a 2% reduction in tailpipe emissions affecting air quality locally as a result of mode-switching from single occupancy vehicle to transit. Opening day GHG emission reduction is estimated at 30,000 tonnes CO₂e.</p>	<p>Types of wastes generated and disposal location:</p>	<p>Waste materials generated during construction include asphalt, concrete, steel, wood, plastic and lesser amounts of non-recyclable materials. City of Calgary policy and procedures require C&D waste diversion from landfill through recycling and for the last 5 years our Transportation Infrastructure business unit has achieved a greater than 95% diversion rate. Calgary Transit operations entail generation of a wide variety of waste materials include public-facing waste, approximately two-thirds of which are recycled with the remainder going to City operated landfill.</p>
--	---	---	---

Brief Project Description

Include major project processes and products, components including capacity and size, infrastructure requirements and general project location.

Consider the terminology and capacities/sizes listed in [Environmental Assessment \(Mandatory and Exempted\) Activities Regulation](#) and the [Activities Designation Regulation](#) when writing the description.

The Green Line Light Rail Transit (LRT) will be Calgary’s third light rail line linking north central Calgary through the downtown core to the deep southeast. Green Line construction will extend from 16th Ave. North (at Centre Street) to 126th Ave. SE. It will introduce fast, frequent and reliable LRT service to tens of thousands of Calgarians, integrating with the Red and Blue LRT lines at a 7 Avenue SW Station, expanding customer access to all of Calgary.

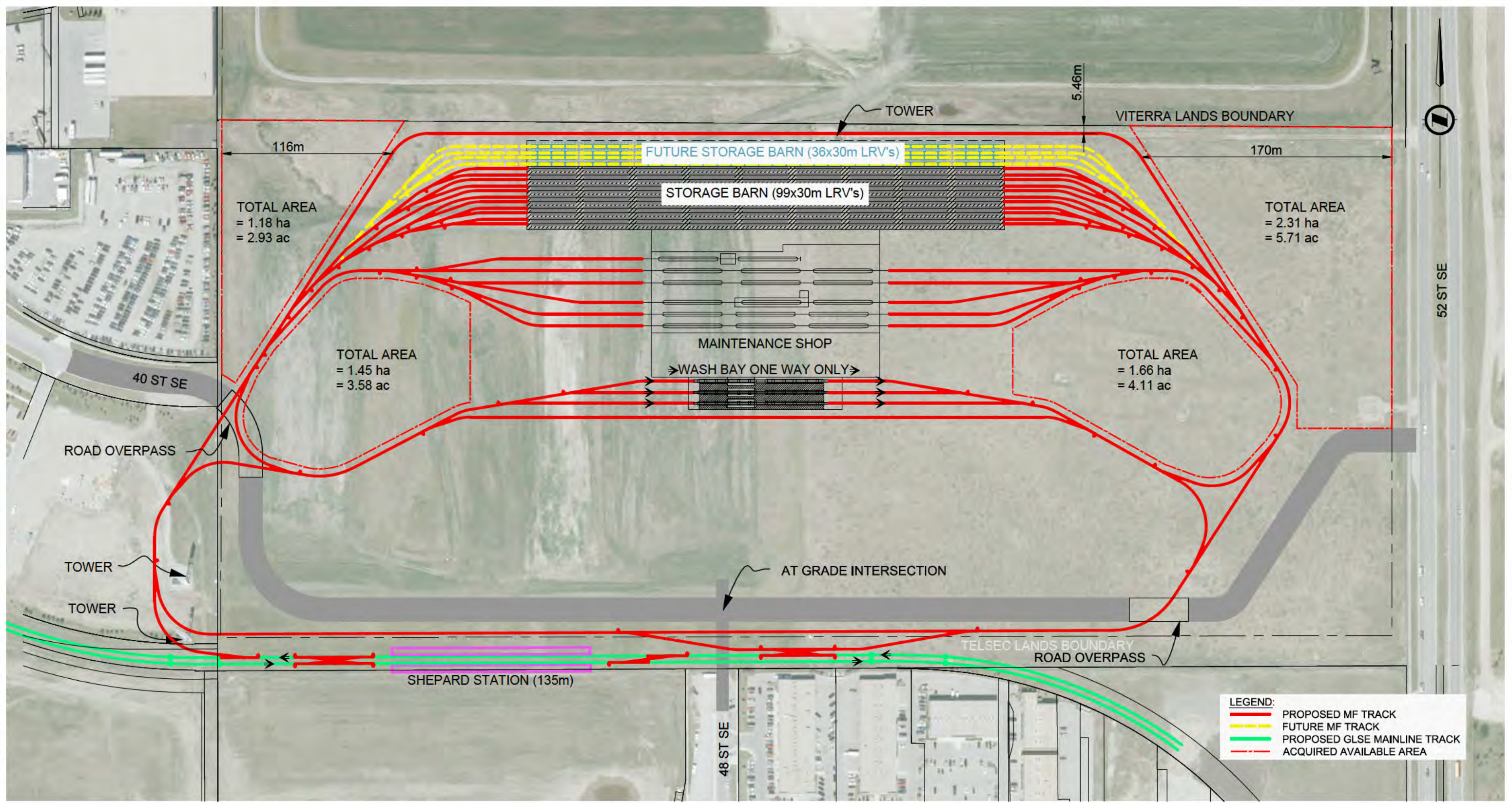
Construction of the Green Line will include the following components:

- 20 km of LRT track through previously developed areas of Calgary
- 14 stations: 4 underground, and 10 surface stations
- 8 bridges, including 2 river crossings: Elbow River, Blackfoot Trail, Highfield Blvd, 46 Avenue SE, Deerfoot Trail, Bow River, 78 Avenue SE and 90 Avenue SE
- 1 km of elevated guideway between Inglewood/Ramsay to 26 Avenue stations
- 3 park and ride facilities with a total of 1800 - 1900 stalls. Located at Lynnwood/Millican, Douglas Glen, and Shepard Stations
- 3 tunnels: CN/Highfield; Ogden Road SE and Barlow Trail/114 Avenue SE
- 4 km Centre City tunnel from 20 Avenue N to Macleod Trail.
- 1 light rail vehicle (LRV) Maintenance and Storage Facility to be constructed north of 126 Avenue SE (Shepard)
- Purchase of approximately 70 low floor vehicles.

D SIZE 22" x 34" (568.8mm x 863.6mm)

PLOT DATE: September 29, 2016 - 5:30 PM

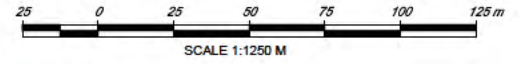
CAD FILE: H-351173-TS-FIG-S3-FP-GE1001.dwg



NOTES:
 1..ALL YARD TURNOUTS #6, MAINLINE TURNOUTS ARE #8.
 2..ALL CURVES A MIN. OF 35m RADUIS OR GREATER.

LEGEND:

- PROPOSED MF TRACK
- FUTURE MF TRACK
- PROPOSED GLSE MAINLINE TRACK
- - - ACQUIRED AVAILABLE AREA



NOTES:
FOR DISCUSSION PURPOSES ONLY

APEGA PERMIT TO PRACTICE NO. P03481
HATCH
 HATCH PROJECT No. H-351173



REVISIONS			
REV.	DATE	ISSUED FOR	AUTH. BY
A	2016/09/28	FOR DISCUSSION	P.T.

DRAFT

Calgary

**GREEN LINE LRT
 SHEPARD MAINTENANCE FACILITY
 SIDE LOAD OPTION**

DWG. BY: C.H.	CHK. BY: E.N.	DWG. NO.:	REV. NO.
DATE: 2016/09/27	SHEET: 1 of 1	H-351173-TS-FIG-S3-FP-GE1001	A



Prairie and Northern Region Région des Prairies et du Nord
Canada Place Place Canada
Suite 1145, 9700 Jasper Avenue Pièce 1145, 9700 rue Jasper
Edmonton, Alberta T5J 4C3 Edmonton (Alberta) T5J 4C3

Michael Thompson
Director, City of Calgary, Green Line



Via email:

Dear Mr. Thompson:

Thank you for your letter of November 29, 2017 providing additional information on the City of Calgary's Green Line Light Rail Transit Project (the Project) which includes the Maintenance and Storage facility at Shepard Station.

The Agency has considered the information provided by the City of Calgary and determined that the Maintenance and Storage facility component of the Project is a designated project pursuant to the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) as it meets the requirements set out in item 25(b) of the *Regulations Designating Physical Activities* (Regulations):

25(b) The construction, operation, decommissioning and abandonment of a new railway yard with seven or more yard tracks or a total track length of 20 km or more.

The Regulations pursuant to CEAA 2012 define designated projects as those that meet the thresholds set out therein, and not based on location or whether the activity is provincially or federally regulated. For the purpose of applying items 25(a) and 25(b), the Regulations do not distinguish between heavy and light rail. The Agency considers the Maintenance and Storage facility to be a railway yard as it would be an area containing a network of non-mainline trackage used for maintaining and storing the light rail cars. In determining that the trackage are yard tracks, the Agency considered the conditions and operation of the tracks in the Maintenance and Storage facility. Some of the factors in relation to conditions and operation considered by the Agency are the short length of the trackage, that the trackage will be operated at slow speeds, and that it will not have through or feeder traffic. Since the Maintenance and Storage facility would include more than seven yard tracks, it is above the threshold set out in item 25(b) of the Regulations and therefore a designated project pursuant to CEAA 2012.

The proponent of a designated project must provide the Agency with a description of the project that includes the information set out in [Prescribed Information for the Description of a Designated Project Regulations](#). The project description is used to determine if a federal environmental assessment is required. Once an acceptable project description is submitted, the Agency has 45 days, including a 20 day public comment period, to determine if a federal environmental assessment is required. In making its determination, the Agency will assess the potential for the Project to affect areas of federal jurisdiction including fish and fish habitat, migratory birds, federal lands, and changes to the environment on Indigenous Peoples. Detailed information on the environmental assessment process is available [here](#) and [here](#).

Resources to develop a project description are located [here](#) (Guide to Preparing a Description of a Designated Project under CEAA 2012) and the Agency is available to read and comment on any draft project descriptions.

Should you have any questions or wish to discuss, please contact Susan Tiege at [REDACTED] or by electronic mail at [REDACTED].a.

Sincerely,

<original signed by>

Susan Tiege
Section Leader, Prairie and Northern Region

C.c: Ethan Askey,

Morrish, Jenna (Calgary)

From: Tiege, Susan [REDACTED]
Sent: April-06-18 6:26 AM
To: Morrish, Jenna [REDACTED]; steve.warner [REDACTED]
Subject: FW: Dec 21 RE: City of Calgary Green Line LRT re: CEAA
Attachments: Dec 21 2017 Agency to Calgary Greenline LRT.pdf; Green Line Maintenance and Storage Facility - Meeting Follow-up

Hello Jenna and Steve
Thank you for your patience.

In looking through correspondence, the Dec 21, 2017 letter specifies

“ The Agency has considered the information provided by the City of Calgary and determined that the Maintenance and Storage facility component of the Project is a designated project pursuant to the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) as it meets the requirements set out in item 25(b) of the *Regulations Designating Physical Activities* (Regulations)...”

As request, in the attached email, regarding the Green Line Light Rail Transit Track Project (not including the Maintenance and Storage facility):

Based on the information provided by the City of Calgary on the proposed Green Line Light Rail Transit Track Project (not including the Maintenance and Storage Facility), it does not appear to meet the definition of a designated project as described in the *Regulations Designating Physical Activities* under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). As such, the Canadian Environmental Assessment Agency (the Agency) has determined that the Track Project (not including the Maintenance and Storage Facility), is not a designated physical activity under CEAA 2012. CEAA 2012 does apply to the Maintenance and Storage facility, as communicated in the December 21, 2017 correspondence attached. However, please note that section 14(2) of CEAA 2012 gives the Minister of the Environment and Climate Change the authority to designate the Project if, in the Minister’s opinion, the carrying out of Project activities may cause adverse environmental effects or public concerns related to those effects warrant the designation.

Should the proposed project change, please contact the Agency to discuss application of CEAA 2012.

Regards,
Susan

From: Tiege, Susan [CEAA]
Sent: December 21, 2017 2:19 PM
To: 'Askey, Ethan'
Cc: Thompson, Michael; Morgan, Doug
Subject: Dec 21 RE: City of Calgary Green Line LRT re: CEAA

Hello Ethan,

Thank you for providing the correspondence from Director Thompson.

Please find attached the Agency’s correspondence to Director Thompson on the applicability of the *Canadian Environmental Assessment Act, 2012* to the Green Line LRT.

Please do not hesitate to contact me if you have any questions or comments.

Cheers Susan

From: Askey, Ethan [REDACTED]
Sent: November 29, 2017 1:44 PM
To: Tiede,Susan [CEAA]
Cc: Thompson, Michael; Morgan, Doug
Subject: City of Calgary Green Line LRT re: CEAA

Susan,
On behalf of the Director, Green Line please find attached this information and request for response from CEAA. Please don't hesitate to contact the Director or myself if you require any additional information.

Thanks,
Ethan

Ethan Askey
Manager, Sustainability Strategy
Transportation Department
Office of the General Manager,
City of Calgary
[REDACTED]



From: Tiede,Susan [CEAA] [REDACTED]
Sent: Friday, November 24, 2017 9:57 AM
To: Askey, [REDACTED]
Subject: RE: [EXT] RE: Green line - Agency follow up.

Great thank you Ethan!

Happy weekend

Cheers Susan

From: Askey, Ethan [REDACTED]
Sent: November 24, 2017 9:53 AM
To: Tiede,Susan [CEAA]
Subject: Re: [EXT] RE: Green line - Agency follow up.

Hi Susan,
Thanks for your follow up and prompt. Great timing. I had pulled some information together that will land on your desk promptly. Had waited for some further details to emerge but will share preliminary design with you rather than wait any longer.

Thanks
Ethan

Sent from my iPhone

On Nov 23, 2017, at 3:45 PM, Tiede,Susan [CEAA] [REDACTED] wrote:

Hello Ethan,

I hope your fall has been going well.

Following up from our meeting in August, I am just touching base on the maintenance and storage yard / facility, number and length of tracks.

Thank you for the update.

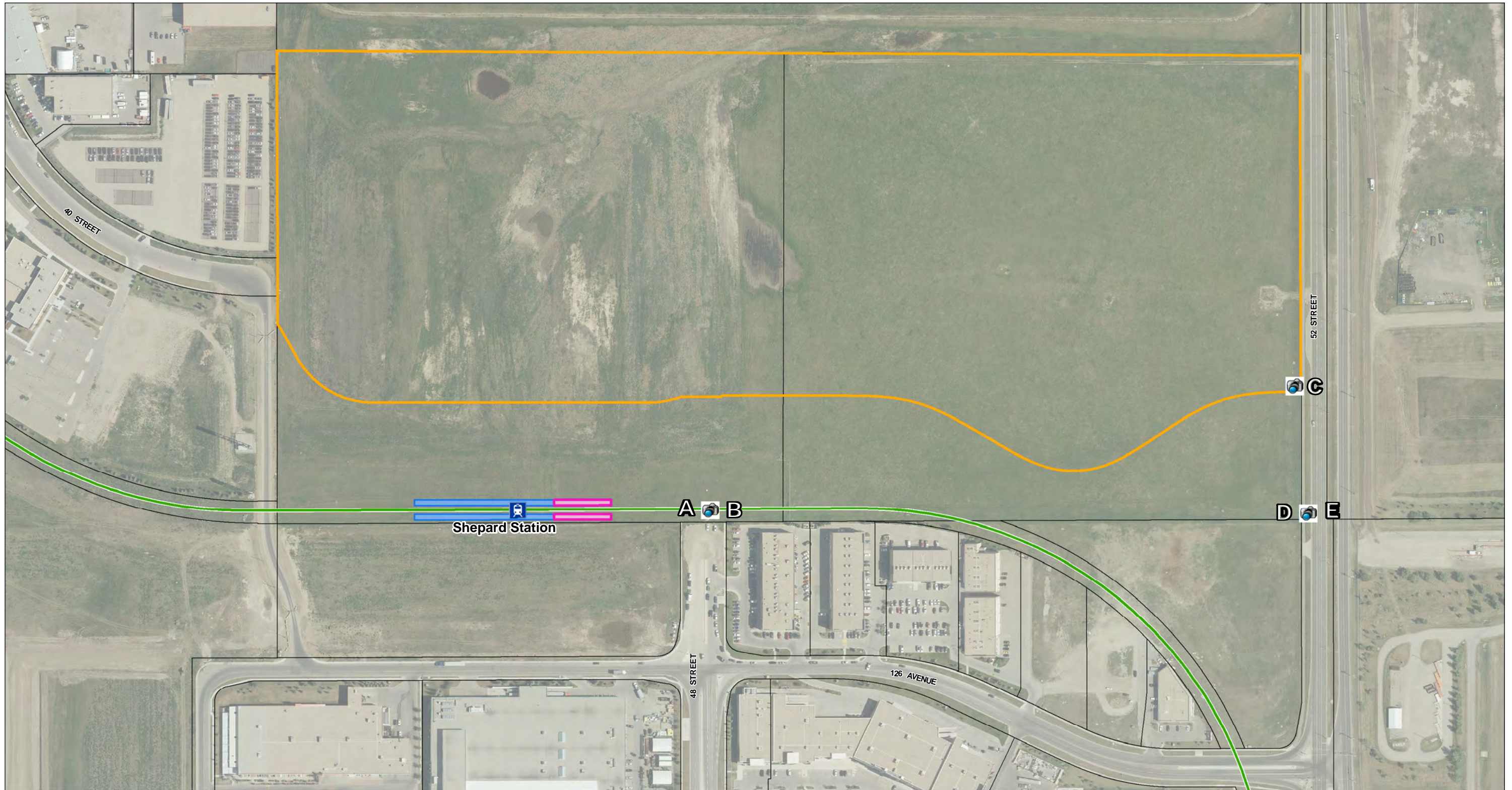
Cheers Susan

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Appendix 3 Project Location Photographs

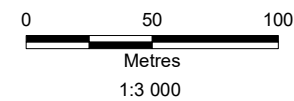




- Proposed Green Line Track
- Proposed Station
- Proposed Platform
- Proposed Platform - future
- Project Footprint
- Ownership Parcel
- Photo Location

Data Sources:
 The City of Calgary, 2014.
 Road network provided by IHS Markit, 2014.
 Imagery provided by City of Calgary, 2017.

FILE LOCATION: N:\PROJECTS\City_Calgary\Greenline\MXD\307074-02081.800\MSF CEAA Project Description\Appendix 3\PhotoLocations_RevC.mxd



THE CITY OF CALGARY GREEN LINE MAINTENANCE AND STORAGE FACILITY CEAA PROJECT DESCRIPTION				
PHOTO LOCATIONS				
Date:	23-OCT-18	Drawn by:	T.G.	App'd by:
		Edited by:	T.G.	
		WorleyParsons Project No. 307074-02081-800		
		FIG No A3-1		REV C
This drawing is prepared solely for the use of our customers as specified in the accompanying report. WorleyParsons Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing.				

Appendix 3 Site Location Photographs

Figure A3-A Facing North West



Figure A3-B Facing North East



Figure A3-C Facing West



Figure A3-D Facing West



Figure A3-E Facing West-Northwest



Appendix 4 Land Titles





LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0037 583 441 1711133;8;1 171 125 473

LEGAL DESCRIPTION
PLAN 1711133
BLOCK 8
LOT 1
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 15.002 HECTARES (37.07 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 4;29;23;10;SE

MUNICIPALITY: CITY OF CALGARY

REFERENCE NUMBER: 171 104 484

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
171 125 473	10/06/2017	TRANSFER OF LAND	\$9,267,500	\$9,267,500

OWNERS

THE CITY OF CALGARY.
OF P.O.BOX 2100, POSTAL STATION 'M', CALGARY
ALBERTA T2P 2M5

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
011 318 682	26/10/2001	CAVEAT RE : RIGHT OF FIRST REFUSAL CAVEATOR - THE CITY OF CALGARY. CITY SOLICITOR MUNICIPAL BLDG, 12TH FLOOR 800 MACLEOD TR SE CALGARY ALBERTA T2G2M3 AGENT - ALLAN R CUNNINGHAM

REGISTRATION

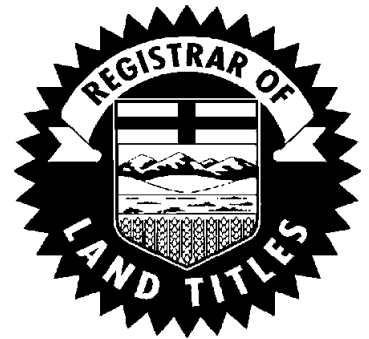
NUMBER	DATE (D/M/Y)	PARTICULARS
171 104 486	17/05/2017	CAVEAT RE : DEFERRED SERVICES AGREEMENT CAVEATOR - THE CITY OF CALGARY. LAW DEPARTMENT, MUNICIPAL BUILDING 12TH FLOOR 800 MACLEOD TRAIL S.E. CALGARY ALBERTA T2P2M5 AGENT - CHERYL HAMILTON.
171 134 855	20/06/2017	CAVEAT RE : SEE CAVEAT CAVEATOR - THE CITY OF CALGARY. LAW DEPARTMENT, MUNICIPAL BUILDING 12TH FLOOR 800 MACLEOD TRAIL S.E. CALGARY ALBERTA T2P2M5 AGENT - MARY A LAY
171 246 892	06/11/2017	UTILITY RIGHT OF WAY GRANTEE - THE CITY OF CALGARY. AS TO PORTION OR PLAN:1712199

TOTAL INSTRUMENTS: 004

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 26 DAY OF JUNE,
2018 AT 01:40 P.M.

ORDER NUMBER: 35389433

CUSTOMER FILE NUMBER: JVDV



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
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SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0017 114 273 4;29;23;10;;1 161 290 680

LEGAL DESCRIPTION

THAT PORTION OF LEGAL SUBDIVISION ONE (1) IN THE SOUTH EAST QUARTER OF SECTION TEN (10) IN TOWNSHIP TWENTY THREE (23) RANGE TWENTY NINE (29) WEST OF THE FOURTH MERIDIAN WHICH LIES TO THE SOUTH OF THE SOUTHERLY BOUNDARY AND ITS EASTERLY PRODUCTION OF THE SHEPARD AIRFIELD AS SHOWN ON PLAN 721FD CONTAINING THIRTY SIX AND SIX TENTHS (36.6) ACRES MORE OR LESS EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: CITY OF CALGARY

REFERENCE NUMBER: 121 336 246

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
161 290 680	06/12/2016	TRANSFER OF LAND	\$26,237,232	\$26,237,232

OWNERS

THE CITY OF CALGARY.
OF P.O. BOX 2100
STATION M
CALGARY
ALBERTA T2P 2M5

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	NUMBER	DATE (D/M/Y)	PARTICULARS
171 246 892	06/11/2017	UTILITY RIGHT OF WAY	GRANTEE - THE CITY OF CALGARY. AS TO PORTION OR PLAN:1712199

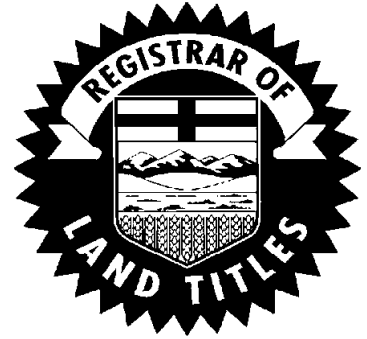
TOTAL INSTRUMENTS: 001

(CONTINUED)

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 12 DAY OF JUNE,
2018 AT 11:21 A.M.

ORDER NUMBER: 35291407

CUSTOMER FILE NUMBER: JVDV



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SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).

Appendix 5 Historical Wildlife Occurrences



Appendix 5 Historical Wildlife Occurrences

Table A5-A Wildlife with Historical Occurrences within 5 km of the Proposed Site

Common Name	Species Name	Alberta General Status ¹	COSEWIC ²	SARA ³	General Habitat	Presence of Habitat
Amphibian						
Northern leopard frog	<i>Lithobates pipiens</i>	At risk	Special concern	Schedule 1	Extirpated from Calgary	No
Mammal						
Badger	<i>Taxidea taxus</i>	Sensitive	Special concern	Schedule 1	Open vegetation communities with abundant prey	Possible
Little brown bat	<i>Myotis lucifugus</i>	May be at risk	Endangered	Schedule 1	Roost in tree cavities and under bark	No
Long-tailed weasel	<i>Mustela frenata</i>	May be at risk	Not at risk	No schedule	Open vegetation communities with abundant prey	Possible
Red bat	<i>Lasiurus borealis</i>	Sensitive	Not assessed	No schedule	Roost in foliage within forests	No
Silver-haired bat	<i>Lasionycteris noctivagans</i>	Sensitive	Not assessed	No schedule	Roost under tree bark but have been found in cavities	No
Western small-footed bat	<i>Myotis ciliobrum</i>	Sensitive	Not assessed	No schedule	Roosts in cliffs, rocky outcrops, and clay banks in valleys and badlands	No
Bird						
Bald eagle	<i>Haliaeetus leucocephalus</i>	Sensitive	Not at risk	No schedule	Nests in forested areas adjacent to large bodies of water	No

Common Name	Species Name	Alberta General Status ¹	COSEWIC ²	SARA ³	General Habitat	Presence of Habitat
Baltimore oriole	<i>Icterus galbula</i>	Sensitive	Not assessed	No schedule	Nests in riparian, woodland edges, and open areas with scattered trees	No
Bank swallow	<i>Riparia riparia</i>	Sensitive	Threatened	Schedule 1	Nests in vertical banks along waterbodies	No
Barn swallow	<i>Hirundo rustica</i>	Sensitive	Threatened	Schedule 1	Agricultural areas and open fields	Yes
Barred owl	<i>Strix varia</i>	Sensitive	Not assessed	No schedule	Swamps and riparian areas within forested areas	No
Black tern	<i>Chlidonias niger</i>	Sensitive	Not at risk	No schedule	Wetlands with emergent vegetation	No
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	Sensitive	Not assessed	No schedule	Variety of waterbodies	No
Black-necked stilt	<i>Himantopus mexicanus</i>	Sensitive	Not assessed	No schedule	Wetlands with emergent vegetation	No
Common yellowthroat	<i>Geothlypis trichas</i>	Sensitive	Not assessed	No schedule	Nests in thick vegetation in wetlands and riparian areas	No
Eastern kingbird	<i>Tyrannus tyrannus</i>	Sensitive	Not assessed	No schedule	Open environments and woodland edges	Yes
Great blue heron	<i>Ardea Herodias</i>	Sensitive	Special concern	Schedule 1	Nests in colonies near water. Forages in wetlands.	No
Horned grebe	<i>Podiceps auritus</i>	Sensitive	Special concern	Schedule 1	Small shallow wetlands with emergent vegetation	No
Least flycatcher	<i>Empidonax minimus</i>	Sensitive	Not assessed	No schedule	Semi-open, second growth, mid-successional forests and shrubby fields	No

Common Name	Species Name	Alberta General Status ¹	COSEWIC ²	SARA ³	General Habitat	Presence of Habitat
Osprey	<i>Pandion haliaetus</i>	Sensitive	Not assessed	No schedule	Nests on tall structures (trees, poles) within 10-20 km of abundant fish-bearing waterbodies	No
Pied-billed grebe	<i>Podilymbus podiceps</i>	Sensitive	Not assessed	No schedule	Wetlands with dense emergent or aquatic vegetation	No
Short-eared owl	<i>Asio flammeus</i>	May be at risk	Special concern	Schedule 1	Open communities with sufficient vegetative cover	Possible
Sora	<i>Porzana carolina</i>	Sensitive	N/A	N/A	Shallow wetlands dominated by emergent vegetation	No
Trumpeter swan	<i>Cygnus buccinator</i>	Sensitive	Not at risk	No schedule	Nests in a variety of waterbodies	No
Western grebe	<i>Aechmophorus occidentalis</i>	At risk	Special concern	Schedule 1	Waterbodies with extensive open water	No
Western wood-pewee	<i>Contopus sordidulus</i>	May be at risk	Not assessed	No schedule	Forests, edges and riparian areas	No
White-faces ibis	<i>Plegadis chihi</i>	Sensitive	Not assessed	No schedule	Wetlands with islands of emergent vegetation	No

Notes:

1. Provincial status according to 2015 AEP General Status Listing (Province of Alberta, 2017).
2. Federal status according to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Wildlife Species Search (Government of Canada, 2018e).
3. Legal status under the *Species at Risk Act* (SARA), according to the Species at Risk Public Registry (Government of Canada, 2018e).

Appendix 6 First Nations Consultation Summary Report





Historical Services Ltd.

ARCHAEOLOGY & HERITAGE CONSULTANTS

March 15, 2017

**Project File: 475-15-0024-001
OPaC HR Appl # 006684847**

The City of Calgary

[REDACTED]

Attention: Evan Kortje, P.Eng., PMP
Transportation Engineer, Green Line

Subject: 4715-15-0024-001 City of Calgary Green Line SE –
First Nations Consultation Summary Report

Mr. Kortje,

Bison Historical Services Ltd. (Bison) was retained by the City of Calgary (The City) to provide Aboriginal consultation regarding the potential for this Project to affect Aboriginal Traditional Use Sites considered to be historic resources (EgPm-134, the St. Dunstan Residential School).

Consultation was triggered by the issuance of a Schedule A document (Project File: 475-15-0024-001) by Alberta Culture and Tourism (ACT) on September 29, 2015. The Aboriginal Heritage Section of ACT provided a list of the appropriate contacts for information regarding Aboriginal Traditional Use Sites of significance within the Project area.

The following summary report outlines the consultation that took place with the four First Nation communities identified by ACT: Siksika, Tsuu T'ina, Blood and Piikani from February 16, 2016 through January 20, 2017.

Notification Letter

Consultation began with a Notification Letter sent to the four First Nations identified by ACT. The Notification Letter consisted of a letter describing the City of Calgary's proposed Green Line project, a summary of the Historical Resource Assessments that have been conducted in the project area to date, as well as a summary of past First Nation involvement with the St. Dunstan Residential School site (See Appendix A).

Key Activities Facilitated By Bison

During the consultation process, Bison facilitated several key activities with each of the four First Nations separately; an initial meeting to discuss the proposed project, a preliminary driving tour of the SE portion of the proposed Green Line, and site visits to the current location of the Jack White Goose Flying burial, the St. Dunstan Residential school site, as well as the locations where the proposed project crosses both the Elbow and Bow Rivers. A summary of these activities is presented below.

[REDACTED]



Historical Services Ltd.

ARCHAEOLOGY & HERITAGE CONSULTANTS

Key Action Taken By First Nations

Subsequently, each of the four First Nations provided a letter of non-objection for the proposed SE Green Line Project. A copy of the letters of non-objection can be found in Appendix B.

First Nation	Activity	Date
Blood	1. Initial meeting	March 31/16
	2. Prelim driving tour	July 27/16
	3. TK site visit	July 28/16
	4. Non-objection letter received	November 9/16
Piikani	1. Initial meeting	May 16/16
	2. Prelim driving tour	September 27/16
	3. TK site visit	September 28/16
	4. Non-objection letter received	October 25/16
Siksika	1. Initial meeting	March 31/16
	2. Prelim driving tour	May 25/16
	3. TK site visit	May 28/16
	4. Non-objection letter received	June 10/16
Tsuu T'ina	1. Initial meeting	April 8/16
	2. Prelim driving tour	December 1/16
	3. TK site visit	December 2/16
	4. Non-objection letter received	January 6/17

Suggestions for Potential Future Participation Provided by First Nations

Of the four First Nation communities consulted, only the Blood Tribe provided suggestions for potential future participation. Mike Oka brought up the possibility of moving the Jack White Goose Burial to the Piikani Nation. Norbert Blackwater Sr. suggested the construction of a permanent cairn at the St. Dunstan Residential School Site (EgPm-134).

Consultation Log

During the consultation process there was a considerable amount of communication between Bison and the four First Nations. The Records of Consultation (ROC) for each of the four First Nations can be found in Appendix C.

Consultation with each of the four First Nation communities identified by ACT, Siksika, Tsuu T'ina, Blood and Piikani, is now complete.

If you have any questions or comments, please contact me at [REDACTED]

Sincerely, [REDACTED]

Michelle Wickham, M.A.
Senior Project Archaeologist

MDW/ms
Enclosures

Cc: Andy Walsh
Michael Hinton



APPENDIX A

Notification Letter



Historical Services Ltd.

February 16, 2016

Project File: 4715-15-0024-001
OPaC HR Appl #: 006684847

Mr. Mike Oka
Consultation Coordinator
Tribal Government & External Affairs
Blood Tribe



Dear Mr. Oka:

Re: City of Calgary Green Line Project

The City of Calgary, in accordance with the Aboriginal Heritage Section of Alberta Culture and Tourism (ACT) would like to notify you of the City of Calgary's proposed Green Line project. The Green Line is a public transportation project originally planned to be constructed over 30 plus years, starting as a bus-only Transitway, with later conversion to Light Rail Transit (LRT). A July 2015 Federal funding announcement has accelerated the project timeline and could allow the Green Line to be built as LRT from the outset. Currently, 290,000 Calgarians are estimated to live along the proposed Green Line alignment, with thousands more working and visiting newly developing employment hubs and community activity centres. The Green Line is needed to serve these areas, particularly as forecasts indicate significant population growth for areas located along the route alignment. Calgary currently has a population of 1.19 million; projections forecast an increase to about 1.89 million over the next 30 years. The Green Line will add an additional 40 kilometres of track to the existing 59 kilometre LRT network. End-to-end, the route will connect North Pointe and Seton to downtown.

Preliminary design of the southeast leg of the Green Line was conducted throughout 2015. As part of this design phase, a Historical Resource Overview of the Green Line Southeast alignment was conducted. See attached maps of the Green Line Southeast alignment. The land through which the LRT is planned has been identified as having high potential to include Aboriginal Traditional Use Sites considered to be historic resources under the *Historical Resources Act*.

The southeast route alignment is within close proximity to a previously recorded archaeological site EgPm-134 (St. Dunstan Industrial School). St. Dunstan's Calgary Indian Industrial School was opened in 1896 by Lord Aberdeen and was operated until 1907 by the Anglican Church. The opening ceremony was attended by four Blackfoot Chiefs: Running Rabbit, White Pup, Big Road and Eagle Rib. In 1907, the school was closed due to low enrolment. From 1907 to 1916, the area was used by the Department of Defence to store ordnances; after that it was leased to Senator Patrick Burns and used by the Bow Valley Ranch feedlot operations. In 1916 the main school block burned down, but the principal's house, bakery and other out buildings remained standing until the late 1970s. Currently, the foundation of the main school block and other smaller features associated with the construction of the original school remain intact. There is no record of a cemetery being located on the site.



In the time since EgPm-134 was recorded as a Historic Resource, this area has undergone several Historical Resource Impact Assessments, a Historical Resource Impact Mitigation as well as several Treaty 7 First Nations ceremonies and site visits. A summary of the Historical Resource Assessments that have been conducted in the project area to date is provided below.

Date	Permit #	Type of assessment	Project	Findings
1978	78-005	HRIA (Historic Resource Impact Assessment)	Expansion of the existing Deerfoot Trail	<ol style="list-style-type: none"> 1. Original recording of EgPm-134 (St. Dunstan Industrial School) 2. The principal's house, bakery and several smaller outbuildings were still standing.
2009	09-042	HRIA	Expansion of the existing Glenmore-Deerfoot Interchange	<ol style="list-style-type: none"> 1. None of the original school was observed to be intact. 2. No evidence of an associated cemetery was identified.
2009	09-136	HRIA	Construction of the South Highfield Storm Pond	<ol style="list-style-type: none"> 1. Identified the intact foundation of the main school block as well as other smaller features associated with the construction and use of the original school. 2. No evidence of an associated cemetery was identified.
2015	15-066	HRIM Stage I (Historic Resource Impact Mitigation)	Bonnybrook Waste Water Treatment Plant Expansion	<ol style="list-style-type: none"> 1. Excavation revealed one cut sandstone foundation wall as well as a wall of bricks and part of a brick pad associated with the Main School Building. 2. Non-structural artifacts appear to relate to the Department of Defence occupation (cartridge casings, military uniform buttons)

In 2012 the City of Calgary Water Resources department began engagement for the construction of the South Highfield Stormwater Quality Retrofit Facility, the construction of stormwater retention ponds and the installation of a storm pipe (SWQR). This project is located between Deerfoot Trail and the Bow River, south of the Calf Robe Bridge in Calgary, AB. This is in the same general area as the southeast leg of the Green Line.

Over the course of the SWQR project a number of key actions were taken by each of the First Nations that the City of Calgary Water Resources department consulted with. These include site visits, site visit reports, letters of non-objection for the SWQR project and several traditional ceremonies. A summary of these actions is provided below.

First Nation	Key Actions (by First Nation)	Date
Siksika	1. Conducted Site Visit (Provided Site Visit Report)	October 9, 2012
	2. Provided Letter	June 11, 2013
	3. Conducted Ceremony	May 12, 2013
Piikani	1. Conducted Two Site Visits	August 12, 2012 & October 12, 2012
	2. Provided Site Visit Report	April 13, 2013
	3. Conducted Ceremony	December 28, 2013
	4. Provided Non-Objection Letter	April 28, 2014
Stoney	1. Letter of Acknowledgement	March 19, 2012
Blood Tribe	1. Conducted Site Visit	August 16, 2012
	2. Provided E-mail of Non-Objection	December 5, 2012
	3. Conducted Ceremony	April 26, 2013
Tsuu T'ina	1. Conducted Site Visit	August 16, 2012
	2. Provided Site Visit Report	May 28, 2014
	3. Conducted Ceremony	June 5, 2014

The exact timeline for the Green Line project is still to be confirmed pending additional funding announcements and confirmation of the project contracting strategy. The City is working to obtain Historical Resource Act clearance for the southeast leg of the Green Line prior to the end of 2016 to allow for potential site preparation work to begin in 2017. Overall schedule for the Green Line project will be confirmed later this year.

In accordance with ACT policy please review the enclosed information and let us know within 15 business days of receiving this information if the proposed City of Calgary Green Line project may adversely impact any traditional use sites. If you state that there are potential impacts, please specify in writing the site-specific concerns, the location of the potential adverse impacts and clearly identify the potential adverse impacts on the exercise of your traditional uses that require further discussion. Please also include reference to the Project File # (*Project File: 4715-15-0024-001*).

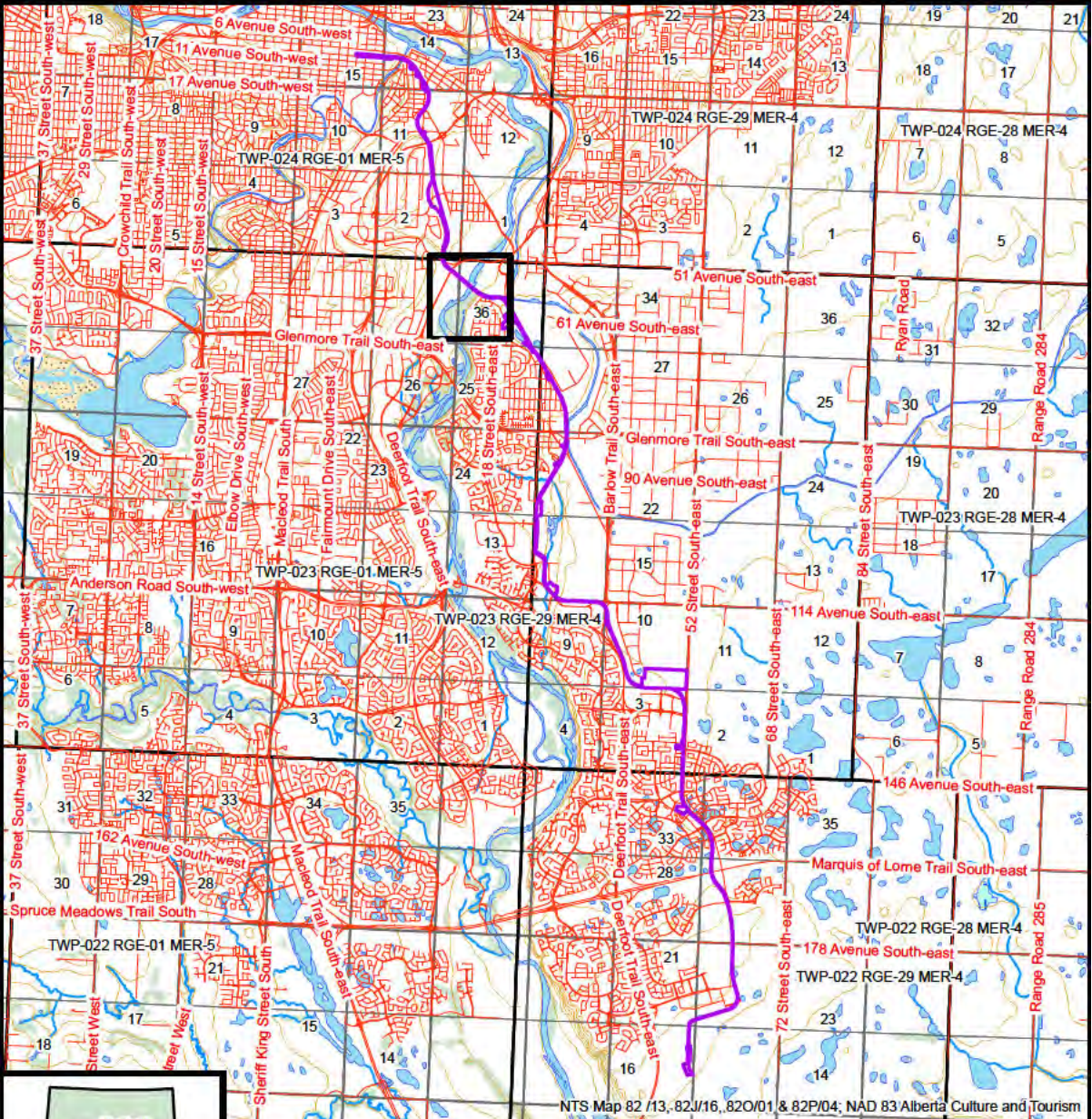
If you wish to meet to discuss the proposed City of Calgary Green Line project further, please contact me at [REDACTED] to arrange a meeting at your earliest convenience.

Sincerely,

[REDACTED]

Michelle Wickham, M.A.
Senior Project Archaeologist, Managing Partner
Bison Historical Services Ltd.

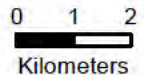
[REDACTED]



NTS Map 82 /13, 82J/16, 82O/01 & 82P/04; NAD 83 Alberta Culture and Tourism

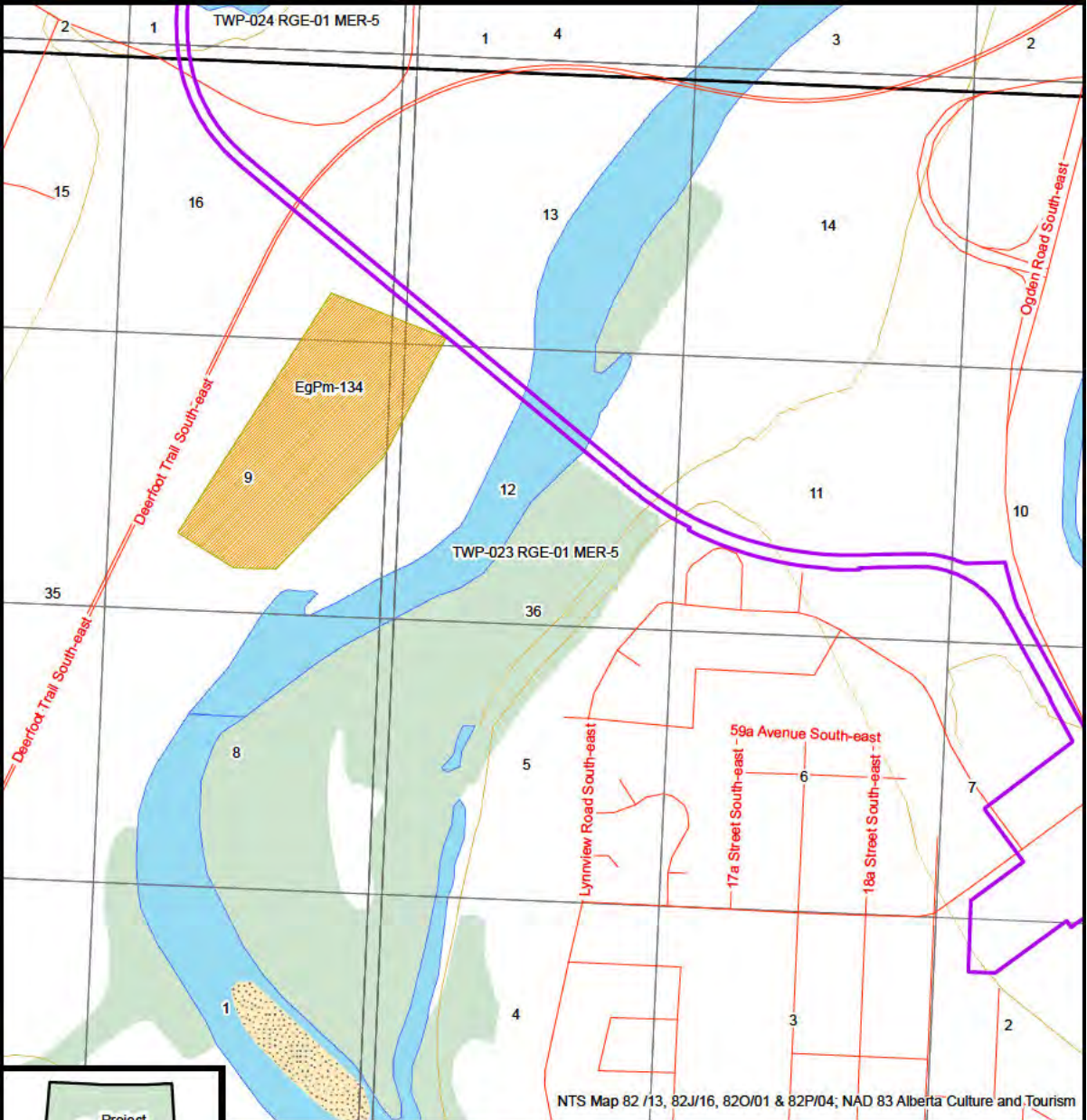


City of Calgary - Green Line Southeast Transitway (GL-SE) FNC



Legend

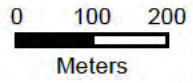
- Proposed Property Boundary
- Area of Concern



NTS Map 82 /13, 82J/16, 82O/01 & 82P/04; NAD 83 Alberta Culture and Tourism



City of Calgary - Green Line Southeast Transitway (GL-SE) FNC



Legend

 Proposed Right of Way



APPENDIX B

Non-Objection Letters



November 09 2016

Michelle Wickham M.A.
Senior Project Archaeologist / Partner
Bison Historical Services Ltd.



RE: Calgary Green Line FNC: 4715-15-0024-001

Please be advised that the Blood Tribe Tribal Government & External Affairs Traditional Land Use and Occupancy Study Office conducted a traditional land use assessment of the above noted project. No traditional sites were found on native prairie within the project right of way.

Accept this letter as a non-objection to the above noted projects. However, any decision including our non-objection, should not be construed or interpreted as abandoning, waiving or extinguishing our Aboriginal or Treaty Rights.

Should you have any questions or concerns, please feel free to contact our office at [redacted]



Regards,



**Mike Oka
Consultation Coordinator
Blood Tribe Tribal Government & External Affairs**



Siksika Consultation Office



2016-06-10

Ms. Michelle Wickham
Senior Archeologist/Partner
Bison Historical Services Ltd.



Dear Ms. Wickham:

RE: Project Name: City of Calgary Green Line

Siksika Consultation Office (SCO) was engaged to undertake a study of the noted project. It has completed a traditional use study (TUS) and site visit, in the proposed work area.

SCO has no concerns with, or objection to, the project at this time; however, if artifacts are uncovered during construction SCO needs to be notified immediately. Siksika Nation will always have concerns regarding possible impacts on our Traditional Use Rights and Heritage Sites as well as possible impacts to wildlife and their habitat and vegetation.

Sincerely,



Grant Gillies
for
Scotty Many Guns
Field Operations Manager

Tsuu Tina Nation Consultation ~ TUS



Tsuu T'ina Nation, Alberta T2W 6H6

December 21, 2016

Michelle Wickham
Bison Historical Services Ltd.

Dear Michelle Wickham:

Re: City of Calgary Green Line Project

The Tsuut'ina Nation Consultation/TUS team has completed a preliminary assessment regarding your project. We have concluded that at this time the Tsuu T'ina Nation does not have any concerns with your project. However, we reserve the right to amend our position in light of any new information that suggests your project may impact the Tsuu T'ina Nation's regarding Treaty rights or traditional use in the project area.

Further, we ask that you provide Tsuu T'ina with any information regarding new projects at the earliest stages so as to allow for our team to conduct preliminary assessments in a more efficient manner. We have attached a map of our Traditional Territories, and require that your company consult with us on any of these lands including notification on private lands.

We appreciate the efforts you have made towards maintaining a good relationship with the Tsuu Tina Nation and we look forward to future contact with your company.

Sincerely,

Violet Meguinis
A/TUS-Consultation Director
Tsuut'ina Nation

Piikani Nation Consultation



October 20, 2016

Michelle Wickham
Senior Project Archaeologist, Managing Partner
Bison Historical Services Ltd.



RE: City of Calgary Green Line Project

Dear Michelle Wickham,

In accordance with the Piikani Nation's Consultation Procedure and respecting the Aboriginal Consultation Office requirements, the Bison Historical Services Ltd. has engaged the Piikani Nation in consultation related to the above noted Project.

Regarding the Bison Historical Services Ltd. project the Piikani Consultation office completed a Traditional Land Use site visit on September 28, 2016 and the outcome of the site visit has not identified any site specific concern, therefore Piikani Nation does not object to the project noted.

Please be advised, if Bison Historical Services Ltd. does not meet their commitment to on-going issue resolution, the Piikani Nation maintains the right to withdraw this letter of non-objection.

If you should have any questions or need further information, please don't hesitate to contact our office at [REDACTED]

Sincerely,

[REDACTED]
Dustin Wolfe
Consultation Manger
PIIKANI NATION

APPENDIX C

Records of Consultation (ROC) and initial meeting minutes

Blood ribe
 C y of Caga yG ee L e Co su a o Log

Date and time of Contact / Message	Person Contacted	Contact information	Bison Employee	Phone/Email/Letter/Meeting and Location	Nature of First Contact/Message and/or information exchanged
Feb 16/16 @ 2 39	Mike Oka	[REDACTED]	MDW	outgoing email notification letter	Letter and Project Notification Package sent
Feb 16/16 @ 2 40	Mike Oka	[REDACTED]	MDW	incoming email read receipt	Letter and Project Notification Package received and acknowledged receipt of information letter
Feb 16/16 @ 2 58	Mike Oka	[REDACTED]	MDW	incoming email	Letter and Project Notification Package received and acknowledged receipt of information letter, accompanied by a note indicating they will be in touch soon.
Feb 17/16 @ 1 28	Mike Oka	[REDACTED]	MDW	hard copy of notification sent registered mail	Letter and Project Notification Package sent
February 22/16 @ 3 31	Mike Oka	[REDACTED]	MDW	incoming email	Request from Mike Oka to set up a meeting
March 7/16 @ 9 48	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW called MO to set up a meeting time and date. MDW left a voice message on his cell phone
March 17/16 @ 11 31	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW called MO, but MO's voice message inbox was full. MDW did not leave a message
March 17/16 @ 11 38	Mike Oka	[REDACTED]	MDW	outgoing email	MDW sent MO an e mail asking if he would be interested in joining a meeting on March 31 at 9 30am on the Siksika Nation, to discuss the City of Calgary Green Line Project as it relates to the St. Dunstan School.
March 17/16 @ 2 39	Mike Oka	[REDACTED]	MDW	incoming email	MO responded that a joint meeting with the Siksika Nation would work.
March 17/16 @ 3 19	Mike Oka	[REDACTED]	MDW	outgoing email	MDW sent an e mail indicating she was looking forward to meeting MO on March 31st.
March 30/16 @ 9 20	Mike Oka, Richard Right Hand	[REDACTED]	RRH	outgoing email	RRH sent MDW an e mail indicating that they would be in Calgary on the morning of March 31, and asked if we could have the meeting in our office.
March 30/16 @ 10 57	Mike Oka	[REDACTED]	MDW	incoming email	MO responded with an e mail stating that MO can meet in Calgary. ust let him know where and when. MO also indicated that he would have to go through his office for travel and accommodation.
March 30/16 @ 12 36	Mike Oka	[REDACTED]	MDW	outgoing email	MDW responded with an e mail stating that she was trying to reorganize with the City and would get back to MO by the end of the day.
March 30/16 @ 1 26	Mike Oka	[REDACTED]	MDW	incoming email	MO sent an e mail requesting confirmation for the meeting on the 31st.
March 30/16 @ 2 08	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW called MO and confirmed the meeting location and time. he meeting will be held at Hatch @ 1 00
March 30/16 @ 2 38	Mike Oka, Richard Right Hand, Scotty Manyguns, Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent a follow up e mail with the meeting location and time.
March 30/16 @ 3 24	Mike Oka, Shade	[REDACTED]	MDW	incoming email	MO sent an e mail confirming attendance at the meeting on March 31, also indicated that Shade would attend
March 31/16 @ 1 00	Richard Right Hand, Scotty Manyguns, Mike Oka, Shade	[REDACTED]	MDW	Meeting in the 15th floor boardroom at Hatch. Location is 840 7 Ave SW, Calgary.	Project background and information was shared by the City. MO and SM expressed concern over the potential for uncovering artifacts during construction, other sites in Calgary where artifacts were found (Edworthy Park), and expressed a desire to review the St. Dunstan School site, areas around proposed river crossings, any undisturbed natural areas along the alignment and the alignment past the Fort Calgary area. RRH expressed interest in getting First Nations communities involved and working on the Green Line or other City projects. he St. Dunstan School site was discussed. he City shared information about a recorded burial site. ack White Goose Flying was reburied after being removed from near the St. Dunstan School site in 1971. Both Siksika and the Blood would like to perform site inspections along the Green Line Southeast alignment. (See Attached Meeting Minutes)
April 8/16 @ 4 18pm	Richard Right Hand, Scotty Manyguns, Mike Oka, Shade	[REDACTED]	MDW	outgoing email	MDW sent an e mail with the minute meetings, an air photo with the location of the proposed alignment relative to the St. Dunstan school, an air photo with the 4C locations highlighted and all the information the project team has on ack White Goose Flying attached. Also included was a note that Ashley Robinson @ Hatch would be sending a link to an F P site so the Green Line Southeast drawings could be down loaded. he link to the Green Line website, that can be checked for updates and information on the project www.calgary.ca/greenline, and the Contact information for City Finance and Supply group o Jaibe Bridge, B.Mgmt, SCMP Senior Buyer, Sourcing Supply Management, Finance & Supply The City of Calgary T: 403.268.6961 F: 403.268.5523 Email: jaibe.bridge@calgary.ca
April 8/16 @ 11 45	Shade	[REDACTED]	MDW	incoming email	S sent MDW a preliminary tour budget for the project and asked where he could send the invoice for the meeting on the 31st.
April 8/16 @ 4 00	Shade	[REDACTED]	MDW	outgoing email	MDW responded that S could send the invoice to MDW and she would forward it to Evan Kortje at the City of Calgary
May 3/16 @ 11 26	Mike Oka	[REDACTED]	MDW	outgoing email	MDW called MO, no answer. MDW left a message requesting a call back.

May 3/16 @ 11 31	Mike Oka	[REDACTED]	MDW	incoming email	MO called MDW back. MDW indicated that the City will need to open a Purchasing Order for the site visit, and require the following billing information from you Vendor Name Contact Name Phone Number Email Address Billing Address MDW noted that given that some areas along the Green Line are located on private property, prior to your site visit could you please let us know what areas you would like to review as you may not be able to access the private lands.
May 3/16 @ 11 41	Mike Oka	[REDACTED]	MDW	outgoing email	MDW followed up the previous conversation with an e mail. MDW also added that an invoice for the initial meeting in Calgary was never sent to her.
May 4/16 @ 5 30	Mike Oka	[REDACTED]	MDW	incoming email	MO sent MDW the Vendor information needed to open a Purchase Order.
May 13/16 1 30	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW called MO to ask what areas the Blood were interested in looking at along the Greenline. MO responded that they would like to look at the river bottoms, the St. Dunstan's school site, where Jack White Goose Flying was buried and the new burial location. MDW asked if she could join them during this assessment, and MO said yes. He also indicated that he would try to coordinate the visit with the Siksika and possibly the Piikani.
une 29/16 @ 10 55	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW called MO. Mailbox was full.
une 29/16 @ 10 56	Mike Oka	[REDACTED]	MDW	incoming text message	MO sent MDW a text message indicating he would call her back.
une 29/16 @ 11 00	Mike Oka	[REDACTED]	MDW	outgoing text message	MDW sent MO a text message asking him to call her to set up a time to conduct the site visit.
uly 15/16 @ 2 19	Mike Oka, Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW asked MO and DW to confirm a date to conduct the site visit. MDW suggested a two day approach to the site visit. Day One MDW and EK would rent a van and drive the Green Line alignment. Day two a US would be undertaken.
uly 15/16 @ 5 46	Mike Oka	[REDACTED]	MDW	incoming email	read receipt for the above e mail
uly 19/16 @ 10 53	Shade, Mike Oka	[REDACTED]	MDW	incoming email	S asked if we were available on Monday and Tuesday. The Blood Sundance will be starting soon and the office will shut down for a couple of weeks.
uly 19/16 @ 2 49	Shade, Mike Oka	[REDACTED]	MDW	outgoing email	MDW responded that she would confirm with the City and get back to S.
uly 20/16 @ 11 51	Shade, Mike Oka	[REDACTED]	MDW	outgoing email	MDW asked if everyone could meet Monday afternoon at the Bison office in Calgary for the site visit. How many individuals will be attending, and how many are elders. And requested that everyone involved in the site visit wear steel toe boots and a high vis vest.
uly 20/16 @ 12 28	Shade, Mike Oka, Mike ailfeathers	[REDACTED]	MDW	incoming email	S responded with the budget he sent in April. And confirmed that it is for 3 techs, Mike Oka, Mike ailfeathers and Shade.
uly 21/16 @ 10 13	Shade, Mike Oka	[REDACTED]	MDW	outgoing email	MDW asked in the Blood tribe could meet at the Bison Calgary office at 1 30 on Monday for the prelim driving tour of the proposed line. Also provided the address to the Bison office.
uly 21/16 @ 11 19	Shade	[REDACTED]	MDW	incoming email	S asked if we would be able to meet Wednesday next week instead of Monday
uly 21/16 @ 12 46	Shade	[REDACTED]	MDW	outgoing email	MDW asked what time S would like to meet on Wednesday, and if the LU study would be conducted on Thursday.
uly 21/16 @ 1 15	Shade, Mike Oka	[REDACTED]	MDW	incoming email	S asked if we could meet at 1pm on Wednesday at the Bison office and do LU Thursday morning.
uly 21/16 @ 2 50	Shade, Mike Oka	[REDACTED]	MDW	outgoing email	MDW confirmed that 1pm on Wednesday would work.
uly 21/16 @ 6 53	Shade	[REDACTED]	MDW	incoming email	S thanked MDW for making the switch.
uly 26/16 @ 8 37	Mike Oka	[REDACTED]	MDW	incoming email	MO asked MDW to send him the address we are to meet at (the Bison office).
uly 27/16 @ 1 00 4 36	Mike Oka	[REDACTED]	MDW	Driving tour of the GL SE alignment / met at Bison Historical Services office	EK, Y G, MDW provided a driving tour of the GL SE alignment for several Blood tribe individuals Mike Oka, Shade, Mike ailfeathers, Angel. We stopped at the Jack White Goose Flying grave site and a prayer was said by MO. We also stopped at the St. Dunstan school site.
uly 28/16 @ 9 15	Mike Oka	[REDACTED]	MDW	outgoing text message	MDW sent MO a text message asking if they were still meeting at the St. Dunstan school site this morning.
uly 28/16 @ 9 17	Mike Oka	[REDACTED]	MDW	incoming text message	MO sent MDW a text message confirming they were on their way to the St. Dunstan location, and asked for directions.
uly 28/16 @ 9 18	Mike Oka	[REDACTED]	MDW	outgoing text message	MDW sent MO directions from Glenmore rail to the trail alongside Burnco.
uly 28/16 @ 9 21	Mike Oka	[REDACTED]	MDW	incoming text message	MO thanked MDW.
uly 28/16 @ 9 00 11 45	Mike Oka	[REDACTED]	MDW	K site visit	MDW met Angel, Mike Oka, Mike ailfeather, yson Shade, David Stripped Wolf and Norbert Blackwater Sr. at the St. Dunstan school location. they then followed MDW to the location where the GL SE crosses the Bow River and then the Elbow River. No concerns were voiced, MO indicated a Letter of No Concern would be issued.
August 30/16 @ 9 38	Mike Oka	[REDACTED]	MDW	outgoing text message	MDW asked MO when he would be sending a Letter of No Concern.
September 7/16 @ 12 19	Mike Oka	[REDACTED]	MDW	outgoing phone call	MDW left MO a message, requesting a call back.
September 7/16 @ 12 27	Mike ailfeather	[REDACTED]	MDW	incoming email	M returned MDW's phone call. MDW inquired as to when a Letter of No Concern would be sent.
October 20/16 @ 4 15	Mike Oka	[REDACTED]	MDW	outgoing email	MDW requested an estimated timeframe as to when the Letter of No Concern would be sent.

November 8/16 @10 32	Mike Oka	[REDACTED]	MDW	outgoing email	MDW sent an e mail to MO indicating that she still had not received a Letter of No Concern, and asked if he knew when she could expect the letter.
November 9/16 @ 11 11	Mike Oka, Shade, Mike ailfeathers	[REDACTED]	MDW	incoming email	MO sent a Non Objection letter to MDW
November 9/16 @ 2 55	Shade	[REDACTED]	MDW	outgoing email	MDW asked S to send an invoice so she could cut the Blood tribe a cheque for the LU study.
November 9/16 @ 5 35	Shade	[REDACTED]	MDW	incoming email	S responded that he could send an invoice tomorrow.
November 14/16 @ 9 36	Shade	[REDACTED]	MDW	outgoing email	MDW asked S if he had had a chance to create an invoice for the LS study.
November 14/16 @ 9 44	Shade	[REDACTED]	MDW	incoming email	S responded that he would work on it right away
November 14/16 @ 9 45	Shade	[REDACTED]	MDW	outgoing email	MDW thanked S.
November 14/16 @ 11 26	Shade, Mike Oka	[REDACTED]	MDW	incoming email	S sent the invoice for the LU project.



Green Line Southeast: First Nations Meeting w/ Siksika and Blood

Date: 2016 March 31

Time:
1:00-3:00 p.m.

Location: Hatch



Chair: Evan Kortje

Communications: Jennifer Blezard

Attendees		
City of Calgary – Transportation Infrastructure	Consultants: Hatch Bison	Tribal Government & External Affairs
Evan Kortje – Project Manager Julie Yepishina-Geller - Communications Jennifer Blezard - Communications	Nathan Higgins - Hatch Michelle Wickham - Bison	Mike Oka – Blood Tribe Angel Milton – Blood Tribe J.J. Shade – Blood Tribe Scotty Many Guns - Siksika Richard Right Hand - Siksika

MINUTES			
Item	Description	Action	Due
1.0	Project Background & Information		
	Evan and Nathan provided project background information and overview: <ul style="list-style-type: none"> - Green Line has been a part of Calgary’s transportation planning for a while. - First functional study for Green Line was in 1983. - Long term vision for Green Line is for full build out of Light Rail Transit (LRT) service from north central Calgary (Country Hills Blvd), south through the downtown core and then to the southeast community of Seton. Green Line alignment shown for both north and southeast legs. - Status of current design process for the Southeast and North legs of the Green Line discussed. - Overview of timeline and funding for the Green Line (federal, provincial and municipal). - Soonest construction can start is estimated as Q4 of 2018 - Nathan reviewed rollout plans of Green Line Southeast alignment: 4 St SE to Seton. 	INFO	
2.0	Discussion		
	<ul style="list-style-type: none"> - Mike Oka and Scotty Many Guns expressed concern regarding potential to uncover artifacts when conducting excavations during construction (i.e. Tunnel locations). - Discussion regarding other project sites where artifacts were found (i.e. Edworthy Park tipi rings). - Desire to review the St. Dunstan School site, areas around proposed river crossings, any undisturbed natural areas along the alignment, and 	INFO	

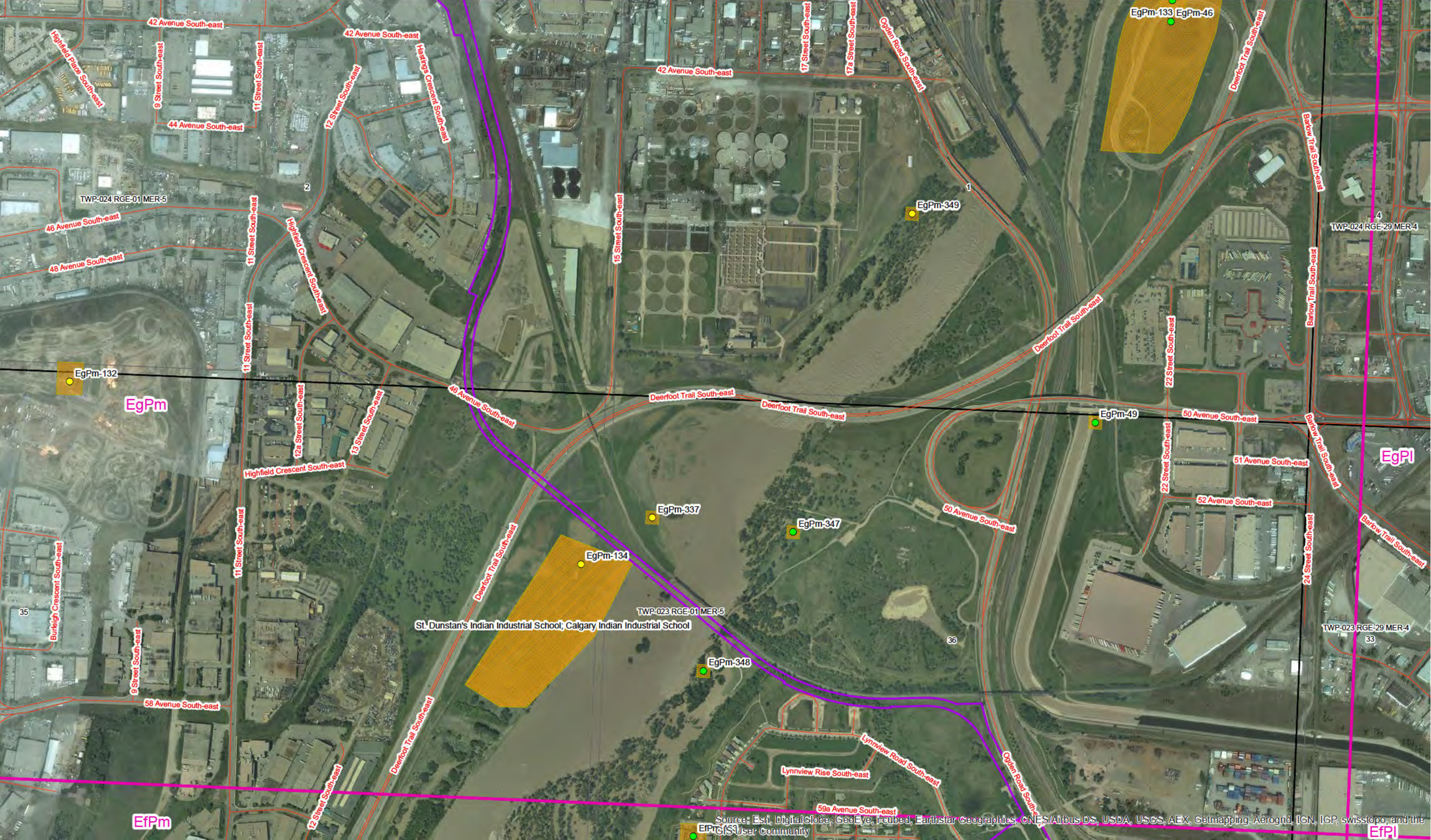


Green Line Southeast: First Nations Meeting w/ Siksika and Blood

	<p>alignment past the Fort Calgary area.</p> <ul style="list-style-type: none"> - River crossings and any river confluences are areas of particular importance for both First Nation communities. There is a desire to mitigate any sort of environmental/wild life/plant life/sediment disturbance that may be caused by construction. - Richard expressed interest in getting First Nation communities involved and working on the Green Line or other City projects. - Participation, relationship building, inclusion and meaningful consultation are key themes from the meeting. - St. Dunstan School site discussed. The City shared information about a recorded burial site. Jack White Goose Flying was reburied after being removed from near the St. Dunstan's School site in 1971 to the Queens Park Cemetery. Noted that the new burial site would likely be part of any planned site visit. - The time of the residential schools is still felt. The effects are long lasting. As well the Indian Act had far reaching consequences. Prior to 1960 you needed a permit to leave the reserve and there was a curfew strictly enforced. - Both Siksika and Blood would like to perform site inspections along the Green Line Southeast alignment. Site reviews potentially can be coordinated. City can facilitate a guided tour of the Green Line Southeast alignment as part of the site review if desired. - First Nation communities potentially would like to conduct a ceremony prior to construction starting and at the completion of the project. 		
3.0	Follow-up		
	Project team to provide Siksika and Blood First Nation communities with an electronic copy of the Green Line Southeast alignment drawings.	Michelle & Nathan	April 8, 2016
	Evan to provide Richard and Mike with a contact in the City's Finance and Supply group who can provide further information on the City's tendering processes and how to become a prequalified vendor.	Evan	April 8, 2016
	Siksika and Blood First Nations to review Green Line alignment maps to put together work plan for a site inspection. Budgets for site reviews will be sent through Michelle Wickham (Bison).	J.J. Shade & Scotty Many Guns	Week of April 25, 2016
	Once budgets have been received, organization of a site visit(s) to be discussed further. Scheduling will be worked through between The City and First Nations to an agreed upon time.	INFO	

Minutes Prepared By:	Jennifer Blezard
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The foregoing is considered a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the recorder immediately.



EgPm

EgPI

EfPm

EfPI

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the
EFPI User Community

42 Avenue South-east

42 Avenue South-east

42 Avenue South-east

EgPm-133 EgPm-46

TWP-024 RGE-01 MER-5

TWP-024 RGE-29 MER-4

TWP-023 RGE-01 MER-5

TWP-023 RGE-29 MER-4

St. Dunstan's Indian Industrial School, Calgary Indian Industrial School

EgPm-132

EgPm-399

EgPm-49

EgPm-337

EgPm-347

EgPm-134

EgPm-348

35

36

33

Highfield Place South-east

9 Street South-east

11 Street South-east

12 Street South-east

Highfield Crescent South-east

11 Street South-east

Highfield Crescent South-east

12a Street South-east

13 Street South-east

Highfield Crescent South-east

11 Street South-east

Deerfoot Trail South-east

Deerfoot Trail South-east

Deerfoot Trail South-east

Deerfoot Trail South-east

22 Street South-east

50 Avenue South-east

51 Avenue South-east

52 Avenue South-east

24 Street South-east

46 Avenue South-east

48 Avenue South-east

Burnigh Crescent South-east

58 Avenue South-east

12 Street South-east

Deerfoot Trail South-east

Lynnview Rise South-east

59a Avenue South-east

Open Road South-east

Lynnview Road South-east

Deerfoot Trail South-east

Barlow Trail South-east

Barlow Trail South-east

Barlow Trail South-east

Barlow Trail South-east

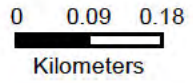
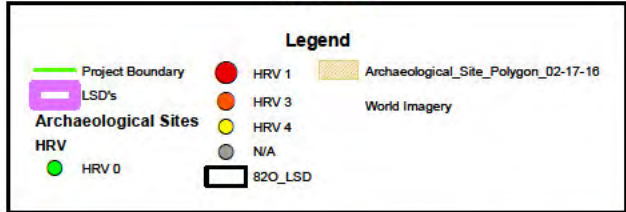
Barlow Trail South-east



Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 NTS Map 820/1; NAD 83 Alberta Culture



HRV 4C



Jack White Goose Flying

The late 19th century saw the establishment of a residential school system in Western Canada designed to "civilise" first nation people and teach them trades and skills necessary for assimilation into European based society. The subject of residential schools remains controversial and emotional. The scene of a number of alleged and actual abuses (both physical and cultural), the residential schools have had an impact on the shared histories of both first nations and white societies through to the present day.

In 1899, Jack White Goose Flying, a young student from the Peigan Nation near Brockett, Alberta, died of tuberculosis at the Calgary Indian Industrial School. His disease had progressed so quickly that there was no opportunity to send him home before his death (as was the practice) and he became the only person to die at the school. He was buried on a hill above the school overlooking the Bow River: his grave piled with stones and surrounded by a white picket fence. There his grave remained, outlasting the school at which he had been resident. The name of the young man buried in the grave, and his story, had been forgotten to most, but his grave still remained.



Jack White Goose Flying's grave in 1956

Glenbow Archives NA-5600-7939a (photo by Jack De Lorme)

Eventually the ever-growing City of Calgary began to encroach on the solitary grave on the prairies. On June 7th, 1956, newspaperman Tom Moore wrote an article about the grave in the *Calgary Albertan* in an attempt to re-discover the name of its inhabitant. At that point, as Moore points out in his article, power lines had been run through above the grave and a gravel pit had been dug within about 10 feet of the deteriorating picket fence. The grave, however, had always been respected by those working in the area and remained, for the most part, undisturbed.

People responding to Moore's article had not been able to identify the person resting in the grave (although one old timer thought his name was John White Goose) and the story of the grave remained mysterious. Eventually, Senator James Gladstone, another former student at the Calgary Indian Industrial School, brought the grave to the attention of his son-in-law, local historian Hugh Dempsey. Dempsey had been involved in an attempt to save some of the old school buildings and took it upon himself to maintain the grave and find out the history of its inhabitant. With the help of another former resident, Percy Creighton, Dempsey uncovered both Jack white goose flying's name and story. Dempsey painted the fence surrounding the grave and erected a new marker honouring the young student.

By 1968, industrial development in the area of Jack's grave (now designated as 58th Avenue & 11th Street S.E.) was proceeding at such a pace that the future of Jack White Goose Flying's grave seemed uncertain at best. Hugh Dempsey, along with his colleague Rev. David Carter, decided to make arrangements to have Jack's remains transferred to the Peigan First Nation Reserve, to take Jack home. Thinking that, after such a length of time, there would be few remains left, the two began excavation of the grave. They discovered, however, that the gravel in

the soil around the grave had provided enough drainage that Jack White Goose Flying's coffin remained intact. It became obvious to Dempsey and Carter that moving the grave would require a great deal more than had originally been thought. At the same time Chief Maurice McDougall and the Peigan Band Council decided against moving Jack White Goose Flying's remains to the cemetery on the reserve as none of Jack's relatives were still living in the area. The Band Council gave its permission to move Jack's remains to another existing cemetery and to donate the fence to Heritage Park (a local historical village).



The site of Jack White goose Flying's original grave as it appears today

By 1971, the destruction of Jack's grave was imminent. Dempsey and Carter, with the help of city Alderman John Ayer. Worked to secure the proper permits to have the remains moved to one of the city cemeteries. At the same time The City of Calgary Land Department was quite aware of the grave and the necessity to do something to either preserve it or move it to a cemetery. The Land Department purchased a plot and, on September 30, 1971, the remains of Jack White Goose Flying were re-interred in Queens Park Cemetery, with the Reverend David Carter officiating at the ceremony.

The story of the grave of Jack White Goose Flying speaks to our humanity. It shows how even in the City of Calgary, a city not known for its desire to preserve its past, a lonely, solitary grave can demand great respect from many people. When I was a teenager in the late 1960s, my friends and I used to "hang out" around Jack White Goose Flying's original grave. At that time, I was impressed by the fact that the grave had been cared for so well after all those years. I now know who was caring for it and the pains that were gone through to respect the person interred therein. Had this story happened today, the outcome may well have been different, and Jack White Goose Flying may have found a different final resting place but, none the less, the same respect would have been shown his grave over the years and he still would be remembered today.

Special thanks to:

- The City of Calgary Cemetery Office (as always)

- The City of Calgary Archives (who, quite accidentally, came across a file on the subject)
- The Glenbow Archives
- Hugh Dempsey and David Carter for filling in some of the details



The final resting place of Jack White Goose Flying

This page dedicated to the memory of Barry Hilton Nesbitt who first showed me the original burial site and who now rests in an unmarked grave not far from Jack White Goose Flying.

Return to [Don's Cemetery Page](#)

Siksika Nation
 C y of Ca ga y G ee L e Co su a o Log

Date and time of Contact / Message	Person Contacted	Contact information	Bison Employee	Phone/Phone/Email/Letter/Meeting and Location	Nature of First Contact/Message and/or Information exchanged
Feb 16/16 @ 3 04	Richard Right Hand	[REDACTED]	MDW	outgoing email notification letter	Letter and Project Notification Package sent
Feb 16/16 @ 3 09	Richard Right Hand	[REDACTED]	MDW	incoming email read receipt	Letter and Project Notification Package received and acknowledged receipt of information letter, accompanied by a note requesting dates to meet and discuss the proposed project.
Feb 17/16 @ 1 28	Richard Right Hand	[REDACTED]	MDW	hard copy of notification sent registered mail	Letter and Project Notification Package sent hard copy
Feb 19/16 @ 1 43	Richard Right Hand	[REDACTED]	MDW	outgoing email	e mail sent by MDW to RRH with dates and times to schedule a meeting in Calgary at the 1 building offices
Feb 19/16 @ 1 44	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH responded that he would get back to MDW on Monday Feb 22 regarding meeting times and dates.
Feb 19/16 @ 1 52	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded sounds good, enjoy the weekend
Feb 25/16 @ 10 30	Richard Right Hand	[REDACTED]	MDW	outgoing phone call	MDW left a voice message on RRH phone asking about meeting times and dates.
Feb 25/16 @ 10 36	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW followed up her phone call with an e mail regarding setting up a meeting time and date.
Feb 25/16 @ 10 53	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH responded that Wednesday March 3rd would work.
Feb 26/16 @ 2 47	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded that the City was available Wednesday afternoon, and would have to check on the morning. MDW also asked if RRH could come to Calgary for the meeting.
Feb 29/16 @ 9 12	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded that the City was available to meet on Wednesday between 2 4pm. If that time doesn't work to please provide a couple of dates and time at least a week out that would work.
Feb 29/16 @ 9 23	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH asked if we could meet in the morning around 10 am.
Feb 29/16 @ 9 35	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW asked where he would be able to meet, in Calgary or Siksika
Feb 29/16 @ 9 38	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH indicated that he had another meeting in Calgary, so he would drive up to meet us.
Feb 29/16 @ 9 45	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW indicated that she would check with the client and see if Wednesday March the 3rd at 10 00 am would work for a meeting.
Feb 29/16 @ 5 36	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded that her client was not able to mobilize the key people in time for the Wednesday morning meeting time. MDW asked that Richard send her several dates and times that RRH would be available to meet.
March 7/16 @ 9 49	Richard Right Hand	[REDACTED]	MDW	outgoing phone call	MDW called RRH to discuss a meeting time and date. RRH indicated he was available to meet on March 30th in the am. MDW indicated that she would try to schedule all interested parties for that date. MDW also asked if the Blood, Piikani and suu 'ina could attend this meeting. RRH said that shouldn't be a problem. MDW asked about a meeting location, RRH asked that we confirm the date first and then try to work out a meeting place, but maybe on the Siksika Nation.
March 14/16 @11 51	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent Richard an e mail indicating that the City was not available to meet on March 30th. MDW asked if RRH was available to meet on the 31st at Siksika.
March 14/16 @11 55	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH responded that the 31st of March would work and indicated that MDW should set it up.
March 16/16 @ 3 18	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent RRH an email asking if we could schedule a meeting for March 31 @ 9 30am.
March 17/16 @ 10 20	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH confirmed that the time and date would work and asked if MDW had contacted the Blood and Piikani to join the meeting.
March 17/16 @ 10 33	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded that she was waiting for a meeting confirmation before contacting the Blood and Piikani.
March 17/16 @ 3 22	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent RRH an e mail indicating that the Blood (Mike Oka) would be joining our meeting on March 31st.
March 21/16 @ 9 48	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent RRH an e mail indicating that both the Blood (Mike Oka) and the Piikani (Dustin Wolfe) would be joining our meeting on March 31st. MDW also requested confirmation on the meeting location.
March 24/16 @ 8 39	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent RRH an e mail indicating that both the Blood (Mike Oka) and the Piikani (Dustin Wolfe) would be joining our meeting on March 31st. MDW also requested confirmation on the meeting location.
March 29/16 @ 12 10	Richard Right Hand	[REDACTED]		outgoing phone call	MDW called RRH to confirm the meeting location on March 31st. RRH indicated that he had to move some meetings around and he would get back to MDW later on in the day.
March 30/16 @ 9 05 am	Richard Right Hand	[REDACTED]		outgoing phone call	MDW left a voice message for RRH, requesting confirmation for the meeting on March 31 at 9 30am.
March 30/16 @ 9 18am	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW sent RRH an e mail follow up requesting confirmation on the scheduled meeting on March 31 at 9 30am
March 30/16 @ 9 20am	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH sent MDW an e mail indicating that they would be in Calgary on the morning of March 31, and asked if the meeting would be held in the Bison office.
March 30/16 @ 9 25am	Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW responded with an e mail indicating she would have to check and asked what time they would be in Calgary.
March 30/16 @ 9 27	Richard Right Hand	[REDACTED]	MDW	incoming email	RRH indicated that they would be in Calgary around 1 00.
March 30/16 @ 2 38	Mike Oka, Richard Right Hand, Scotty Manyguns, Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent an follow up e mail with the meeting location and time.

March 31/16 @ 1 00 3 00	Richard Right Hand, Scotty Manyguns, Mike Oka, . Shade	[REDACTED]	MDW	Meeting in the 15th floor boardroom at Hatch. Location is 840 7 Ave SW, Calgary.	Project background and information was shared by the City. Mike Oka and Scotty Manyguns expressed concern over the potential for uncovering artifacts during construction, other sites in Calgary where artifacts were found (Edworthy Park), and expressed a desire to review the St. Dunstan School site, areas around proposed river crossings, any undisturbed natural areas along the alignment and the alignment past the Fort Calgary area. Richard Righthand expressed interest in getting First Nations communities involved and working on the Green Line or other City projects. he St. Dunstan School site was discussed. he City shared information about a recorded burial site. ack White Goose Flying was reburied after being removed from near the St. Dunstan School site in 1971. Both Siksika and the Blood would like to perform site inspections along the Green Line Southeast alignment. (See Attached Meeting Minutes)
April 8/16 @ 4 18	Richard Right Hand, Scotty Manyguns, Mike Oka, . Shade	[REDACTED]	MDW	outgoing email	MDW sent an e mail with the minute meetings, an air photo with the location of the proposed alignment relative to the St. Dunstan school, an air photo with the 4C locations highlighted and all the information the project team has on ack White Goose Flying attached. Also included was a note that Ashley Robinson @ Hatch would be sending a link to an F P site so the Green Line Southeast drawings could be down loaded. he link to the Green Line website, that can be checked for updates and information on the project www.calgary.ca/Green Line, and the Contact information for City Finance and Supply group o Jaibe Bridge, B.Mgmt, SCMP Senior Buyer, Sourcing Supply Management, Finance & Supply The City of Calgary T: 403.268.6961 F: 403.268.5523 Email: jaibe.bridge@calgary.ca
April 12/16 @ 11 28	Scotty Manyguns	[REDACTED]	MDW	incoming phone call	Scotty Manyguns called to see if MDW had received a budget from Siksika and requested that MDW use Scotty Manyguns as the main contact and cc Richard Right Hand. MDW indicated that she had not received a copy of the Siksika's proposed site visit budget.
April 13/16 @ 7 48am	Erin Solway	[REDACTED]	MDW	incoming email	Erin forwarded the LU budget as per Scotty Manyguns' direction, please see the attached budget for a rdational Land Use Study for the City of Calgary Green Line Project. She indicated that if there were any questions, to please contact Scotty.
April 13/16 @ 8 30	Scotty Manyguns	[REDACTED]	MDW	incoming phone call	Scotty Manyguns called to confirm if MDW had received a budget. MDW confirmed that she had received the budget and indicated that she had not had a chance to look it over yet.
April 18/16 @ 10 30	Scotty Manyguns	[REDACTED]	MDW	incoming phone call	Scotty Manyguns called to discuss the budget and a site visit. MDW confirmed that she had forwarded the budget on to the City of Calgary for approval, but had not heard back from the City yet.
May 3/16 @ 11 23	Scotty Manyguns	[REDACTED]	MDW	outgoing phone call	MDW called SM, no answer. MDW left a message requesting a call back.
May 3/16 @ 2 02	Scotty Manyguns	[REDACTED]	MDW	incoming phone call	SM returned MDW's call. MDW confirmed that the City had approved their budget, but also needed to know which areas they were going to look at as access may be an issue.
May 3/16 @ 2 12	Scotty Manyguns, Richard Right Hand	[REDACTED]	MDW	outgoing email	MDW followed up the previous phone conversation with an e mail. he City had approved the budget, and would open a Purchasing Order for the work. Given that some areas along the Green Line are located on private property, the City asked for specific areas to be reviewed prior to the site visit as access to some of the private lands might not be possible.
May 17/16 @ 3 08	Scotty Manyguns	[REDACTED]	MDW	outgoing phone call	MDW called SM to discuss a preliminary site visit and the potential of conducting the site visit with the Blood.
May 20/16 @ 9 20	Scotty Manyguns	[REDACTED]	MDW	outgoing phone call	MDW left a message for SM, regarding picking a date for the preliminary site visit.
May 20/16 @ 2 31	Scotty Manyguns	[REDACTED]	MDW	incoming phone call	SM returned MDW's call. SM suggested May 25th as a good date for the preliminary site tour.
May 24/16 @ 9 59	Scotty Manyguns	[REDACTED]	MDW	outgoing text message	MDW sent SM a text confirming the 9 30 meeting time at the Bison office, the number of attendees and to ensure everyone had the proper PPE.
May 24/16 @ 7 22	Scotty Manyguns	[REDACTED]	MDW	incoming text message	SM confirmed the meeting time.
May 25/16 @ 9 30 12 30	Scotty Manyguns	[REDACTED]	MDW	Driving tour of the GL alignment / met at Bison Historical Services office	EK, MDW provided a driving tour of the GL SE alignment for three Siksika Nation individuals. We stopped at the ack White Goose Flying grave site and a prayer was said by MO. We also stopped at the St. Dunstan school site.
May 26/16 @ 6 09	Erin Solway	[REDACTED]	MDW	incoming email	ES sent a revised US Invoice #161b. She removed the Drone charge.
une 9/16 @ 3 31	Scotty Manyguns	[REDACTED]	MDW	outgoing phone call	MDW called SM Re Letter of No Concern. SM had indicated the letter would be ready by une 7/16. SM said he would check and MDW should have it soon.
une 10/16 @ 11 58	Grant Gillies	[REDACTED]	MDW	incoming email	GG sent a copy of the No Objection Letter.
une 23/16 @ 11 48	Scotty Manyguns	[REDACTED]	MDW	outgoing text message	MDW sent SM a text message indicating he could come by the Bison Historical offices and pick up a cheque on une 24/16.

suu 'ina Nation
City of Calgary Green Line Consultation Log

Date and Time of Contact / Message	Person Contacted	Contact information	Bison Employee	Phone/Phone/Email/Letter/Meeting and Location	Nature of First Contact/Message and/or Information exchanged
Feb 16/16 @ 3 10pm	onya Crowchild	[REDACTED]	MDW	outgoing email notification letter	Letter and Project Notification Package sent
Feb 16/16 @ 3 45	onya Crowchild	[REDACTED]	MDW	incoming email read receipt	Letter and Project Notification Package received and acknowledged receipt of information letter.
Feb 17/16 @ 1 28	onya Crowchild	[REDACTED]	MDW	hard copy of notification sent registered mail	Letter and Project Notification Package sent
March 7/16 @ 12 01	ustin Onespot	[REDACTED]	MDW	incoming phone call	O called to set up a meeting time, MDW asked if the suu 'ina would be interested in a joint meeting with the Siksika, Blood and the Piikani. O indicated that he would have to ask his supervisor.
March 8/16 @ 1 59	ustin Onespot	[REDACTED]	MDW	incoming phone call	O called and left a message. O indicated that the suu 'ina would like a private meeting with the City.
March 9/16 @ 9 34	Richard and Declan	[REDACTED]	MDW	outgoing phone call	MDW called and left a message indicating that she had contacted the City regarding setting a time and location for a private meeting with the suu 'ina
March 11/16 11 41	David Onespot	[REDACTED]	MDW	incoming e mail	DO sent an e mail indicating that the suu 'ina had done the field assessment and ceremony for the Dunstan School and nothing else, and that the current file does not cover that file. What the City is proposing is a totally different project and we need to set up a meeting to discuss this file.
March 14/16 3 03	David Onespot	[REDACTED]	MDW	outgoing e mail	MDW responded that she had been discussing this file with ustin (ustin Onespot) and would try to set up a meeting in April to discuss this project.
March 14/16 @ 2 55	ustin Onespot	[REDACTED]	MDW	incoming phone call	O called to see if any progress had been made with a meeting time. O indicated that all of April (except April 4th) was free for the suu 'ina.
April 8/16 @ 10 30 11 30	ustin Onespot, onya Crowchild	[REDACTED]	MDW	Meeting at the suu ina ribal Administration building	Project background and information was shared by the City. onya Crowchild had some concerns about environmental impacts. Evan conveyed that the current LR system uses wind generated electricity to power the C rain systems. Nathan communicated that he City will continue to draw from wind power and investigate other sources of renewable energy. he use of green technology (i.e. wind, solar) is a big concern and there are ongoing discussions with the province to expand the wind power capabilities in southern Alberta. A biophysical impact assessment has been completed along the southeast alignment reviewing the impact to wildlife, vegetation and fish habitats. Information from this assessment can be shared with suu 'ina if desired. David Onespot had a question about the information included in the project notification letter sent to suu 'ina. Letter identified past Historical Resource Assessments that have taken place at the St. Dunstan's School site and the engagement that was conducted with First Nations communities for the Water Resources storm pond project. he project team clarified that this information was included to provide a sense of history and does not preclude further/future site visits to any sites along the Green Line route alignment. onya indicated that the field team and administrative team with suu 'ina will develop a budget; ustin Onespot will develop the budget. A field team from suu 'ina would go out for the site visits which he City can accompany on. Any reports generated by the field team from site visits will be sent to onya's executive director and from there, if everything is fine, a letter of no concern will be issued. (See Attached Meeting Minutes)
April 8/16 @ 4 23	ustin Onespot, onya Crowchild	[REDACTED]	MDW	outgoing e mail	MDW sent an e mail indicating that Ashley Robinson @ Hatch would be sending a link to an F P site so the Green Line Southeast drawings could be downloaded. Also included was the link to the Green Line website, that can be checked for updates and information on the project www.calgary.ca/GreenLine
April 19/16 @ 6 45pm	David Onespot, onya Crowchild	[REDACTED]	MDW	outgoing e mail	MDW sent DO and C a copy of the meeting minutes and asked if O had looked at the alignment plans and created a budget for a site visit.
April 25/16 @ 1 04	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW asked in O had received the alignment plans and if he was able to work up a site visit budget. O indicated that his e mail had not been working for the past 2 weeks. MDW indicated that she would resend him the alignment plans to his personal e mail address, and asked if he would resend the budget.
April 25/16 @ 1 41	ustin Onespot	[REDACTED]	MDW	outgoing e mail	MDW tried to send O the alignment plans, but even compressed they were too big for his personal e mail.
April 25/16 @ 2 08	ustin Onespot	[REDACTED]	MDW	outgoing e mail	MDW sent O an e mail indicating that she could not send the alignment plans as they were too big.
April 29/16 @ 12 08	ustin Onespot	[REDACTED]	MDW	outgoing e mail	MDW sent O an e mails asking if he had put together a budget for a site visit.
May 3/16 @ 10 44	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW tried calling O, there is no mailbox so was unable to leave a message.
May 9/16 1 53	David Onespot	[REDACTED]	B (City of Calgary)	outgoing e mail	O sent B the proposed site assessment budget
une 6/16 @ 11 01	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW tried calling O Re three days for a site visit. MDW left a voice message.
une 9/16 @ 3 29	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW called O and left a message to call her back.
une 22/16 @ 3 22	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW called O and left a message to call her back.
une 29/16 @ 10 51	ustin Onespot	[REDACTED]	MDW	outgoing phone call	MDW talked to O, and asked him to justify the 3 days on the budget. O indicated that they would have to have a ceremony if they found anything. O indicated that he would call DO and discuss revising the budget.
uly 4/16 @ 12 24	ustin Onespot	[REDACTED]	MDW	incoming e mail	O revised the budget to switch the Proposed Budget to two days instead of three but he indicated that if the Site Assessment were to take longer than the two days, they would bill us for the extended time. his is due to the fact that the suu ina Consultation team likes to conduct "a very thorough As Possible" assessment during their site visits/Site Assessments, and that they like to do them on foot and not from a vehicle.
uly 4/16 @ 2 04	ustin Onespot	[REDACTED]	MDW	outgoing e mail	MDW thanked O and indicated that she would be forwarding the revised budget and caveat to the client.
September 8/16 @ 5 15	ustin Onespot	[REDACTED]	DZ (Hatch)	outgoing e mail	Derrick Zang (DZ @ Hatch) sent O the alignment plans.

September 9/16 @9 30	ustin Onespot		MDW	outgoing phone call	MDW called O and asked if he had received the alignment plans. O indicated that he had received the plans, but had not looked at them yet. He indicated that he would call MDW back.
Oct 21/16	ustin Onespot		SG	plan drop off	Sean Goldsmith dropped off large scale roll out plans of the Green Line project to the suu 'ina office
November 8/16 @ 10 34	ustin Onespot		MDW	outgoing phone call	MDW called O to confirm receipt of the large roll out plans of the Green Line route. ustin had not seen them, and was going to check.
November 8/16 10 40	ustin Onespot		MDW	outgoing text message	MDW sent O a text message requesting confirmation of receipt of the maps
November 8/16 @ 11 07	ustin Onespot		MDW	incoming text message	O replied that C had them
November 8/16 @ 11 13	ustin Onespot		MDW	incoming text message	O sent a text message asking where are we at with this project
November 8/16 @ 11 18	ustin Onespot		MDW	outgoing text message	MDW replied that she had thought once O had a chance to look over the large scale roll out maps then he could confirm the areas that he would like to assess.
November 8/16 @ 11 25	ustin Onespot		MDW	incoming text message	O suggested we have a meeting to discuss this with the large maps.
November 8/16 @ 11 37	ustin Onespot		MDW	outgoing text message	MDW agreed, but said she was not available until after the 17th.
November 8/16 @ 11 46	ustin Onespot		MDW	incoming text message	O indicated that he was available any time after December 15th.
November 8/16 @ 11 58	ustin Onespot		MDW	outgoing text message	MDW indicated that she had to coordinate with the City project manager (EK .
November 8/16 @ 12 04	ustin Onespot		MDW	incoming text message	O responded that that sounded like a plan.
November 8/16 @ 4 27	ustin Onespot		MDW	outgoing text message	MDW responded that herself and EK were available to meet on Monday Nov 21 between 1 4 or all day on Wednesday Nov 23.
November 8/16 @ 4 30	ustin Onespot		MDW	incoming text message	O responded that Nov 23 at 1 30 would be a good time to meet. And indicated that DO and C would be available to meet as well.
November 8/16 @ 4 32	ustin Onespot		MDW	outgoing text message	MDW responded that she would see O then.
November 8/16 @ 4 45	ustin Onespot		MDW	incoming text message	O responded "no problem".
November 23/16 @ 10 51	ustin Onespot		MDW	outgoing text message	MDW sent O a text asking for confirmation on the meeting at 1 30, she did not receive confirmation.
November 23/16 @ 1 30 1 45	onya Crowchild		MDW	Meeting at the suu 'ina admin building	MDW and EK had set up a meeting with O to discuss the alignment, however when they arrived at the administration building C indicated that O was no longer working with the consultation office and that Declan Starlight (DS) would be taking over.
November 23/16 @ 1 34	onya Crowchild		MDW	outgoing e mail	MDW sent C a copy of the revised budget.
November 23/16 @3 10	onya Crowchild		MDW	outgoing e mail	MDW sent C an e mail with her contact information and asked if C could forward it on to DS.
November 24/16 @10 07	Declan Starlight		MDW	incoming e mail	DS took the project over from O, however DS could not find the project file and requested MDW send him information on the proposed project.
November 24/16 @ 10 20	Declan Starlight		MDW	outgoing e mail	MDW attached the original Notification Letter for this project, the Meeting Minutes and the budget O had given us, Bison Historical sent over 4 large roll out maps of the project footprint, onya mentioned that they should be in ustin's office.
November 28/16 @ 4 11	Declan Starlight		MDW	incoming e mail	DS sent MDW an e mail asking if we could do the site our toward the end of the week.
November 28/16 @ 7 23	Declan Starlight		MDW	outgoing e mail	MDW asked if DS was interested in a driving tour of the route on one day and then conducting the K study on the following day MDW indicated that she was available on hursday and Friday this week, but would have to check with the City representative (Evan) on his availability to conduct a tour. MDW also asked DS to confirm what you had in mind for the two days and MDW will coordinate with the City.
November 29/16 @ 8 35	Declan Starlight		MDW	incoming e mail	DS responded that he thought a tour would work well.
November 29/16 @10 03	Declan Starlight		MDW	outgoing e mail	MDW indicated that a hursday tour would work, asked if O could meet at the Bison office and to confirm the number of individuals who would be attending.
November 29/16 @ 12 32	Declan Starlight		MDW	incoming e mail	DS indicated that there would be three individuals for the tour, and a 9 30 meeting time worked for them.
December 1/16 @ 9 22	Declan Starlight		MDW	outgoing text message	MDW sent DS a text indicating that Bison had recently moved offices, the sign is still up at the old office, but we moved right next door.
December 1/16 @ 9 30 12 30	Declan Starlight		MDW	Driving tour of the GL alignment / met at Bison Historical Services office	EK, and MDW provided a driving tour of the GL SE alignment for DS and Mike. We drove the centre line of the entire GL SE alignment.
December 1/16 @ 1 41	Declan Starlight		MDW	outgoing e mail	MDW indicated that she had asked the GIS staff at Bison Historical to put together Shape files of the project for the suu 'ina GIS department, and asked in DS could confirm what he would be using the shape files for.
December 2/16 @ 9 06	Declan Starlight		MDW	incoming text message	DS sent MDW a heads up they were running a bit late.
December 2/16 @9 21	Declan Starlight		MDW	outgoing text message	MDW replied "no problem"
December 2/16 @ 9 30 12 30	Declan Starlight		SP	K site visit	DS and Mike met (Sean Pickering) SP at the Bison Historical office, SP drove them to the location where the GL SE crosses the Bow River and then the Elbow River and concluded the tour at the St. Dunstan school location. No concerns were voiced, DS indicated a Letter of No Concern would be issued.
December 2/16 @2 36	Declan Starlight		MDW	incoming e mail	DS indicated that he uses the shape files to cross reference with their own work and as a visual reference in case they need to give an update to our leadership.
December 20/16 @ 11 44	Declan Starlight		MDW	outgoing e mail	MDW sent an e mail re our phone conversation; confirming that a Letter of No Concern will be issued by the suu 'ina tomorrow for the City of Calgary Green Line (SE Project.
December 28/16 @ 9 54	Declan Starlight		MDW	outgoing e mail	MDW sent DS an e mail "I understand you are out of the office until an 2nd; I just wanted to drop you a note to let you know we have not yet received the Letter of No Concern from the suu 'ina regarding the City of Calgary Green Line Project."
anuary 5/17 @ 9 29	Declan Starlight		MDW	outgoing e mail	MDW asked DS to provide her with a timeframe for when the Letter of No Concern from the suu 'ina, regarding the City of Calgary Green Line project, could be expected.
anuary 6/17 @9 54	Declan Starlight		MDW	incoming e mail	DS sent a signed Letter of No Concern.
anuary 13/17 @ 10 59	Declan Starlight		MDW	incoming e mail	DS sent a note asking when he could expect payment for the site assessment.
anuary 13/16 @ 11 19	Declan Starlight		MDW	outgoing e mail	MDW responded that she had been out of the office with the flu and that the book keeper was out until an 18, but a cheque would be cut as soon as the book keeper was back in the office.
anuary 13/16 @ 11 49	Declan Starlight		MDW	incoming e mail	DS thanked MDW for getting back to him.
anuary 18/17 @ 2 54	Declan Starlight		MDW	outgoing text message	MDW asked DS who to make the cheque out to he suu 'ina Nation Consultation
anuary 20/17 @ 8 21	Declan Starlight		MDW	incoming text message	DS responded that yes, that was correct.
anuary 20/16 @ 8 21	Declan Starlight		MDW	outgoing text message	MDW responded that she would drop it off on Monday.



Green Line Southeast: First Nations Meeting w/ Tsuu T'ina

Date: 2016 April 8

Time:
10:30-11:30 a.m.

Location: Tsuu T'ina
Administration Office
[Redacted]

Chair: Evan Kortje

Communications: Jennifer Blezard

Attendees		
City of Calgary – Transportation Infrastructure	Consultants: Hatch Bison	Consultation Director
Evan Kortje – Project Manager Jennifer Blezard – Communications Serena Shane – Engage Resource Unit	Nathan Higgins - Hatch Michelle Wickham - Bison	Tonya Crowchild – Tsuu T'ina David One Spot – Tsuu T'ina

MINUTES			
Item	Description	Action	Due
1.0	Project Background & Information		
	Evan and Nathan provided project background information and overview: <ul style="list-style-type: none"> - Green Line has been a part of Calgary's transportation planning for a while. - First functional study for Green Line was in 1983. - Long term vision for Green Line is for full build out of Light Rail Transit (LRT) service from north central Calgary (Country Hills Blvd), south through the downtown core and then to the southeast community of Seton. Green Line alignment shown for both north and southeast legs. - Status of current design process for the Southeast and North legs of the Green Line discussed. - Overview of timeline and funding for the Green Line (federal, provincial and municipal). - Soonest construction can start is estimated as Q4 of 2018 - Nathan reviewed rollout plans of Green Line Southeast alignment: 4 St SE to Seton. 	INFO	
2.0	Discussion		
	<ul style="list-style-type: none"> - Tonya Crowchild had some concerns about environmental impacts. Evan conveyed that currently LRT is powered by wind and Nathan has communicated that The City will continue to draw from wind power. The use of green technology (i.e. wind, solar) is a big concern and there are ongoing discussions with the province to expand the wind power capabilities in southern Alberta. A bio impact assessment has been completed covering fisheries, wild life and this assessment can be 	INFO	



Green Line Southeast: First Nations Meeting w/ Tsuu T'ina

	<p>shared with Tsuu T'ina if desired. This assessment is typically part of pre design and not shared with the public but can be accessed through a FOIP request. Environmental remediation is currently under way.</p> <ul style="list-style-type: none"> - David One Spot had a question about the letters included in the package sent to Tsuu T'ina. A letter stating a visit has taken place at St. Dunstan's School already was in the material. The project team clarified that it was included to provide a sense of history and does not preclude further/future site visits to any sites along the Green Line route alignment. - Tonya indicated that the field team and administrative team with Tsuu T'ina will develop a budget; Justin One Spot will develop the budget. A field team from Tsuu T'ina would go out for the site visits which The City can accompany on. Any reports generated by the field team from site visits will be send to Tonya's executive director and from there, if everything is fine, a letter of no concern will be issued. 		
3.0	Follow-up		
	Evan/Nathan to send PDF of maps before or by Monday morning	Evan Kortje & Nathan Higgins	April 11, 2016
	Tonya Crowchild will provide Justin One Spot with the maps	Tonya Crowchild	Week of April 25, 2016
	Tsuu T'ina to generate budget based on review of maps	Justin One Spot via Tonya Crowchild	Week of April 11, 2016
	Once budgets have been received, organization of a site visit(s) to be discussed further. Scheduling will be worked through between The City and First Nations to agree upon time.	INFO	

Minutes Prepared By:	Jennifer Blezard
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The foregoing is considered a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the recorder immediately.

Date and Time of Contact / Message	Person Contacted	Contact information	Bison Employee	Phone/Email/Letter/Meeting and Location	Nature of First Contact/Message and/or Information exchanged
Feb 16/16 @ 2:49	Dustin Wolfe	[REDACTED]	MDW	outgoing email notification letter	Letter and Project Notification Package sent
Feb 16/16 @ 2:51	Dustin Wolfe	[REDACTED]	MDW	incoming email read receipt	Letter and Project Notification Package received and acknowledged receipt of information letter
Feb 17/16 @ 1:28	Dustin Wolfe	[REDACTED]	MDW	hard copy of notification sent registered mail	Letter and Project Notification Package sent
Feb 19/16 @ 3:54	Megan Crow Shoe	[REDACTED]	MDW	incoming email response letter and notification package	Project Notification Package the Consultation timeline will expectedly be delayed due to submission of incomplete Project Notification Package(s). The Consultation process will commence upon the date of receipt of complete Project Notification Package(s) which must include all of the following <ul style="list-style-type: none"> O PFN PRO EC NO FICA ION FORM O HIS ORICAL RESOURCE OVERVIEW or HIS ORICAL RESOURCES IMPAC ASSESSMEN O ENVIRONMEN AL IMPAC ASSESSMEN O DE AILED SKE CH OR SURVEY PLAN O MAP WI H 50 MILE RADIUS OF PROPOSED DEVELOPMEN O PRO EC ED PRO EC REVENUE
March 17/16 @ 11:41	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW tried calling DW, but the phone just rang and did not go to voice mail. No message was left
March 17/16 @ 11:50	Dustin Wolfe and Megan Crow Shoe	[REDACTED]	MDW	outgoing email	MDW sent DW an e mail asking if he would be interested in joining a meeting on March 31 at 9:30am on the Siksika Nation, to discuss the City of Calgary Green Line Project as it related to the St. Dunstan School.
March 21/16 @ 8:31	Dustin Wolfe	[REDACTED]	MDW	incoming email	DW sent MDW a note indicating that he will attend the meeting with the Blood and Siksika on March 31st.
March 21/16 @ 9:41	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent an e mail to DW indicating she was looking forward to meeting with him on March 31st.
March 30/16 @ 9:20	Mike Oka, Richard Right Hand, Scotty Manyguns, Dustin Wolfe	[REDACTED]	MDW	outgoing email	RRH sent MDW an e mail indicating that they would be in Calgary on the morning of March 31, and asked if we could have the meeting in our office.
March 30/16 @ 10:02	Dustin Wolfe	[REDACTED]	MDW	incoming email	DW sent MDW an e mail indicating that he would not be able to make the meeting on March 31st, and asked if we could come meet at his office.
March 30/16 @ 10:37	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW responded to DW with an e mail stating that she was working on reorganizing the scheduled meeting and would get back to DW later on during the day.
March 30/16 @ 2:38	Mike Oka, Richard Right Hand, Scotty Manyguns, Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent a follow up e mail with the meeting location and time. MDW noted that DW would not be able to attend the meeting on the 31st and indicated that she would call DW to reschedule the meeting.
March 30/16 @ 10:02	Dustin Wolfe	[REDACTED]	MDW	incoming email	DW sent MDW an e mail indicating that he would not be able to attend the meeting organized for March 31st and asked if the project team could come meet at the Piikani office.
March 30/16 @ 10:37	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW responded that she was trying to reorganize the meeting on the 31st and asked if she could get back to DW.
April 13/16 @ 3:54	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW asked if DW was available to meet with the project team to discuss this project, that they were available on April 25th or April 28th. An 11:00am meeting would give enough time to drive out to Standoff from Calgary.
April 25/16 @ 11:46	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called but was unable to leave a message
April 26/16 @ 2:55	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	his number is now the number for the Piikani Tribal Administration.
April 26/16 @ 2:56	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW talked to DW and asked him to provide some meeting dates.
April 26/16 @ 3:01	Dustin Wolfe	[REDACTED]	MDW	incoming email	DW sent MDW two dates in which he is available for a meeting to discuss the project.
April 26/16 @ 3:19	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW thanked DW for sending dates and indicated that she would get back to him with a confirmed meeting day.
April 26/16 @ 4:11	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW tried to call DW, the mail box was full
April 26/16 @ 4:18	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent DW an e mail indicating that May 16th is a preferred meeting date. And asked if we could have the meeting at 10:30 11:00am
April 26/16 @ 12:02	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW tried to call DW, the mail box was full
April 26/16 @ 4:18	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent DW an e mail requesting confirmation on the meeting time on May 16.
April 29/16 @ 12:05	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent DW an e mail requesting confirmation on the meeting time on May 16.
May 3/16 @ 10:40	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW, DW is out of the office until May 4. MDW left a message asking DW to call her back.

May 16/16 @ 11 00 11 45	Megan Crow Shoe, Dustin Wolfe	[REDACTED]	MDW	Meeting in Brocket, AB at the Piikani Administration offices	Project background and information was shared by the City. Dustin Wolfe noted that if any work around the rivers or digging along other areas of the Green Line Southeast alignment should uncover any artifacts related to the First Nations, that Piikani would like to be notified. Dustin expressed interest in getting First Nation communities involved and working on the Green Line or other City projects. The Green Line team to provide information for contact in the City's Finance and Supply group who can provide further information on the City's procurement process. The Piikani would like to do a site review at key spots along Green Line alignment. Dustin to provide a budget. Will discuss potential to do combined site review with Siksika and Blood. The St. Dunstan School site was discussed. The City shared information about a recorded burial site. The White Goose Flying was reburied after being removed from near the St. Dunstan's School site in the 1970's to the Queens Park Cemetery. Dustin identified that the Piikani recently collaborated with the City of Lethbridge on a Traditional Land Use (TLU) study. University of Lethbridge was involved. Green Line team to review if there are any potential opportunities to partner with University of Calgary or SAI. First Nations liaison for SAI is Angie Greer. (See Attached Meeting Minutes)
May 27/16 @ 8 23	Piikani admin	[REDACTED]	MDW	outgoing phone call	MDW called to inquire about Megan's last name, phone was busy.
May 27/16 @ 12 11	Piikani admin	[REDACTED]	MDW	outgoing phone call	MDW called the Piikani admin, there was no answer.
June 3/16 @ 2 59 pm	Megan Crow Shoe	[REDACTED]	MDW	incoming email	Site visit budget
June 6/16 @ 10 24	Megan Crow Shoe	[REDACTED]	MDW	outgoing email	MDW thanked MCS for the site visit budget and indicated that MDW would forward it on to the City for approval.
June 15/16 @ 12 55	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW tried to call DW, the mail box was full
June 22/16 @ 2 00	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message asking DW to provide a date for the site visit.
June 29/16 @ 10 57	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW tried to call DW, the mail box was full
June 29/16 @ 12 39	Dustin Wolfe	[REDACTED]	MDW	outgoing email	MDW sent DW an email requesting a date for the site visit. MDW suggested a guided tour along the line, as well as a visit to the current location of the White Goose Flying grave, she also asked if possible, to coordinate this tour with Mike Oka.
September 7/16 @ 2 28	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message with the receptionist asking him to call her back.
September 9/16 @ 9 25	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and asked if a site tour the week of September 19th would work.
September 12/16 @ 1 45	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW, and left a message regarding scheduling a site tour.
September 12/16 @ 2 43	Dustin Wolfe	[REDACTED]	MDW	incoming phone call	DW returned MDW phone call and indicated that a September 19th tour date may be too soon, he needed to talk to Piikani finance.
September 14/16 @ 12 45	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW his mailbox was full.
September 14/16 @ 2 57	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW his mailbox was full.
September 14/16 @ 4 27	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW no voice mail
September 14/16 @ 4 28	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW his mailbox was full.
September 15/16 @ 9 09	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message for him to call her back, Re site tour.
September 15/16 @ 3 43	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message for him to call her back, Re site tour.
September 15/16 @ 3 47	Dustin Wolfe	[REDACTED]	MDW	incoming phone call	DW called MDW back and asked if she had received the budget for the tour. MDW had not received a budget.
September 16/16 @ 9 28	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message with the receptionist asking him to call her back.
September 16/16 @ 1 13	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW called DW and left a message with the receptionist asking him to call her back.
September 16/16 @ 1 23	Dustin Wolfe	[REDACTED]	MDW	incoming phone call	DW returned MDW's phone call and confirmed that the Piikani would be in Calgary at 9 00am on September 26th for a driving tour of the GL SE alignment and then conduct the UK site visit on the 27th.
September 16/16 @ 3 59	Megan Crow Shoe	[REDACTED]	MDW	incoming email	MCS sent the proposed budget, and asked for approval so they could work on scheduling the site visit.
September 23/16 @ 9 28	Dustin Wolfe and Megan Crow Shoe	[REDACTED]	MDW	outgoing email	MDW sent MCS an email confirming the Sept 26 UK site visit.
September 26/16 @ 8 53	Dustin Wolfe and Megan Crow Shoe	[REDACTED]	MDW	incoming email	DW sent MDW an email indicating he thought the tour was scheduled for the 27th, and the UK site visit would take place the following day.
September 26/16 @ 9 00	Dustin Wolfe	[REDACTED]	MDW	outgoing phone call	MDW talked to DW confirmed that the Piikani would be at Bison Historical on September 27th at 9 00 for the preliminary site tour.
September 27/16 @ 9 00 12 30	Pat Provost	[REDACTED]	MDW	Driving tour of the GL alignment / met at Bison Historical Services office	EK and MDW provided a driving tour of the GL SE alignment for several Piikani individuals Pat Provost, Shirley Crow Shoe, Charles Yellowface and Chris Crowshoe. We stopped at the White Goose Flying grave site and a prayer was said. We also stopped at the St. Dunstan school site.
September 28/16 @ 9 00 11 30	Pat Provost	[REDACTED]	SP	K site visit	Pat Provost, Shirley Crow Shoe, Charles Yellowface and Chris Crowshoe met SP at the Bison Historical office, SP drove them to the location where the GL SE crosses the Bow River and then the Elbow River and concluded the tour at the St. Dunstan school location. No concerns were voiced, PP indicated a Letter of no Concern would be issued.
October 25/16 @ 4 15	Megan Crow Shoe	[REDACTED]	MDW	incoming email	MCS sent the Letter of Non Objection, along with a copy of the invoice for the project.
November 3/16 @ 12 34	Megan Crow Shoe	[REDACTED]	MDW	outgoing email	MDW sent an email requesting a change on the invoice. Change the Bill of from City of Calgary to Bison Historical Services Ltd.
November 4/16 @ 8 53	Megan Crow Shoe	[REDACTED]	MDW	incoming email	MCS sent a new invoice with the Bill of Changed from City of Calgary to Bison Historical Services Ltd.



Green Line Southeast: First Nations Meeting w/ Piikani

Date: 2016 May 16

Time:
11:00-11:45 a.m.

Location: Brocket AB
Piikani Administrative Offices
[Redacted]

Chair: Evan Kortje

Communications: Jennifer Blezard

Attendees		
City of Calgary – Transportation Infrastructure	Consultants: Hatch	Piikani Nation
Evan Kortje – Project Manager Jennifer Blezard – Communications Julie Yepishina-Geller - Communications	Nathan Higgins - Hatch Michelle Wickham - Bison	Dustin Wolfe – Consultation Manager Megan -

MINUTES			
Item	Description	Action	Due
1.0	Project Background & Information		
	Evan and Nathan provided project background information and overview: <ul style="list-style-type: none"> - Green Line has been a part of Calgary's transportation planning for a while. - First functional study for Green Line was in early 80's. - Long term vision for Green Line is for full build out of Light Rail Transit (LRT) service from north central Calgary (Country Hills Blvd), south through the downtown core and then to the southeast community of Seton. Green Line alignment shown for both north and southeast legs. - Southeast leg of Green Line originally planned to be built in three stages: <ul style="list-style-type: none"> - Stage 1: Dedicated bus transitway 4th Street to Douglas Glen - Stage 2: Conversion to LRT (20 years) - Stage 3: Extension of LRT to Seton (30 years) - Status of current design process for the Southeast and North legs of the Green Line discussed. - Overview of timeline and funding for the Green Line (federal, provincial and municipal). Ability to go straight to LRT. - Nathan reviewed rollout plans of Green Line Southeast alignment. 	INFO	
2.0	Discussion		
	<ul style="list-style-type: none"> - Dustin Wolfe noted that any work around the rivers or digging along other areas of the Green Line Southeast alignment that uncover any artifacts related to the First Nations, that Piikani would like to be notified. 	INFO	



Green Line Southeast: First Nations Meeting w/ Piikani

	<ul style="list-style-type: none"> - Dustin expressed interest in getting First Nation communities involved and working on the Green Line or other City projects. - Green Line team to provide information for contact in The City's Finance and Supply group who can provide further information on the City's procurement process. - Piikani would like to do a site review at key spots along Green Line alignment. Dustin to provide a budget. Will discuss potential to do combined site review with Siksika and Blood. - St. Dunstan School site discussed. The City shared information about a recorded burial site. Jack White Goose Flying was reburied after being removed from near the St. Dunstan's School site in the 1970's to the Queens Park Cemetery. - Dustin identified that the Piikani recently collaborated with the City of Lethbridge on a Traditional Land Use (TLU) study. University of Lethbridge was involved. - Green Line team to review if there are any potential opportunities to partner with University of Calgary or SAIT. First Nations liaison for SAIT is Angie Greer. 		
3.0	Follow-up		
	Dustin and Megan to generate a budget and send to City of Calgary.	Dustin/Megan	May 27, 2016
	Meeting minutes to be drafted and shared.	Jennifer Blezard	May 27, 2016
	Evan Kortje to provide contact in the City's Finance and Supply group who can provide further information on the City's tendering processes and how to become a prequalified vendor.	Evan Kortje	May 27, 2016
	Project team to investigate what opportunities may exist with the University of Calgary and SAIT Polytechnic to partner with the First Nations on Green Line with students.	Next Steps	

Minutes Prepared By:	Jennifer Blezard
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The foregoing is considered a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the recorder immediately.



Siksika Consultation Office



2016-06-10

Ms. Michelle Wickham
Senior Archeologist/Partner
Bison Historical Services Ltd.



Dear Ms. Wickham:

RE: Project Name: City of Calgary Green Line

Siksika Consultation Office (SCO) was engaged to undertake a study of the noted project. It has completed a traditional use study (TUS) and site visit, in the proposed work area.

SCO has no concerns with, or objection to, the project at this time; however, if artifacts are uncovered during construction SCO needs to be notified immediately. Siksika Nation will always have concerns regarding possible impacts on our Traditional Use Rights and Heritage Sites as well as possible impacts to wildlife and their habitat and vegetation.

Sincerely,



Grant Gillies
for
Scotty Many Guns
Field Operations Manager

Piikani Nation Consultation



October 20, 2016

Michelle Wickham
Senior Project Archaeologist, Managing Partner
Bison Historical Services Ltd.

RE: City of Calgary Green Line Project

Dear Michelle Wickham,

In accordance with the Piikani Nation's Consultation Procedure and respecting the Aboriginal Consultation Office requirements, the Bison Historical Services Ltd. has engaged the Piikani Nation in consultation related to the above noted Project.

Regarding the Bison Historical Services Ltd. project the Piikani Consultation office completed a Traditional Land Use site visit on September 28, 2016 and the outcome of the site visit has not identified any site specific concern, therefore Piikani Nation does not object to the project noted.

Please be advised, if Bison Historical Services Ltd. does not meet their commitment to on-going issue resolution, the Piikani Nation maintains the right to withdraw this letter of non-objection.

If you should have any questions or need further information, please don't hesitate to contact our office at [REDACTED]

[REDACTED]
Dustin Wolfe
Consultation Manger
PIIKANI NATION



November 09 2016

Michelle Wickham M.A.
Senior Project Archaeologist / Partner
Bison Historical Services Ltd.
[Redacted]

RE: Calgary Green Line FNC: 4715-15-0024-001

Please be advised that the Blood Tribe Tribal Government & External Affairs Traditional Land Use and Occupancy Study Office conducted a traditional land use assessment of the above noted project. No traditional sites were found on native prairie within the project right of way.

Accept this letter as a non-objection to the above noted projects. However, any decision including our non-objection, should not be construed or interpreted as abandoning, waiving or extinguishing our Aboriginal or Treaty Rights.

Should you have any questions or concerns, please feel free to contact our office at [Redacted]
[Redacted]

Regards,
[Redacted]

**Mike Oka
Consultation Coordinator
Blood Tribe Tribal Government & External Affairs**

Tsuu Tina Nation Consultation ~ TUS



Tsuu Tina Nation, Alberta T2W 6H6

December 21, 2016

Michelle Wickham
Bison Historical Services Ltd.

Dear Michelle Wickham:

Re: City of Calgary Green Line Project

The Tsuut'ina Nation Consultation/TUS team has completed a preliminary assessment regarding your project. We have concluded that at this time the Tsuu Tina Nation does not have any concerns with your project. However, we reserve the right to amend our position in light of any new information that suggests your project may impact the Tsuu Tina Nation's regarding Treaty rights or traditional use in the project area.

Further, we ask that you provide Tsuu Tina with any information regarding new projects at the earliest stages so as to allow for our team to conduct preliminary assessments in a more efficient manner. We have attached a map of our Traditional Territories, and require that your company consult with us on any of these lands including notification on private lands.

We appreciate the efforts you have made towards maintaining a good relationship with the Tsuu Tina Nation and we look forward to future contact with your company.

Sincerely,

Violet Meguinis
A/TUS-Consultation Director
Tsuut'ina Nation

Appendix 7 Indigenous Groups/Communities Notification Package





Date

Consultation contact name

First Nation

Address

Dear *First Nation Contact*

Re: The City of Calgary Green Line Light Rail Transit (LRT) – Maintenance and Storage Facility (MSF)

The City of Calgary proposes to construct, own and operate a Maintenance and Storage Facility (MSF) that will maintain and store equipment for the proposed Green Line LRT. This facility will comprise offices, parking lot, tracks, heavy and light duty maintenance bays, wash bays, paint bays and equipment testing areas. The proposed construction start date for the facility is 2020, and completion is expected within approximately 2 years from that time.

The location proposed for the facility is currently a vacant lot at 12725 52^d Street SE in Calgary. The facility will be situated within urban lands that were previously used for agricultural purposes from at least the 1940's until the late 1990's. The land is directly bordered by industrial operations, and the surrounding lands are commercial and industrial in nature.

There are no known lands or resources currently being used by Indigenous communities on the site, and there are also no known historical or archaeological resources present.

The City of Calgary is committed to continuing and maintaining ongoing positive relationships with Indigenous communities. These relationships are developed and maintained through the sharing of project information early in the planning stages for the facility. This provides the opportunity for potentially affected communities to comment of the proposed development. This proposed Maintenance and Storage Facility falls within the *First Nations* Traditional Territories.

Please find the enclosed / attached information package for the Green Line Maintenance and Storage Facility including the table below which details the proposed activities.

Activity Type	ATS Legals	Area/Distance	Applicable Act	Regulatory Body
Maintenance and Storage Facility	SW 1 & 2–10-23-29-W4M	37, 400 m ²	-Migratory Birds Convention Act -Land Stewardship Act -Water Act -AB Weed Control Act -Environmental Enhancement Protection and Act	-Gov of Canada -Province of AB -Province of AB -Province of AB -Province of AB

Please review the information included and provide a written submission identifying any potential impacts the Maintenance and Storage Facility may have on your Treaty rights and traditional uses.

We respectfully request that you provide your response within (15) Government of Alberta working days from time of receipt. Any concerns identified should be spatially located, tied to a Treaty right or traditional use and identify how the proposed project may impact that Treaty right or traditional use.

Sincerely

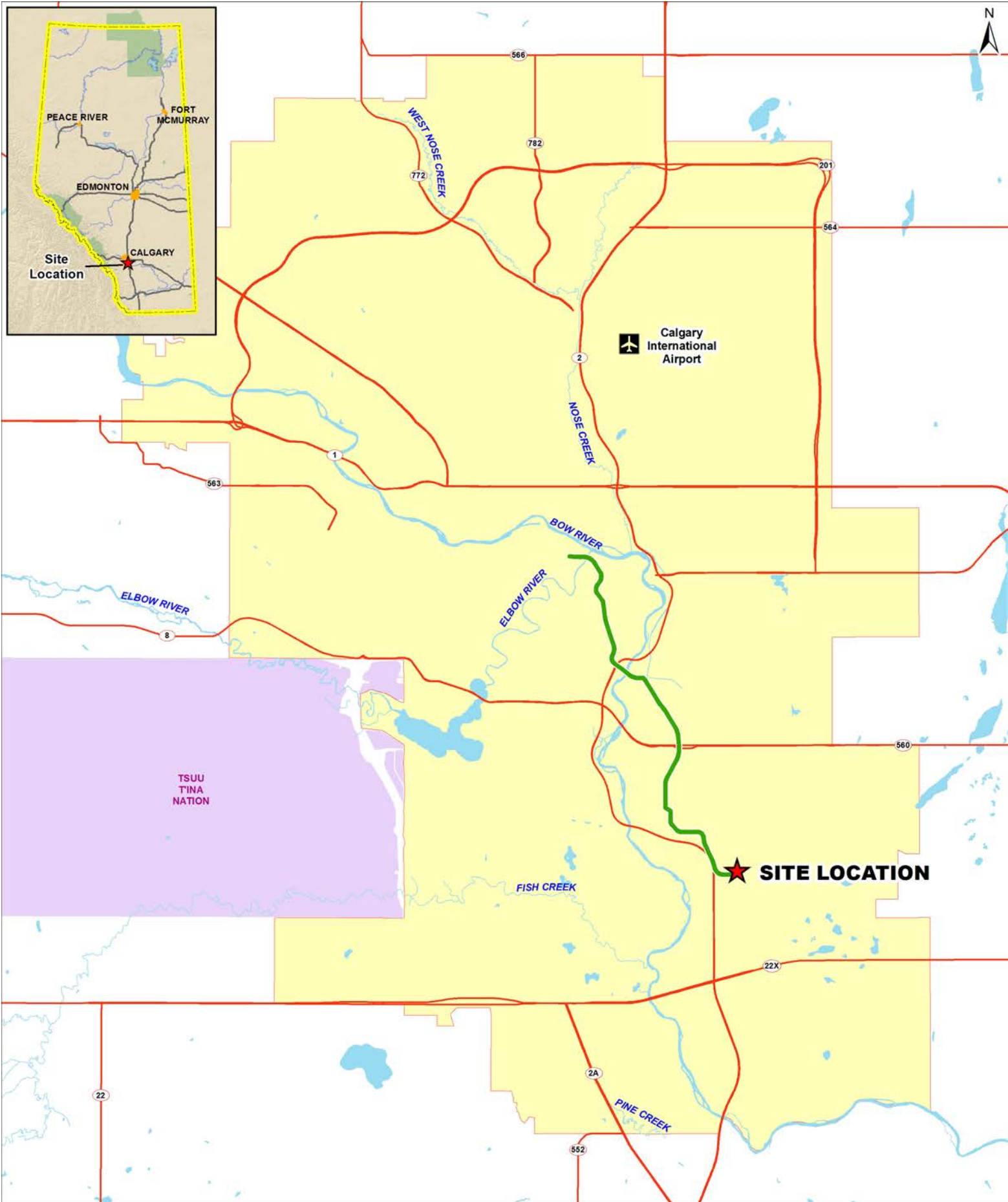


Michelle Wickham, M.A.
Senior Project Archaeologist, Managing Partner
Bison Historical Services Ltd.



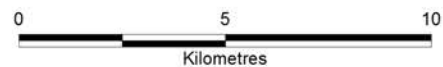
Bison

Historical Services Ltd.



-  Site Location
-  Green Line South East (Stage 1)
-  Calgary
-  Tsuu T'ina Nation
-  Waterbody
-  Watercourse

ISC: UNRESTRICTED

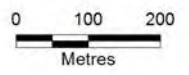


Data Sources:
 Alberta Environment & Parks
 IHS Markit
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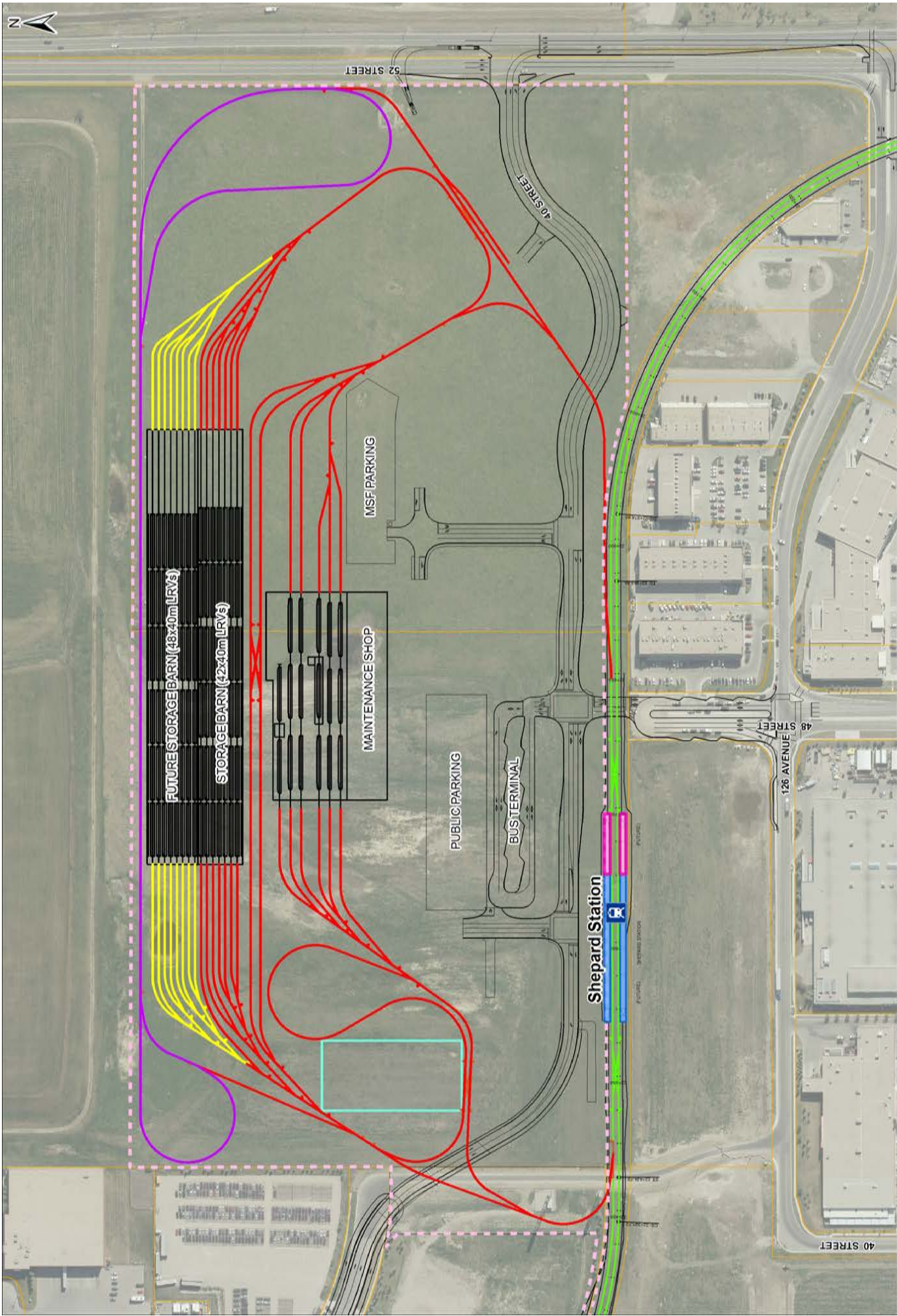


- Site Boundary
- Proposed Green Line Track
- Proposed Yard Track
- Future Yard Track
- Test Track
- Approximate Stormwater Pond Location

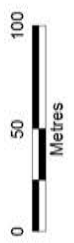
ISC: UNRESTRICTED



Data Sources:
 Road network provided by IHS Markit, 2014.
 Imagery Provided by The City of Calgary, dated 2017.
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ISC: UNRESTRICTED



Data Sources:
 The City of Calgary, 2014.
 Road network provided by IHS Markit, 2014.
 Imagery Source: City of Calgary, 2017.
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