
Cando Rail & Terminals

Cando Sturgeon Rail Terminal
West Expansion

Summary Project Description

Under the Impact Assessment Act

N ½ 34-55-22-W4M

Sturgeon County, Alberta



Clifton

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List of Acronyms

ACIMS	Alberta Conservation Information Management System
ACO	Government of Alberta's Aboriginal Consultation Office
ACSW	Alberta Ministry of Arts, Culture and Status of Women
AD	Arrival/Departure Railyard
AER	Alberta Energy Regulator
AF	Activity Factor
ATEC	Alberta Transportation and Economic Corridors
BAT/BEP	Best Available Technologies / Best Environmental Practices
CEAA	Canadian Environmental Assessment Agency
Cando	Cando Rail & Terminals
CH ₄	Methane
CF	Conversion Factor
Clifton	Clifton Engineering Group Inc.
CN	Canadian National Railway Company
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
db	decibel
ECCC	Environment and Climate Change Canada
EDI	EDI Environmental Dynamics Inc.
EF	Emission Factor
USEIA	The United States Energy Information Agency
EPA	Government of Alberta's Environment and Protected Areas Department
ESA	Environmental Site Assessment
FWMIS	Fisheries and Wildlife Management Information System
GHG	Greenhouse Gas
GPS	Global Positioning System
GWP	Global Warming Potential
ha	Hectare(s)
HC	Hydrocarbons
HP	Horsepower
IAAC	Impact Assessment Agency of Canada
IPCC	Intergovernmental Panel on Climate Change

km	Kilometer(s)
kV	kilovolt
kWh	kilowatt hour
LPG	Liquefied Petroleum Gases
LUC	Land Use Change
Mt	Million metric tonnes
MW	Megawatt
MWh	Megawatt hour
NCIA	Northeast Capital Industrial Association
NG	Natural gas
NO _x	Nitrous oxides
N ₂ O	Nitrous oxide
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Particulate Matter
RAP	Restricted Activity Period
SARA	Species at Risk Act
scf	Standard cubic feet
SO ₂	Sulphur Dioxide
SWMP	Stormwater Management Plan
t	Metris Tonne
TDG	Transportation of Dangerous Goods
TDS	Total Dissolved Solids
USEPA	The United States Environmental Protection Agency
WAIF	Wetland Assessment and Impact Form
WAIR	Wetland Assessment and Impact Report

Table of Contents

Introduction	1
1.0 General Information	1
1.1 Project's Name, Type/Sector, and Proposed Location	1
1.2 Proponent Contact Information	8
1.3 Engagement with Jurisdictions or Agencies	8
1.3.1 Federal Stakeholder Engagement	9
1.3.2 Provincial Stakeholder Engagement	9
1.3.3 Municipal Stakeholder Engagement	10
1.3.4 Landowner	11
1.3.5 Resident Stakeholder Engagement	11
1.3.6 Industry Stakeholder Engagement	13
1.4 Indigenous Engagement	13
1.5 Studies and Plans	15
1.6 Strategic Assessments	16
2.0 Project Information	16
2.1 Project Purpose and Need	16
2.2 Project Applicable Physical Activities Regulation	19
2.3 Project Activities, Infrastructure, and Physical Works	19
2.3.1 Proposed New Infrastructure	19
2.3.2 Existing Infrastructure	21
2.3.3 Project Activities	22
2.3.4 Incidental Activities	24
2.4 Production Capacity	24
2.5 Anticipated Schedule	25
2.6 Potential Alternatives	26
3.0 Location Information and Context	28
3.1 Geographic Coordinates	28
3.1.1 Site Maps	28
3.1.2 Legal Land Descriptions and Landowner Documents	31

3.1.3 Proximity to Residents and Communities	31
3.1.4 Project Proximity to Traditional Indigenous Uses	32
3.1.5 Proximity to Federal Lands	33
3.2 Physical and Biological Environment	33
3.2.1 Terrain and Soil Summary of Publicly Available Information	33
3.2.2 Vegetation	35
3.2.3 Wildlife and Wildlife Habitat	36
3.2.4 Water –Surface Water, Wetlands, and Groundwater	38
3.2.5 Air Quality and Noise	41
3.3 Health, Social, and Economic Context	43
3.3.1 Health Context	43
3.3.2 Social Context	44
3.3.3 Economic Context	45
4.0 Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects	46
4.1 Federal Financial Support	46
4.2 Federal Project Lands	46
4.3 Jurisdictions with Powers, Duties, or Functions	47
5.0 Potential Effects of the Project	48
5.1 Relevant Environmental Legislation	48
5.1.1 Fish and Fish Habitat	48
5.1.2 Species at Risk Act: Aquatic Species/Marine Plants	49
5.1.3 Migratory Birds	49
5.2 Changes to Federal Lands	49
5.3 Impact to Indigenous Peoples	50
5.4 Greenhouse Gas Estimate	51
5.4.1 Construction Phase	51
5.4.2 GHG Emission Sources – Operation Phase	53
5.5 Additional Considerations	55
5.5.1 Carbon Sinks Impact	55
5.5.2 Carbon Sinks Mitigation Measures	55
5.5.3 Estimation of Uncertainty	56
5.5.4 Net-Zero Plan	56
5.6 Types of Waste and Emissions	57
5.6.1 Air	57
5.6.2 Water	57
5.6.3 Land	58

6.0 References**59**

List of Tables

Table 1-1: General Project Information
Table 1-2: Proponent Information
Table 1-3: Public and Regulatory Stakeholders
Table 1-4: Name of Indigenous Community or Group
Table 2-1: Proposed New Infrastructure for the Expansion Rail Terminal
Table 2-2: Anticipated Construction Schedule without a Federal Impact Assessment
Table 2-3: Anticipated Construction Schedule with a Federal Impact Assessment
Table 2-4: Potential Future Infrastructure
Table 3-1: Bypass Road Geographical Extents
Table 3-2: Bypass Legal Descriptions
Table 3-3: Soil Risks and Mitigations
Table 3-4: Vegetation Risks and Mitigations
Table 3-5: Wildlife Risks and Mitigations
Table 3-6: Water Risks and Mitigations
Table 3-7: Air Risks and Mitigations
Table 5-1: Estimated Net Total GHG Emissions – Construction Phase of the Project
Table 5-2: Estimated Net Total GHG Emissions – Operation Phase of the Project
Table 5-3: Estimate Carbon Intensity
Table 5-4: Carbon Sinks Mitigation Measures Summary
Table 5-5: Uncertainty Ranking

List of Figures

Figure 1: General Project Location
Figure 2: Project Within the Alberta Industrial Heartland
Figure 3: Site Boundary
Figure 4: Resident Engagement Radius
Figure 5: Proposed Track Layout
Figure 6: Local Residents
Figure 7: Communities and Federal Land
Figure 8: Wetlands

Introduction

This application is being submitted by Clifton Engineering Group Inc. (Clifton) on behalf of Cando Rail & Terminals Ltd. (Cando) to conform with the requirements of an Initial Project Description (IPD) under the Government of Canada's *Impact Assessment Act, 2019*.

Cando is a Canadian company founded in Manitoba that provides custom rail solutions. This application is being presented to the Canadian Impact Assessment Agency (IAAC) under the *Impact Assessment Act* in support of the expansion of Cando's existing rail terminal located in Sturgeon County, Alberta. The existing rail terminal was previously approved in 2019 under the Canadian Environmental Assessment Act, 2012 (CEAA) with the reference number 80167. The information included in this application has been prepared in accordance with Annex I – Contents of an Initial Project Description, which aligns with Schedule 1 of the *Information and Management of Time Limits Regulation*. Throughout the report under the headings there is blue italicized text which includes the guidance language from Annex I to which the section is directly applicable. This was included for the convenience of the reviewer and reader to correlate the content with the guidelines and demonstrate concordance with the Annex I.

1.0 General Information

1.1 Project's Name, Type/Sector, and Proposed Location

The project's name, type or sector, and proposed location. When naming the project, proponents are encouraged to include a unique identifier, the main resource or sector that is the focus of the project, and the type of project.

Table 1-1: General Project Information	
Name	Cando Sturgeon Rail Terminal West Expansion
Type/Sector	Railyard
Proposed Location of the Railyard	<p>Municipality: Sturgeon County Alberta</p> <p>Zoning: Industrial Land Use – Alberta’s Industrial Heartland</p> <p>Alberta Township Survey System Description: N ½ 34-55-22-W4M</p> <p>Approximate GPS Coordinates: 53°47'59.43"N (latitude), and 113°11'11.97"W (longitude)</p> <p>Legal Land Descriptions: NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D)</p>

The project applicable to this submission is the expansion of Cando’s existing rail terminal located in Sturgeon County, Alberta. The expansion is to include the half section directly to the west of the existing rail terminal, roughly the same amount of land as the existing rail terminal, essentially doubling the terminal’s capacity. The official project name for this application is the Cando Sturgeon Rail Terminal West Expansion; however, it will be referred to as the Project, Site or the expansion rail terminal throughout this document. For reference, the previous submission for the existing rail terminal was similarly named the Cando Sturgeon Rail Terminal Project. The location of the project within Alberta is depicted in Figure 1.

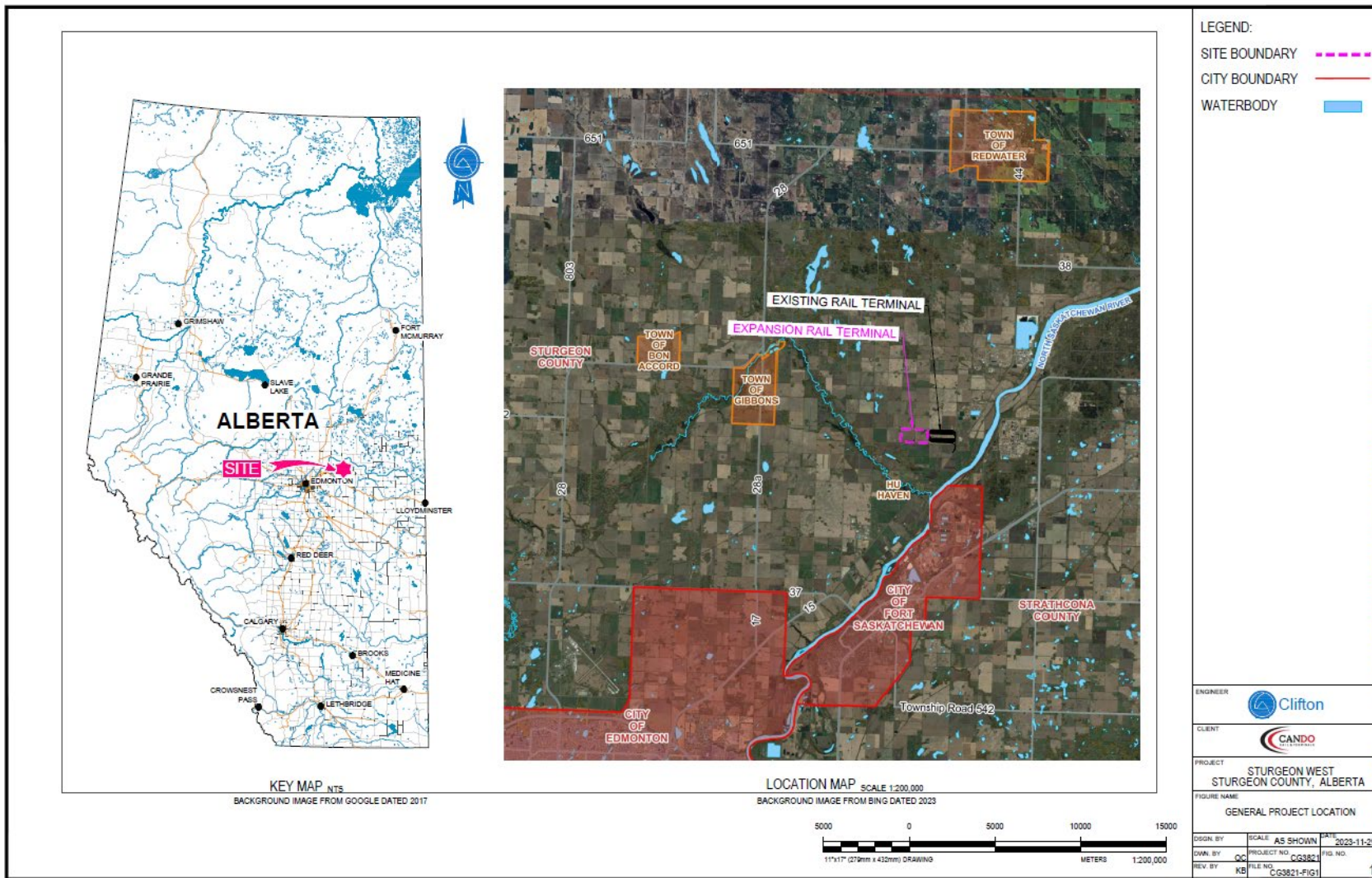


Figure 1: General Project Location

After initial discussions with the Impact Assessment Agency the project was determined to be an expansion of an existing rail terminal as the two rail terminals are located adjacent to one another which establishes a clear connection between the two railyards. In addition, the two rail terminals will be directly connected by track, and components of the existing rail terminal, notably its connection to the Canadian National Railway Company (CN) rail line, will be necessary for the function and operation of the expansion rail terminal.

An important component of the project location is that it is in the Sturgeon County portion of Alberta's Industrial Heartland, a Designated Industrial Zone. The entirety of the region is zoned for heavy industrial land use and offers a concentrated location for chemical, petrochemical, and oil and gas facilities as well as provincial regulatory streamlining and cumulative environmental management (Alberta's Industrial Heartland, 2023). Figure 2 shows the location of the project within the boundaries of Alberta's Industrial Heartland.

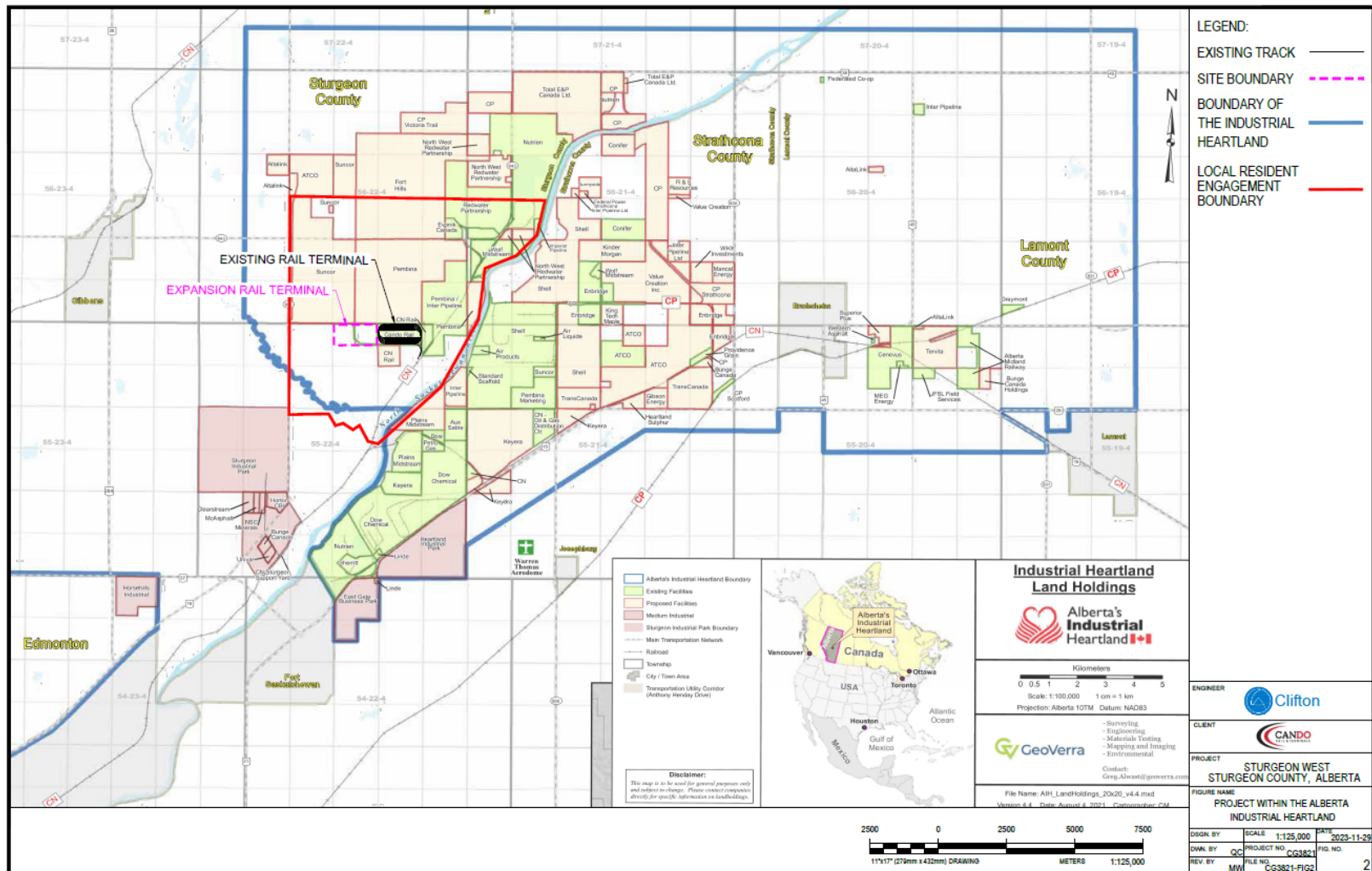


Figure 2: Project Within the Alberta Industrial Heartland

The two quarter sections to be used for the expansion rail terminal are the northeastern and northwestern quarters of section 34, township 55, region 22, west of the 4th meridian (N ½ 34-55-22-W4M). The approximate latitude and longitude of the project are 53°47'59.43"N and 113°11'11.97"W, respectively. The legal land descriptions for the expansion rail terminal are: NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D). The two land titles for the quarter sections are privately owned whereas the two titles under Plan 0824867 are owned by CN Rail; however, CN Rail does not operate on the land. It is currently cultivated agricultural land. The total area to be used for the expansion rail terminal is approximately 130 hectares (ha).

A secondary component to the project consists of the creation of a bypass road. The connection between the existing rail terminal and the expansion rail terminal will cross Range Road 222. For safety and convenience of residents, Cando is working with Sturgeon County to close Range Road 222 between the two rail terminals. The bypass will include upgrades to the existing Range Road 223 to the west of the W ½ 34-55-22-W4M, and the intersection of Range Road 222 and Township Road 560. To complete the bypass, roadways will also be constructed to the south of the S ½ 34-55-22-W4M (extension of Township Road 555) and a cul-de-sac will be constructed to the south of the expansion rail terminal where Range Road 222 ends. Once the road is constructed Sturgeon County will take over ownership and be responsible for the operation and maintenance.

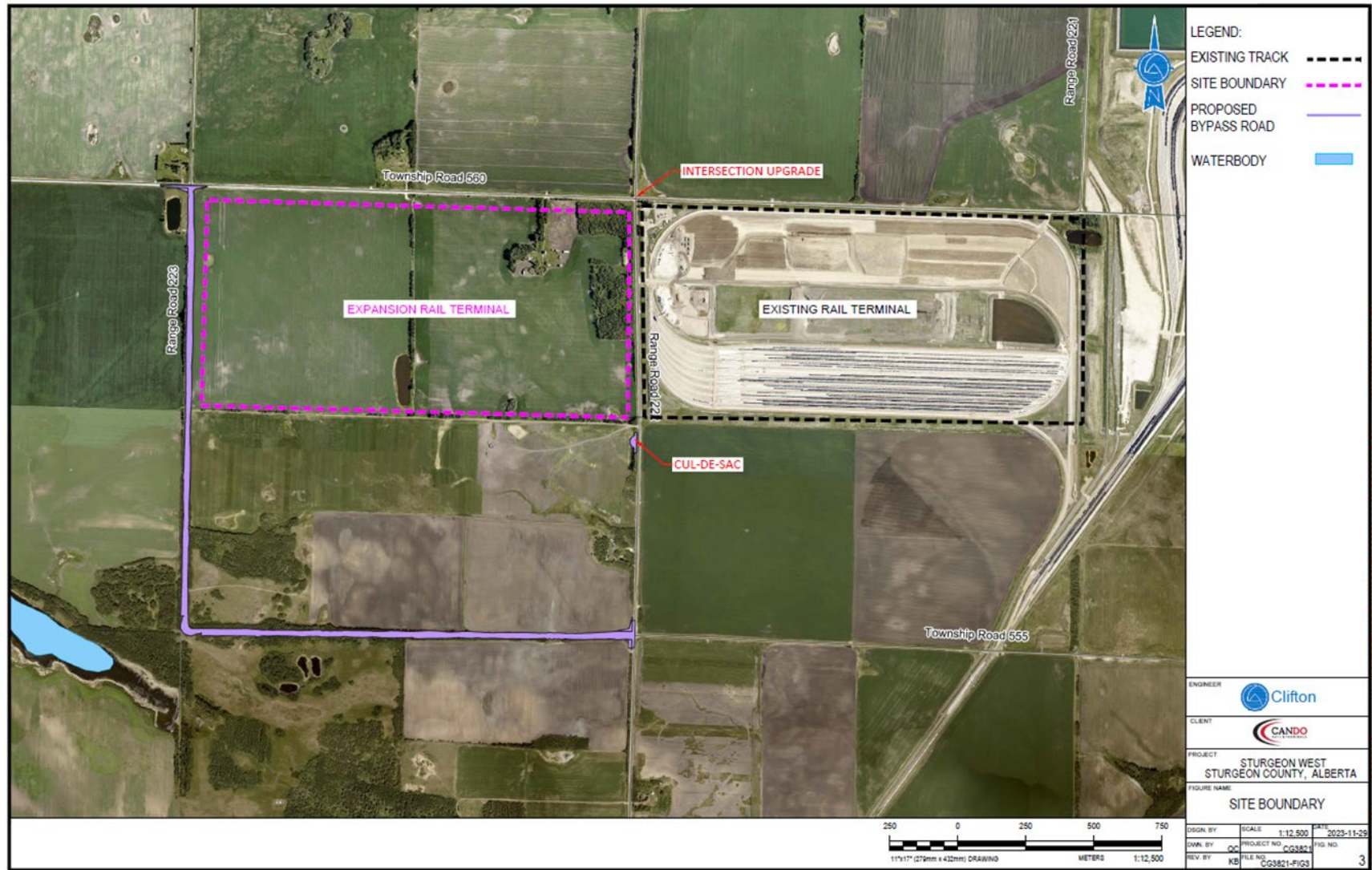


Figure 3: Site Boundary

1.2 Proponent Contact Information

The proponent’s name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.

The proponent contact information for the purpose of this application is detailed below.

Table 1-2: Proponent Information	
Name of Project	Cando Sturgeon Rail Terminal West Expansion
Name of Proponent	Cando Rail & Terminals Ltd.
Proponent’s Contact Information	Unit 400 – 740 Rosser Avenue Brandon, Manitoba R7A 0K9 info@candorail.com Toll-Free: 1-866-989-5310 Phone: 204-725-2627 Fax: 204-725-4100
Primary Representative	Maxim Delisle GM Infrastructure Development
Primary Representative’s Contact Information	Maxim.Delisle@candorail.com 1-416-799-5998

1.3 Engagement with Jurisdictions or Agencies

A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of engagement and brief description of any plan for future engagement. This should include any engagement with public or other participants.

Cando has completed engagement activities with various stakeholders including landowners, residents, industry, and Sturgeon County throughout the planning of the expansion rail terminal. Clifton, on Cando’s behalf, has also been engaging with federal and provincial regulatory officials. Indigenous engagement is covered in Section 1.4. A list of the parties engaged is detailed below (Table 1.3).

Table 1-3: Public and Regulatory Stakeholders
<p>Federal Stakeholders</p> <ul style="list-style-type: none"> • Impact Assessment Agency of Canada (IAAC)
<p>Provincial Stakeholders</p> <ul style="list-style-type: none"> • Alberta Environment and Protected Areas (EPA) • Alberta Transportation and Economic Corridors (ATEC) • Alberta Ministry of Arts, Culture and Status of Women (ACSW)
<p>Municipal Stakeholders</p> <ul style="list-style-type: none"> • Sturgeon County
<p>Individual Stakeholders</p> <ul style="list-style-type: none"> • Landowners • Residents • Surrounding Industry

Engagement began in Spring 2023 and will continue throughout the lifespan of the project. Cando will respond to any issues that may arise and is open to discussions with stakeholders. A summary of engagement details can be found in Sections 1.3.1 to 1.3.6 and further information has been recorded by Cando. Cando created a dedicated email (candolistens@candorail.com) for all non-government stakeholders. The email can be accessed by select Cando employees who are designated liaisons.

1.3.1 Federal Stakeholder Engagement

Correspondence with IAAC began in June 2023 when it was determined that the project would fall under the *Impact Assessment Act*. Clifton has taken part in correspondence and meetings with IAAC, which are ongoing. The pre-construction approval of the expansion rail terminal is the only Federal control over the project. As the existing and expansion rail terminals are not a Class 1 railway the operation would fall to ATEC rather than Transport Canada.

1.3.2 Provincial Stakeholder Engagement

Clifton initially held a meeting with EPA representatives in October 2023. The discussion included an introduction to the project scope and location and conversations around applicable legislation and provincial submissions. It was determined that approvals for the Stormwater Management Plan (SWMP), and the Wetland Assessment and Impact Reports (WAIRs) will be required through the Alberta’s *Water Act*. It does not appear that further approvals will be required by the AEPA.

Clifton reached out to representatives of ATEC to discuss requirements under the *Railway (Alberta) Act*. This discussion was specific to the additional requirements and timeline for review necessary for approval.

Specific project details were not included as part of this discussion. Cando's existing rail terminal complies with all the necessary provincial requirements to operate.

A historical resources application detailing the physical location of the project was submitted to ACSW for evaluation as is required prior to beginning development. The evaluation determines the likelihood that the project would impact known or potential historical resources. As of the date of this document a response has not been received from the ACSW. Cando will review the response, once received, and will ensure compliance with the ACSW. Approval would still be subject to section 31 of the *Historical Resources Act* relating to a chance discovery of a historical resource.

1.3.3 Municipal Stakeholder Engagement

Cando has an ongoing, collaborative relationship with Sturgeon County since the commencement of the existing rail terminal project. Numerous meetings and correspondence between the Sturgeon County Administration and Cando have been completed throughout the planning phase of the Project. Representatives of Sturgeon County have been providing advice and support regarding the County's interest in the project including development of the railyard, partial closure of Range Road 222, construction of the Bypass Road, traffic management for these components, development permit obligations, and resident and business interests. Formal engagement activities have also included creation of a formal Project engagement email address (CandoListens@candorail.com), which is available to all persons with concerns or to seek additional information.

There was a municipal vote by Sturgeon County Council for the proposed partial closure of Range Road 222 with the First Reading by Sturgeon County Council of the statutory road closure bylaw ([Bylaw 1638/23 – Road Closure for Portion of Range Road 222](#), Sturgeon County 2023c) took place on November 14, 2023 and was carried/passed [unanimously](#) (Sturgeon County, 2023d). After First Reading of the Range Road (RR) 222 Closure Bylaw, a Public Information Session on the Project, proposed Road Closure and Bypass was held. The event was used to inform nearby stakeholders (residents, landowners, and industry) about Project elements. The Information Session was lightly attended, although some local residents and industry stakeholders did ask questions related to the Project. Few concerns were noted, and most attendees seemed to be gathering information to better understand Project elements. One resident/farm family noted a concern about the proposed closure of RR 222 and committed to bringing that forward at the Public Hearing (below).

Following statutory guidelines, A Public Hearing about the proposed closure of RR222 was held on January 16, 2024, to formally gather public input and to inform Sturgeon County Council ahead of a referral/submission to Alberta Transportation and Economic Corridors (ATEC) about the proposed closure. Although it is a local road closure, provincial Ministry sign-off is needed to progress the road closure Bylaw to Second and Third Readings. At the Public Hearing, four people noted concerns about the road closure. Two noted concerns about increased traffic and development near their properties, and the protection of trees and irrigation routes, and have suggested mitigation measures both publicly and privately to Cando. Cando is taking appropriate action on these mitigations, and will action them in partnership with the County, if feasible. One speaker noted concerns about industrial development of any kind in the area,

given the local farming history. Cando notes the area has been zoned for heavy industrial development for decades as it is part of Alberta's Industrial Heartland, and the provincial Designated Industrial Zone. One resident claimed the road closure and the extra length of time needed to drive large trucks and farm equipment around the Bypass would be detrimental to farm operations. Cando indicated that the proposed closure and, as mitigation, the Bypass Road, are critical needs for Project safety as there is a likelihood of trains blocking the road for extended periods at any time of the day. It is simply not safe or feasible to have a local road/public access through an active railyard. While the Bypass may increase travel distance, it also increases safety and is the best possible mitigation to ensure safe rail-based development.

Following referral of the Road Closure Bylaw to ATEC, and assumed Ministerial sign-off, a Second and Third Reading by Sturgeon County Council of the Bylaw will take place. Timing of Second and Third Reading, and likely approval of the Road Closure by the County, is dependent on a response from ATEC. It is hoped this will occur in the first half of 2024. Cando will continue to work with the County regarding the road closure and Bypass and notes both the County Administration and Council have indicated support throughout the process.

1.3.4 Landowner

The land allocated for the use of the project is currently owned by private residents and businesses. These individuals or representatives of the businesses have been informed of the project. Cando is working closely with the landowners. There do not currently appear to be any issues or concerns regarding the land sales and the properties have been accessed for preliminary assessments.

1.3.5 Resident Stakeholder Engagement

Cando has sent notification letters to residents that would be potentially affected by the project. This included residents of Sturgeon County within the area outlined in Figure 4. In order to maintain the residents' privacy Sturgeon County facilitated mailing the letters. The letters provided the residents with contact information for Cando and encouraged feedback. Cando, in conjunction with Sturgeon County, also advertised and assisted in organizing an information session for the residents which took place on 02 November 2023. The information session included a presentation by Cando on the project. The residents in attendance were able to ask questions and sign up to receive a copy of the presentation. Any concerns noted during the information session were logged by Cando and will be considered during the project. All residents who reached out to Cando will be provided an individual response.

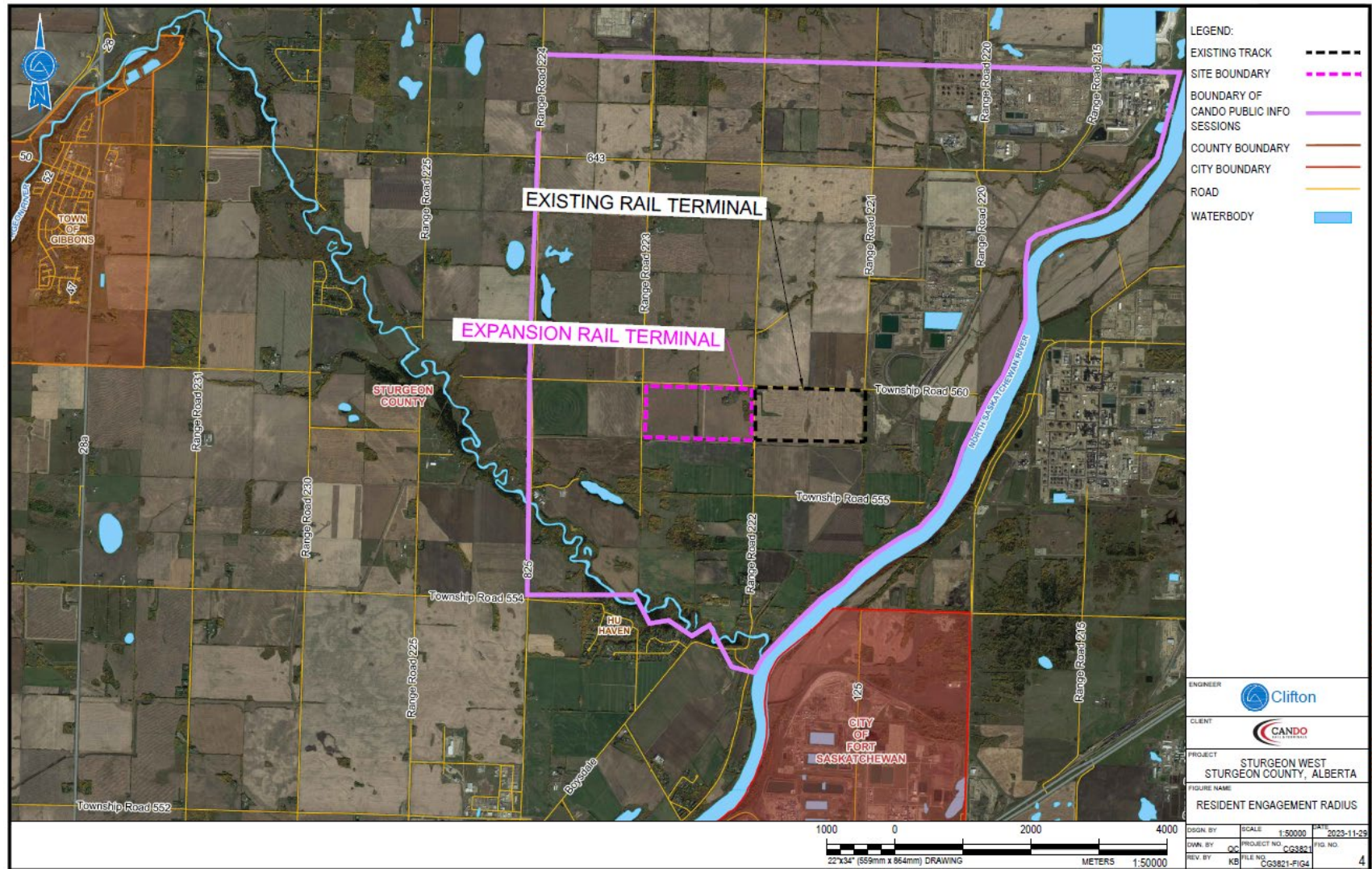


Figure 4: Resident Engagement Radius

1.3.6 Industry Stakeholder Engagement

All industrial facilities within the Sturgeon County portion of the Industrial Heartland were emailed a letter describing the project with figures detailing the project location. The letters provided contact information for Cando and encouraged feedback. No objections or concerns regarding the project have been brought forward by industry stakeholders.

1.4 Indigenous Engagement

A list of Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.

A list of Indigenous groups which may be impacted by the project was provided by the IAAC. In addition to the list provided, Cando contacted the Alexis Nakota Sioux Nation and Paul First Nation which are both located west of Edmonton. The following are the Indigenous groups contacted.

Alexander First Nation	Montana Cree Nation	Otipemisiwak Métis Government
Alexis Nakota Sioux Nation	Paul First Nation	Otipemisiwak Métis Government – Region 4
Enoch Cree Nation	Saddle Lake Cree Nation	Buffalo Lake Métis Settlement
Ermineskin Cree Nation	Samson Cree Nation	Kikino Métis Settlement
Kehewin Cree Nation	Foothills Ojibway First Nation	Lac Ste. Anne Métis Community Association
Louis Bull Tribe	Kelly Lake First Nation	

Following receipt of the Indigenous groups list from IAAC, contact information was collected from Alberta’s Aboriginal Consultation Office (ACO), IAAC, or the Indigenous group’s website to first send a Project Notification Letter. The letter was sent via email, with read receipts requested, to each group. The letters requested a response within 30 days. Prior to the 30-day mark a follow-up email was sent as a reminder of the request for feedback. Before the Holiday break, a response had been received from the following First Nations and Métis organizations:

- Enoch Cree Nation – Engagement activities have included numerous emails and an in-person meeting mostly related to Cando’s upcoming needs for contractors and project-related services. Cando will

continue to engage as the project progresses to determine if there is the potential for future collaboration or procurement.

- Ermineskin Cree Nation – A letter was received requesting an in-person meeting and that an Ermineskin representative complete a site assessment as the project is located on their ancestral territory. The letter stated that it was not Ermineskin's intent to impede the project but as stewards of the land it is their duty to protect the safety of flora, fauna, birds, water, soil, air, and culturally sensitive areas.
- Kehewin Cree Nation – An email was sent to Cando requesting clarification on the contact information for the project. Cando responded.
- Kelly Lake First Nation – Cando received a letter stating that they had no objections to the project, but wished to be informed of future Project milestones.
- Samson Cree Nation – A virtual meeting was conducted between Cando and representatives of Samson Cree Nation. Discussions during the meeting included having access to any wood following tree clearing activities and providing a monitor during construction activities. The Samson Cree representative also asked about contractor or procurement opportunities. Following the meeting, Samson Cree Nation was to provide a list of companies, their capabilities, and the services they could potentially provide.
- Lac Ste. Anne Métis Community Association (LSAMCA) – A virtual meeting was held to provide a Project overview and see if there were any initial questions or concerns by LSAMCA. Representatives noted they would like additional mapping of the Project location (provided), asked how they were added to consultation lists for contact (IAAC, ACO), asked when IAAC would be making decisions, noted concern that Cando did not yet have a formal Indigenous Consultation Policy (in development), asked Cando to share early site works activities and opportunities for involvement, and noted an interest in a site assessment.

Following the holiday break, Cando has continued following up by phone and email with Indigenous groups that were initially contacted, prioritizing those from which no initial response was received, or communication was halted due to the holidays. Cando began notifying First Nations and Indigenous organizations that they would like to start wrapping up the information gathering phase and start addressing/closing the comments/feedback received. Additional comments, and their disposition are noted below:

- One group indicated that they wanted to have a monitor on site during the construction period. Cando has indicated that given the prior use of the site as a farm the likelihood of cultural artifacts being found is very low. That said, a chance find protocol will be in place in the unlikely event that a heritage resource is uncovered.
- Several groups have indicated that they would like a site visit in the spring and Cando considers this a reasonable request and will work to accommodate it. Cando's preference would be to make the site available for a day or two for groups, although some groups have stated that they are not open to having other First Nations or Indigenous organizations attend at the same time.
- One group has indicated they would like access to the firewood when the site is cleared and grubbed. Cando is okay with lumber salvage, although First Nations and Indigenous groups will need to arrange transport of the firewood and any labour or equipment requirements.

- A number of requests for work, especially in clearing and grubbing, and for roads and civil earthworks. While this work is some way off yet, Cando is maintaining a list of the interested Indigenous contractors and their capabilities to send proposals or tenders to.
- There were some requests for technical documents generated for the project and Cando indicated that some will be available online once regulatory submissions are available to the public, and that any that are not included in a report or submission are considered confidential. That said, Cando has noted during consultations that they would be willing to discuss the findings of specific reports in a summary manner.

Consultation, communications, and clarification with Indigenous groups is ongoing, though is now focused on addressing/closing the comments/feedback received. It is the intention of Cando, in pursuit of this application, to endeavour to ensure the Project Notification Letter/Email was received by all First Nations communities and Indigenous groups shown in Table 1-4, gather initial feedback, and work to address concerns or comments in a manner that is both respectful and feasible.

In addition to the engagement activities undertaken for this submission, provincial applications will be required under Alberta's Water Act. These applications will require the completion of a Pre-Consultation Assessment through the ACO. Cando will complete further engagement with Indigenous Groups if deemed necessary following the ACO's pre-consultation assessment. Cando's First Nations Consultation number with ACO is: FNC202450136.

1.5 Studies and Plans

Any study or plan relevant to the project that is being or has been conducted of the region where the project is to be carried out, including any Regional Assessment carried out under the Impact Assessment Act, or by any jurisdiction including by or on behalf of an Indigenous governing body, where the study or plan is available to the public.

There are no studies or plan, relevant to the project, under section 92 or 93 of the *Impact Assessment Act* or by any jurisdiction, including by or on behalf of an Indigenous governing body.

There are environmental initiatives in the region set out by the province and the Industrial Heartland, including (Government of Alberta, 2023a):

- An air quality management framework with local air quality monitoring through the Fort Air Partnership. A greenhouse gas (GHG) inventory and a discussion on air quality management is included in this report.
- A topsoil guideline document specific to the Industrial Heartland which outlines conservation, off-site storage, and off-site use of topsoil. Cando will continue to discuss the topsoil management with Sturgeon County.
- Water quality will be managed through the North Saskatchewan Region Surface Water Quality Management Framework. Cando will implement best management practices to conserve the quality of the regional surface waters; and

- Water drainage will be managed through municipal master drainage plans and *Water Act* approvals. Cando is working with qualified professionals to manage the on-site wetlands and surface water drainage. Both components are provincially regulated by EPA through the *Water Act*.

Cando is working with qualified professionals and government agencies to preserve the environmental quality of the air, soil, and water and ensure that all requirements are considered prior to construction.

1.6 Strategic Assessments

Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act.

The Strategic Assessment of Climate Change, published in 2020, would be relevant to the project; it is a strategic assessment conducted under subsection 95(2) of the *Impact Assessment Act*, and it applies to all designated projects under the *Impact Assessment Act*. The Strategic Assessment of Climate Change was considered during Clifton's GHG estimate.

2.0 Project Information

2.1 Project Purpose and Need

A statement of purpose of and need for the project, including any potential benefits.

Purpose

With connections to a Class 1 railroad (Canadian National), the purpose of the project is to provide rail services to clients in the petrochemical industry located in Sturgeon County, the adjacent Strathcona County, within the Alberta Industrial Heartland zone, and beyond. Those rail services include rail car storage, train marshalling and assembly especially for unit trains, limited transloading of hazardous and non-hazardous materials, minor repairs and servicing to railcars and locomotives, and other rail services as may be identified by rail customers. The Cando Sturgeon Rail Terminal West Expansion is intended to be a full-service, multi-purpose facility for the storage, grouping, maintenance, and transloading of rail cars from various industries. This has resulted in the need to expand the existing Sturgeon East Railyard to handle demand.

Need

The Class 1 railroads in Canada have largely stopped storing railcars for customers creating a national need for railcar storage facilities. Combined with the increasing industrial presence in the area of the Project, and the increasing need for the transport of bulk products, there is a need for railyards to service customer railcar needs. The petrochemical industry located in Sturgeon County and the adjacent Strathcona County use large numbers of predominantly tank cars and hopper cars to transport their

products to customers. The tank cars are privately owned and require rail facilities to store cars when they are not actively in use at either a production facility, a user's facility or in transit. Consolidating rail staging operations in one area removes the need for each individual industry to provide its own facility, assists with network fluidity for the Class I's over the road, and improves railcar handling efficiency at the end destination. This in turn lowers industry infrastructure and capital costs and increases competitiveness.

To meet the local needs for handling and servicing unit trains (trains that contain a single commodity) and to maintain connections to the CN Rail line and the rest of the North American market it is imperative that the expansion rail terminal be comprised of long tracks with connections on both the north and south sides to the existing rail terminal.

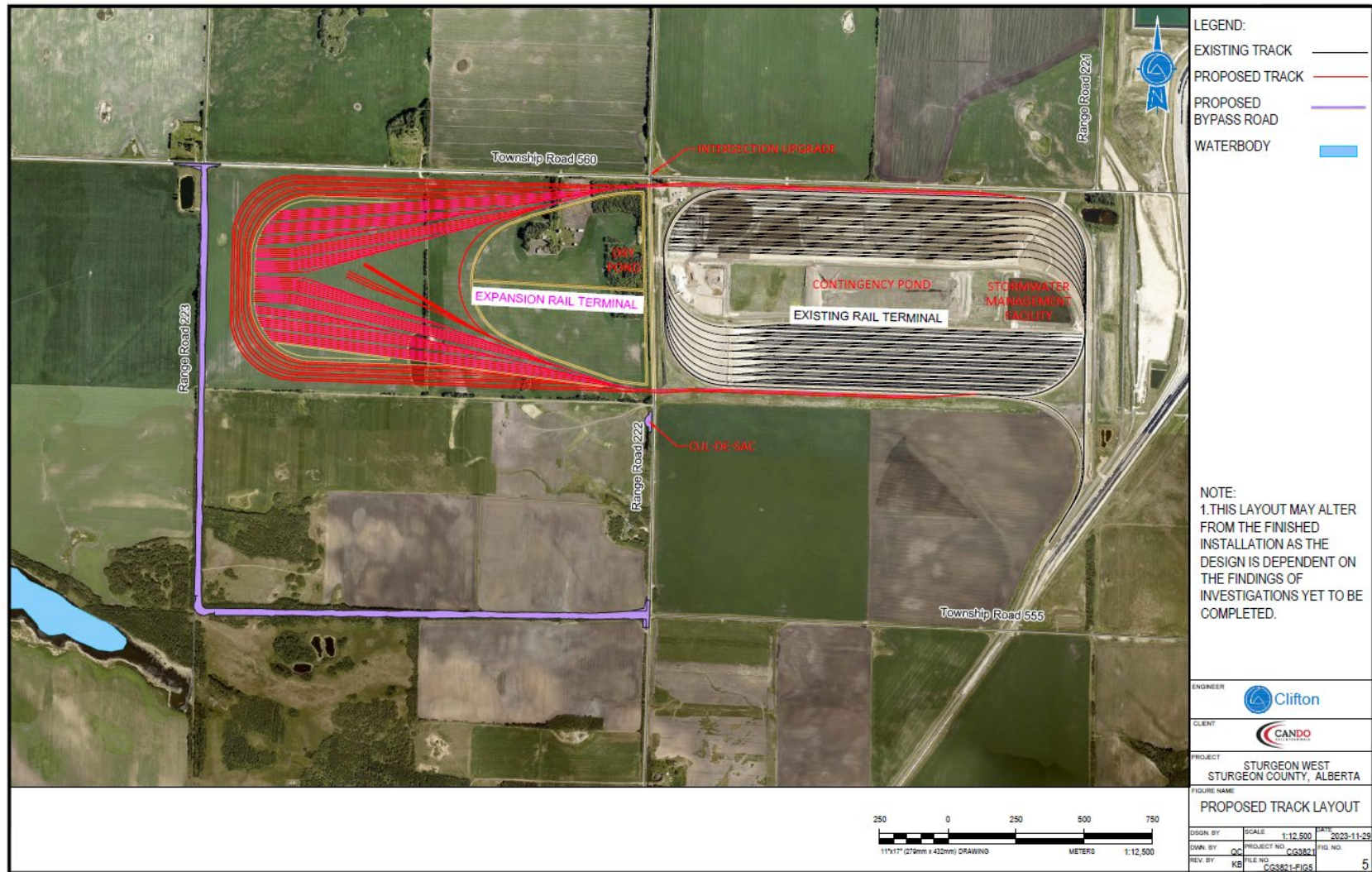


Figure 5: Proposed Track Layout

It is intended that in time additional ancillary facilities would be built to support railway operations based upon customer requirements. Facilities that may be constructed include storage tanks for fueling, mobile transloading, and an expansion of the repair facilities. These uses may be developed in time along with appropriate permits and support infrastructure including power and surface and stormwater management.

2.2 Project Applicable Physical Activities Regulation

The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part. Proponents must detail how the project meets the description, threshold, and the criteria in any of the other provisions.

The project is subject to Section 55 of the *Physical Activities Regulation* which states the following:

“The expansion of an existing railway yard, if the expansion would result in an increase of its total area by 50% or more and a total area of 50 ha or more”.

The expansion rail terminal encompasses a total area of approximately 130 ha of land which is greater than the 50 ha indicated and would also increase the capacity of the overall facility by approximately 50%.

There is no other criteria presented in the *Physical Activities Regulation* which would be applicable to the project. There do not appear to be any other federal authorities that would have direct jurisdiction over the expansion rail terminal. Cando is aware of the need to comply with the *Migratory Birds Convention Act* and the *Species at Risk Act* in developing the project.

2.3 Project Activities, Infrastructure, and Physical Works

A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation, decommissioning of the project. Include existing structures or related activities that will form part of or are required to accommodate or support the designated project.

2.3.1 Proposed New Infrastructure

The proposed new infrastructure for the project is detailed below in Table 2-1.

Table 2-1: Proposed New Infrastructure for the Expansion Rail Terminal	
Proposed Infrastructure	Description
Arrival/Departure Yard	The arrival/departure (AD) yard is to become the primary spot for the inbound and outbound train traffic. The AD tracks, ranging in holding capacity from 99 to 179 railcars, would provide a total of approximately 1,088 railcar spots. There is the potential to add locomotive storage tracks on the north and south sides of the AD yard to allow staging of locomotive power while trains are being built.

Table 2-1: Proposed New Infrastructure for the Expansion Rail Terminal	
Proposed Infrastructure	Description
Classification Yards	The classification yards are comprised of four smaller yards with a combined railcar capacity of 1,860 railcars. These four yards would be used to support the railcar demands of local industries and to assist in breaking up inbound unit trains and building outbound unit trains.
Mechanical Yards	The mechanical yard/repair facility is in the center of the terminal and connects the classifications yards and the AD yard. It contains a small staging yard of approximately 70 railcar spaces, locomotive parking, and locomotive/railcar maintenance and servicing areas. These areas would be intended for minor repairs. It also includes a connecting loop to assist in movements between the north and south of the facility.
Rail Connection	The new terminal is to be connected at both the north and south track extents to the existing rail terminal located to the east of Range Road 222. The extension of both the south and the north line is to be completed to ensure that all operations on both the expansion and existing rail terminals can occur simultaneously without disturbing the ability of either facility to meet customer demands.
Access Roads	Roadways will be constructed for crew and staff access by personal vehicle, for truck traffic to enter to refuel locomotives, and for service vehicles to provide water and remove waste products. The portion of Range Road 222 between the expansion and existing rail terminals is to be repurposed into the designated access point. Primary access is planned to be on the south side of the expansion rail terminal property from Township Road 555 with a second emergency access from Range Road 560.
Internal Roads	Internal gravel service roads will be constructed beside the tracks along with gravel pads in the designated repair and transload areas (if constructed in the future). The service roads will be crowned to provide drainage away from the rail tracks and into the stormwater management system.
Water Management Infrastructure	Water supply for the expansion rail terminal is to be trucked in and stored in cisterns until it is needed. Additional infrastructure may require water supply which will be completed in accordance with all provincial requirements under Alberta's <i>Water Act</i> . A SWMP will be completed and approved under Alberta's <i>Water Act</i> .
Offices	Offices used during project construction will be housed in mobile, temporary trailers. Offices for the operation of the rail terminal are expected to be housed in a series of modular buildings with portable services (tanks for water, sewer, and

Table 2-1: Proposed New Infrastructure for the Expansion Rail Terminal	
Proposed Infrastructure	Description
	gas connections) with gravel parking areas. As services expand, offices could migrate into structures, such as maintenance shops, with fixed utility connections.
Services	Services including electrical power and internet will be connected to the expansion rail terminal from the existing rail terminal. Electrical power will be upgraded to support 3-phase power requirements and to power the various equipment, facilities, and offices. The power feed and distribution lines will be constructed and operated in accordance with an arrangement between Cando and the service provider. A small motor control center building may be required to house major electrical components. Internet and radio connections will be installed and operated in agreement with a third-party provider.
Security	Planned security measures for the expansion rail terminal include a standard 6 feet high chain link fence. The fence will be installed around the perimeter with strategically placed gates and emergency egress points. Lights and cameras are to be placed to cover important operational areas, gates, and office locations. The fence will limit unpermitted access from both humans and wildlife.
Bypass Road	Due to the closure of Township Road 222 between the two rail terminals a bypass road is to be built. The bypass will include upgrades to Range Road 223 to the west of the W ½ 34-55-22-W4M and the intersection of Range Road 222 and Township Road 560 to the northeast of the project. To complete the bypass, roadways will also be constructed to the south of the S ½ 34-55-22-W4M and a cul-de-sac will be constructed on Range Road 222 to the south of the project.

The only temporary structures are the mobile office and workspaces to be used during the project construction phase. The remaining infrastructure will be permanent. The temporary structures will be removed once the construction phase is complete.

2.3.2 Existing Infrastructure

Some infrastructure critical to the project is already in place at the existing rail terminal and includes:

- Utilities and third-party infrastructure services are in place or have been upgraded for the existing rail terminal. These services include internet, upgraded electrical power to 600 amp peak usage services – 300 kVa 3 phase power, and local natural gas services.
- Once the tracks of the expansion and the existing rail terminal are connected this will provide the connection to the CN Rail line.

- The surface and stormwater management system on the existing rail terminal will also be part of the SWMP for the expansion rail terminal.
- There are facilities for staff such as offices and washrooms on the existing rail terminal.
- The bypass road will include upgrades to the existing roadways including Range Road 223, the intersection of Township Road 560 and Range Road 222, and Range Road 222 to the south of the expansion rail terminal where a cul-de-sac will be constructed.

2.3.3 Project Activities

Activities associated with the project completed by third-party consultants and contractors will remain under the care and control of Cando. The contractors/consultants will be procured by Cando and will be subject to Cando's safety and environmental standards. Activities to be completed potentially outside of the care and control of Cando are those related to utilities. These activities will be directed by the utility provider with Cando's involvement as required.

Planning Activities

The project is undergoing an extensive planning period including:

- A desktop biophysical baseline review with field verification to determine features related to the siting, landscape, land use terrain, soils, vegetation, wildlife, habitat, surface water, and hydrology.
- A WAIR for both the expansion rail terminal and the bypass road meeting the EPA requirements.
- A Phase I Environmental Site Assessment (ESA) for both the expansion rail terminal and the bypass road to determine the potential for contamination to the subsurface soil and groundwater.
- A Phase II ESA to collect subsurface soil and groundwater samples targeting areas identified for having potential contamination. The Phase II ESA will be completed to meet the EPA requirements.
- A geotechnical investigation to determine the soil characteristics to support the design of the project.
- A Wetland Assessment and Impact Form (WAIF) was completed to allow for the temporary disturbance to wetlands caused by the geotechnical drilling program in accordance with EPA requirements.
- A SWMP that aligns with requirements of both the county and EPA.
- A traffic impact assessment to support the design of the bypass road.
- Field surveys to determine the elevations and topographical terrain of the expansion rail terminal.

Construction Activities

The physical works associated with the construction activities include the implementation of the rail tracks and associated components, site access roads, surface water drainage infrastructure, and the bypass road. Cando is working with the county to ensure that all requirements are met. A safety plan and utility locates will be completed prior to construction. Security measures will be implemented to limit access by unauthorized personnel and animals. Equipment will be stored on the expansion rail terminal property.

Land Preparation – Vegetation Clearing and Demolition

The first stage of construction activities includes planning with utility providers, removing vegetation, and demolition of existing structures. Only the vegetation within the footprint of the project is to be removed. Construction materials from demolition activities will be properly recycled or disposed of by a third-party

contractor. If necessary, a Hazardous Building Materials Assessment will be completed on the existing structures to determine if abatement is required prior to demolition.

Soil Stripping

Stripping activities in the footprint will segregate the topsoil and the subsoil. Based on conversations with EPA the topsoil management aspects of the project would fall under the jurisdiction of Sturgeon County. It is most likely that the topsoil will be stockpiled for potential future reuse or repurposed at another location.

Cut/Fill Activities

The area will be cut/filled with the reuse of soil from high elevations to areas of lower elevation if the material is deemed suitable. If imported material is required, it will be tested for environmental and geotechnical suitability prior to use. The material will be moved, spread, and compacted using appropriate equipment. As the material is being excavated additional work necessary for the completion of the approved SWMP such as site grading or ditches will also take place. The current SWMP design ties into the stormwater system on the existing rail terminal. If any underground infrastructure such as power lines and natural gas connections is necessary, it will be completed to the standards of the specific utility provider. It is possible that dewatering activities will be necessary during construction. The groundwater removed may be discharged following any necessary approvals from EPA or the county to ensure that the water quality and quantity will not cause adverse effects. The main contaminant during dewatering activities would be suspended solids which can be reduced if the water is retained allowing the solids to settle.

Grading

The material will be spread and compacted to meet site specifications. Granular material for road surfaces, pit run gravel, and sub ballast will be trucked over, spread out, and compacted with appropriate equipment.

Track Construction

Once the grade has been completed and inspected, track construction can begin. Portions of the expansion and existing rail terminals will be used to store the construction materials including soil and aggregate stockpiles and track materials. Track construction includes material distribution, skeleton track construction, and ballasting and surfacing. Material distribution includes getting the ties, rail and other track materials positioned for assembly. The skeleton track construction consists of laying out the ties at the correct spacing, connecting the sections of rail to each other and the ties while getting the track on the design alignment. The ballast will be brought to the property and placed around the skeleton track. The track is then raised, and the ballast is compacted under and between the ties.

Bypass Road Construction

Following necessary approvals, the bypass road construction will follow similar steps to the track construction: vegetation will be cleared, topsoil will be stripped, and fill material will be placed in engineered lifts and tested to meet specifications.

Operation Activities

The construction will be phased, and some railway operations may be able to take place at the same time as some construction activities. Cando will operate the expansion rail terminal following the direction of the existing rail terminal. The main activities to take place at the expansion rail terminal include sorting incoming and outgoing railcars, storing railcars, and assembling unit trains for departure. The operations will be under the jurisdiction of ATEC. To ensure compliance with ATEC, updates to the existing site-specific General Operating Instructions, Emergency Response Plan, Safety Management System (completed to Transport Canada standard), and the Operating Certificate (which is issued under the *Railway (Alberta) Act*) would be completed. Cando also has a Environmental, Social and Governance Policy and an Occupational Health and Safety policy and procedures.

The purpose of the rail terminals is to allow a singular location for the storage of railcars for local industry. Additionally, the expansion rail terminal offers maintenance and repair services for cars and locomotives. Between the expansion and existing rail terminals there could be up to 120 employees with 40 employees working per shift. The expansion rail terminal will operate 24 hours a day, seven days a week.

Decommissioning Activities

The project will operate without a defined end point. The decommissioning activities will be completed in accordance with the industry standards and regulations in place at that time. In general, the decommissioning activities will include disconnecting any on-site utilities and removing any in-place infrastructure including buildings, tracks, tanks, etc. The materials will be removed from site by a qualified contractor. It is intended that the removal will include the recycling of any applicable construction materials with the remaining materials disposed of properly. The decommissioning process will include an assessment of potential contamination to the subsoil or groundwater. If determined to be necessary, the decommissioning process will also include the reclamation of contaminated soil and groundwater completed to the standards applicable at the time of decommissioning.

2.3.4 Incidental Activities

This is to include physical activities that are incidental to the designated project.

To make the expansion rail terminal project safe and feasible additional roadways are required to be constructed. This includes the completion of the bypass road works.

2.4 Production Capacity

An estimate of maximum production capacity of the project and a description of the production processes to be used. Capacity refers to the maximum capacity based on the project's design and operating conditions, not the planned capacity of a project. This information may not be relevant to all project types (e.g. highway, railway line), and the proponent should simply indicate where this is the case. The proponent may instead provide other relevant metrics of project size (e.g. area, length, usage).

The arrival/departure yard is anticipated to have holding capacities ranging from 99 railcars to 179 railcars, with a total of approximately 1,088 railcar spots (approximately 60 ft or 18.3 m/rail spot). The classification

yards have a combined railcar capacity of approximately 1,860 railcars. The mechanical yard contains a small staging yard of approximately 70 railcar spaces. The track and associated activities are thought to encompass the entirety of the half section, approximately 130 ha in size. The anticipated traffic is approximately as follows:

- CN Arriva: 4 to 5 Trains/day.
- CN Departure: 4 to 5 Trains/day.
- Customer Inbound: 2 to 3 Trains/day.
- Customer Outbound: 2 to 3 Trains/day.
- Up to 2000 railcars arriving and departing daily.
- Up to 730,000 railcars arriving and departing yearly.

2.5 Anticipated Schedule

The anticipated schedule for the project’s construction, operation, decommissioning, and abandonment, including any expansions of the project.

The anticipated construction schedule without an Impact Assessment is as follows (Table 2.2):

Table 2-2: Anticipated Construction Schedule without a federal Impact Assessment	
Project Task	Timeframe
From approval to full build out	6-7 years
Site Preparation	November 2024 to February 2025
Construction Phase 1	February 2025 to February 2027
Further Construction Phases	2027 to 2030
Project Lifespan	TBD – No fixed end date.
Decommission	TBD – minimum 50 years

The anticipated construction schedule with an Impact Assessment is shown in Table 2.3.

Table 2-3: Anticipated Construction Schedule with a Federal Impact Assessment	
Project Task	Timeframe
IAAC Planning Phase	2024
Impact Assessment Completion	2024 – 2026 (assumes limited federal scope requirements)
Assessment and Decision Making	Early 2027
From concept to full build out	6-7 years
Site Preparation	March 2027 to July 2027
Construction Phase 1	July 2027 to July 2029
Potential Further Construction Phases	2029 to 2033
Project Lifespan	TBD – No fixed end date.
Decommission	TBD – >50 years

2.6 Potential Alternatives

A list of potential:

- *Alternative means that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies.*
- *Alternatives to the project that the proponent is considering and that are technically and economically feasible, and directly related to the project.*

For rail, there are not a lot of alternate means of delivering a project of this type. While Cando will start this project with conventional diesel electric locomotives, they are exploring the use low-carbon fuels for combustion engines in the short-term and the electrification of its fleet of locomotives using batteries, hydrogen fuel cells, or a hybrid of both. Cando, in cooperation with Emissions Reduction Alberta, is a leading participant in the lithium-ion battery-powered locomotive initiative. Battery powered trains use

multiple locomotives that would carry batteries to provide traction power for in-service use. The traction system of a battery powered train is based on that of a conventional electric train, but which is self-contained with the addition of on-board battery storage, supporting power converters, and temperature management for the batteries.

The only practical alternative to the expansion yard is to require clients to build their own storage yards and assemble trains there. This would result in a large number of storage yards that will require a lot of land as a minimum amount of land is required to provide for proper train movement, switching and storage, but will be under utilized relative to the Sturgeon East and West yards, which will be managed full time to maximize the yards utilization. By effectively managing the yard, Cando can service multiple clients.

In addition to the above there are potential items that may be included in the expansion rail terminal depending on the physical space available and customer demands (Table 2-4). None of the potential future infrastructure would fall under federal jurisdiction put appropriate provincial and municipal legislation would be followed along with best industry practices.

Table 2-4: Potential Future Infrastructure	
Railcar Repair Shop	If constructed, the structure would be comprised of a main shop with an office and support area. The railcar repair shop would include flaring and purging capabilities, to ensure that works can be safely conducted on railcars.
Locomotive Repair Shop	A full-service locomotive repair facility to complete heavy repairs within the building. Light maintenance activities would be completed outside the building in a designated area. Electrical charging infrastructure associated with Emissions Reduction Alberta and Cando’s lithium-ion battery locomotive initiative would be included in the locomotive repair shop area.
Storage Tanks	Temporary and modular buildings will require storage or holding containers for potable water, liquid waste, and solid waste. Other above ground storage tanks may include: diesel fuel, gasoline, nitrogen, used oil, and glycol. The amount of storage is unknown at this time but is thought to remain below the provincial <i>Activities Designation Regulation</i> of 5,000 m ³ or more. The tanks will be registered with the province, county, and/or emergency response as necessary.
Mobile Transload	There is a potential to provide a small scale mobile transload services to move products between railcars and trucks in support of local industries. Products may include dry bulk, aggregates, biodiesel, refined fuels, liquefied petroleum gases (LPGs), and other products. The quantity of materials is expected to be limited to a maximum of four railcars per day, generating a maximum of 24 truck movements in/out of the facility. The requirements regarding the transloading of products have been discussed with ATEC as well as EPA and all necessary approvals will be acquired.

3.0 Location Information and Context

3.1 Geographic Coordinates

Proposed geographic coordinates, including, for linear development projects, the proposed locations of major ancillary facilities that are integral to the project and a description of the spatial boundaries of the proposed study corridor. Coordinates should be appropriate for the project type.

The geographic centre of the expansion rail terminal is approximately 53°47'59.43"N (latitude), and 113°11'11.97"W (longitude). The terminal itself will cover a half section of land, approximately 130 ha in size. The Alberta township description is N ½ 34-55-22-W4M. The bypass road is expected to have the following approximate geographic extents:

Description	Latitude	Longitude
Intersection of Township Road 560 and Range Road 222	53°48'12.32"N	113°10'27.87"W
Upgrades to Range Road 223	53°48'12.43"N - 53°47'19.54"N	113°11'56.77"W - 113°11'55.95"W
Southern Side – New Road Construction	53°47'19.54"N - 53°47'20.56"N	113°11'55.95"W - 113°10'25.15"W
Cul-de-sac	53°47'44.39"N	113°10'25.56"W

The majority of the bypass road is contained either within properties that are to be used for the rail terminal or within existing rights-of-way. There will be portions that will need to be acquired from local landowners prior to construction. The exact amount of land to be purchased depends on the final design of the roadway. Drawings of the current, preliminary road design are included in Appendix B.

3.1.1 Site Maps

Site maps produced at an appropriate scale in order to determine the project's proposed general location and the spatial relationship of the project components.

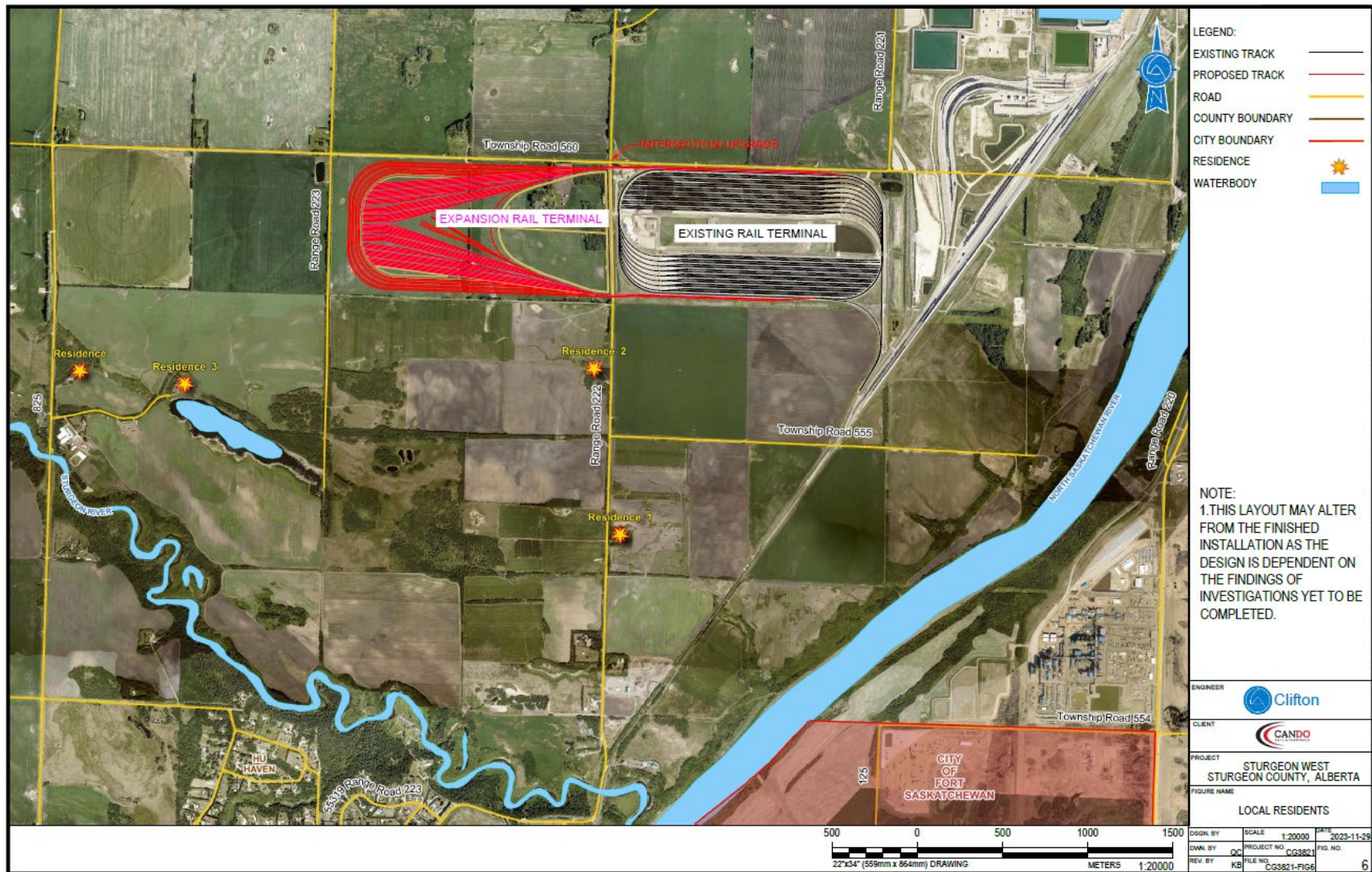


Figure 6: Local Residents

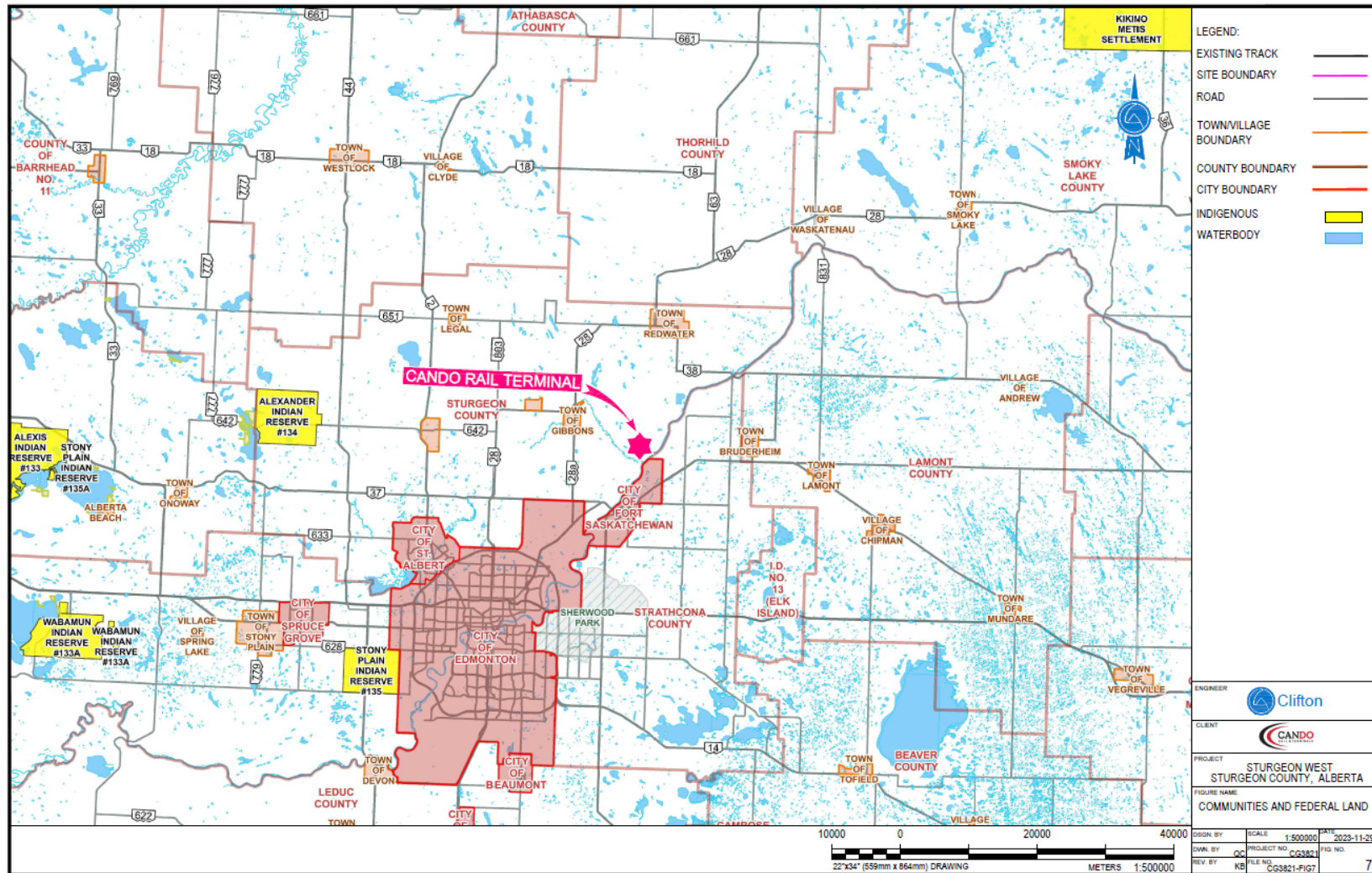


Figure 7: Communities and Federal Land

3.1.2 Legal Land Descriptions and Landowner Documents

The legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot. The level of detail should be appropriate for the project type.

The legal land descriptions of the expansion rail terminal properties are NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D). Based on the current design the legal land descriptions and portions of land that may be purchased for the bypass road are as follows (Table 3-2).

Table 3-2: Bypass Legal Descriptions	
Location	Legal Land Description
Intersection of Township Road 560 and Range Road 222	Existing right-of-way and approximately 22.5 m ² of SE 3-56-22-W4M
Intersection of Township Road 560 and Range Road 223	Existing right-of-way and approximately 338 m ² of NE 33-55-22-W4M
Range Road 223	Existing right-of-way, 8,021 m ² of SW 34-55-22-W4M, and approximately 8,121 m ² of NW 34-55-22-W4M
Southern Boundary along the S ½ 34-55-22-W4M	Undeveloped right-of-way in SW 34-55-22-W4M and approximately 10,842 m ² of SE 34-55-22-W4M and approximately 14,758 m ² of NE 27-55-22-W4M
Cul-de-sac	Approximately 1,554 m ² in the northern half of SE 34-55-22-W4M

Land for the project has not yet been purchased but all landowners have been engaged by Cando and discussions are ongoing.

3.1.3 Proximity to Residents and Communities

The project’s proximity to any permanent, seasonal or temporary residences and to the nearest affected communities.

The zoning of the land in this portion of Sturgeon County is I5 – Heavy Industrial District (Sturgeon County Land Use Bylaw, Sturgeon County, 2023e). As noted, Alberta’s Industrial Heartland (APEA, 2023d) is also

a Designated Industrial Zone within the province of Alberta. There is no intent of a future change in land use. No future residential development will occur within at least 800 m of the project boundaries. The railyard Project property is cultivated agricultural land with a single residence that will be vacated prior to construction.

To the north of the property is Township Road 560 followed by heavy industrial-zoned land that is primarily cultivated agricultural land leased out to local farmers. To the east is the existing rail terminal. To the south is a pipeline right-of-way followed by a sod farm, both with heavy industrial zoning. To the west is Range Road 223 followed by, again, heavy industrial-zoned land that is currently cultivated agricultural land. There are treed areas within the cultivated properties, though they are not numerous due to the agricultural history of the area. Based on a review of Google Earth© there appear to be four residences located within a 1.5 km radius of the site: two to the south of the site and the remaining two to the southwest.

The nearest residence is 500 metres south of the edge of the proposed expansion yard. This land is zoned heavy industrial, and it is for sale (See Link, 2024a) as part of a larger 320-acre parcel. At the January 16th Public Hearing, a member of the owner's family indicated that the owner/occupant of this residence did not consider the existing rail terminal noisy. The owner/occupant has also worked as a third-party contractor at Cando's existing rail terminal. The (existing) Sturgeon Terminal site GM and Supervisor have not received any noise complaints about the existing rail yard from the public to-date. This is likely due to the low population density, and the rural and industrial nature of the area. (M. Richard, Cando representative, personal communications, 2024).

The project is located approximately 2.5 km to the north of the Hu Haven rural subdivision. The northernmost boundary of the City of Fort Saskatchewan is located approximately 7.5 km to the southeast on the opposite side of the North Saskatchewan River. The community of Gibbons is approximately 7.6 km to the northwest of the project. The community of Redwater is located approximately 15 km to the north.

3.1.4 Project Proximity to Traditional Indigenous Uses

The project's proximity to land used for traditional purposes by Indigenous peoples of Canada, land in a reserve as defined in subsection 2(1) of the Indian Act, First Nation land as defined in subsection 2(1) of the First Nations Land Management Act, land that is subject to a comprehensive land claim agreement or a self-government agreement and any other land set aside for the use and benefit of Indigenous peoples of Canada.

The project properties are located on Treaty 6 land. The closest First Nation reserves are: Alexander First Nation 49 km west and Enoch Cree Nation 48 km to the southwest. There were other reserves further to the northeast, southwest, and west. There were no reserves within 150 km to the north, east, southeast, or south (Government of Alberta, 2021). The project is located within Otipemisiwak Métis Government Region 4 and District 11 – St. Albert Métis District (Otipemisiwak Métis Government, 2023). The closest documented Métis Settlement is Kikino located approximately 84 km to the northeast. There were no First Nations within 150 km to the north, east, southeast, or south of the Site. These locations are based on a

review of the documented reserves as mapped by the province (Government of Alberta, 2021, see Figures 6 and 7).

Traditional land uses specific to the project location have not been identified. The larger area has been historically used by Indigenous communities through harvesting, fishing, and hunting. There may be some ancestral connections to the lands and Cando will continue to work with Indigenous groups. The landscape in the area has changed through cultivation and industrial developments. The project location has been used as cultivated agricultural land since at least 1950 (Clifton, 2023).

3.1.5 Proximity to Federal Lands

The project's proximity to any federal lands.

The Edmonton Garrison (Canadian Forces Base) is located to the north of the City of Edmonton and is approximately 18.5 km to the southwest of the project. Elk Island National Park is located approximately 20 km to the southeast of the project. Elk Island National Park is located within the Beaver Hills Biosphere. The boundary of the biosphere is approximately 16 km to the southeast (Beaver Hills Biosphere, 2023).

3.2 Physical and Biological Environment

A brief description of the physical and biological environment of the project's location, based on information that is available to the public.

Cando retained the services of EDI Environmental Dynamics (EDI) to complete a biophysical assessment which included a desktop review with field verification (EDI, 2023c). The following sections include information obtained from this report. Following the summary of the publicly available information is a description of the site-specific field observations, potential risks, and mitigation measures.

3.2.1 Terrain and Soil Summary of Publicly Available Information

3.2.1.1 Summary of Publicly Available Information

The project is located within the southern Dry Mixed Wood Natural Subregion (Natural Regions Committee, 2006). This region is typically characterized by undulating or hummocky surface expression with variable relief including some low-relief and inclined areas. The local topography was described as generally flat with a downward slope south towards the Sturgeon River and east towards the North Saskatchewan River (EDI, 2023c).

There are three soil mapping polygons consisting of five soil series listed within the project area (Government of Alberta and Alberta Agricultural and Forestry, 2023). Generally, the soils were described as eluviated or orthic black chernozems which one soil series described as gleyed black chernozems. The majority of the project footprint was noted to be loam, silty loam, silt loam, and very fine sandy loam textures (EDI, 2023c).

3.2.1.2 Site-Specific Risks and Mitigation

Field results generally confirmed the surface soil results from the desktop review. It was noted that black topsoil material (A horizon) was approximately 20 to 40 cm thick and described as a silty clay loam or clay loam. The B horizon was an additional 20 to 40 cm thick and was described as clay loam or clay. The A and B horizon soils in the footprint of the project will be stripped prior to construction. In discussions between Clifton and EPA it was determined that the conservation and management of the surface soils would fall under the jurisdiction of Sturgeon County. The management of the soils must still comply with Alberta’s *Soil Conservation Act* (EDI, 2023c).

The risks to the soil due to the project include:

- Loss of soil due to erosion.
- Degradation of stockpiled materials.
- Soil compaction due to rutting and moving equipment.
- Potential for soil contamination.

Table 3-3: Soil Risks and Mitigations

Risk	Mitigation
Erosion	<ul style="list-style-type: none"> • Limit the area stripped as much as practicable. • In dry, windy conditions use water on the surface of exposed soils. • If possible, place any stockpiled fine-grained materials away from low-lying areas and drainage courses and in locations with wind coverage to avoid material from entering waterbodies. • If possible, cover the stockpiled materials with a tarp or, if they are intended for long term storage, seed the stockpiles with an acceptable mixture. • To reduce siltation to nearby waterbodies, construct earthen berms, or ditches to control the surface water runoff as per an approved SWMP. The current SWMP includes the retention of waters to allow for the settlement of suspended solids.
Degradation	<ul style="list-style-type: none"> • Test the soils for clubroot, a soil borne disease affecting canola, mustard, and other crops in the cabbage family. • Soils will be stockpiled as required. • Reuse and/or remove soils, pending the approval, to avoid long-term storage. • If soils are stockpiled long-term, consider testing and amending the soil to improve the chemical/physical characteristics prior to reuse.
Compaction	<ul style="list-style-type: none"> • Avoid using equipment off-site to reduce the effects of compaction as compact soils result in the reduction of plant rooting and growth. • Use designated paths when running equipment.

Contamination

- Use drip pads and spill containment during activities with a higher risk of a spill/release occurring.
- Properly dispose of all hazardous materials.
- Keep all on-site vehicles and equipment in good condition and free of leaks. Inspect equipment regularly and repair as needed.
- Keep spill response materials on-site and clean-up any spill or release immediately properly disposing of contaminated materials, including any soil or water, to avoid the contaminant migration.
- Ensure compliance with all transportation of dangerous goods (TDG) and Workplace Hazardous Materials Information System (WHMIS) regulations.
- Engage a qualified third-party for the remediation and removal of any contaminated materials.
- Fueling will take place away from drainage systems and water bodies to prevent the spread of contaminants if a spill or release were to occur.
- If there are contaminated materials on-site that will be disturbed then a soil management strategy will be created. This may include the segregation and off-site treatment or disposal of contaminated soils with confirmatory samples collected to determine if all contaminated materials were collected. The Phase II ESA being completed is specific to the areas identified as being potentially contaminated during the Phase I ESA.

3.2.2 Vegetation

3.2.2.1 Summary of Publicly Available Information

The Dry Mixed Wood Subregion of the Boreal Natural Region (Natural Regions Committee, 2006) is composed of aspen forests and cultivated lands with wetlands and low-lying areas. A review of the Alberta Conservation Information Management System (ACIMS) system did not indicate the presence of a listed vegetation species (Alberta Environment and Protected Areas, 2023a). A large portion of the project area consists of cultivated land with limited native species. The remaining areas consisted of a mix of deciduous trees, graminoid marshes, and deciduous swamps (EDI, 2023c).

3.2.2.2 Site-Specific Risks and Mitigations

The complete list of observed vegetation species is included in EDI's biophysical report. Five different noxious weed species were observed within the project area. There was also one listed plant, clammy hedge-hyssop, identified in two different locations. The plant is not federally listed in the *Species at Risk Act* (SARA). The plant is also known to be present in disturbed wetlands, is locally abundant, and was reported to ACIMS (EDI, 2023c).

Potential risks to vegetation include:

- Loss of native vegetation.
- Introduction and spread of invasive plants and noxious weeds.

Table 3-4: Vegetation Risks and Mitigations	
Risk	Mitigation
Vegetation Loss	<ul style="list-style-type: none"> • Limit clearing activities to the extents necessary and practicable. • Clearing activities should occur during the winter months to avoid disturbance to dormant plant species and wildlife, especially birds, as per the Alberta <i>Wildlife Act</i> and Canada’s <i>Migratory Birds Convention Act</i>. • Use the existing and expansion rail terminals and cultivated land areas for laydown and equipment storage to avoid disturbing native plant species as much as possible. • Native vegetation is not to be harvested. • If culturally significant flora or fauna is identified in the area, specifically by an Indigenous group, Cando will engage with the party to come to a mutually agreed upon plan. • If possible, the listed plants will be salvaged prior to construction and translocated to local waterbodies.
Invasive Species	<ul style="list-style-type: none"> • To avoid the spread of invasive species and noxious weeds control measures approved by Sturgeon County conform to Alberta’s <i>Weed Control Act</i> will be implemented. These measures could include removal of the weeds, mowing the areas to prevent seeding, landscaping, tilling the soils, and the use of approved herbicides.

3.2.3 Wildlife and Wildlife Habitat

3.2.3.1 Summary of Publicly Available Information

The project is not located in any designated wildlife sensitivity zones. The closest sensitivity zone is the Key Wildlife and Biodiversity Zone located approximately 280 m from the project and is associated with the Sturgeon and North Saskatchewan River Valleys (Government of Alberta, 2022). The project is located 200 m from a sharp-tailed grouse survey area and a sensitive raptor zone for the bald eagle (Government of Alberta, 2022). The project area does not overlap with any federally designated critical habitats (Fisheries and Oceans Canada, 2022; Environment and Climate Change Canada, 2022b) or any important bird areas, migratory bird sanctuaries, or national wildlife areas (Government of Alberta, 2022; EDI, 2023c).

Known wildlife to the area include mule and white-tailed deer, moose, many bird species, and small mammals. Three bird species have historically been reported within 2 km and there is documented fish presence within the Sturgeon and North Saskatchewan Rivers (Alberta Environment and Protected Areas, 2023b). These species were not listed with the federal or provincial government. The cultivated lands may provide habitat for deer, some birds, and small mammals. The treed areas within the project area would provide habitat for birds, ungulates, and small mammals (EDI, 2023c).

3.2.3.2 Site-Specific Risks and Mitigations

Activity from woodpeckers was noted and there was an unoccupied stick nest observed. Other trees were noted to be large enough to support habitat for raptor nests and pileated woodpecker nest cavities. No active nests/cavities were noted during the site visit. Thirteen different bird species, deer tracks, mule deer, and red squirrel were observed (EDI, 2023c).

Risks to the wildlife and wildlife habitat due to the project include:

- Loss of habitat.
- Disturbance to present wildlife including the potential for nested birds.
- Increased human interference in the area due to the presence of workers.

Table 3-5: Wildlife Risks and Mitigations	
Risks	Mitigations
Loss of Habitat	<ul style="list-style-type: none"> • Limit the removal of habitat to the areas necessary. • Concentrate construction activities, such as vehicle parking, to areas that have already been disturbed.
Disturbance	<ul style="list-style-type: none"> • Complete clearing activities outside of the migratory bird nesting period (generally beginning of April to end of August). • Conduct a stick nest/nest cavity survey within suitable habitat of 1 km of the project during leaf-off conditions in 2024, with a follow-up survey in late May 2024 to verify if the nest is active or inactive and, if occupied, identify the occupant species. • Conduct a pre-disturbance wildlife and nest clearance sweep prior to the commencement of construction following the Wildlife Sweep Protocols (Alberta Environment and Parks 2020b). • Complete mitigation measures if occupied nests or other sensitive species are encountered. Mitigations would be specific to the findings but could include revisions to the construction plan or monitoring the wildlife for signs of stress. • Manage dust and noise as much as practicable to avoid stress on wildlife.
Human Interference	<ul style="list-style-type: none"> • Maintain the stormwater pond to avoid plant growth which can be desirable habitat and regularly remove the water from the pond. • Test the pond water promptly by a qualified professional prior to disposal if it is suspected of having been affected by a hazardous substance. • Include wildlife incidents, such as accidental vehicle collisions, in site-specific protocols as well as the steps to report an incident. • Avoid interactions with wildlife including hunting, chasing, or feeding.

3.2.4 Water –Surface Water, Wetlands, and Groundwater

3.2.4.1 Summary of Publicly Available Information

The project is located within the North Saskatchewan River watershed and the North Saskatchewan River Beaverhill Basin and Sub-basin. The Sturgeon River runs to the west, southwest, and south with the nearest point more than 1 km to the southwest. The Sturgeon River flows southeast into the North Saskatchewan River which is primarily located approximately 1.5 km to the east. The North Saskatchewan River then flows to the northeast. The regional surface water runoff generally follows in alignment with local topography meaning that the project would generally receive surface water from the northwest and that runoff from the project would generally flow to the south and east. Maps show a tributary of the North Saskatchewan River which may be connected to a wetland partially located within the project footprint (Alberta Environment and Protected Areas, 2023a; EDI, 2023c).

Another aspect of water is the groundwater. The groundwater in the area underwent a regional assessment in 2001 (Hydrogeological Consultants Ltd., 2001). Based on this assessment, the aquifer in the region of the project is the Oldman Aquifer. The groundwater is mainly sodium-bicarbonate based and has naturally elevated total dissolved solids (TDS) between 500 and 1,500 mg/L. Sulfate concentrations were generally below 500 mg/L. The chloride concentrations were expected to be greater than 250 mg/L which is the Canadian Drinking Water Guideline. The 250 mg/L guideline is an aesthetic objective (Government of Canada, 2023d) and does not necessarily indicate that there is an imminent risk to human health. There are also instances of fluoride levels above the Canadian drinking water quality guideline of 1.5 mg/L.

3.2.4.2 Site-Specific Risks and Mitigations

The local surface water runoff will be altered to direct the runoff to the engineered SWMP. The regional surface water runoff would be altered based on the presence of roadways, ditches, irrigation, cultivation, and berms. There is also a sluice gate located north of the project within the northern ditch of Township Road 560. When the gate is closed to the south the water flows east along the northern ditch of Township Road 560; however, when the sluice gate is open to the south the water flows south onto the land allocated for the expansion rail terminal (EDI, 2023c).

Thirty-two wetlands, described as land saturated with water for long enough to promote the formation of water altered soils, growth of water tolerant vegetation, and biological activity adapted to a wet environment (Government of Alberta, 2013), were identified within the footprint of the expansion rail terminal. Nine wetlands were also identified within the footprint of the bypass road. These wetlands are shown in Figure 8. There were also ephemeral waterbodies and anthropogenic waterbodies (dugouts) identified within the project boundary. Ephemeral waterbodies are described as low-lying areas where water is briefly ponded in the spring or after a heavy precipitation events, but do not meet the requirements of a wetland (Government of Alberta, 2015). There were 18 ephemeral waterbodies, 13 ephemeral drainages, and three dugouts located within the project footprint. Detailed WAIRs regarding the wetland assessment have been completed under separate covers for submission to EPA under the Water Act. The WAIR is designed to receive approval from EPA for the removal of wetlands providing financial compensation (EDI, 2023c).

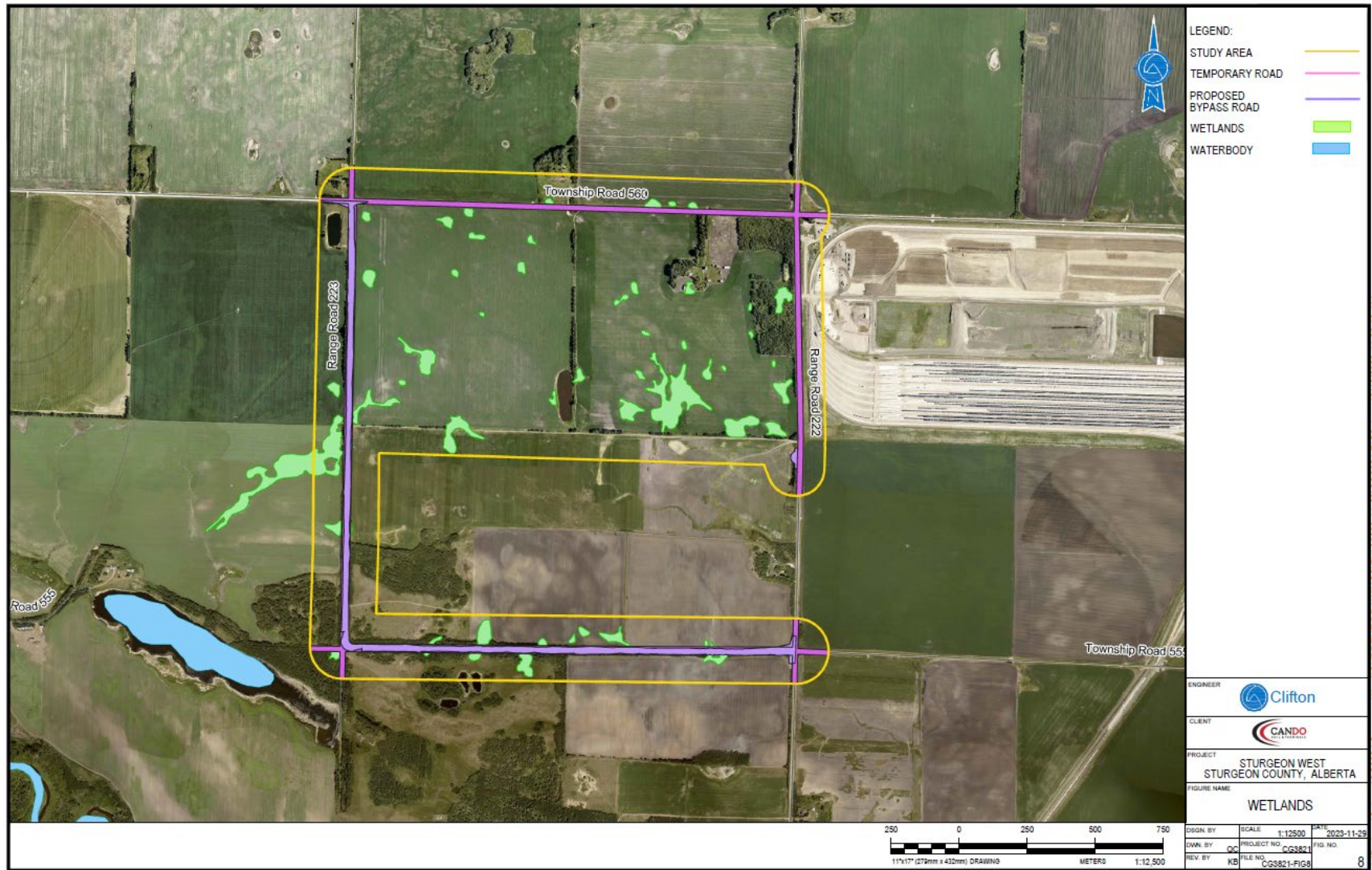


Figure 8: Wetlands

Clifton completed a subsurface investigation to support a Phase II ESA and a baseline environmental assessment was completed with surficial soil samples and groundwater samples collected throughout the footprint of the expansion rail terminal. Groundwater samples were collected and analyzed for a variety of analytes during these investigations. There was a geotechnical investigation completed which included the installation of piezometers to determine the groundwater elevations. The results of the subsurface investigation will be reviewed and assessed, and the Phase II ESA will be completed to EPA standards and include any future recommendations. The results of the baseline environmental investigation could be used to determine soil and groundwater chemistry prior to operation of the expansion rail terminal.

The risks to groundwater, surface water, and wetlands due to the project include:

- Contamination due to a spill or release.
- Sedimentation to surface waterbodies.
- Changes to drainage courses causing alterations to waterbodies.
- Destruction of wetland habitat.

Table 3-6: Water Risks and Mitigations

Risk	Mitigations
Contamination	<ul style="list-style-type: none"> • Potential contamination sources identified in the Phase I ESAs should be properly assessed in a Phase II ESA and, if contamination is present, specific handling procedures should be created by a qualified professional including guidance around removal, containment, and proper disposal of contaminated soil and groundwater. • Prevent contamination by using proper primary and secondary containment when storing hazardous substances as required by regulations. Storage tanks should be double walled or have other secondary containment capable of holding 110% of the contents of the container. • Ensure that there is an emergency response procedure if a spill or release is to occur. Including reporting procedures and clean-up using on-site spill kits. • Use drip trays or absorbents when completing activities that may be high risk for the release of a hazardous substance. • If the on-site ponds appear to have a hydrocarbon sheen or are known to have been affected by a hazardous substance use skimmers and booms to remove as much oil as possible. • Surface waters accumulated in the SWMP will be tested prior to release and if there are parameters above discharge criteria, then the water would be removed and properly disposed of by a qualified third-party. EPA has advised that, physical/chemical characteristics for surface water at the site will not be provincially regulated but should follow local precedence based on <i>Water Act</i> approvals issued to other industry stakeholders within Alberta’s Industrial Heartland.

Table 3-6: Water Risks and Mitigations	
Risk	Mitigations
	<ul style="list-style-type: none"> • Complete high-risk activities in a designated area, potentially with mitigation measures to protect drainage channels. • Inspect equipment regularly and if a leak is observed ensure the equipment is properly repaired and fitted with a drip tray in the interim. • Use proper TDG and WHMIS protocols for the handling and transportation of hazardous materials and ensure staff are properly trained for the tasks they complete.
Sedimentation	<ul style="list-style-type: none"> • Allow retention of surface waters in the on-site ponds for the settlement of suspended solids. • Reduce dust and airborne particles by watering the ground surface (or using other dust prevention amendments) during dry, windy conditions. • If possible, cover or vegetate areas with a high potential for erosion. • Reduce dust generation through speed limits.
Drainage Courses	<ul style="list-style-type: none"> • Ensure that a properly engineered SWMP is implemented that follows the provincial <i>Water Act</i> regulations and municipal master drainage plan. The SWMP is to be approved by EPA prior to implementation.
Destruction of Wetland Habitat	<ul style="list-style-type: none"> • Avoid wetlands outside of the project footprint to reduce unnecessary destruction of habitat. • Complete a thorough investigation of the wetlands within the project footprint and document the investigation in a WAIR for EPA approval. The approval is contingent on compensation for all wetlands destroyed. The compensation is part of a wetland replacement program which aims to re-establish wetlands in other parts of the province.

3.2.5 Air Quality and Noise

3.2.5.1 Summary of Publicly Available Information

The air quality in Alberta’s Industrial Heartland is managed on a regional basis, rather than individual facilities, through the Capital Region Air Quality Management Framework. Four concentration level limits have been established for nitrogen dioxide (NO₂), sulphur dioxide (SO₂), fine particulate matter (PM_{2.5}) and ozone (O₃). These limits are reviewed annually and are based on the Alberta Ambient Air Quality Objectives (AAQO) for NO₂ and SO₂, and the Canada Wide Standards for PM_{2.5} and O₃. Mitigative management actions are to be implemented as needed in response to triggering of limit thresholds (Clifton, 2023b).

Air quality in the region of the project is monitored by the Fort Air Partnership, which currently operates ten continuous and sixty-three passive air monitoring stations. Data is compared to provincial AAQOs and is used to calculate the Air Quality Health Index. The Air Quality Health Index is a publicly accessible report which provides daily risk ratings on a scale from low to very high risk related to outdoor activity. The closest continuous monitor to the project is located southeast at the Scotford Shell Refinery. The closest passive monitor lies approximately 65 km east of the project. The Air Quality Trend Health Index for 2019-2021 indicates that hourly readings were in the low-risk range for 85% to 90% of the monitoring period (Clifton, 2023b).

Noise levels in the area are managed for member companies under the Northeast Capital Industrial Association (NCIA) Regional Noise Management Plan. The development of the Regional Noise Management Plan was based on a predictive computer noise model that incorporates noise models from various facilities in the region, as well as road and rail traffic noise levels. The model is publicly accessible via Google Earth and displays four model cases. Case 3D shows 'Existing Facilities plus main Road and Rail Contributions' using 2019 roadway traffic data and estimated rail traffic volume on the main lines over a 24-hour period in 2020. The industrial facilities model assumes all equipment is running at 100% capacity 100% of the time. The regional model is updated every few years and considers significant changes in noise levels at industrial facilities and new data provided by ATEC and rail companies (if available). The current model predicts sound levels to be 43 to 48 dBA (Clifton, 2023b).

The nearest noise monitoring stations are located at the southwest fence line of the Pembina Redwater Fractionation facility to the east of the project, with another located more than 1,500 m from the project. Measured noise levels at most locations were shown to be generally consistent with model predictions. The field validation annual report conducted on behalf of NCIA also indicated that noise levels at most locations consisted of low frequency components with occasional mid/high frequency components. Trend analysis indicated no significant increasing or decreasing trends over baseline sound levels. Regarding rail transport activities, noise from train passages through the monitoring regions dominated the noise climate, although there had not been an increase of rail passages over 2019 observations (Clifton, 2023b).

3.2.5.2 Site-Specific Risks and Mitigations

Air contaminant emissions are expected to be negligible, or minimal during all project phases. Expected emissions during the construction phase will be transient in nature. During construction, the major sources of atmospheric emissions are expected to be exhausts from the onsite mobile equipment and fugitive dust. The key contaminants from mobile equipment combustion will be SO₂, nitrogen oxides (NO_x), carbon monoxide (CO), hydrocarbons (HC), and particulate matter (PM). The construction phase is planned to extend for 12 hours/day, 6 days/week for up to seven years. The emissions in air due to on year of construction were estimated to be: 64.8 kg of SO₂; 51,129 kg of NO_x; 33,436 kg of CO; 8,617.4 kg of HC, and 4,752.7 kg of PM. Diesel fuel was assumed to be used in the mobile equipment (Clifton, 2023b).

During operation, the main source of air emissions will be the combustion of diesel fuel in the locomotives. Based on information regarding locomotive use provided by Cando the preliminary expected emissions during the operation were estimated to be: 20 tonnes/year of SO₂; 20 tonnes/year of NO_x; 20 tonnes/year

of CO; 0.5 tonnes/year of PM₁₀; and 0.3 tonnes/year of PM_{2.5}. Additional sources of emissions during the operations include fugitive emissions from the loaded rail cars, fugitive emissions from fuel storage, and fugitive dust resulting from the traffic on unpaved internal roads. These emission sources are expected to be negligible compared to the locomotives operation and will be transient in nature (Clifton, 2023b).

During the construction phase, noise will result from vehicles and equipment. Construction noise will be transient in nature. The primary noise sources during operation will be train shunting, coupling of rail cars, and the operation of locomotives. These activities will continue daily. The project will result in increased noise levels in the vicinity of the site. The increased noise is not expected to contribute significantly to increasing trends at a regional level. Noise receptors are expected to be occupied residences within a 5 km radius. It is not expected that increased noise levels will adversely affect receptors as the overall increase in noise levels over background is expected to be minor (Clifton, 2023b).

Table 3-7: Air Risks and Mitigations

Risk	Mitigation
Fugitive Dust	<ul style="list-style-type: none"> • Limit the area of disturbance as much as practical. • Implement reduced vehicle speed limits or other speed control measures. • Suppress dust as necessary using water trucks. • Conduct visual monitoring of dust to determine when suppression is needed.
Air Emissions	<ul style="list-style-type: none"> • Avoiding unnecessary vehicle and equipment idling. • Implement a regular maintenance program of vehicles, locomotives and equipment to reduce combustion emissions and maximize fuel efficiency.
Potentially Disturbing Noise	<ul style="list-style-type: none"> • Notify nearby residents of the intended project schedule before the start of construction to prevent or reduce the impact on their operations or activities. • Maintain equipment, machinery and locomotives in good working order, including noise abatement equipment. • Reduce the amount of time that switchers are left idling at the yard.

3.3 Health, Social, and Economic Context

A brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public or derived from any engagement undertaken.

3.3.1 Health Context

Based on a profile report completed by Alberta Health in 2022 there were 6,102 people located in Sturgeon County East, the portion of Sturgeon County which includes the project area. Sturgeon County East had a population increase of 35.9% between 2001 and 2022. The percentage of obese individuals and those with mental health issues were similar to the provincial averages. The percentage of single parent households

and low-income households were lower than provincial averages as were the general and teen birth rates (Alberta Health, 2022).

The most common disease in Sturgeon County was hypertension at a rate marginally higher than the provincial average. The next most common chronic illnesses were diabetes, ischemic heart disease, and chronic obstructive pulmonary disease. The mortality rate per 100,000 people over the three year period of 2019 to 2021 was 759.8 which was slightly higher than that of the province which was 700.3. The three main causes of death were neoplasms (cancer), circulatory system issues, and external causes (injury). All three of these causes of death had three-year averages higher than that of the province (Alberta Health, 2022).

The most common reason for emergency room visits was upper respiratory infections. The rate of upper respiratory infections was similar to that of the province. The top three reasons for inpatient care was ischemic heart disease, diabetes, and mental/behavioural disorders due to psychoactive substance use. It was noted in the report that 100% of ambulance visits resulted in the patient receiving care outside of the geographical area. In addition, 73.2% of residents had a primary care physician outside of their geographical range; the provincial average was 53.2% (Alberta Health, 2022).

The project is not anticipated to contribute impacts to human health. Cando is committed to ensuring the health and safety of all individuals who work on the project. All staff and workers receive training to complete their assigned duties and are mandated to follow Cando's health and safety protocols. The rail industry is heavily regulated and part of gaining the Operating Permit under the *Railway (Alberta) Act* includes the submission of General Operating Instructions, an Emergency Response Plan, and a Safety Management System (completed to Transport Canada standard). All of these documents provide detailed, site-specific information regarding the safety procedures and emergency protocols. Cando is committed to operating safely and with minimum impact on communities and the environment. Cando has an award-winning safety program and in 2023 won a Railway Association of Canada Safety and Environment Award for their Good Catch Campaign which aims to recognize and reward exceptional staff safety hazard identification and action (Cando Rail & Terminals. 2021).

3.3.2 Social Context

The population of Sturgeon County in 2021 was 20,061 people. This was a 2.1% decrease between 2016 and 2021. The population distribution is as such: 19.2% 14 years and younger, 65.2% 15 years old to 64 years old, 15.6% 65 years and older, and 1.3% 85 years and older (Statistics Canada, 2023). The median age of the population is 41.2 (Statistics Canada, 2023). Sturgeon County represents an area of 2,146.8 km² and has 0.46% of Alberta's population (Government of Alberta, 2023d).

There is a total of 7,021 private residences with the vast majority being single detached homes. On average there are 2.8 people per household and a population density of 9.6 people per km². There are reportedly 5,870 families in private households with the following demographics: 4,700 of those are married households with 2,495 of those having children; 695 are common-law with 305 having children; and 475

are single parent households with 270 being single mothers and 205 single fathers (Statistics Canada, 2023).

Most of the population at 17,725 people state that English is their mother tongue, 675 identified French as their mother tongue, and 10 people identify an Indigenous language as their mother tongue. Most people speak English in the home, 150 speak French, and no households identified Indigenous languages as the household language. The most common household languages other than French and English, were Polish and Portuguese both listed at 25 people (Statistics Canada, 2023).

There were 1,640 people who identified as Indigenous. There were 415 that identified as First Nation, 1,085 identified as Métis, 80 who identified as Inuit, and the remainder either had multiple or no identifications. There were 350 responses from Registered or Treaty Indians. The Alexander First Nation Reserve is located on the western boundary of the county. Most of the population of Sturgeon County, at 19,245 people, are Canadian citizens. There have been 70 people who have immigrated to the area between 2016 and 2021 (Statistics Canada, 2023). In 2021, 3.83% of the population identified as a visible minority and 8.4% of this group identified as aboriginal (Government of Alberta, 2023d).

Of the population 25 to 64 years old a total of 10,450 people, 9,380 have their high school diploma or equivalent, 6,795 have postsecondary education, and 1,915 have a bachelor's degree or higher (Statistics Canada, 2023).

Sturgeon County has five towns within its boundaries: Bon Accord, Gibbons, Legal, Morinville, and Redwater. The county has an active recreation and parks department including community events, trail maps, golfing, ice skating, and ski trails. The county offers a variety of adult, child, and youth programs and family and community support services such as counselling, grants, and scholarship programs. The county is involved in other initiatives including truth and reconciliation through active engagement and industrial and economic growth initiatives. They are involved in several environmental initiatives such as tree establishment, vegetation management, wetland replacement, and a clean energy improvement program (Sturgeon County, 2023).

As a company with rural roots, Cando is committed to fostering and maintaining strong relationships in the community and helping to build a sustainable future. Some of Cando's initiatives include monitoring and working towards lowering emissions, charitable donations, long-term community partnerships, sponsorships, and a national scholarship program. Cando has four core values that they stand by in every community they work; these are environmental stewardship, indigenous relations, workforce/people, and community giving. Through genuine engagement, Cando becomes a community partner in all areas in which they work (Cando Rail & Terminals, 2021).

3.3.3 Economic Context

In 2020, the median household income was \$124,000 and \$105,000 after taxes. The median income for single person households was \$56,400 and \$48,800 after taxes and the average incomes was \$68,400 and \$56,500 after taxes. The median income of households with two-or-more people was \$139,000 and

\$117,000 after taxes. The average household income was \$151,400 and \$120,900 after taxes. The average income for two or more people households was \$166,400 and \$132,600 after taxes (Statistics Canada, 2023). The median income for lone parent households was \$92,000 (Government of Alberta, 2023d).

The top five employment sectors, in order from the most employed to the least were: construction; public administration; health care and social assistance; retail trading; and agriculture, forestry, fishing, and hunting (Statistics Canada, 2023). In 2022, Sturgeon County produced 34.9 million cubic meters of natural gas and 141,548 m³ of oil. There was approximately \$744.6 million spent on major projects and 302 building permits were issued. The participation rate of the working population of Sturgeon County had decreased between 2021 and 2016 as well as the employment rate. In 2021, the unemployment rate was reportedly 8% which represented an 11.1% increase since 2016 when the unemployment rate was 7.2% (Government of Alberta, 2023d).

It is estimated that the project will generate an additional 40 full-time jobs. There would be employment opportunities for part-time skilled labour throughout the construction phase of the project. Additional financial benefits include an approximate \$140 million dollar spend and an increased tax assessment to all levels of government. The project is ideally suited to Sturgeon County's goal of investment. Their website states that the county has multiple rail-ready sites available for development with properties that enable a direct connection to critical rail transportation and logistics infrastructure (Sturgeon County, 2023). The project would provide an overall economic benefit to the area through its capital spend, and the creation of both part-time and full-time jobs. Sturgeon County has publicly expressed interest in the development of rail transportation projects as there has been an overall increase in the unemployment rate in the county over the last five years. The project is ideally suited to continue within Sturgeon County.

4.0 Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects

4.1 Federal Financial Support

A description of any financial support that federal authorities are, or maybe, providing to the project.

Cando is the sole financier of the project.

4.2 Federal Project Lands

A list of any federal lands that may be used for the purpose of carrying out the project.

There are no federal lands within the footprint of the project or adjacent to the project's boundaries.

4.3 Jurisdictions with Powers, Duties, or Functions

A list of any jurisdictions that have powers, duties, or functions in relation to an assessment of the project's environmental effects. This may include permits, licenses, or other authorizations that may be required by federal authorities or other jurisdictions. A list of any changes to the environment or to health, social or economic conditions that may occur in Canada that are directly linked or necessarily incidental to the involvement of a federal authority that would permit or enable the project to be carried out in whole or in part.

Aside from the IAAC, there are permits/approvals that will be required through the provincial and municipal governments. The other agencies requiring approval would be:

- Alberta Environment and Protected Areas through the *Water Act*.
- Alberta Transportation and Economic Corridors (ATEC) through the *Railway (Alberta) Act*.
- Alberta Ministry of Arts, Culture and Status of Women through the *Historical Resources Act*.
- Sturgeon County through the Planning and Development Department.
- Alberta's Safety Codes Council.

EPA regulates the removal and compensation for the wetlands within the footprint of the expansion rail terminal and bypass. They would also be the authority for the approval of the SWMP.

ATEC would approve the expansion rail terminal for operation. If, in the future, the transloading of dangerous goods is to be added to the services of the facility this would also require approval through ATEC. The bypass road would also require a submission to ATEC.

Alberta Ministry of Arts, Culture and Status of Women would be the authority for historical resources. An application for a Historical Resources Act approval has been sent but a reply has not yet been received. Cando will conform to any requirements issued by the province.

Sturgeon County would be the authority for the operation of the bypass roadway, as it would ultimately be a county owned and operated road. The project will also require a development permit through the county. The county is also the authority for the management and conservation of topsoil.

The portion of Sturgeon County which includes the project is in an unaccredited area meaning any storage tanks containing flammable or combustible liquids would be permitted and licensed through Alberta Safety Codes Council.

5.0 Potential Effects of the Project

5.1 Relevant Environmental Legislation

A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:

- a. fish and fish habitat as defined in subsection 2(1) of the Fisheries Act.*
- b. aquatic species, as defined in subsection 2(1) of the Species at Risk Act (marine plants).*
- c. migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994.*

5.1.1 Fish and Fish Habitat

There are no waterbodies within the project footprint and no activities associated with the project will take place in areas that support fish, fish habitat, or marine plants. Two known fish-bearing watercourses are located within 2 km of the project footprint (Alberta Environment and Protected Areas 2023b). The Sturgeon River, located approximately 1 km southwest, flows southeast approximately 3 km to its confluence with the North Saskatchewan River, which then flows northeast. The North Saskatchewan River is located approximately 1.7 km southeast of the project footprint. The Sturgeon River is a large permanent Class C watercourse with a Restricted Activity Period (RAP) from April 16 to June 30, and the North Saskatchewan River is a large permanent Class C watercourse with a RAP from April 16 to July 31 (Alberta Environment and Sustainable Resource Development 2012). One potential watercourse was indicated by FWMIS which is located within close proximity to the south. No evidence of this watercourse was observed within 100 m of the project footprint during the field assessments.

Cando will mitigate potential effects to downgradient receptors through the SWMP which is designed to retain surface water runoff on the property. The main quality criteria thought to be affecting the surface water is sedimentation. This may change if additional services are to be provided on-site. The retention of the water will allow for sediments to settle prior to discharge. Surface waters will be released to Sturgeon County's drainage system which discharges into the North Saskatchewan River. The quality criteria to be tested prior to discharge is currently thought to include pH, electrical conductivity, turbidity, and oil and grease. These criteria are based on the precedence set by *Water Act* approvals received from other industry within Alberta's Industrial Heartland. Acquiring the criteria from past precedence is based on EPA's recommendations and may change as the project progresses.

The water for washrooms will be trucked to and stored on-site. Any wastewater generated will be kept in tanks or containers designed for this specific purpose. The wastewater will be removed from the property by a qualified third-party contractor.

Based on Cando's current operating procedure for the existing rail terminal and the mitigations measures to be put in place for the expansion rail terminal there are no known risks to fish or fish habitat as defined in the *Fisheries Act*.

5.1.2 Species at Risk Act: Aquatic Species/Marine Plants

The *Species at Risk Act* prohibit the killing, harming, harassing, or capturing of species listed within the Act. The property and surrounding areas are primarily industrial and agricultural land use. It is not expected that species at risk would be present within the project footprint. There were no federally listed species at risk identified during the field verification portion of the biophysical assessment nor during the desktop assessment. Cando will comply with the prohibitions in the *Species at Risk Act* throughout all stages of the project.

5.1.3 Migratory Birds

The *Migratory Birds Act* prohibits the harming of migratory birds or the disturbance/destruction of their nests and eggs. Many bird species were noted to be located within the project footprint during the desktop review and the field verification. The general breeding bird window is beginning of April to end of August. There are treed areas within the footprint of the project which could potentially be used as habitat for breeding birds as well as tall plants within the cultivated sections. No active nests/cavities were noted during the field verification; however, there was an unoccupied stick nest and habitat suitable for raptor nests and pileated woodpeckers. Given the proximity of industrial facilities it is anticipated that wildlife would prefer the landscape of the nearby Sturgeon River and North Saskatchewan River.

Due to the potential for migratory birds to be present within the project footprint mitigation measures must be considered. A wildlife sweep will be conducted by a qualified biologist prior to the commencement of construction activities. Trees within the footprint of the project will be cleared outside of the breeding bird window and grasses will be mowed to prevent ground nesting birds. Additional mitigation measures can be implemented if migratory birds are observed at the time of construction. These include adjusting the construction schedule by postponing activities near occupied nests, implementing a barrier between the occupied nest and the activity, moving equipment daily, relocating nests or wildlife, and/or monitoring the nest to determine if the inhabitant is showing signs of stress. With the primary mitigation measures in place, it is unlikely that an issue to migratory birds would occur during construction/operation.

5.2 Changes to Federal Lands

A list of any changes to the environment that, as a result of carrying out the project, may occur:

- *On federal lands.*
- *In a province other than the province in which the project is proposed to be carried out; or,*
- *Outside of Canada.*

No changes to federal lands are anticipated, nor will the footprint of the project cross provincial or international boundaries. Due to the direction and distance to the nearest federal lands, provincial borders, and international borders it is not anticipated that the project would create any changes to these lands.

5.3 Impact to Indigenous Peoples

With respect to the Indigenous peoples of Canada, a brief description of the impact — that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment — on:

- *Physical and cultural heritage.*
- *The current use of lands and resources for traditional purposes.*
- *Any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.*

A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.

Cando is dedicated to building strong relationship within the communities that they work and service. They have taken a hands-on approach to the engagement process with all Indigenous groups by issuing information packages as described in Section 1.4 of this document. All communications received from Indigenous groups throughout the process have been responded to directly by Cando. This has included phone calls, emails, and in-person meetings. Cando believes in the importance of understanding unique perspectives and will continue to work closely with all project stakeholders.

Potential effects to the physical and cultural heritage or the socio-economic health of the Indigenous peoples of Canada may continue to be revealed. If any potential effects are brought forth, Cando will work with the party to help mitigate any issues. Given the responses received to date there are not anticipated to be any effects to the physical heritage, cultural heritage, or traditional land uses for Indigenous people.

The area in which the project is located is all zoned for industrial purposes and is designed to be a consolidated location for industrial purposes. The land has been cultivated agricultural and privately owned for more than 70 years. The project footprint also contains a rural residential property. Given the zoning, current land use, and historical land use the potential for traditional land use is considered to be low as it would not be used for hunting, fishing, plant gathering, or spiritual use.

There are no listings of historical resources within the footprint of the project. The closest historical resource listings are along the North Saskatchewan and Sturgeon Rivers. The listings are primarily 5a and 5p which indicate an area with a high potential for an archaeological or palaeontological finding (Alberta Culture, 2023). A *Historical Resource Act* application has been submitted to the province of Alberta, and while a response has yet to be received, Cando will follow the directions and conditions included in the response. While preparing for the application the archaeologist reviewing the information made note of the potential for historical buildings within the footprint of the project. Cando will follow the proper protocol of stopping work and reporting to an archaeologist if there is a chance encounter of an item of historical, archaeological, cultural, geological, natural, or palaeontological significance.

Given the location of the project and the mitigations planned for the construction and operation there are thought to be no negative health effects. The site will be primarily used as a storage yard for rail cars with some maintenance of locomotives and refueling. These activities will be performed in specific locations with the use of containment materials, as necessary. If a spill or release occurs, Cando will implement a spill response plan that conforms to the provincial regulations. Negative health or environmental effects due to the project will be localized and would be unlikely to affect Indigenous communities.

The project is not expected to increase travel, use, or disturbance to lands that are currently used for traditional purposes. The construction and operation activities will be limited to the project footprint and established roadways. Based on all the information available there are thought to be low social impacts to Indigenous people.

The economic impacts to the area include a capital investment into the project. There will also be an increase in the workforce during the construction phase and the creation of up to 40 full-time jobs for operation. There has been some interest from Indigenous groups to have the opportunity to bid on or provide vendor services. Cando will work with qualified Indigenous peoples with skills and services required for the project during the procurement process.

5.4 Greenhouse Gas Estimate

An estimate of any greenhouse gas (GHG) emissions associated with the project. This should be calculated as the net GHG emissions associated with the project and estimated based on the information available to proponents at this stage.

Section 5.4 and subsections include a summary of the GHG estimate completed by Clifton. In general, the equation used to calculate the carbon dioxide equivalent is as follows:

$$\text{CO}_{2e} \text{ (tonnes/year)} = \text{AF} * \text{EF} * \text{GWP} * \text{CF}$$

Where:

- CO_{2e} (tonnes/year) – estimated GHG emissions expressed as CO_{2e} equivalent in metric tonnes per year.
- AF – Activity Factor.
- EF – Emission Factor.
- GWP – Global Warming Potential for an evaluated GHG gas.
- CF – Units Conversion Factor.

The GWP conversion factors based on the IPCC 5th Protocol are 1 for CO_{2e}, 28 for CH₄, and 265 for N₂O.

5.4.1 Construction Phase

Identified significant sources (more than 1 % of the overall GHG emissions) for the construction phase of the proposed project (excluding any GHG emissions from the existing terminal operation) can be summarized as follows (Clifton, 2023b):

- **Direct GHG Emissions:**
 - Mobile Combustion:
 - Mobile Diesel Combustion.
 - Land Use Change:
 - Biomass Oxidation.
- **Indirect GHG Emissions:**
 - Construction Personnel Travel by Road.

5.4.1.1 Mobile Combustion – Diesel

Cando and their affiliated contractors/consultants supplied the information on the equipment type, number of units, and usage required for the calculation of GHG emissions from diesel mobile combustion during the construction phase. Other information required for the calculation including EF and equipment horsepower were obtained from public information sources. Based on all the information available, the total GHG emissions for one year of construction was estimated to be 6,743.7 tonnes CO_{2e}/year (Clifton, 2023b).

5.4.1.2 Land Use Change – Biomass Oxidation

The estimated GHG emissions contribution as a result of the Land Use Change (LUC) contains two types of the carbon-related impacts (Clifton, 2023b):

- Emissions caused by the removal and oxidation of biomass during construction.
- The carbon not trapped by native vegetation that would have remained at the site should the project not have been constructed referred to as the lost carbon sequestration potential.

Calculations assumed a permanent removal of approximately 25 ha of the forest and 7.505 ha of the wetlands in the expansion area of the project during the construction phase. Estimated LUC-related GHG emissions for the construction phase of the project were estimated to be 8,460.64 tonnes CO_{2e} (Clifton, 2023b).

5.4.1.3 Construction Personnel Travel by Road

The estimated GHG emissions released during the construction phase of the project as a result of the construction personnel travelling were quantified. The EF for gasoline was obtained from a public source. Based on information from Cando, it was estimated that 35 people would travel to site, assuming a schedule of 6 days a week for construction and a travel distance of Fort Saskatchewan to the site (about 30 km round trip). For estimate purposes, the assumption considered gasoline fuel consumption for a light pickup truck, 2015 or newer. This resulted in a total estimate of 109.29 tonnes CO_{2e}/year (Clifton, 2023b).

5.4.1.4 Estimated Net Total GHG Emissions – Construction Phase

Estimated net total GHG emissions for the construction phase are as follows (Clifton, 2023b):

Table 5-1: Estimated Net Total GHG Emissions – Construction Phase of the Project		
Construction Year	Estimated GHG Emissions CO _{2e} (tonnes)	
	Mobile Diesel Combustion	Biomass Oxidation
Y-6	6743.7	
Y-5	6743.7	
Y-4	6743.7	
Y-3	6743.7	8,460.64
Y-2	6743.7	
Y-1	6743.7	
Subtotal	40462.2	8460.64
Estimated Net Total GHG Emissions		48,922.84

5.4.2 GHG Emission Sources – Operation Phase

Identified significant GHG emission sources for the operation phase of the proposed project (including GHG emissions from the existing terminal operation) can be summarized as follows (Clifton, 2023b):

- **Direct GHG Emissions:**
 - Static Combustion:
 - Propane Combustion.
 - Mobile Combustion:
 - Mobile Diesel Combustion – Locomotives.
 - Mobile Diesel Combustion – Auxiliary Vehicles and Equipment.
- **Indirect GHG Emissions (Formerly Scope 2 GHG Emissions):**
 - Acquired Energy GHG Emissions.
- **Indirect GHG Emissions:**
 - Employee Travel by Road.

5.4.2.1 Static Combustion – Propane Combustion

Propane is the primary heating source for the project. The EF for propane was determined from publicly available sources. The proposed expansion does not require a new propane-burning emission sources,

and therefore, the AF is based on the average propane usage at the existing terminal. Estimated GHG emission for this category is 11.24 CO_{2e} tonnes/year (Clifton, 2023b).

5.4.2.2 Mobile Combustion – Diesel Combustion, Locomotives

The EF for the combustion of diesel fuel due to the locomotives operating was collected from a publicly available source and the AF was estimated based on the information provided by Cando. The GHG emissions calculated for this category were 4,068 CO_{2e} tonnes/year (Clifton, 2023b).

5.4.2.3 Mobile Combustion – Diesel Combustion, Auxiliary Vehicles and Equipment

This category covers the estimated GHG emissions due to the use of diesel fuel by auxiliary vehicles and equipment. The AFs were calculated using the estimated requirements for the on-site equipment. The equipment and usage were based on the information provided by Cando. Other information was collected from public sources. The estimated GHG emission for the usage of equipment/vehicles was 3,721.2 CO_{2e} tonnes/year (Clifton, 2023b).

5.4.2.4 Acquired Energy GHG Emissions

The AF for the energy imports from the public electric grid were estimated using assumed requirements based on information provided by Cando. Other information was collected from publicly available sources. The estimated GHG emissions for this category are 164.91 CO_{2e} tonnes/year (Clifton, 2023b).

5.4.2.5 Employee Travel by Road

The AF was calculated using the estimated average railyard terminal personnel count estimated to be 90 people, assuming 3 rotating shifts, 7 day a week operations schedule and a road distance between the site and Fort Saskatchewan (about 30 km round trip). An average gasoline fuel consumption for the light pickup truck road travel, 2015 or newer, was used in the estimated. The estimated GHG emissions were 318.76 CO_{2e} tonnes/year (Clifton, 2023b).

5.4.2.6 Estimated Net Total GHG Emissions – Operation Phase

The estimated net total GHG emissions for an average operation year is summarized as follows (Clifton, 2023b):

Table 5-2: Estimated Net Total GHG Emissions – Operation Phase of the Project				
Estimated GHG Emissions CO _{2e} (tonnes/year)				Estimated Net Operation GHG Emissions CO _{2e} (tonnes/year)
Static Combustion	Mobile Combustion Diesel-Locomotives	Mobile Combustion Diesel Vehicles	Acquired Energy	
11.24	4068	3721	164.91	7965

5.4.2.7 Estimated Carbon Intensity of the Project

The estimated carbon intensity per a year of operation is presented as a ratio between the calculated net GHG emissions and railcars spots after the expansion is as follows (Clifton, 2023b):

Table 5-3: Estimate Carbon Intensity		
Estimated Net Operation GHG Emissions CO_{2e} (tonnes/year)	Projected Capacity (railcars spots)	Estimated Carbon Intensity (t CO_{2e}/railcars spots per a year)
7965	5000	1.59

5.5 Additional Considerations

5.5.1 Carbon Sinks Impact

Carbon sinks impacts related to the LUC/vegetation removal were quantified using the methodology described in Section 5.4.1.2. Estimated GHG emissions resulting from a loss of carbon sequestration were estimated to be 342.7 CO_{2e} tonnes/year (Clifton, 2023b).

5.5.2 Carbon Sinks Mitigation Measures

Based on the current project footprint, a total area of approximately 7.505 ha of wetlands will be removed. As part of the EPA approval process to remove the wetlands, Cando will provide compensation for loss of wetlands which will go into the wetland replacement program. Wetlands will not be disturbed until approval has been received. Mitigation will include the applicable compensation for the affected wetlands. The effect of the proposed wetland mitigations is estimated to be as follows (Clifton, 2023b):

Table 5-4: Carbon Sinks Mitigation Measures Summary		
Area Classified As	Estimated Removal/Restoration Area (ha)	CO_{2e} (tonnes/year)
Forest	25	319.5
Wetlands	7.505	23.2
Estimated GHG Emissions Total (Before Mitigation)		342.7
Wetlands	18.617	- 57.5
Estimated GHG Emissions Total (After Mitigation)		285.2

5.5.3 Estimation of Uncertainty

Qualitative estimation of the impact of uncertainties on the accuracy of the presented GHG assessment is presented below (Clifton, 2023b):

Table 5-5: Uncertainty Ranking	
Propane Combustion	Low Uncertainty – Propane consumption is based on the quantity of fuel purchased. Minimal loss is expected from storage or leakages. Propane emission factors are consistent and accurate.
Diesel Combustion	Medium Uncertainty – Diesel consumption is based on the utilization rates estimated by Cando and power rating. Minimal loss is expected from storage or leakages. Diesel emission factors are consistent and accurate.
Acquired Energy	Low Uncertainty – Electricity consumption is based on the metered electricity data purchased that is calibrated. The emission factor is based on an annual provincial grid average that includes all the province’s controllable fuel sources.
Road Travel	High Uncertainty – Annual road transport is an estimate based on available information regarding future staffing levels. Gasoline emission factors are consistent and accurate.

5.5.4 Net-Zero Plan

The presented net-zero plan is based on the Best Applicable Technology/Best Environmental Practices (Delphi Group, 2022). The proposed decarbonization path applicable to the project consists of the following implementation steps (Clifton, 2023b):

5.5.4.1 Efficiency Improvements

Efficiency improvements to existing and new equipment and infrastructure have been the focus of railway decarbonization efforts. All efficiency improvements will serve to reduce the decarbonization burden placed on fuels and propulsion technologies.

Description: There are numerous ways to continue to enhance rail efficiency including further enhancing aerodynamics of locomotives and rail cars, automation, and data-driven solutions.

Carbon Reduction Potential: less than 7 %

Implementation Timeframe: Available immediately

5.5.4.2 Low-Carbon Fuels

Through low-carbon/renewable fuel regulations, federal and provincial governments have already mandated minimum blending requirements of up to 5% renewable content in diesel. Efficiency improvements may be supplemented by the blending fuels beyond what is regulated.

Description: Biodiesel is a renewable fuel that can be manufactured from various oils and fats for use in diesel vehicles or equipment. Biodiesel's physical properties are like those of petroleum diesel, with some notable exceptions including inferior cold weather properties and reduced energy content.

Carbon Reduction Potential: up to 16 %

Implementation Timeframe: Estimated around 2030

5.5.4.3 Alternative Propulsion

As railways seek to move past the limits of what low-carbon fuels and combustion engines can offer, electrification via battery, or hydrogen fuel cells are long-term solutions. Cando, in cooperation with Emissions Reduction Alberta, is leading a lithium ion battery-powered locomotive initiative.

Description: Battery powered trains are electric multiple units and locomotives which carry batteries in order to provide traction power for in-service use.

Carbon Reduction Potential: up to 100 %

Implementation Timeframe: Estimated around 2035 (provided further technology development and successful testing).

5.6 Types of Waste and Emissions

A list of the types of waste and emissions that are likely to be generated — in the air, in or on water and in or on land — during any phase of the project.

5.6.1 Air

The emissions to air include dust and emissions generated by equipment during the construction phase and operations. In addition, the equipment operating will generate localized noise. As discussed in detail in previous sections, the GHG emissions, fugitive emissions, and noise generation due to the project are thought to be minimal in comparison to the background conditions within Alberta's Industrial Heartland. The fugitive emissions generated are thought to be primarily sulfur dioxide, nitrogen oxides, carbon monoxide, hydrocarbons, and particulate matter due to exhaust. Cando will implement general mitigation measures including dust suppression, speed limits, vehicle/equipment maintenance programs, and avoiding idling whenever practicable. Cando is also currently developing a lithium-ion powered switching locomotive which will provide long-term GHG reductions (Cando Rial & Terminals, 2023).

5.6.2 Water

There will be limited liquid waste generated as part of the project including stormwater, liquid domestic waste, and waste oils. The stormwaters created within the footprint of the project are to be stored within the stormwater management facility. Given the current purpose of the existing and expansion rail terminals is primarily for rail car storage there is thought to be little generation of dangerous goods or risk of

contamination to the surface waters. The primary risk to surface waters is sedimentation which will be reduced as the SWMP includes the retention of water in the on-site pond which will allow time for the suspended solids to settle. If it is suspected that the water has become contaminated further tests specific to the suspected substance would be performed by a qualified professional. If the water is unsuitable to be diverted to the municipal drainage system, it will be collected by a third-party for removal off-site to a designated facility with a receipt or waste manifest collected for documentation.

Liquid domestic waste generated will be retained in tanks/containers specific to this purpose. When required, the materials will be removed from the tanks/containers by a qualified third-party for proper disposal. Receipts or waste manifests documenting the removal of hazardous materials will be kept on record.

5.6.3 Land

Potential solid waste generated by the project are contaminated soils, hazardous building materials, conventional building materials, construction waste, and garbage/scrap materials. A Phase II ESA with the collection of subsurface soil and groundwater materials was completed. If there are contaminated materials that will be disturbed then a soil management strategy will be created. This may include the segregation and off-site treatment or disposal of contaminated soils with confirmatory samples collected to determine if all contaminated materials were collected.

Prior to the demolition of any on-site buildings suspected of containing hazardous building materials an assessment including the collection and analysis of representative building materials will be completed. If the materials are found to contain hazardous substances, then further abatement will be completed with the materials disposed of off-site by a qualified third-party.

Cando is committed to reducing landfill waste and follows the waste reduction hierarchy starting with the source reduction of materials. This includes understanding quantities and project needs and not over ordering materials. Waste will be separated with materials recycles or reuses whenever appropriate. Refuse generated by Cando will be stored within the boundaries of the project footprint with appropriate storage containers, such as dumpsters, used for refuse. Other non-hazardous materials may be stored external to storage containers. When necessary, materials will be properly removed for example by a third-party to the landfill or to scrap metal recycling. All solid waste materials that may be generated can not be anticipated at this time but based on Cando's experience and commitment to waste reduction care will be taken to ensure proper removal.

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