

INITIAL PROJECT DESCRIPTION

Summary

GREAT SANDHILLS RAILWAY

Great Sandhills Railway Switching Operation at North
West Terminal Ltd.



EXECUTIVE SUMMARY

Great Sandhills Railway (GSR) is proposing the expansion of the North West Terminal (NWT) 1 kilometre east of Unity, Saskatchewan (SK). NWT is one of the largest grain handling facilities in Western Canada and is serviced by two Class 1 railways, the Canadian National Railway (CN) and the Canadian Pacific Railway (CP). The proposed project includes three loop tracks, two shop tracks, a wye track, and a repair shop. The new tracks will allow these Class 1 railways to enter and depart the yard without using their mainline to break up and consolidate the train. This reduces unnecessary congestion on the mainline. The tracks will also serve as an interchange between CP and CN, with the ability to interchange over 175 cars at one time, surge capacity for the Edmonton corridor, and an option to yard trains for mechanical inspection or repurposing, either by their own mechanical staff or by mechanical personnel at NWT.

The Project is designed to solve the current configuration issue at NWT. Due to dated design and restrictive access, traffic originating from NWT creates between 4 and 16 hours of a backlog on CN's mainline in both directions per week. Anticipated traffic volumes for the current users of NWT in the next five years would result in approximately 26 hours of delays per week along a critical export rail corridor. The proposed project includes three loop tracks, two shop tracks, a wye track, and a repair shop. GSR is anticipating the work will be completed from September 2020 to September 2022.

The benefits of improved fluidity for North West Terminal Ltd., and the producers who deliver to the terminal, is an additional 60% of wheat, canola, and peas per year shipped to China, Japan, Mexico, South East Asia, South America and India in the short term. The Project also increases the smooth-running of the existing product that are exported to China, Asia, South America, Europe, and the Middle East each year from NWT alone.

The Project will create eight full-time equivalent (FTE) jobs for GSR and eight FTEs for NWT, for a total of sixteen FTEs plus indirect jobs within the service industry, construction, real estate etc. resulting in economical gains in and around Unity, SK.

PROJECT OVERVIEW

The following is a plain language summary of an initial description of the Great Sandhills Railway Switching Operation at North West Terminal Ltd. (the Project). It was prepared using Part F of Schedule 1, paragraph 25, of the Information and Management of Time Limits Regulations, 2019 and the Impact Assessment Agency of Canada's (IAAC's) Guide to Preparing an Initial Project Description and a Detailed Project Description under the Impact Assessment Act.

1 THE PROJECT'S NAME, SECTOR AND PROPOSED LOCATION

Great Sandhills Railway (GSR) is proposing to expand the existing North West Terminal Ltd. (NWT) railway yard near Unity, Saskatchewan. The proposed project includes three loop tracks, two shop tracks, a wye track, and a repair shop.



2 PROPONENT'S NAME AND CONTACT INFORMATION

GSR primary contact and contact information (Table 1).

Table 1. Contact information

Proponent:	Great Sandhills Railway Ltd.
Contact:	Amy Lintick
Address:	Box 726, 448 1 st Ave W, Leader, Saskatchewan S0N 1H0
Email:	alintick@gsrailway.net
Phone:	(306) 628-8138

3 EARLY ENGAGEMENT WITH JURISDICTIONS OR AGENCIES

Engagement activities specific to the Project included: The Town of Unity, Agricultural Producers Association of Saskatchewan, the Province of Saskatchewan, and the Impact Assessment Agency of Canada. These engagement activities have included phone discussions and in person meetings to review preliminary material including Project schedule information, early engagement plans, regulatory processes and schedules, and planned Project timing. Key topics identified included potential impacts to land use, employment opportunities and the proximity of the Project to Unity. GSR will continue engagement activities during the preparation of the Detailed Project Description through regular Project updates and technical meetings.

Engagement with jurisdictions and agencies is completed on an as needed bases. Future engagement dates and frequencies to be determined.

4 EARLY ENGAGEMENT WITH INDIGENOUS GROUPS

Early engagement has occurred with Indigenous groups during the early planning stages of the Project. GSR reached out to Mosquito, Grizzly Bear's Head, Lean Man First Nation, Little Pine First Nation, Poundmaker First Nation, Red Pheasant First Nation, Sweetgrass First Nation and Metis Nation Saskatchewan – Western Region 1A.

No responses from the Indigenous groups contacted has been received, GSR will continue to reach out and be available for discussion.

5 STUDIES OR PLANS RELEVANT TO THE PROJECT

GSR is not aware of any studies or plans that have undergone provincial or joint federal-provincial regulatory review or studies or plans that are available to the public from non government jurisdictions that are applicable to the Project.

6 STRATEGIC ASSESSMENT RELEVANT TO THE PROJECT

The Project is located in the Round Valley Rural Municipality (RVRM). According to the *Impact Assessment Act* Registry, the RVRM has not been the subject of a strategic assessment. The strategic assessment of climate change, published in July 2020, 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 Project is entering the Impact Assessment process to determine if the Project will undergo a federal impact assessment under the *Impact Assessment Act*. Any projects that undergo a federal impact assessment require a strategic assessment of climate change. The strategic assessment of climate change provides guidance on information requirements related to climate change in the federal impact assessment, this guidance includes the following:



- Outlines the approach to be used to estimate net and upstream greenhouse gas (GHG) emissions;
- Clarifies that downstream emissions will not be assessed; and
- Explains how avoided emissions and GHG offsets are to be factored into estimates of GHG emissions.

The Project proponents will provide basic information related to GHG emissions, GHG mitigation measures, and climate change resilience.

7 PURPOSE OF AND NEED FOR THE PROJECT

The purpose of the Project is to reduce delays and increase capacity at the NWT. The Project is needed to realize the full value of the NWT strategic location that supports the Edmonton corridor.

The potential benefits of the Project include:

- Optimizing efficiency by increasing volume and decreasing delays
- Create 16 full time equivalent (FTE) jobs
- Improving service for customers (Class 1s, agriculture)
- Increase the value and volume of goods exported to overseas markets

The loop tracks will allow these Class 1 Rail lines to enter and depart the yard without using their mainline to break up and consolidate the train. This reduces unnecessary congestion on the mainline. The loop tracks will also serve as an interchange between CP and CN, with the ability to interchange over 175 cars at one time, surge capacity for the Edmonton corridor, and option to yard trains for mechanical inspection or repurposing, either by their own mechanical staff or by mechanical personnel at NWT.

The potential benefits also serve to add value for the shareholders.

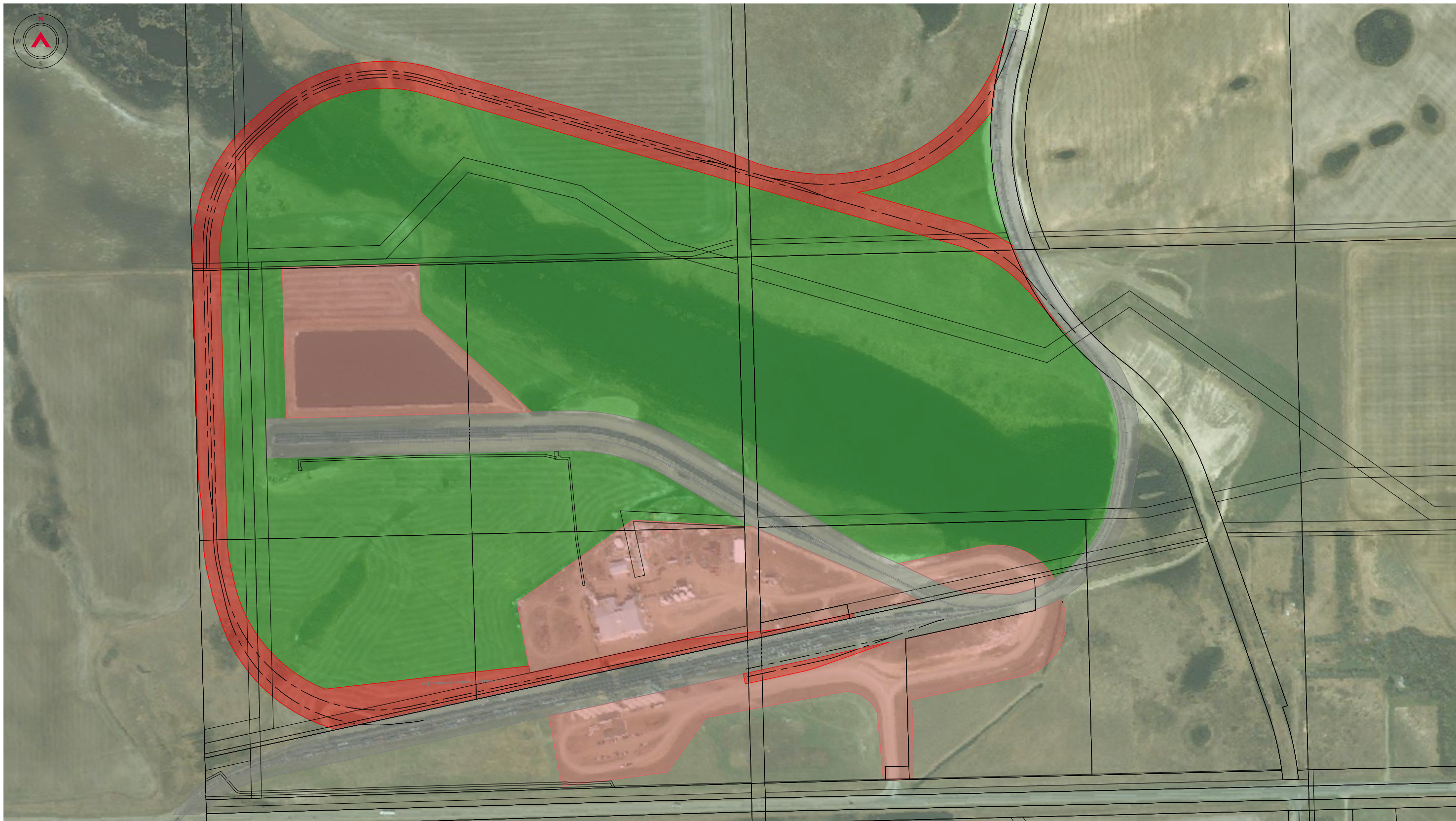
8 PROVISIONS IN THE SCHEDULE TO THE *PHYSICAL ACTIVITIES REGULATIONS* (PROJECT LIST)

The relevant provision, Section 55 of Schedule 2, to the *Physical Activities Regulations* is:

“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 development area of the existing railway yard is approximately 36 hectares. The development area for the Project is expected to be approximately 80 hectares, which represents an increase of the area of the existing railway yard that is greater than 50% (Figure 1). The proposed new track and the existing track is assumed within 50 feet of track centerline.

Figure 1. Project Site Plan.



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LEGEND

	EXISTING TRACK AND EMBANKMENT =14.5 hectares
	PROPOSED NEW TRACK AND EMBANKMENT =11.6 hectares
	NOT BEING DEVELOPED =69.3 hectares
	EXISTING NON-RAIL DEVELOPED AREA =20.9 hectares

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REV	0	20/07/24	ISSUED FOR INFORMATION	SEP	MJ	EL
			DESCRIPTION	DRWN	CHKD	APVD

CLIENT:

TITLE: **SITE PLAN**

CLIENT NO:	-	DRWN:	SEP	DATE:	20/07/23
PROJECT NO:	2000003	DSGN:	-	DATE:	-
DRAWING SIZE:	ANSI "B"	CHKD:	MJ	DATE:	20/07/24
SCALE:	1:5500	APVD:	EL	DATE:	20/07/24

PROJECT: **GREATSANDHILLS RAILWAY SWITCHING OPERATIONS AT NORTH WEST TERMINAL LTD. UNITY, SK**

DWG NO:	2000003-SKT-01	REV:	0
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9 INFRASTRUCTURE AND PHYSICAL WORKS ASSOCIATED WITH CONSTRUCTION, OPERATION AND DECOMMISSIONING ACTIVITIES

Anticipated new infrastructure, structures, and physical works are provided in Table 2. No temporary structures are associated with the Project and the existing NWT site will be used to facilitate the construction of the Project. The activities in Table 2 are within the care and control of GSR.

The expected lifetime of the project is 100 years. This is an approximation based in general, on short line railways expected lifetime. Refer to Figure 1 in section 8 of this document for the locations of the railway components described in Table 2.

Table 2: New Infrastructure, Structures, and Physical Works

Phase	New Infrastructure, Structures, and Physical Works
Construction	Initial site preparation, including: <ul style="list-style-type: none"> • Removal of all vegetation, organic deposits, gravel, and topsoil • Surface drainage controls systems • Groundwater management system • Erosion protection through the application of a layer of topsoil and hydro-seeding
	Construction of facilities: <ul style="list-style-type: none"> • Repair shop
	Construction of linear infrastructure: <ul style="list-style-type: none"> • A railway loop system which comprises of the following: <ul style="list-style-type: none"> ○ Formation of an Inner track loop connecting the existing track on the East side of the terminal before the east wye with the existing laydown track near the NWT elevator ○ West wye track to connect the existing CP lead track to the Outer track loop ○ Formation of an outer track loop connecting the Inner track loop south of wye and the existing track west of the NWT elevator ○ Shop tracks • Earthworks and grading including the rail subgrade, ballast, and sub ballast installation to accommodate the railway alignment including any earthworks required to tie into the existing rail line • Drainage system which includes ditches and culverts to divert storm runoff away from track bed
Operation	There are two connections for the new railway loop to the existing rail track. They are as follows: <ul style="list-style-type: none"> • Connection to existing CP Lead line via the existing east wye track and a new west wye track • Connection to the existing elevator track and the existing laydown track near the NWT elevator. <p>The new rail loop will be operated and maintained by Great Sandhills Railway Ltd. However, both CP and CN intend to utilize this new rail loop as part of their operations. Initial</p>



	<p>operations plan is for CN to operate in an counter clockwise direction and CP to operate in a clockwise direction</p> <p>Neither CN nor CP have any control of the NWT yard, it is owned in it's entirety by NWT. No operating contracts exist between NWT and CN or CP. The NWT yard is run under Canadian Rail Operating Rules (CROR) Rule 105. NWT has an operating agreement with GSR for them to operate and manage the rail yard, this will continue after the Project is completed</p> <p>Rail components required for the new rail loop include but are not limited to the following:</p> <ul style="list-style-type: none"> • Rail • Tie plates • Rail spikes • Wooden ties • Rail turnouts • Switches <p>General maintenance (e.g., repair shop, mobile equipment and linear infrastructure) and emergency services</p> <p>Environmental Monitoring</p>
Decommissioning	Removal of buildings and linear infrastructure
	Maintenance (e.g., mobile equipment) and emergency services

The Project will integrate with existing water, power, heat, and fuel utilities and use the existing roads and railway yard to facilitate the Project construction and operation.

Table 3: Existing Infrastructure, Structures, and Physical Works Operated in Association with the Project

Phase	Existing Infrastructure, Structures, and Physical Works
Construction	<ul style="list-style-type: none"> • Existing power sources at NWT are capable of supporting construction of the Project and will not require any modification • Existing SaskEnergy pipeline, crossing agreement required • Existing SaskTel fibre optic line, crossing agreement required • Existing SaskPower infrastructure, crossing agreement required
Operation	<p>Existing water intakes, hot water sources, and sewage system at NWT are capable of supporting operation of the expansion and will not require modification</p> <p>Existing power sources at NWT are capable of supporting operation of the expansion and will not require modification</p>
Decommissioning	Existing power sources at NWT and power distribution network will support decommissioning

SaskEnergy, SaskTel, and SaskPower have been contacted as they are required to accommodate the Project in order to ensure that their services are not interrupted. Crossing agreement discussions are ongoing with each provider.

10 ESTIMATE OF MAXIMUM PRODUCTION CAPACITY AND DESCRIPTION OF PRODUCTION PROCESSES

The nature of the Project is not production. However, the expansion will increase the amount of wheat, canola, and peas that are delivered to the terminal by sixty percent. The Project consists of a new railway loop, two new shop tracks, a new wye track and a new repair shop. The railway circumference is 3770 m with sections of double and triple tracks. The total amount of new track is 8940 m. The repair shop will be 14,000 square feet.



11 ANTICIPATED SCHEDULE FOR THE PROJECT

The anticipated schedule for the Project is to undertake and complete the regulatory process between 2018 and 2020. Construction of the Project is planned for 2020 to 2022. Decommission of the Project is approximated to be 2120.

12 POTENTIAL ALTERNATIVE MEANS AND ALTERNATIVES TO THE PROJECT

An alternate route for the rail loop was identified. The alternative route was shorter in total length but it would have to cross the natural gas pipeline four times (Figure 2). The preferred route is longer but crosses the natural gas pipeline twice.

Building one shop track was considered, but due to the amount of traffic it was determined that it would not have the capacity to provide adequate service.

Realigning the existing eastern track was considered to increase the curve radius. However, it was determined that it will not be required to meet railway specifications and therefore will not be realigned.

Trucking is not an alternative as the grain that gets shipped can only be accepted at the Vancouver terminals by rail.

There are no feasible alternatives to building loop tracks to increase NWT's capacity and therefore no alternatives are being considered. GSR's decision is final, and no changes to the Project are being made.

Figure 2. Project alternate route.



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LEGEND	
	EXISTING TRACK AND EMBANKMENT
	PROPOSED NEW TRACK AND EMBANKMENT
	NOT BEING DEVELOPED
	EXISTING NON-RAIL DEVELOPED AREA
	ALTERNATE ROUTE
	PIPELINE CROSSING

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REV	YY/MM/DD	DESCRIPTION	DRWN	CHKD	APVD

CLIENT:

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DRAWING SIZE:	ANSI "B"	CHKD:	MJ	DATE:	20/07/24
SCALE:	1:5500	APVD:	EL	DATE:	20/07/24

PROJECT: GREATSANDHILLS RAILWAY SWITCHING OPERATIONS AT NORTH WEST TERMINAL LTD. UNITY, SK	
DWG NO:	2000003-SKT-02
REV:	0



13 LOCATION INFORMATION

The Project is located approximately one kilometre east of the town of Unity, SK in the Rural Municipality of Round Valley. The Project is directly north of Highway 14 and East of Highway 21 (Latitude: 52°26'15.86"N, Longitude: 109° 7'25.54"W). North West Terminal Ltd. primarily consists of agricultural and industrial land use. The development will be located adjacent to the existing NWT site.

The Project area's northern boundary is directly adjacent to farm land and unnamed bodies of water. The eastern boundary is the existing rail line that will be modified to ensure a safe turning radius is achieved. Beyond the existing rail line is farm land and an unnamed body of water. The southern boundary is adjacent to the grain elevators, existing railway, and farm land. Highway 14 is approximately 200m south of the Projects southern boundary. The western boundary is adjacent to farm land. 1km west of the Projects boundary is Highway 21 and the Town of Unity.

The Projects Legal Land Descriptions are as follows:

- LSD 2 Sec 17 Twp 40 Rge 22 W 3 Extension 14 (Surface Parcel #121033763)
- LSD 7 Sec 17 Twp 40 Rge 22 W 3 Extension 6 (Surface Parcel #121033819)
- NE Sec 17 Twp 40 Rge 22 W 3 Plan No 102249851 Extension 0 (Surface Parcel #203351925)
- NW Sec 16 Twp 40 Rge 22 W 3 Extension 1 (Surface Parcel #118288581)
- SW Sec 16 Twp 40 Rge 22 W 3 Extension 4 (Surface Parcel #163958697)

Residences and places of business situated near the Project include the Town of Unity (1km west) and TransGas office (1 km south east). There are three residential properties located 1.2km, 1.9km, and 2.0km east of the Project.

The Project's proximity to land used for traditional purposes by Indigenous peoples of Canada is unknown, consultation is on-going.

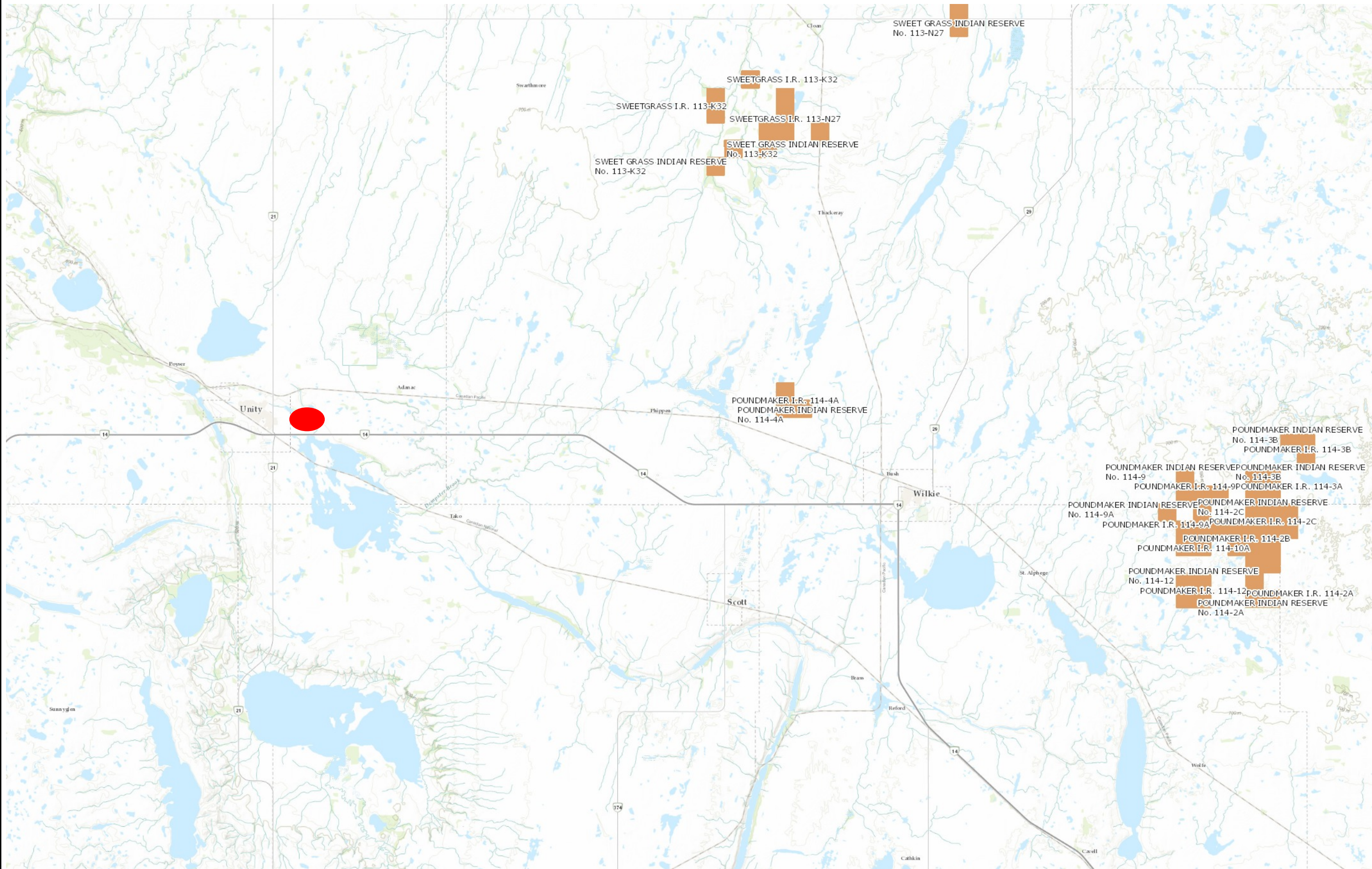
The Project's proximity to the land in a reserve as defined in subsection 2(1) of the Indian Act within a 50km radius of the Project (Figure 3), include:

- Poundmaker Indian Reserve No. 114 (25 kilometers east of the Project)
- Sweetgrass Indian Reserve No. 113 (25 kilometres North East of the Project)

First Nation land as defined in subsection 2(1) of the First Nations Land Management Act within a 300km radius of the Project include:

- Flying Dust (251km north of the Project)
- Mistawasis (237km north east of the Project)
- Muskeg Lake (210km north east of the Project)
- One Arrow (236km north east of the Project)
- Wahpeton Dakota Nation (296km north east of the Project)
- Whitecap No. 94 (222km south east of the Project)
- Yellow Quill (195km east of the Project)

Figure 3. Indian Reserves near Unity, Saskatchewan



Legend

- Provincial Boundary
- Indian Reserve (NRCan)
- Indian Reserve (ISC)
- National Park
- Project Location

8.6 0 4.31 8.6 Kilometers

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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
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1: 169,808

Notes
The Project site is approximately one kilometre East of the town of Unity, Saskatchewan



14 PHYSICAL AND BIOLOGICAL ENVIRONMENT

The Project is located in the RVRM which is in the Aspen Parkland. The Aspen Parkland is semi-arid with long, cold winters and hot dry summers. The site and surrounding area gradually slope towards the southeast. The site is approximately 7 – 12 metres (m) lower than the surrounding areas and is underlain by 2 to 5 m of lacustrine sand, silt, and clay which directly overlies approximately 20 m of clay. Bedrock formations are of the Belly River (Judith River) formation consisting of fluvial to minor marine light grey-buff sandstone, siltstone, and mudstone with strong lateral variations.

The habitat within the Aspen Parkland Ecoregion is dominated by farmland with small interspersed areas of native mixed-grass and aspen vegetation. Regionally, wheatgrasses and speargrasses are the dominant species intermixed with blue grama grass on the upper slopes and rough fescue and Hooker's oat grass on the lower slopes. Trembling aspen is the dominant tree species and is typically found around wetlands. Aspen bluffs generally have an understory of western snowberry, prairie rose, Canada violet, smooth aster, and northern bedstraw.

Aspen Parkland supports a variety of wildlife, including mule deer, white-tailed deer, coyote, red fox, striped skunk, white-tailed jackrabbit, porcupine, Richardson's ground squirrel. No species of ecological significance have been identified within the Project area.

Bird species that could be identified within and nearby the Project area include savannah sparrow, horned lark, western meadowlark, American robin, song sparrow, house wren, American crow, great-horned owl, and red-tailed hawk.

Wetland habitat in the region includes red-winged blackbird, yellow-headed blackbird, mallard, blue-winged teal, northern shoveler, green-winged teal, and gadwall. These birds may use the semi-permanent wetland within the Project area.

A semi-permanent pond is located in the southern portion of the Project area. Marsh vegetation dominates the central zone of the wetland, as well as coarse emergent plants or submerged aquatics, including cattails, bulrushes and pondweeds. This wetland frequently maintains surface water throughout the growing season (May to September). The water body is presumed non-fish bearing as no connectivity exists between fish bearing lakes and the wetland freezes solid over winter offering no over-wintering habitat.

Kikiskitotawâwak Iskêwak Lake is located approximately 275m southeast of the site. There is no fish data available to the public on this lake, or any lakes in close proximity to the Project. Manitou Lake is 80km northwest of Unity and has Muskies, Northern Pike, Smallmouth and Largemouth bass, Lake Trout and Walleye.

The total Project area is 1,167,770m². Of that, 669,122m² (57%) will remain undeveloped (wetland and farmland). Of the undeveloped area, the wetland is approximately 271,300m² (41% of the undeveloped area, 23% of the total Project area). The remaining 397,822m² is farmland (59% of the undeveloped area, 34% of the total Project area). Once the Project starts construction, the land that is currently being leased as farmland will be discontinued.

15 HEALTH, SOCIAL AND ECONOMIC CONTEXT

The Project falls within the Heartland Health Region (HHR) which is part of the provincial Saskatchewan Health Authority. The Population Health Status Report in 2016 identified that the health of the residents compared in many ways to that of the rest of Saskatchewan and Canada. However, in such areas as smoking, alcohol consumption, overweight, obesity, diet, exercise and exposure to radon in households, the rates in the HHR are higher than the



rest of the province. The population in the HHR is widely dispersed, 0.95 persons per square kilometre. Based on the 2011 Census the Aboriginal population makes up approximately 3% of the overall population in the HHR.

The Drinking Water Quality Index (WQI) is intended to provide an easy to understand “ranking of water quality”. The index is determined by comparing 23 commonly monitored chemical constituents within a community’s drinking water to the Saskatchewan Drinking Water Quality Standards and Objectives. The results of testing for the following trace substances found in drinking water are used to calculate the index: Alkalinity; Aluminum; Arsenic; Barium; Boron; Cadmium; Chloride; Chromium; Copper; Fluoride; Hardness; Iron; Lead; Manganese; Nitrate; Selenium; Sodium; Sulphate; Total Dissolved Solids; Trihalomethanes; Uranium; Zinc; and pH. The WQI in the HHR is below the maximum allowable limit (10 micrograms per litre), however, Unity has the highest at 0.9 micrograms per litre.

The RVRM falls within the HHR and encompasses approximately 811 square kilometres and includes the town of Unity. Between 2006 and 2011 the RM population increased from 355 to 361. The median age within the RM is 50.1 and the median total income in 2015 was \$42,752. In 2015 the population of Unity was 3,064.

The main sector in close proximity to the Project is agriculture. Additionally, the Compass Minerals Mine (formerly Sifto Canada) employs 60 people from Unity and is located south of the Project across Highway 14. The ethanol facility, oil service and transportation industries, landfill storage, and rail transportation have all increased Unity’s ties to industry as a local and reliable source of employment.

Unity offers over 140 local businesses and over 170 rooms from a variety of accommodations. Its history is proudly displayed through its historic downtown murals and at the Unity and District Heritage Museum, which includes 22 outdoor buildings and an array of displays. The Unity Golf Club is suitable for both beginner and seasoned golfers.

16 FINANCIAL SUPPORT FROM FEDERAL AUTHORITIES

The total federal funding amount requested from Transport Canada under the National Trade Corridors Fund is \$ 7,616,073.58.

17 FEDERAL LAND USED FOR PROJECT

No federal lands will be used for the Project.

18 JURISDICTIONS THAT HAVE POWERS, DUTIES OR FUNCTIONS IN RELATION TO AN ASSESSMENT OF THE PROJECT’S POTENTIAL ENVIRONMENTAL EFFECTS

Environment and Climate Change Canada has duties in relation to potential effects of the Project through the *Species at Risk Act* and the *Migratory Birds Convention Act*. Fisheries and Oceans Canada also has duties related to the assessment of effects and authorization of impacts to fish and fish habitat pursuant to the *Fisheries Act*. No authorizations from these acts will be sought for the Project.

Province of Saskatchewan has jurisdictional powers, duties, and functions through the Ministry of Highways and Infrastructure and has written a letter of support for the Project. The *Environmental Assessment Act* requires that the proponent receive approval of the Minister of Environment before proceeding with a development that is likely to have significant environmental implications. The Project is not likely to have significant environmental implications.

The Impact Assessment Agency of Canada as referenced in Section 2 of this document (Initial Project Description) has jurisdictional duties that relate to the Projects environmental effects.



In addition, the Project falls within the following provincial and federal jurisdictions:

- The *Environmental Management and Protection Act*
- The *Wildlife Act*
- *The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010*

19 POTENTIAL CHANGES TO COMPONENTS OF THE ENVIRONMENT WITH LEGISLATIVE AUTHORITY OF PARLIAMENT

Fish and Fish Habitat - Due to the Projects proximity to farm land and its distance from fish-bearing streams and lakes, the likelihood of impact on fish and fish habitat is low. There is no connectivity or surface water connections between the wetlands on the Project site and water bodies beyond the Project site.

The closest fish bearing bodies of water are Scott Reservoir, 28km east of the Project site and Denzil Pond, 50km west of the Project. Both are stocked annually with rainbow trout.

No mitigations regarding fish habitat are planned as no connectivity exists.

Aquatic Species at Risk - The development of the Project is not expected to impact aquatic species at risk. No public information on Aquatic Species at Risk is available on the two unnamed bodies of water within the Project area.

Wildlife Species at Risk - The development of the Project is not expected to impact wildlife species at risk. Due to the existing NWT and the agricultural land where the Project expansion will be placed, it is highly unlikely that further significant loss of wildlife use of the Project lands will occur.

Migratory Birds - The development of the Project is not expected to impact Migratory Birds habitat or breeding grounds. Construction of the Project is currently planned outside of the nesting window. The project will pass through the wetlands on the Project site, this result in loss of habitat across the railway right of way.

In 2017 a Ferruginous hawk was identified 300kms south of the Project site. Ferruginous hawks are included in the federal *Species at Risk Act*. Due to the Project's distance from the Ferruginous hawk nest, it is not expected to impact the habitat or breeding grounds.

Migratory bird species in the federal *Species at Risk Act*, Schedule 1 with ranges overlapping with the Project area are as follows:

- Bank Swallow
- Barn Swallow
- Bobolink
- Eastern Wood-pewee
- Western Grebe

The Project falls within the Prairie Potholes Region of Bird Conservation Strategy, the largest number of priority birds within this region were associated with wetlands. Continued wetland degradation and fragmentation of the remaining grasslands and other native habitats threaten future stability of the Prairie Potholes Region. The Project falls within the cultivated and managed areas of the region and does not fall within the protected and designated areas in the Prairies Potholes Region.



20 POTENTIAL CHANGES TO THE ENVIRONMENT ON FEDERAL LANDS AND LANDS OUTSIDE SASKATCHEWAN AND CANADA

The Project is not expected to result in changes to reserve lands and federal lands. The Project exists entirely on private land owned in its entirety by NWT. Elk Island National Park is located 342km west of the Project. Grasslands National Park is located 448km south of the Project.

The Project is not expected to result in changes outside of Saskatchewan. The Project exists entirely within Saskatchewan,

The Project is not expected to result in changes outside of Canada.

21 IMPACT TO INDIGENOUS PEOPLES – PHYSICAL AND CULTURAL HERITAGE, TRADITIONAL LAND USE, HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES

Potential impacts to physical and cultural heritage of Indigenous people will be identified through ongoing engagement and consultation with potentially impacted Indigenous peoples. Currently, no information is publically available. GSR will continue to pursue engagement with Indigenous communities on potential impacts of the Project.

No information from engagement with Indigenous communities has been made available to GSR (Section 6 of this document).

The nature of construction for this project will be to build on top of the land and minimal earthworks are expected. However, if historical, archaeological, paleontological, or architectural structures are identified during construction then work will cease until the appropriate actions are taken. There will be no impacts to historical, archaeological, paleontological or architectural resources. In the unlikely case that a discovery is made, work will stop and the applicable jurisdictions, agencies, and professionals will be notified.

Current use of lands and resources for traditional purposes are unknown as it is private land that has almost entirely been converted to farmland or industrial land.

22 IMPACT TO INDIGENOUS PEOPLES – SOCIAL, ECONOMIC, AND HEALTH CONDITIONS

Potential impacts to social, economic, and health conditions of Indigenous people will be identified through ongoing engagement and consultation with potentially impacted Indigenous peoples. Due to the Project's distance from Indigenous communities, the impact to social, economic and health conditions of Indigenous peoples is considered to be low.

GSR will continue to pursue engagement from Indigenous communities on the potential impacts of the Project and ensure any potential impact identified by Indigenous groups is addressed.

23 ESTIMATE OF ANY GREENHOUSE GAS EMISSIONS

During construction, the main source of GHG emissions will come from the combustion of diesel fuel from heavy equipment on site and from transportation activities.



An initial estimate greenhouse gas emissions associated with the Project construction and operation has been developed based on a literature review of railway operation and the expected capacity of the NWT after the Project is complete. The initial estimate is approximately 50,000 metric tons of carbon dioxide equivalent over the life of the Project.

24 TYPES OF WASTE AND EMISIONS GENERATED BY PROJECT

This section identifies waste and emissions that are expected during construction of the Project and during operation of the NWT. Non-regulated domestic and industrial waste products will be managed through approved landfills. Regulated waste products will be disposed of through third party waste management facilities. Recyclable and reclaimable material destinations will vary by material type.

NWT has an Environmental Approval to Operate an Industrial Effluent Works and a permit to operate the terminal and to operate and monitor the water quality and air quality on the site.

Land – Creosote or chromated copper arsenate used to treat railway ties has the potential to impact soils in the vicinity of the railway lines. These impacts are typically minor, localized and near the surface and are expected during operation. At the end of the Project lifetime the railway ties and affected soils will be removed and disposed of appropriately.

Air – GHG emissions are expected from equipment exhaust and combustion sources. Particulate matter emissions are expected from site clearing and construction activities. NWT has permits and authorizations in place to operate and monitor the water quality and air quality on the site.

Air quality monitoring will continue during construction and operation of the project.

Water – Shallow groundwater beneath the site is very hard, with sodium sulphate rich water that is unfit for human or animal consumption. These conditions are relative to the shores of the Kikiskitotawânanawak Iskêwak Lake, which is a large alkali lake located south of the Project across Highway 14. Waste is not expected to be generated in or on water during any phase of the Project. No liquid wastes and water-carried waste will be generated by the Project.

Annual groundwater and surface water monitoring is a requirement under their current operating permit. This includes three evaporation ponds, ten monitoring wells and two sloughs as specified monitoring points in the environmental monitoring program developed by Saskatchewan Environment.

There is an existing sewage system at the NWT that the Project will use during construction. The Project is not expected to additional any additional human waste that is above the capacity of the current system. Small amounts of waste is expected from construction, and this waste will be disposed of at the local landfill.