

Report

Summary of the Initial Project Description

Mihta Askiy Data Center Project

Prepared for
Cree Ative Datacenter Corp GP

December 11, 2025



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Disclaimer

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Acronyms and abbreviations

AAAQOG	<i>Alberta Ambient Air Quality Objectives and Guidelines</i>
AACSW	Alberta Arts, Culture and Status of Women
ACIMS	Alberta Conservation Information Management System
ACO	Aboriginal Consultation Office
AIES	Alberta Interconnected Electric System
AESO	Alberta Electric System Operator
AER	Alberta Energy Regulator
ATCO	ATCO Electric Ltd.
AUC	Alberta Utilities Commission
Carmon Creek Project	Shell Carmon Creek Project
CEMS	Continuous Emissions Monitoring System
CH ₄	methane
CO ₂	carbon dioxide
COP	Code of Practice
Cree Ative	Cree Ative Datacenter Corp GP
Ecosis	Ecosis Ltd.
EPA	Alberta Environment and Protected Areas
EPA-FWS	Alberta Environment and Protected Areas – Fish and Wildlife Stewardship
EPEA	<i>Environmental Protection and Enhancement Act, RSA 2000, c. E-12</i>
ESA	Environmental Site Assessment
FWMIS	Fisheries and Wildlife Management Information System
GHG	greenhouse gas
GOA	Government of Alberta
GOC	Government of Canada
ha	hectare(s)
HRA	<i>Historical Resources Act, RSA 2000, c. H-9</i>
HRV	Historic Resource Value
HEEA	<i>Hydro and Electric Energy Act, RSA 2000, c. H-16</i>
IAA	<i>Impact Assessment Act, SC 2019, c. 28, s. 1</i>
IAAC	Impact Assessment Agency of Canada

ISD	in-service date
km	kilometre(s)
kV	kilovolt(s)
m	metre(s)
m ³	cubic metre(s)
Maskwa	Maskwa Environmental Consulting Ltd.
Matrix	Matrix Solutions Inc.
MW	megawatt(s)
N ₂ O	nitrous oxides
NGTL	NOVA Gas Transmission Ltd.
NO _x	nitrogen oxides
NRC	Natural Regions Committee
PCA	pre-consultation assessment
PIP	Participant Involvement Program
Power Plant	a 650 MW combined cycle facility
the Project	the Mihta Askiy Data Center Project
PLA	<i>Public Lands Act, RSA 2000, c. P-40</i>
Rule 007	<i>Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines</i>
Rule 012	<i>Rule 012: Noise Control</i>
SARA	<i>Species at Risk Act, SC 2002, c. 29</i>
Shell	Shell Canada Ltd.
SOMC	Species of Management Concern
Stantec	Stantec Consulting Ltd
Three Creeks Power Plant	Kineticor Three Creeks Power Plant

1 Part A – General information

On behalf of Cree Ative Datacenter Corp GP (Cree Ative), Maskwa Environmental Consulting Ltd. (Maskwa) prepared an Initial Project Description for the Mihta Askiy Data Center Project (the Project). This document is a Plain Language Summary of the Initial Project Description, which was prepared in accordance with the Impact Assessment Agency of Canada (IAAC) *Guide to Preparing an Initial Project Description* under the *Impact Assessment Act* (IAA). Additional details on the Project can be found in the detailed Initial Project Description filed with the IAAC.

1.1 Item 1 – Project name and location

General Project information is summarized below. Appendix A, Figure A1: *Project Location* illustrates the Project location.

Table 1 - General Project Information

Name of Project	Mihta Askiy Data Center Project
Name of Proponent	Cree Ative Datacenter Corp GP
Project type	650-megawatt (MW) combined cycle power generation facility
Project location	A previously disturbed and partially constructed brownfield site in Northern Sunrise County, approximately 40-kilometres (km) northeast of Peace River. Alberta Township System Location: NE-15-85-18-W5. Approximate Global Positioning System coordinates: 56.376, -116.745.

The Project involves the construction of a 650-megawatt (MW) combined cycle power generation facility (Power Plant), designed to supply grid-connected power to a proposed data center. The Power Plant is considered a designated physical activity under Section 30 of the *Physical Activities Regulations* (SOR/2019-285). Therefore, the Project, in the context of the Initial Project Description, refers primarily to the Power Plant as the designated physical activity of the IAA and describes other incidental or ancillary infrastructure components. Permitting for ancillary infrastructure primarily require approvals from the Alberta Utilities Commission (AUC) under the *Hydro and Electric Energy Act*. This includes the data center and two new 240-kilovolt (kV) single-circuit transmission lines to connect the site to the Alberta Interconnected Electric System (AIES) via the existing ATCO Electric Ltd (ATCO) Wesley Creek Substation. Other anticipated ancillary infrastructure includes a natural gas pipeline, a telecommunications line and other associated utility infrastructure.

The Project is located on an existing brownfield site previously permitted, approved and partially constructed under Shell Canada Ltd. (Shell)’s Carmon Creek Project (Carmon Creek Project). Infrastructure for the Carmon Creek Project and interconnection to the AIES was previously

reviewed and approved twice by the AUC. Although the site was never operational, it has been most recently held and maintained as the TransAlta Three Creeks Thermal Electric Power Plant.

1.2 Item 2 – Proponent Information

Proponent information is provided in Table 2. Cree Ative is the general partner acting for and on behalf of Mihta Askiy LP. The Mihta Askiy LP is an Indigenous partnership that is 51% owned by Woodland Cree First Nation and 49% owned by Sovereign Digital Infrastructure. The Mihta Askiy LP will own the Power Plant and data center infrastructure assets.

Table 2 - Proponent contact information

Proponent information	Details
Proponent name	Cree Ative Datacenter GP
Proponent address	Suite 3819 - Bankers Hall West 888, 3 Street SW, Calgary, Alberta T2P 5C5
Proponent primary representative contact	Darin Watson, VP Engineering and Construction (403) 651-2303 Darin.Watson@creeativedata.com

1.3 Item 3 – Engagement summary

Maskwa developed a Participant Involvement Program (PIP) following the guidelines in Rule 007 (AUC 2025). The PIP is intended to meet or exceed all ACO, AUC and other associated regulatory requirements. The PIP includes identifying all parties who must be notified and consulted in respect of the Project. Notification began with delivery of a Project-specific information package in July 2025. A summary of ongoing engagement activities to date is provided in Table 3.

Table 3 - Engagement summary

Name	Engagement notes
IAAC	Met virtually on August 27, October 21, and November 20, 2025, to discuss requirements and Initial Project Description process for the Project under the IAA. Provided feedback for Indigenous engagement on October 16, 2025, this included additional Indigenous and Métis communities to be engaged. Consultation ongoing.
Alberta Consultation Office (ACO)	A pre-consultation assessment (PCA) has been submitted to the ACO. The PCA was returned with recommended Level 2 Consultation with 8 Indigenous and Métis communities. See Section 1.4 for more detail. Consultation ongoing.

Name	Engagement notes
Alberta Electric System Operator (AESO)	The Project System Assess Service Request was submitted in April 2025 and the Project is actively advancing through the AESO connection process.
Alberta Environment and Protected Areas – Fish and Wildlife Stewardship (EPA-FWS)	Met virtually on June 19, 2025 to discuss environmental approach for the Project. Follow-up e-mail communications addressed inquiries related to the Project.
Alberta Environment and Protected Areas (EPA) – Regulatory Assurance	Met virtually on August 6, 2025 to discuss requirements for the Project under the <i>Environmental Protection and Enhancement Act</i> process. In follow-up e-mail communications, EPA determined that no EPEA approval amendment is necessary.
Northern Sunrise County	Met in-person on August 26, 2025. Northern Sunrise County provided a Letter of Support for the Project on September 3, 2025.
ATCO	Met virtually on July 23, 2025. Comments and concerns raised included transmission line routing feedback, impacts to existing infrastructure, and road/land crossings. ATCO is actively engaged with the AESO connection process and has confirmed no footprint changes are needed at the Wesley Creek Substation.
Industry	Industry consultation will be ongoing as part of the Project planning and development.
Landowners identified within the PIP	Landowner and resident consultation will be ongoing as part of the Project planning and development. Landowner feedback provided to date relates to ecological impacts, potential noise, potential vibration, impacts to recreational lands, routing and siting process, and compensation for easements.

Ongoing engagement will continue through the lifecycle of the Project. Future activities as part of ongoing engagement include circulation of Project update packages and meetings with relevant landowners/residents and agencies. Engagement with Indigenous groups is discussed in Section 1.4.

1.4 Item 4 – Indigenous groups engagement

Indigenous communities, stakeholders, and interested parties were identified through multiple processes. The Project proximity to these Indigenous groups' reserves and settlements are shown on Appendix A, Figure A2: *Project Proximity to First Nation Reserves and Métis Settlements*. Indigenous groups that are being consulted with for the Project include:

- Peavine Métis Settlement
- Gift Lake Métis Settlement
- Dene Tha' First Nation
- Duncan's First Nation
- Driftpile Cree Nation
- East Prairie Métis Settlement
- Otipemisiwak Métis Government
- Sucker Creek First Nation
- Woodland Cree First Nation
- Lubicon Lake

The proponent has initiated the regulatory process with the ACO and is actively engaging with all listed Indigenous communities. Ongoing engagement efforts will ensure diverse opportunities for feedback and participation as the Project develops.

A summary of engagement with Indigenous groups is provided below:

- Project notifications were shared with Indigenous communities on July 14, 2025. In October 2025 additional Indigenous communities were identified and will be provided Project materials and consulted going forward.
- The Project was introduced at a community meeting at Woodland Cree First Nation on August 27, 2025. Preliminary topics of interest relate to economic benefits, demand for data centers, employment and training opportunities, environmental impacts, Project lifespan, and water usage.
- To-date, Gift Lake Métis Settlement and Sucker Creek First Nation have responded with requests for additional meetings and/or site visits.
- Ongoing engagement will continue through the lifecycle of the Project, based on the interest and degree of potential impact for each Indigenous group. Future activities as part of ongoing engagement with Indigenous groups include circulation of Project updates and introductory meetings, as well as any other preferred engagement methods of each Indigenous group.

1.5 Item 5 – Section 92 or 93 studies or plans

There are currently no known federal regional assessments conducted under Section 92 or 93 of the *IAA* in the region where the Project is to be developed.

Under provincial jurisdiction, there are currently no regional plans or frameworks; however, plans or frameworks under development for the Peace River may have application in the future, once completed (EPA – Regulatory Assurance 2025a, pers. comm.).

1.6 Item 6 – Section 95 studies or plans

No strategic assessments as referenced under Section 95 of the IAA have been carried out that are applicable to the Project. However, the *Strategic Assessment of Climate Change (revised October 2020)* (GOC 2020) may be applicable to the Project and its assessment of greenhouse gas (GHG) emissions and potential effects on climate change.

2 Part B – Project information

2.1 Item 7 – Purpose and benefits of the Project

The purpose of the Project is to provide grid-connected power generation for private and cultural computing services by way of a data center. The Project is driven by and provides a solution for an idle and unused existing brownfield site, while supporting the growing demand for cloud services, data storage and sovereign artificial intelligence compute. The main benefits of the Project relate to its alignment of economic growth with meaningful community engagement and sustainable development. It is anticipated to provide the surrounding region with employment and training opportunities and diversify the region's economy in alignment with the global shift towards technology-driven development.

2.2 Item 8 – Physical activities regulations

Based on Section 30 of the *Physical Activities Regulations*, the Project is considered a designated physical activity:

“The construction, operation, decommissioning, and abandonment of a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more”.

As a designated project that potentially requires an impact assessment, an Initial Project Description for the Project was prepared and submitted to the IAAC for its review and circulation to stakeholders.

2.3 Item 9 – Activities and infrastructure

The Project component for which IAAC approval is being sought are as follows:

- Power Plant – power generation facility with a capacity of 650 MW

The Project is intended to support or be supported by the following incidental/ancillary infrastructure:

- Data center
- Substation
- Transmission line interconnection (two, 240 kV transmission lines)
- Natural gas pipeline connection to NOVA Gas Transmission Ltd. (NGTL)
- Telecommunications

Additional information on physical works and activities is provided below.

2.3.1 Power Plant

The Power Plant will utilize the existing brownfield site and associated generation and electrical infrastructure that was previously permitted, approved and partially constructed (e.g., Carmon Creek Project, Kinetikor Three Creeks Power Plant [Three Creeks Power Plant]). The brownfield site includes approximately 20.6-hectares (ha) of Crown land, which was previously cleared and graded. Although site construction for the previous projects has been suspended since 2015, the site, as well as the idle and unused infrastructure and equipment, has been maintained by subsequent owners. The transfer of ownership of the Power Plant is in progress. Mihta Askiy LP will own the Power Plant.

2.3.1.1 Construction and operations

There will be no increase in physical land footprint or clearing required for the Power Plant. Once completed, permanent infrastructure will include two gas turbine buildings, two heat recovery steam generator units, a steam turbine generator, an air-cooled condenser tower, and an operations building. A Site Plan outlining the proposed facilities is included in Appendix A, Figure A3: *Site Plan*.

Construction of the Power Plant will include the following activities:

- Completion of partially construction facilities, including the installation of:
 - (Phase 1) Two 230 MW (International Standards Organization (ISO) or approximately 205 MW site rating) Gas Turbines in Simple Cycle/Ultra Low nitrogen oxides (NOx) Combustor;
 - (Phase 2) 250 MW Steam Turbine Generator when converted to Combined Cycle Gas Turbine combined with condenser cooling tower;
- Connection of ancillary equipment;
- Commissioning of Power Plant; and
- Site clean-up.

Operation of the Power Plant will include:

- Monitoring and control of equipment for power generation (including operation of turbines for electrical generation, cooling system infrastructure, electrical power systems, etc.);
- Operation of services and utilities (e.g., sewage, stormwater, domestic water services);
- Regular safety and operational checks; and
- General routine maintenance.

The combined cycle power facility is comprised of both gas and steam power production technologies to utilize otherwise wasted energy from the gas turbine exhaust to produce steam which drives the steam-turbine generator. In operations, natural gas will be combusted in a gas turbine to generate electricity. Hot exhaust from the gas turbine will be used to produce steam, which will produce additional power supplied to the steam turbine. The benefit of the process is

that up to 50% more electricity is produced from the same amount of fuel compared to the simple cycle facility. It is anticipated that large cooling loads, such as the steam turbine condenser, will use evaporative cooling so as to reduce internal electricity consumption, and increase fuel efficiency. The data center, having smaller and vastly more distributed cooling loads, is anticipated to utilize closed loop cooling. A step-up transformer will be used to increase the voltage of generated electricity to 240 kV prior to the AIES interconnection. As per the EPEA Approval, the *Alberta Ambient Air Quality Objectives and Guidelines* (AAAQOG; GOA 2024a) will be achieved during the operational phase of the Power Plant, which include Continuous Emissions Monitoring System (CEMS) in accordance with applicable Provincial regulations.

The Power Plant, including any incidental and ancillary infrastructure (i.e., data center, etc.), will require an initial daily water usage of up to 5,000 cubic metres (m³). A *Water Act* licence will be required for the Project and initial planning is in progress to source this water under an existing Shell licence or licence(s) for up to 11,000 m³ per day. Subsequent water usage requirements will vary based on the closed loop cooling planned for the data center; however, in any case, water requirements are anticipated to be the same, or less, than what is required initially. The Project will adhere to the requirements of the *Water Act* and applicable licence(s).

2.3.1.2 Decommissioning

The Project is expected to operate for approximately 30 years. At the time of decommissioning and reclamation, applicable regulatory requirements will be adhered to in consultation with landowners, occupants, relevant government agencies, and other stakeholders having an interest in the proposed works. It is expected that decommissioning will require AUC approval and that final reclamation will require the approval of applicable agencies, including EPA.

2.3.2 Ancillary Infrastructure

The Project will require ancillary infrastructure, as outlined below.

- **Data center:** A data center, owned by Mihta Askiy LP, will be powered by the Power Plant and include an industrial warehouse that will house computer processing equipment, as well as an employee parking area, security gate house, fence, and lighting. Figure 1 shows an initial rendering of the Project, with the data center as the four warehouse buildings in the foreground.
- **Transmission line and substation:** Two, single-circuit 240 kV transmission lines will connect an existing substation (to be commissioned) at the Power Plant site to the AIES at the existing Wesley Creek Substation. Cree Ative will be responsible for the siting and construction phases of the transmission facility, with ownership of the facilities transferred to the designated Transmission Facility Owner, ATCO, upon completion. The transmission line will be regulated by the AUC. Maskwa is currently conducting a siting assessment. Preliminary routes were mailed out to stakeholders in July 2025 and consultation is in

progress to assist in route determination (Appendix A, Figure A4: Preliminary Routes and Study Area).

- **Natural gas pipeline:** The Power Plant will require a new natural gas pipeline to the existing NGTL system. The pipeline will be developed in coordination with NGTL and regulated by the Alberta Energy Regulator (AER).
- **Telecommunications:** Telecommunications will be required for the operation of the Project and transfer of digital data from the data center. A fiber optic connection using existing infrastructure along Highway 986 is currently being assessed.

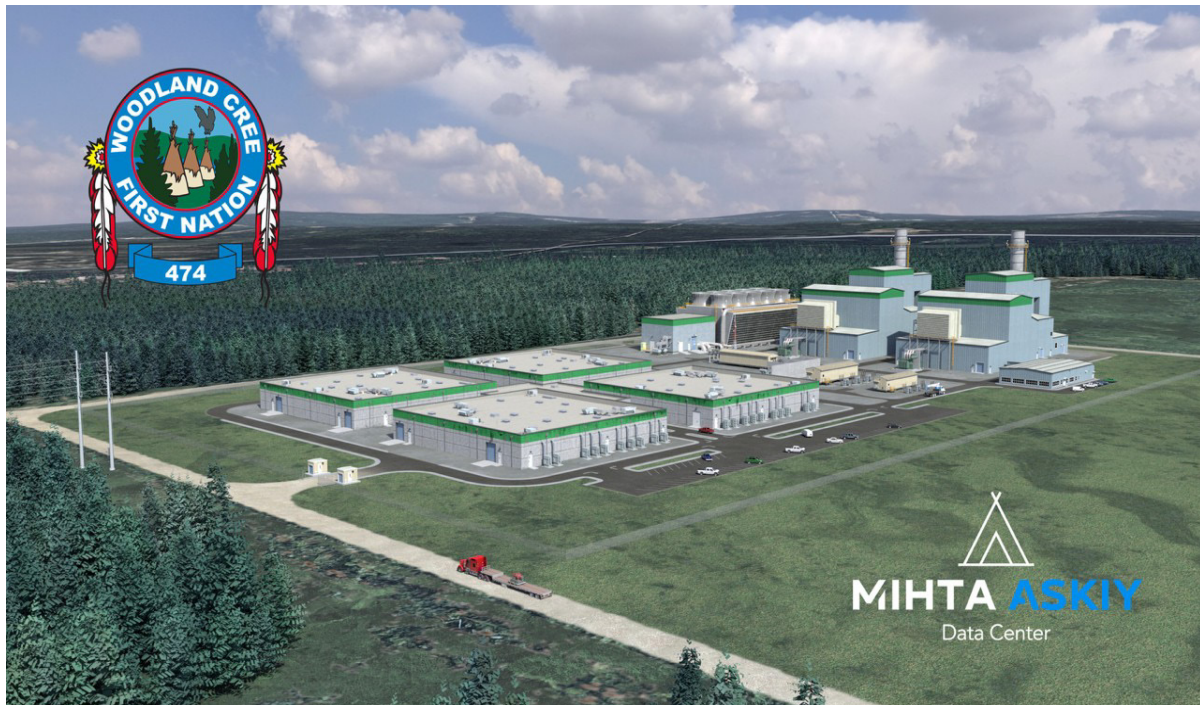


Figure 1 - Proposed Project Rendering

2.4 Item 10 – Production capacity

The Project will feature two 200 MW natural gas-powered turbines and a 250 MW steam turbine, built in phases, for combined cycle power generation with a maximum production capacity of 650 MW.

2.5 Item 11 – Anticipated schedule

The anticipated Project schedule is presented in Table 4, with the assumption that the estimated lifespan of the Power Plant is 30 years.

Table 4 - Project schedule

Milestone	Estimated schedule
Power Plant Transfer of Ownership	Q1 2026
AUC transmission line and substation approval	Q2 2026
AUC Power Plant approval	Q2 2026
Transmission line construction	Q4 2026
Re-commencement of construction for 400 MW simple cycle gas generators	Q4 2026
Transmission lines and substation in-service date (ISD)	Q1 2027
Data center ISD	Q2 2027
Power Plant ISD	Q4 2027
650 MW (total) combined cycle gas generation and 250 MW data center expansion	Q4 2029
Decommissioning of all Project facilities	2056
Surface reclamation	2057

2.6 Item 12 – Project alternatives

No potential technically and economically feasible generation alternatives (i.e., alternative fuels, alternative site layouts) are being considered for the Project as the Project is utilizing an existing brownfield site, associated land dispositions and partially constructed power plant infrastructure (including an existing substation located on cleared and graded land). The combined cycle power facility offers the best available solution as it is comprised of both gas and steam power production technologies.

While the Project is intended to provide on-site power for the data center, alternative power can be supplied by the AIES. A connection to the AIES is intended to provide redundancy for the Project should onsite generation become unavailable for some unforeseen reason. The Project is working with the AESO on the interconnection and has confirmed that on site generation is required to support a load of this size in this area.

3 Part C – Location Information

3.1 Item 13 – Proposed project location

The Project is located on a brownfield site occupying 20.6 ha of Crown land within NE-15-85-18-W5 (at approximately 56.376, -116.745). Leases are registered under the *Public Lands Act* through EPA or the AER. Transmission lines are proposed between the Project and the Wesley Creek Substation within SW 17-084-19 W5.

Appendix A, Project Maps includes:

- Figure A1 – Project Location
- Figure A2 – Project Proximity to First Nation Reserves and Métis Settlements
- Figure A3 – Site Plan
- Figure A4 – Preliminary Routes and Study Area
- Figure A5 – Project Proximities
- Figure A6 – Environmental Overview

The nearest residence is 11.3 km from the Project. The nearest affected reserve and communities are the Woodland Cree No. 226 reserve (11.1 km), the locality of Simon Lakes (13.3 km), the locality of Three Creek (21.1 km), the Hamlet of St. Isidore (29.2 km), and the Town of Peace River (34.5 km). Other First Nation reserves and Métis settlements in proximity to the Project include Lubicon Lake Band (36.2 km), Peavine Métis Settlement (46 km), Gift Lake Métis Settlement (55.4 km), Duncan's First Nation (72.4 km), Sucker Creek First Nation (102.9 km), Driftpile Cree Nation (123.5 km), East Prairie Metis Settlements (124.3 km), and Dene Tha' First Nation (228.4 km – 382.2 km). The Woodland Cree No. 226 reserve is also the nearest federal land. Wood Buffalo National Park of Canada, which is approximately 251.6 km northeast of the Project, is the nearest national park. See Appendix A, Figure A2: *First Nation Reserves and Métis Settlements* and Figure A5: *Project Proximities*.

3.2 Item 14 – Physical and biological description

The Project is located within the Central Mixedwood Subregion of the Boreal Forest Natural Region, with some of the ancillary infrastructure also occurring within the Dry Mixedwood Subregion. The Central Mixedwood Subregion is characterized by a mosaic of aspen, mixedwood and white spruce forests on upland areas and wet, poorly drained fens and bogs on level to gently undulating plains (Natural Regions Committee [NRC] 2006). The Boreal Forest Natural Region generally supports a large diversity of vascular and non-vascular plant species and wide-ranging wildlife species (NRC 2006). Land use in the region includes Indigenous traditional use activities and recreation (e.g. hunting, fishing, and trapping), as well as aspen and conifer harvesting, oil and gas exploration and development, and agriculture.

3.2.1 Assessment of the Project

Maskwa completed a desktop review of publicly available databases and existing studies for the Project and interconnection study area, which include the Environmental Impact Assessment associated with the application for approval of the Carmon Creek Project (Shell 2009), Wesley Creek to Brock Transmission Project Environmental Evaluation (Tetra Tech EBA Inc. 2014) and Three Creeks Power Project Environmental Evaluation (Stantec Consulting Ltd. [Stantec] 2018a). Based on the review, Maskwa completed a field assessment and general site reconnaissance for the Project between June and August of 2025 to confirm current environmental conditions and features. Wildlife surveys were conducted following guidance within the *Sensitive Species Inventory Guidelines* (GOA 2013).

3.2.2 Physical and environmental setting for the Project

Based on the desktop review and field studies, a summary of the physical and environmental setting for the Project and surrounding area within the interconnection study area is provided in Table 5 and illustrated in Appendix A, Figure A6.

Table 5 - Summary of the Physical and Environmental Setting for the Project

Physical and Environmental Setting	Baseline conditions
Potential environmental concerns	<ul style="list-style-type: none"> • Environmental Site Assessments (ESA) have previously been completed for the Power Plant site: <ul style="list-style-type: none"> ○ A Phase I ESA (Matrix Solutions Inc. [Matrix] 2016a) and Phase II ESA (Matrix 2016b) completed for the Carmon Creek Project in 2016 did not identify any subsurface impacts or potential contamination resulting from Shell’s operations, including the partial construction of the Carmon Creek Project Power Plant. ○ A Phase I ESA (Ecosis Ltd. [Ecosis] 2025) completed for the Three Creeks Power Plant in 2025 identified certain potential issues and areas of environmental concern associated with the current or historical land use of the property but assumed these to be low risk based on the ESAs completed in 2016.
Land use	<ul style="list-style-type: none"> • The Project is on a brownfield site that has been previously cleared and graded. • Land uses in the surrounding area and interconnection study area primarily include industrial activities (e.g., oil and gas, electricity), privately-owned agriculture, recreational use and Indigenous use (e.g., hunting, trapping, fishing, harvesting, gathering, recreation).

Physical and Environmental Setting	Baseline conditions
Soils and terrain	<ul style="list-style-type: none"> • The Project is on a brownfield site that has been previously cleared and graded. • Soils in the region are typically Gray Luvisolic soils on medium- to fine-textured upland sites, with Brunisols on sandy upland sites and Organic soils in poorly drained lowlands (NRC 2006). • Project and ancillary infrastructure are located in a generally flat to undulating landscape.
Surface water and groundwater	<ul style="list-style-type: none"> • No provincially mapped lakes and watercourses (GOA 2025a) or wetlands are present within the Project. • Carmon Lake, which occurs approximately 3 km southwest of the Power Plant is the nearest named lake; Carmon Creek, as well as several unnamed tributaries occur throughout the general vicinity of the Project and ancillary infrastructure (GOA 2025a). • Several watercourses and wetlands are potentially overlapped by the preliminary transmission line routes. • Wet surface conditions observed during the 2025 field program suggest that the interconnection study area has a relatively shallow groundwater table.
Aquatic species and habitat	<ul style="list-style-type: none"> • As the Project is located on a previously cleared and graded brownfield site, it does not support any aquatic species or habitat. • Federally, there are no aquatic species at risk or critical habitat overlapping the Project and ancillary infrastructure or the 5 km downstream stretches of any interacting watercourses (GOC 2025b). • Species historically observed in previous surveys within 5 km of the Project include brook stickleback, fathead minnow and lake chub, whose regional populations are provincially listed as Secure (GOA 2022) and federally not listed (GOC 2025c). • There are no Alberta Conservation Information Management System (ACIMS) records of aquatic invertebrate occurrences within the Project (ACIMS 2022).
Vegetation and wetlands	<ul style="list-style-type: none"> • The Project does not overlap any provincial Endangered and Threatened Plant Ranges (GOA 2025a,b). • The Project and interconnection study area have the potential to support sensitive and non-sensitive vascular and non-vascular element occurrences, including several lichens and liverworts (Shell 2009, Tetra Tech EBA Inc. 2014, Stantec 2018a, ACIMS 2022). • As vegetation removal and earthworks associated with the Project are complete, no vascular or non-vascular element occurrences are anticipated for the Project. • During a sampling of late-season rare plant surveys in August 2025, blunt-leaved watercress, clustered burreed, and liverwort were observed in the interconnection study area.

Physical and Environmental Setting	Baseline conditions
Wildlife	<ul style="list-style-type: none"> • The general desktop review indicated that: <ul style="list-style-type: none"> ○ The Project and interconnection study area are located within migratory bird nesting zone B5 (GOC 2025d) which has a general nesting period between April 15 and August 31; ○ The nearest Important Bird Area, AB115 Frank Lake (north), is located approximately 50 km from Project (Birds Canada 2025); ○ The Project and interconnection study area do not overlap with provincially sensitive ranges or wildlife layers (GOA 2025a,b); ○ Carmon Creek, which is located within the interconnection study area, is considered a trumpeter swan waterbody (GOA 2025a,b), and is subject to conditions under the <i>Master Schedule of Standards and Conditions</i> (GOA 2024b). ○ Species of management concern (SOMC) represent species that are provincially listed under the <i>Alberta wild species general status listing – 2020</i> (GOA 2022) or <i>Alberta Wildlife Regulation</i> (Alta Reg 143/1997), or federally listed as a Schedule 1 species under the <i>Species at Risk Act</i> (SARA) or recommended to be listed under Schedule 1 of the SARA by the Committee on the Status of Endangered Wildlife in Canada (2025). Historical records of SOMC occurring within 5 km of the Project area include 1 amphibian SOMC, 31 bird SOMC, and 10 mammal SOMC (GOA 2025a). • As vegetation removal and earthworks are complete for the Project, there is limited quality habitat available within and around existing infrastructure. <ul style="list-style-type: none"> ○ During the 2025 field program for the Project, one cliff swallow colony feature was observed under the existing switchgear building on site. • The preliminary transmission line routes and other ancillary infrastructure primarily cross areas of undisturbed forest, shrubland and wetland, as well as existing industrial operations and associated access. <ul style="list-style-type: none"> ○ During the 2025 field program for the interconnection study area, breeding bird point count stations were established in accessible and representative habitats. In total, there were eight SOMCs (American kestrel, barn swallow, black tern, common yellowthroat, great blue heron, olive-sided flycatcher, sandhill crane, sora) observed during surveys or incidentally. ○ As part of the general reconnaissance, three active wildlife features were identified in the vicinity of the preliminary transmission line routes, including an active trumpeter swan breeding feature, red-tailed hawk nest, and western toad breeding feature. ○ A historical record within the Fisheries and Wildlife Management Information System (FWMIS) indicated that one historical sharp-tailed grouse lek was identified within SW-33-084-19 W5M during surveys in 2005 (GOA 2025a). Based on a visit to this location, the forested habitat did not appear to be representative of quality lekking habitat. The historical record was discussed with EPA-FWS, who agreed that the habitat appeared to be unsuitable for sharp-tailed grouse lekking (EPA-FWS 2025, pers. comm.).

Physical and Environmental Setting	Baseline conditions
Historical resources	<ul style="list-style-type: none"> The Project does not overlap any lands assigned a designated Historic Resource Value (HRV; Alberta Arts, Culture and Status of Women [AACSW] 2025). Ancillary infrastructure (e.g., transmission lines) may cross quarter sections designated HRV 4c (AACSW 2025), which identifies areas with the potential to contain cultural (e.g., traditional land use) historic resources that may require avoidance or assessment.

3.3 Item 15 – Health, social, and economic context

The Project is located in Northern Sunrise County, east of the town of Peace River. Several localities and hamlets are located within the county, including Simon Lakes, Cadotte Lake, and Three Creeks.

As of the 2021 census, the population of Northern Sunrise County decreased 10.9% from a 2016 population of 1,921 to a 2021 population of 1,711 (Statistics Canada 2021). Of the total population, 9.0% (155 people) identified as Indigenous (Statistics Canada 2021). Average age of the population is 40.7 (Statistics Canada 2021). In 2021, men+ (i.e., men and/or boys as well as some non-binary persons) comprised the majority (53.6%) of the county population (Statistics Canada 2021).

The median employment income in 2019 for full-year full-time individuals (aged 15 years and over) in 2020 was reported as \$76,000 (Statistics Canada 2021). Median household income for a two-or-more person household in 2020 was reported as \$121,000 (Statistics Canada 2021). The 2021 unemployment rate in Northern Sunrise County was 6.2%, which was lower than that of the province (11.5%).

The Project is located within the North Zone of Alberta Health Services. The health of people within Northern Sunrise County is anticipated to be typical of suburban and rural regions in Alberta. Alberta Health’s 2019 community profile summary for the local geographic area of Peace River indicates that the North Zone reports lower key population health indicators when compared to the overall province (Alberta Health 2019). Key indicators of population health relate to primary care utilization and availability of primary care services, health conditions or health status such as incidence and prevalence of disease, as well as life expectancy at birth (Alberta Health 2019). The life expectancy for Northern Sunrise County was reported as 77.8 years in 2022 (GOA n.d.)

Overall, the Project is expected to have minimal impact on population growth and healthcare services, and a moderately positive impact with respect to the local economy for employment and service providers.

No health, social or economic concerns regarding the proposed Project have been identified during engagement to date.

4 Part D – Federal, provincial, territorial, Indigenous, and municipal involvement

4.1 Item 16 – Federal financial support

The Project is not receiving any proposed or anticipated federal financial support.

The Woodland Cree First Nation may receive funding through a mix of economic development initiatives and grants from federal programs. As the Project is 51% owned by Woodland Cree First Nation, federal financial support may be considered to be indirectly provided to the Project through partnership with Woodland Cree First Nation.

4.2 Item 17 – Federal lands

There are no federal lands that will be used for any purpose of the Project.

4.3 Item 18 – Environmental effects jurisdictions

Federal, provincial and municipal jurisdictions have powers, duties or functions in relation to the assessment of the Project's environmental effects. These are detailed below.

4.3.1 Federal regulatory requirements

In addition to the current process under the IAA, including consultation with the IAAC, adherence to the following federal legislation is required for construction of the Project and/or ancillary infrastructure (e.g., transmission, pipeline).

- *Fisheries Act* (RSC 1985, c. F-14)
- *IAA* (SC 2019, c. 28, s. 1)
- *Migratory Birds Convention Act* (SC 1994, c. 22)
- *SARA* (SC 2002, c. 29)

Authorizations or approvals are not anticipated to be required based on the current understanding of the Project.

4.3.2 Provincial

Adherence to the following provincial legislation and associated approval, where applicable, is required for the Project and/or ancillary infrastructure (e.g., transmission, pipeline).

- Alberta ACO process (see Section 1.4)
- *Alberta Land Stewardship Act* (SA 2009, c. A-26.8)
- *Alberta Utilities Commission Act* (SA 2007, c. A-37.2)
- *Code of Practice (COP) for Powerline Works Impacting Wetlands* (GOA 2019)
- *Electric Utilities Act* (SA 2003, c. E-5.1)
- EPEA (RSA 2000, c. E-1)
- *Historical Resources Act* (HRA; RSA 2000, c. H-9)
- *Hydro and Electric Energy Act* (RSA 2000, c. H-16)
- *Municipal Government Act* (RSA 2000, c. M-26)
- *Public Lands Act* (RSA 2000, c. P-40)
- Rule 007 (AUC 2025)
- Rule 012: Noise Control (Rule 012; AUC 2024)
- *Soil Conservation Act* (RSA 2000, c. S-15)
- *Water Act* (RSA 2000, c. W-3)
- *Weed Control Act* (SA 2008, c. W-5.1)
- *Wildlife Act* (RSA 2000, c. W-10)

Based on consultation with EPA, the existing EPEA Approval No. 366024-00-01 (issued April 3, 2019) will be transferred to the Project, and an Approval Amendment is not required at this time (EPA – Regulatory Assurance 2025b, pers. comm.).

An Environmental Evaluation will be submitted to the AUC as part of the Power Plant Facility Application and the transmission line and substation applications. HRA approvals will be applied for in advance of the AUC submission.

Applicable *Water Act* approval(s) will be obtained from AER or EPA prior to the commencement of any eligible activities within wetlands or watercourses. Applicable *Water Act* COP notification(s) will be submitted a minimum of 14 calendar days prior to the commencement of any eligible activities within wetland and watercourse features.

4.3.3 Municipal

Adherence to the following municipal legislation and associated approval, where applicable, is required for the Project and/or ancillary infrastructure (e.g., transmission, pipeline).

- *Land Use Bylaw B458/24* (Northern Sunrise County 2025)

A development permit is required for construction of the Project and/or ancillary infrastructure (e.g., transmission, pipeline) under the *Land Use Bylaw B458/24* (Northern Sunrise County 2025). The development permit will be applied for prior to construction, once the Project has received AUC approval.

5 Part E – Potential Effects of the Project

5.1 Item 19 – Non-negligible adverse changes (fish, aquatics, and birds)

The Project is not anticipated to result in adverse effects on fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act*, or aquatic species as defined in subsection 2(1) of the *Species at Risk Act*. As the Project is on an existing brownfield site, there are no fish-bearing watercourses or waterbodies, or connection to these features present within the site. While the Project may use water from a watercourse that supports fish and other aquatic species to meet daily water requirements, water used for operational purposes shall adhere to the conditions of the water licence obtained and effectively mitigate impacts to aquatic species and habitat.

With the implementation of mitigation, the Project is not anticipated to result in adverse effects on migratory birds as defined in subsection 2(1) of the *Migratory Birds Convention Act*. The Project does not require an increase in physical land footprint or clearing and, therefore, there will be no new habitat loss. Similarly, as the Project site and surrounding area are previously disturbed by existing infrastructure, industrial operations and development, the Project is not anticipated to contribute to increased collision risk.

5.2 Overview of other environmental effects

The Project consists of the development of the Power Plant. Potential effects are anticipated to be limited for the Power Plant given that it is on an existing and partially developed brownfield site; therefore, most potential effects are associated with ancillary infrastructure.

Ancillary infrastructure (e.g., data center, transmission line, substation, pipeline) will be regulated provincially. Potential effects of the overall Project and ancillary infrastructure on the biophysical environment and proposed high-level mitigation measures are summarized in Table 6. Adverse environmental effects are not anticipated with the implementation of mitigation measures.

Table 6 - Summary of potential environmental effects, effect pathways, and mitigation measures

Component	Potential effect		Effect pathways	Potential high-level mitigation measures
	Power plant, data center, and substation site	Ancillary infrastructure (e.g., transmission line)		
Soils, terrain and land use	No effect anticipated (no change from existing brownfield)	Change in soil quality and quantity	<ul style="list-style-type: none"> • Soil compaction, admixing, and rutting during site preparation and construction • Soil erosion by water and wind during site preparation and construction • Contamination from inadvertent spills/releases from vehicles and equipment during site preparation, construction, and operations • Chance discovery of existing soil contamination during site preparation and construction 	<ul style="list-style-type: none"> • No soil stripping will occur outside of the delineated work area. • If topsoil stripping is required, it must take place in suitably dry/non-frozen conditions, when practical, to allow for proper separation between soil layers. • Any stripped soil must be stored separately as topsoil, subsoil, and by wetland or upland to avoid admixing. • Where ground disturbance activities are involved, avoid extreme dry, windy, and/or wet conditions. Delay work with heavy machinery in the event of wet or thawed soil conditions to reduce terrain disturbance and soil structure damage. • Work will occur in dry or frozen ground conditions when possible. If there is a risk of degradation inclusive of admixing, compaction, rutting, erosion, or sedimentation, work may be suspended or modified until conditions improve, or additional mitigation is established (e.g., matting). • Erosion and sediment control mitigations will be developed, and erosion and sediment control measures will be installed and maintained until areas are considered stable. • Spill prevention and response mitigations will be developed to ensure that requirements for equipment refuelling, fuel storage and spill prevention, as well as spill response steps are outlined. • If contaminated soil is discovered onsite, work will be halted immediately, and a contaminated soil delineation process will be enacted. Any recovered contamination will be documented, managed, hauled, and disposed of at an appropriate waste management facility.
	No effect anticipated (no change from existing brownfield)	Change in land use	<ul style="list-style-type: none"> • Changes to access influencing current land use activities, particularly related to Indigenous traditional use and recreational use. The nearest reserve, Woodland Cree No. 226, is 11.1 km northeast of the Project 	<ul style="list-style-type: none"> • All Indigenous communities identified by the ACO have been and will continue to be consulted with as part of the overall Project permitting and development stage, which provides multiple opportunities and methods for Indigenous communities to provide feedback, identify questions and concerns, and contribute to the overall Project design and planning. • Indigenous communities have been previously consulted with as part of the two previous projects pursued on the now inactive brownfield site, which will be reviewed and considered for this Project where available.

Component	Potential effect		Effect pathways	Potential high-level mitigation measures
	Power plant, data center, and substation site	Ancillary infrastructure (e.g., transmission line)		
Surface water and groundwater	Change in surface water quality or quantity (e.g., water use)	Change in surface water quality or quantity	<ul style="list-style-type: none"> Alteration of surface water quality or quantity to satisfy water requirements for operational purposes (e.g., steam turbine generator) Alteration of surface water quality (e.g., via soil erosion/sedimentation or inadvertent chemical spills/releases into surface water bodies) during site preparation, construction, and operations Changes to surface drainage patterns during site preparation and construction Reduction in overall wetland function as effected by the above pathways during site preparation and construction 	<ul style="list-style-type: none"> Machinery must be operated in a manner that avoids disturbance to the banks and bed of any surface water feature. Access improvements may not restrict the flow of surface water. If culverts are required, appropriate permitting must be obtained prior to the installation of culverts. Do not deposit, place, or release debris, soil, snow, water, or any deleterious material into or through any surface water feature, or on the ice of any surface water feature. Do not apply pesticides within 30 metres (m) of any open water bodies. The site may be graded, if required, in a manner that maintains surface drainage patterns. Where permanent features have the potential to impede that drainage, culverts will be installed following the appropriate permitting, or the feature will be constructed so that the water flows in a natural manner. Prior to work commencing within 100 m of seasonal or wetter permanence wetlands, mitigations will be applied to reduce impacts, and the activities will be authorized by way of appropriate <i>Water Act</i> approvals or COP notification(s). Water used for operations shall adhere to the conditions and requirements of the water license obtained.
	No effect anticipated (no change from existing brownfield)	Change in groundwater quality	<ul style="list-style-type: none"> Penetration of groundwater aquifer(s) resulting from construction and installation of transmission structure foundations in locations where the water table is shallow during construction Impacts on groundwater quality resulting from an inadvertent release (e.g., spill) of a deleterious substance during site preparation, construction, and operations 	<ul style="list-style-type: none"> If groundwater is encountered while excavating, check for signs of degradation of water quality through identification of physical characteristics such as sheen (which is indicative of hydrocarbons), discoloration, and/or chemical, and/or other odours. Spill prevention and response mitigations will be developed to ensure that requirements for equipment refuelling, fuel storage and spill prevention, as well as spill response steps are outlined
Aquatic species (including fish) and habitat	<ul style="list-style-type: none"> No effect anticipated (no change from existing brownfield) for construction. Change in surface water quality or quantity (e.g., water use) 	Harm to aquatic species and alteration or destruction of habitat	<ul style="list-style-type: none"> Alteration of habitat quality (e.g., via soil erosion/sedimentation or inadvertent chemical spills/releases into surface water bodies) during site preparation, construction, and operations could have impacts on aquatic species via factors like habitat, reproduction and behaviour Alteration of surface water quality or quantity to satisfy water requirements for operational purposes (e.g., steam turbine generator) 	<ul style="list-style-type: none"> Erosion and sediment control mitigations will be developed, and erosion and sediment control measures will be installed and maintained to prevent alteration of aquatic habitat quality and indirect harm to aquatic species. To the extent practical, infrastructure will be sited to avoid sensitive habitats (e.g., riparian zones) following best practices and regulatory requirements. Fisheries and Oceans Canada's <i>Measures to protect fish and fish habitat</i> (GOC 2025e) will be implemented as applicable to minimize potential effects on aquatic resources. Water used for operations shall adhere to the conditions and requirements of the water licence obtained and effectively mitigate impacts to aquatic species and habitat.
Vegetation and wetlands	No effect anticipated (no change from existing brownfield)	Loss/change in vegetation communities and species	<ul style="list-style-type: none"> Disturbance or loss of native vegetation, rare plant species, rare ecological communities, or their habitat during site preparation and construction Introduction or spread of weeds/invasive species during site preparation, construction, and operations 	<ul style="list-style-type: none"> Vegetation disturbance/removal will be minimized to the smallest extent required for construction and the safe operation of ancillary infrastructure (e.g. transmission line). Vegetation clearing will not occur within the setback buffer of an environmental or cultural feature. Vegetation clearing activities should only occur during dry or frozen ground conditions. All vehicles, equipment, and materials must be inspected for, and cleaned of, any plant/soil material prior to working on the Project.
	No effect anticipated (no change from existing brownfield)	Loss of wetlands or change in wetland function	<ul style="list-style-type: none"> Vegetation alteration and/or removal of hydric soils during site preparation, construction, and operations 	<ul style="list-style-type: none"> Mitigations required for working in and around wetlands will be adhered to.

Component	Potential effect		Effect pathways	Potential high-level mitigation measures
	Power plant, data center, and substation site	Ancillary infrastructure (e.g., transmission line)		
Wildlife (including migratory birds)	Change to wildlife habitat, movement and/or mortality	<ul style="list-style-type: none"> Change to wildlife habitat, movement and/or mortality Collision risk for migratory birds 	<ul style="list-style-type: none"> Disruption, including sensory disturbance, to local wildlife and wildlife habitat during site preparation, construction, and operations Loss of wildlife habitat through vegetation removal during site preparation, construction, and operations Wildlife encounters during site preparation, construction, and operations Avian fatalities resulting from collisions and electrocutions with Project infrastructure during operations 	<ul style="list-style-type: none"> Efforts will be made to minimize human-wildlife interactions, such as: <ul style="list-style-type: none"> Prohibiting the feeding or harassment of wildlife; Prohibiting dogs or pets on the Project footprint; Storing waste in wildlife-proof bins; and General site housekeeping and regular removal of all waste with the potential to attract wildlife to the site. If wildlife is observed at or near construction or operations activities, allow the opportunity to leave the work area to the surrounding habitat and away from areas of conflict. Wildlife and nest sweeps must be completed prior to vegetation clearing. If a feature is identified during wildlife sweeps, pre-construction surveys, or incidentally during construction, work in the immediate areas (i.e., within the recommended setback for the feature) will be stopped immediately while mitigation is developed. Site- and species- specific mitigations, recommended setback buffers and restricted activity periods will be developed and adhered to for identified wildlife features. Measures to mitigate avian collisions and/or electrocutions may be developed depending on the final detailed design of the transmission line (e.g., bird flight diverters, protective coverings for high-voltage electrical equipment).
Historical Resources	No effect anticipated (no change from existing brownfield)	No effect anticipated; however, chance discovery possibility	<ul style="list-style-type: none"> Disturbance to historical resources during construction 	<ul style="list-style-type: none"> If an unanticipated discovery (i.e., chance discovery) is made during the construction phase of the Project (e.g., archaeological, cultural or paleontological features), work must stop immediately within the immediate area of discovery, and the feature must not be disturbed, until appropriate mitigation can be developed.
Air Quality	Change in air quality	Change in air quality	<ul style="list-style-type: none"> Air contaminant emissions from equipment and vehicles required for construction activities Dust generated during earthworks and through vehicle and equipment movement on the Project footprint Air contaminant emissions from hydrocarbon fueled equipment (e.g., combustion turbine) during operation 	<ul style="list-style-type: none"> All equipment must be in good operating order and fitted with standard emission control devices in compliance with air quality regulations and standards. A dust abatement protocol may be developed and implemented and include mitigations such as: <ul style="list-style-type: none"> Identification of dust abatement conditions; Implementation of speed reductions to limit dust; Requirements of surface treatments, if required; Requirements for storage or transport of fine soil materials (e.g., coverage with tarps, poly sheeting, geotextile or managed using an equivalent measure) to prevent wind erosion and sediment transport; and If surface treatments require using local sources of water (e.g., dugouts, wetlands, and watercourses), any approval or permitting (e.g., Temporary Diversion Licence) may be required. An emissions abatement protocol may be developed and implemented for the turbines.
Noise	Change in existing sound levels	Change in existing sound levels	<ul style="list-style-type: none"> Noise emissions from equipment required during construction Noise emissions from operation of the power generation facility 	<ul style="list-style-type: none"> Construction activities will be limited to the daytime periods, to the greatest extent possible. Vehicle and equipment idling will be minimized. Equipment enclosures will be installed on operational equipment relating to the power plant to reduce noise emissions. Noise will be complaint with provincial regulations for a power plant of this size/scope, in alignment with AUC Rule 012 (AUC 2024).

5.3 Item 20 – Non-negligible adverse changes to the environment on federal lands

The Project will not have any non-negligible adverse changes to the environment that would occur on federal lands, as the Project is not located on federal lands.

5.4 Item 20.1 – Non-negligible adverse changes to marine environments

The Project will not have marine environment impacts outside of Canada.

5.5 Item 20.2 – Non-negligible adverse changes to interprovincial, boundary, or international waters

The Project will not have impacts to interprovincial waters, boundary waters or international waters.

5.6 Item 21 – Non-negligible adverse impacts on Indigenous peoples of Canada

The Project is located within Treaty 8. The Project is not expected to result in any adverse impacts to Indigenous peoples, including the infringement of Aboriginal and Treaty Rights, impacts to physical and cultural heritage, impacts to the current use of lands and resources used for traditional purpose, and impacts to any culturally significant areas (e.g., sites or structures of historical, archaeological, paleontological, or architectural significance).

As the Project is Indigenous-led, the Project will generally benefit Indigenous communities involved as the Project owners continue to acknowledge and prioritize the importance of avoiding or minimizing potential impacts to Indigenous communities and engaging with Indigenous groups as the Project progresses.

While the traditional land and resource use that is currently practiced by Indigenous groups in the vicinity of the Project includes hunting, fishing, trapping and gathering, the Project will be located on an already cleared, partially constructed and fenced brownfield site. Any effects are anticipated to be limited to construction and are expected to be temporary in nature.

All Indigenous feedback provided for previous projects will be reviewed and in addition, all Indigenous communities with potential interests in the area identified in collaboration with the ACO will continue to actively be consulted with for this Project.

5.7 Item 22 – Non-negligible adverse changes to the health, social, or economic conditions of the Indigenous peoples of Canada

Potential effects of the Project on the health, social, or economic conditions of Indigenous groups are anticipated to be beneficial, or negligible if adverse. By introducing new technology and infrastructure and being Indigenous-led, the Project contributes to economic diversification and aligns with the global shift toward technology-driven development, while supporting regional social cohesion and Indigenous leadership.

The Project will provide the opportunity for construction and operational jobs, training, capacity building and direct economic benefits to the community. While population may fluctuate as a result of Project employment opportunities, the Project is not expected to result in significant changes to population makeup or negatively affect Indigenous peoples or community well-being. Employment and training opportunities have been a key topic in discussions with Indigenous communities as it represents one of the main potential benefits for community members.

5.8 Item 22.1 – Non-negligible adverse effects to federal lands

There are no federal lands that will be used for any purpose of the Project.

5.9 Item 23 – Greenhouse gas emissions

GHG emissions anticipated for the Project, as well as any incidental/ancillary infrastructure (e.g., data center, transmission lines), include methane (CH₄), nitrous oxides (N₂O) and carbon dioxide (CO₂).

There will be a short-term increase in vehicle and equipment related emissions versus ambient background conditions during the construction and decommissioning period. Transmission lines do not emit GHGs during operation. Most GHG emissions from the data center stem from electricity used for power, cooling, and lighting, meaning the Project's emissions are primarily linked to energy generation at the Power Plant. Incorporating advanced cooling systems in the data center and utilizing waste heat from the Power Plant will help reduce these emissions. GHG emissions during the operational period will be in-compliance with the AAAQOG (GOA 2024a), as per the conditions in the EPEA approval.

Net Project GHG emissions are calculated consistent with equation 1 of the *Strategic Assessment of Climate Change* (GOC 2020) and summarized in Table 7.

Table 7 - Greenhouse gas emissions

Pollutant	GHG Emissions (tonne/year)	GHG Emission Intensity (kg/MWh)
CO ₂	114.751	556.358
CH ₄	0.052	0.250
N ₂ O	0.061	0.298
CO ₂ equivalent	114.864	556.906

Note:

kg/MWh – kilogram per megawatt hour

Air quality assessments completed in 2013 (Shell 2013) and 2018 (Stantec 2018b) for the previously approved projects on the site indicated that the maximum predicted concentrations for NO₂ associated with those projects alone and associated with those projects cumulatively with other neighbouring emission sources in the study area were both less than the AAAQOG (GOA 2024a). An updated air quality assessment will be conducted for this Project to confirm the 2018 results. Results will be included in the AUC Power Plant application.

5.10 Item 24 – Waste and emissions

The waste and emissions that are likely to be generated from the Project include:

- Air emissions, including:
 - Vehicle and equipment emissions during construction, operations and reclamation, in the form of nitrogen, CO₂, and water vapour, as well as trace amounts of carbon monoxide, NO_x, sulphur dioxides, volatile organic compounds, polycyclic aromatic hydrocarbons, and particulate matter (e.g., diesel combustion particulate matter and fugitive dust);
 - GHG emissions during operations (e.g., natural gas combustion), primarily in the form of CO₂, CH₄, and N₂O.
- Noise emissions, including:
 - Noise that will be generated during construction related to the use of heavy equipment to complete the construction of the Power Plant, construct the data center and complete final site grading;
 - Noise that will be generated during operations from the Power Plant, which will be compliant with AUC Rule 012 (AUC 2024) requirements for noise control.
- Liquid discharges, including:
 - Stormwater, sewage wastewater, industrial wastewater, and surface water runoff during construction and operations, which will be managed with a stormwater detention pond that is designed and operated in alignment with the EPEA approval.

- Solid waste, including:
 - Domestic waste and industrial garbage, recyclables (wood, paper, metal), waste oil, and hazardous waste (paint, solvents, batteries, fluorescent light bulbs, herbicides, etc.) during the construction and operation of the Project.

Cree Ative will manage construction and operation emissions, discharges and wastes to meet requirements of applicable guidelines, policies and regulations for all phases of the Project. An Environmental Protection Plan, required for the AUC Power Plant application, will address mitigations to potential waste and emissions.

6 References

6.1 Personal communication

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6.2 Literature and legislation cited

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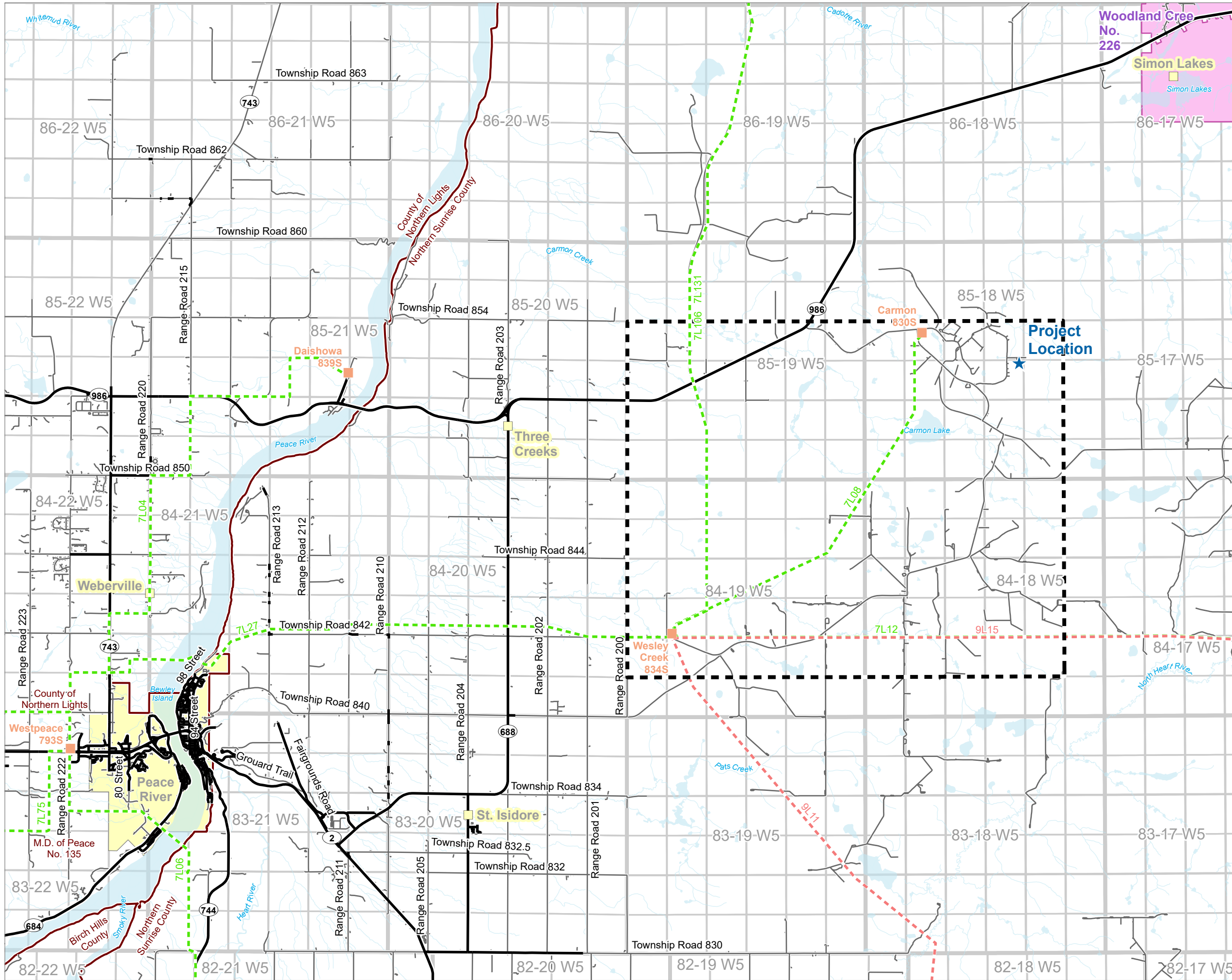
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Appendix A

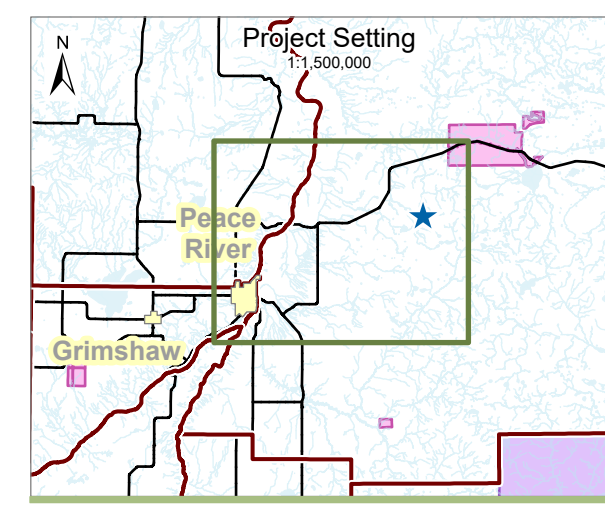
Project maps





Project Location

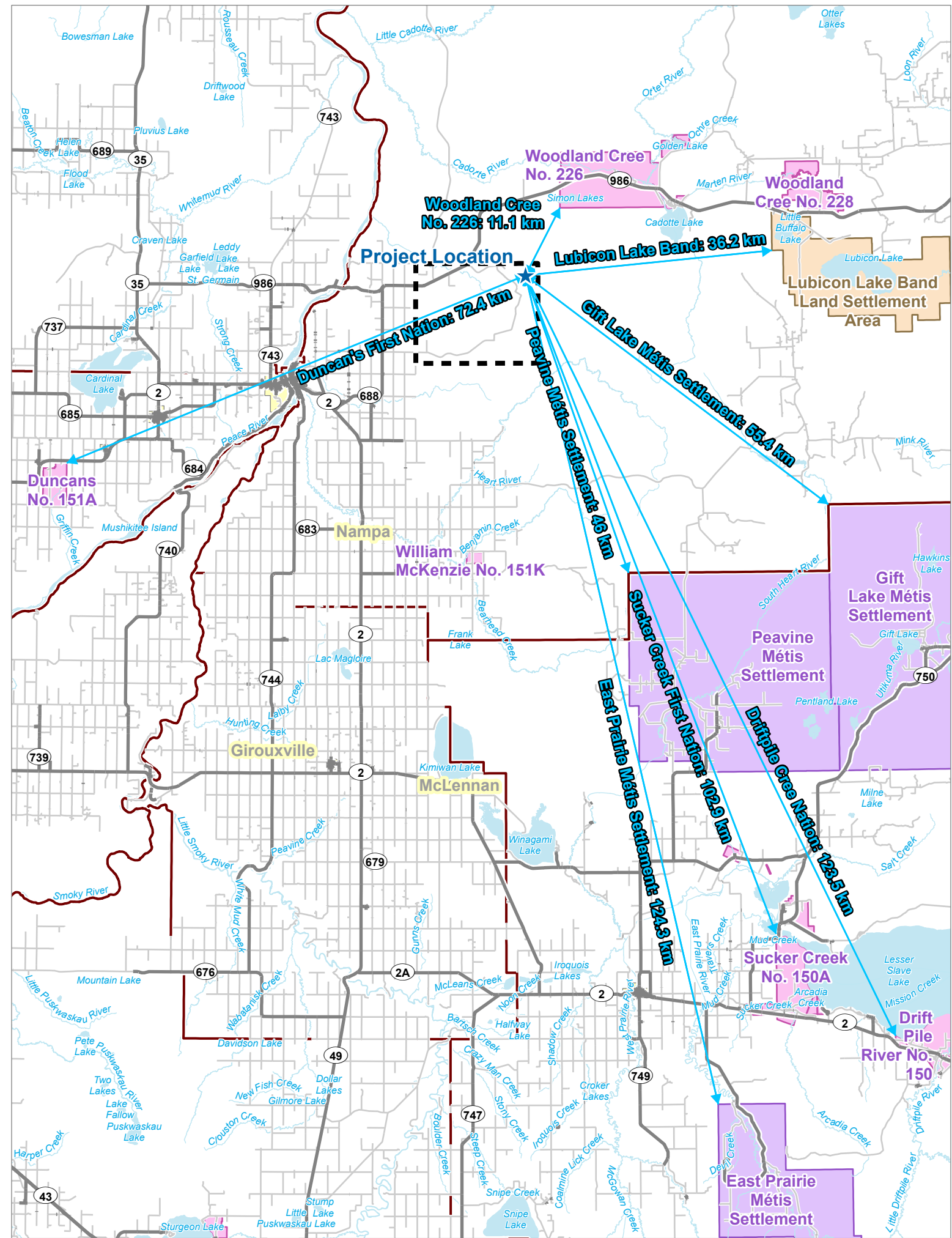
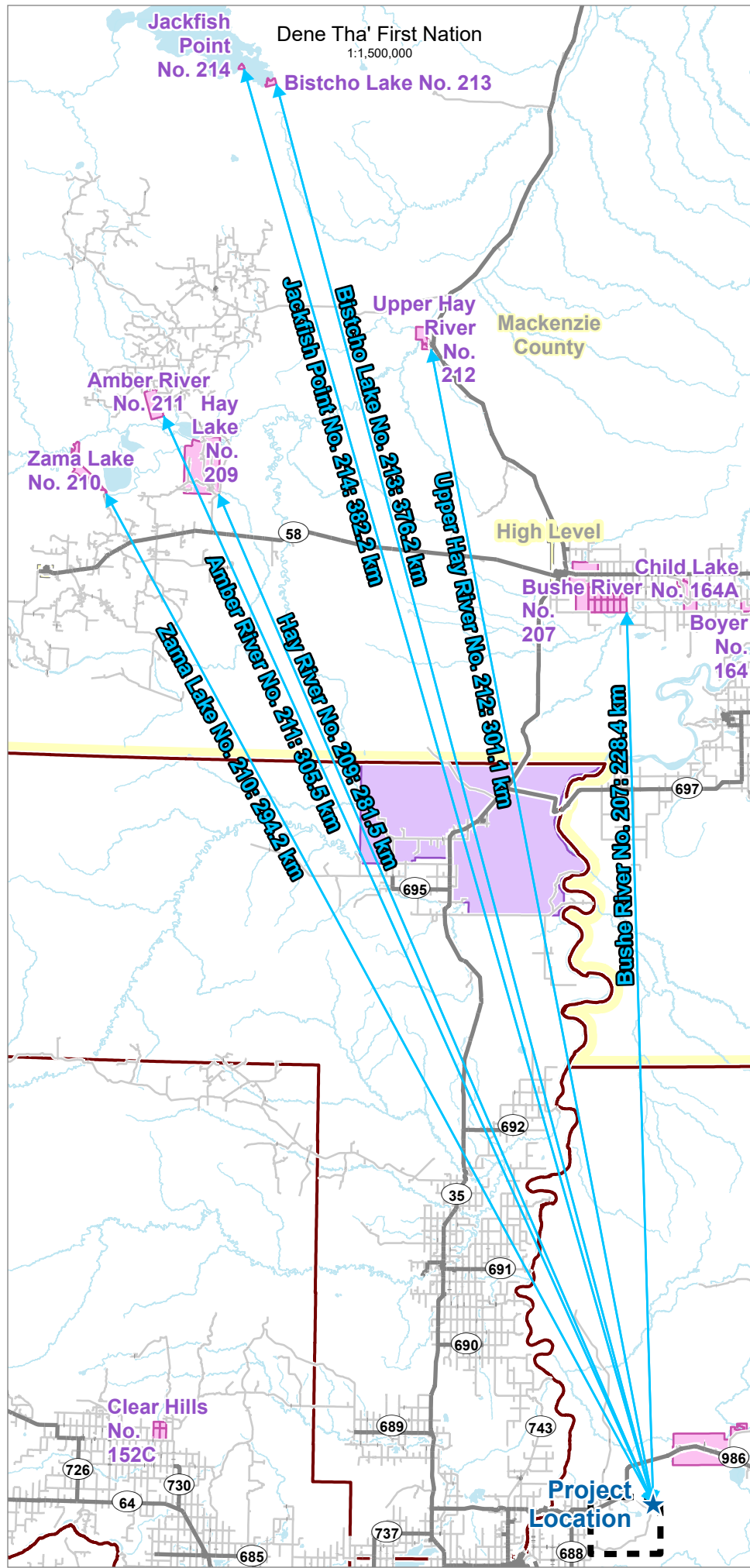
- Project Location
- Interconnection Study Area
- Existing Substation
- Existing 144 kV Transmission Line
- Existing 240 kV Transmission Line
- Paved Road
- Unpaved Road
- Watercourse
- Water Body
- Community
- First Nations Reserve
- Métis Settlement



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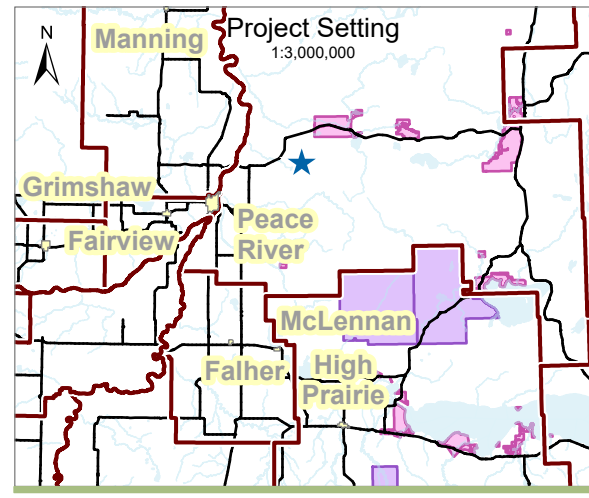
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Project Proximity to First Nation Reserves and Métis Settlements

- ★ Project Location
- ↔ Project Proximity Indicator
- ⬜ Interconnection Study Area
- Community
- Paved Road
- Unpaved Road
- ▭ Municipal District
- Watercourse
- Water Body
- First Nations Reserve
- Lubicon Lake Band Land Settlement Area
- Métis Settlement



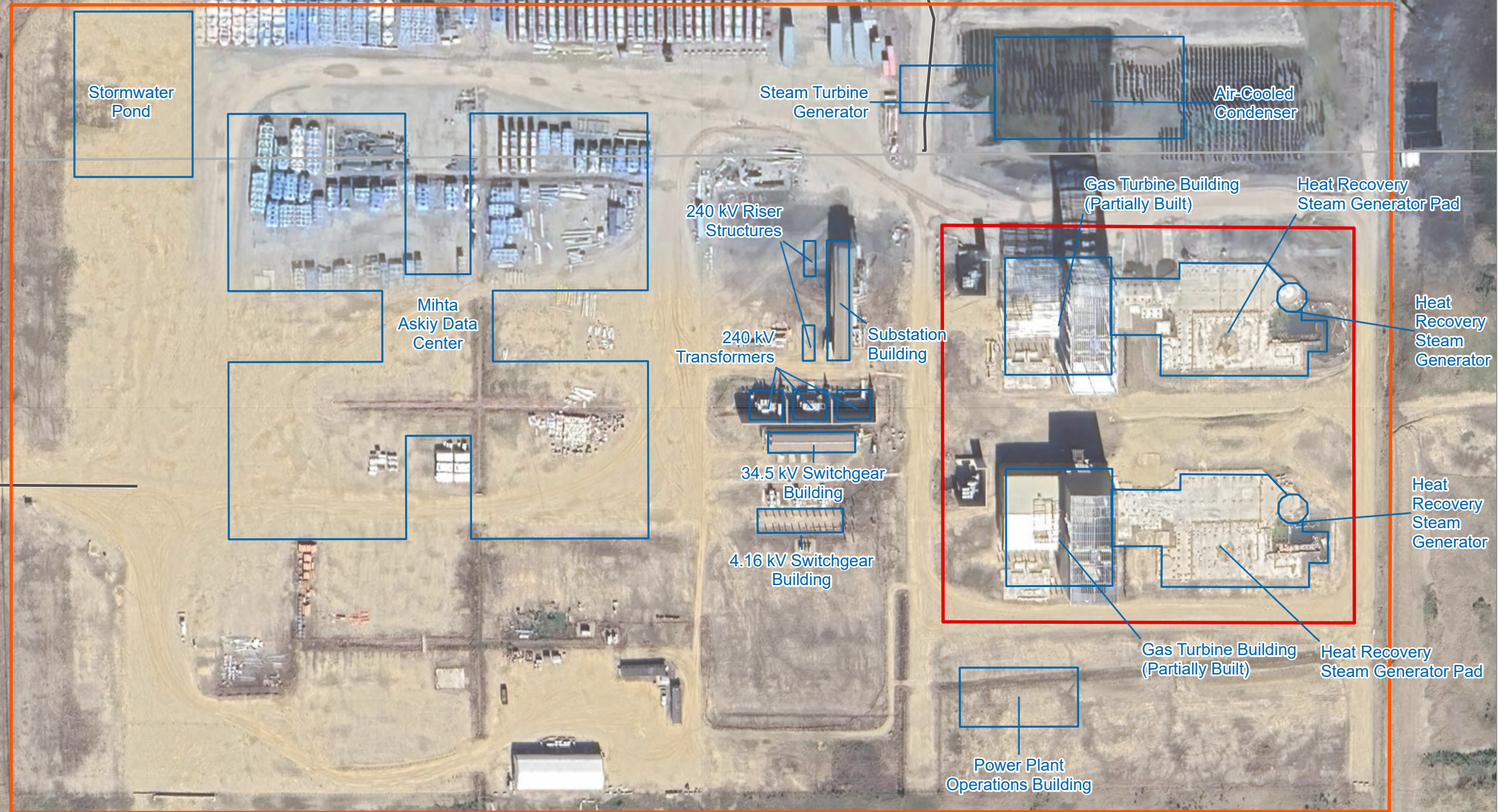
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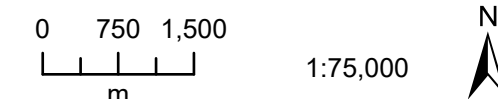
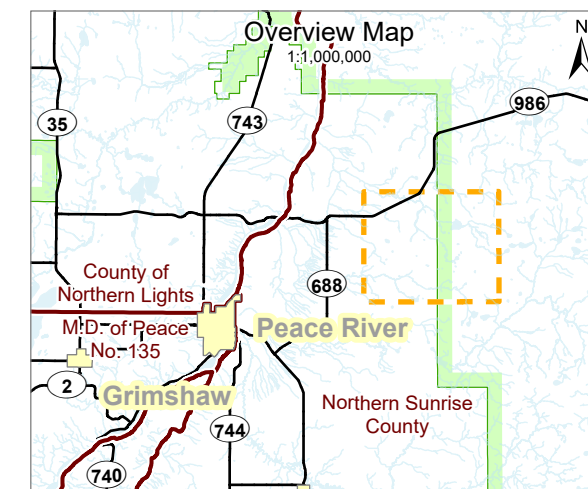
Site Plan

- Site Plan
- Power Plant Site Boundary
- Data Centre Site Boundary
- Unpaved Road

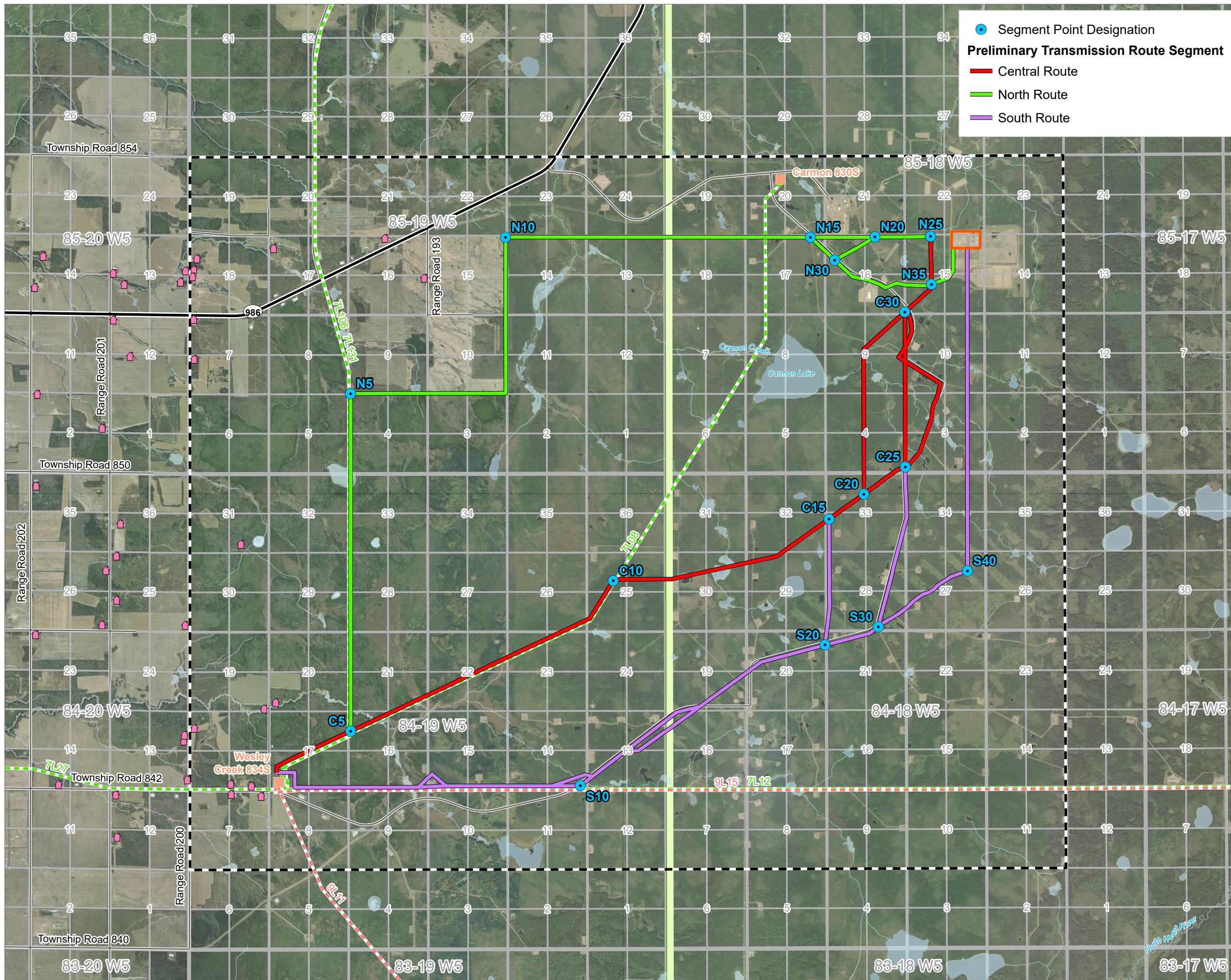


Preliminary Routes and Study Area

- Site Boundary
- Siting Study Area
- Existing Substation
- Residence Location
- Existing 144 kV Transmission Line
- Existing 240 kV Transmission Line
- Paved Road
- Unpaved Road
- Watercourse
- Community
- Green/White Area Boundary
- Water Body



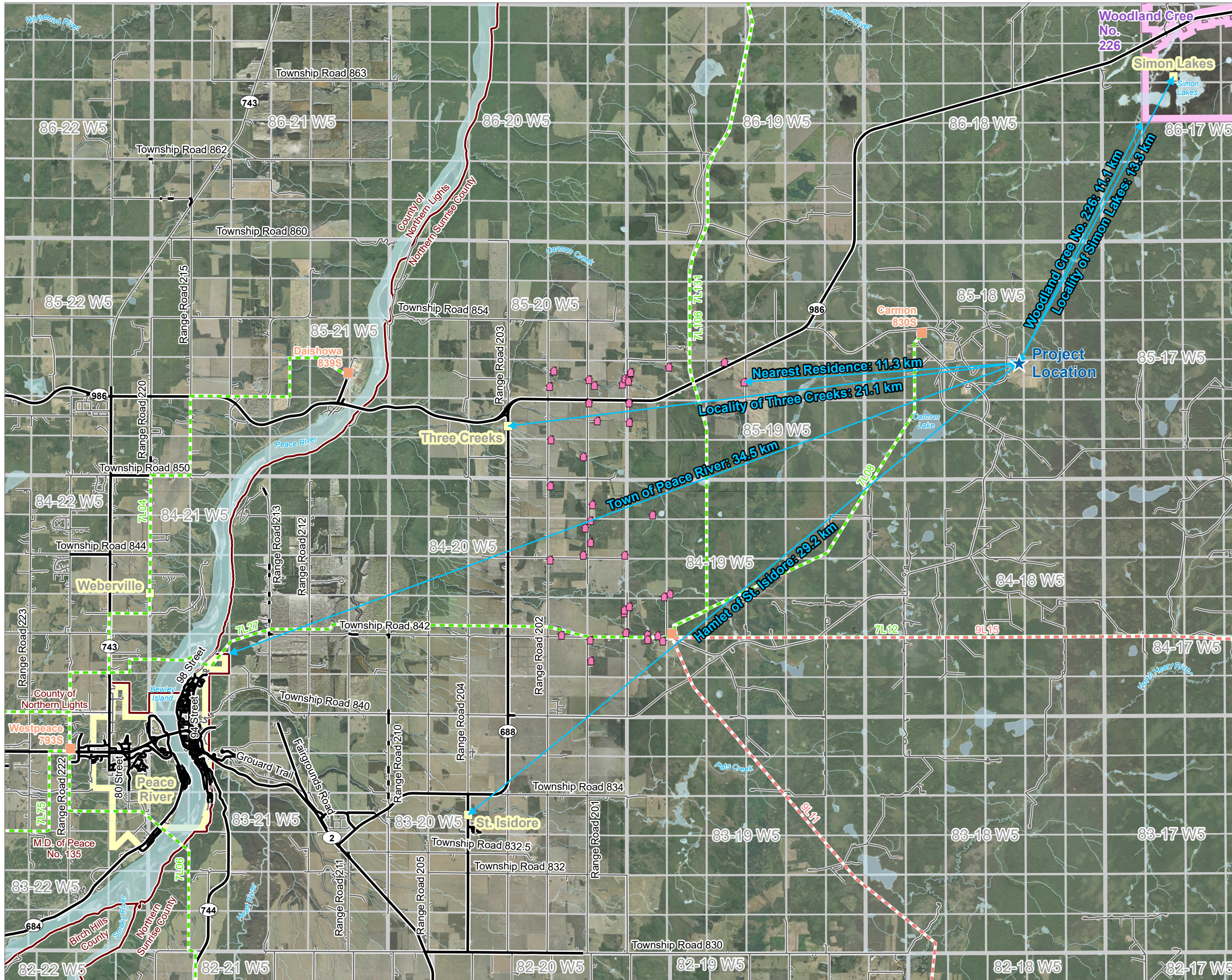
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Segment Point Designation

Preliminary Transmission Route Segment

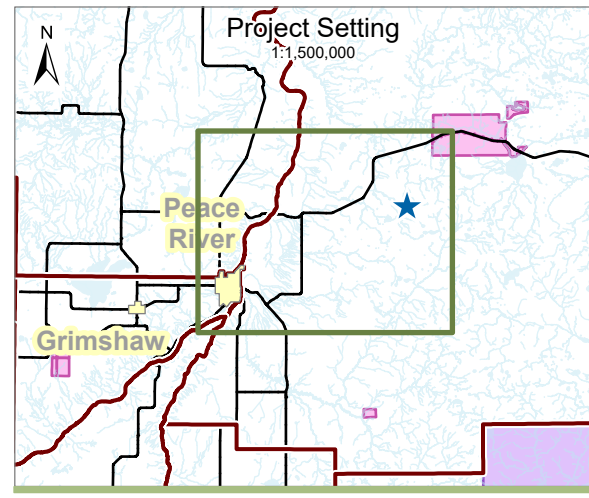
- Central Route
- North Route
- South Route



Project Proximities

- ★ Project Location
- 🏠 Residence Location
- 📍 Existing Substation
- Existing 144 kV Transmission Line
- Existing 240 kV Transmission Line
- Paved Road
- Unpaved Road
- Watercourse
- Community
- Métis Settlement
- Municipal District
- First Nations Reserve
- Water Body

Note: Nearest Federal Land (Wood Buffalo National Park) is 251.6 km NE




















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Environmental Overview

-  Data Centre Site Boundary
-  Power Plant Site Boundary
-  Interconnection Study Area
-  Existing Substation
-  Existing 144 kV Transmission Line
-  Existing 240 kV Transmission Line
-  Paved Road
-  Unpaved Road
-  Watercourse
-  Water Body
- Wildlife Sensitivity Range**
 -  Sharp-tailed Grouse Survey
 -  Trumpeter Swan Watercourse
 -  Trumpeter Swan Watercourse Buffer
- Wildlife Survey Locations and Features**
 -  Breeding Bird Survey Location
 -  Other Wildlife Feature
 -  Raptor Nest Location
 -  Sensitive Amphibian Feature

