

2.0 PROJECT LOCATION

2.1 INTRODUCTION

Chapter 2 provides a general geographical setting for the Project Proposal in terms of its location within the Yukon. It addresses the requirements in Section 3.0, Project Location, of the *Proponents Guide to Information Requirements for Executive Committee Project Proposal Submissions* (YESAB, 2005) by setting out information regarding geographic location, land tenure, traditional territory of Yukon First Nations, Yukon Land Use Planning Region and consistency with existing plans. It also outlines the broad Project Study Region for the Project Proposal assessment approach as more fully described in Chapter 3, as well as the Route Study Area used in discussions on route selection and alternatives in Chapter 7. The Project Site Area as defined in the Project Proposal is the smaller area generally within the Route Study Area which contains the proposed transmission line ROW (for the preferred route) and substation footprints.

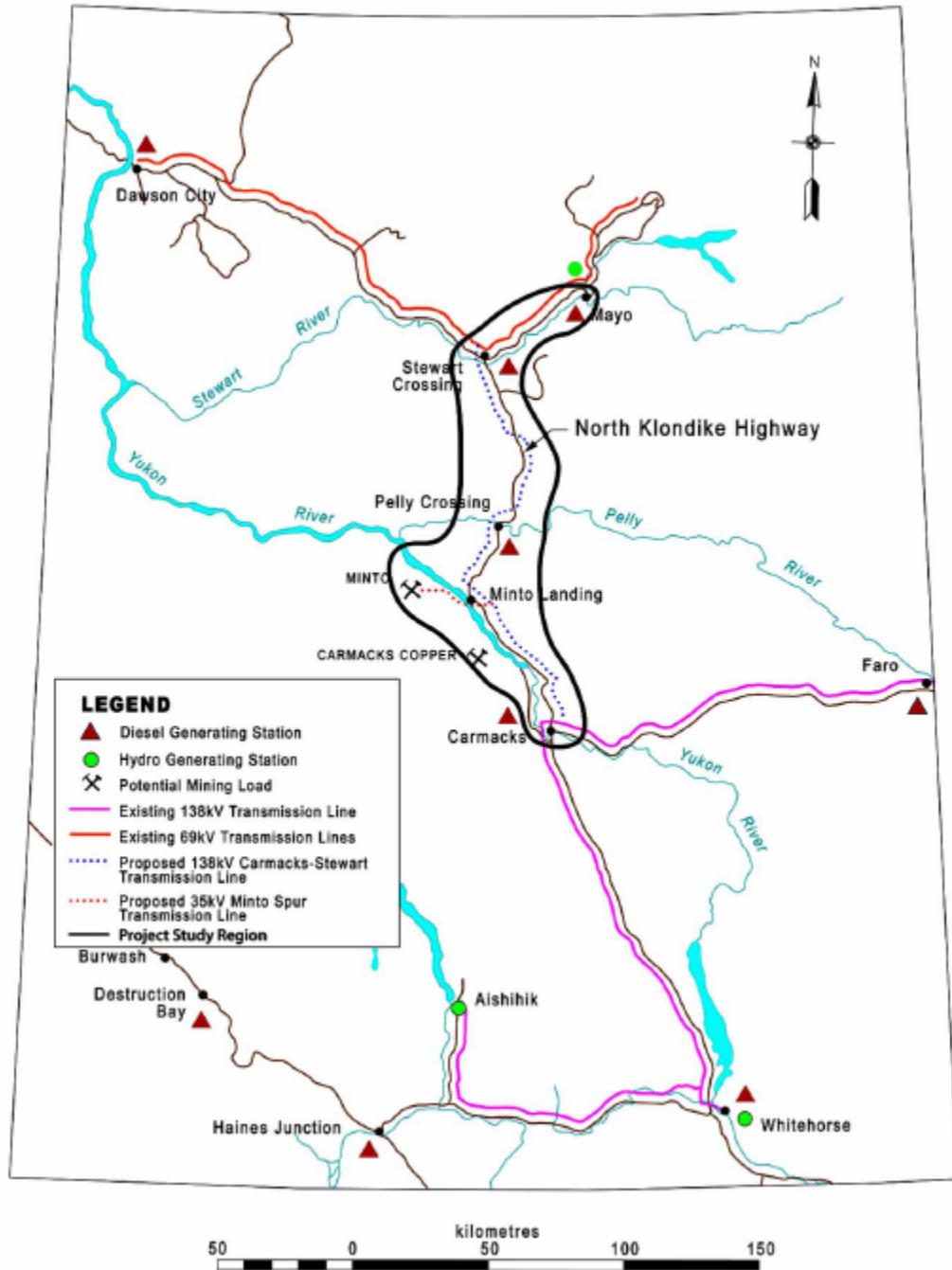
The Proponent cannot provide a legal land description of the Project components at this time. As is standard practice with transmission line developments, precise legal land descriptions for the final route generally will only become available after construction is complete and final easements have been agreed upon with the Crown for use of Crown land, any private property owners, and the respective First Nations for use of their settlement lands. Details on the process are outlined in each section below.

2.2 GEOGRAPHICAL LOCATION

The proposed Carmacks-Stewart/Minto Spur Transmission Project is located in the Yukon interior region. Based on the final route selected as described in Chapter 7, the 138 kV CS transmission line will be approximately 172 km in length, starting at a new substation adjacent to the Carmacks Airport and 138 kV WAF transmission line at the southern end, and terminating at the existing Stewart Crossing substation at the northern end. The 35 kV MS transmission line is approximately 27 km in length, starting at a new substation east of the Klondike Highway in the vicinity of Minto Landing, and terminating at the Minto Mine site.

As reviewed in more detail in Chapter 3, the Project Study Region for the Project Proposal is that portion of the Northern Tutchone Planning Region, between Carmacks and Mayo that is generally in close proximity to the Klondike Highway and the existing access road from the Klondike Highway to the Minto Mine Site. This Project Study Region also falls within YESAB's Central District. A schematic of the Project Study Region is provided in Figure 2.2-1 below.

Figure 2.2-1
Proposed Carmacks-Stewart/Minto Spur Transmission Project Study Region



The Project Study Region used in focusing the collection of environmental and socio-economic baseline information found in Chapter 6 lies within the Boreal Cordillera Ecozone, which is generally characterized by rolling hills, uplands and plateaus separated by deep and broad U-shaped valleys. The Project Study Region is also within the Yukon River Major Drainage Area which encompasses approximately 66% of the

Yukon Territory and is its largest drainage area. Details on the drainage basin, topography and ecoregions are found in Chapter 6, Section 6.2.1. The Project Study Region includes the communities of Carmacks, Minto Landing, Pelly Crossing, Stewart Crossing and Mayo which are connected by Klondike Highway # 2 and Silver Trail Highway # 11.

As indicated in Chapter 1, Section 1.3, preliminary studies resulted in a 500 metre wide route study area for the CS project route generally located along the Klondike Highway, and including several alternatives. In May 2006, a MOU was concluded between the Proponent and the three NTFNs which outlined support for the CS project, generally located within this 500 metre wide route study area and the MS development generally located along the Minto Mine access road. As reviewed in Chapter 3, the overall Route Study Area as defined on this basis was the focus of the public consultation and route selection process outlined in Chapters 4 and 7 respectively.

Upon completion of the route selection process, an approximate 100 metre wide corridor was selected to visually describe through GIS mapping the preferred route location for the CS and MS transmission lines for regulatory review. This corridor is discussed in Section 2.4 below. Within this corridor, the final Project Site Area will be defined after construction is complete and all easements with the Crown, NTFNs and any private property owners are finalized. This Project Site Area will include a 60m ROW for the CS development, a 30 m ROW for the MS development, and any added ROW or land acquired for substation sites.

Regarding the associated substations, the Project Proposal defines general proposed locations and approximate footprint sizes in Chapter 5, Project Description. Final precise dimensions and land tenure areas will be known for substations only after final engineering design is complete.

2.3 PROJECT COMPONENTS

The Project consists of the following components:

- The 138 kV CS transmission line from Carmacks to Stewart Crossing
- The 35 kV MS transmission line from the vicinity of Minto Landing to the Minto Mine Site
- New substations at Carmacks, Minto Landing, and Pelly Crossing
- Expansion of the existing substation north of Stewart Crossing
- Step-down transformer and switches at the Minto Mine Site substation

Approximate **Universal Transverse Mercator Coordinate System (UTM)** and Latitude/Longitude coordinates for the Project's substation components are provided in Table 2.3-1 below:

**Table 2.3-1
Project Substation UTM and Latitude/Longitude Coordinates**

Substation	UTM coordinates		Latitude	Longitude
	Easting	Northing		
Carmacks	437300	6887800	62°52'30"N	136°11'10"W
Minto Landing	405750	6942500	62°35'30"N	136°50'W
Minto Mine Site	385300	6945100	62°37'10"N	137°14'40" W
Pelly Crossing	419300	6967150	62°47'10"N	136°35'20"W
Stewart Crossing	414450	7030000	63°23'30"N	136°42'W

2.3.1 Legal Land Description

A detailed legal land description of the transmission lines and associated substations will be available after detailed engineering design, construction and easements are finalized with the Crown, private property owners and relevant NTFNs for their settlement lands. This will be filed with Yukon Government Lands at that time.

2.4 LAND TENURE

A land tenure search along the proposed Route Study Area is provided in Appendix 2A. The line primarily crosses Crown Land and First Nation Settlement Land and Yukon Energy has made every attempt to avoid crossing privately-owned lands.

Land Use Maps depicting land use along both the CS and MS Route Study Areas are provided in Appendix 2B, (Maps 2B-1 through 2B-7). Original 28 x 24 scale maps of these Land Use Maps are included on the Map Folio CD accompanying this submission.

Management and Protected Areas:

The Project is adjacent to the following management and protected areas (more detail is provided in Chapter 6, Section 6.3.2.1):

- Five Finger Rapids Recreation Site
- Lhutsaw Wetland Habitat Protection Area
- Jackfish Lake Park Reserve
- Ddhaw Ghro Habitat Protection Area

These areas are avoided by the Project's final ROW, due to the iterative route selection process outlined in Chapter 7, Evaluation of Route Alternatives.

Trapping and Outfitting Concession Areas:

The Project overlaps 12 trapping concessions: 10 concessions for the CS line and two for the MS line. More detailed information, including a trapping concession map, is found in Chapter 6, Section 6.3.2.1.

The Project overlaps three outfitting concessions: Trophy Stone Safaris, Mervyn's Yukon Outfitting, and Rogue River Outfitters Ltd. More detail including a map of outfitting concessions is found in Chapter 6, Section 6.3.2.2.

Mineral, Aggregate and Agricultural claims:

There are two known mining claims within the Route Study Area: Cash Resources has a coal exploration concession on the east side of Tantalus Butte which lies adjacent to the proposed CS transmission ROW, and Sherwood Copper Corporation owns and is developing the Minto Mine claims where the MS line crosses into and terminates. Western Copper holds numerous quartz claims and leases within the broad Project Study Region, extending from the Klondike Highway at McGregor Creek west to their proposed mine site along Williams Creek.

In addition to mining claims, aggregate materials are mined throughout the Project Study Region. The Yukon Government Department of Highways has 23 aggregate notations within the Project Study Region which include active quarry pits, stockpiles, reserves and maintenance yards. The Project is immediately adjacent to or will cross 7 of these gravel pits. Greater detail on mining and aggregate materials can be found in Chapter 6, Section 6.3.2.2

There is one parcel of agricultural land which the CS transmission line is proposed to cross, running along the west side of the Klondike Highway immediately south of McGregor Creek. This AG Application # 746 has recently been approved by Yukon Government but is pending due to a challenge by LSCFN. The CS line also passes in the vicinity of three other agricultural parcels: two applications north of McGregor Creek and one Agreement for Sale at McCabe Creek. In these cases the CS transmission line is on the opposite side of the Klondike Highway. More details on the use of this land are found in Chapter 6, Section 6.3.2.2.

2.5 TRADITIONAL TERRITORY

The proposed Project crosses the traditional territory of three First Nations: Little Salmon/Carmacks, Selkirk and Nacho Nyak Dun. Figure 2.5-1 shows the traditional territory of these First Nations in a regional setting.

Figure 2.5-1
First Nation Traditional Territory



In addition to crossing the traditional territory of these First Nations, the route selection process (as outlined in Chapter 7) results in the proposed transmission lines crossing approximately 74 kms of settlement land belonging to Little Salmon/Carmacks and Selkirk First Nations. Table 2.5-1 outlines the approximate amount of settlement land by line segment:

**Table 2.5-1
Settlement Lands Crossed or Adjacent to the Project Site Area**

Transmission Line Segment	On Settlement Lands (approximate km)	Adjacent to Settlement Lands¹ (approximate km)
Carmacks to McGregor Creek	LSCFN: 2.5 km (north of Tatchun Creek)	LSCFN: 5 km
McGregor Creek to Pelly Crossing substation	SFN: 6.9 km (McCabe Creek to proposed Minto Landing substation) SFN: 14.8 km (north of EMR block to end of SFN R10B block)	SFN: 25.8 km
Minto Spur line – Minto Landing to Mine Site	SFN: 1.8 km from substation to Yukon River crossing SFN: 23.2 km from west bank of Yukon River to mine site	
Pelly Crossing substation to Stewart Crossing substation	SFN: 25.2 km	SFN: 9.1 km NNDFN: 15.3 km
TOTAL LINE	74.4 kms	55.2 km

The overall estimated area of settlement land which will be required for the CS transmission ROW will be:

- LSCFN: 2.5 km x 60 m width = 15 hectares
- SFN: 46.9 km x 60 m width = 281.4 hectares

The overall estimated area of settlement land which will be required for the MS transmission line ROW will be 75 hectares, using a 30 m wide ROW.

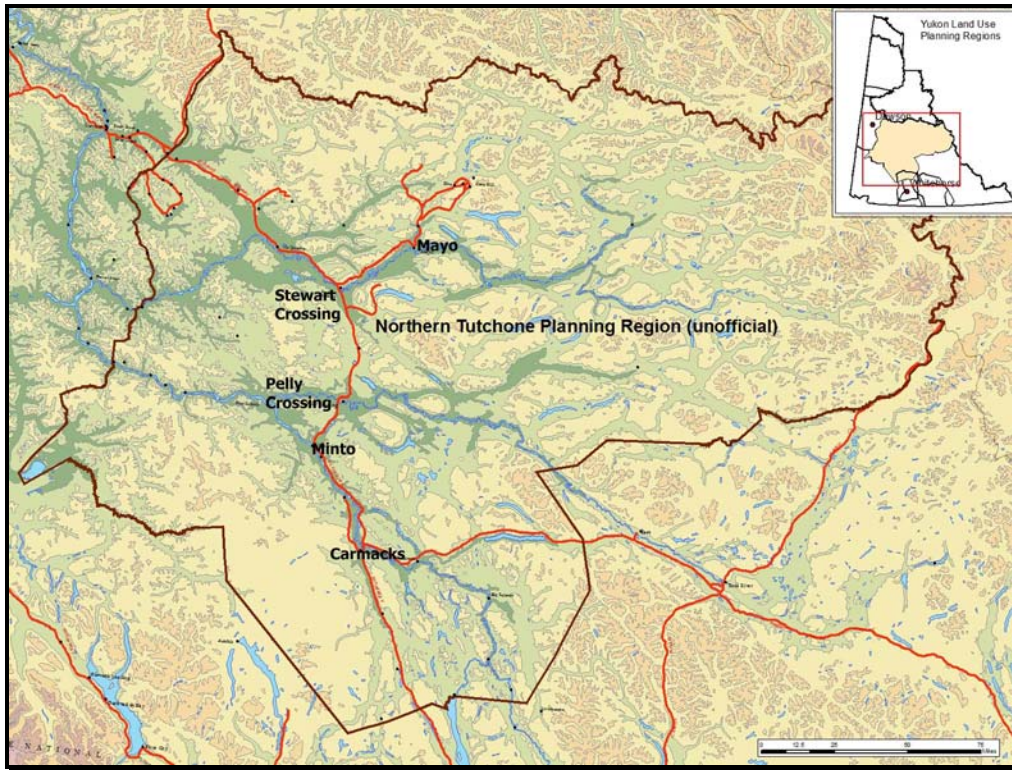
In addition, the CS line will run adjacent to another 55 km of settlement land generally located on the side of the Klondike Highway opposite from the proposed route.

¹ "Adjacent to settlement lands" refers to the line running on the opposite side of the highway to settlement land blocks which are in addition to lands that have been crossed by the CS line. The MS line is wholly in SFN settlement lands other than in the vicinity of the Minto Landing substation.

2.6 YUKON LAND USE PLANNING REGION

The proposed Project falls within the Northern Tutchone Planning Region as illustrated in Figure 2.6-1. No regional Land Use Plans have been developed for this region at this time.

Figure 2.6-1
Yukon Planning Regions



(Source: www.plan yukon.ca)

2.7 CONSISTENCY WITH OTHER PLANS

The proponent has reviewed publicly available fish and wildlife and community plans in the Project Study Region in order to ensure the proposed transmission lines and substations are consistent with these plans.

2.7.1 Current Land Use and Management Plans

There are currently no land use plans in place in the Project Study Region; however, there are several management plans that are applicable. These plans include Community-Based Fish and Wildlife Management Plans for the Project Study Region First Nations, the Village of Carmacks: **Official Community Plan (OCP)**, the draft community plan for Minto Landing, the Yukon Wildland Fire Management Program, along with the Ddhaw Ghro Habitat Protection Area Draft Management Plan and

newly released Łútsāw Wetland Habitat Protection Area Management Plan. A summary of the plans considered in relation to the Project is provided in Table 2.7-1.

**Table 2.7-1
Land Use and Management Plans that Relate to the Project**

Plan	General Description	Objectives Related To The Project
Community-Based Fish and Wildlife Management Plan: Little Salmon/Carmacks First Nation Traditional Territory, 2004-2009	Consists of a five year work plan to address local concerns about fish and wildlife. Consultation identified multiple concerns, solutions and commitments.	Items pertaining to the Project are largely located in the Carmacks to Minto area and include Yukon River Habitat Protection, the Tatchun Caribou Herd, making corridors less attractive to wildlife, and fire management strategies.
Community-Based Fish and Wildlife Management Plan: Nacho Nyak Dun Traditional Territory, 2002-2007	This is the third such plan for the community. Community consultation allowed for concerns about fish and wildlife to be identified for the entire traditional territory of the First Nation of NND. Multiple concerns, solutions and commitments were identified.	Moose populations and habitat, caribou, harvesting of moose and caribou, and access are all concerns identified in the plan.
SFN Draft Land Use Plan for Hetsutthat (Minto) ²	This plan is in the formative stages and identifies various R-blocks for purposes such as wood cutting and cabin/house building, along with areas that are inappropriate for activities such as wood cutting (especially commercial) and agriculture.	Areas of interest for wood cutting (or disallowing wood cutting) are most relevant for the Minto Spur line. The plans for Minto Landing do not give any details on a transmission line or substation.
Village of Carmacks: Official Community Plan, 2004.	The Official Community Plan (OCP) is a roadmap of the community's vision for the future. The plan addresses community development and land use, economic development, social development, education and public safety, parks, recreation and open spaces, environmental protection and stewardship, and infrastructure and	The provisions of the OCP that are most applicable to the transmission line include environmental protection and stewardship objectives along with future land use plans.

² The draft plans for the Minto Landing area are still in the early stages. Since the original draft plans were produced in 2002, no further details for the area have evolved.

Plan	General Description	Objectives Related To The Project
	municipal services.	
Yukon Wildland Fire Management Program	The program aims to protect Yukoners, their communities and resources by enforcing the Forest Protection Act and suppressing wildfire from a priority-based approach which places human life, community value and firefighter safety above all else.	The Project will fall within two management zones: a Full Fire Management Zone, and a Strategic Fire Management Zone. Suppression activities will vary depending on the type of management zone.
Łútsáw Wetland Habitat Protection Area Management Plan	The plan delineates the management recommendations for various land uses in the habitat protection area. It includes the maintenance of both the natural and cultural environment. The Plan was approved in May 2006 by SFN and YG.	The plan seeks to protect wildlife habitat, as well as recognize the importance of the area to the Selkirk First Nation. It contains recommendations specific to linear developments such as transmission lines.
Ddhaw Ghro Habitat Protection Area Draft Management Plan	The Draft Management Plan was released in May 2006 and is currently under public review by the Yukon government, SFN, and NND. The vision, objectives and recommendations of the management plan envision the area so that it is left as is, i.e. it remains in its natural state.	Since Ddhaw Ghro exists outside of the Route Study Area, the items pertaining to the Project are limited to the aim of protecting key habitat outside the current Ddhaw Ghro boundaries. This includes protection of the Ethel Lake caribou herd winter range, riparian areas and wetlands, and raptor nesting sites.

Aside from the plans listed, it should be noted that the Community-Based Fish and Wildlife Management Plan: Selkirk First Nation Traditional Territory is currently in the process of being edited and accepted by the First Nation. According to a member of the Selkirk Renewable Resources Council (personal communication, July 12, 2006) there are no items of concern in regards to the Project in the Management Plan that have not otherwise been stated in the community consultation process.

2.7.2 Project Consistency with Other Plans

The Project took into consideration the objectives of various management plans that are currently in place. Objectives identified in the various documents were also items frequently identified in the public consultation and involvement process, and thus were dually considered in the selection of the route.

Appendix 2C provides a summary of the objectives of the applicable management plans, identifies whether the objective was acknowledged during public consultation, and describes how the Project is consistent with each plan objective. The following provides a summary description showing that the Project is in line with the objectives and strategies of these management plans.

The LSCFN and NND Community-Based Fish and Wildlife Management Plans, along with the Łútsăw Habitat Protection Area Management Plan and Ddhaw Ghro Habitat Protection Area Draft Management Plan, are largely focused on the protection and enhancement of wildlife. Further, the Łútsăw Habitat Protection Area Management Plan contains recommendations for linear projects. Concerns related to the objectives of these plans were also frequently identified in consultation with First Nations, government agencies, and other publics such as the local Renewable Resources Councils. Routing of the transmission line was sensitive to the various wildlife concerns contained within these management plans.

The environmental protection and stewardship objectives of the Village of Carmacks OCP aim to protect environmentally sensitive areas from the encroachment of incompatible land uses. This will be accomplished by establishing buffers and setbacks and by adopting other management practices to protect the area's integrity, productivity, and resilience. The OCP also aims to protect residents from incompatible land uses and potential sources of pollution such as noise, odour, dust and other potential sources of nuisance or public safety risk. Given that the new substation for the Project will be located near the airport, while the remainder of the transmission line will avoid the community, the Project is consistent with the development plans stated in the OCP.

Each of the communities concerned has recent experience with forest fires, and consequently the consultation process identified concerns regarding the effect that a transmission line would have on potential future fires. The areas of Carmacks and Stewart Crossing have a higher priority fire management designation, while fire suppression activities near the communities of Pelly Crossing and Minto Landing will be limited according to Wildland Fire Analysis. Given that a transmission line has the ability to act as a firebreak in the case of a wildfire, the Project helps to enhance the objectives of the Wildland Fire Management Program.