



BC EAO EAC Application – Tenas Project

Section 13.0 Management Plans

Chapter 10 Minesite Traffic Control Plan

May 2022

VERSION 1.0

Submitted to:	BC Environmental Assessment Office
Pursuant to:	<i>Environmental Assessment Act</i> , S.B.C. 2002, c.43
Submitted by:	Telkwa Coal Limited Suite 1410 – 409 Granville Street Vancouver, BC V6C 1T2

Tenas Project

Section 13.0 Management Plans Chapter 10 Minesite Traffic Control Plan

TABLE OF CONTENTS

Table of Contents	i
List of Figures	iii
List of Tables	iii
List of Appendices.....	iii
Abbreviations and Acronyms	iv
Units of Measure	v
Executive Summary.....	vi
1. Introduction	1
2. Purpose and Objectives	1
3. Scope and Scale.....	1
4. Compliance Obligations	2
4.1 Regulatory Requirements	2
4.2 Standard Practices and Procedures (SPPs).....	4
5. Relationship to Other Management Plans.....	5
6. Details of the Minesite Traffic Control Plan (MTCP).....	6
6.1 Site Description and Access	6
6.1.1 Tenas Access Corridor (TAC).....	6
6.1.2 Interaction with Public Roads	3
6.1.3 Access Control.....	3
6.1.4 Radio Control.....	5
6.2 Onsite Haul and Service Roads	5
6.2.1 Rules	5
6.2.1.1 Minesite Haul and Service Roads	5
6.2.1.2 Vehicle Inspections	6
6.2.1.3 Left-hand Drive.....	6
6.2.1.4 Seat Belts.....	6
6.2.1.5 Intersections and Vehicle Priorities	6
6.2.1.6 Speed Limits	7
6.2.1.7 Changes in Traffic Patterns	7
6.2.1.8 Following Distances and Passing	7

6.2.1.9	Special Road Usage by Heavy Equipment.....	7
6.2.1.10	Radio-controlled Roads	8
6.2.2	Parking	8
6.2.3	Vehicle Lights	8
6.2.4	Back-up Alarms.....	8
6.2.5	Moving Vehicles.....	8
6.2.6	Electric Trailing Cable, and Overhead Lines	8
6.2.7	Licensing	9
6.2.8	Smoking.....	9
6.2.9	Maximum Grades.....	9
6.2.10	Night Operations	9
6.2.11	Facility Protection.....	9
7.	Monitoring	10
7.1	Performance Objectives	10
8.	Reporting	11
8.1	General Reporting	11
8.2	Compliance Reporting	11
8.3	Internal Reporting	11
9.	Roles and Responsibilities	12
9.1	Mine Manager	12
9.2	Health, Safety, and Human Resources Superintendent.....	12
9.3	Environmental Coordinator	12
9.4	Visitors and Contractors	12
9.5	Supervisors	13
9.6	Employees	13
9.7	All.....	13
10.	Communication	14
10.1	Training and Awareness	14
10.2	Employee Training.....	14
10.3	Contractor and Visitor Training	14
11.	Evaluation and Adaptive Management	15
11.1	Evaluation	15
11.2	Adaptive Management.....	15
11.3	Continual Improvement.....	15
12.	Change Management.....	16
13.	Conclusion	16
14.	References	17

LIST OF FIGURES

Figure 6.1-1:	Existing Access to the Tenas Project Area	7
Figure 6.1-2:	Tenas Access Corridor (TAC) relevant features	1
Figure 6.1-3:	Maximum axel loading requirements for the Tenas Access Corridor (TAC)	2
Figure 6.1-4:	Interaction with public roads and trails and access gate locations.....	4

LIST OF TABLES

Table 4.1-1:	Legislation and Guidelines Relevant to the Minesite Traffic Control Plan (MTCP).....	2
Table 5-1:	Management Plans with Relationship to the Minesite Traffic Control Plan (MTCP).....	5
Table 6.1-1:	Proposed Radio Frequencies for the Tenas Project	5
Table 7.1-1:	Performance Objectives	10

LIST OF APPENDICES

Appendix 13.10-A	Project Summary Report - Tenas Access Corridor Feasibility Design
Appendix 13.10-B	Minesite Traffic Control Plan LOM Figures
Appendix 13.10-C	Runaway Ramp Additional Details
Appendix 13.10-D	Vehicle Operator Checklist
Appendix 13.10-E	Wildlife Observation Form
Appendix 13.10-F	Incident Notification and Incident Investigation Forms

ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
AQMP	Air Quality Management Plan (S13.0-C2)
BC	British Columbia
BC FLNRORD	British Columbia Forest, Land, Natural Resource Operations and Rural Development
BC MECCS	British Columbia Ministry of Environment and Climate Change Strategy
BC MEMLI	British Columbia Ministry of Energy, Mines and Low Carbon Innovation
BC MEMPR	British Columbia Ministry of Energy, Mines and Petroleum Resources
BC MOF	British Columbia Ministry of Forests
BC MOTI	British Columbia Ministry of Transportation and Infrastructure
C	Chapter
CEMP	Construction Environmental Management Plan (S13.0-C4)
CMSTHP	Chemicals and Materials, Storage, Transfer, and Handling Plan (S13.0-C4)
Code	Health, Safety and Reclamation Code in British Columbia (British Columbia Ministry of Energy, Mines and Low Carbon Innovation (BC MEMLI 2021)
EAC	Environmental Assessment Certificate
EMP	Explosives Management Plan (S13.0-C6)
EMS	Environmental Management System (S13.0-C1)
FMSCP	Fuel Management and Spill Control Plan (S13.0-C7)
FSR	Forest Service Road
JAIR	Joint Application Information Requirements for <i>Mines Act</i> and <i>Environmental Management Act</i> Permits (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] and British Columbia Ministry of Environment and Climate Change Strategy [BC MECCS] 2019).
MA/EMA	<i>Mines Act</i> , RSBC 1996, c 293 and <i>Environmental Management Act</i> , SBC 2003, c 53
MERP	Mine Emergency Response Plan (S13.0-C9)
MOC	Management of Change
MTCP	Minesite Traffic Control Plan (S13.0-C10)
MWMP	Minesite Water Management Plan (S13.0-C11)
OHSP	Occupational Health and Safety Program (S13.0-C13)
PAMP	Public Access Management Plan (S13.0-C14)
Project	Tenas Project
RCP	Reclamation and Closure Plan (S13.0-C15)
ROW	right-of-way
S	Section
SEMP	Socio-economic Management Plan (S13.0-C16)

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
SEPSCP	Surface Erosion Prevention and Sediment Control Plan (S13.0-C17)
SPP	Standard Practices and Procedures
TAC	Tenas Access Corridor
TCL	Telkwa Coal Limited
TCRC	Telkwa Coalmine Recreation Camp
WMP	Wildlife Management Plan (S13.0-C21)
WMPRE	Waste Management Plan for Refuse and Emissions (WMPRE) (S13.0-C20)

UNITS OF MEASURE

Abbreviation or Acronym	Long Form of Abbreviation or Acronym
%	percent
kg	kilogram
km/hr	kilometres per hour
m	metre

EXECUTIVE SUMMARY

The Minesite Traffic Control Plan (MTCP) has an overall objective of protecting the public, employees, contractors, and visitors through the safe management of Minesite traffic and safe use of the roads during all Project phases.

The MTCP describes the traffic management processes and procedures in place at the Tenas Project (Project), including use of the Tenas Access Corridor (TAC) which provides access to the Minesite, and its associated haul and service roads within the Minesite. The MTCP addresses maximum allowable speeds, rules for passing and parking, “stop” and “yield” locations, priority rules for various vehicles, rules for night operation, maximum operating grades, emergency runaway measures, and shoulder barrier prescriptions (berms). Rules of the road will be monitored and adherence to them will be required by all employees, contractors, and the public.

With respect to the TAC, the MTCP provides access restrictions, load restrictions, radio frequencies to be used by local traffic, and route maps showing key locations or turns for access roads to the Minesite.

Management of traffic and ensuring the safety of those who access the Project is important and critical to the safety of the public, visitors, employees, and contractors. Through implementation of this MTCP and relevant Standard Policies and Procedures (SPPs), TCL will ensure safe roads and road users.

1. INTRODUCTION

The Minesite Traffic Management Plan (MTCP) describes the traffic management processes and procedures in place at the Tenas Project (Project). This MTCP will remain in place during the Construction, Operation, Decommissioning and Reclamation, and Post-closure phases of the Project, and will be subject to ongoing management review and revisions as required. The MTCP will mitigate potential safety issues related to Minesite traffic and the use of the Tenas Access Corridor (TAC) that is used to access the Project.

2. PURPOSE AND OBJECTIVES

The objective of this MTCP is to protect the public, employees, contractors, and visitors through the safe management of Minesite traffic and safe use of the TAC during all Project phases. This MTCP is just one (1) portion of the overarching **Environmental Management System (Section [S] 13.0-Chapter [C] 6) (EMS)** for the Project.

3. SCOPE AND SCALE

The scope of this MTCP is defined within the Project Area, and includes all activities, as well as any operation and/or construction activities that are directly associated with the Project and exist outside of the Project Area. The MTCP is in effect during all Project phases and ceases to be in force at the final closure of the Minesite as approved by the regulatory authorities.

4. COMPLIANCE OBLIGATIONS

This subsection will summarize the relevant compliance approvals and requirements that the MTCP needs to address.

4.1 Regulatory Requirements

Several legislative requirements apply to Minesite traffic access and control. A short list of these and their major applicable components are provided in **Table 4.1-1** below.

Table 4.1-1: Legislation and Guidelines Relevant to the Minesite Traffic Control Plan (MTCP)

Legislation, Regulations, and Guidelines	Applicable Information
<i>Environmental Management Act</i> , SBC 2003, c 53 (Government of British Columbia [GovBC] 2003) Spill Reporting Regulation BC Reg 187/2017 (GovBC 2017)	Provide rules regarding spills and spill reporting
<i>Fisheries Act</i> , 1985, c F-14 (Government of Canada [GovCan] 1985)	Prohibits serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery, including the permanent destruction of habitat
<i>Forest and Range Practices Act</i> , SBC 2002, c 69 (GovBC 2002)	Regulates unauthorized road construction or modification and unauthorized cutting or damage to Crown timber (trespass)
Forest Planning and Practices Regulation, BC Reg 14/2004 (GovBC 2004)	Part 5 – Roads describes regulatory requirements for roads, culverts, and bridges on resource roads
Health, Safety and Reclamation Code for Mines in British Columbia (British Columbia Ministry of Energy, Mines and Low Carbon Innovation [BC MEMLI 2021])	Regulates mines from construction to closure
<i>Mines Act</i> , RSBC 1996, c 293 (GovBC 1996b)	Regulates permitting of roads on mineral claims registered to the proponent
<i>Mining Right of Way Act</i> , RSBC 1996, c 294 (GovBC 1996c)	Describes the necessary approvals for constructing a right-of-way (ROW) across private and public land
<i>Motor Vehicle Act</i> , RSBC 1996, c 318 (GovBC 1996d)	Regulates speed limits and other traffic controls on a highway
Off-Road Vehicle Regulation, BC Reg 193/2015 (GovBC 2015)	Provides information for registration and safe and responsible use of off highway recreational vehicles.
Provincial Forest Use Regulation, BC Reg. 176/95 (GovBC 1995) of the <i>Forest Practices Code of British Columbia Act</i> , RSBC 1996, c 159 (GovBC 1996a)	Regulates the issuance of special use permits for roads on land not registered under a mineral claim to the proponent
Resource Road Safety Guide (British Columbia Ministry of Forest, Land, Natural Resource Operations and Rural Development [BC FLNRORD] 2015)	Describes what to expect on resource roads and describes rules of the road

Legislation, Regulations, and Guidelines	Applicable Information
<i>Species at Risk Act</i> , SC 2002, c 29 (GovCan 2002)	Regulates road and traffic effects on wildlife and requires mitigation of potential effects on specific wildlife species
<i>Transportation of Dangerous Goods Act</i> , SC 1992, c 34 (GovCan 1992)	Regulates the transportation of dangerous goods and provides additional powers to municipal councils to regulate the transportation of dangerous goods within their boundaries
Warning: Read Before Driving Resource Roads (British Columbia Ministry of Transportation and Infrastructure [BC MOTI] n.d.) -	Safety precautions described at: https://www.tranbc.ca/2013/08/30/warning-read-before-driving-resource-roads/
<i>Water Sustainability Act</i> , B.C. Reg. 36/2016 (GovBC 2016)	Provides guidelines for the managing the diversion and use of water resources
<i>Wildlife Act</i> , RSBC 1996, c 488 (GovBC 1996e)	Regulates road and traffic effects on wildlife and requires mitigation of potential effects on specific wildlife species

The Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits (British Columbia Ministry of Energy, Mines and Petroleum Resources [BC MEMPR] and British Columbia Ministry of Environment and Climate Change Strategy [BC MECCS] 2019) (JAIR) provides direction on the objectives for a MTCP in Section 9.13 of the JAIR.

Joint *Mines Act*, RSBC 1996, c 293 and *Environmental Management Act*, SBC 2003, c 53 (*MA/EMA*) permit applications will provide a general description of a MTCP, which in turn includes information on the list below.

This document is designed to fulfill these objectives as well as those for the Environmental Assessment Certificate (EAC) Application. The MTCP includes:

- ▶ radio frequencies;
- ▶ maximum allowable speeds for the vehicles in use;
- ▶ rules for passing;
- ▶ “stop” and “yield” locations;
- ▶ priority rules for various vehicles;
- ▶ rules for night operation;
- ▶ maximum operating grades;
- ▶ emergency run-off protection;
- ▶ shoulder barriers;
- ▶ access roads to the Minesite, including:
 - ▶ access restrictions;
 - ▶ load restrictions (if any);
 - ▶ radio frequencies to be used by local traffic;
 - ▶ route maps showing key locations or turns for access roads to the Minesite; and
- ▶ other relevant information, as required by British Columbia Ministry of Energy, Mines and Low Carbon Innovation (BC MEMLI).

4.2 Standard Practices and Procedures (SPPs)

All Telkwa Coal Limited (TCL) Standard Practices and Procedures (SPPs) will conform to the British Columbia Health, Safety and Reclamation Code for Mines in British Columbia (BC MEMLI 2021) (Code).

In addition to regulatory requirements, the Project will implement SPPs that meet or exceed the required laws and regulations.

5. RELATIONSHIP TO OTHER MANAGEMENT PLANS

The Project is governed by an **EMS**, an overarching management plan strategy comprising a set of processes and practices which enable TCL to manage its environmental and safety performance in a holistic way, within an integrated framework. While the management plans are part of the **EMS**, the **EMS** is not just a collection of management plans.

In addition to the overall guidance of the **EMS**, this MTCP has a relationship with other management plans that also present mitigation measures. Those management plans and their relationship to this MTCP are listed in **Table 5-1**.

Table 5-1: Management Plans with Relationship to the Minesite Traffic Control Plan (MTCP)

Management Plans	Nature of Relationship
Environmental Management System (S13.0-C1) (EMS)	All management plans are part of the EMS
Air Quality Management Plan (S13.0-C2) (AQMP)	Management of dust, vibration, and noise from traffic is managed by the AQMP.
Chemicals and Materials, Storage, Transfer, and Handling Plan (S13.0-C3) (CMSTHP)	Management of the transport of chemicals, materials and spill controls/reporting associated with Minesite traffic.
Construction Environmental Management Plan (S13.0-C4) (CEMP)	Manage construction works with respect to roadways
Explosives Management Plan (S13.0-C6) (EMP)	Manage blasting and road transport of products to blast pattern
Fuel Management and Spill Control Plan (S13.0-C7) (FMSCP)	Management of fuel and spills associated with Minesite traffic.
Mine Emergency Response Plan (S13.0-C9) (MERP)	Any emergency that occurs on the Tenas Project (Project) haul and service roads, or the Tenas Access Corridor (TAC).
Minesite Water Management Plan (S13.0-C11) (MWMP)	Manage water runoff from roads used by Minesite traffic.
Occupational Health and Safety Program (S13.0-C13) (OHSP)	Manages Minesite Incidents and Dangerous Occurrences
Public Access Management Plan (S13.0-C14) (PAMP)	Manage public access to and beyond the Minesite using approved routing and TCL escort protocols.
Reclamation and Closure Plan (S13.0-C15) (RCP)	Manage road reclamation
Surface Erosion Prevention and Sediment Control Plan (S13.0-C17) (SEPSCP)	Manage prevention of road erosion. Mitigation methods and maintenance activities identified in the SEPSCP will help to control potential runoff and erosion.
Waste Management Plan for Refuse and Emissions (S13.0-C20) (WMPRE)	Manage waste collection and transfers on Minesite roads
Wildlife Management Plan (S13.0-C21) (WMP)	Manage wildlife access and mortality on roads. One (1) of the main performance objectives for the Minesite Traffic Control Plan (MTCP) is to minimize wildlife interactions and following access rules will help to achieve this.

6. DETAILS OF THE MINESITE TRAFFIC CONTROL PLAN (MTCP)

6.1 Site Description and Access

This Project is located between the Goathorn Creek to the east and Tenas Creek to the west and north. Existing access to the Project is from the north utilizing the Telkwa Coalmine Road which connects to Forest Service Roads (FSRs) within the Project Area. However, this access currently requires users to ford the Goathorn Creek as the bridge was washed out over 10 years ago. The Telkwa Coalmine Road in turn connects to Highway 16 to the north and from here one can travel to Smithers and/or Houston. The Telkwa Coalmine Road also connects to the Lawson Road to the east as well via Birch Road. **Figure 6.1-1** illustrates current access to the Project Area.

6.1.1 Tenas Access Corridor (TAC)

The TAC connects the Project's Minesite to Rail Infrastructure and intersects both the Lawson and Telkwa Coalmine roads. The TAC is fully described in **Appendix 13.10-A Project Summary Report - Tenas Bypass Road Feasibility Design**. The TAC and its relevant features are provided on **Figure 6.1-2**.

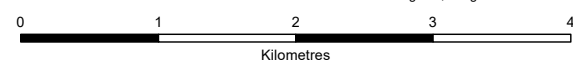
The TAC allows the Project to be accessed without using the Telkwa Coalmine Road except in an emergency where the TAC is not accessible and during a portion of Construction Phase while the TAC is under construction. The TAC is one of the first Project Components that will be constructed. A bridge over Goathorn Creek will be re-established to allow for access to Project Components during the Construction, Operation, Decommissioning and Reclamation, and Post-closure phases of the Project that are on the west side Goathorn Creek. This bridge is a divided structure where the public can use one (1) side independently of the Project's activities. The maximum vehicle load for TAC is a gross vehicle weight of 110 tonnes with the axel loading provided by **Figure 6.1-3**.



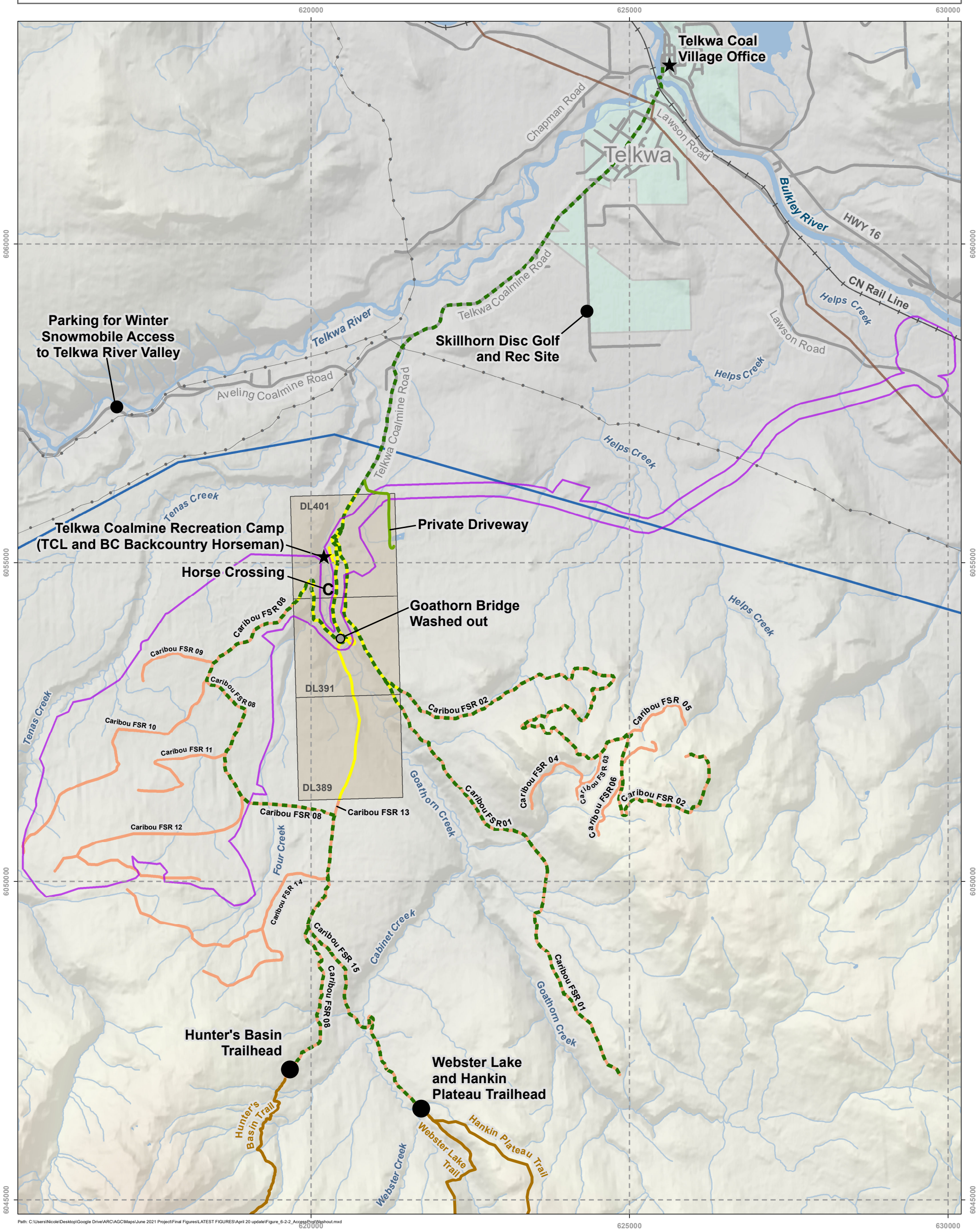
Figure 6.1-1

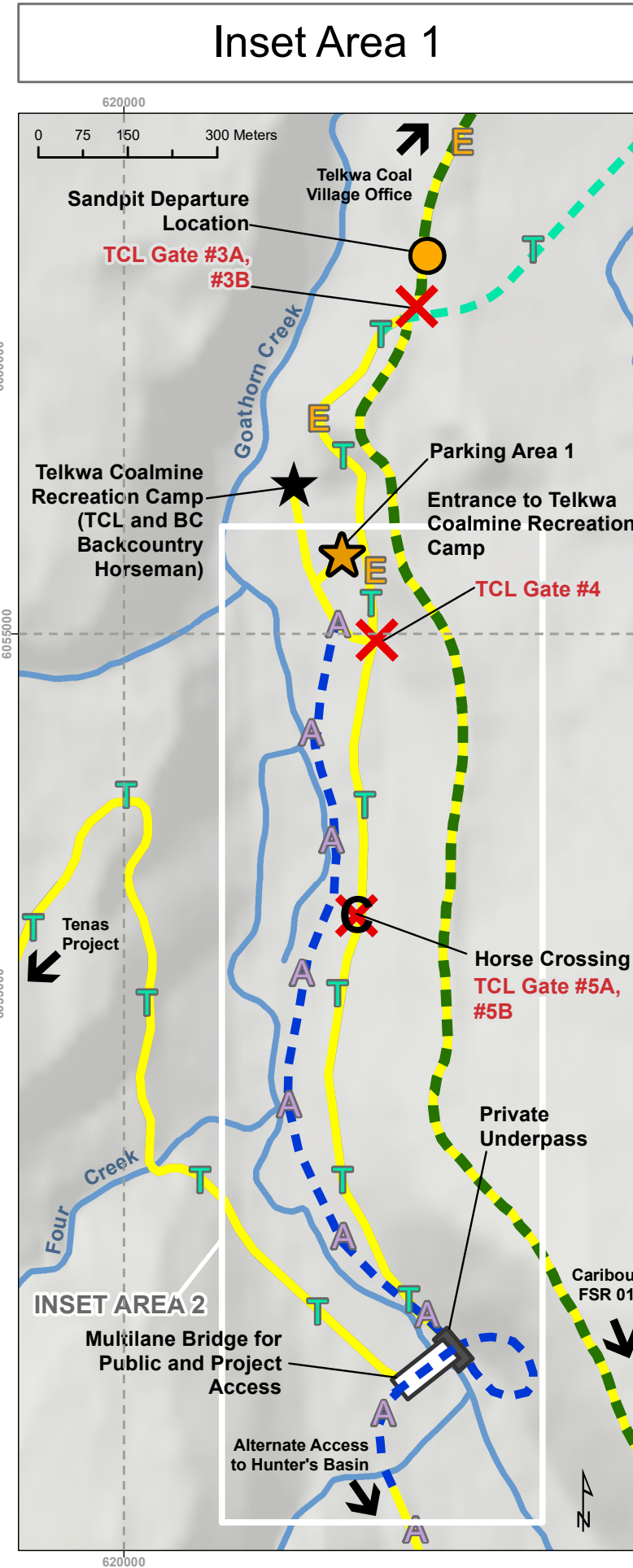
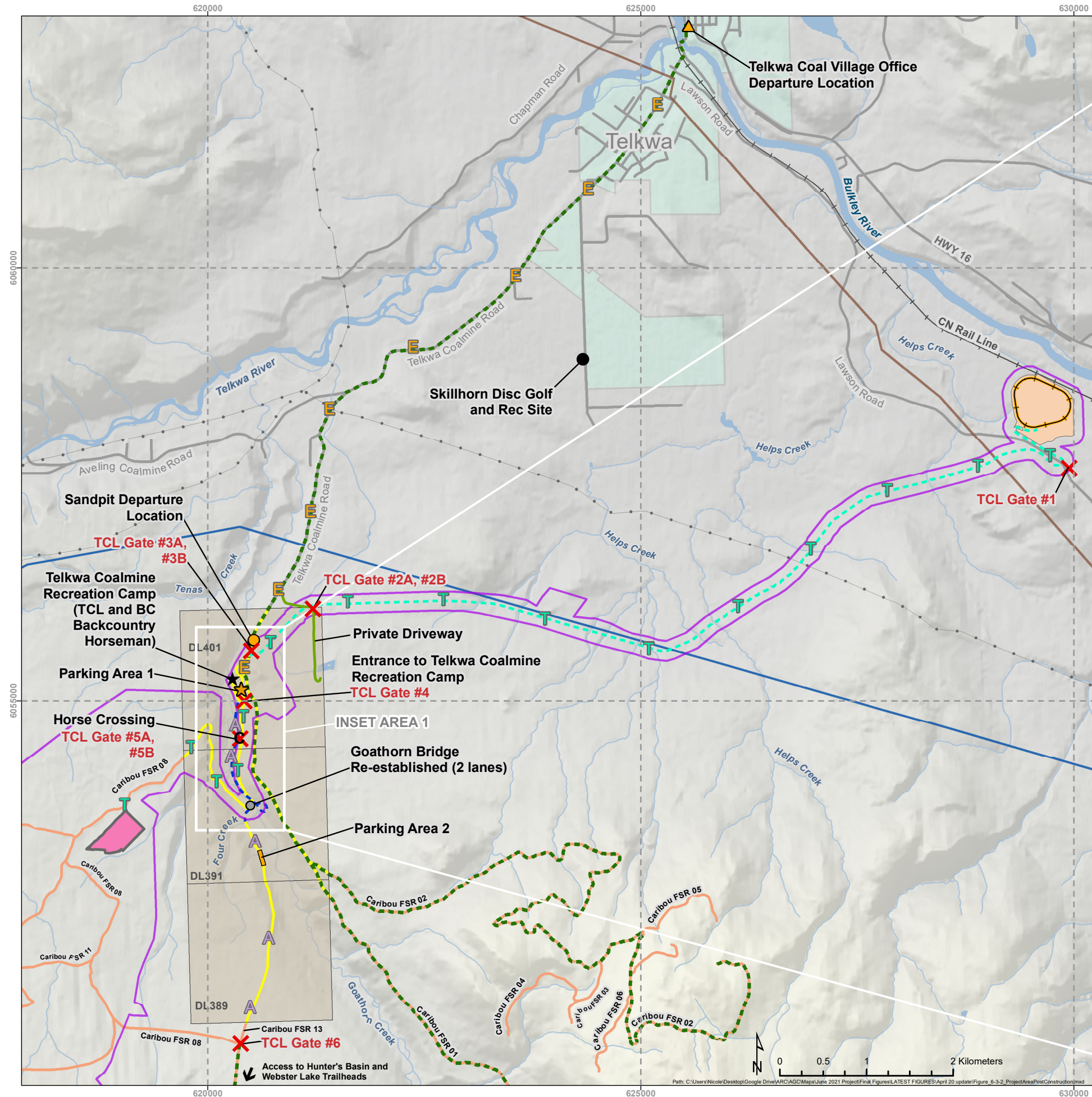
Present public access to Project Area after the Goathorn Creek Bridge was washed out

NAD 83 UTM Zone 9N
Date Created: April 22 2022
Last updated: April 22 2022
Version: 1
Created by NB
Base Data: Geogratias, Allegiance Coal 2022



- | | | | | | |
|---|------------------------------|---|-------------------|---|------------------------------|
|  | Project Area |  | CN Rail Line |  | Waterbody |
|  | 138 kV Transmission Line |  | Hiking Trail |  | Telkwa Village Boundary |
|  | 500 kV Transmission Line |  | Watercourse |  | Forest Service Roads |
|  | Pacific Natural Gas Pipeline |  | TCL Private Roads |  | Provincial Roads or Highways |
|  | Present Public Access | | | | |





- Project Area
- Mine Infrastructure Complex (Coal Processing Plant, Administration and Mine Dry Building, Maintenance Facility)
- X Access Gates
- Pacific Natural Gas Pipeline
- CN Rail Line
- Present Public Access
- Proposed Private Access Road (TAC)
- Proposed Private Recreational Access Road
- TCL Private Roads
- Forest Service Roads
- Provincial Roads or Highways
- Waterbody
- Telkwa Village Boundary
- Rail Loop
- Rail Infrastructure
- Hiking Trail
- Watercourse
- 138 kV Transmission Line
- 500 kV Transmission Line
- E Under TCL Escort
- A Alternative Public Access
- T Telkwa Coal Access for Processed Coal Haul, Supplies, and Personnel

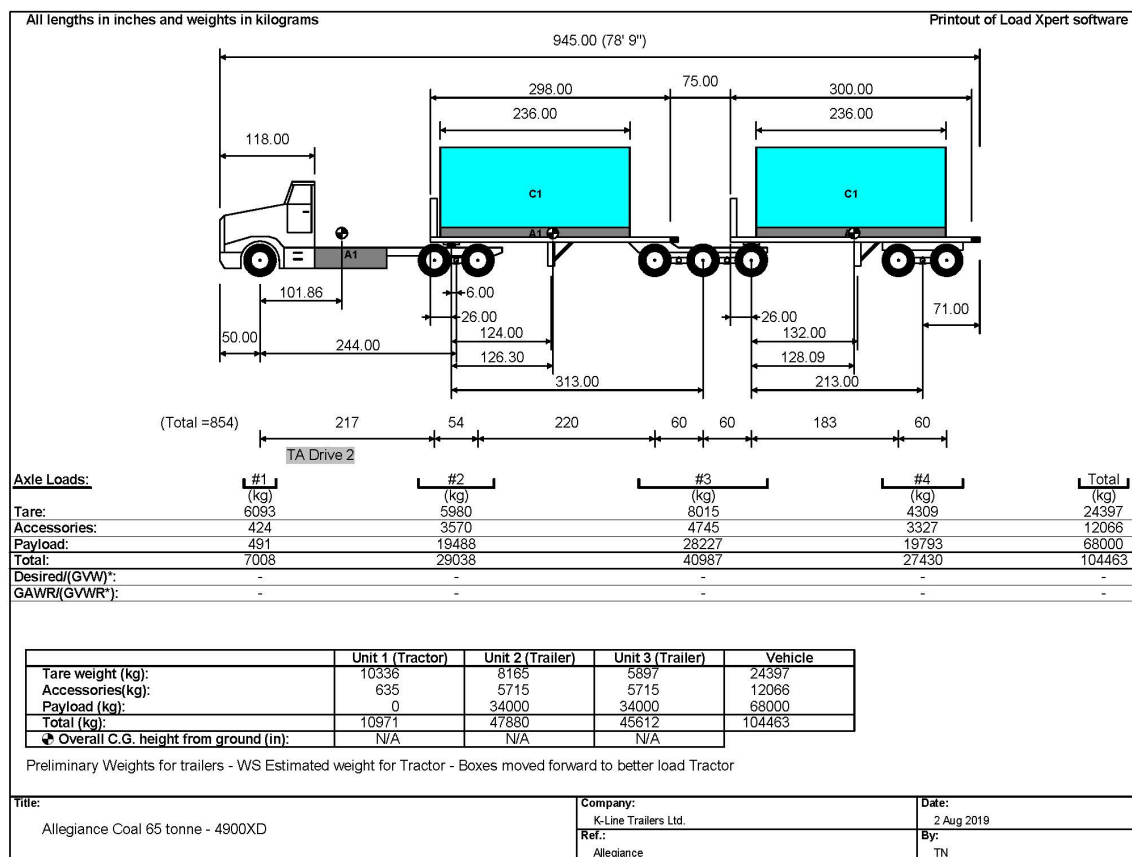


Figure 6.1-3: Maximum axel loading requirements for the Tenas Access Corridor (TAC)

The TAC is not defined as a haul road under the British Columbia (BC) *Mines Act*, RSBC 1996, c 293 (Government of British Columbia [GovBC] 1996b), but follows the Forest Road Engineering Guidebook (British Columbia Ministry of Forests [BC MOF] 2002) road guidelines and has been designed with the following features:

- ▶ single lane road with a running surface of 6 metre (m);
- ▶ passing lanes with a running surface of 10 m incorporated throughout the TAC;
- ▶ single lane bridges with a running surface of 4.877 m;
- ▶ road railings and/or other form of barrier wherever there is a vertical drop of greater than 3 m; their height and length will match British Columbia Ministry of Transportation and Infrastructure (BC MOTI) requirements;
- ▶ radio controlled;
- ▶ vehicles leaving the Minesite will always have the right-of-way (ROW) on the TAC except for when emergency vehicles need to access the site;
- ▶ left hand drive;
- ▶ not be accessible by the public unless under escort by a TCL employee or authorized by TCL; and
- ▶ appropriate signage as required by BC MOTI.

Further, details on the TAC is provided in **S1.0 Overview of Project Proponent Description** and in the figures provided in **Appendix 13.10-B Minesite Traffic Control Plan Figures**.

The TAC will be used by authorized vehicles, including buses, vans, Minesite vehicles, explosive transport trucks, fuel and lubricant delivery vehicles, and miscellaneous supply delivery vehicles. The TAC is used by super B-train processed coal haulage trucks to transport processed coal between the CPP and Rail Infrastructure. Off-road trucks will not travel on the TAC unless placed on a transport truck. Off-road equipment such as dozers, graders and loaders will be used on the TAC for maintenance functions and be accompanied by traffic control measures if required.

6.1.2 Interaction with Public Roads and Access Control

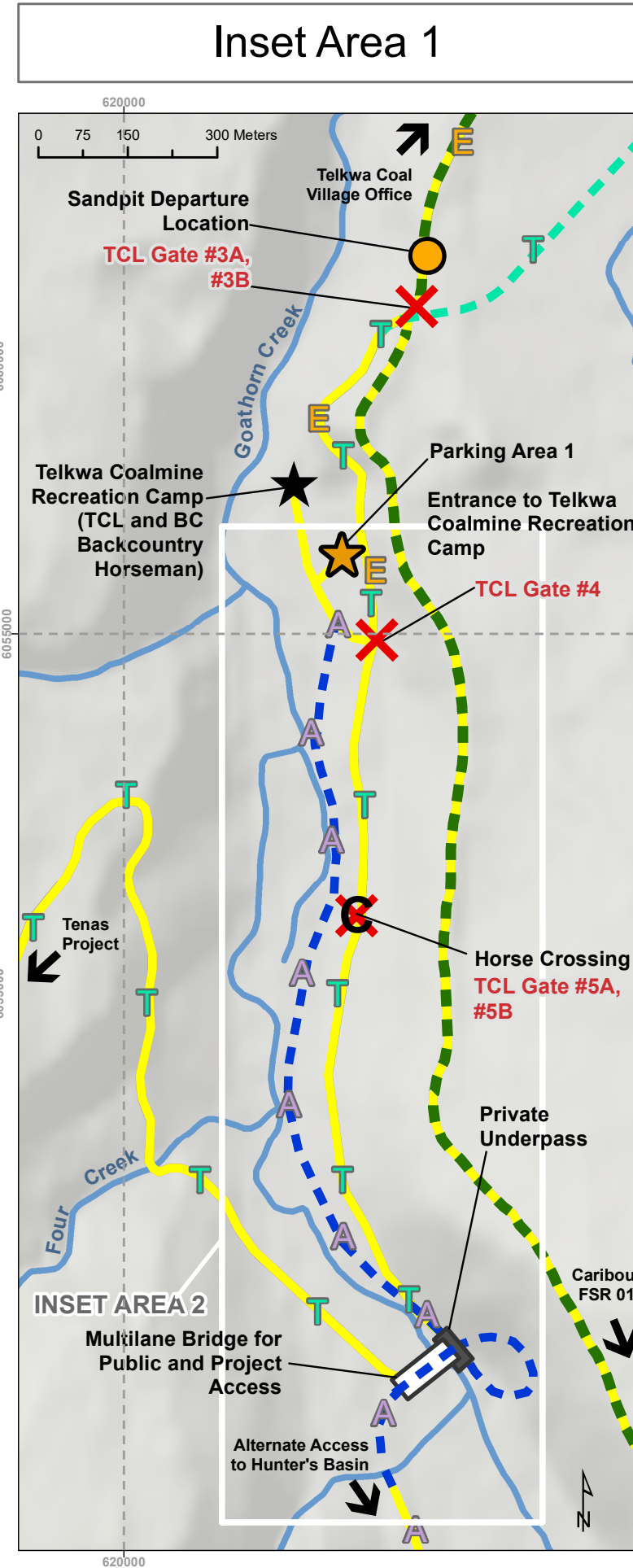
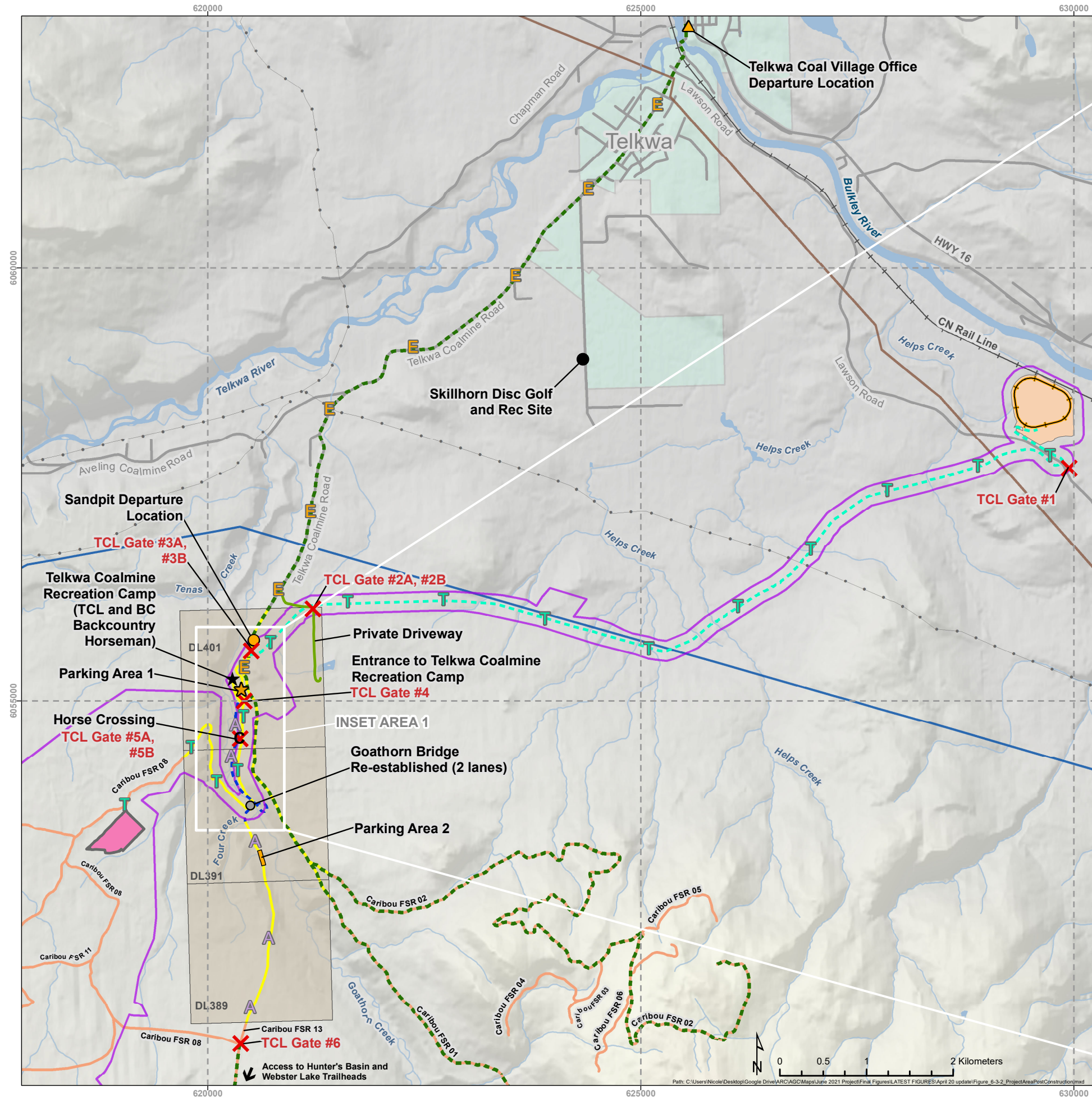
There are six (6) locations where the TAC and public, forestry service roads or TCL private roads interact. They are listed below and illustrated by **Figure 6.1-4 below**:

1. Lawson Road intersection;
2. Private driveway intersection for property PID014-958-881;
3. TCL private road intersection;
4. Entrance to the Telkwa Coalmine Recreation Camp;
5. An existing horse crossing; and
6. Caribou FSR 08 and Caribou FSR 13.

The Telkwa Coalmine Road will be used by the public to gain access to or beyond the Project via the procedures provided in the **Public Access Management Plan (S13.0-14) (PAMP)**. In summary, to protect the safety of the public and Minesite employees and contractors, general access to the Project Area will be restricted to approved employees and contractors only past the locations illustrated on **Figure 6.1-4**. The public will be allowed beyond and within the Project Area following the procedures provided in **S13.0-14 PAMP**.

Contractors, employees, visitors, and suppliers will sign in when coming onto the Minesite and sign out when they leave the Minesite. This will be done either at TCL's office in Telkwa, on the bus, or at the Administration Building onsite. A remote gate "fob" is provided to designated contractors and delivery drivers to assist with access, and training is provided in the use of these remotes. Otherwise, only Minesite employees will have access to fobs that control the gates.

The public will also be able to access and control some of dedicated gates via push button control if available.



- Project Area
- Mine Infrastructure Complex (Coal Processing Plant, Administration and Mine Dry Building, Maintenance Facility)
- X Access Gates
- Pacific Natural Gas Pipeline
- CN Rail Line
- Present Public Access
- Proposed Private Access Road (TAC)
- Proposed Private Recreational Access Road
- TCL Private Roads
- Forest Service Roads
- Provincial Roads or Highways
- Waterbody
- Telkwa Village Boundary
- Rail Loop
- Rail Infrastructure
- Hiking Trail
- Watercourse
- 138 kV Transmission Line
- 500 kV Transmission Line
- E Under TCL Escort
- A Alternative Public Access
- T Telkwa Coal Access for Processed Coal Haul, Supplies, and Personnel

6.1.3 Radio Control

The TAC is a radio-controlled road with equipment calling “out” when leaving the Minesite and “in” when coming into the Minesite. Outbound vehicles will have the ROW unless an emergency vehicle is coming into the Minesite.

The following radio frequencies (transmitting and receiving) will be used for the Project and are summarized in **Table 6.1-1** below.

Table 6.1-1: Proposed Radio Frequencies for the Tenas Project

Frequency	Radio Channel	Use
453.0125	1	Tenas Access Corridor (TAC)
453.0250	2	Coal Processing Plant (CPP) Operations
453.0375	3	Maintenance Operations
453.0625	4	Emergencies
453.0750	5	Mine Operations
453.0875	6	Supervisors
453.1000	7	Spare channel

6.2 Onsite Haul and Service Roads

Haul and service roads connect Mine Infrastructure to the open pits, storage pile areas, management ponds, management pond embankments and buttresses, stockpiles, and reclamation sites. A service road from both the Explosive Magazine and Explosive Facility connects via the TAC and Minesite service and haul roads to proposed blasting locations in the open pit and the rock quarry site located adjacent to the TAC east of Goathorn Creek.

6.2.1 Rules

The following provides a summary of rules that will be observed on haul roads, services roads and where indicated the TAC.

6.2.1.1 Minesite Haul and Service Roads

All Minesite haul and service roads have a running surface of three (3) times the width of the largest haul truck running on it for two (2)-way traffic and two (2) times the width of the largest haul truck running on it for single lane traffic. Safety berms with a minimum height of $\frac{3}{4}$ the tire height of the largest haul truck using the haul and service roads are provided if there are drops greater than 3 m present. All haul and service roads will be left-hand drive and signage will be placed at all locations where a transition is required. Furthermore, reminder signs will be placed after the transition to remind drivers that the road is left-hand drive. Appropriate signage on haul roads will be used as required for traffic control, relating to left-hand drive rules. The maximum load for the haul roads with the Minesite area is a vehicle with a gross vehicle weight of 500 tonnes while it is 100 tonnes for service roads.

Appendix 13.10-B contains isometric views of the Project’s mine plan as it progresses through all phases.

The standard at TCL calls for the construction of runaway lanes periodically where required by a risk assessment where haul road grades exceed five (5) percent (%), with each runaway lane being able to bring a potential runaway vehicle to a controlled stop. Additional information on runaway lanes is provided in **Appendix 13.10-C Runaway Ramp Additional Details**.

During the Construction Phase of the Project, the haul and service road network will be developed from the Mine Infrastructure to the open pit areas. There are substantial existing forestry road networks within the Project Area, and they will be utilized if possible; however, some new haul and/or service roads will be required to fully develop the Project. During the Operation Phase, the haul and service road network in the Project Area will be developed progressively along with the development of the open pits and storage piles and management ponds.

TCL will manage Minesite and TAC roads and traffic through the use of SPPs that will be developed in the future. All TCL SPPs will conform to the Code.

In addition to regulatory requirements, the Project will implement SPPs that meet or exceed the required laws and regulations.

All employees, contractors and any user of the Project's roads must complete a review of these SPPs as they come available and this MTCP during the site induction process and upon designated review timing of both of these documents.

6.2.1.2 Vehicle Inspections

All vehicles being used on the Minesite need to be inspected prior to use, using the forms provided in **Appendix 13.10-D Vehicle Operator Checklist**, unless an inspection was performed within the previous 24 hours on the same unit.

6.2.1.3 Left-hand Drive

All traffic on Minesite haul roads and the TAC including Rail Infrastructure will be left-hand drive in keeping with best practices for safe mining.

6.2.1.4 Seat Belts

Use of seat belts is mandatory in all equipment and vehicles. Seat belts must be in good physical condition and be in full working order.

6.2.1.5 Intersections and Vehicle Priorities

Uncontrolled intersections will not have signs and the ROW will be adhered to in a pre-determined order, by the priorities provided below:

1. emergency vehicles;
2. personnel busses;
3. loaded production trucks, travelling downhill;
4. loaded production trucks, travelling uphill;
5. empty production trucks;
6. fuel and explosive trucks;

7. other rubber tire equipment like graders, loaders, and water trucks;
8. light vehicles; and
9. tracked vehicles.

When two (2) like pieces of equipment meet at uncontrolled intersections, the vehicle to the right always yields to the vehicle on the left.

Controlled intersections will have stop signs in place will use the same vehicle priority and yield rules as above for uncontrolled intersections.

6.2.1.6 Speed Limits

Speed limits are posted at the sides of roads and are enforced by TCL safety personnel, supervisors, and management. During Construction, Operation, and Decommissioning and Reclamation phases of the Project, personnel will be required to drive according to road conditions and follow posted speed limits to a maximum of 50 kilometres per hour (km/h) on the TAC, 70 km/h on Minesite haul roads, and 30 km/h on service roads. Mine haul trucks on the Minesite will have an average operating speed of approximately 30 km/h even though the speed limit is 70 km/h given the large size and weight of the Mine haul trucks.

6.2.1.7 Changes in Traffic Patterns

Any change to a road, intersection or traffic pattern will be communicated to all Minesite employees through a site-wide email, announcements over all radio channels by Minesite supervision and bulletins posted around the Minesite. All changes will be temporarily marked, in addition to normally required signage, with a “new” sign in place for a period of 8 to 16 days.

6.2.1.8 Following Distances and Passing

A minimum distance of two (2) vehicle lengths from the vehicle being followed must be always maintained unless under escort by another vehicle.

In general, no passing is allowed within the Project Area except under the following conditions:

- ▶ emergency situations,
- ▶ passing equipment that is conducting road maintenance activities,
- ▶ passing equipment that is undergoing maintenance, and
- ▶ if vehicle passing has obtained permission for vehicle being passed and this vehicle has come to a complete stop.

Even in these situations, verbal or visible approval is required prior to passing except for emergency vehicles.

Any persons entering the Minesite must be aware of the danger associated with equipment with blind spots.

6.2.1.9 Special Road Usage by Heavy Equipment

Heavy Minesite equipment cannot use roads designated for light vehicles, service roads and/or the TAC except in emergency situations, specific maintenance functions, to access maintenance and fueling locations and/or with approval of the Mine Supervisor and/or Mine Manager.

6.2.1.10 Radio-controlled Roads

On occasion, sections of roads or designated areas onsite may need to be radio-controlled. These areas will be signed and any vehicle or equipment travelling through a radio-controlled area must call "in" using the designated TCL radio channel when entering and call "out" when leaving. As stated previously, the TAC is a radio-controlled road.

6.2.2 Parking

When parking vehicles, the operator must ensure adequate clearance from other vehicles and must be parked in a fashion that allows the first movement to be forward when starting a vehicle if possible. Wheel chocks must be used for all equipment that has them provided when a vehicle is parked unless there are ground features preventing unwanted vehicle movement. A vehicle must be parked before an operator dismounts the vehicle. Vehicles shall only park in designated areas.

6.2.3 Vehicle Lights

All vehicles must operate with both headlights and running lights on at all times. All vehicles less than 3 m in total height require a buggy whip that measures at least 4 m from the ground with a reflective flag and working light when on any active haul and service road and within the Minesite portion of the Project Area. A buggy whip is not required for vehicles using the TAC or Rail Infrastructure areas.

6.2.4 Back-up Alarms

The Code requires either a visual or auditory back-up alarm for all equipment greater than 7,000 kilograms (kg). TCL has opted for a visual back-up alarm to reduce noise emissions from the Project that complies with the following criteria:

- ▶ light shall be clearly visible above usual daily light levels;
- ▶ visual alarm actuation shall be independent of the operator; and
- ▶ light shall flash if the vehicle transmission is in the reverse position.

TCL has selected white to be the standard colour for the light that will indicate a vehicle is backing up.

6.2.5 Moving Vehicles

Before any vehicle is moved on the Minesite, the operator must make sure the surrounding area is clear of personnel and equipment through visual contact and verbal communication if required. The operator is to give one (1) blow of the horn if the vehicle's first move is to be in reverse unless reverse is part of that vehicle's regular duty cycle such as reversing it to get loaded by an excavator or being spotted by a dozer at a material disposal location or dozer work on a pile. The first move of a vehicle should always be in the forward direction, if possible, as this is the direction of the greatest visibility for the operator.

To reduce noise emissions for the TAC and Rail Infrastructure areas, no horn indications are required for vehicles to move in the reverse direction.

6.2.6 Electric Trailing Cable, and Overhead Lines

Heavy equipment must stay at least 2 m away from a trailing cable and/or a powerline ROW unless under the direction of authorized personnel.

6.2.7 Licensing

All operators shall have a valid BC Class 5 Driver's License and a TCL Minesite Driver's License to operate vehicles on the haul roads, TAC, Mine Infrastructure, Rail Infrastructure, and Explosive Infrastructure areas.

6.2.8 Smoking

All operators, contractors, and visitors are prohibited from smoking within the Project Area or within any vehicles owned by TCL.

6.2.9 Maximum Grades

For all haul and service roads and for the TAC, a maximum grade of -10% to +10% will be used. For drill access trails, a maximum grade of approximately of 15% will be used, while for runaway lanes a maximum grade of approximately of 25% will be used.

6.2.10 Night Operations

Night operation of vehicles will follow the same rules as daytime operation. Lighting is to be supplemented by the addition of an amber flashing light above the cab of vehicles used when outside of areas of direct illumination by overhead lights. Furthermore, visitors will not be allowed during night operations unless for emergency requirements. As much as practical, contractor use of roads will be limited during night operation conditions. Also, other tasks will be reduced during night operations such as major maintenance activities, material deliveries such a fuel, lubricants, explosives, and other materials. Additional beacons will be activated during night operations at controlled intersections and entrances/exits of piles and benches.

6.2.11 Facility Protection

Facilities that are potentially hazardous to personnel and wildlife such as electrical substations, fuel, and lubricant storage facilities, and sedimentation ponds will be fenced and/or barricaded as appropriate to restrict access.

7. MONITORING

TCL will conduct regular inspections of Minesite roads, signage, TAC, and public access trail deterrents to ensure structures are in good shape. TCL will also conduct regular audits to ensure that the MTCP is being followed and gather input from users.

7.1 Performance Objectives

The data on performance objectives and targets that will be collected by the Environmental Coordinator and used to ensure the proper implementation of this MTCP are shown in **Table 7.1-1**.

Table 7.1-1: Performance Objectives

Objective	Target
Number of unplanned light and heavy vehicle interactions or safety incidents	zero
Inspections and corrective actions needed	continual improvement
Number of unlicensed or un-escorted individuals using Minesite roads	zero

8. REPORTING

8.1 General Reporting

Reporting completed by TCL will ensure consistent implementation of the MTCP. Summary reports of monitoring activities and results will be compiled and reviewed annually as per **7. Monitoring**.

8.2 Compliance Reporting

Compliance reporting will be subject to EAC and *MA/EMA* permit conditions. The information gathered during monitoring practices will be summarized with information from other management plans into an Annual Environmental Management Summary Report and upon permitting completion, the Annual Environmental Reports as required by *MA/EMA* permits. Community engagement activities will be an aspect of the **Socio-economic Management Plan (S13.0-C16) (SEMP)**. The **SEMP** will have requirements related to reporting on community engagement programs.

8.3 Internal Reporting

Details of the monitoring program described in **7. Monitoring** will be reported internally on an annual basis according to the change management system and adaptive management framework of the **EMS**. The report will provide results of monitoring, assessment of performance objectives, and include any other pertinent information.

TCL employees and contractors will be strongly encouraged to report any inefficiencies to management for evaluation consideration.

9. ROLES AND RESPONSIBILITIES

9.1 Mine Manager

The Mine Manager bears overall responsibility for all phases of the Project, and responsibility for onsite environmental monitoring and compliance. The Mine Manager reports to the executive steering committee for TCL and will coordinate with this group to ensure that Project objectives are being met.

Specifically, the Mine Manager will:

- ▶ implement the MTCP, and
- ▶ facilitate the annual review of the MTCP.

9.2 Health, Safety, and Human Resources Superintendent

The Health, Safety, and Human Resources Superintendent will:

- ▶ audit speed limits;
- ▶ manage reporting of incidents or dangerous occurrences on the Minesite roads;
- ▶ deliver or delegate training and awareness programs regarding this MTCP; and
- ▶ maintain training records.

9.3 Environmental Coordinator

The Environmental Coordinator reports the Mine Superintendent and will:

- ▶ assist with the implementation of this MTCP;
- ▶ work towards continual improvement at all Mine Infrastructure to ensure safety of Minesite traffic and investigate improvements in any trend and assess whether the practices responsible for the improvements can be applied to other areas of the Project;
- ▶ with deteriorating trends, once the cause is identified, the Environmental Coordinator will propose a suitable corrective action to the Mine Manager;
- ▶ record wildlife interactions that are reported on the form in **Appendix 13.10-E Wildlife Observation Form**, and if necessary, contact regulatory agents;
- ▶ collect and report all data about performance objectives including ensuring they are incorporated into the EMS's Annual Environmental Management Report; and
- ▶ complete an annual review of the MTCP to compare data, trends, and implementation of the MTCP and its objectives, including a review of the management plan deliverables and input received from Indigenous groups and all other stakeholders.

9.4 Visitors and Contractors

Visitors and contractors will:

- ▶ ensure to follow sign-in and sign-out procedures; and

- ▶ ensure compliance with this MTCP.

9.5 Supervisors

Supervisors will:

- ▶ ensure employees are trained and understand the MTCP.

9.6 Employees

Employees will:

- ▶ attend training related to the MTCP;
- ▶ have a valid driver's licence and ensure understanding of the MTCP prior to operating a vehicle in the Project Area; and
- ▶ comply with the MTCP.

9.7 All

All individuals present at the Minesite will:

- ▶ ensure all Incidents are reported and investigated using TCL forms provided in **Appendix 13.10-F Incident Notification and Incident Reporting Report Forms**; and
- ▶ in accordance with the **Wildlife Management Plan (S13.0-C21) (WMP)**, ensure all wildlife observations and interactions, such as wildlife injury or mortality are reported using the TCL form provided in **Appendix 13.10-E Wildlife Observation Form**.

10. COMMUNICATION

Communication of the MTCP at TCL will be based on internal requirements and will primarily take place through this MTCP and relevant SPPs. Any significant change to the MTCP will be communicated to Minesite employees and contractors through a site-wide email, announcements over all radio channels by Minesite supervision and bulletins posted around the Minesite. When effective to do so, maps will be marked with changes.

10.1 Training and Awareness

Operating a vehicle or other equipment using Project Area roads requires training and understanding of the MTCP, and all personnel using Project Area roads must have a valid BC Class 5 Driver's License and TCL Minesite Driver's License.

10.2 Employee Training

Employees are required to review all relevant management plans and/or SPP and their associated training modules at the start of employment and on annual basis. Employee training is tracked by the Health, Safety, and Human Resources Department using an industry standard software application.

10.3 Contractor Training

Contractors will review the relevant management plans and/or SPP at the start of their contract and on an annual basis if contracts are longer than 13 months in duration to ensure their compliance with these requirements.

10.4 Visitor Training

Visitors will receive an overview of the relevant SPPs during their visitor induction session prior to accessing the site or from their Contract Manager. Visitors are generally restricted to being under the direction of TCL employees for use of TCL roads and will be escorted by TCL personnel onsite or accompanying TCL personnel in their vehicles.

11. EVALUATION AND ADAPTIVE MANAGEMENT

11.1 Evaluation

A review of the MTCP will be completed on an annual basis to compare data, trends, and implementation of the management plans and their objectives. This process will include a review of the management plan deliverables and input received from Indigenous groups through the community engagement programs.

11.2 Adaptive Management

A philosophy of adaptive management will be adopted to ensure that management plans and mitigation measures are consistently meeting or exceeding performance targets. This will be achieved through periodic reviews of the MTCP and the results of monitoring programs.

TCL will work towards continual improvement at all Mine Infrastructure to ensure safety regarding Minesite traffic. The Environmental Coordinator will investigate improvements in any trend and assess whether the practices responsible for the improvements can be applied to other areas of the Project.

Deteriorating trends will be studied to determine the root cause. When the cause is identified, the Environment Coordinator will propose a suitable corrective action to the Mine Manager or their delegate. Examples of corrective actions could include:

- ▶ additional training of employees and contractors on procedures;
- ▶ enhancement of maintenance or monitoring measures; and/or
- ▶ additional supervisory oversight.

11.3 Continual Improvement

TCL will amend the MTCP as required based on annual evaluations and feedback from relevant stakeholders and Indigenous groups. Any proposed changes regarding management of the public roads leading to the Project and concerns from the public or Indigenous groups will be sent out for review by these groups as needed before being finalized and implemented into the MTCP.

12. CHANGE MANAGEMENT

Changing any part of this MTCP requires a formalized process to be used. If significant changes to objectives, management plan structure, operational milestones, communication, and/or information management are being planned, it is required that the Management of Change (MOC) procedure in the **EMS** be followed. Minor edits and/or updates to this MTCP will be controlled through version control and content approval functions.

13. CONCLUSION

Management of traffic and ensuring the safety of those who access the Minesite is important. Through implementation of this MTCP and relevant SPP, TCL will ensure safe roads and road users.

14. REFERENCES

- British Columbia Ministry of Energy, Mines and Low Carbon Innovation (BC MEMLI). 2021. Health, Safety and Reclamation Code in British Columbia (Code). Available at: <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/health-safety/health-safety-and-reclamation-code-for-mines-in-british-columbia>. Accessed July 2021.
- British Columbia Ministry of Energy, Mines and Petroleum Resources (BC MEMPR) and British Columbia Ministry of Environment and Climate Change Strategy (BC MECCS). 2019. Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits. Available at: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/mineral-titles/permitting/2019_09_24_joint_application_information_requirements.pdf. Accessed July 2021.
- British Columbia Ministry of Forest, Land, Natural Resource Operations and Rural Development (BC FLNRORD). 2015. Resource Road User Safety Guide. Available at: https://www2.bcforestsafe.org/files/tk_pdfs/gde_resrd.pdf. Accessed July 2021.
- British Columbia Ministry of Forests (BC MOF). 2002. BC Forest Road Engineering Guidebook, 2nd edition. Available at: <https://www.for.gov.bc.ca/ftp/hfp/external/!publish/FPC%20archive/old%20web%20site%20contents/fpc/fpcguide/Road/FRE1.pdf>. Accessed July 2021.
- British Columbia Ministry of Transportation and Infrastructure (BC MOTI). n.d. Warning: Read Before Driving Resource Roads. Available at: <https://www.tranbc.ca/2013/08/30/warning-read-before-driving-resource-roads/>. Accessed July 2021.
- Government of British Columbia (GovBC). 1995. Provincial Forest Use Regulation, BC Reg. 176/95. Available at: <https://canlii.ca/t/53j66>. Accessed July 2021.
- Government of British Columbia (GovBC). 1996a. *Forest Practices Code of British Columbia Act*, RSBC 1996, c 159. Available at: <https://canlii.ca/t/52qv5>. Accessed July 2021.
- Government of British Columbia (GovBC). 1996b. *Mines Act*, RSBC 1996, c 293. Available at: <https://canlii.ca/t/54qxj>. Accessed July 2021.
- Government of British Columbia (GovBC). 1996c. *Mining Right of Way Act*, RSBC 1996, c 294. Available at: <https://canlii.ca/t/kx3g>. Accessed July 2021.
- Government of British Columbia (GovBC). 1996d. *Motor Vehicle Act*, RSBC 1996, c 318. Available at: <https://canlii.ca/t/553gt>. Accessed July 2021.
- Government of British Columbia (GovBC). 2002. *Forest and Range Practices Act*, SBC 2002, c 69. Available at: <https://canlii.ca/t/53lx7>. Accessed July 2021.
- Government of British Columbia (GovBC). 2003. *Environmental Management Act*, SBC 2003, c 53. Available at: <https://canlii.ca/t/54wmd>. Accessed July 2021.
- Government of British Columbia (GovBC). 2004. Forest Planning and Practices Regulation, BC Reg 14/2004. Available at: <https://canlii.ca/t/551gd>. Accessed August 2021.
- Government of British Columbia (GovBC). 2015. Off-Road Vehicle Regulation, BC Reg 193/2015. Available at: <https://canlii.ca/t/52sqd>. Accessed July 2021.
- Government of British Columbia (GovBC). 2016. *Water Sustainability Act*, B.C. Reg. 36/2016. Available at: <https://canlii.ca/t/54qx7>. Accessed July 2021.

Government of British Columbia (GovBC). 2017. Spill Reporting Regulation, BC Reg 187/2017. Available at: <https://canlii.ca/t/jk4x>. Accessed July 2021.

Government of Canada (GovCan). 1985. *Fisheries Act*, 1985, c F-14. Available at: <https://canlii.ca/t/543j4>. Accessed July 2021.

Government of Canada (GovCan). 1992. *Transportation of Dangerous Goods Act*, SC 1992, c 34. Available at: <https://canlii.ca/t/543hb>. Accessed July 2021.

Government of Canada (GovCan). 2002. *Species at Risk Act*, SC 2002, c 29. Available at: <https://canlii.ca/t/552zg>. Accessed July 2021.