

# Monthly Status Report

---

**Reporting Period**  
**February 2022**

# 1. Introduction

---

## 1.1 Project Overview

The Kicking Horse Canyon Project – Phase 4 (KHCP4) is located on the Trans-Canada Highway approximately 4 km east of the Highway 95 junction at Golden BC. It is the final phase of the 26 km-long Kicking Horse Canyon Project which has been incrementally improving the highway to a modern four lane standard at a 100 km/h design speed, including bridge replacements and natural hazard reduction features to improve safety and reliability. The scope of work includes:

- Widening 4 km of two lane and 0.8 km of three lane highway to four lanes
- Highway realignment to a 100 km/h design speed
- Installation of median barrier, wildlife exclusion fencing and passages
- Provision of snow avalanche and rock fall hazard reduction measures; and
- Shoulder widening for cyclists

Construction of the fourth and final phase to complete the remaining – and most difficult – 4.8 kilometres is expected to be substantially complete in winter 2023-24.

Additional information and updates about the Project can be found on the Project's website <https://www.kickinghorsecanyon.ca/>

## 1.2 Project Delivery

Transportation Investment Corporation, a provincial Crown corporation, is delivering and overseeing this \$601 million Project. The Project is being delivered under B.C.'s Community Benefits Agreement and the Project workforce is being provided by B.C. Infrastructure Benefits Inc. (BCIB)

The project is cost-shared, with the Government of Canada contributing \$215 million.

Kicking Horse Canyon Constructors (KHCC) was selected to design and construct the fourth and final phase of the Kicking Horse Canyon Project near Golden.

The Project is a multi-phase project to improve safety and mobility over approximately 26 kilometres of two-lane highway. Three phases of work have been completed. The fourth and final phase to transform the remaining section of about 4.8 kilometres is under construction.

## 1.3 Project Goals

Based on the Ministry's mandate and results of consultation to date, six primary goals have been identified for the Project:

**Transportation:** Improve highway safety, capacity, and reliability of the highway corridor.

**Financial:** Plan and deliver the project that meets the approved scope, schedule and budget targets cost effectively.

**Environment:** Reduce wildlife collision rates and minimize impacts on future wildlife movements.

**Economic Development:** Support the growth of the local and regional economy by improving highway safety and reliability and assist the efficient movement of people and goods along the project corridor.

**Social and Communities:** Engage with Indigenous Communities, local communities, and key stakeholders to identify opportunities, issues and information pathways that will inform the delivery of the project.

**Deliverability:** Constructable and operable.

## 2. Project Update

### 2.1 Project Dashboard

Objectives			Project Status	Comments
Project Delivery	Scope	Meet the approved scope.	●	<ul style="list-style-type: none"><li>The project includes the widening of 4.8km of Highway 1 to a 4-lane 100km/hr. standard and is being delivered within the approved scope.</li></ul>
	Schedule	Delivered within the approved schedule.	●	<ul style="list-style-type: none"><li>The Project is on schedule to be completed by winter 2023/2024.</li></ul>
	Budget	Delivered within the approved budget. Total project budget is \$601 million.	●	<ul style="list-style-type: none"><li>The project spending for the month of February 2022 was \$11.99 million and total project spending to date is \$279.6 million.</li><li>Total Federal Recoveries to date are \$130.7 million.</li><li>The Project is forecast to be delivered within budget.</li></ul>
	Safety	Take every reasonable step to ensure that our work is performed safely and in compliance with all applicable safety regulations, and in accordance with government policy.	●	<ul style="list-style-type: none"><li>Workplace Occupational Health and Safety (OHS) committee is in place and active.</li><li>The Health and Safety Plan for Project work is in place which includes specific COVID-19 protocols.</li><li>Lost Time Injury Frequency Rate (LTIFR) for the Project remains at 0. The average Injury Rate for Heavy Construction from 2011 to 2020 is 2.98 as per <a href="#">WorkSafeBC</a>.</li></ul>

Objectives		Project Status	Comments
	Quality	●	<ul style="list-style-type: none"> <li>Daily quality monitoring ongoing with no major issues observed.</li> </ul>
	Environmental	●	<ul style="list-style-type: none"> <li>Ongoing submission reviews for management plans.</li> <li>Ongoing weekly site surveillance visits.</li> </ul>
	Archaeology	●	<ul style="list-style-type: none"> <li>Systematic data recovery along the Dart Creek Forest Service Road (FSR) completed.</li> <li>Permit application process underway.</li> </ul>
	Design and Construction	●	<ul style="list-style-type: none"> <li>Oversight of Design-Build-Agreement (DBA) project work.</li> <li>Compliance reviews during construction.</li> <li>Review of KHCC design and management plans ongoing.</li> <li>Site surveillance and inspections by Project Team.</li> <li>Traffic Management ongoing and active traffic monitoring during extended closure.</li> </ul>
	Community Benefits	●	<ul style="list-style-type: none"> <li>Project Team is working with BCIB to meet labour requirements.</li> <li>BCIB labour working onsite; permits have been issued.</li> </ul>
Partners/Stakeholders	Indigenous Groups	●	<ul style="list-style-type: none"> <li>Continued collaboration and engagement with Indigenous Groups on key environmental values.</li> <li>Continued engagement with KHCC and Indigenous Groups on contract and employment opportunities.</li> </ul>
	Third Parties	●	<ul style="list-style-type: none"> <li>Regular meetings with CP Rail.</li> <li>BC Hydro preparing for further temporary utility relocations this spring.</li> </ul>
	Public and Stakeholder Engagement	●	<ul style="list-style-type: none"> <li>Ongoing work to enhance quality and reliability of traffic notifications.</li> <li>Website and social media updates including highway status calendar and stakeholder notices.</li> </ul>

Status	Description
●	Managing critical issues, negotiating resolution; action required immediately
●	Managing some issues, negotiating resolution; action required in the near term
●	Stay the Course – no action required

### 3. Project Documents and Achievements to Date

---

Project Delivery	Project Planning and Development	<ul style="list-style-type: none"> <li>• <u>Business Case Supplemental Memo (2019)</u></li> <li>• <u>Cost Report (2019)</u></li> <li>• <u>Risk Report (2019)</u></li> <li>• Executed Design-Build-Agreement (November 2020)</li> </ul>
	Environmental	<ul style="list-style-type: none"> <li>• <u>Environmental Synopsis Report (2016)</u></li> <li>• <u>Various Environmental Reports (2005 – 2016)</u></li> </ul>
	Archaeology	<ul style="list-style-type: none"> <li>• Heritage Inspection Permit 2019-0208 (2019)</li> <li>• Archaeological and Heritage Resource Management Plan (AHRMP)_(August 2020)</li> <li>• Site Alteration Permit 2020-0297 (October 2020) and subsequent amendments</li> </ul>
	Community Benefits	<ul style="list-style-type: none"> <li>• <u>Community Benefits Agreement (July 2018)</u></li> <li>• BCIB Health and Safety Program (March 2020)</li> <li>• BCIB Apprenticeship and Training Targets (March 2020)</li> <li>• <u>BCIB Sub-Appendix with the Kicking Horse Project Information (March 2020)</u></li> <li>• BCIB – AIRCC Enabling Agreement Executed (May 2020)</li> </ul>
	Third Parties	<ul style="list-style-type: none"> <li>• Contribution Agreement – Government of Canada (2017)</li> </ul>

## 4. February Highlights and Three Month Lookahead

### 4.1 Safety

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Establish Occupational Health and Safety (OH&amp;S) Project delivery objectives and performance measures.</li><li>• Manage Project OH&amp;S activities and monitor performance metrics.</li><li>• Ensure the Project complies with relevant WorkSafeBC regulations and government requirements.</li><li>• Outline relevant health and safety management processes and activities.</li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Site Safety Audit was conducted by Project safety advisor on February 4, 2022. No findings reported in the audit. Next audit scheduled for March 2022.</li><li>• 3 incidents were documented in the health and safety log in February. Lost Time Injury Frequency Rate (LTIFR) for the Project is 0, which is less than the WorkSafeBC average of 2.98 for <u>heavy construction</u>.</li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Maintain Province's Safety Management Plan for implementation as part of the Design-Build-Finance Agreement to align with KHCC, Transportation Investment Corporation (TIC), WSP and Ministry of Transportation and Infrastructure requirements.</li><li>• Orientation and safety training for onsite personnel as required.</li><li>• Conduct surveillance audits of KHCC's safety management performance.</li></ul>

### 4.2 Quality

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Establish quality management Project objectives and performance measures.</li><li>• Monitor relevant quality management performance metrics.</li><li>• Manage Project quality management activities.</li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Reviewed two (2) Non-Compliance Reports (NCR) received from KHCC, no significant issues found. Suitable corrective actions were identified.</li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Review KHCC quality specific management plans.</li><li>• Oversee quality of KHCC work onsite.</li><li>• Record and distribute daily observation reports of work on site.</li><li>• Review KHCC quality records for compliance to the DBA.</li><li>• Monthly audits of KHCC quality processes.</li></ul>

### 4.3 Environmental

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Complete environmental reviews of KHCC's submissions.</li><li>• Support communications team with stakeholder engagement.</li><li>• Conduct site surveillance and provide environmental support to Project as and when needed.</li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Reviewed and commented on KHCC submissions, permits and designs.</li><li>• Site environmental surveillance and reporting ongoing.</li></ul>

	<ul style="list-style-type: none"> <li>• Collaborated with the Golden and District Rod and Gun Club and the Ktunaxa Nation Council on bighorn sheep monitoring.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>• Review and comment on KHCC's environmental submissions.</li> <li>• Site environmental surveillance.</li> </ul>

## 4.4 Archaeology

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Managing, directing, and undertaking all archaeological work, including Archaeology Impact Assessment (AIA), Systematic Data Recovery (SDR), and archaeological monitoring.</li> <li>• Providing the Province and KHCC with information for the management of archaeological and heritage resources.</li> <li>• Responding to chance archaeological or heritage finds.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>• SDR work continued along the Dart Creek FSR. Field work was complete on February 12, 2022. Ongoing lithic analysis and reporting.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>• Artifact analysis and cataloging ongoing in the laboratory.</li> <li>• Alteration permit amendment request submissions, as required.</li> <li>• Sediment removal along Dart Creek FSR once alteration permit amendment issued.</li> </ul>

## 4.5 Design and Construction

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Travel demand forecasting, traffic operations modelling, traffic data collection, and other related engineering services in support of the traffic management regime proposed for the Project.</li> <li>• Provide technical support to the Project Team during the review of contractor submittals.</li> <li>• Oversight of DBA project work.</li> <li>• Compliance reviews during construction.</li> <li>• Develop plans for managing traffic along the Alternate Route Highway 93/95 during full project closures.</li> <li>• Establish agreements with other jurisdictions for provision of services along the Alternate Route.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>• Ongoing management of drainage design issues.</li> <li>• KHCC has 5 pile installation rigs and 6 available crews on rotation conducting foundation pile installation operations, working primarily on the eastbound lanes underway throughout the Project.</li> <li>• Sheep's Bridge – Girder installation completed with deck panel and parapet installation underway. Diaphragm and pedestal formwork and concrete placement at abutments underway.</li> </ul>

	<ul style="list-style-type: none"> <li>• Bighorn Wall – Foundation pile installation, pile cap, and cast in place wall and backfill for pavement structure completed. This wall is nearing completion.</li> <li>• Bighorn Viaduct – Foundation pile installation for eastbound lanes ongoing.</li> <li>• Bighorn Bridge – Foundation pile installation including transition piers, abutments, pier cap, column and pile cap construction is complete with some final work on bearing seats ongoing. Girder installation is currently underway.</li> <li>• Lynx Viaduct – Pile installation (ongoing) with eastbound bents first to facilitate traffic phasing. Pre-cast pile caps and box stringers arriving on site.</li> <li>• Frenchman’s Bridge – Temporary crane trestle installation completed and micro pile foundation installation continuing in February.</li> <li>• Elk Viaduct – Mid-slope foundation pile installation underway.</li> <li>• Cut 2 – Drill, blast, excavation, and haul to Dart Creek Surplus Disposal Site ongoing and scheduled to finish early March. Upslope rockfall attenuator fence post construction complete with netting to be installed. BC Hydro underground duct installation to begin once cut is complete.</li> <li>• Cut 3 – Type D (overburden) and Type A (rock) excavation paused. Cut 3 excavation temporarily halted to facilitate pre-build laydown for girder launches at Bighorn Bridge.</li> <li>• Dart Creek Forest Service Road – Road essentially complete except for the last 150m approaching Highway 1. Road being used for heavy haul to Surplus Disposal Site and being maintained by KHCC. Archaeological investigation works completed.</li> <li>• Cut 4 – Mechanical rock excavation in the Cut 4 area (Blackwall) is ongoing as required for access to foundation locations.</li> <li>• Grizzly Walls / Viaduct – Foundation pile installation ongoing for EB lanes.</li> <li>• Blackwall Bridge – Access road construction and slope stabilization to East and West abutments and piers ongoing to allow for foundation pile installation. Temporary crane trestles are completed and East and West transition pier construction still underway.</li> <li>• Marmot Viaduct – Foundation pile installation ongoing.</li> <li>• Caribou Fill/Wall – Access excavation and L-30 access road construction halted. Final design for Caribou Viaduct and Wall are now complete and work is expected to begin in March 2022.</li> <li>• Hedgehog Wall / Viaduct – Foundation pile installation is ongoing.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>• Continue participation in weekly meetings with KHCC and CP.</li> <li>• Province review of designs and management plans as designs are finalized.</li> <li>• Manage slope survey monitoring consultant.</li> <li>• Undertake site surveillance, inspections, and audits by Project Team, including OE Lead Engineer, OE Quality Manager, and OE Safety Advisor.</li> <li>• Blasting for rock cuts and installation of bridge and wall foundation piles ongoing throughout winter (weather dependant).</li> <li>• Monitor KHCC traffic management performance through site and into the next extended closure.</li> <li>• Spring extended closure planned for April 19 to May 20, 2022.</li> </ul>



	<ul style="list-style-type: none"> <li>Discussions with Parks Canada to address issues they have experienced along Highway 93 south during extended closures.</li> </ul>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 4.6 Indigenous Groups

<b>Scope:</b>	<ul style="list-style-type: none"> <li>Fulfill Province's duty to consult and accommodate identified Indigenous communities and facilitate engagement and collaboration with communities on environmental and socio-economic interests.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>Project Team meetings with Indigenous communities.</li> <li>Continued collaboration with KHCC Indigenous Contracting and Employment Coordinator (ICEC) on employment opportunities for Indigenous groups.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>Continue regular meetings with all identified Indigenous groups, including the Pespesellkwe, Ktunaxa, and Shuswap Indian Band.</li> <li>Continue collaboration with KHCC4 environment team to ensure Indigenous groups' concerns are considered in the Construction Environmental Management Plan (CEMP) review.</li> <li>Bighorn sheep monitoring and collaring with Ktunaxa Nation Council (KNC) and Golden Rod and Gun Club.</li> </ul>

## 4.7 Third Parties

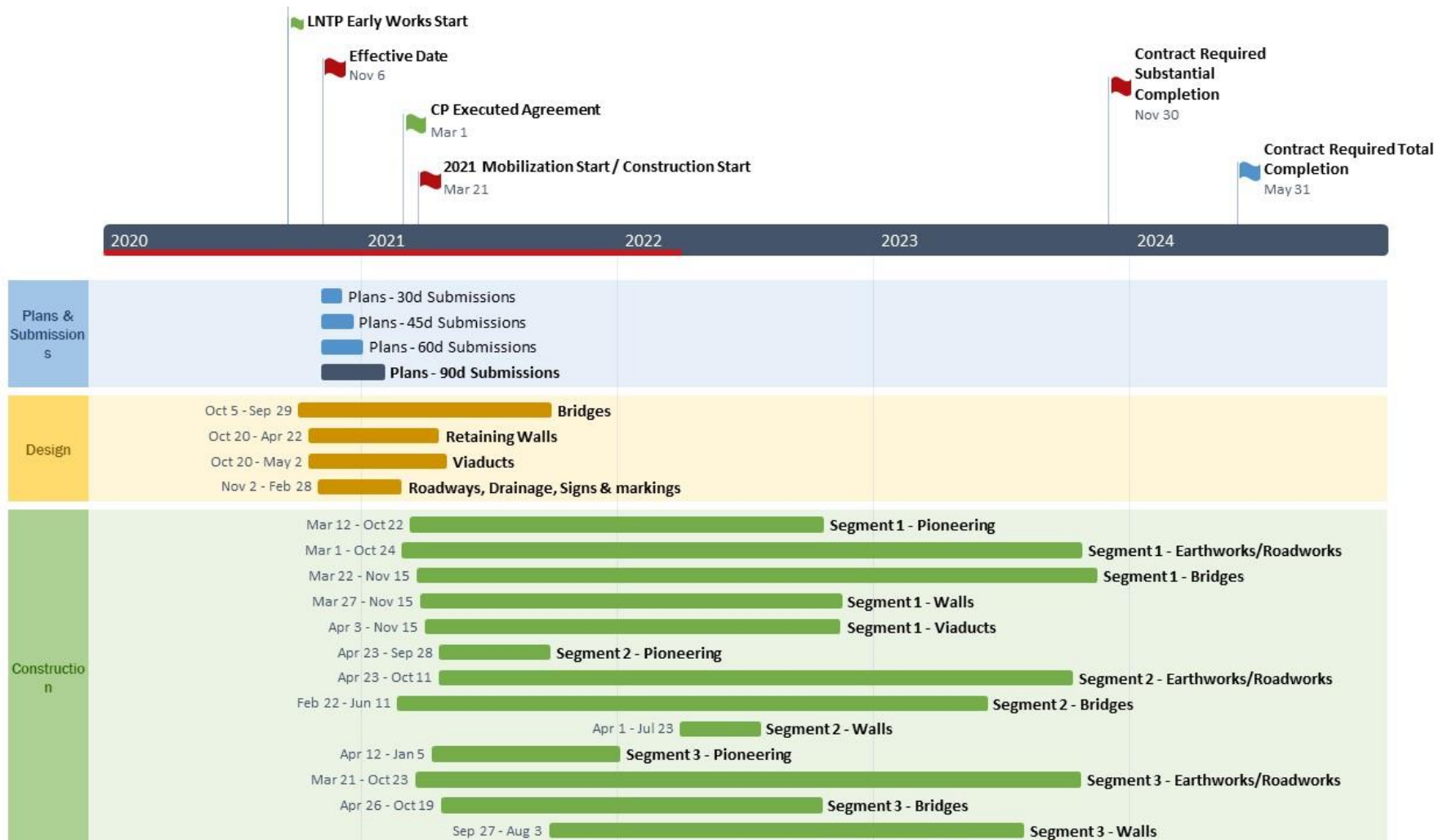
<b>Scope:</b>	<ul style="list-style-type: none"> <li>Develop utilities and rail agreements as required.</li> <li>Secure local and regional government approvals as required.</li> </ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"> <li>Completed temporary utility relocation at Cut 2 in February.</li> <li>Regular meetings with CP Rail.</li> <li>Continued blasting at Cut 2 and Cut 3.</li> </ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"> <li>Continue implementation of Protocol Agreement.</li> <li>Review of KHCC utility designs ongoing.</li> <li>Review final design for Phase 2 temporary utility relocation.</li> <li>Coordinate blasting with CP; first blast above CP (Cut #1) expected April 2022.</li> <li>Resolution of CP request to increase size of track-level culverts.</li> </ul>

## 4.8 Public and Stakeholder Engagement

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Manage ongoing public and stakeholder communications and engagement.</li></ul>
<b>Monthly Highlights:</b>	<ul style="list-style-type: none"><li>• Released monthly Project newsletter.</li><li>• Responded to public/stakeholder inquiries.</li><li>• Meetings held with local governments and stakeholders, including Radium Hot Springs and Columbia-Shuswap Regional District.</li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Oversight of KHCC's Communication and Public Engagement obligations and activities.</li><li>• Build awareness of construction and traffic management activities with media info bulletins/interviews, website updates, newsletters and advisories, and social media.</li><li>• Continue direct dialogue with key stakeholders and Community Liaison Committee.</li><li>• Project update meetings scheduled in March with Regional District of East Kootenay and the Banff Improvement District #9.</li><li>• Manage commuter/day pass program for 2022.</li></ul>

## 5. Schedule

The following schedule depicts deliverables, milestones and associated dates and timelines for the implementation phase of the Project, as well as anticipated construction timelines.



## 6. Project Photos

---



**Figure 1: Bighorn Bridge – Temporary Trusses – Feb. 7, 2022**



**Figure 2: Cut 2 – Drilling in preparation for next blast – Feb. 14, 2022**



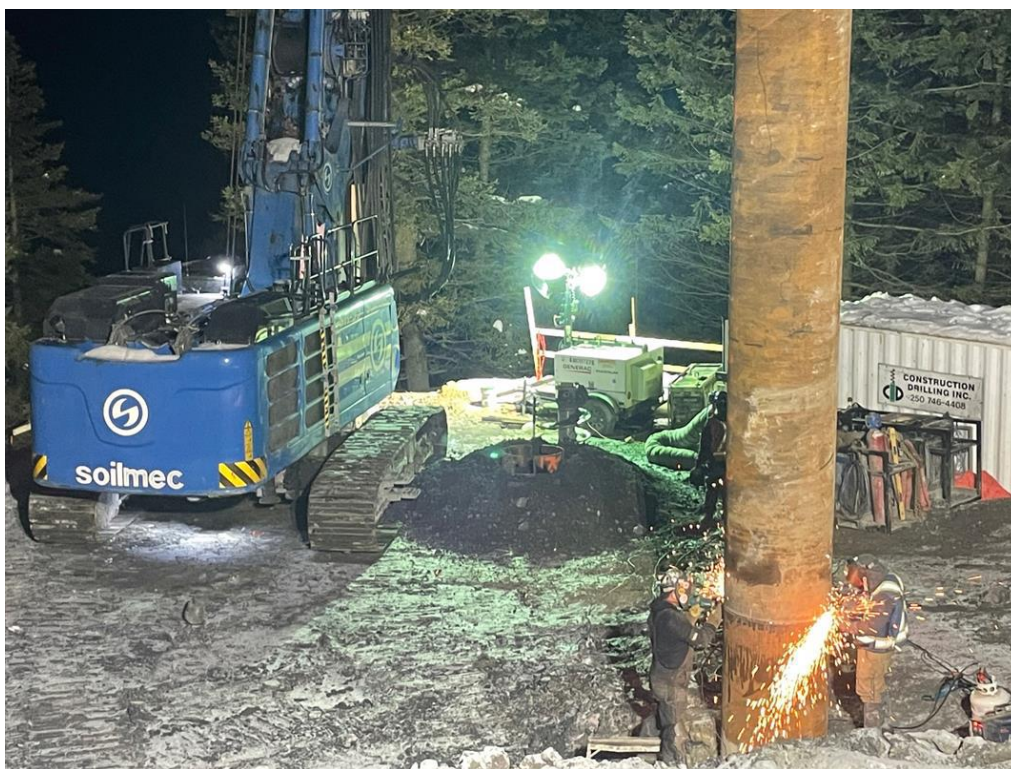


**Figure 3: Blackwall Bridge – Micro pile installation completed – Feb. 22, 2022**

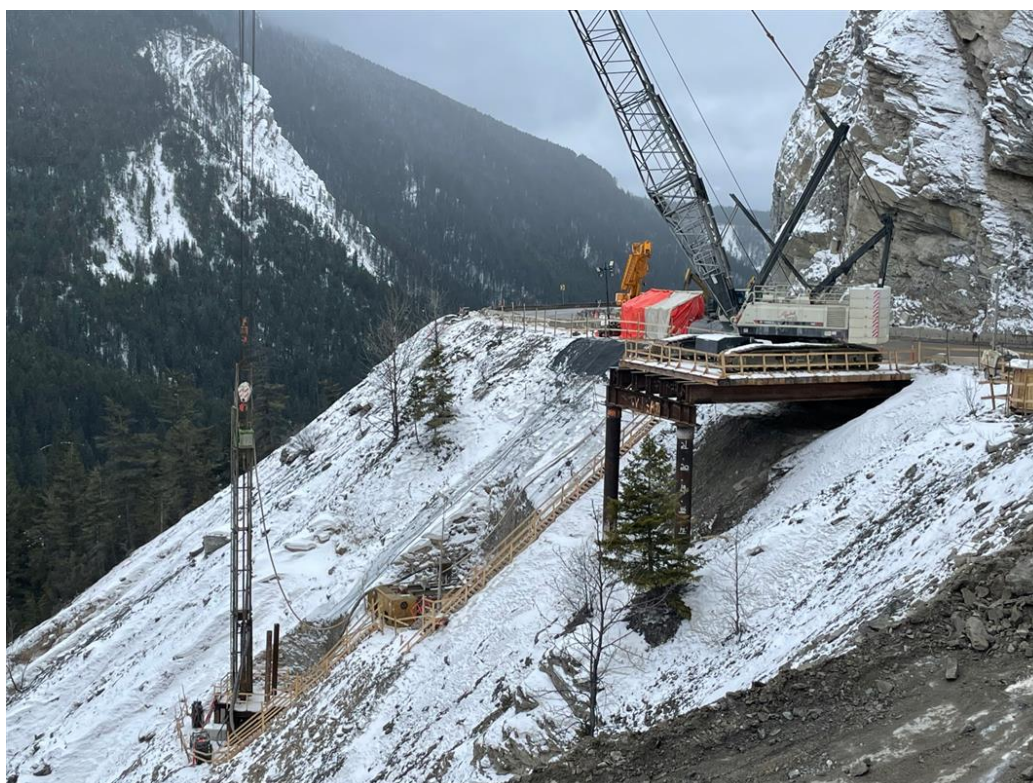


**Figure 4: Lynx – Crane pad installation – Feb. 23, 2022**





**Figure 5: Grizzly Viaduct – Piling operation ongoing – Feb. 8, 2022**



**Figure 6: Frenchman's Bridge – Piling operations at center bearing – Feb. 28, 2022**