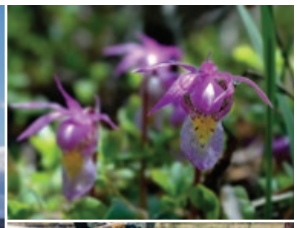
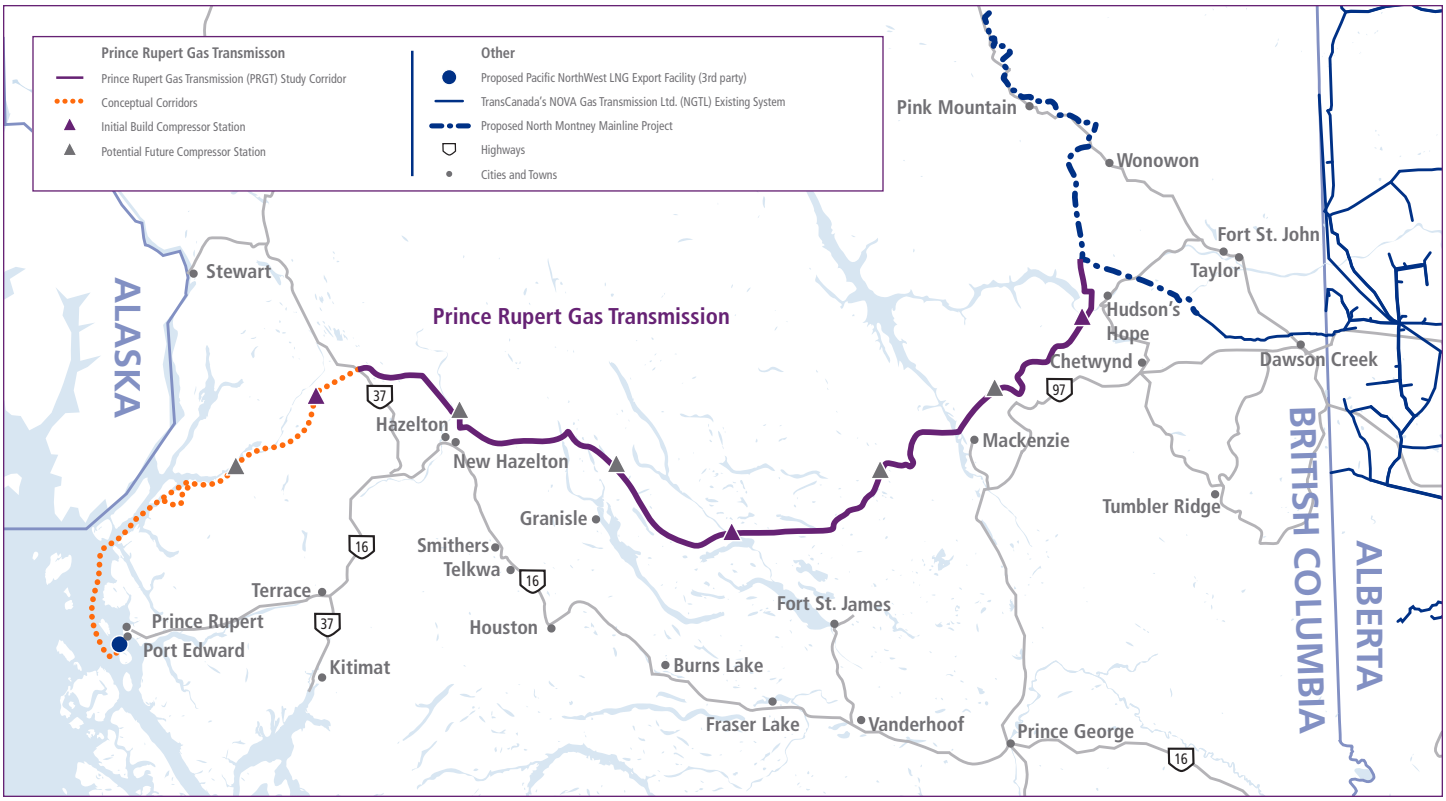


Prince Rupert Gas Transmission Project Overview

Prince Rupert
Gas Transmission Project

Prince Rupert Gas Transmission Project



Overview

In January 2013, TransCanada was selected by Progress Energy Canada Ltd. to design, build, own and operate an approximately 900-kilometre natural gas pipeline in northern British Columbia.

If approved, the Prince Rupert Gas Transmission pipeline will safely deliver natural gas from a point near Hudson's Hope to a proposed liquefied natural gas (LNG) facility on Lelu Island within the District of Port Edward. The LNG facility will be constructed and operated by Pacific NorthWest LNG.

Anticipated Timelines

Project announced – January 2013

Regulatory application – Early 2014

Commence construction (pending approvals) – 2015

In service – end of 2018

Proposed Route Corridors

As we progress in our planning towards submission of our regulatory applications to the BC Environmental Assessment Office and the BC Oil & Gas Commission, we have further refined our route alternatives along the western section of the proposed route corridor. We have removed a route alternative known as Nass Bay North Marine from further consideration due to potential impact on the environment and constructability issues. The Alice Arm alternative is not currently proposed pending further technical and environmental assessment.

The decision to refine our marine route options confirms our ongoing commitment to minimizing disturbances to the environment, waterways and culturally sensitive areas. It provides a degree of certainty to communities along the proposed route and confirms that, should approvals be received, the presence of the pipeline will generate substantial benefits to those along the route for many years to come.

It is important to note that further refinements of the route are possible. We are developing our applications to the BC EAO and the BC OGC and plan to submit them soon following a thorough internal review. We remain on schedule to begin construction, once all approvals have been received, in early 2015 with an in-service date of late 2018.

Aboriginal Engagement

We have a dedicated Aboriginal Relations team that has engaged with Aboriginal groups since the project was announced in January.

These discussions include capacity development - funding to help facilitate participation in government regulatory processes and project field programs (including leading or participating in traditional use and traditional ecological knowledge studies), training and employment opportunities, business opportunities and long-term community benefits.

We have actively engaged with approx. 25 Aboriginal groups who have an interest in the proposed pipeline routes.

To date, discussions with Aboriginal groups have helped us understand their interests, and define possible route options.

Stakeholder Engagement

Stakeholders are the people or groups who may be affected by the project.

We understand that the trust and support of the people who live and work near the proposed pipeline routes, local governments and landowners is earned, and that's why we're committed to building a long-term relationship.

TransCanada believes in engaging with stakeholders often to:

- Provide timely and accurate information;
- Gather input and ideas;
- Identify concerns;
- Find positive solutions.

Since January, when the project was announced, our engagement activities have included:

- Open houses, face-to-face meetings, presentations, project email, a toll-free line and website;
- Involvement in project-specific initiatives such as field studies, collecting and incorporating traditional ecological knowledge in environmental studies, and traditional land use studies;
- Employment and contracting opportunities;
- Investment in community-based activities;
- Participation in the regulatory process.

Our engagement continues throughout the life of the project.

Prince Rupert Gas Transmission Project Overview

Our Commitment to Landowners

Landowners have a right to know and want to understand what is occurring on or near their land. We are working with them so they know what is proposed and how they can participate.

TransCanada is committed to treating all landowners who may be affected by our project honestly, fairly, and with mutual respect.

All landowners will receive fair and equitable compensation for their land easements granted.

TransCanada is working closely with landowners to identify special circumstances, land restrictions, access routes, timing and other construction requirements to minimize disturbance to the land, the landowners and the environment.

Once the pipeline is in place, landowners will have the right to fully use and enjoy the right-of-way without having to notify TransCanada as long as the operation or integrity of the pipeline is not compromised. This includes normal agricultural practices such as plowing, fertilizing, disking, harrowing, cultivating, seeding, planting, spraying, tilling, baling, rolling and harvesting.

Community Benefits

$25 Million Every Year in Property Taxes

Once it's operating, the project will generate an estimated $25 million each year in property taxes. This revenue will help support school and hospital districts, emergency services, recreation services, recycling programs and other local programs vital to sustaining strong communities.

The tax payments flow to the provincial government, which then allocates the money to various accounts including school districts, policing funds, regional district operations and local provincial government operations.

Investments in Local Communities

Giving back has been part of TransCanada's culture for more than 60 years. We believe in making a positive difference in the lives of others through investing in communities.

Our Community Investment program focuses on three key areas: safety, the environment and community needs (e.g., training and health).

To learn more about our Community Investment program, please visit www.transcanada.com or contact the Prince Rupert Gas Transmission project directly (see contact information on the back page).

Employment Opportunities

If approved, the project will create thousands of short-term jobs over a four-year period.

Most of the jobs will be construction related. Hiring will take place through a general contractor and its subcontractors, and we will encourage them to hire Aboriginal and local residents.

As the project evolves, we will post a list of contractors on our website, www.princerupertgas.com.

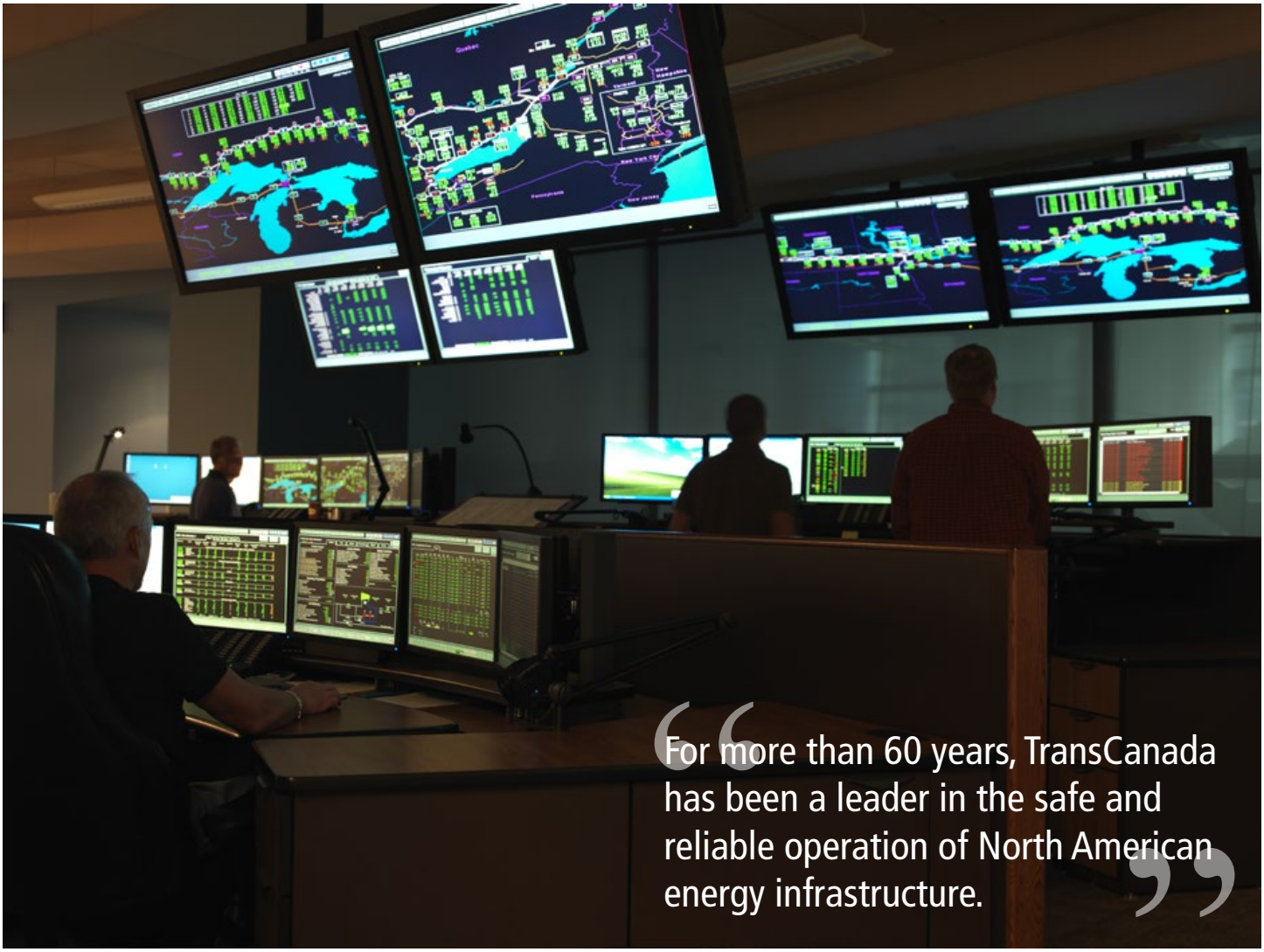
Business Opportunities

The pipeline construction project will create demand for local goods and services such as food and accommodation, gravel supply and construction equipment.

If you have a business and are interested in contracting opportunities, please visit our website at www.princerupertgas.com to register. Contractors who are pre-qualified are invited to bid on project work.

For more information and to pre-qualify, please contact George Hemeon at george_hemeon@transcanada.com.

> ***"The proposed Prince Rupert Gas Transmission Project will create opportunities for Aboriginal and local businesses and workers."***



Pipeline Safety

For more than 60 years, TransCanada has been a leader in the safe and reliable operation of North American energy infrastructure. From design to construction, to operations and maintenance, safety is integral to everything we do.

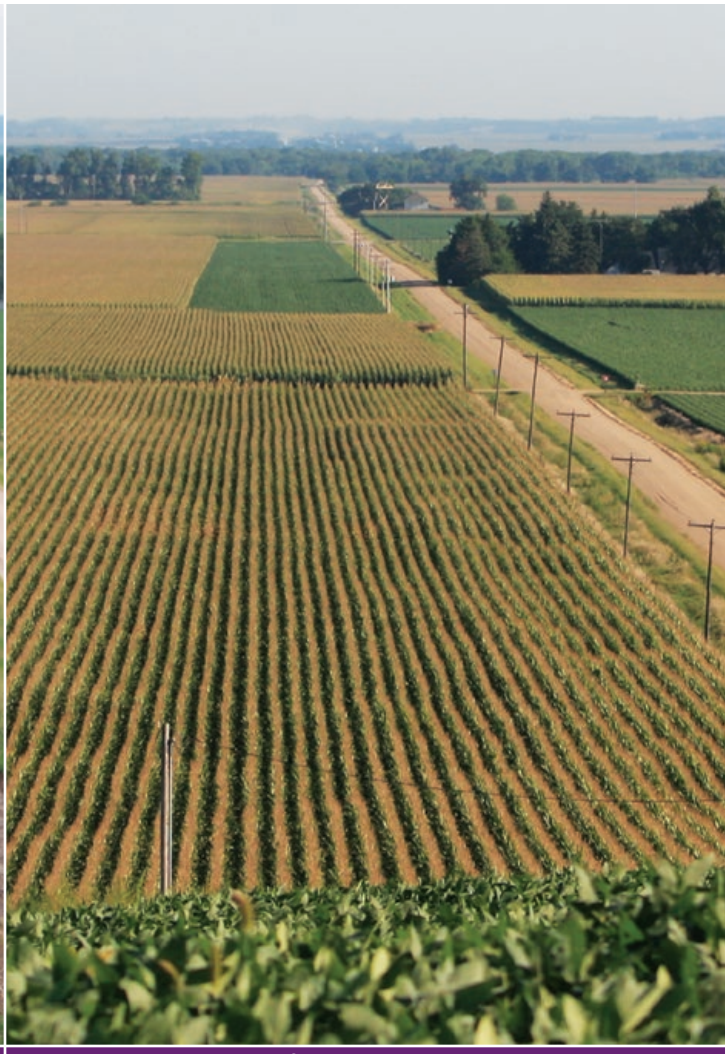
We use top quality steel and industry-leading welding techniques throughout our pipeline system to ensure we meet and exceed industry standards. We take additional safety precautions when the pipeline crosses roads, railways, waterways and communities.

During construction, welds are checked by x-ray and/or ultrasonic inspection methods and then we pressure-test the pipe, which is coated to protect against corrosion. We also use “smart pigs” – sophisticated inspection devices – to record information about the internal conditions of the pipeline.

TransCanada monitors its pipeline 24 hours a day, 365 days a year. Satellite technology sends data to our monitoring centre every five seconds. If a drop in pressure is detected, we immediately identify the problem area and isolate that section of the pipe remotely, closing the valves that control the flow of gas. Trained crews are dispatched by land or helicopter, depending on the location of the leak. If there is an incident, we work closely with authorities, emergency responders and the media to ensure residents in the area are aware of the situation and are safe.

In case of an emergency, please call TransCanada’s 24-hour toll-free number at 1.888.982.7222.

During Construction



After Construction

Environmental Protection

Understanding and protecting the natural and cultural environments is at the centre of everything we do.

We are conducting extensive environmental studies to analyze potential impacts on water, land, air, wildlife, vegetation and fish habitat.

We are also working closely with Aboriginal groups, local governments, landowners and stakeholders to understand how this project could impact their lives and the environment.

Our goal is to alleviate issues before they arise so we can minimize our footprint and help protect the environment for future generations.

The approval process for a new pipeline project is rigorous. We submit detailed environmental assessment reports and plans to the BC Environmental Assessment Office, the BC Oil and Gas Commission and various federal agencies.

Reclamation

Returning the land to its previous state is a goal TransCanada takes to heart. We are committed to minimizing the pipeline's environmental impact along the proposed route, both during construction and after the pipe is in the ground. Recognizing the importance of forested terrain as well as soil and top soil conservation, the project team will execute established techniques designed for the highest quality reclamation process.

With over 60 years of experience building and operating pipelines, TransCanada has successfully reclaimed thousands of acres on pipeline rights-of-way throughout North America. As with all of our pipeline projects, great care and planning is taken to minimize and avoid impacts to the environment, including rare or endangered species, habitat, significant water crossings, and historical and paleontological resources.

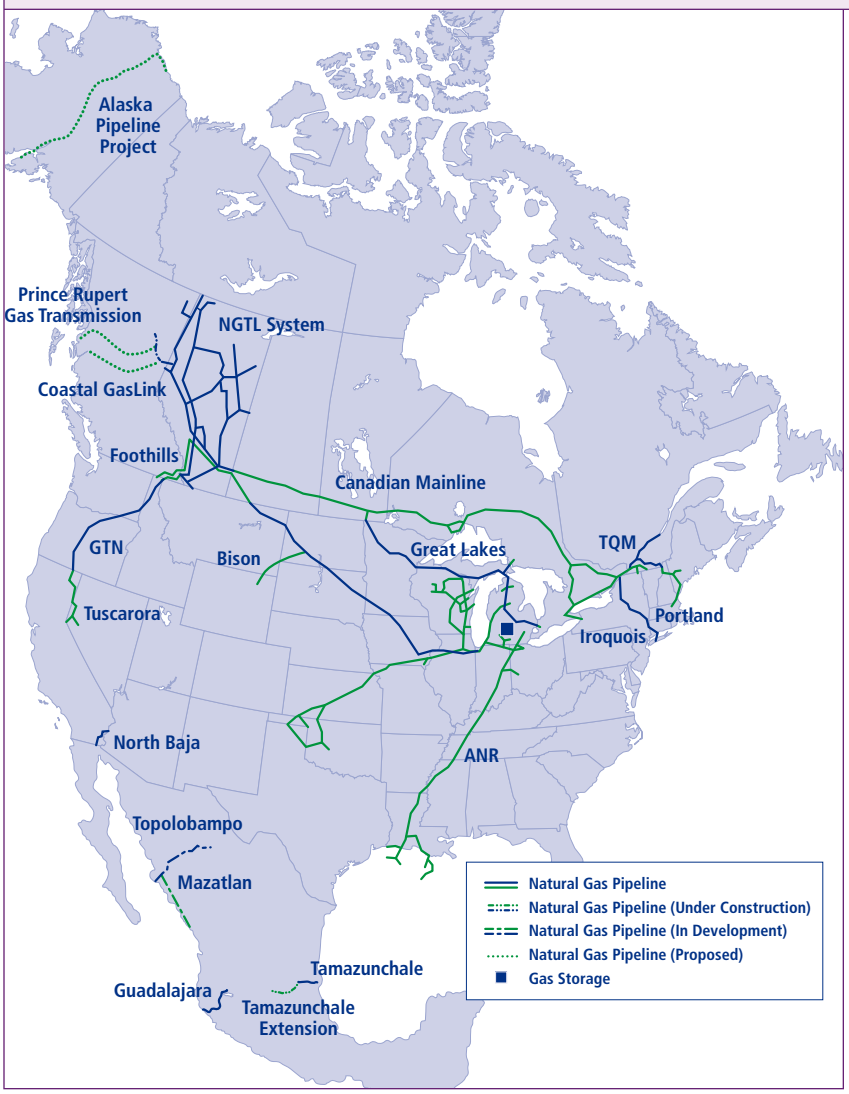
Prince Rupert
Gas Transmission Project

About the Prince Rupert Gas Transmission project

The Prince Rupert Gas Transmission project is a wholly owned subsidiary of TransCanada PipeLines Limited. We have more than 50 years of experience building and operating pipelines in B.C. The pipeline will be approx. 900 kilometres in length from a point near Hudson's Hope B.C. to a proposed liquefied natural gas plant to be built on Lelu Island within the District of Port Edward. The 48-inch pipeline will have the capacity to transport 2 billion to 3.6 billion cubic feet of gas per day. Three compressor stations are planned, with provision for up to five more. The estimated cost of the project is $5 billion.

Quick facts about TransCanada's natural gas pipeline network

- TransCanada operates one of North America's largest natural gas pipeline networks – 68,500 kilometres.
- The pipeline network taps into virtually every major gas supply basin on the continent.
- It delivers 20 per cent of the natural gas consumed in North America each day (approximately 14 Bcf/d) - heating homes, fueling power generation and industry.
- TransCanada is headquartered in Canada but has a significant presence in the United States and a growing business in Mexico.



Contact Prince Rupert Gas Transmission

We invite you to contact us with any questions regarding the proposed project:

Phone: 1.855.253.0099 (Toll-free)
Email: princerupertgas@transcanada.com
Website: www.princerupertgas.com

TransCanada Office Locations

#630, 609 Granville Street
Vancouver, B.C. V7Y 1G5
778.328.5301

Suite 102, 135 – 10 Avenue S
Cranbrook, B.C. V1C 2N1
250.489.5794

Suite 1300, 10504 - 100 Ave
Fort St. John, B.C. V1J 1Z2
250.262.5134

#201 – 760 Kinsmen Place
Prince George, B.C. V2M 0A8
250.596.8057

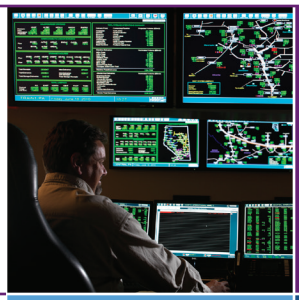
450 – 1 Street SW
Calgary, AB T2P 5H1
1.855.253.0099 (toll-free)

TransCanada

March 2014

Your Safety, Our Integrity

Prince Rupert Gas Transmission Project



TransCanada has an industry-leading safety record with operations that extend across North America. Each region is fully staffed with qualified employees and established offices that ensure the safe and efficient operation of the facilities in each area. For us, safety is an integral part of everything we do.

Below are some of TransCanada's long-standing safety programs that will be adopted and implemented by the Prince Rupert Gas Transmission Project.

Design

TransCanada uses top quality steel and welding techniques throughout our 68,500-kilometre natural gas pipeline network. We take additional safety precautions where pipelines cross roads, railway tracks, waterways and in areas of higher population.

Construction

During construction, all welds are checked by an x-ray or ultrasonic process to ensure the welds are sound. To protect against corrosion, the external surface of the pipeline is coated.

Operation

During operations, a very low-voltage electrical current – called cathodic protection – is applied to the pipe. The applied current protects the pipe from corrosion in areas where coatings are defective. The cathodic protection system is monitored on a monthly basis to ensure proper operation.

The entire transmission system is monitored 24 hours a day by highly trained TransCanada employees from a computerized control centre. From here, we are able to detect changes in pressure along our pipelines and ensure that all facilities are operating properly.

Safety

If work is required on your land, a TransCanada representative will make all reasonable efforts to contact you prior to conducting any work. At that time, we will arrange for land access and discuss any environmental and safety considerations with you.

In order to ensure your safety, there are a couple of things you should know: when work is being done, a portion of the pipeline right-of-way may need to be excavated and large equipment mobilized on site. You will be restricted from using the area for the duration of the activities. Temporary fences will be set up along the perimeter of the excavation site if required.

TransCanada strongly recommends that all of our landowners "call before you dig". Check with your local authorities through the B.C. One Call centre at 1.800.474.6886

In the event of a pipeline emergency, please call TransCanada's toll-free emergency number at 1.888.982.7222.

Prince Rupert
Gas Transmission Project

Your Safety, Our Integrity

Maintenance

Regular maintenance is performed on all portions of the pipeline system. All compressor and meter stations also undergo routine maintenance in accordance with industry and government standards. TransCanada has an extensive Pipeline Maintenance Program (PMP) to monitor, inspect and repair our pipeline facilities. Regular maintenance activities include:

- **Aerial Patrol** – We regularly inspect the pipeline route from low-flying helicopters and airplanes. The pilots look for hazards to the pipeline from outside sources (e.g. unauthorized activity, soil disturbances) that could affect the integrity of our pipeline system. We also regularly use sensitive leak detection equipment during these patrols to identify small leaks.
- **Cover Surveys** – TransCanada investigates areas where we suspect wind or water erosion may have reduced the depth of ground cover over our pipelines so we can maintain the integrity of the pipe.
- **Geotechnical Monitoring** – TransCanada's pipelines cross more than 2,300 bodies of water and significant slopes. All of these are monitored for erosion and movement during aerial patrol. Active slopes and streams are monitored more thoroughly through a variety of survey techniques.
- **Hydrostatic Testing** – We can verify the integrity of our pipeline by removing natural gas from the pipeline, replacing the gas with water and then pressurizing the pipeline to a level far greater than it experiences during normal operation. If a leak occurs during testing, TransCanada will repair or replace the affected section of pipe.
- **In-line Inspection** –In-line inspection, also referred to as "pigging," looks for any locations where corrosion may have occurred. Specialized internal inspection devices called smart pigs travel through the pipeline collecting data. The data is then analyzed to determine if there are areas of concern requiring further investigation.
- **Investigative Digs** – TransCanada conducts investigative digs based on the data analysis from pigging and other information. Sections of pipeline are excavated to investigate their condition and to ensure integrity. Detailed engineering assessments are used to determine if and when repairs are required.
- **Public Awareness Program** – Communicates with the people living or working near our facilities to ensure they are aware of what they can do to help maintain the safety and integrity of the pipeline system. By encouraging the public to call before they dig and employ safe excavation practices, we can reduce third party damages to underground pipelines.
- **Valve Maintenance** – Natural gas pipeline mainline valves are located approximately every 30 kilometres along the pipeline. If pipeline pressure drops due to a leak, the valves automatically stop the flow of gas. TransCanada maintains approximately 100,000 valves on our pipeline system. Each of these valves requires specific routine maintenance depending on function and valve condition.

We continuously improve our pipeline integrity programs using new technology, innovations and applications.

Environmental Practices

Prior to any ground disturbance, TransCanada ensures that site-specific environmental protection measures are incorporated to ensure equivalent land capability is maintained. At TransCanada, this includes minimizing and mitigating effects on soil, water, wildlife and vegetation.

Contact Info

For more information, please contact us:

Toll-Free: **1.855.253.0099**
Email: **princerupertgas@transcanada.com**
Project web page: **www.princerupertgas.com**

Or, you can write to us with attention to:

Prince Rupert Gas Transmission Project
450 – 1st Street SW
Calgary, Alberta
Canada T2P 5H1

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Construction Jobs and Role Descriptions

The Prince Rupert Gas Transmission team oversees the project and the general contractors. General contractors directly employ the workforce and subcontractors. They are encouraged to hire Aboriginal and local people.

This document describes the kinds of jobs required to construct a natural gas pipeline. For more information please contact George Hemeon at george_hemeon@transcanada.com.

Labourers

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Chainman/Rodman/ Stakeman	Places survey rod for field engineer or bending engineer when surveying is required. Assist the survey instrument man in running line, measuring pipe and/or right-of-way, carrying and driving in stakes, and other survey work for the employer. May cut brush and trees from survey line. These members of the pipeline construction crew may face adverse conditions related to isolated conditions.	Requires grade 8 or equivalent.
First Aid Attendant	The holder of current government issued certificate in first aid or equivalent designated to administer first aid in the case of an emergency, in addition to his regular duties.	Requires grade 10 or equivalent and previous first aid experience.
Flagman	Signals traffic to be cautious or stop as required while crews are working on or near highways or roadways. Controls traffic utilizing hand signals, flags, paddles, lights, signs, barricades, etc. These employees should expect very dusty conditions during dry periods of construction activity.	Requires grade 6 or equivalent.
General Labourer	Performs any work not specifically designated to other classifications, such as all hand digging and trimming, hand clearing, support work for all drilling and blasting, handling of skids, all concrete work, handling winch lines and hooks, handling pipe slings, handling of sandbags and padding and other miscellaneous work.	Requires grade 6 or equivalent.
Jackhammerman	Operates pneumatic tools including jackhammer, pavement breakers, etc. to break rock and pavement for removal.	Requires grade 6 or equivalent and previous jackhammer operation and/or work as general labourer on pipeline construction.
Measureman	Responsible to the Bending Engineer for correct interpretation of bending stakes and "measuring in" pipe joints, centering (and if necessary sequencing) joints to ensure bends are made at adequate distances from joint ends; transfers Bending Engineer's directions from stakes to pipe joints to assist Bending Machine operator in making bends conforming to the geographic contour.	Requires grade 12 or equivalent and previous work as Rodman or chainman and at least one year's experience on pipe bending crew.
Nozzleman	Handles the nozzle for sandblasting, all hand-held high pressure water jet operations, in the cleaning and preparation of the pipe other than the final buffing of the pipe bevels in preparation for the weld, for the installation of foam, for the placing of concrete, guniting or grouting, and for the spraying or painting of protective pipe coating materials in the coating crew.	Requires grade 6 or equivalent and previous pipeline work as sandblaster or pipeline labour work.
Pneumatic Tool Operator	Compacts backfilled areas with powered tamping tools, uses pneumatic hammer to chip concrete, and uses similar equipment as assigned.	Requires grade 6 or equivalent.
Skid Setter	Sets skids to build supports (set ups) under pipe joints.	Requires grade 6 or equivalent and one season's work as pipeline labourer.
Specialized Labourer	Fabrication, erection, installation, dismantling, rehabilitation, salvaging, and/or demolition of all structures connected with pipeline construction including plain or reinforced concrete, pipe insulation, piles and pipe supports.	Requires grade 8 or equivalent and several seasons pipeline work as general labourer on various crews.
Swamper	Assists the work of side boom operator in handling pipe. Hooks and unhooks the load line on the side boom tractor, winch trucks, picker trucks, and any boom trucks as instructed by the stabber.	Requires grade 6 or equivalent and one season's work as labourer on pipeline construction preferably on pipe gang.

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Teamster

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
A-Frame and Hoist-Equipped Truck Driver	Drives truck equipped with flat bed and hoisting equipment when used for transporting materials and supplies. Responsible for loading and unloading of the truck.	Requires grade 8 or equivalent plus Class 3 driver's licence, and previous on and off highway operation of hoist-equipped medium to large size truck(s) on pipeline, or other construction or logging operations.
Bus (Manhaul) Driver	Drives bus or crew cab for manhaul purposes to move crews from marshalling point to work areas.	Requires grade 8 or equivalent plus Class 4 driver's licence for buses up to 24 passengers. Class 2 driver's licence for buses greater than 24 passengers and previous bus operation on highway and off highway.
Concrete Transit Mix Truck Driver	Drives concrete mixer truck. Delivers dry mix and water used to prepare concrete for building footings and anchors. Maintains the water at the proper temperature and mixes water and dry mix to make concrete.	Requires grade 8 or equivalent plus Class 3 driver's licence and previous operation of transit mix truck on highway and off highway.
Crew Cab (General) Driver	Drives crew cab for manhaul purposes to move crews from marshalling point to work areas.	Requires grade 8 or equivalent plus Class 4 driver's licence and previous crew cab or bus operation on highway and off highway.
Dump Truck Driver	Drives truck equipped with hydraulically lifted and dump box used for hauling bedding, padding and backfill materials and/or surplus rock, etc. during cleanup. Trucks vary in size from 8 cubic yard single axle to high capacity tandem axle and off highway units.	Requires grade 8 or equivalent plus Class 3 driver's licence and previous experience operating dump truck(s) on highway and off highway.
Flat Deck Truck Driver	Drives truck equipped with flat deck used for transporting supplies. The larger the truck, the more experienced driver must have to understand the capabilities of the truck. The driver is also responsible for the safely tying down of all loads.	Requires grade 8 or equivalent plus Class 3 driver's licence and previous construction work operating smaller truck(s) on highway and off highway and/or pipeline construction work as swamper on flat deck truck.
Forklift Driver	Operates forklift in warehouse area, loading, unloading and moving all types of materials (not pipe).	Requires grade 8 or equivalent and previous operation of forklift equipment.
Fuel/Water Truck Driver	Operates fuel truck used to fuel equipment at the work area on the right-of-way.	Requires grade 8 or equivalent plus Class 3 driver's licence and transportation of dangerous goods certificate required for fuel truck. Also, previous work operating fuel truck and/or swamping on a fuel truck on pipeline construction and a knowledge of applicable WCB regulations and a familiarity with the type and quantity of fuel required by various types of equipment.
Lowbed Driver	Drives tractor-truck pulling trailer on which large construction equipment is loaded and moved. Operates all types of equipment when loading and unloading and is responsible for safely tying down all loads. Haul distances vary from a few hundred feet to hundreds of miles.	Requires grade 8 or equivalent plus Class 1 driver's licence and previous pipeline construction work, 8-10 years operating heavy truck-trailer(s) on highway and off highway, and operation of other types of construction equipment.
Pickup Truck Driver	Drives truck used to pick up parts and supplies from warehouse.	Requires grade 8 or equivalent plus Class 5 driver's licence and previous pipeline work, preferable warehouse-related, and on highway and off highway truck driving experience and/or previous materials pickup and delivery work on industrial construction.
Pipe and Pole Trailer (Stringing Truck) Driver	Drives tractor-truck equipped with a pole trailer specifically designed for hauling joints of pipe for distribution along rights-of-way. Responsible for tying, untying and safety of all loads.	Requires grade 8 or equivalent plus Class 1 driver's licence, previous work on pipeline stringing and 8-10 years operation of heavy truck-trailer equipment on highway and off highway.
Semi-Trailer (Highbed/ Highboy) Driver	Drives tractor-truck pulling highbed-type trailer which is loaded with small construction equipment or heavy loads of supplies such as steel, skids, pipe, etc. Operates small types of equipment and is responsible for safely tying down all loads.	Requires grade 8 or equivalent plus Class 1 driver's licence, previous pipeline construction work and 5-8 years experience operating heavy trucks and truck-trailer equipment on highway and off highway.
Tandem Truck Driver	Drives tandem-axle truck, equipped with flat deck and winch, which is used for hauling heavy supplies. Is responsible for safely tying down all loads.	Requires grade 8 or equivalent plus Class 3 driver's licence and previous on highway and off highway heavy truck operation.

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Warehouseman	Performs duties in warehouse such as cataloguing, issuing heavy duty parts and supplies, stocking, shipping, and receiving. May make local supplies purchases.	Requires grade 8 or equivalent plus Class 5 driver's licence and previous construction warehouse work and/or general construction labour work providing a good knowledge of construction materials, supplies, parts, tools and equipment and a clerical background or aptitude.

Pipefitters

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Graded Helper	Assists pipe gang welding and tie-in crew journeymen (welders, spacers, stabbers, etc.) in all aspects of their work except actual welding.	Requires grade 10 or equivalent and 1-3 seasons work as pipeline welder's helper with some welding experience.
Mandrel Operator	Operates mandrel in pipe bending crew. This power-operated device acts as a core around which the pipe is bent so as to maintain the circular configuration of the pipe at the point of bending.	Gasfitter apprenticeship program and previous work as pipeline journeyman, clampman, spacer, stabber or welder.
Spacer	Works in co-operation with operator, stabber and welders to ensure that the proper space is maintained between the joints of pipe that are to be welded together. Signals the stabber and operator to accomplish this task.	Gasfitter apprenticeship program and previous work as pipeline spacer, stabber, welder, or pipefitter and/or at least one season's work as pipeline welder's helper on pipe gang.
Stabber	Ensure the joint of pipe to be welded is aligned through signals from spacer. Pipe is supported by a sideboom tractor.	Gasfitter apprenticeship program and previous work as a pipeline stabber, spacer or welder, and/or at least one season's work as a pipeline welder's helper in pipe gang.
Straw Boss	Under direction of Pipe Gang Foreman, supervised pipe gang welders, stabbers, spacers and labourers. Responsible to the Pipe Gang Foreman for proper alignment of pipe for welding and assists in maintaining scheduled production rate.	Gasfitter apprenticeship program and 3-5 seasons pipeline work as a pipe gang straw boss, stabber, spacer or welder.
Welder – Hot Pass	Makes second pass (weld) over the root pass. This pass, like the first, is critical to the strength of the weld.	Welder apprenticeship program and previous 3-5 seasons work as a pipeline welder – Journeyman.
Welder – Journeyman	Usually works as a backend or firing line welder placing the filler and cap on the weld following the hot pass weld. The method of welding is mechanized and is done in the confines of a welding shelter.	Welder apprenticeship program and previous work as pipeline welder and/or at least one season's work as pipeline Welder's Helper and some welding experience.
Welder – Root Bead	Makes the first weld to joint the sections of pipe being held in place by external or internal clamps. This first weld is the root or stringer bead and is critical to the strength of the weld.	Welder apprenticeship program and 3-5 seasons work as pipeline welder – Journeyman (back end).
Welder – Tie-In	A qualified employee who performs complete welds which join sections of pipeline at road, railroad, foreign pipeline, river crossings, and other locations as required. This work is usually done in the ditch.	Welder apprenticeship program and 3-5 seasons work as Welder – Stringer bead or Welder – Hot Pass.
Welder – Repair	Makes repair and miscellaneous pipeline welds, including stringer bead, hot pass and filler passes as required.	Welder apprenticeship program and 3-5 seasons work as pipeline welder – Journeyman.
Welder – Helper	Works with welder to which assigned. Cleans pipe joint bevels preparatory to welding, monitors and adjusts welding machine, maintains supply of correct welding rods and wire, cleans slag from welds, strings welding cables and does such other work as may be required in helping the welder.	Requires grade 8 or equivalent and at least one season's previous pipeline work, preferably as pipe gang labourer.

Operating Engineers

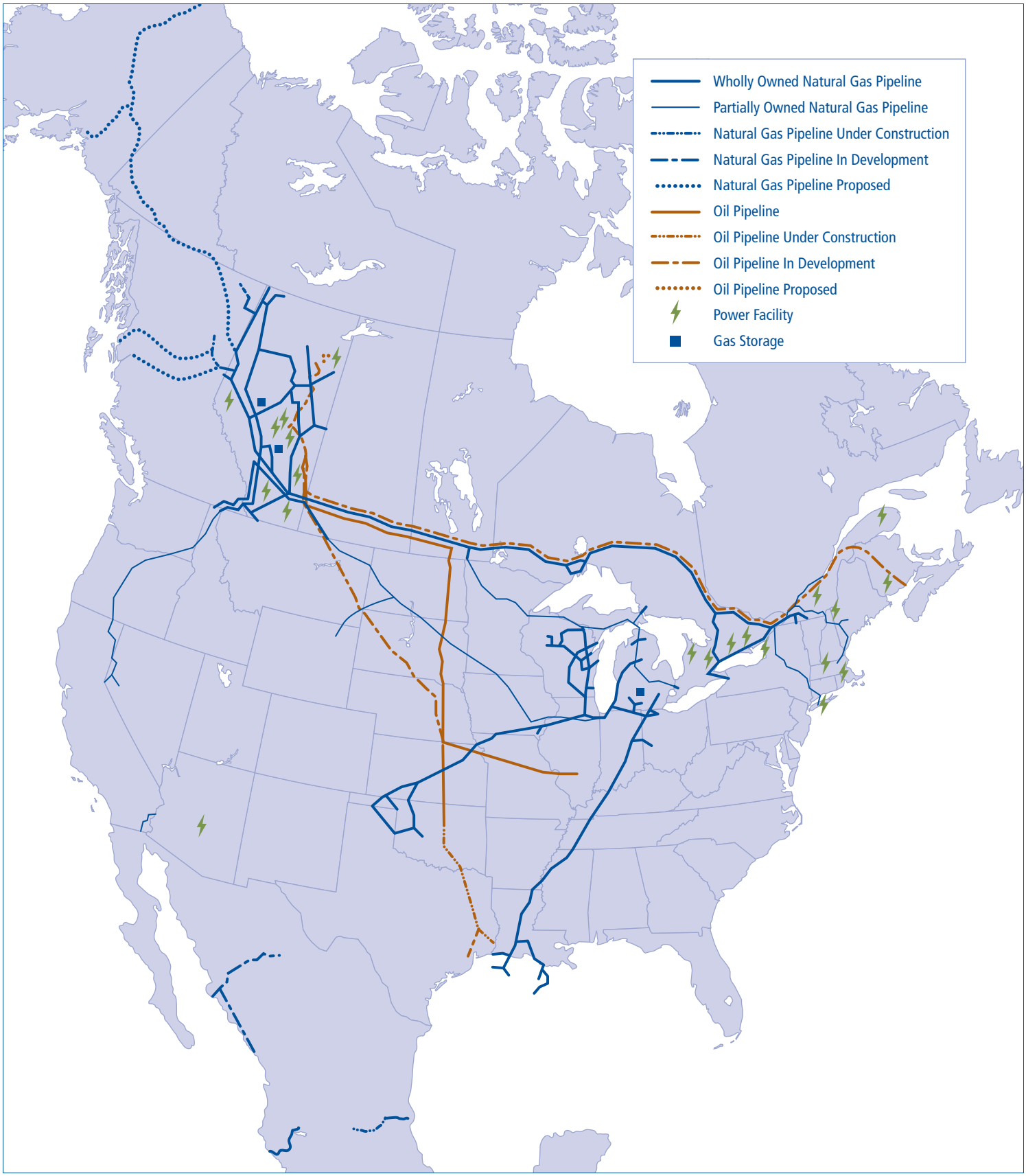
Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Air Compressor Operator	Operates air compressors for the functioning of air tools, pressure testing pipe and pigging pipe.	Requires grade 8 or equivalent and familiarity with gas and diesel driven engines and pipeline construction work.
Backfiller Operator	Operates large tractor equipped with auger, or conveyer used to place ditch spoil over the pipeline.	Requires grade 8 and previous pipeline experience operating dozer or dragline equipment in backfill crew.
Excavator Operator	Operates excavator to cut ditch, excavate bell holes for tie-in crews and road crossings and valve installations, dig river crossings, and expose existing pipelines or utility services. May dig ditches in preparation for the pipe on those segments of the right-of-way where ditching machines cannot function, such as rock and swamp. Effects running repairs (i.e., adjusts clutch, brakes, pumps).	Requires grade 8 or equivalent and previous pipeline construction work as operator of large excavator(s) and/or apprentice on this type of equipment.
Tack Rig/Tractor Operator	Operates tractor equipped with generators and/or welding machines and welding cable used on pipe gang.	Requires grade 8 or equivalent and previous Tack Rig operation and/or previous work operating tractor(s) and not less than 1 year's work in a pipe gang.
Bending Machine Operator	Operates hydraulic machine that bends joints of pipe to fit the contours of the pipeline ditch in accordance with bending Engineer's directions. Must be totally familiar with all aspects of the bending operation.	Grade 10 mathematics or equivalent and previous operation of large pipe bending machine and/or previous pipeline construction work as oiler on such equipment.
Boring Machine Operator	Operates auger-type machine used to bore pipe under roads, railroads and foreign pipelines and, in some cases, streams, canals, rivers, etc. The operator aligns the boring rig and adjusts its operation to follow line stakes. Effects running repairs (i.e. adjusts clutch, brakes, pumps).	Requires grade 8 or equivalent and previous operation of boring machines and/or previous pipeline work as boring machine operator's helper or sideboom operator.
Bulldozer Operator	Operates bulldozer for tree cutting-clearing, stump removal and burial; grading right-of-way including road crossing; stripping over-burden to expose rock on grade; and for replacing ditch spoil and cleaning up right-of-way after pipe is buried.	Requires grade 8 or equivalent and previous operation of bulldozer(s) in pipeline construction and/or industrial and road construction.
Clam/Dragline/ Mormon Board Operator	Operates large swing-type equipment with applicable bucket attachment. May operate dragline to prepare areas where backhoe cannot operate such as swamps, river beds or muskeg. Requires considerably more skill than the operation of equipment such as dozer or front-end loader.	Requires grade 8 or equivalent.
Crane Operator	Unloads and loads pipe at various pipe stock piles and rail heads. The operator does running repairs (i.e. adjusts clutch, brakes, and pumps).	Three year apprenticeship program and previous operation of heavy crane equipment on pipeline or industrial construction and/or previous pipeline construction work as apprentice on this type of equipment.
Ditching (Trenching) Machine Operator	Operates a bucket-wheel type ditching machine to dig ditches in which the pipeline is placed. The operator services and maintains the machine and is required to provide some supervision for oiler/helper. May include continuous night shift.	Requires grade 8 or equivalent and previous operation of large wheel-type ditching equipment and/or considerable previous pipeline construction work including work as an apprentice on this type of equipment.
Equipment Repair Welder's Apprentice	Assists equipment repair welder in the performance of his duties.	Requires grade 8 or equivalent and previous work as an Equipment Repair Welder Helper and/or as construction welder's helper or apprentice.
Equipment Repair Welder (Utility Welder)	Performs welding for the purpose of equipment repair and maintenance. These duties range from emergency field repairs to the major overhaul of the equipment in permanent repair shops. Does not weld on the pipeline.	Requires grade 10 or equivalent and previous work as equipment repair and fabrication welder on pipeline or industrial construction and/or previous construction work as journeyman welder.
Forklift Operator	Operates forklift to load, unload and handle pipe or other material at locations other than warehouse(s).	Requires grade 8 or equivalent and previous work as forklift, bulldozer, tow-cat or front-end loader operator on pipeline construction and/or as a front-end loader operator on other construction or logging operations.
Gradall Operator	Operates gradall to cut side slopes and trim ditches as well as expose pipes in congested pipeline areas.	Requires grade 8 or equivalent and previous operation of gradall equipment on pipeline or other construction and/or oiler on this type of equipment.
Grader Operator	Operates motor grader or patrol to remove and replace topsoil, maintain access roads, level storage yards and clean up agricultural areas.	Requires grade 8 or equivalent and previous operation of grader equipment or other construction and/or previous operation of bulldozer(s) or front-end loader(s) on pipeline construction.

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Greaser	Works in shop area. Main duties include lubricating, servicing and changing filters of trucks, automobiles and buses. Must have knowledge of complete automotive servicing. Often works night shift.	Requires grade 8 or equivalent and previous work as greaser on construction or in industrial service shop as apprentice mechanic and/or serviceman's helper.
Loader Operator	Operates wheel-type or crawler-type vehicle equipped with bucket for excavating, backfilling and loading trucks.	Requires grade 8 or equivalent and previous operation of front-end loader(s) on construction projects, road building or logging operations and/or previous operation of bulldozer(s) or front-end loader(s) on pipeline construction.
Lubrication and Service Unit Operator	Responsible for assessing, scheduling and performing service on all equipment and maintaining service records. Involves long hours of work.	Requires grade 10 or equivalent and previous operation of pipeline lubrication and service unit and/or previous truck operation on and off highway and extensive experience in lubricating heavy equipment, changing filters and servicing hydraulic equipment.
Mechanic	Repairs and maintains equipment such as backhoes, tractors, welders, trucks, etc. used on the construction project. These duties range from emergency field work to the major overhaul of the equipment in permanent repair shops. May involve long hours of work.	Requires grade 10 or equivalent and previous maintenance and repair of heavy pipeline construction equipment (dozers, backhoes, front-end loaders, sidebooms, cranes, etc.) and trucks.
Mechanic Apprentice	Assists the mechanic in the performance of his duties. May involve long hours of work.	Requires grade 10 or equivalent and previous work as mechanic helper on pipeline or other construction and/or general experience maintaining and repairing a variety of industrial wheeled and tracked equipment.
Apprentice Operator	An apprentice assists the operator of ditching machines, backhoes, clams, draglines and cranes by measuring depths, helping to service equipment and other duties as required. Usually has opportunity to learn how to operate the machine.	Requires grade 8 or equivalent and previous work as swamper on pipeline or other construction and/or previous general pipeline construction experience.
Pump Operator	Operates and services water pumps to dewater ditches and road crossings. Does not operate the specialized high pressure pumps used on testing operations.	Requires grade 8 or equivalent and previous operation of low pressure water pumps on pipeline or industrial construction and/or previous pipeline work as operator of small equipment or oiler on testing crew high pressure pump(s).
Sideboom Tractor Operator	Performs the more complicated functions of the sideboom such as bending, setting up and setting in pipe joints, lowering and tying-in pipe, unloading and stringing of single lengths of pipe. Supervises swamper or cradling pumps, boring machines, welding shelter and assigned to assist in the operation of the equipment.	Requires grade 8 or equivalent and previous pipeline work as advanced sideboom operator and/or not less than two seasons as beginner sideboom operator.
Skidder Operator	Operates a rubber-tired logging tractor equipped with winch and dozer for collecting felled timber and logs.	Requires grade 8 or equivalent and previous operation of skidder equipment on pipeline or other construction or logging operations; and/or pipeline work as bulldozer or tow tractor operator or oiler on skidder.
Tow Tractor Operator	Operates tow tractor which is a track mounted tractor equipped with a winch and cable. Tractor is used for towing other equipment, fuel tanks, and anchoring equipment on steep slopes.	Requires grade 8 or equivalent and previous operation of tow tractor on pipeline or other construction and/or heavy tracked equipment and winch operation on other construction.

Supervisory and Field Administration

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Accountant	Plan, organize, direct and control field office accounting activities.	High school graduation with specialized business accounting courses and previous work as a pipeline field office accountant and/or as an accountant in the head office of a construction company.
Assistant Superintendent	Assist the Superintendent in the planning, organization, direction and supervision of all construction activities assigned to him and responsible to the Superintendent for cost-effective attainment of production goals set by the contract or the Superintendent.	Grade 12 or equivalent and a minimum of 10 years pipeline construction experience including not less than 3-5 years as Crew Foreman or Project Engineer.
Clerk	Responsible to Office Manager for performing clerical and accounting functions such as payroll, accounts payable, typing, filing, progress reports, invoicing, etc. as required.	Grade 12 commercial course graduate or equivalent and previous clerical work on pipeline or other construction and/or general business office experience.
Field Engineer	Address technical questions or problems arising during construction and confirms correct interpretation of design specifications, construction and logistics plans and schedules, etc. within assigned scope of responsibility.	Engineering degree or equivalent technical school diploma and 1-3 years design/construction on relevant projects.
Land Adjuster (Landman, Claimsman)	Responsible to Project Manager or Superintendent for the cost-effective adjustment of claims arising out of damages to property, etc., caused by pipeline construction or related operations.	Grade 12 or equivalent and 5 years experience on pipeline construction, including at least 1 year of construction office work.
Master Mechanic	Direction and supervision of spread mechanics and equipment service personnel. Responsible to Superintendent for cost-effective servicing, maintenance and repair of spread equipment to enable the respective crews to attain production goals set by contract or the Superintendent.	Grade 10 or equivalent and 5-8 years as a mechanic on pipeline construction.
Office Manager	Responsible to the Project Manager or Superintendent and company management for the supervision of staff under his direction affecting timely production of payroll, maintenance of operating expense accounts, administration of operating funds, preparation of cost and other progress reports, maintenance and retrieval of all required construction records and proper performance of all field office accounting functions.	Grade 12 or equivalent and previous work as Field Office Manager and/or at least 2 years experience as a senior field office clerk on pipeline construction.
Backfill Foreman	Direction and supervision of the crew which effects backfill of the trench following lowering in of the pipeline. May also be responsible for direction and supervision of cleanup crew(s). Responsible to the Superintendent for cost-effective attainment of crew production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as a bulldozer, dragline or backfiller operator, with at least one season in backfill crew(s).
Bending Foreman	Direction and supervision of the crew which effects bending of pipe joints as directed by the Bending Engineer so the pipeline will follow the ditch centre-line and geographical contours. Responsible to the Superintendent for cost-effective attainment of crew production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as a bending machine or sideboom operator, with at least 1 year on Bending Crew(s).
Cleanup Foreman	The cleanup foreman is responsible for the placement of previously stockpiled topsoil. Direction and supervision of crew(s) which effect cleanup and restoration of all areas disturbed or damaged by pipeline construction or related activities. Responsible to the Superintendent for cost- effective attainment of crew production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as bulldozer, dragline or motor grader operator, with at least 1 year on Cleanup Crew(s).
Clearing Foreman	Direction and supervision of crew(s) which effect the hand/or machine clearing and disposal of trees and brush on the pipeline right-of-way preparatory to grading and subsequent construction operations. Responsible to the Superintendent for cost-effective attainment of production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as operator of bulldozer, with at least 1 year on Clearing Crew(s).
Coating Foreman	Direction and supervision of the crew(s) which (after welding and before lowering in and backfill) effect pipeline sand blasting activities and application of protective coating of girth welds and valve assembly in accordance with contract specifications. Responsible to the Superintendent for cost-effective attainment of crew(s) production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as operator of cleaning or wrapping machine, or sideboom tractor, with at least 1 year on Cleaning or Wrapping Crew(s).
Ditch Foreman	Direction and supervision of the crew(s) which excavate the pipeline trench in accordance with contract specifications and the location stakes provided. Responsible to the Superintendent for cost-effective attainment of crew(s) production goals set by contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as operator of trenching machine, backhoe, clam, dragline or bulldozer, with at least 1 year on ditching crew(s).
Pipe Foreman	Direction and supervision of the pipe gang which effects pipe joint placement and the stringer bead and hot pass welds in accordance with stringent contract specifications. Responsible to the Superintendent for cost-effective attainment of crew(s) production goals set by the contract or the Superintendent.	Grade 10 or equivalent and 3-5 seasons pipeline construction work as stabber, spacer or hot pass or stringer bead welder.

Role	General Accountabilities	Minimum Entry-Level Requirements (may be subject to change)
Grading Foreman	Direction and supervision of the crew(s) which grade pipeline right-of-way to provide a suitable contoured working surface for subsequent construction operations. The Grade Foreman may be responsible for topsoil stripping and stockpiling activities. Responsible to Superintendent for cost-effective attainment of crew(s) production goals set by the contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as a bulldozer operator, with at least 1 year on right-of-way crew(s).
Stringing Foreman	Direction and supervision of crew(s) which load pipe joints at delivery or stockpile sites, haul them to the work site and string them along the right-of-way in advance of the Bending Crew. Responsible to the Superintendent for the cost- effective attainment of crew(s) production goals set by contract or the Superintendent.	Grade 8 or equivalent and 3-5 years pipeline construction work, usually as a sideboom or crane operator or stringing truck driver, with at least 1 year on stringing crew(s).
Tie-in Foreman	Direction and supervision of the crew(s) which affect the tie- in of completed pipeline sections in accordance with stringent contract specifications. Tie-in Foreman may also be responsible for road boring activities and also the installation of fabricated assemblies. Responsible to the Superintendent for cost-effective attainment of crew(s) production goals set by the contract or the Superintendent.	Grade 10 or equivalent and 3-5 seasons pipeline construction work as operator, stabber, spacer or welder on pipeline tie-in crew(s).
Welder Foreman	Direction and supervision of the (Back End) Welding Crew which follows the Pipe Gang and effects the filler and cap weld passes in accordance with stringent specifications. Responsible to the Superintendent for cost-effective attainment of crew(s) production goals set by the contract or the Superintendent.	Grade 10 or equivalent 3-5 seasons pipeline construction work as Welder – Journeyman (back end).
Project Manager	Plans, organizes, directs, supervises and controls through subordinate managers and supervisory personnel the preparation of construction estimates, purchase of materials and equipment, preparation and implementation of schedules, the co-ordination and control of construction and related activities, maintenance of records and preparation of reports, and all other aspects of the work. Responsible to company management for the cost-effective attainment of goals set by the contract or company management.	Normally grade 12 and up and a minimum of 10 years pipeline or industrial project management experience.
Project Superintendent	Plans, organizes, directs and supervises through subordinate personnel all construction and related field activities and is responsible to the Project Manager or company management for cost-effective attainment of production goals set by the Contract, Project Manager or company management.	Requiring grade 12 or equivalent and 10-15 years pipeline construction experience including not less than 1-5 years as Assistant Superintendent.
Purchasing Agent	Responsible to the Superintendent or Project Manager for the cost-effective procurement of parts, tools, supplies and materials required for the work.	Grade 12 or equivalent and at least 2 years work as pipeline construction purchasing agent or warehouseman.
Safety Supervisor	Responsible to the Superintendent or Project Manager for project safety and first aid. Develops construction safety programs and advises correction of unsafe procedures. Investigates and records accident details and is responsible to the Office Manager for the necessary completion and filing of accident and Workers Compensation reports.	Requiring grade 10 or equivalent and at least 2-3 years as First Aid Attendant on pipeline construction.
Security Personnel	Patrols unoccupied work site, warehouse, storage, and field office areas as assigned in order to reduce possibilities of loss or damage to property resulting from fire, theft, etc. Involving regular night work.	Grade 10 or equivalent and previous security work.
Secretary	Transcribes and types correspondence, type reports and other documents, maintains appropriate correspondence logs and office files and performs such other general secretarial office duties as may be required by the Field Office Manager.	Grade 10 or equivalent and previous stenographic or typing work preferably with construction company.
Warehouse Manager	Responsible to the Superintendent or Project Manager for the storage and control of parts, tools, supplies and materials required for the work. Organizes and manages project warehouse and administers inventory controls.	Grade 12 Commercial Diploma or equivalent and at least 2 years work as pipeline construction Warehouse Manager and/or warehouseman.



Prince Rupert Gas Transmission
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E-mail: princerupertgas@TransCanada.com
www.princerupertgas.com

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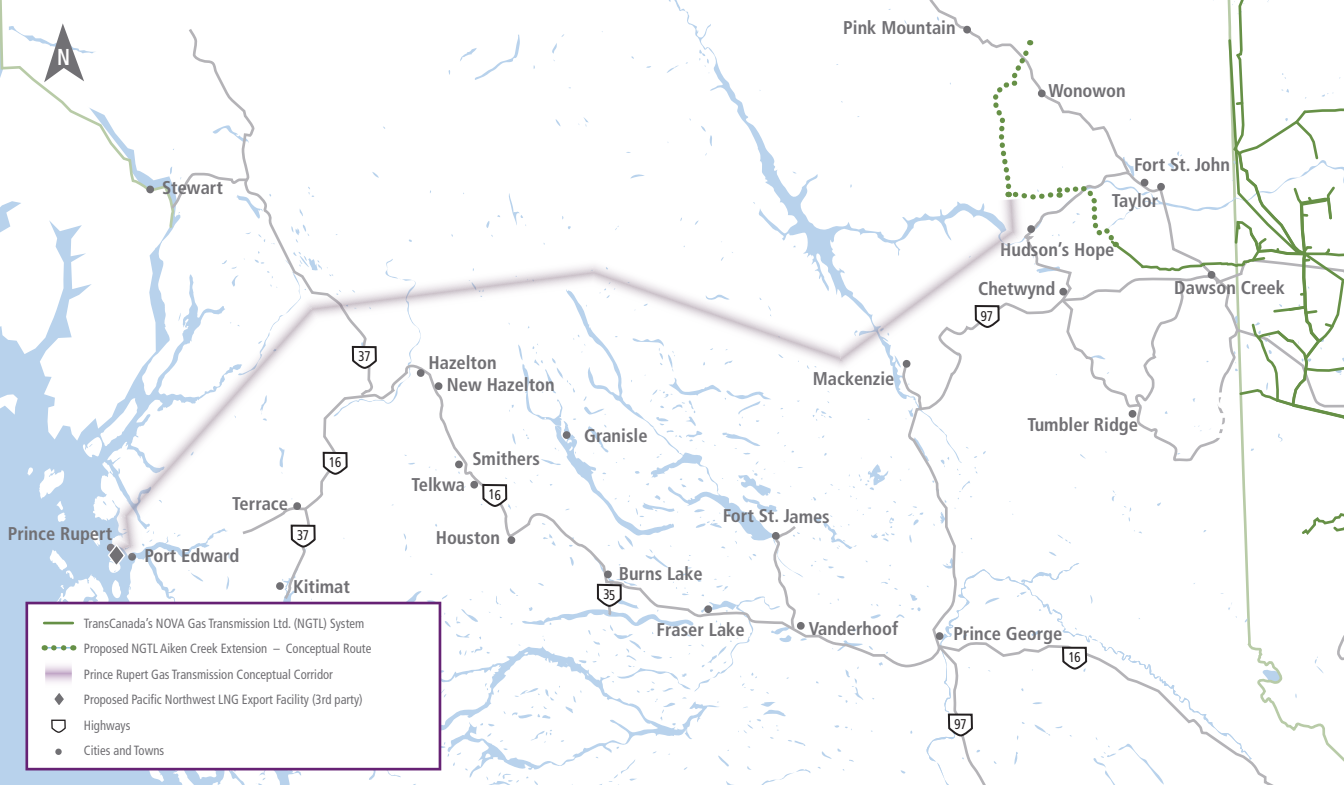
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Pink Mountain
Wonowon
Fort St. John
Taylor
Hudson's Hope
Chetwynd
Dawson Creek
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Mackenzie
Tumbler Ridge
Stewart
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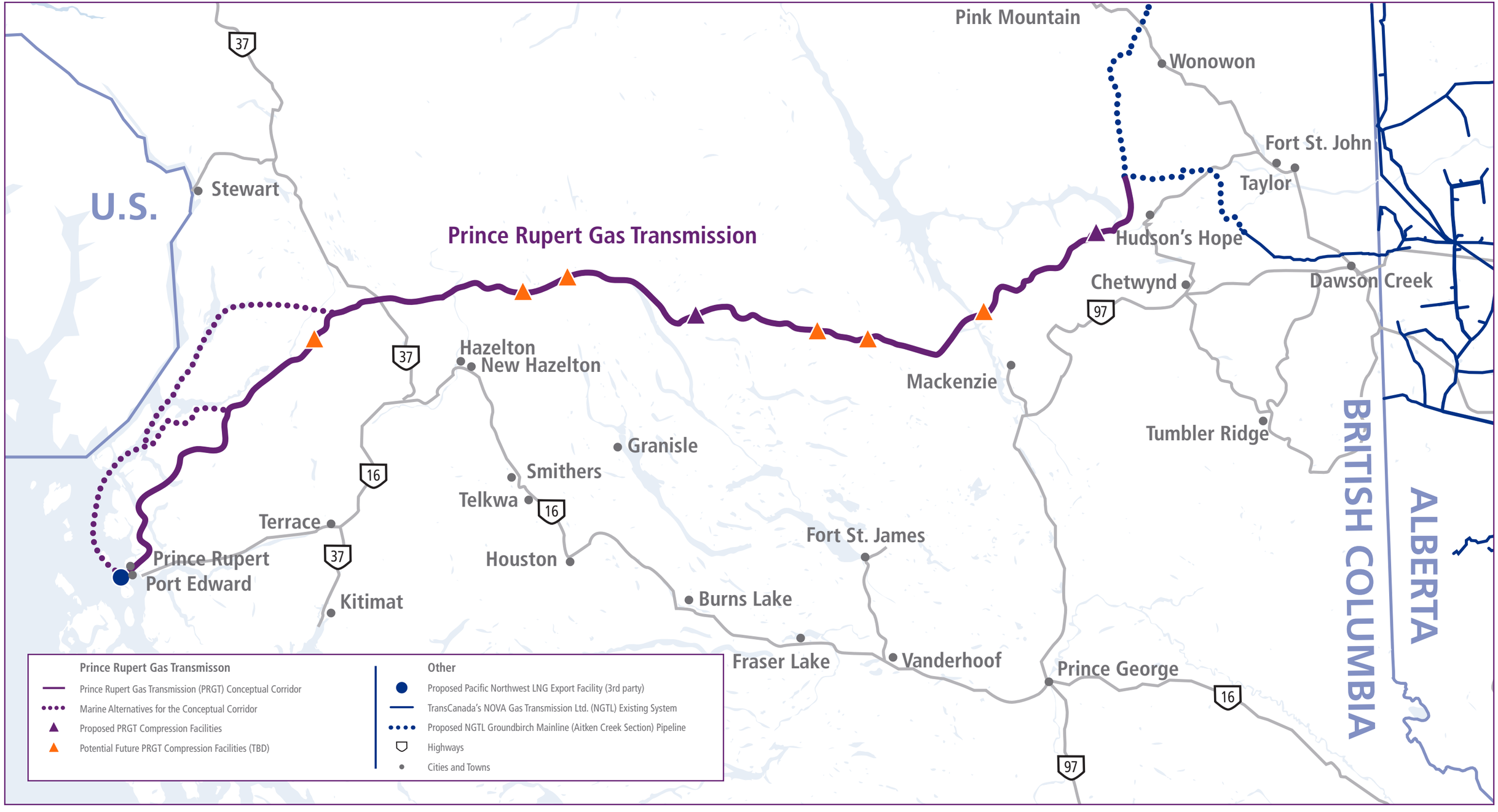
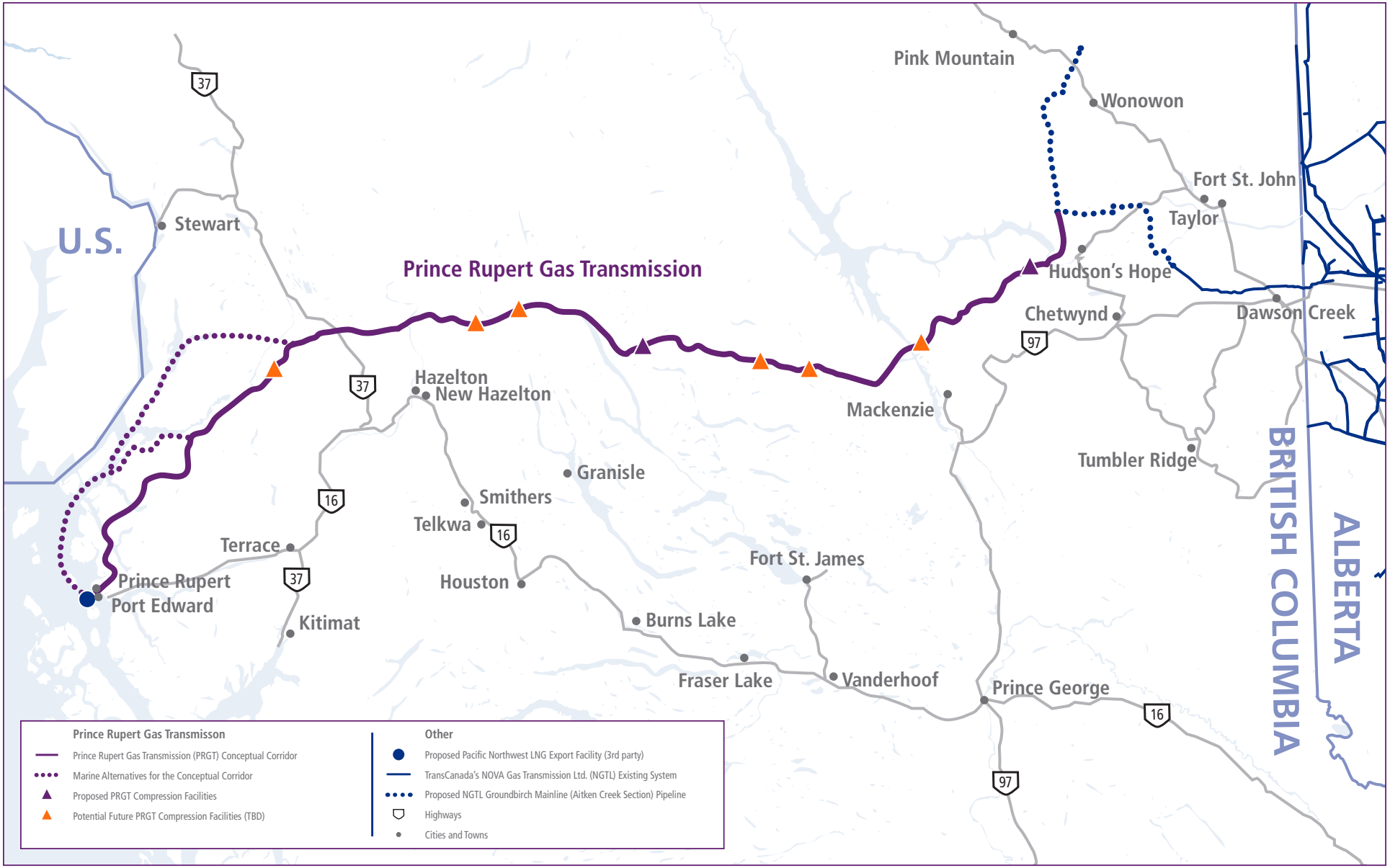
Hazelton
New Hazelton
Granisle
16
Smithers
Telkwa
16
Terrace
37
Houston
Fort St. James
Prince Rupert
Port Edward
Kitimat
Burns Lake
35
Fraser Lake
Vanderhoof
Prince George
16
97
TransCanada's NOVA Gas Transmission Ltd. (NGTL) System
Proposed NGTL Aiken Creek Extension – Conceptual Route
Prince Rupert Gas Transmission Conceptual Corridor
Proposed Pacific Northwest LNG Export Facility (3rd party)
Highways
Cities and Towns



Routes will not be finalized until we have engaged with Aboriginal groups and stakeholders such as landowners, local communities and government. Other routing factors include the environment, archaeological and cultural values, land use capability, safety, constructability and economics.



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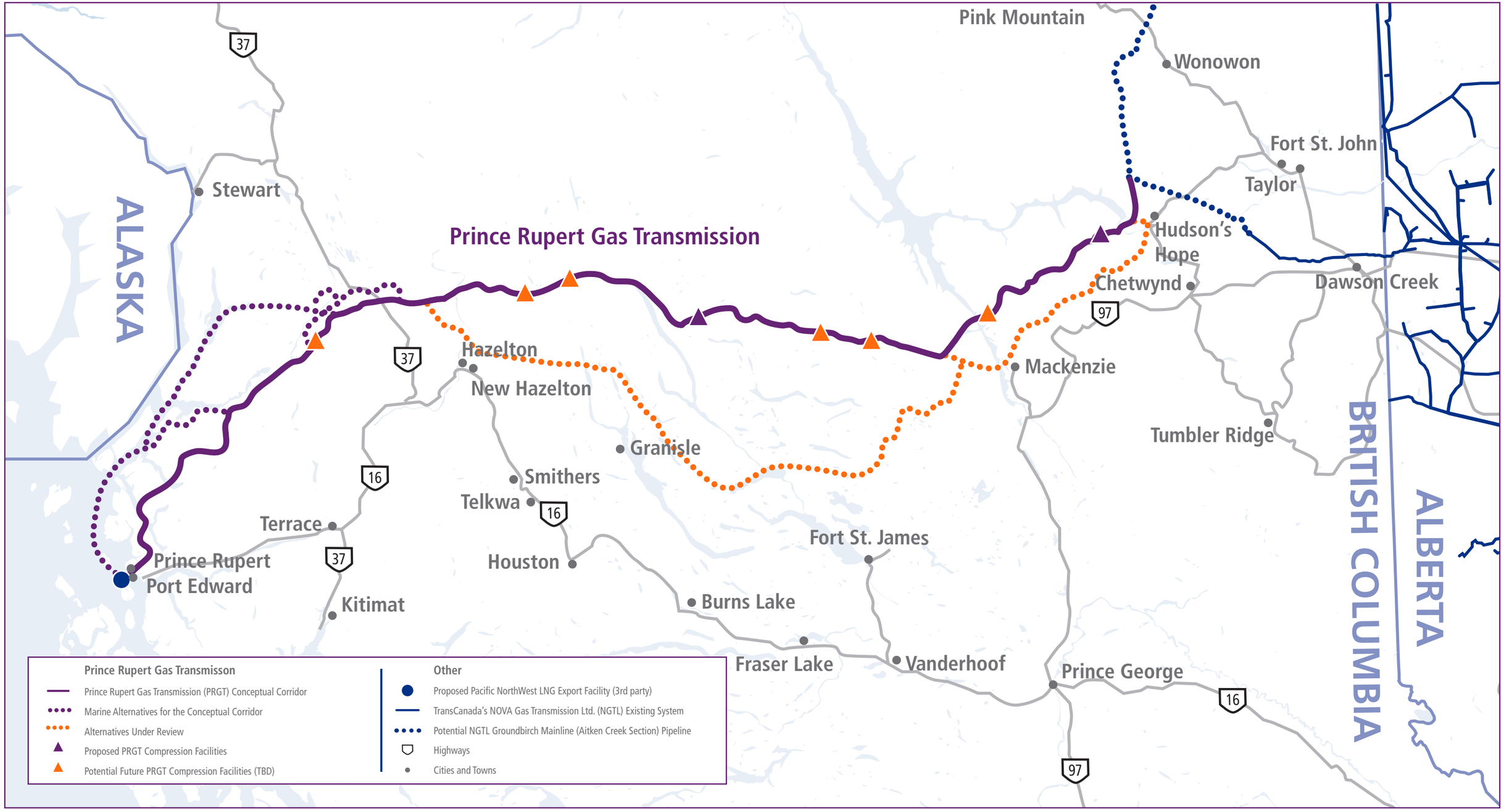
TransCanada

May - 2013

Prince Rupert
Gas Transmission Project

Prince Rupert Gas Transmission Projects Conceptual Corridor



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STIKINE
BEAR LAKE
MEZIADIN JUNCTION
STEWART
CRANBERRY JUNCTION
ALICE ARM
KITIMAT-STIKINE
GITWINKSIHLKW
GITLAXT'AAMIKS
LAXGALTS'AP
GINGOLX
MILL BAY
GITANYOW
HAZELTON
NEW HAZELTON
KITWANGA
MORICETOWN
ROSSWOOD
BULKLEY HOUSE
TAKLA LANDING
FORT BABINE
OLD FORT
BULKLEY-NECHAKO
GRANISLE
TOPLEY LANDING
SMITHERS
TELKWA
TOPLEY
HOUSTON
TERRACE
PORT SIMPSON
GEORGETOWN MILLS
PRINCE RUPERT
PORT EDWARD
PORT ESSINGTON
SKEENA-QUEEN CHARLOTTE
KITIMAT
DECKER LAKE
BURNS LAKE
ENDAKO
FRASER LAKE
FORT FRASER
COLLEYMOUNT
VANDERHOOF
FORT ST JAMES
BEAR LAKE
GISCOME
PRINCE GEORGE
FRASER-FORT GEORGE
MACKENZIE
PEACE RIVER
PINE VALLEY
LEMORAY
BERYL PRAIRIE
FARRELL CREEK
HUDSON'S HOPE
BRITISH COLUMBIA
ALBERTA

LEGEND

- FUTURE COMPRESSOR STATION (CONCEPTUAL)
- INITIAL BUILD COMPRESSOR STATION (CONCEPTUAL)
- METER STATION
- STUDY CORRIDOR
- CONCEPTUAL CORRIDOR
- NGTL NORTH MONTNEY MAINLINE EXTENSION
- EXPRESSWAY / HIGHWAY
- OTHER ROAD / ACCESS
- RAILROADS
- NISGA'A LANDS
- CITY/TOWN
- PROVINCIAL PARK
- PROTECTED AREA

* 3009.1, 3208, 3304, 5012, 5104, 5205, 5304, 5401, 6107, 6306, 6509

25 0 25 KILOMETRES

COORDINATE SYSTEM: NAD 1983 BC ENVIRONMENT ALBERS
PROJECTION: ALBERS
DATUM: NORTH AMERICAN 1983

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Prince Rupert Gas Transmission Project

UniversalPegasus INTERNATIONAL

PRINCE RUPERT GAS TRANSMISSION PROJECT

UPDATED STUDY CORRIDOR

NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRN	CKD	APP
A	ISSUED FOR COMMENT	2013-11-20	JRF	JWK	

UPI REFERENCE NUMBER	SSEID	SCALE	DRAWING NUMBER	SHEET NO	REV
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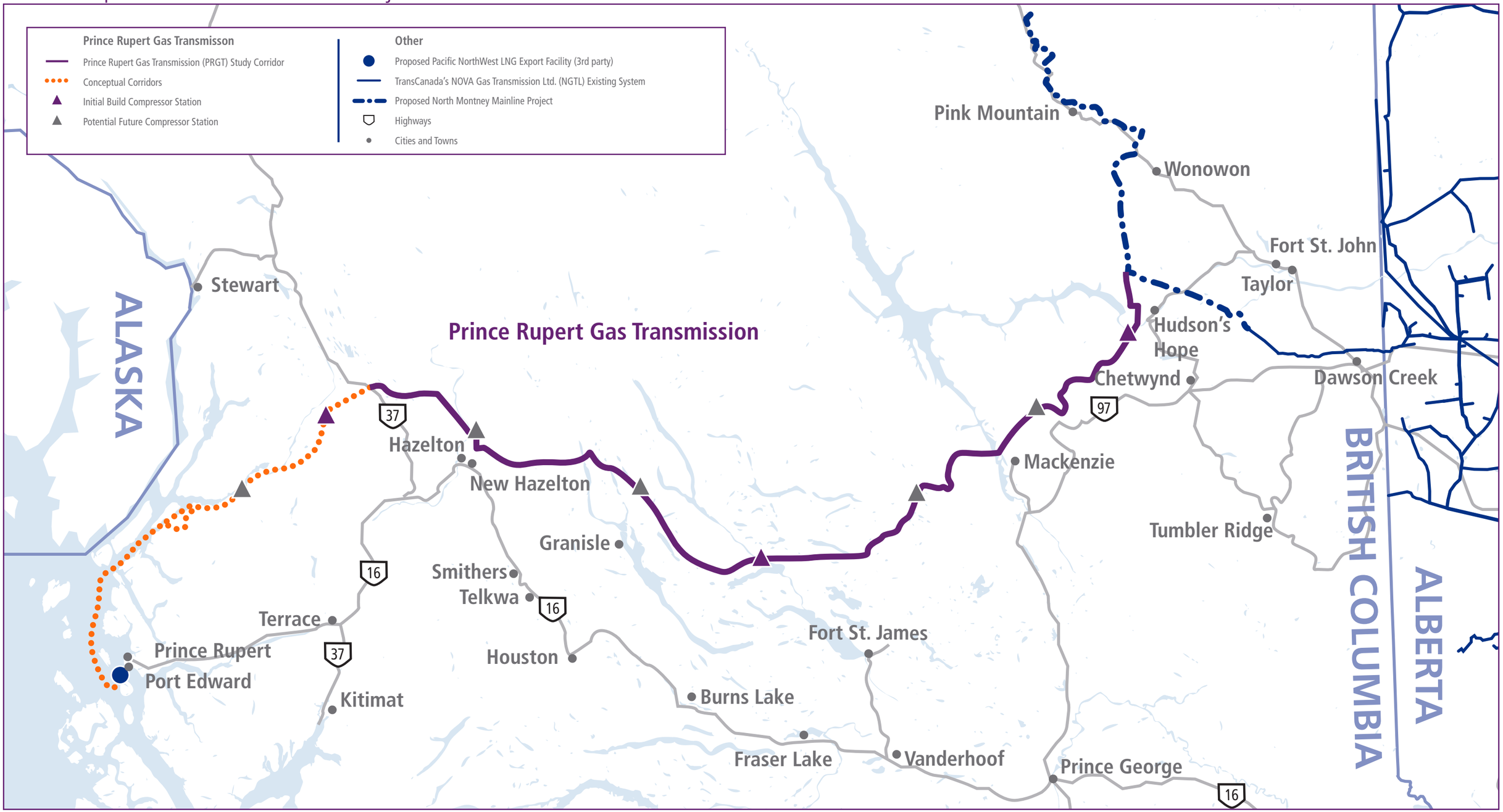
SIZE: ISO A0 - VERSION: C

Prince Rupert Gas Transmission Project



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