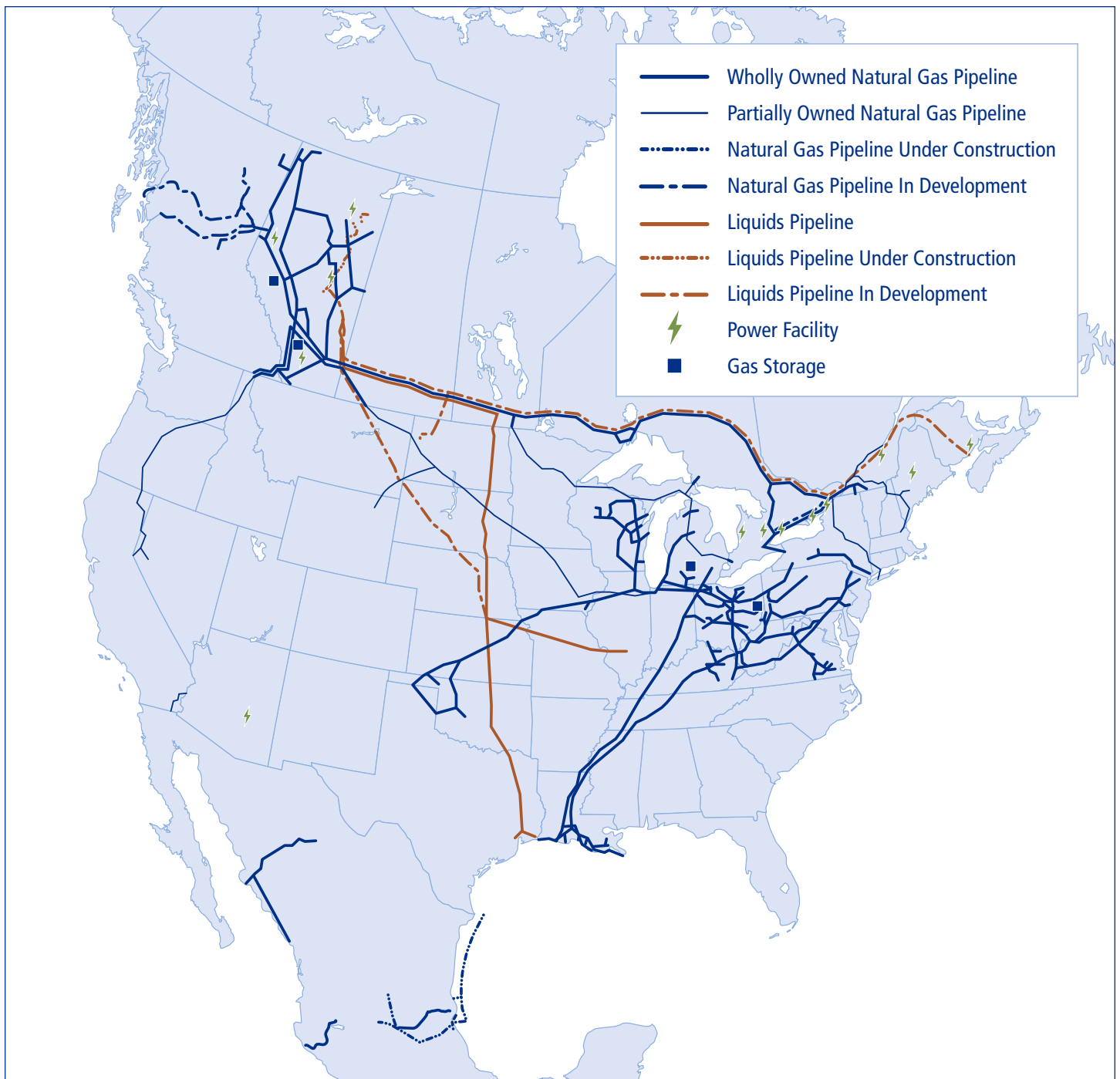




Work Safely

Guidelines for Development Near Our Pipelines and Facilities





About Us

With more than 65 years' experience, TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure including natural gas and liquids pipelines, power generation and gas storage facilities. TransCanada operates one of the largest natural gas pipeline networks throughout Canada, the United States and Mexico, stretching over 91,500 kilometres (kms) (56,900 miles) and tapping into virtually every major gas supply basin to transport more than 25 per cent of the continent's daily natural gas supply. We are North America's leading provider of gas storage

and related services with 653 Bcf of storage capacity. We are also the developer and operator of a leading liquids pipeline system that extends over 4,300 kms (2,700 miles), connecting growing oil supplies to key markets and refineries. A large independent power producer, TransCanada owns or has interests in 12 power generation facilities with the capacity to generate approximately 6,200 megawatts of electricity, enough to power more than six million homes. More than half of the power we produce comes from emission-less sources including nuclear, wind and solar.

Our Pipelines

Pipelines are the safest and most efficient method to transport natural gas and oil to market. Natural gas is odourless, colourless and will dissipate quickly when released because it is lighter than air. However, the gas is flammable and can be explosive if ignited. Crude oil is a liquid mixture of naturally occurring petroleum hydrocarbons and can possess a rotten egg, gasoline, tar or “skunk-like” odour. Crude oil vapours are volatile, and can be flammable and explosive.

Typically, TransCanada does not own the land where our pipelines are located, but instead acquires the right prior to construction to install and operate the pipeline and related facilities within a pipeline right-of-way through an easement or right-of-way agreement with the landowner. The terms of the right-of-way agreements vary but generally provide TransCanada with the right to access, construct, operate, maintain and abandon the pipeline within the right-of-way. The width of the right-of-way is based on the size and type of the pipeline and related facilities. By contrast, TransCanada does typically own the land where both compressor stations, which re-pressurize gas along the pipeline to ensure the gas flows continuously at a desired flow rate, and pump stations, which pump oil through the pipeline from one point to the next, are located. The lands required for meter stations, which measure product volume, are either leased directly from landowners or owned by TransCanada.

Regulatory Requirements

TransCanada’s pipeline design, construction and maintenance programs meet or exceed industry and government standards. In Canada, our operations are regulated by provincial and federal authorities including the National Energy Board (NEB). Legislation and regulations set out the requirements governing activities in proximity and on pipeline rights-of-way, including vehicle and equipment crossings, construction of facilities on or near a right-of-way, and other activities that could cause ground disturbances, which might impact the pipeline. Such legislation and regulations aim to ensure the safety and protection of the public, our employees, the environment as well as our pipeline facilities and other property.

Safety

At TransCanada, we seek to anticipate and minimize hazards of every description. From design and construction to operation and maintenance, safety is an integral part of everything we do. TransCanada regularly communicates pipeline safety information to stakeholders through our Public Awareness Program.

Our safety practices include monitoring changes in land use near our pipeline facilities. This can involve meetings with landowners, municipal decision makers, administrative staff and land use planners.

TransCanada also has an extensive Pipeline Maintenance Program that ensures our pipeline facilities are regularly monitored, inspected and repaired in order to meet or exceed best industry practices and regulatory requirements. Our entire pipeline transmission system is monitored from our control centres 24 hours a day, 7 days a week. In addition, TransCanada carries out the following activities as part of our Pipeline Maintenance Program:

Aerial patrols – TransCanada carries out aerial patrols of the pipeline route to identify hazards from outside sources, including unauthorized construction and ground disturbances near the pipeline. Sensitive detection equipment may be used during these patrols to identify gas leaks.

In-line pipeline inspections – TransCanada conducts in-line pipeline inspections using tools that travel through the pipeline collecting data and looking for locations where corrosion, metal loss or dents may have occurred.

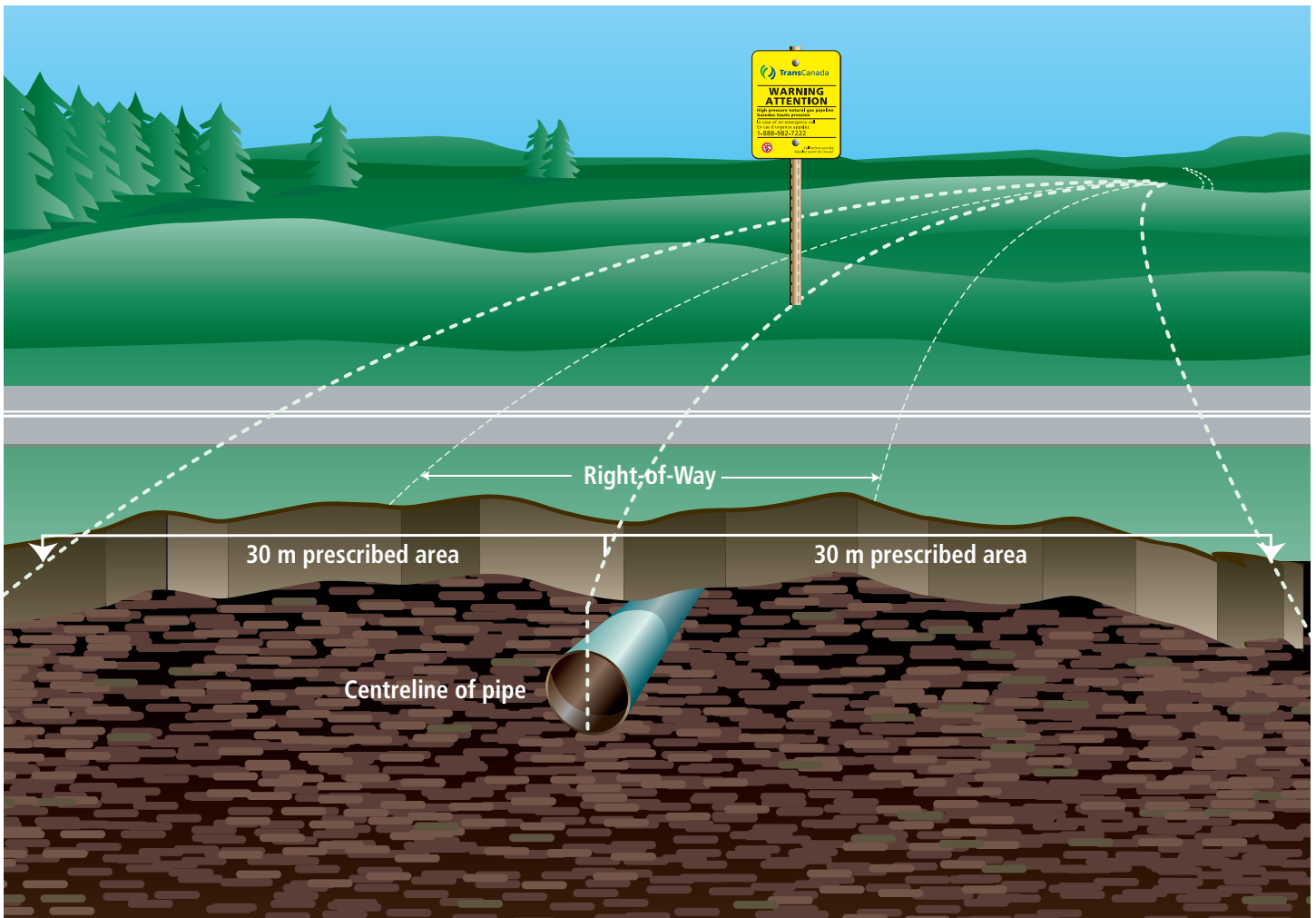
Hydrostatic testing – TransCanada uses hydrostatic testing, typically at the completion of pipeline construction, but to verify the safety of existing pipelines. Sections of the pipeline are filled with water and the pressure is increased beyond normal operating pressure to test pipeline strength and identify any pipeline leaks.

Cathodic protection – TransCanada uses cathodic protection, which involves applying a low-voltage electrical current to the metal pipe to protect the pipeline against corrosion. The cathodic protection system is monitored regularly to ensure proper protection against pipeline corrosion.

Pipeline signage – TransCanada installs pipeline signs at all road, rail, and waterbody crossings and at other strategic points along the pipeline route to identify the approximate location of our pipelines. Pipeline signs contain important information such as:

- the owner of the pipeline;
- the product shipped in the pipeline; and
- emergency contact numbers

BE AWARE: Pipeline signs will not designate the exact location, depth or number of pipelines in the area. Contact your local One-Call Centre and TransCanada will send a representative to the proposed excavation site to mark the pipeline.



Approvals For Working Around TransCanada's Facilities

To ensure our pipelines and facilities operate safely, written consent from TransCanada must be obtained in Canada before any of the following:

- Constructing or installing a facility across, on, along or under a TransCanada pipeline right-of-way.
- Conducting ground disturbance (excavation or digging) on or within the prescribed area (30 metres or 100 feet from the centreline of the pipeline).
- Driving a vehicle, mobile equipment or machinery across a TransCanada pipeline right-of-way outside the travelled portion of a highway or public road.
- Using any explosives within 300 metres or 1,000 feet of TransCanada's pipeline right-of-way.
- Use of the prescribed area for storage purposes.

The following are examples of ground disturbances:

- digging
- excavation
- trenching
- ditching
- tunneling
- boring/drilling/pushing
- augering
- topsoil stripping
- land levelling/grading
- plowing to install underground infrastructure
- tree or shrub planting
- clearing and stump removal
- subsoiling
- blasting/using explosives
- quarrying
- grinding and milling of asphalt/concrete
- seismic exploration
- driving fence posts, bars, rods, pins, anchors or pilings
- in-ground swimming pools

Locate Request

Any person planning to construct a facility across, on, along or under a pipeline (including the right-of-way), conduct a ground disturbance activity within 30 metres of the centreline of a pipe, or operate a vehicle or mobile equipment across a right-of-way, must request a locate service. Locate requests can be made online (www.clickbeforeyoudig.com), via mobile apps (Alberta, Saskatchewan and Quebec) or via phone (see the back of this booklet for more details). The locate request must be made at least three working days in advance of the ground disturbance, construction activity, or vehicle or mobile equipment crossing. The One-Call Centre will notify TransCanada to send a representative to mark the facilities with flags, paint or other markings in order to help you avoid damaging them. The TransCanada representative will explain the significance of the markings and provide you with a copy of the locate report. The service is free and could prevent accidents, injuries or deaths.

Written Consent

After you apply for written consent, TransCanada will assess the planned work to ensure it does not pose a risk of damage to the pipeline and to ensure that access to the pipeline for maintenance or emergency purposes is not impeded. Obstacles on a right-of-way, such as sheds, trailers, boats, garbage and vegetation can interfere with TransCanada's Pipeline Maintenance Program (detailed in Safety section above). In some cases, TransCanada may require additional time to assess the situation prior to providing consent.

In review, prior to commencing any activities in proximity to the pipeline, you must:

- Make a locate request
- Obtain TransCanada's written consent (apply online at writtenconsent.transcanada.com or call 1.877.872.5177). Often written consent for minor activities can be obtained directly from regional TransCanada representative through a locate request.
- Obtain TransCanada's safety practices to be followed while working in the vicinity of its pipes or prescribed area and information that clearly explains the significance of the locate markings.

Mobile Equipment and Vehicle Crossings

The operation of a vehicle or mobile equipment across a TransCanada right-of-way requires TransCanada's written consent, **except** in the following circumstances:

- Vehicle or mobile equipment is operating within the travelled portion of a highway or public road across the right-of-way
- Vehicle and mobile equipment is being used to perform an agricultural activity and the following conditions are being met:
 - the loaded axle weight and tire pressures of the vehicle is being operated within the manufacturer's approved limits and operating guidelines; and
 - the point of crossing has not been identified by TransCanada as a location where a crossing could impair the pipeline's safety or security



Warning Sign



Warning Sign



Vent Marker



Aerial Marker



Agricultural Activities

Agricultural activity involves the work of producing crops and raising livestock and includes tillage, plowing, disking, harrowing, and pasturing but does not include the construction of new buildings or the placement of footings, foundations, pilings or posts.

The following agricultural activities do not require written consent from TransCanada:

- Cultivation activities (e.g. tillage, plowing, disking and harrowing) to a depth of less than 45 centimetres, as these activities are exempt from the applicable statutory definitions of a ground disturbance (See the *Approvals for Working Around TransCanada's Facilities* section).
- Agricultural vehicle and mobile equipment crossings as described in the *Mobile Equipment and Vehicle Crossings* section above.

Development On or Near the Pipeline Right-of-way

It is important for municipal authorities, developers and landowners to consult with TransCanada early in the planning stage of a development project on or near a right-of-way to ensure that TransCanada's pipelines and facilities are appropriately incorporated into the plan and that any new development near our facilities meets regulatory and TransCanada requirements.

Contact TransCanada before developing within 750 metres of TransCanada compressor stations and pump stations so that we can analyze potential impacts and recommend measures to protect adjacent lands from industrial impacts.

TransCanada requires significant advance notice for any development which increases the population density within approximately 200 metres of a pipeline. Population growth means potential changes to the operating requirements of the pipeline, and could result in a revision to operating pressure, a pipeline replacement, and/or other mitigation actions as necessary. Failure to consult with TransCanada in advance may result in significant delays and costs to the development.



Municipalities often prescribe minimum setback distances to restrict the building of a structure within a prescribed distance from a curb, property line, right-of-way or structure. These setbacks can help to minimize the risk of damage to buried infrastructure. As municipal setback requirements vary, contact the local authority and TransCanada to determine the requirements in your area.

Any ground disturbance within 30 metres of the centerline of the pipe, construction of a facility across, on, along or under a pipeline (including the right-of-way), or vehicle or mobile equipment crossing the pipeline right-of-way may not occur without TransCanada's written consent. For detailed guidelines about applying for written consent from TransCanada, visit [writtenconsent.transcanada.com](https://www.transcanada.com/writtenconsent) or call 1.877.872.5177. A copy of the guidelines can also be provided upon request.

The following must be taken into consideration when planning a development project.

Subdivisions – Contact TransCanada early in the design process so that we can comment on the proposed subdivision plans. TransCanada's practice is that our right-of-way be used as a passive green space or as part of a linear park system. Permanent structures on the right-of-way are not permissible.

Roads and Utilities – Contact TransCanada when designing roads and utilities. Roads may be permitted to cross and/or run parallel to the right-of-way, but no portion of a road allowance can be located on the right-of-way (apart from approved road crossings). TransCanada will also review the location of utilities, which are often proposed to be installed within road allowances.

Blasting – Contact TransCanada before conducting any blasting activities within 300 metres of the pipeline right-of-way so TransCanada can review your plans for potential impacts to its facilities. Blasting activities related to prospecting for mines and minerals within 40 metres of a federally regulated pipeline right-of-way require permission from the NEB.

Landscaping – Contact TransCanada for written consent before landscaping. Projects such as pedestrian pathways and the planting of trees and shrubs may be permitted as long as they do not impede TransCanada's access along its right-of-way for operational or maintenance activities. Our written consent will specify the permitted landscaping requirements.



Contact Us

Call or Click Before You Dig – It's Free
www.clickbeforeyoudig.com

One-Call Centres

British Columbia	1.800.474.6886
Alberta	1.800.242.3447
Saskatchewan	1.866.828.4888
Manitoba	1.800.940.3447
Ontario	1.800.400.2255
Quebec	1.800.663.9228

Mobile phone apps

Alberta	Dig Info AB
Saskatchewan	Sask 1st Call
Quebec	Info-Excavation

For Emergencies 1.888.982.7222

For General Inquiries 1.855.458.6715
 Email public_awareness@transcanada.com

For General Landowner Inquiries 1.866.372.1601
 This number is monitored Monday through Friday, 8am – 4:30pm MST.

Written Consent

Online Application Form.....	writtenconsent.transcanada.com
Phone	1.877.872.5177
Email	crossings@transcanada.com
Quebec Email	quebec_crossings@transcanada.com

In Canada, the majority of TransCanada's pipelines are regulated federally, with some pipelines regulated provincially. Please visit our regulator's websites for more information:

National Energy Board: www.neb-one.gc.ca.

Alberta Energy Regulator: www.aer.ca

These guidelines are intended to provide useful and timely safety information. TransCanada endeavors to ensure the information is as current and accurate as possible. For all development-related inquiries please contact us.

For additional information on TransCanada's operations, please visit our website www.transcanada.com.

