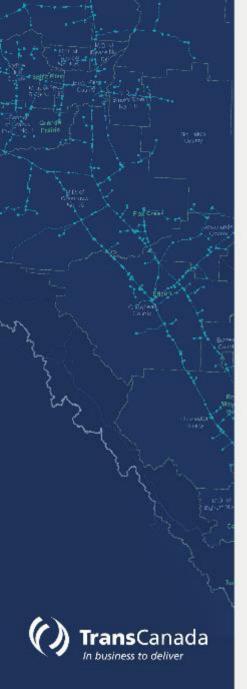


Planning in Proximity to Pipelines: Best Practices and Considerations





Presentation Outline

- I. Introductions
- II. TransCanada (TC) at a Glance
- III. Regulatory Context & Standards
- IV. Collaborative Planning Initiative
- V. Referral Process
- VI. Case Studies
- VII. Summary







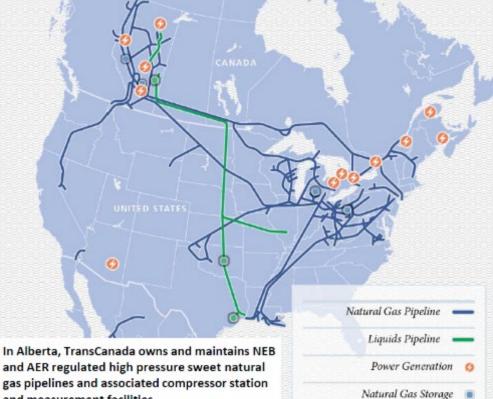
TransCanada (TC) at a Glance



Semiose Rectly

North America Network

Liquids Tank Terminal



- **Natural Gas Pipeline Networks**
- Operates 91,500 km of pipelines
- Transports ~25% of continental demand

Private Sector Power Generators

- 11 power facilities, approximately 6,200 MW
- Nuclear, solar, and natural gas

Premier Liquids Pipeline System

- Keystone Pipeline System: 4,300 km •
- Transport 545,000 bbl/d
- Safely delivered more than 1.5 billion barrels of Canadian oil to U.S markets since 2010





and measurement facilities

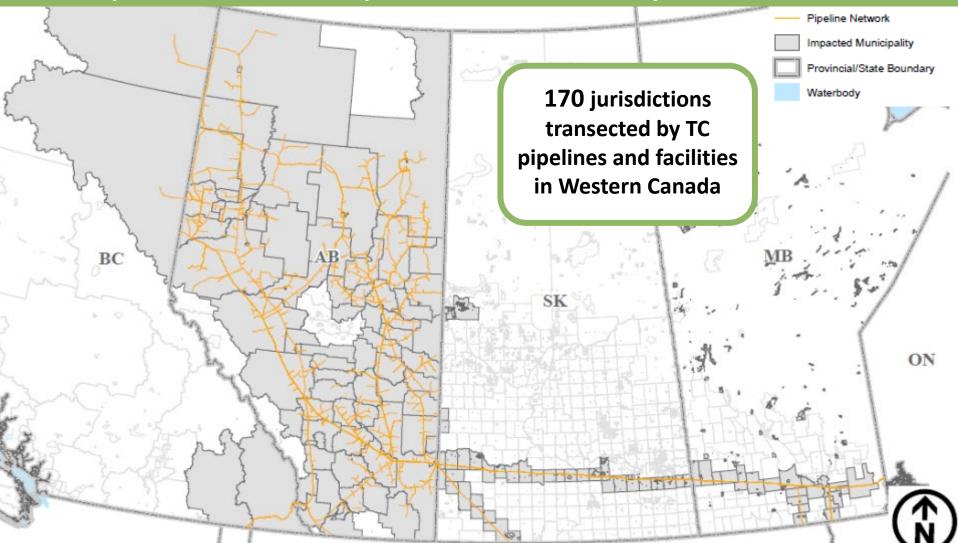




Western Canada Network

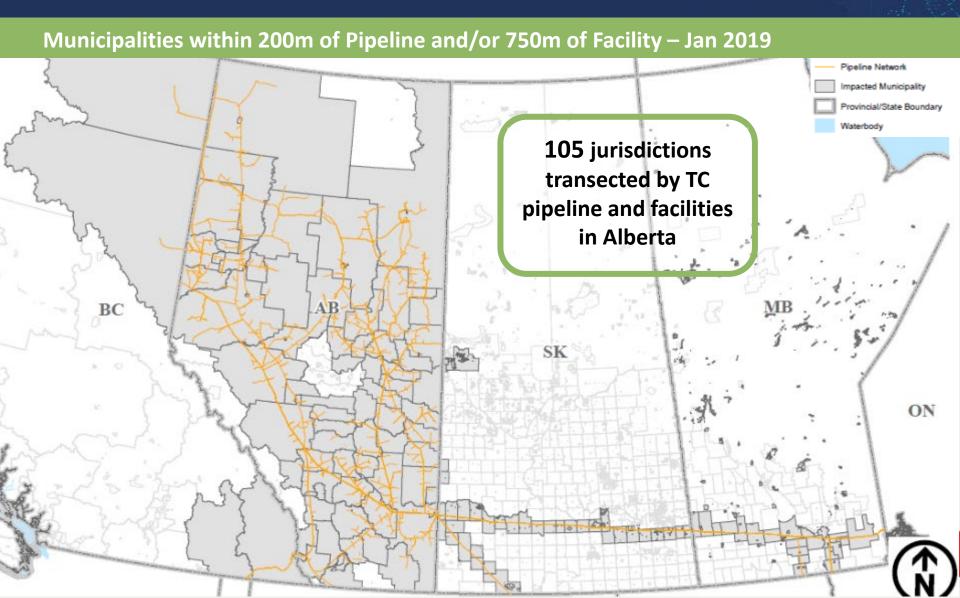


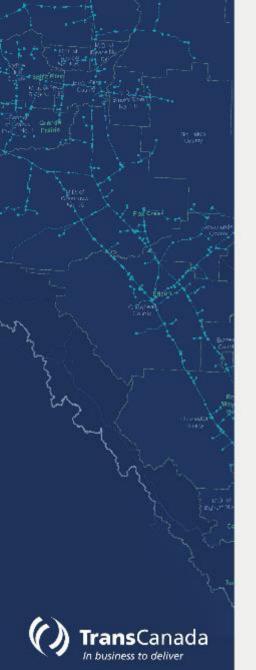
Municipalities within 200m of Pipeline and/or 750m of Facility – Jan 2019



Land Services Western Canada









Stakeholder Commitments



- Safe, environmentally responsible, and reliable service.
- Proactive approach to regulatory compliance and integrity management.
- TC implements measures to keep the public, property, and environment safe.

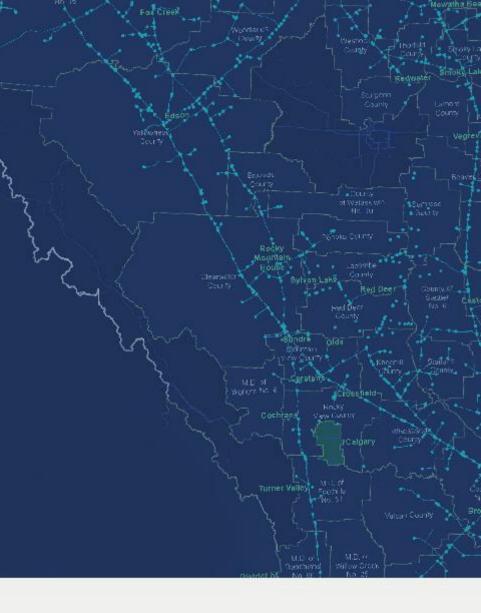


Land Development Process

- Since 2016, B&A has supported TC's monitoring, review, and assessment of planning and development initiatives within 200m of its pipeline network and 750m of its associated facilities throughout Western Canada and Quebec.
- TC's primary interests with respect to planning and development are:
 - Safety of its facilities, the public, property, and the environment;
 - Compatible land use and development;
 - Collaboration with stakeholders to ensure safe development.
- The process is intended to ensure statutory plans, regulations, land use, subdivision and development applications, and infrastructure projects consider and integrate NEB and AER requirements, CSA Standards, and TC's right-of-way and land use guidelines to support collaboration in the planning and development process.



Regulatory Context & Standards







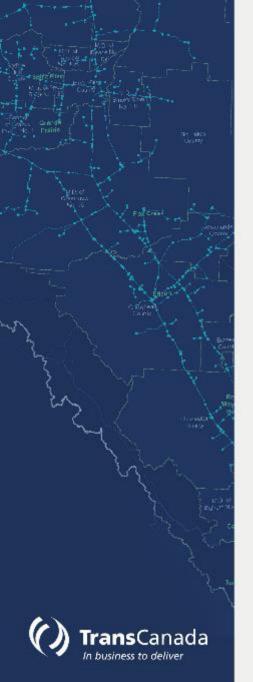
National Energy Board (NEB)

- NEB regulates parts of the energy industry under federal jurisdiction, and informs the government and the public about energy matters.
- NEB regulates the construction, operation, and abandonment of pipelines that cross international borders or provincial boundaries.
- TC must design, construct, operate, and maintain its interprovincial / international pipelines in accordance with NEB's regulations.



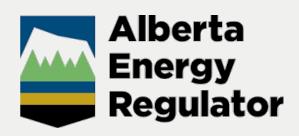
National Energy Board Office national de l'énergie





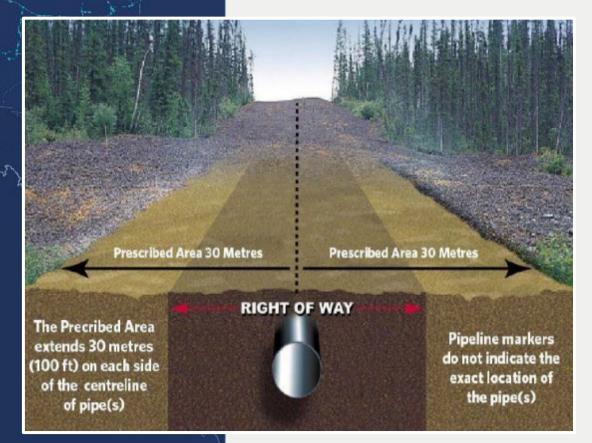
Alberta Energy Regulator (AER)

- AER ensures the safe, efficient, orderly, and environmentally responsible development of oil, oil sands, natural gas, and coal resources within Alberta.
- AER is the single regulator of energy development in Alberta from application and exploration, to construction and operation, to decommissioning, closure, and reclamation.
 - TC must design, construct, operate, and maintain its Alberta pipelines (including gas and liquids) in accordance with AER's regulations.





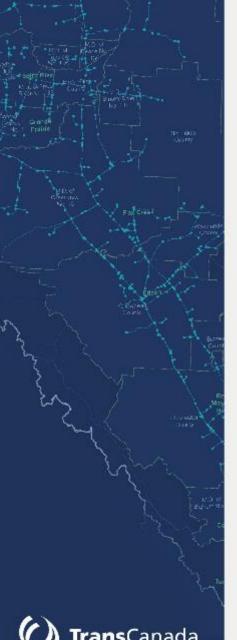
Damage Prevention: Duty to Inform



Any person that intends to construct a facility across, on, along or under a pipeline, engage in an activity that would cause a ground disturbance within a prescribed area, or operate a vehicle or mobile equipment across a pipeline must, before the construction, activity, or operation is to start, inform all persons working on their behalf, including employees, contractors, and subcontractors, of their obligations under the NEB **Damage Prevention Regulations.**





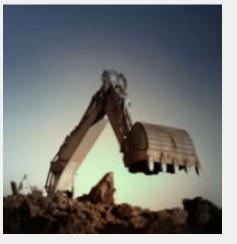




Damage Prevention: Communication



AlbertaOneCall.com 1.800.242.3447



- Preventing damage to pipelines is a shared responsibility.
- Because pipelines are buried, they can be at risk for accidental damage from nearby ground disturbance or construction activities, including crossings. This type of damage can be prevented.
- Pipeline companies are required to make sure people know how to safely conduct these activities. Anyone planning such activities on or near pipelines must call or click before they dig. Crossings of pipelines require agreements.





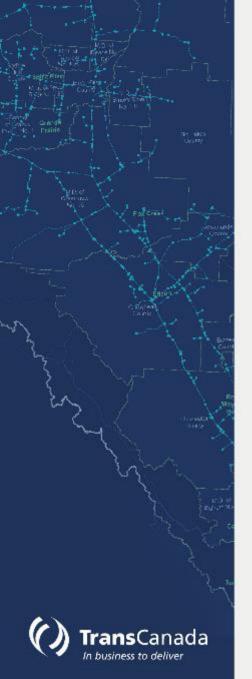
Canadian Standards Association (CSA) Z663-18

Z663-18: "Land use planning in the vicinity of pipeline systems":

- Intended to address challenges of planning near pipelines, outlining requirements and best practices.
- Outlines roles and responsibilities of all stakeholders: developers, landowners, pipeline operators, and governments.
- Contains recommended policies for statutory and non-statutory plans.







Canadian Standards Association (CSA) Z662-15

Z662-15: "Oil and gas pipeline systems" (to be updated this year):

- Technical document which establishes essential requirements and minimum standards for the **design**, **construction**, **operation**, **and maintenance of oil and gas pipeline systems**.
- Pipeline design considers structures within 200m of a pipeline.
 Based on the types and density of structures, the pipe design requirements vary and can fall under 4 classifications.







TransCanada Guidelines

- Work Safely booklet: Guidelines for Development near TC's Pipelines and Facilities:
 - Outlines *regulatory, development, and crossing requirements* for work in proximity to TC pipelines and facilities along with key contact information. Copies are available at this conference or online.
 - Supplemented with technical specs and guidelines relating to crossing design and construction, pathway design and, buried cable, utility, and pipe to pipe crossings.



Work Safely Guidelines for Development Near Our Pipelines and Facilities



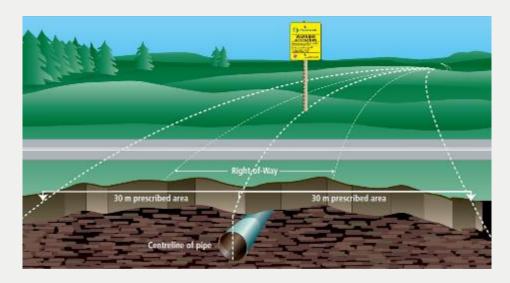
() TransCanada





Working Safely

- Written consent must be obtained from TC for any construction, ground disturbance, or crossings on / in proximity to TC pipelines and facilities.
- Any use of explosives within 300m / 1,000ft of pipeline right-of-way must obtain TC's written consent.
- Key websites: <u>www.clickbeforeyoudig.com</u> & <u>https://writtenconsent.transcanada.com</u>.







Development Considerations – Pipeline Maintenance



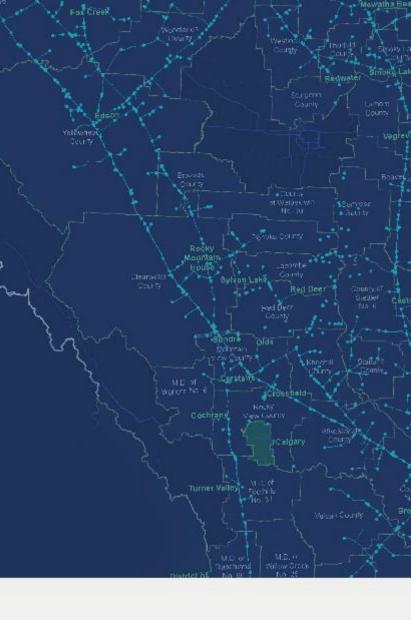
Appropriate setbacks from the pipeline rights-of-way are required to provide sufficient access for future maintenance and operations.

Where crossings are proposed, protective measures or pipeline upgrades may be required.





Collaborative Planning Initiative







CPI Goals

- 1. Support TC's efforts to *minimize and prevent third party damage*.
- Support and enable *effective and proactive planning for pipeline and facility upgrades* as necessary.
- 3. *Establish and maintain relationships* with *approving authorities, industry partners, developers, and other key stakeholders*.







CPI Approach

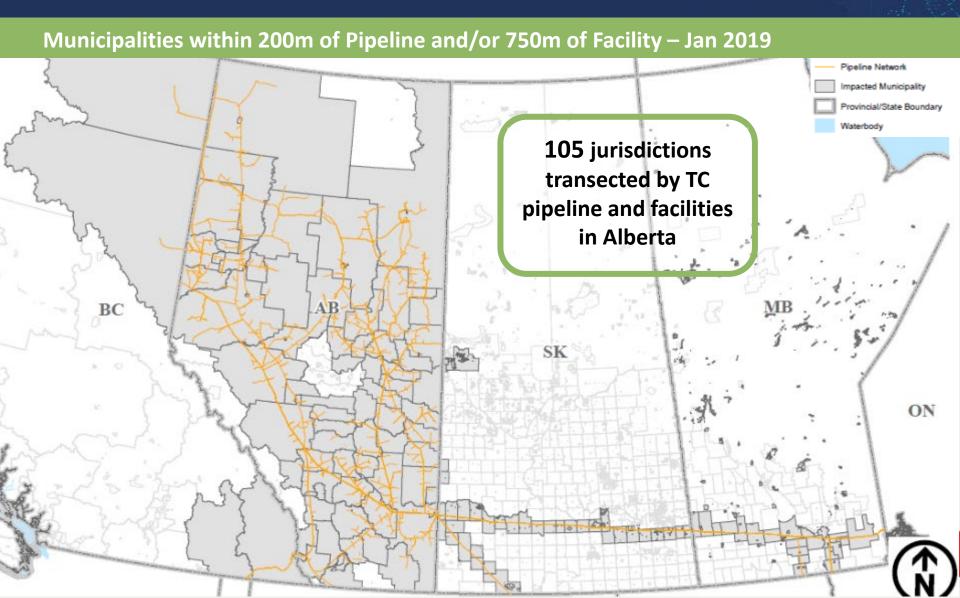
- 1. Raise awareness of TC's infrastructure in relation to *planning and land development best practices* through *proactive communication, outreach, and relationship building* with project stakeholders (primarily municipalities).
- 2. Receive and process planning-related application referrals from project stakeholders in a thorough and efficient manner, supporting *evaluation of both short and long term implications* to TC's infrastructure.
- 3. Provide and enhance *project systems, processes, and tools* to *evaluate and track referral and planning information.*

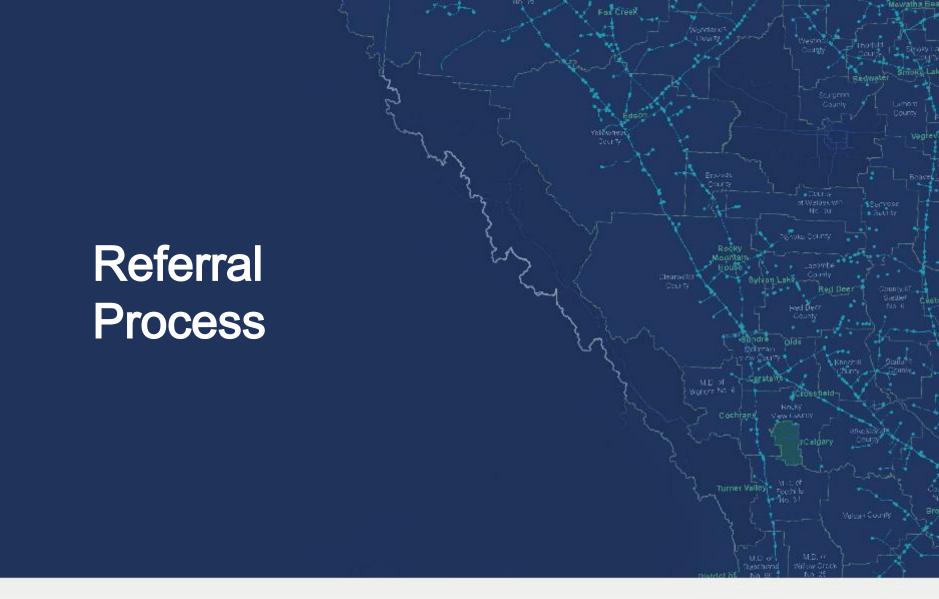




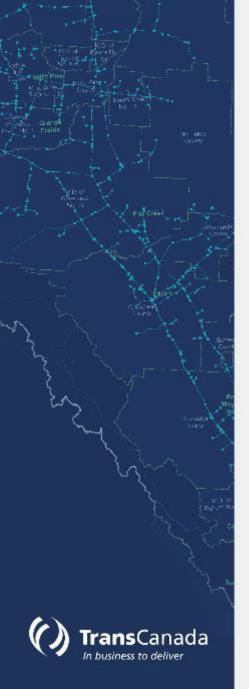
Land Services Western Canada











Overview

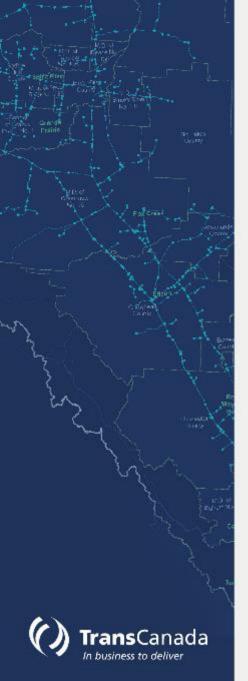
Goals

- To monitor and evaluate **current and long range planning** applications.
- To advise TC about short and long term planning implications respecting referrals.
- To inform project
 stakeholders about TC
 interests in planning
 and land development
 best practices.

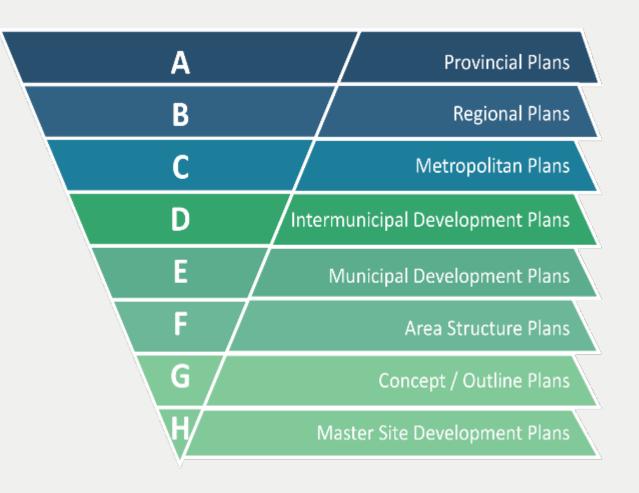
Tactics / Actions

- Receive, map, and evaluate referral applications efficiently and consistently.
- Classify referrals based on level of potential impact to TC infrastructure.
- Summarize referrals and circulate to relevant TC teams for their review and comment.
- Formulate and submit responses to municipalities and follow-up as needed.





Plans of Interest









Applications of Interest







B&A Process

Step 1: Referral received at transcanada@bapg.ca

Step 2: Referral file **created in our system** and info received (including contact info) added.

Step 3: Initial review by B&A **to classify referral Type** (1: highest concern to 4: lowest concern) and see if any additional info required.

Step 4: **Map set** prepared showing application area in relation to TC infrastructure.

Step 5: Municipality **contacted if required** to introduce B&A, obtain additional info, and offer assistance.

Step 6: Application **summarized and circulated to TC teams** (such as Crossings and Pipeline Integrity) for their review and comment.

Step 7: TC's comments reviewed and summarized. **Response**, including requirements, recommendations, maps, Work Safely booklet, info on GIS data availability, and Z663-18, prepared and submitted to municipality.

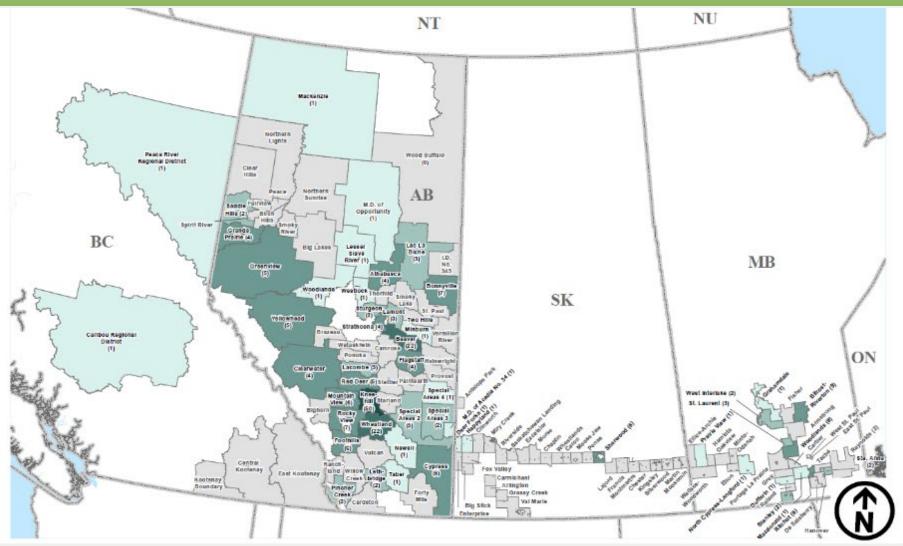
Step 8: Follow-up as required.

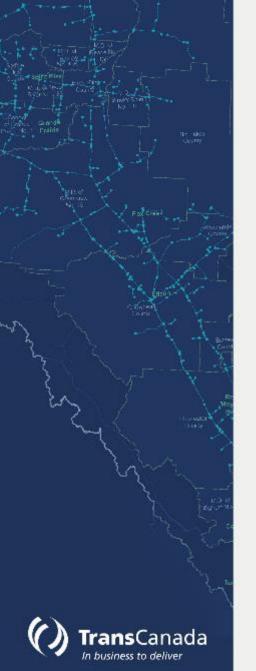


Land Services Western Canada

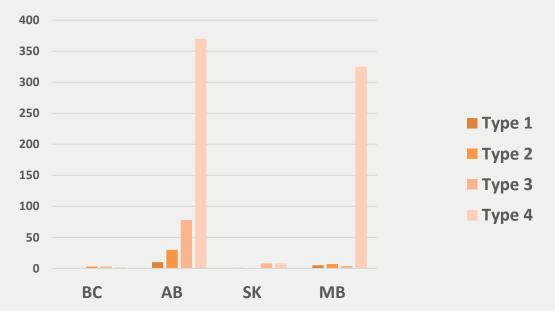


Total Rural Municipality Referrals Received (2018): 410





Referrals by Type



Type 1 "Highest Concern": Potential for significant impacts to TC infrastructure, such as a new multi-lot subdivision crossing a pipeline or a long-term policy plan for large-scale development containing pipelines and facilities.

Type 2 "Moderate Concern": Within 200m of a pipeline / 750m of a facility. Could be a land use with the possibility for greater impacts due to a new rural business with additional employees or if there is a pipeline running through the subject parcel.

Type 3 "Limited Concern": Within 200m of a pipeline / 750m of a facility. Proposal is for a new parcel with only one country residential dwelling, or the development is not within 200m of the pipeline but a portion of subject parcel is within 200m of the pipeline.

Type 4 "No Concern" (not circulated to TC): The proposal is not within 200m of pipeline or 750m of a facility.



Policy Best Practices

Incorporate considerations for pipeline systems:

• <u>Example</u>: "The Municipality acknowledges the importance of incorporating consideration for pipeline systems as part of land use planning in the vicinity of pipeline systems."

Establish a communication process:

• <u>Example</u>: "The Municipality should, as part of its standard referral process, refer development applications to the pipeline systems operator when a proposed development is located in the referral zone."

General considerations of pipeline systems:

• <u>Example</u>: "Pipeline ROW may be used for passive recreation, passive green space, pathways, or other passive green space opportunities with the consent of the pipeline system operator and at the discretion of the municipality."





Development Best Practices

- TC's buried infrastructure is commonly situated within a right-of-way. Development within the right-of-way is discouraged.
- Permanent structures should generally be **7m outside of the right-of-way and 12m from the edge of the pipeline**.
- Any ground disturbance within 30m of the pipeline, construction of a facility across, on, along, or under a pipeline, or crossing the pipeline may not occur without TC's written consent (<u>https://writtenconsent.transcanada.com</u> or call 1.877.872.5177).
 - Any proposed crossings will
 require crossing agreements
 that must be applied for
 through TC's online third party
 crossing tool. Crossings must
 occur as close as possible to 90
 degrees and not less than 45
 degrees.







Development Planning Around Pipelines

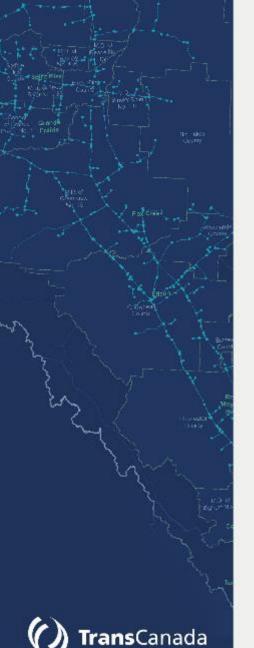




Ideal Development Planning

- Pipeline right-of-way highly visible
- Fences line the right-of-way
- Barriers, including rocks, to impede vehicle access
- Open green space
- Sufficient development setbacks





Development On or Near the Pipeline Right-of-Way



Subdivisions

- ROW may be used as passive green space or as part of a linear park system.
- Permanent structures are not permissible on the ROW.
- Contact us *early* in the design stage.

Roads

- Roads may be permitted.
- Crossing angle and vehicle weight limitations.
- Minimum depth of cover requirements.
- Crossing agreement will specify protective measures or conditions required.

Landscaping

- Pedestrian pathways and planting of trees/shrubs may be permitted.
- Cannot impede access for TC operational and maintenance activities.
- Written consent will specify the permitted landscaping requirements.

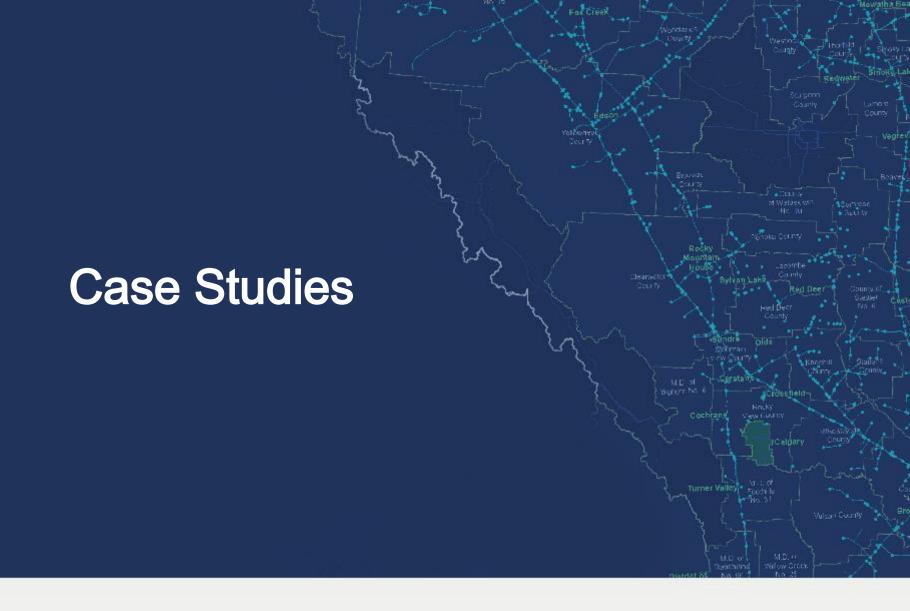




Summary

- **Refer** planning and development applications in proximity to TC infrastructure as soon as possible to <u>transcanada@bapg.ca</u>.
- **Communicate** additional information when required.
- **Evaluate** our response and seek clarification where necessary.
- Incorporate recommendations within statutory and nonstatutory plans (ie: Municipal Development Plans (MDP), Intermunicipal Development Plans (IDP), Area Structure Plans (ASP), Land Use Bylaws (LUB)).
- Review Z663-18 and TC's Work Safely booklet.
- Utilize GIS data upon signing Confidentiality Agreement.
- **Update** us on any changes to the application and / or other planning, development, and crossing related proposals.









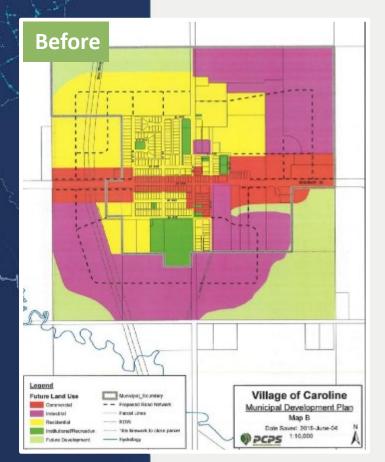
Caroline – Clearwater Draft MDP & IDP

Summary

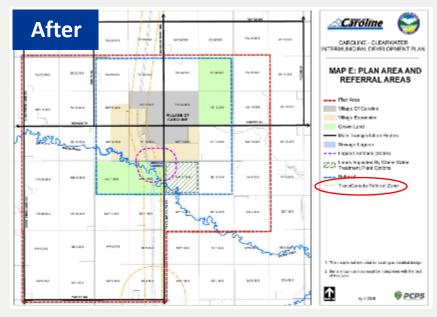
- Original Referral received July 2018. Noted that TC pipeline within plan areas.
- Original response provided October 2018 with mapping and policy (Z663-18) recommendations.
- Follow-up Referral received January 2019, indicating our recommendations were generally incorporated into draft plans.
- Final plans scheduled to be adopted this year.



Caroline – Clearwater Draft MDP & IDP



TransCanada



New Policy: "When an area structure plan, an outline plan, a concept plan, a subdivision application or a development permit application is proposed that involves land in either side of and within 200m of the TransCanada Pipeline rights of way, as shown on *Map E: Plan Area and Referral Areas*, the municipality that has jurisdiction over approval of the plan or application shall refer the matter to TransCanada for review and input."





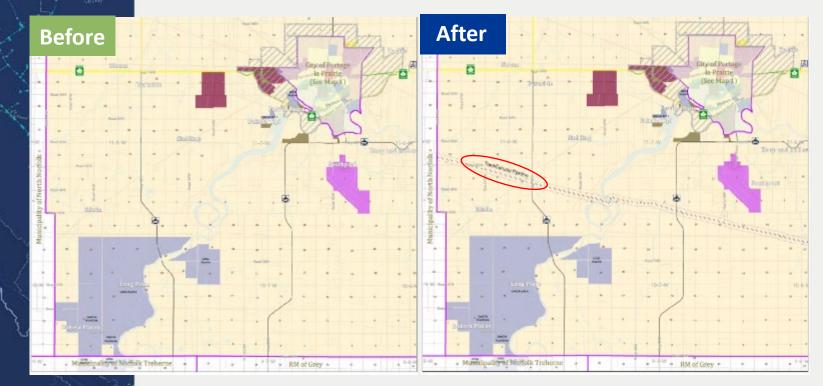
Portage la Prairie, MB Draft Development Plan

Summary

- Referral received January 2019 from Planning District. TC pipelines and facilities cross plan area but not indicated within proposed plans.
- Communication with municipal agency throughout process: GIS data (with Confidentiality Agreement) provided along with initial Z663-18 recommendations.
- Response provided February 2019 with mapping and policy recommendations. Followed-up RE: application and Public Hearing status.
- New proposed plan generally incorporates our recommendations. Final plan scheduled to be adopted this year.



Portage la Prairie, MB Draft Development Plan



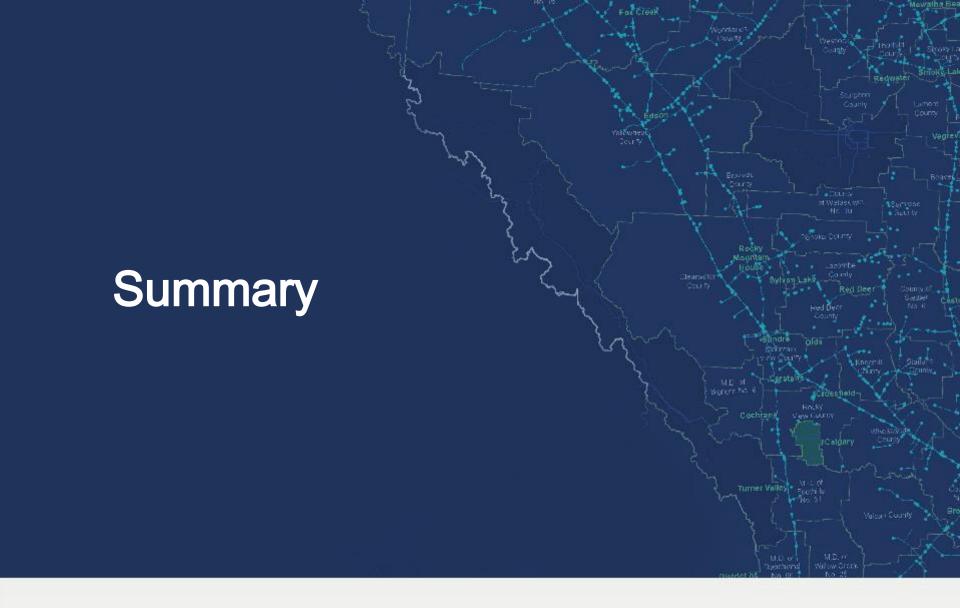
New Development Plan Pipeline Systems Policy:

"To help prevent pipeline damage, unwarranted crossings, and to identify any development that could trigger a pipeline Class upgrade, all planning applications (including but not limited to: policy plans/amendments, land use/zoning amendments, development proposals) that are located within the 200m pipeline and/or 750m facility buffer referral zone, will be referred by the Planning District, as part of its standard referral process, to the pipeline systems operator. The 200m pipeline buffer referral zone is identified on Map 2C and 2D of this Plan.



"It is the responsibility of the application to identify, as part of their submission to the Portage la Prairie Planning District, any pipelines located within 200m and/or facilities located within 750m of the proposed planning application. Applicants should contact the pipeline systems operator prior to finalizing development plans and filling their application to ensure the operator is aware of proposed development plans and filling their application to ensure the operator is aware of proposed development and to support a collaborative planning process."

b&a







Closing Thoughts

- Pipelines are essential components of Alberta's and Canada's economy. Their safe operation is TransCanada's #1 priority.
- **Collaborative land use planning and development** plays a key role in ensuring **public and environmental safety**.
- **Proactive referral circulation** and review early in the process is critical for TC's information and planning, particularly related to Class, crossings, and damage prevention.
- We continuously support knowledge and best practices for planning and development in proximity to pipelines and related facilities.







DN/2



Closing Questions

- Does your municipality contain pipelines and facility infrastructure? Will it contain additional pipelines and facilities in the future?
- How has your municipality incorporated planning in proximity to pipeline systems into statutory and non-statutory plans and the subdivision and development process?
- Would you be interested in being added to our stakeholder list and receiving GIS data (pending completion of Confidentiality Agreement) indicating TC's pipelines and facilities to support proactive land use and development planning?
- Do you have any questions for us? Please ask, or email <u>transcanada@bapg.ca</u>.

