

**National Energy Board  
Hearing Order GH-001-2016  
Undertaking U-1  
Submitted June 14, 2016**

**Response to  
Undertaking given by Sander Duncanson to Sean Gosnell**

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**Undertaking:** Place on the record crossing documents provided to the Nessim Family.

**Response:** Attached are crossing documents provided by TransCanada to the Nessim Family.



450 – 1<sup>st</sup> Street SW  
P.O. Box 1000, Station M  
Calgary, Alberta, Canada T2P 4K5

tel 1-877-872-5177  
fax 403.920.2334  
web [www.transcanada.com](http://www.transcanada.com)  
email [crossings@transcanada.com](mailto:crossings@transcanada.com)

Dear \_\_\_\_\_ :

Re: **NGTL's**  
**Crossing Agreement**  
**(D- )**  
**Your File:**  
**Our File:**

**("NGTL") is subject to the jurisdiction of the National Energy Board (NEB).** As such, your activities must be conducted in compliance with the *National Energy Board Pipeline Crossing Regulations*, Part I and Part II. These Regulations can be accessed from the NEB's website.

Enclosed is our standard crossing agreement. If in order, please:

1. Complete page 1 [operates under the jurisdiction of the (name of regulating body)].
2. Complete page 2, Grantee's Corporate Office and Grantee's Field Representative.
3. Execute agreement on page 2 **and** on Schedule "C" on behalf of \_\_\_\_\_ .
4. Return a fully executed scanned copy of the agreement to [crossings@transcanada.com](mailto:crossings@transcanada.com) for our further handling. Your work cannot proceed until we receive a fully executed scanned agreement in our office and the required notification has been made to our field representative. A **fully executed** copy of this Agreement must be available at the Crossing Area during installation of your facility as per Clause 5(d).

If you have any questions, please call a Crossings Analyst at 1-877-872-5177.

Yours truly,

Land Analyst

Encl.

File:  
D-

## FACILITY CROSSING AGREEMENT

**THIS AGREEMENT** is made and effective as of the \_\_\_\_ day of \_\_\_\_, 20\_\_\_\_.

-between-

(the "**Grantor**")

-and-

(the "**Grantee**")

**WHEREAS** the Grantor operates under the jurisdiction of the National Energy Board, and holds one or more rights-of-way for \_\_\_\_ across the Lands and has constructed \_\_\_\_ therein, (the "**Grantor's Facility**");

**WHEREAS** the Grantee operates under the jurisdiction of the \_\_\_\_\_, and has acquired one or more rights-of-way across the Lands and proposes to install a pipeline therein, (the "**Grantee's Facility**"); and

**WHEREAS** the rights-of-way and/or Facilities of the respective parties intersect in the Crossing Area (as defined below); and

**WHEREAS** the parties wish to define their respective rights and liabilities with respect to the Crossing Area under certain terms and conditions defined in Schedule A.

**NOW THEREFORE THIS AGREEMENT WITNESSES** that in consideration of the premises, mutual covenants and agreements herein contained, the parties agree that their respective Work (as defined below) in the Crossing Area shall be governed by this Agreement together with the Schedules as herein described.

### Terms and Conditions

This Agreement including the recitals and the following Schedules, which are attached hereto and made part hereof, shall be the terms and conditions as agreed to by the Grantor and the Grantee:

Schedule A — Mutually Agreed to Terms and Conditions

Schedule B — Location Plan and Profile

Schedule C — Specific Terms and Conditions

(the "**Schedules**")

### Location and Notices

Location of Crossing Area (Legal Description):

: ( ) crossing ( )

Notices:

	Grantor's Corporate Office	Grantee's Corporate Office
Name:	_____	_____
Address:	450 – 1 <sup>st</sup> Street SW P.O. Box 1000, Station M Calgary, Alberta T2P 4K5	_____
Dept.:	LAND	_____
Contact:	LAND	_____
Phone:	1-877-872-5177	_____
E-mail:	crossings@transcanada.com	_____

Field Representative:

	Grantor's	Grantee's
Name:	_____	_____
Position:	Pipeline Technician	_____
Address:	_____	_____
Phone:	_____	_____
E-mail:	_____	_____
Alternate Name:	_____	_____
Alt. Position:	Pipeline Technician	_____
Alt. Phone:	_____	_____
Corrosion Tech:	_____	_____
Phone:	_____	_____
In case of Pipeline Emergency:	1-888-982-7222	_____

**IN WITNESS WHEREOF** the parties hereto have caused this Agreement to be duly executed.

\_\_\_\_\_  
 (the Grantor)

\_\_\_\_\_  
 (the Grantee)

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

SF		
NSF	Approved as to Form and Content	
	Legal	Business

## Schedule A

### Mutually Agreed to Terms and Conditions

#### Schedule A forms part of the Facility Crossing Agreement

-between-

(the **Grantor**)

-and-

(the **Grantee**)

and dated the \_\_\_\_ day of \_\_\_\_, 20\_\_\_\_.

### 1. INTERPRETATION

1.1 In this Agreement, including the recitals, the words and terms used shall have the following meanings:

- (a) “**Agreement**” means this agreement and the Schedules;
- (b) “**Crossing Area**” means the area of intersection of the Grantor’s and the Grantee’s rights-of-way and/or Facilities, as outlined in red on Schedule B;
- (c) “**Grantee’s Facility**” means the Facility or Facilities to be constructed by the Grantee and to be located within, across, along, upon, over or under the Crossing Area;
- (d) “**Grantor’s Facility**” means the Facility or Facilities of the Grantor located within, across, along, upon, over or under the Crossing Area;
- (e) “**Facility**” means:
  - (i) any structure that is constructed or placed on or in the right-of-way within the Crossing Area (concrete slab, concrete conduit, retaining wall, special fences such as chain link, etc.); and
  - (ii) any highway, public or private road, railway, irrigation ditch, drain, drainage system, sewer, dike, cable line, telecommunication line, telephone line or line for the transmission of hydrocarbons, power or any other substance that is or is to be carried across, along, upon, over or under the Crossing Area;
- (f) “**Lands**” means the lands described in Schedule B; and
- (g) “**Work**” means, with respect to a Facility, the carrying, laying, installing, constructing, maintaining, operating, repairing, inspecting, replacing, altering, removing, abandoning and such other operations as may be required from time to time and includes any ground disturbance within the Crossing Area.

1.2 If any terms or provisions of the Schedules conflict, the following shall apply: Schedule C, if present, shall prevail over Schedules A and B, Schedule B shall prevail over Schedule A.

## 2. CONSENT

The Grantor hereby agrees, insofar as it has the right to do so, that the Grantee may perform the Work on the Grantee's Facility in the Crossing Area in accordance with the terms and conditions of this Agreement.

## 3. COMPLIANCE WITH STATUTES AND REGULATIONS

3.1 The Grantee shall at all times comply with any and all applicable codes, statutes, laws, regulations, permits, licenses, orders and directions of any governmental authority from time to time in force, including the *National Energy Board Act* and the *National Energy Board Pipeline Crossing Regulations Part I and Part II (1988)*, as the same may be amended or replaced from time to time (such act and regulations collectively referred to as the "Act"). The minimum applicable technical standards therein shall apply to both parties unless more stringent standards are provided for in this Agreement. If compliance with any provision of this Agreement would result in violation of any applicable codes, statutes, laws, regulations, permits, licenses, orders and directions of any governmental authority, such code, statute, law, regulation, permit, license, order and direction of any governmental authority shall prevail and this Agreement shall be deemed to be amended accordingly.

3.2 The Grantee acknowledges that it is familiar with the Act and all of its obligations under the Act.

## 4. POSITION OF FACILITY

Unless otherwise indicated in any of the Schedules, or ordered by governmental authority or regulations:

- (a) The Grantor's Facility shall be entitled to the upper position in the Crossing Area except for above grade facilities;
- (b) A minimum distance of thirty (30) centimetres shall be maintained between the external surfaces of the underground Facilities;
- (c) The Grantee's Facility shall be maintained at the same depth with no side bends for the entire width of the Crossing Area; and
- (d) The Grantee's Facility shall be installed as close as possible at a ninety (90) degree angle to the Grantor's Facility.

## 5. CONDITIONS

When the Grantee performs Work in the Crossing Area, the following terms and conditions shall apply:

- (a) Subject to section 8.3, the Grantee's Field Representative shall contact the Grantor's Field Representative directly, either in person or by telephone, a minimum of seventy two (72) hours (excluding Saturdays, Sundays and Statutory Holidays) before commencement of the Grantee's Work within thirty (30) metres of the Crossing Area and, if unable to contact that person, the Grantee shall serve a minimum of seventy two (72) hours written notice pursuant to section 9 hereof before commencement of the Grantee's Work.
- (b) The Grantor's representative must be on site at all times while the Grantee is conducting Work within the Crossing Area.
- (c) The Grantee shall comply with all reasonable instructions of the Grantor's Field Representative regarding the procedures to be followed during the Grantee's Work.
- (d) During any Work pursuant to this Agreement, the Grantee shall have available at the Crossing Area a copy of this Agreement.

- (e) No ground disturbance, be it excavation or fill, will be permitted until the Grantor's Field Representative has been on site to locate and stake the Grantor's Facility and discuss the significance of the stakes that identify the location of the Grantor's Facility.
- (f) The Grantee shall, where applicable, install and maintain during performance of the Work suitable markers indicating the location of the Grantor's Facility in the Crossing Area.
- (g) Before excavating within five (5) metres of the Crossing Area, the Grantee shall fully expose the Grantor's Facility by hand digging or hydrovac.
- (h) The Grantee shall lay down and construct its Facility in accordance with this Agreement.
- (i) The Grantee shall carry out all Work in the Crossing Area in a proper and diligent manner and in accordance with good engineering and construction practices.
- (j) The party performing the Work shall ensure no damage occurs to existing Facilities while the Work is being performed in the Crossing Area including damage which may result from the use of heavy work equipment outside the Crossing Area while performing the Work in the Crossing Area.
- (k) The Grantee shall support the Grantor's Facility as required, or as directed by the Grantor, while any Work is being carried out hereunder.
- (l) In the event that the Grantor's Facility suffers contact damage or other damage as a result of the Grantee's Work, all Work at the Crossing Area shall immediately stop. The Grantor shall be notified forthwith and repair of the Grantor's Facility shall be carried out by the Grantor at the Grantee's cost.
- (m) At least twenty four (24) hours (excluding Saturdays, Sundays and Statutory Holidays) prior to covering the Grantor's exposed Facility, the Grantee's Field Representative shall contact the Grantor's Field Representative directly, either in person or by telephone for inspection.
- (n) The Grantee shall, where applicable, install and maintain suitable buried markers indicating the location of the Grantee's Facility in the Crossing Area.
- (o) The Grantor's Field Representative must be present during all backfilling operations.
- (p) Unless otherwise directed by the Grantor, the Grantee shall cover the Grantor's Facility with at least thirty (30) centimetres of suitable backfill material (as specified by the Grantor's Field Representative) prior to commencing backfilling operations. The Grantee shall, in backfilling the excavation in the Crossing Area, compact the fill material in fifteen (15) centimetre layers, or such greater depth specified by the Grantor's Field Representative.
- (q) No boring, horizontal directional drilling or explosives are permitted without prior written approval from the Grantor and the Grantee shall comply with the safety precautions required by the Grantor in giving such approval.
- (r) During the continuance of Work, the Grantee shall maintain the Crossing Area in good order and condition and carry out expeditiously all Work hereunder.
- (s) The Grantee shall, as soon as it is reasonably practicable after the completion of the Grantee's Work in the Crossing Area, restore the surface of the Crossing Area as closely as is practicable to the condition in which it existed immediately prior to the Work being commenced.
- (t) Except as otherwise provided herein, the cost of Work with respect to each party's Facilities within the Crossing Area undertaken by either party shall be borne by the party requiring such Work.



- (u) The cost associated with the location, identification or supervision shall not be charged to or borne by the other party unless specified in Schedule "C".
- (v) Where the Grantor is satisfied, in its discretion, that unsafe construction practices have been or are being used the Grantor may suspend, for such period as it deems necessary, the consent to Work provided for in this Agreement, in which case all Work shall cease.

## 6. FACILITY

- 6.1 The Grantee shall maintain its Facility in a state of good repair compatible with the safety of the Grantor's pipeline and shall immediately correct any deterioration in the Grantee's Facility upon being requested to do so in writing by the Grantor.
- 6.2 Unless otherwise ordered by the National Energy Board, the Grantee shall not be relieved of its responsibility under subsection 6.1 except where:
  - (a) The Grantee provides the Grantor with a written undertaking executed by a third party whereby the third party agrees to assume responsibility for maintaining the Grantee's Facility; or
  - (b) The Grantee's Facility has been removed or abandoned and the site restored to the satisfaction of the Grantor.

## 7. REMEDY ON DEFAULT

In the case of default by the Grantee in carrying out any of the provisions of this Agreement, the Grantor may give notice thereof to the Grantee. If the Grantee fails to commence to remedy such default within fifteen (15) days after receipt of such notice and diligently complete such remedy thereafter, the Grantor may, but has no obligation to, take such steps as are appropriate to remedy such default and the Grantee shall be liable for and shall pay all reasonable costs and expenses incurred by the Grantor in remedying the default. In the case of an emergency, the Grantor may, but has no obligation to, immediately take such steps as are appropriate to remedy such default and the Grantee shall be liable for and shall pay all reasonable costs and expenses incurred by the Grantor in remedying the default.

## 8. FURTHER WORK

- 8.1 If, subsequent to the initial Work undertaken by the Grantee for its Facility, either the Grantor or the Grantee desires to undertake any Work in the Crossing Area in respect of its Facility, this Agreement shall be deemed to grant consent to that party, and sections 5, 6 and 7 of this Agreement shall apply *mutatis mutandis* to all subsequent Work undertaken by either party under this section 8; and, for further certainty, the provisions of this Agreement shall be read as if "Grantee" were substituted for "Grantor" and vice versa as the situation requires.
- 8.2 Notwithstanding the foregoing, installation of any new Facility not expressly contemplated by this Agreement and shown on attached Schedule B shall require a separate Facility Crossing Agreement.
- 8.3 Notwithstanding the foregoing, if emergency Work in the Crossing Area is required with respect to a party's Facility, that party shall commence the necessary Work and shall forthwith give the other party's Field Representative verbal notice of the emergency and necessary Work, and shall forthwith give notice pursuant to section 9 hereof.

## 9. NOTICES

Notices shall be in writing and shall be sent to the parties at the addresses for notice provided above. The following shall govern notices:

- (a) Either party may from time to time change its address for service by giving written notice to the other party.
- (b) All notices required to be given hereunder may be delivered by hand, mailed by registered or prepaid mail, or sent by telecommunication. If mailed, the notice shall be deemed to have been received seven days (Saturdays, Sundays and Statutory Holidays excluded) after the mailing thereof. If delivered by hand, the notice shall be deemed to have been received on the day on which it was delivered, or if delivered after regular business hours, it shall be deemed to have been received on the following business day. If sent by telecommunication, the notice shall be deemed to have been received on the first business day following the day it was dispatched.
- (c) No notice shall be effective if mailed during any period in which Canadian postal workers are on strike or if a strike of postal workers is imminent and may be anticipated to affect normal delivery thereof.
- (d) Notwithstanding the foregoing, to the extent described in this Agreement, the Grantor's and the Grantee's Field Representatives or designated alternates shall have the right and authority to make, give, receive any notice, information, direction or decision required in conducting Work hereunder.

## **10. LIABILITY AND INDEMNITY**

### **10.1 Liability**

- (a) The Grantee shall be liable to the Grantor for all direct loss, damages and expenses which the Grantor may suffer, sustain, pay or incur by reason of any act or omission of the Grantee, its servants, agents, contractors, subcontractors or employees in respect of the Grantee's use of the Crossing Area.
- (b) The Grantor shall be liable to the Grantee for all direct loss, damages and expenses which the Grantee may suffer, sustain, pay or incur by reason of any act or omission of the Grantor, its servants, agents, contractors, subcontractors or employees in respect of the Grantor's use of the Crossing Area.

### **10.2 Indemnity:**

- (a) The Grantee shall indemnify and save harmless the Grantor against all third party actions, proceedings, claims and demands which may be brought against the Grantor as a result of any act or omission of the Grantee, its servants, agents, contractors, subcontractors or employees in respect of the Grantee's use of the Crossing Area.
- (b) The Grantor shall indemnify and save harmless the Grantee against all third party actions, proceedings, claims and demands which may be brought against the Grantee as a result of any act or omission of the Grantor, its servants, agents, contractors, subcontractors or employees in respect of the Grantor's use of the Crossing Area.
- (c) Notwithstanding sections 10.1 and 10.2, in no case shall either party have any liability to the other party for any consequential or special damages, loss of profits or business interruption suffered by that party.

## **11. TAXES**

- 11.1 The Grantee shall be liable for and shall pay all taxes, rates and assessments of every description whatsoever that may be imposed by any lawful authority by reason of the presence of the Grantee's Facility in the Crossing Area, or by reason of this Agreement or of anything done by the Grantee pursuant

to this Agreement. In addition, the Grantee shall indemnify the Grantor from and against all such taxes, rates and assessments.

11.2 The Grantor shall be liable for and shall pay all taxes, rates and assessments of every description whatsoever that may be imposed by any lawful authority by reason of the presence of the Grantor's Facility in the Crossing Area, or by reason of this Agreement or of anything done by the Grantor pursuant to this Agreement. In addition, the Grantor shall indemnify the Grantee from and against all such taxes, rates and assessments.

## **12. INSURANCE**

Without in any way limiting the liability of either party under this Agreement, each party shall obtain and keep in force during the term of this Agreement the following insurance covering damage arising from Work or operations of Facilities:

- (a) Each party and its contractors shall, at their own expense, carry and keep in full force and effect:
  - (i) Comprehensive General Liability insurance with an inclusive limit for personal injury and property damage of Five Million Dollars (\$5,000,000). The policy shall include the other party as an Additional Insured; and
  - (ii) Automobile Liability Insurance with an inclusive limit for bodily injury (including passengers) and property damage of Two Million Dollars (\$2,000,000).
- (b) A party, upon request of the other party, shall furnish written documentation, satisfactory to the requesting party, evidencing the required coverage.

## **13. CHANGES TO AGREEMENT**

No change, modification or alteration of this Agreement shall be valid unless it is in writing and signed by the parties hereto, and no course of dealing between the parties shall be construed to alter the terms hereof.

## **14. ASSIGNMENT**

14.1 Either party to this Agreement may assign or transfer this Agreement or the rights and privileges hereby granted. The party intending to assign or transfer this Agreement shall give to the non-assigning party to this Agreement prior notice of its intent by registered mail.

14.2 The non-assigning party to this Agreement may require the assignor and assignee to execute a novation agreement in a form acceptable to the non-assigning party.

14.3 This Agreement shall enure to the benefit of and be binding upon the parties, their successors and assigns.

## **15. GOVERNING LAW**

This Agreement and the rights and obligations of the parties herein shall be governed and construed according to the laws of the province in which the Work is to occur.

## **16. TERM**

The rights and obligations of the parties under this Agreement shall terminate:

- (a) two years from the date hereof if construction of the Grantee's Facility has not commenced; or

- (b) upon proper abandonment and removal of all of a party's Facilities from the Crossing Area, the completion of any reclamation Work required by applicable laws, and the restoration of the site to the satisfaction of the other party, acting reasonably, except for those rights acquired and obligations incurred prior to such events. A party shall notify the other party in writing prior to any abandonment or removal of its Facility.

## **17. MISCELLANEOUS**

- 17.1 In this Agreement, words importing the singular include the plural and vice versa; words importing the masculine gender include the feminine and vice versa; and words importing persons include firms or corporations and vice versa.
- 17.2 The headings of all sections in this Agreement are inserted for convenience of reference only and shall not affect the meaning or construction thereof.
- 17.3 Time is of the essence of this Agreement.
- 17.4 No waiver of any breach of a covenant or provision of this Agreement shall take effect or be binding upon a party unless it is expressed in writing. A waiver by a party of any breach shall not limit or affect that party's rights with respect to any other or future breach.

## **18. ENTIRE AGREEMENT**

This Agreement sets forth the entire agreement between the parties hereto with respect to the Facilities and the Crossing Area, and shall be deemed to have superseded any and all previous agreements and understandings, whether written or oral, between the parties dealing with the Facilities and the Crossing Area.

## **19. FACSIMILE AND COUNTERPART**

This Agreement may be executed and delivered (including by facsimile or other electronic transmission) by the different parties hereto in separate counterparts, each of which will, when executed, be deemed an original and all of which taken together will constitute one and the same Agreement.



## TransCanada Detailed Crossing Guidelines

*This document is subject to change at any time. If you require any assistance or have any questions prior to submitting a crossing request, please contact us at 1-877-872-5177 or email [crossings@transcanada.com](mailto:crossings@transcanada.com).*

### Click or Call before you dig

Whether you're building on a jobsite or in your backyard, before you disturb the ground, know what's below. You should always contact your provincial One-Call Centre at least 3 days prior to commencing (check provincial One Call requirements to ensure proper timing) to have all underground utilities located and marked free of charge.

If you are performing a ground disturbance within 30m of the National Energy Board (NEB) regulated TransCanada PipeLine you are required to obtain consent from the company.

### Click or Call before you cross

A Crossing can mean constructing or installing a temporary or permanent structure across, on, along or under a facility or pipeline right-of-way (ROW), or it can mean operating or transporting heavy equipment, machinery or vehicles over or across the pipeline ROW or facility site. These activities have the potential to damage the pipeline, so you must apply to TransCanada PipeLines for consent. When consent has been granted, the party completing the work or activity must contact the local one call notification centre at least three business days before beginning the work.

### Canada:

[www.clickbeforeyoudig.com](http://www.clickbeforeyoudig.com)

<http://www.transcanada.com/call-before-you-dig.html>

**BC:** 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

### What you need to know for crossing applications

TransCanada is committed to the safety of everyone living or working near our pipelines and associated facilities.

Some activities can pose a threat to a pipeline and those around it, including workers, employees, and the general public.

To ensure the safe operation of our pipelines and facilities and safety of those living and working near them, written consent from TransCanada must be obtained in the following situations:

- Constructing or installing a facility across, on, along, or under a TransCanada pipeline ROW.
- Conducting ground disturbance (excavation or digging) on or within the Safety Zone which is 30m from the edge of the ROW. Note, when put into force, the new proposed NEB Damage Prevention Regulations will change the Safety Zone to "Prescribed Area", measured 30 meters from the centreline the pipe.



- Driving a vehicle, mobile equipment, or machinery across a TransCanada pipeline ROW outside the travelled portion of a highway or public road.
- Using any explosives within 300 meters of TransCanada's pipeline ROW.

### **Application and Consent process**

1. When planning, and before any of the work or activities listed above can begin, a request for consent must be submitted to TransCanada.

Information required for completing your application is located in Appendix A.

2. Once the complete information has been assessed and the potential impacts to TransCanada's facilities have been evaluated, TransCanada may:
  - a. grant consent without any conditions;
  - b. grant consent that requires certain conditions to be met; or
  - c. not grant consent.

3. When consent has been granted, the party completing the work or activity must contact the local one call notification centre at least three business days before beginning the work.

TransCanada will send a representative to mark the location of the pipeline facilities who must also be present to oversee the work. Please plan your work schedule accordingly. The written consent document must be onsite at all times.



## Activities Not Allowed on the TransCanada ROW

The following list of activities and installations are generally not permitted by TransCanada on its ROWs:

<ul style="list-style-type: none"> <li>• Airport runways</li> <li>• All-terrain vehicle function or rally</li> <li>• Blasting</li> <li>• Boat launch</li> <li>• Campsites or Work camps</li> <li>• Cathodic protection devices/facilities (i.e., ground beds)</li> <li>• Concrete slabs (not for pipeline supports) (i.e., footings)</li> <li>• Dugouts</li> <li>• Feedlots</li> </ul>	<ul style="list-style-type: none"> <li>• Golf courses</li> <li>• Junkyard</li> <li>• Lake (man-made)</li> <li>• Mini golf courses</li> <li>• Mining development</li> <li>• Parking lots</li> <li>• Quarries, Aggregate development</li> <li>• Rifle ranges</li> <li>• Community gardens</li> <li>• Permanent structures</li> </ul>	<ul style="list-style-type: none"> <li>• Seismic activities</li> <li>• Septic tanks</li> <li>• Service stations</li> <li>• Storage</li> <li>• Structures (house, barn, sheds, etc.)</li> <li>• Storage tanks</li> <li>• Sport facilities, tennis courts, Pickleball court, etc.</li> <li>• Waste disposal sites</li> <li>• Weighing stations</li> </ul>
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When in doubt or for assistance when completing the application, contact TransCanada for guidance. The contact information is as follows (<http://www.transcanada.com/6683.html>):

### Head Office

#### TransCanada Corporation

450 - 1 Street SW  
Calgary, Alberta, Canada  
T2P 5H1

**Telephone:** 1.403.920.2000 (1.877.872.5177 Toll-free within North America)

**Fax:** 1.403.920.2200

### Crossings Application

**Toll Free:** 1.877.872.5127

**Canada:** [crossings@transcanada.com](mailto:crossings@transcanada.com)

**Quebec-only:** [quebec\\_crossings@transcanada.com](mailto:quebec_crossings@transcanada.com)

To learn more about design characteristics and general conditions required for crossings, please see Appendix E.



## Appendix A

### Steps To Submit a Crossing Application

For an efficient turnaround time, it is essential that your application be as complete as possible. We have outlined some key information below to assist in achieving this objective:

1. Be sure your **request letter** includes:
  - applicant full name, address, telephone number and email address;
  - legal location and/or GPS coordinates of the proposed activity; and
  - specific details of the proposed activity, including proposed commencement date.
2. Include a **drawing/survey plan** clearly identifying your proposed activity/facility in relation to our facility. All facilities must be clearly labelled.
3. A completed **TransCanada Crossing Information Requirements Form** (Appendix C) is required for certain activities. See Appendix B for when and how to complete this form.
4. A completed **TransCanada Angle Sheet** (Appendix D) is required **only** for permanent access road crossing applications.
5. Guidance in designing specific types of crossings can be found in Appendix E. While exceptions might be made once an assessment has been completed, adhering to the guidance will assist our efforts to process applications expeditiously.

**Note** – Most agricultural activities, vehicle travel and ground disturbance only (no permanent structure or facility) within the Right of way, 30m Safety Zone or Prescribed Area can be addressed quickly through a One-Call Notification. A TransCanada field representative will respond and provide locates and approvals as necessary.

***The following tips will help TransCanada to process your request for consent in a timely manner:***

- If you are sent an information request form, fully complete the form and provide the most accurate information possible.
- Adhere to the guidance provided.
- Provide prompt responses to TransCanada questions.

If you require any assistance or have any questions prior to submitting in your crossing request, please contact us at **1-877-872-5177** or email [crossings@transcanada.com](mailto:crossings@transcanada.com).





## Appendix B

### Guidance For Completing TransCanada Crossing Information Requirements Form

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**1. The form provided at Appendix C must be completed in the following instances:**

- crossing a TransCanada facility with a facility<sup>1</sup>
- crossing a TransCanada facility with vehicles and equipment outside of the travelled portion of a roadway
- permanently encroaching on a TransCanada ROW with a pathway or other facility/structure

**2. All section(s) applicable to your request must be completed.**

For example, a pipeline crossing application requires the completion of the following sections:

- Section 1 Introduction
- Section 2 Pipeline crossing and/or paralleling TransCanada's Facility
- Section 6(a) Temporary Heavy Equipment Crossing (i.e., construction vehicles)

More examples:

<u>Activity</u>	<u>Sections to Complete</u>
Applicant cable crossing TransCanada facility	1, 3 & 6a
Overhead line crossing TransCanada facility	1, 4 & 6a
Pathway/sidewalk/bike path crossing TransCanada facility	1, 5 & 6a
Temporary Heavy Equipment crossing TransCanada facility	1 & 6a
Permanent Access Road Crossing TransCanada facility	1 & 6b and angle form
Applicant facility paralleling a TransCanada facility	1 & 2, 3, 4, or 5

**3. Complex applications**

In certain circumstances the form provided at Appendix C may not adequately address the requirements of complex projects. In those instances, TransCanada will engage directly with the applicant to ensure the appropriate information is requested and shared among our internal subject matter experts.

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<sup>1</sup> Facility can include: pipelines, cables, access roads, ground beds, overhead powerlines, meter stations, compressor stations, valve sites, wellsites, etc.

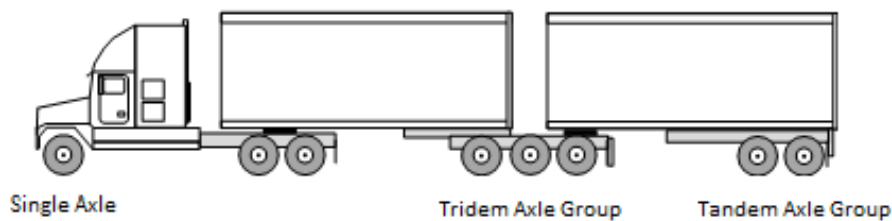
#### 4. Vehicle Information

##### Definitions:

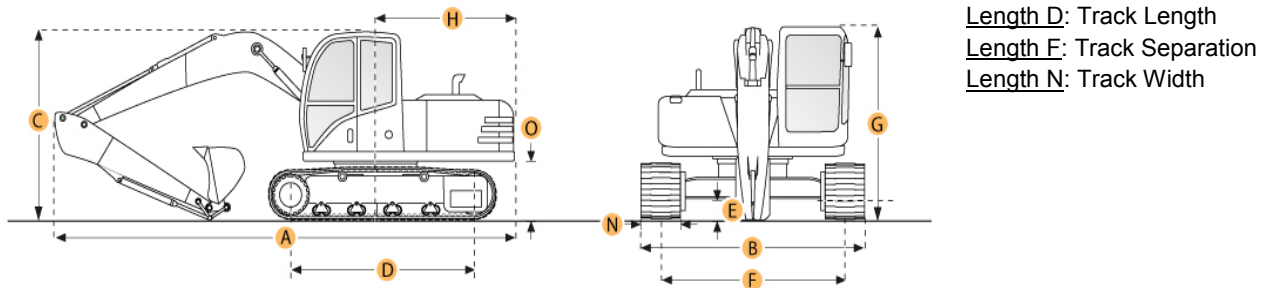
Axle Group – axle groups are split into 3 categories based on how closely they are situated. The diagram below gives example of all 3 categories.

Highway Legal Weights – Provincial weight restrictions placed on vehicles which vary depending on vehicle configuration and time of year.

The gross vehicle weight, as well as the weight borne by each axle group, is required for a crossing analysis. The axle weights listed will appear on the crossing agreement and are the maximum allowable weights for that crossing.



The required tracked vehicle information is the make, model, track length, track width, and shoe width. If some information cannot be found, please ensure that at least the make and model are given. Below is a diagram describing the required specifications.





## Appendix C

### TRANSCANADA CROSSING INFORMATION REQUIREMENTS FORM

<b>1. Introduction</b>			
Please complete this form and submit by email to: <a href="mailto:crossings@transcanada.com">crossings@transcanada.com</a> . This information is required to process your request. Please complete this form accurately and entirely, as incomplete information will result in delays in issuing your agreement. Call us at 1-877-872-5177 if you have any questions or concerns.			
Requesting Company:			
Phone Number and/or email:			
Legal Location:			
Requesting Company File #:			
GPS Coordinates of Crossing(s): (provide in units of Degree/Decimal Only (DD)). For instance, 49.64297-95.50149)			
Crossing Location:			
Expected Date of Construction:			
<b>2. Pipeline crossing and/or paralleling TransCanada's Facility</b>			
Pipe Material:			
Pipe Size:			
Installation Method (i.e. Open cut, bore):			
Crossing Angle (Where Practicable, as close to 90 Degree as possible):			
Crossing Position:	<input type="checkbox"/> Over TransCanada <input type="checkbox"/> Under TransCanada <input type="checkbox"/> Above Ground		
Cathodic Protection (select one)	<input type="checkbox"/> Impressed Current System <input type="checkbox"/> Galvanic Anodes <input type="checkbox"/> No Cathodic Protection		
For above ground pipeline, confirm if the Support Piles near TransCanada Facility will be electrically isolated	<input type="checkbox"/> Yes <input type="checkbox"/> No		
If an impressed current system is being used, will there be any ground beds located within 150m of TransCanada's pipeline(s)?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Applicant's Cathodic Protection Technical Contact: _____			
Email: _____ Telephone: _____			
<b>3. Cable Line(s) crossing and/or paralleling TransCanada's Facility</b>			
Cable Type (i.e. Electrical, Communications):		Energization Date:	
Cable Material (i.e. Copper, Fiber Optic):			
Grounding Distance from nearest TransCanada's Pipelines			
Cable Voltage:	<input type="checkbox"/> AC <input type="checkbox"/> DC		
Cable Insulator & Conduit Material:			
Installation Method (i.e. Open cut, Bore):			
Crossing Angle (Where Practicable, as close to 90 Degree as possible):		Fault current level (phase to ground fault):	



TRANSCANADA CROSSING INFORMATION REQUIREMENTS FORM

Crossing Position		<input type="checkbox"/> Over TransCanada	<input type="checkbox"/> Under TransCanada	<input type="checkbox"/> Overhead
<b>4. Overhead Power Transmission/Distribution Line(s) crossing or paralleling TransCanada's Facility</b>				
<b>Distribution Line</b>			<b>Transmission Line</b>	
Line Voltage:		<input type="checkbox"/> AC	<input type="checkbox"/> DC	Line Voltage:
				<input type="checkbox"/> AC
				<input type="checkbox"/> DC
Energization Date:			Energization Date:	
Crossing Angle (Where Practicable, as close to 90 Degree as possible):			Crossing Angle (Where Practicable, as close to 90 Degree as possible):	
Groundings or Counterpoises distance from nearest TransCanada pipelines:			Groundings or Counterpoises distance from nearest TransCanada pipelines:	
Please provide the following if paralleling TransCanada's Pipeline(s):				
Paralleling Length:			Fault Current Level (phase to ground fault):	
Load Current (Amps):				
Imbalances (%):			If applicable, paralleling length:	
Harmonics (%):				
<b>5. Pedestrian/Bike Path(s) crossing and/or paralleling TransCanada's Facility</b>				
<i>Pathways on the TransCanada right-of-way must maintain a minimum setback distance of 5m from the closest edge of the pathway to the edge of the pipeline surface. This distance must clearly be shown on the plan(s).</i>				
Type of Pathway (i.e. limestone, crushed gravel, paved)				
Crossing Angle (Where Practicable, as close to 90 Degree as possible):				
GPS coordinates for each pathway crossing (in units of DD):				
Width of pathway (Max 3 m):				
<b>6. Road(s) and/or Heavy Equipment Crossing TransCanada's Facility</b>				
Please <b>complete</b> the applicable table(s) – wheeled and/or tracked – for the <b>heaviest</b> vehicle in each category.				
<b>a) Temporary Heavy Equipment Crossing (i.e. Construction Vehicles)</b>				

TRANSCANADA CROSSING INFORMATION REQUIREMENTS FORM

Wheeled Vehicles		Tracked Vehicles (Please attach Vehicle's Specification)	
Total Vehicle Weight:	(KG)	Total Vehicle Weight:	(KG)
Axle Group (Highway Legal):	Weight Per Axle Group: (KG)	Make:	
O Single: <input type="checkbox"/> 2 Tires <input type="checkbox"/> 4 Tires		Model:	
OO Tandem: <input type="checkbox"/> 4 Tires <input type="checkbox"/> 8 Tires		Track Length	(Meter)
OOO Tridem: <input type="checkbox"/> 6 Tires <input type="checkbox"/> 12 Tires		Track Width	(Meter)
Tire Pressure	(psi)	Shoe Width	(Millimeter)
Axle Group (Exceed Highway Legal): (Please attach Vehicle's Specification)	(KG)	Other (Specify):	
Other (Specify):			
<b>b) Permanent Heavy Equipment Crossing (Please complete attached "Angled Sheet" for Permanent Road Crossing)</b>			
Wheeled Vehicles		Tracked Vehicles (Please attach Vehicle's Specification)	
Total Vehicle Weight:	(KG)	Total Vehicle Weight:	(KG)
Axle Group (Highway Legal):	Weight Per Axle Group: (KG)	Make:	
O Single: <input type="checkbox"/> 2 Tires <input type="checkbox"/> 4 Tires	(*9100 kg Max)	Model:	
OO Tandem: <input type="checkbox"/> 4 Tires <input type="checkbox"/> 8 Tires	(*17000 kg Max)	Track Length:	(Meter)
OOO Tridem: <input type="checkbox"/> 6 Tires <input type="checkbox"/> 12 Tires	(*24000 kg Max)	Track Width:	(Meter)
Tire Pressure	(psi)		
*Alberta Legal Highway Axle Grouping Weight will apply if left blank			



**TRANSCANADA CROSSING INFORMATION REQUIREMENTS FORM**

<b>Axle Group (Exceed Highway Legal):</b> <b>(Please attach Vehicle's Specification)</b>	<b>(KG)</b>	Shoe Width:	<b>(Millimeter)</b>
<b>Other (Specify):</b>		<b>Other (Specify):</b>	
Type of road (i.e. Gravel / Paved / Asphalt)			
Will there be ditches?	<input type="checkbox"/> No <input type="checkbox"/> Yes		
Permanent Crossing Date Required:			
Angle(s) of crossing (Where Practicable, as close to 90 Degree as possible):			
Total Width of the proposed road (m):			

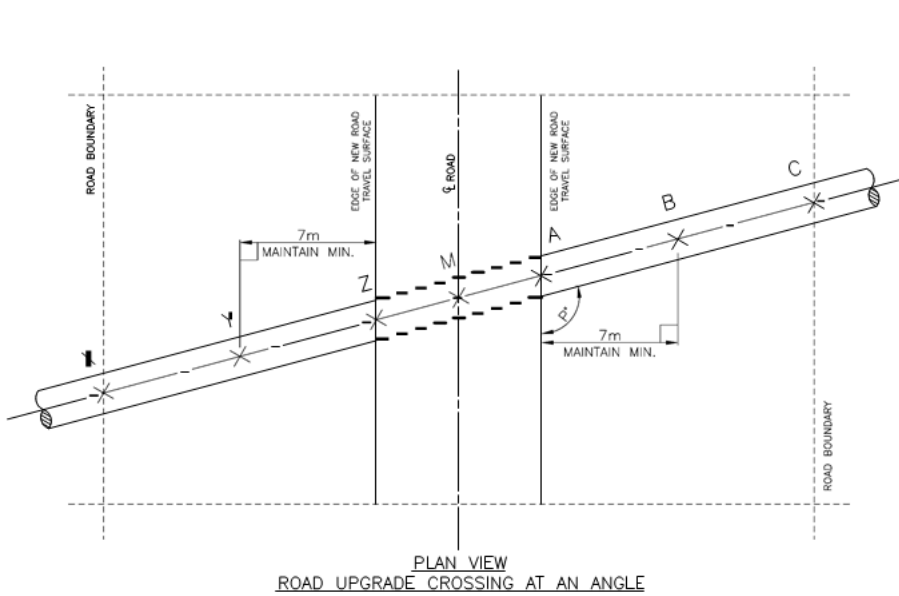
**7. Other Important Information that TransCanada should know**  
 (For example, Existing Permit)



### Appendix D

### TransCanada Road Crossing Angle Form

Note – Prior to attempting to obtain depths of TransCanada pipelines for the purpose of completing this form, complete a Locate Request through the local One-Call Notification Center and wait for TransCanada field representative to respond to locate and mark the pipeline.



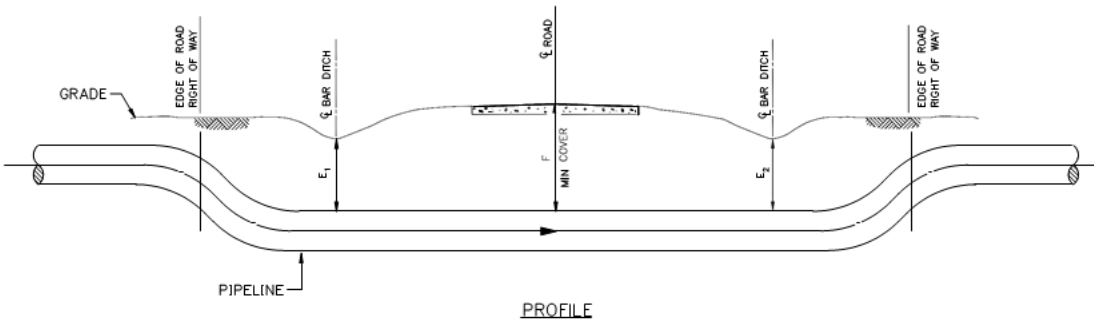
REQUIRED COORDINATES TO BE PROVIDED BY THE APPLICANT

	LATITUDE	LONGITUDE
A		
B		
C		
M		
X		
Y		
Z		

PROVIDE DATUM OF UNITS: \_\_\_\_\_

REQUIRED ANGLE TO BE PROVIDED BY THE APPLICANT

	DEGREES
P'	



MINIMUM DEPTH OF COVER TO BE PROVIDED BY THE APPLICANT IN METERS

E <sub>1</sub>	
E <sub>2</sub>	
F	

**NOTES:**

1. PROVIDE BEARINGS BASED ON TRUE NORTH.
2. PROVIDE LOWEST DEPTH OF COVER AT PIPE ALONG TRAVEL SURFACE OF ROAD AND AT BAR DITCH.



## Appendix E

### Crossing Design Guidance

The following provides design guidance for crossings. While exceptions might be made once an assessment has been completed, adhering to the guidance will assist in efforts to process applications expeditiously.

#### General Requirements

- Road and Utility crossings shall:
  - occur as close as possible to 90 degrees.
  - not occur at a bend in a TransCanada pipeline.

#### General Conditions for Crossings of TransCanada PipeLines by Highways, Private Roads, and Railways

- A highway or private road shall be constructed so that the travelled surface is no less than 1.5 m above the top of the pipeline.
- The bottom of the ditches adjacent to roads should not be less than 1.4m above the top of the pipeline.
- Minimum cover for railway crossings (below base of rail) is 3.05 m for uncased pipe.
- Note, TransCanada may require additional clearance from those noted above.

#### General Conditions for Crossings of TransCanada's PipeLines by Utilities

- TransCanada shall retain the upper position in the crossing area.
- Minimum separation between buried facilities shall be 600mm for open cut excavations and 1000mm for trenchless installation methods (i.e. horizontal directional drill, boring, etc.). On a case-by-case basis, the separation could be reduced if the utility is crossing under our pipeline.
- The utility depth shall be maintained for the entire width of the ROW.
- The utility shall have no bends within the pipeline ROW.
- The utility shall have no joints, splices or other connections within the TransCanada pipeline ROW.
- Pipeline crossings should not be placed within 7m of a TransCanada pipeline bend.

#### General Conditions for Pathways and Landscaping on the TransCanada ROW

- Pathways on the ROW should have a 5 metres separation from the edge of a TransCanada pipeline.
- Pathway width shall not exceed 3 metres.
- Trees must not obscure the overhead view of the TransCanada ROW as it is regularly patrolled by aircraft or facilitate access to fenced facilities.
- Tree roots must not interfere with the TransCanada pipeline.
- Landscaping must not block vehicle access along the ROW.

#### General Conditions for Construction Near TransCanada ROW & Facilities

- No work may take place within the TransCanada pipeline ROW, Safety Zone or Prescribed Area or within a TransCanada designated exclusion area without a TransCanada representative on site.
- The instructions and directions of the TransCanada Representative shall be strictly adhered to.
- In all circumstances it shall be necessary to hand excavate the pipeline prior to mechanical excavation within 5m of the pipe.
- Some municipalities require additional setbacks from pipeline ROW's for the safety of the public. Please check with the local municipality to determine these requirements. A setback is the minimum distance required between a property line and a structure as dictated by a regulator and/or municipality.





*Note – Failure to follow the requirements of the NEB, including the above guidelines which are intended to promote safety and environmental protection, could result in the NEB imposing Administrative Monetary Penalties on companies or individuals.*

## SCHEDULE "C"

### Specific Terms and Conditions

Schedule "C" forms part of the Facility Crossing Agreement

between (Grantor)

and (Grantee)

and dated the day of , .

#### Grantee Pipe Crossing Grantor Pipe

1. The Grantee's Facility shall be constructed in accordance with the attached typical drawing STDS-03-ML-03-022.
2. Where the crossing is open cut, a minimum clearance of thirty (30) centimetres must be maintained between the Grantor's Facility and the Grantee's Facility for the entire width of the Crossing Area.
3. Where the Grantee's Facility is installed by boring or by horizontal directional drill, the following shall apply:
  - (a) A minimum clearance of one (1.0) metre must be maintained between the Grantor's Facility and the Grantee's Facility for the entire width of the Crossing Area.
  - (b) The Grantee must provide a drilling plan and drawing (profile). The plan must include:
    - (i) total length of bore;
    - (ii) depth of cover over each buried facility;
    - (iii) depth to bottom of each buried facility;
    - (iv) size and type of each buried facility;
    - (v) clearance between Grantee's Facility and existing buried facilities;
    - (vi) expected centreline of bore.
  - (c) The Grantee must ensure sight holes are:
    - (i) provided at a minimum of 1.5 metres and a maximum of three (3) metres from the side (nearest to the drill) of each buried facility, and perpendicular to the Grantee's Facility being constructed;
    - (ii) a minimum of three (3) metres long (1.5 metres each side of the expected centreline) and are sufficiently wide to provide easy visual confirmation of the bore head entering the sight hole;
    - (iii) excavated to at least the depth of the crossing.

NOTE: If a sight hole cannot be provided, the minimum clearance between the Grantor's Facility and the bore will be increased in accordance with the Grantor's specific requirements to ensure no possibility of contact between the bore and the Grantor's Facility. This will be assessed by the Grantor's Field Representative in consultation with the Grantor's Damage Prevention Engineers.

- (d) The Grantee shall mark the centre line of the bore.
  - (e) The Grantee shall ensure that spoil piles are not being placed over the bore path.
  - (f) The Grantee shall ensure that the Grantee's Facility maintains continuous depth and horizontal alignment as it is installed across the full width of the Grantor's Right-of-Way. Any deviation resulting in less cover must first be approved by the Grantor's Area Manager.
4. The following shall apply to all mechanical excavation:
    - (a) The Grantor's Field Representative must be present.
    - (b) No mechanical excavation shall take place within one and a half (1.5) metres of the Grantor's Facility. In addition, the Grantee shall not excavate mechanically:
      - (i). within five (5) metres laterally of an underground Facility being crossed until such Facility has first been exposed by hand at the point of crossing; or
      - (ii). within five (5) metres of an underground Facility where the excavation runs parallel to such Facility until such Facility has been exposed by hand at sufficient intervals to confirm its location.

**Continued on next page**

- (c) Mechanical excavation closer to underground Facilities than permitted under subclauses 4(b)(i) and 4(b)(ii) above may be permitted by the Grantor's Field Representative in his or her sole discretion.
- (d) Side cutters attached to buckets shall not be used.
- 5. The Grantee shall do all things that in the Grantor's reasonable opinion are necessary to ensure that the Grantor's cathodic protection of the Grantor's Facility or any part thereof is not damaged or adversely affected as a result of the Grantee's operations or subsequent application of cathodic protection by the Grantee to the Grantee's Facility. Notwithstanding the generality of the foregoing, the Grantee shall, at the nearest reasonable access, install test leads in accordance with the attached typical drawing STDS-06-CP-80-108. In all cases where test lead cables are to be attached to the Grantor's Facility by utilizing thermite CAD welding procedures, the Grantor's Regional Corrosion Technician must approve the third party performing the thermite welding. All thermite CAD welding shall be conducted in accordance with the attached typical drawing STDS-06-CP-80-117. The Grantee shall bear the entire cost of providing installation and maintenance of any such cathodic protection and test leads. Notwithstanding the foregoing, cathodic protection shall not be required where the Grantee is installing a plastic or other non-metal Facility.
- 6. The Grantee shall be responsible for any extra costs which may be incurred by the Grantor for extra hydrovac holes and bracing made necessary where the Grantor's pipeline is crossed by the Grantee's pipeline at an angle of less than ninety (90) degrees.
- 7. Where practicable, there shall be no joints in the section of the Grantee's Facility being installed within the Grantor's pipeline right-of-way.
- 8. Should Grantee require temporary working space, the Grantor consents to the Grantee utilizing temporary working space during and until completion of construction of the Grantee's Facility only, and not thereafter, in the locations marked as "temporary working space" on the plan attached as Schedule B ("Temporary Working Space Areas"). During such period, the Temporary Working Space Areas shall be considered a Crossing Area under the Agreement and all terms and conditions of the Agreement shall apply to the Temporary Working Space Areas

**Temporary Vehicle and/or Equipment Crossing of Grantor's Pipeline During Initial Construction of Grantee's Facility**

- 9. During and until completion of construction of the Grantee's Facility only, and not thereafter, the Grantor consents to the Grantee utilizing the Crossing Area for temporary crossing of the Grantor's Facility with vehicles and/or equipment subject to the conditions below. In the event that, after the completion of construction, temporary vehicle and/or equipment access is required due to further Work, then the Grantee is required to obtain further written consent from the Grantor for access.
- 10. Weight of temporary vehicles and/or equipment shall not exceed the following at any given instance:

Wheeled:    \_\_\_\_\_ kg per single axle group  
                   \_\_\_\_\_ kg for tandem axle group  
                   \_\_\_\_\_ kg for tridem axle group  
 Tracked:    \_\_\_\_\_ kg

No more than one vehicle or piece of equipment shall cross the Grantor's pipeline(s) simultaneously.

**11 Temporary external protection at the crossing location is required. Approved form(s) are checked below:**

<input type="checkbox"/> <b>Earth Ramp</b> Depth of cover over Grantor's pipeline(s) in any part of the crossing location shall not be less than _____ metres.  Should additional cover be necessary, it can be achieved per typical drawing <u>STDS-03-ML-03-202</u> .	<input type="checkbox"/> <b>Rig Mats</b> Depth of cover over Grantor's pipeline(s) in any part of the crossing location shall not be less than _____ metres.  Should additional cover be necessary, it can be achieved per typical drawing <u>STDS-03-ML-03-202</u> .  In addition, rig mats to a minimum thickness of _____ cm ( _____ inches) shall be installed as per typical drawing <u>STDS-03-ML-03-203</u> .	<input type="checkbox"/> <b>Bridge</b> A bridge, sufficient for the anticipated loads with no added stress or pressure on the pipeline, in the form of: <ul style="list-style-type: none"> <li>• a structure (subject to Grantor's pre-approval of design); or</li> <li>• rig mats placed over the pipe such that a void is maintained for 1.5 metres on either side.</li> </ul> The bridge shall be installed as per typical drawing <u>STDS-03-ML-03-201</u> .
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Where multiple forms of protection are acceptable and checked above, Grantor's on site representative, at his/her reasonable discretion, shall determine the most appropriate method of protection for this crossing).

**Continued on next page**

- 12. Vehicles and/or equipment shall cross Grantor's pipeline(s) as close as possible at a ninety (90) degree angle.
- 13. Upon completion of construction of the Grantee's Facility, Grantee shall remove any temporary external protection/additional cover installed and shall restore the Crossing Area in accordance with Schedule A. **The Grantor's Field Representative must be on site for the removal of the additional cover, unless otherwise advised.**

("Grantor")

("Grantee")

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

## SCHEDULE "C"

### Specific Terms and Conditions

Schedule "C" forms part of the Facility Crossing Agreement

between (Grantor)  
and (Grantee)  
and dated the day of , 2016

#### Grantee Cable Crossing Grantor Pipe

1. Notwithstanding section 4(a) of Schedule A, the Grantee's Facility shall be entitled to the upper position in the Crossing Area, unless field conditions dictate installation of the Grantee's Facility in the lower position as determined by the Grantor's Field Representative. The Grantee's Facility shall be constructed in accordance with the attached typical drawing STDS-03-ML-03-004.
2. Where the Grantee's Facility assumes the upper position in the Crossing Area, the Grantee's Facility must be installed in an open cut trench only. **Boring is not permitted.**
3. The following shall apply to all mechanical excavation:
  - (a) The Grantor's Field Representative must be present.
  - (b) No mechanical excavation shall take place within one and a half (1.5) metres of the Grantor's Facility. In addition, the Grantee shall not excavate mechanically:
    - (i). within five (5) metres laterally of an underground Facility being crossed until such Facility has first been exposed by hand at the point of crossing; or
    - (ii). within five (5) metres of an underground Facility where the excavation runs parallel to such Facility until such Facility has been exposed by hand at sufficient intervals to confirm its location.
  - (c) Mechanical excavation closer to underground Facilities than permitted under subclauses 3(b)(i) and 3(b)(ii) above may be permitted by the Grantor's Field Representative in his or her sole discretion.
  - (d) Side cutters attached to buckets shall not be used.

#### Temporary Vehicle / Equipment Crossing of Grantor's Pipeline During Initial Construction of Grantee's Facility

4. During and until completion of construction of the Grantee's Facility only, and not thereafter, the Grantor consents to the Grantee utilizing the Crossing Area for temporary crossing of the Grantor's Facility with vehicles and/or equipment subject to the conditions below. In the event that, after the completion of construction, temporary vehicle and/or equipment access is required due to further Work, then the Grantee is required to obtain further written consent from the Grantor for access.
5. No more than one vehicle or piece of equipment shall cross the Grantor's pipeline(s) simultaneously.
6. Vehicles and/or equipment shall cross the Grantor's pipeline as close as practicable at a ninety (90) degree angle to the Grantor's pipeline.

Continued on next page

**7. Weight of vehicles and/or equipment shall not exceed the following at any given instance during construction of Grantee's Facility:**

Wheeled: \_\_\_\_\_ kg per single axle group  
 \_\_\_\_\_ kg for tandem axle group  
 \_\_\_\_\_ kg for tridem axle group

Tracked: \_\_\_\_\_ kg

**8. External protection at the crossing location is required. Approved form(s) are checked below:**

<input type="checkbox"/> <b>Earth Ramp</b> Depth of cover over Grantor's pipeline(s) in any part of the crossing location shall not be less than _____ metres.  Should additional cover be necessary, it can be achieved per typical drawing <u>STDS-03-ML-03-202.</u>	<input type="checkbox"/> <b>Rig Mats</b> Depth of cover over Grantor's pipeline(s) in any part of the crossing location shall not be less than _____ metres.  Should additional cover be necessary, it can be achieved per typical drawing <u>STDS-03-ML-03-202.</u>  In addition, rig mats to a minimum thickness of _____ <b>cm ( _____ inches)</b> shall be installed as per typical drawing <u>STDS-03-ML-03-203.</u>	<input type="checkbox"/> <b>Bridge</b> A bridge, sufficient for the anticipated loads with no added stress or pressure on the pipeline, in the form of: <ul style="list-style-type: none"> <li>• a structure (subject to Grantor's pre-approval of design); or</li> <li>• rig mats placed over the pipe such that a void is maintained for 1.5 metres on either side.</li> </ul> The bridge shall be installed as per typical drawing <u>STDS-03-ML-03-201.</u>
---	--	---

Where multiple forms of protection are acceptable, Grantor's on site representative, at his/her reasonable discretion, shall determine the most appropriate method of protection for this crossing).

9. Should Grantee require temporary working space, the Grantor consents to the Grantee utilizing temporary working space during and until completion of construction of the Grantee's Facility only, and not thereafter, in the locations marked as "temporary working space" on the plan attached as Schedule B ("Temporary Working Space Areas"). During such period, the Temporary Working Space Areas shall be considered a Crossing Area under the Agreement and all terms and conditions of the Agreement shall apply to the Temporary Working Space Areas

10. Upon completion of construction of the Grantee's Facility, Grantee shall remove any external protection/additional cover and shall restore the Crossing Area in accordance with Schedule A. **The Grantor's Field Representative must be on site for the removal of the additional cover, unless otherwise advised.**

("Grantor")

("Grantee")

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_

File:

**SCHEDULE "C"**

**Specific Terms and Conditions**

Schedule "C" forms part of the Facility Crossing Agreement

between (Grantor)

and (Grantee)

and dated the day of , .

1. Should it be necessary to lower, alter or protect any portion of the Grantor's Facility to accommodate the Grantee's Facility (road) or any proposed Work, all costs involved shall be borne by the Grantee. Any additional costs that the Grantor may incur due to the presence of the Grantee's Facility shall also be borne by the Grantee.
2. Additional ramping may be required at the Crossing Area and shall be installed at the direction of the Grantor's Field Representative.
3. Depth of cover over the Grantor's Facility shall be maintained as follows and shall not be compromised over the life of the crossing due to rutting, erosion or other means:
  - a. three (3) metres under the full width of the travelled surface of the road; and, if necessary, at
  - b. 1.5 metres at the lowest point in any ditch within seven (7) metres of the travelled surface of the road.
4. Depth of cover shall consist of competent fill, preferably granular based, or rig mats (where thickness of the rig mats constitutes an equivalent amount of fill). Depth of cover shall NOT consist of a snow berm.
5. **During construction or maintenance activities** no more than one vehicle with the following loads shall simultaneously cross the Grantor's Facility:

**Maximum tired weight = 12,000 kg per single axle group**  
**24,000 kg per tandem axle group**  
**32,000 kg per tridem axle group**

**Maximum tracked weight = kg**

6. Legal highway weights apply after construction of the traveled surface of the road.
7. Should temporary working space be required, during and until completion of construction of the Grantee's Facility only, and not thereafter, the Grantor consents to the Grantee utilizing temporary working space in the locations marked as "temporary working space" on the plan attached as Schedule B ("Temporary Working Space Areas"). During such period, the Temporary Working Space Areas shall be considered a Crossing Area under the Agreement and all terms and conditions of the Agreement shall apply to the Temporary Working Space Areas.

("Grantor")

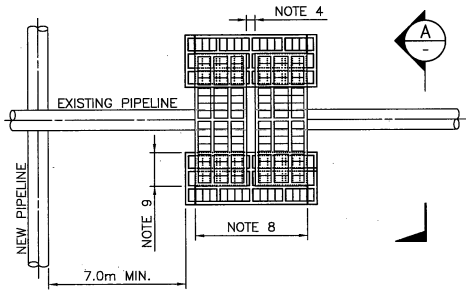
("Grantee")

Per: \_\_\_\_\_

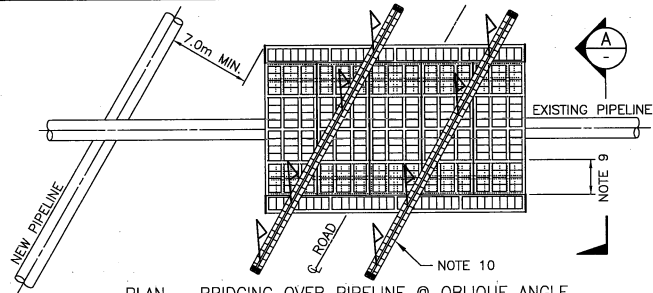
Per: \_\_\_\_\_

Per: \_\_\_\_\_

Per: \_\_\_\_\_



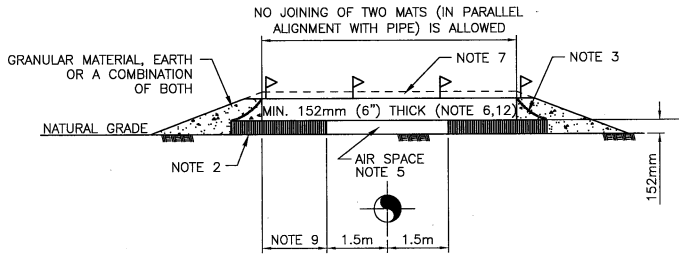
PLAN - BRIDGING OVER PIPELINE @ 90° ANGLE  
N.T.S.



PLAN - BRIDGING OVER PIPELINE @ OBLIQUE ANGLE  
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN METRIC MEASUREMENTS.
2. GROUND SURFACE SHALL BE PROPERLY PREPARED AND LEVELED. GROUND BEARING PRESSURE ESTIMATOR (MANITOWOC) MAY BE USED TO ENSURE SOIL CAN WITHSTAND VEHICLE'S WEIGHT.
3. STEEL CHAIN PADLOCK MAY BE REQUIRED TO SECURE MATS FROM MOVEMENT.
4. GAP BETWEEN MATS SHALL BE KEPT TO MINIMUM.
5. MAINTAIN MINIMUM 152mm AIR SPACE BETWEEN BOTTOM OF SPAN MAT(S) AND NATURAL GRADE.
6. FREE SPANNING MAT(S) SHALL BE 8'x40'x6" 4 BEAM RIG MAT STEEL FRAME, DOUGLAS FIR WOOD CORE. SECOND LAYER OF MAT MAY BE REQUIRED FOR OVERSIZED VEHICLES. CONSULT MANUFACTURER.
7. SOIL ON TOP OF MAT MAY BE REQUIRED TO PREVENT DAMAGES TO MAT(S). HOWEVER, IT SHOULD BE KEPT TO MINIMUM.
8. WIDTH OF TRAVEL SURFACE AND NUMBER/SIZE OF MAT(S) ARE SITE SPECIFIC REQUIREMENTS.
9. FREE SPANNING MAT(S) SHALL BE PLACED OVER A MINIMUM 2/3 OF THE SUPPORTING MAT(S) TO EFFECTIVELY DISTRIBUTED THE VEHICLE WEIGHT.
10. BERM AND/OR FLAG(S) IS REQUIRED ON BOTH SIDES OF THE TRAVELLED SURFACE.
11. CROSSING ANGLE WILL BE SITE SPECIFIC HAZARD REQUIREMENT. MAINTAIN A MINIMUM OF 45 DEGREE CROSSING ANGLE AS POSSIBLE.
12. INSPECTION OF MAT IS REQUIRED PRIOR TO FIELD INSTALLATION FOR SIGNS OF AGING AND DETERIORATION. DO NOT USE DAMAGED MAT(S).
13. MAT IS TO BE USED FOR CROSSING WITHIN PIPELINE RIGHT-OF-WAY ONLY.



SECTION A  
N.T.S.

DRAWING No		TITLE	
-		-	

REV No	DATE	REVISION	PROJECT CODE	DRAFT BY	DRAFT CHK	DESIGN BY	DESIGN CHK	PROJ MGR
00	2002-04-08	DRAWING SUPERSEDES B-SK-18-397	-	-	-	-	-	-
01	2016-01-22	GENERAL ISSUE - REVISED FOR 2015 SPEC.	-	KPL	-	-	-	-

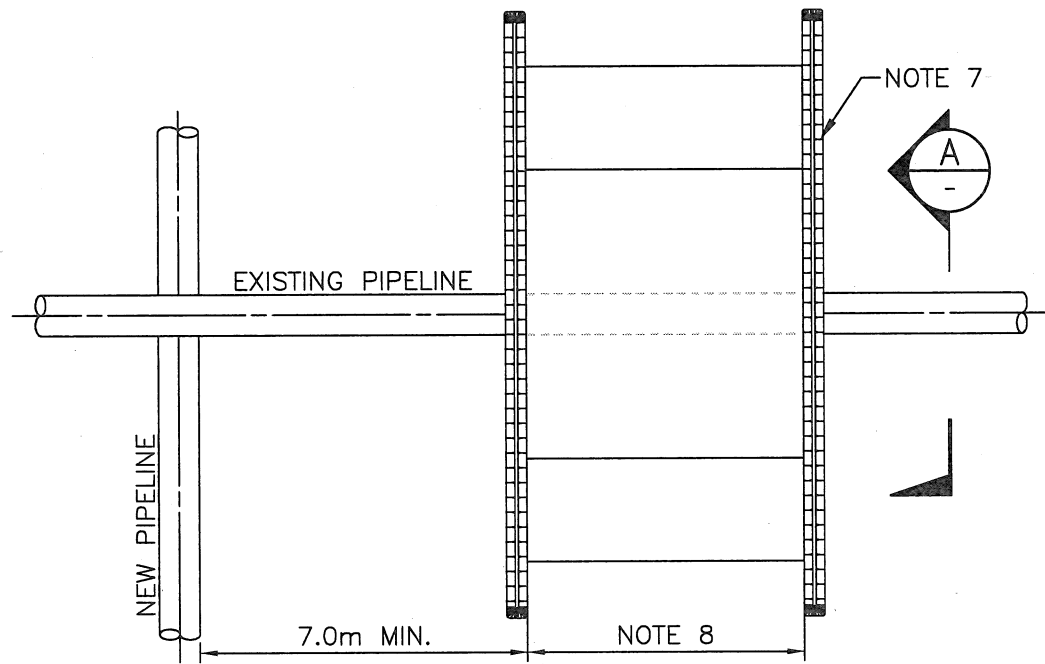
PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL
	DATE: _____ PERMIT NUMBER: P7100

DESIGN STANDARD		
FIA #	STDS	DISCIPLINE #
		03
TEMPORARY BRIDGING OVER EXISTING PIPELINE		
SCALE AS SHOWN	DRAWING No STDS-03-ML-03-201	REV 01

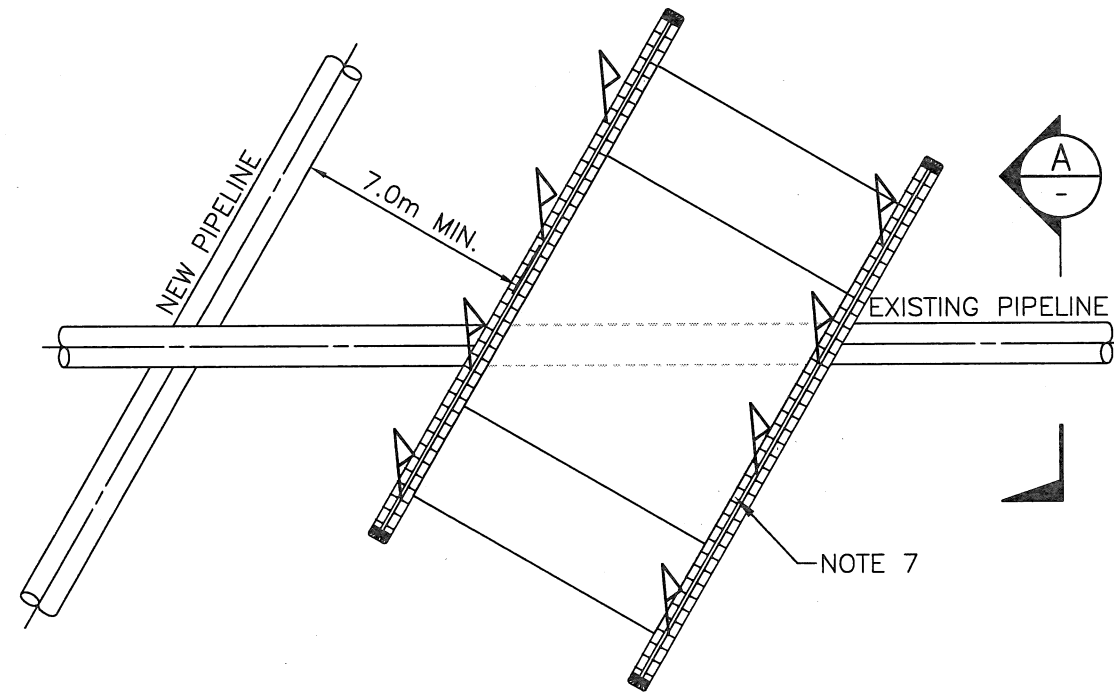
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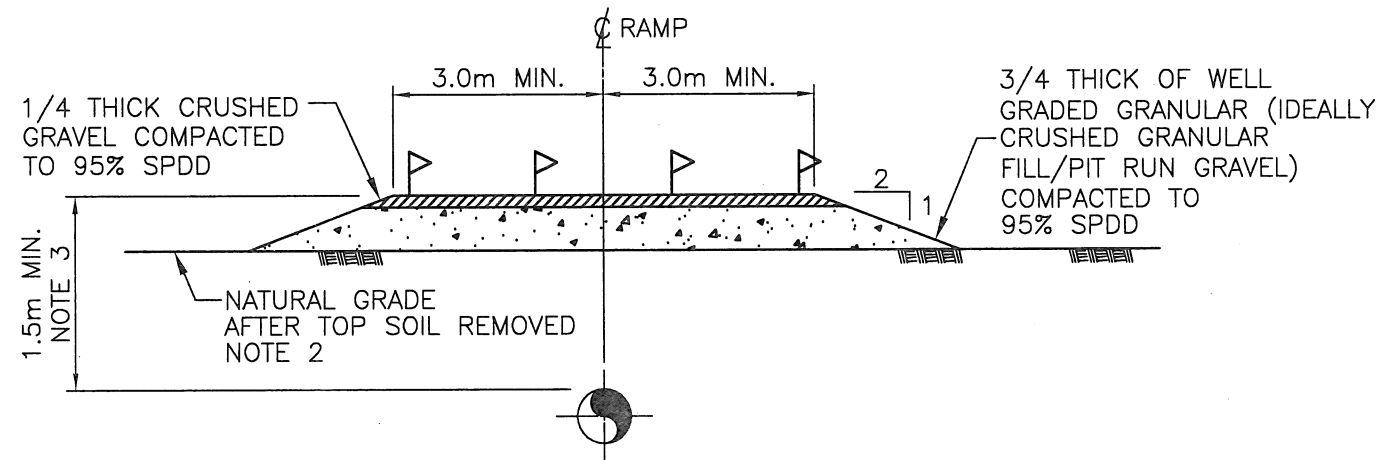




PLAN - RAMPING OVER PIPELINE @ 90° ANGLE  
N.T.S.



PLAN - RAMPING OVER PIPELINE @ OBLIQUE ANGLE  
N.T.S.



SECTION  
N.T.S.

NOTES:

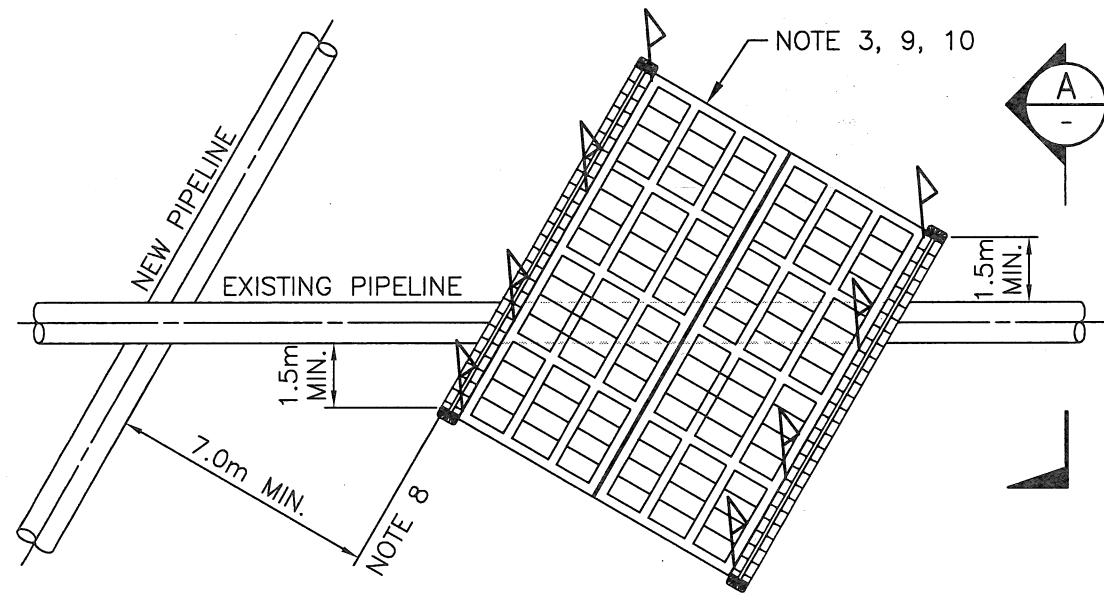
1. ALL DIMENSIONS ARE IN METRIC MEASUREMENTS.
2. LOCATION WHERE SUBGRADE IS DEEP ORGANICS, WEAK AND/OR THAW UNSTABLE SOIL, ALTERNATE (ENGINEERED) CROSSING METHOD(S) IS REQUIRED.
3. DEPTH OF COVER REQUIREMENT SHALL BE IN ACCORDANCE TO TRANSCANADA'S TES-PROJ-PCS OR CROSSING AGREEMENT WHICHEVER IS MORE STRINGENT.
4. UPON COMPLETION, FOREIGN PIPELINE CONTRACTOR SHALL RESTORE THE CROSSING TO THE SATISFACTION OF THE GRANTOR COMPANY FIELD REPRESENTATIVE.
5. IF FOREIGN CONTRACTOR PROPOSES TO CROSS MULTIPLE PIPELINES, ONE CONTINUOUS RAMP MUST BE CONSTRUCTED ACROSS THESE PIPELINES UNLESS THE SEPARATION BETWEEN PIPELINES ARE LARGE ENOUGH TO ACCOMMODATE MULTIPLE RAMPS.
6. RAMP CROSSING ANGLE WILL BE SITE SPECIFIC HAZARD REQUIREMENT. MAINTAIN A MINIMUM OF 45 DEGREE CROSSING ANGLE AS POSSIBLE.
7. BERM AND/OR FLAG(S) IS REQUIRED ON BOTH SIDES OF THE TRAVELLED SURFACE.
8. WIDTH OF TRAVEL SURFACE IS A SITE SPECIFIC REQUIREMENT.

REFERENCE DRAWINGS								
DRAWING No	TITLE							
-								
REV No	DATE	REVISION	PROJECT CODE	DRAFT BY	DRAFT CHK	DESIGN BY	DESIGN CHK	PROJ MGR
00	2002-04-02	DRAWING SUPERSEEDS B-SK-18-83A	-	-	-	-	-	-
01	2015-11-17	GENERAL ISSU - REVIEWED FOR 2015 SPEC.	-	KPL	R	HD	MP	MP

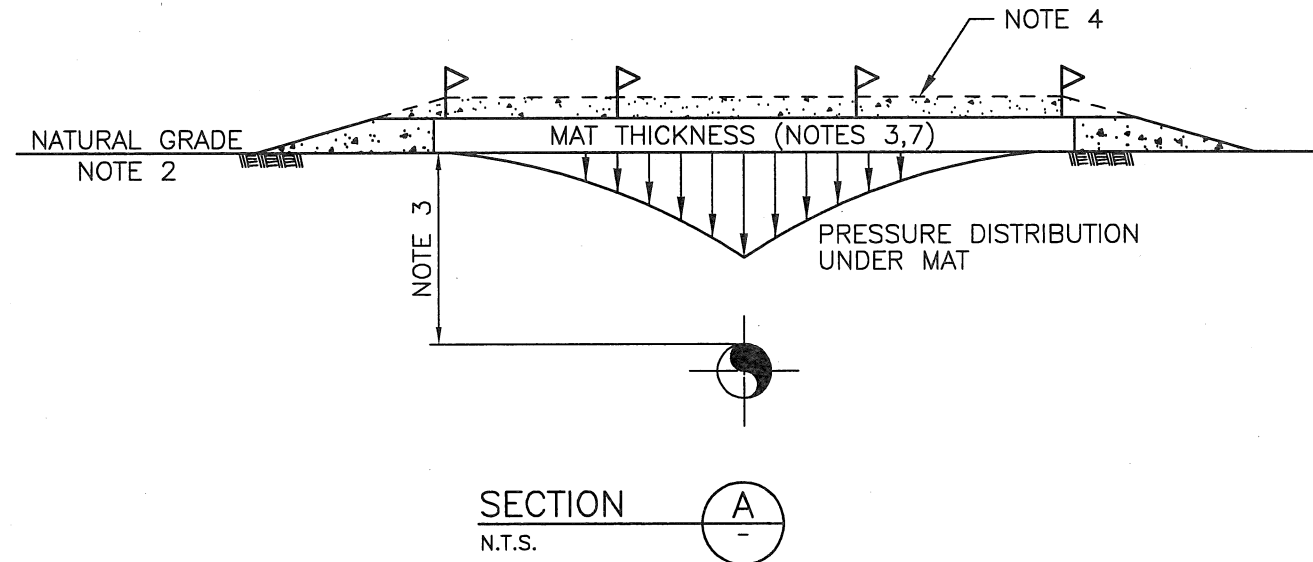
PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL
	DATE _____ PERMIT NUMBER: 97100
REV. NO. 22 Jan 2016	

DESIGN STANDARD			
FIA #	STDS	CHAINAGE:	DISCIPLINE # 03
TEMPORARY RAMPING OVER EXISTING PIPELINE			
SCALE AS SHOWN	DRAWING No STDS-03-ML-03-202	REV	01

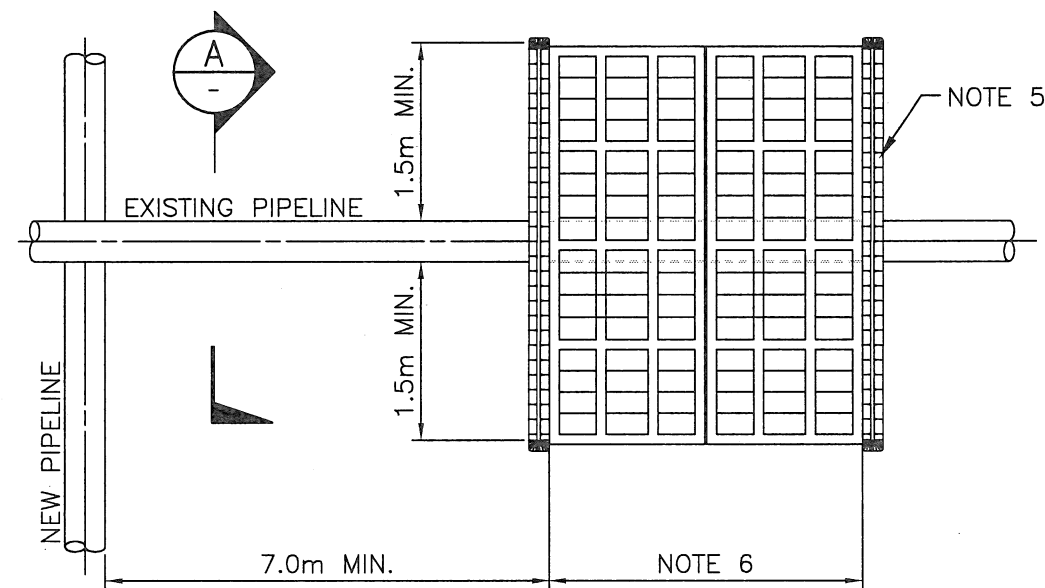
TIME-DESIGNFILE



PLAN - CROSSING EXISTING P/L WITH MATS @ OBLIQUE ANGLE  
N.T.S.



SECTION A-A  
N.T.S.



PLAN - CROSSING EXISTING P/L WITH MATS @ 90° ANGLE  
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN METRIC MEASUREMENTS.
2. GROUND SURFACE SHALL BE PROPERLY PREPARED AND LEVELED. GROUND BEARING PRESSURE ESTIMATOR (MANITOWOC) MAY BE USED TO ENSURE SOIL CAN WITHSTAND VEHICLE'S WEIGHT.
3. RIG MAT OR ACCESS (SWAMP) MATS MAY BE USED PROVIDED THE WOOD CORE IS MADE OF OAK OR DOUGLAS FIR. THE THICKNESS OF MATS AND DEPTH OF COVER WILL VARY DEPENDING ON SURFACE LOADING REQUIREMENT. CONSULT CROSSING ENGINEER FOR MAT(S) THICKNESS REQUIREMENT. ACCESS (SWAMP) MAT SHALL BE 3-PLY/22-14 FT AND 21-8 FT/SOLID CORE WITH 174 CARRIAGE BOLT/2 x 2 PATTERN OR BETTER.
4. SOIL ON TOP OF MAT(S) MAY BE REQUIRED TO PREVENT DAMAGES TO MAT(S). HOWEVER IT SHOULD BE KEPT TO MINIMUM.
5. BERM AND/OR FLAG(S) IS REQUIRED ON BOTH SIDES OF THE TRAVELLED SURFACE.
6. WIDTH OF TRAVEL SURFACE AND NUMBER/SIZE OF MAT(S) ARE SITE SPECIFIC REQUIREMENTS.
7. NO JOINING OF TWO OR MORE MATS (IN PARALLEL ALIGNMENT WITH PIPE) IS ALLOWED WITHIN 1.5m ON EITHER SIDE OF PIPELINE.
8. MATS CROSSING ANGLE WILL BE SITE SPECIFIC HAZARD REQUIREMENT. MAINTAIN A MINIMUM OF 45 DEGREE CROSSING ANGLE AS POSSIBLE.
9. INSPECTION OF MAT IS REQUIRED PRIOR TO FIELD INSTALLATION FOR SIGNS OF AGING AND DETERIORATION. DO NOT USE DAMAGED MAT(S).
10. MAT IS TO BE USED FOR CROSSING WITHIN PIPELINE RIGHT-OF-WAY ONLY.

REFERENCE DRAWINGS								
DRAWING No	TITLE							
REV No	DATE	REVISION	PROJECT CODE	DRAFT BY	DRAFT CHK	DESIGN BY	DESIGN CHK	PROJ MGR
00	2002-04-15	DRAWING SUPERSEEDS BSK-18-83C	-	-	-	-	-	-
01	2015-11-17	GENERAL ISSUE - REVIEWED FOR 2015 SPEC.	-	KPL	L	W	W	W

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL
	DATE
REV. NO.	PERMIT NUMBER:

DESIGN STANDARD		
FIA #	STDS	DISCIPLINE # 03
CHAINAGE:		
TEMPORARY MATS OVER EXISTING PIPELINE		
SCALE AS SHOWN	DRAWING No STDS-03-ML-03-203	REV 01