

**MANITOBA-MINNESOTA  
TRANSMISSION PROJECT**

Clean Environment Commission Hearing





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<ul style="list-style-type: none"> <li>Introduction &amp; Project Description</li> <li>Engagement</li> <li>Routing</li> <li>Construction, Operations &amp; Property</li> <li>Methods</li> <li>EMF</li> <li>Socio-Economic Environment</li> <li>Biophysical Environment</li> <li>Environmental Protection Program &amp; Conclusion</li> </ul>	<div style="border: 1px solid blue; border-radius: 10px; padding: 5px; background-color: #0070C0; color: white; text-align: center;">             Glenn Penner P.Eng. Director Transmission Construction           </div> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px; background-color: #0070C0; color: white; text-align: center;">             Access Clearing Foundations Tower assembly Stringing           </div>
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**Project schedule**

- Start of construction – January 2018
- End of construction – March 2020

Two sections

- Dorsey to Anola – Existing corridor
- Anola to border – New right-of-way

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Construction methods

- Access
- Clearing
- Foundations
- Tower assembly
- Stringing

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Access route and bypass trail development

- Access along the ROW using existing public access roads or trails wherever possible
- Minor deviations (bypass trails) from the ROW may be necessary in severe terrain conditions

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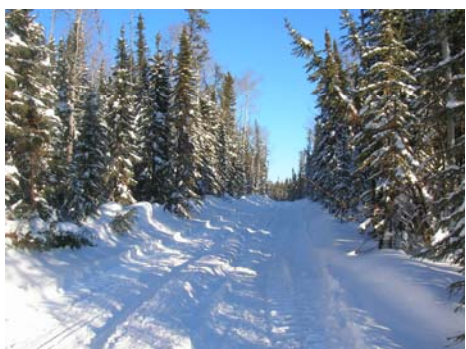
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Typical access trail



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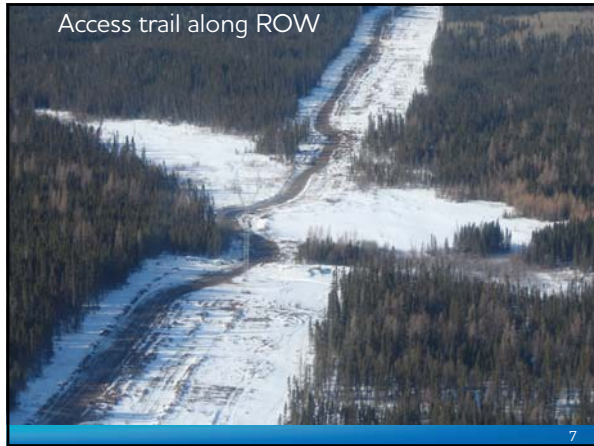
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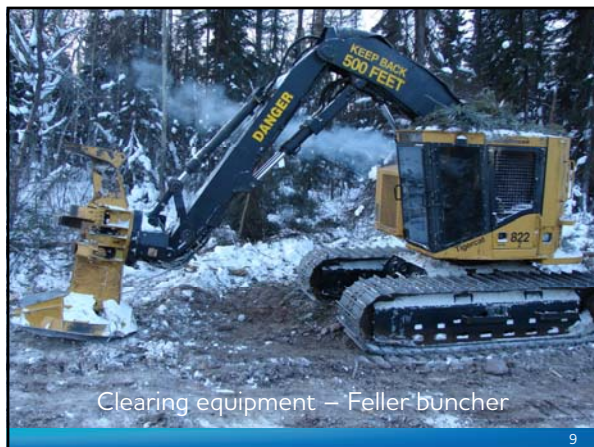
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### Geotechnical investigations

- Soil drilling to create a soil profile
- Test pits



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## Foundations

- Mat footings & anchors
- Rock footings and anchors
- Screw piles/micro piles
- Cast in place concrete



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## Mat anchor



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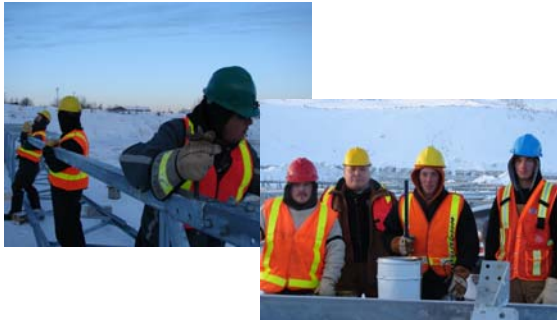
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### Tower assembly



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### Marshalling yards

- Exact number and location of marshalling yards will be determined.



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### Accommodations and construction camps

- Hotels or existing facilities where available
- Mobile construction camps

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### Mobile construction camp supports construction workers



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**Contracting strategies**

- Section 1
  - Dorsey to Anola
- Minimal clearing, existing ROW
- Public tendered construction contract

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**Contracting strategies**

- Section 2
  - Anola to International Border
- Clearing required on portions
- New ROW
- Public tendered construction contract

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**Contracting strategies – Indigenous opportunities**

- Minimum mandatory First Nation and Metis content targets
- Evaluated in selection of bidder
- Penalties in contract for not achieving targets

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## Contracts – Indigenous content

### First Nation and Metis content

- Direct employment
- Training
- Subcontracting
- Services
  - Fuel
  - Accommodations
  - Trucking
  - equipment rental

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