

# Northern Ontario First Nation Environment Conference

Road Building 101



# Process and Approach

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**JUSTIFICATION**

**ROUTE PLANNING**

**PRELIMINARY DESIGN**

**DETAIL DESIGN**

**CONSTRUCTION**

**MAINTENANCE**



# JUSTIFICATION

Community & Residential



IDENTIFY NEEDS

Commercial

Industrial

# Current and Future Needs



# Sustainability and Sensitive Design



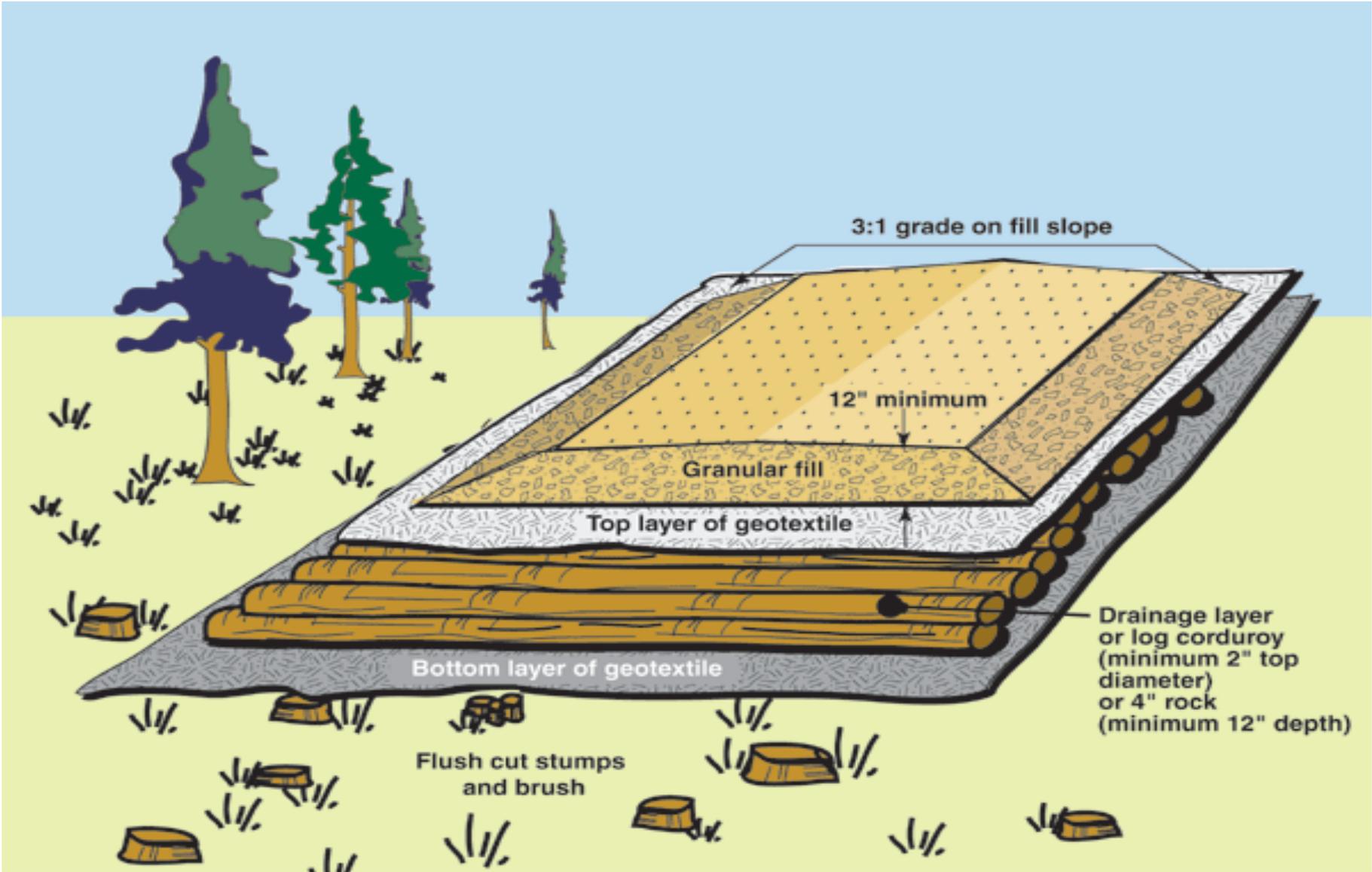
# Route Planning



# Lakes & Rivers



# Swamp & Organic Terrain



# Bedrock Terrain



# Aggregates



# Preliminary Design



# Detail Design

**Design Criteria**

**Topographical Survey**

**Environmental Studies**

**Geotechnical and Foundation Investigations**

**Drainage and Hydrology Analysis**

**Safety Analysis**

**Roadway Design and Contract Drawings**

**Technical Specifications**

# Construction

**Contract Tendering**

**Find the Right Contractor for the Job**

**Quality Counts**

**Work Together**

**Accountability**

**Environmental Monitoring**



# Maintenance

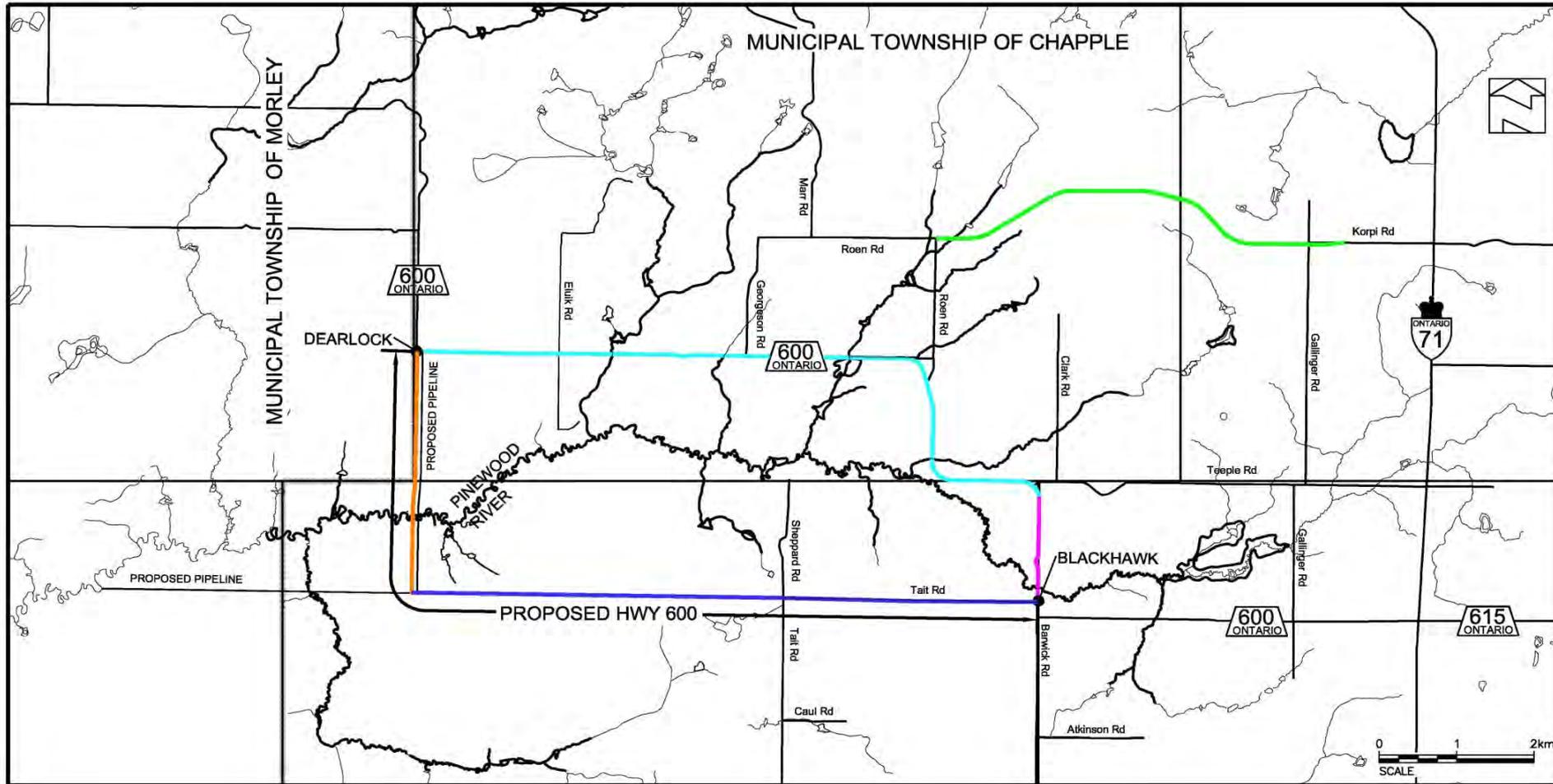


***“DOING IT RIGHT HAS NEVER DONE US WRONG”***

# Sample Project – Hwy 600



# New Gold – Hwy 600 Bypass

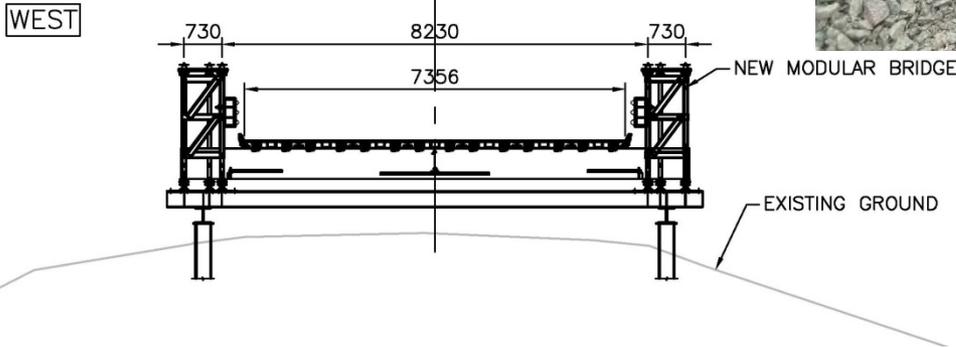


ROAD NETWORK TRANSFER LEGEND	
<span style="color: orange;">—</span>	RAINY RIVER RESOURCES TO MTO
<span style="color: blue;">—</span>	MUNICIPAL TWP OF CHAPPLE TO RAINY RIVER RESOURCES TO MTO
<span style="color: cyan;">—</span>	MTO TO RAINY RIVER RESOURCES
<span style="color: magenta;">—</span>	MTO TO RAINY RIVER RESOURCES TO MUNICIPAL TWP OF CHAPPLE
<span style="color: green;">—</span>	RAINY RIVER RESOURCES TO MUNICIPAL TWP OF CHAPPLE

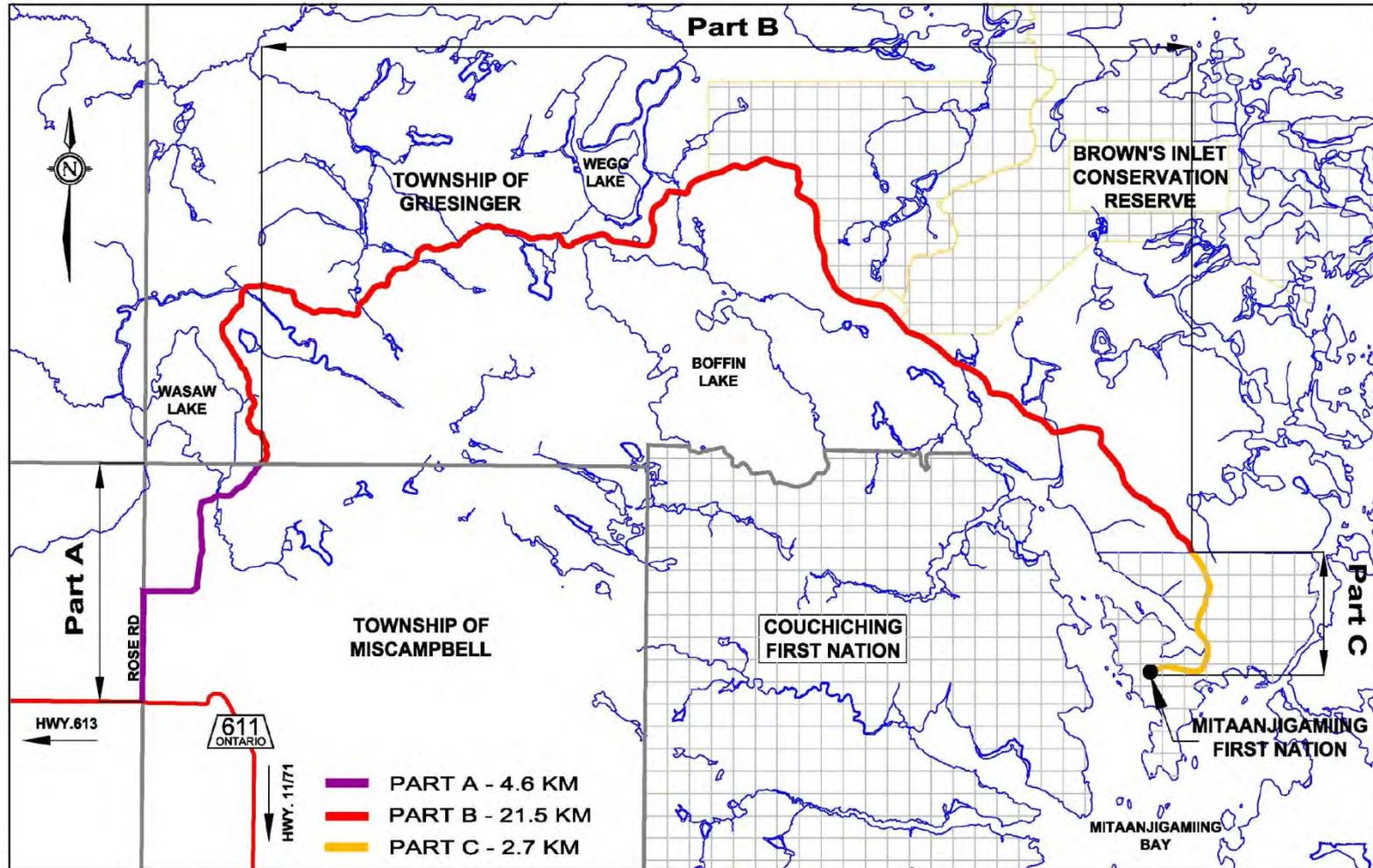
# Typical Road Section



# Pinewood River Crossing



# Sample Project – MFN Access Rd



# MFN Access Rd



# Local Aggregate Supply



# Sample Project - Nunavut



# Nunavut – Route Planning Study



# Preliminary Design - Nunavut

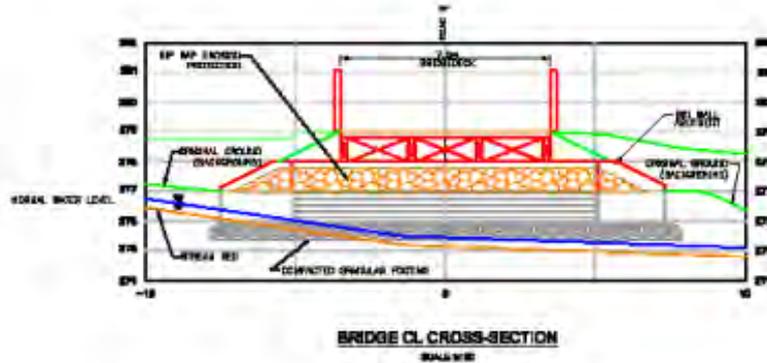
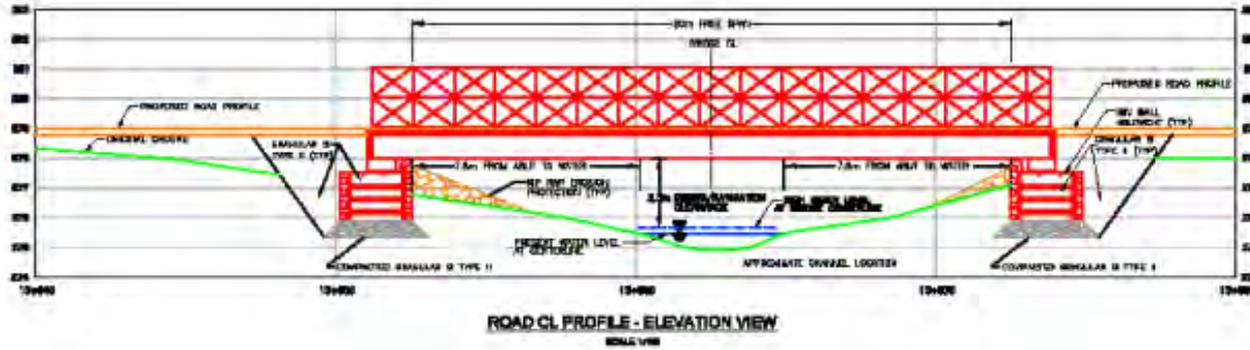


PHOTO AS#14 - LOOKING UPSTREAM AT CROSSING LOCATION

WATER CROSSING DATA RETRIEVED FROM CROSSING METHOD RECOMMENDATIONS, A-S 1043, PARTNER LEE, SEP 2005.  
STREAM CROSSING SURVEY AND FIELD REVIEW CONDUCTED BY TET ENGINEERING JULY 2007

<b>NOT FOR CONSTRUCTION</b>	DATE	SCALE	SHEET NO.	SHEET TOTAL	PROJECT	TET ENGINEERING WOLFEDEN ENGINEERING INC.	DRAWN BY D.M./J.B.	PROJECT NO. 88/188
	APPROVED BY S.P.	DATE APRIL 2007	SCALE AS SHOWN	BY	<b>WATER CROSSING LOCATION PLAN AS#14</b>  <b>ALL-SEASON ROAD DESIGN</b>  HIGH LAKE, NUNAVUT		APPROVED BY S.P.	DATE APRIL 2007

# Questions?

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