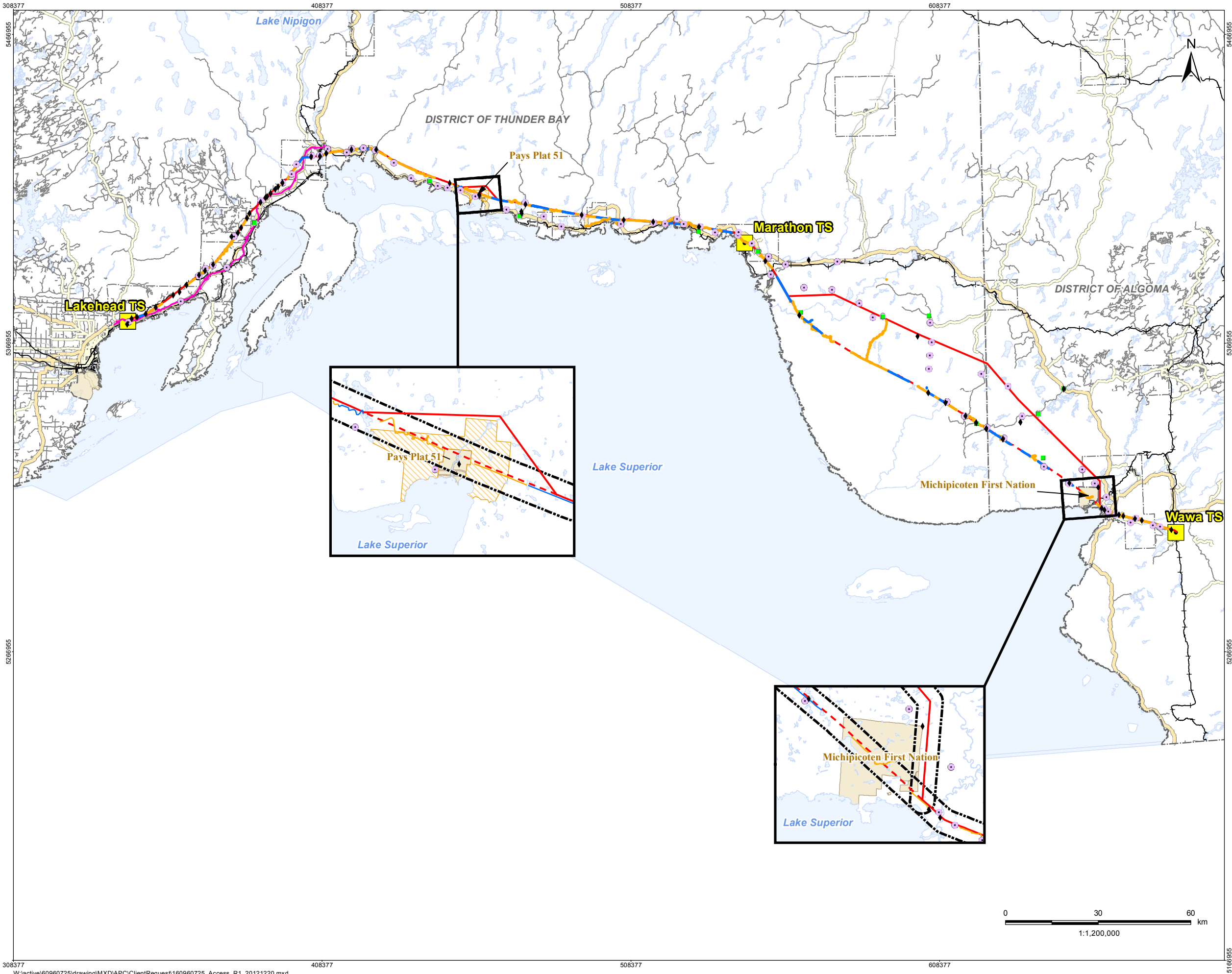


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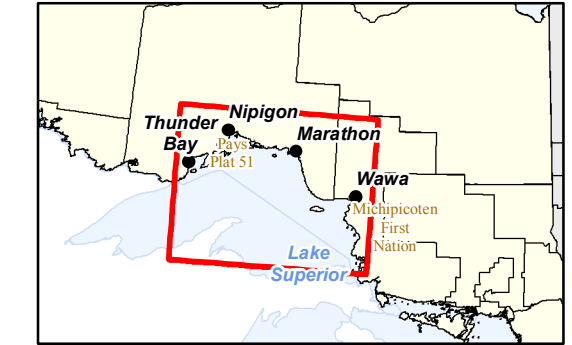


Legend

- | | | | |
|--|--|--|----------------------|
| | Proposed Study Area Corridor | | Railway, |
| | Preliminary Preferred Route** | | Railway, |
| | Reference Route | | Highway |
| | Potential Offroad Access | | Major Road |
| | Potential Camp | | Local Road |
| | Potential Laydown | | First Nation Reserve |
| | Potential Access Road - May Require Upgrade | | First Nation |
| | Potential Access Road - New Construction *** | | Municipal Boundary |
| | Proposed Highway 17 Realignment | | Waterbody |

** Preliminary Preferred Route located approximately 100 m north of existing transmission line, and parallels existing transmission line corridor where feasible, except between Marathon and Wawa where the line would not adjoin the existing line.

*** 'Access Road - New Construction' assumed for Preliminary Preferred Route north of Pukaskwa National Park.



Notes

1. Coordinate System: NAD 1983 UTM Zone 16N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.



Stantec

January 2013
160960725

Client/Project
RES Canada Transmission LP
East-West Tie Transmission Line

Figure No.
B-3-3

Title
Access Map

1 **Access Road Inventory Report**

2 The Access Road Inventory Report on the next page of this exhibit has been produced
3 by PowerTel after conducting field work and a substantial desktop review.

RES / MAT		
East - West Tie Line		
Road Categories		
PowerTel Breakdown	RES/MAT Categories	Description of Road Type
Type "A"	MAT # 1	Paved and/or Gravel Roads capable of handling highway hauling floats, flatbed material delivery, etc. Subject to normal weight limits.
Type "B"	MAT # 2	Usually Gravel Roads limited to Tandem Trucks subject to Bridge Limits or locations to turn around at the end of the access route.
Type "C"	MAT # 3 & 4	Good Dirt Trails usually limited to Pickups and Rubber Tracked Vehicles (RTV) but capable of handling tandems (Boom Trucks) in Winter or Dry Seasons.
Type "D"	MAT # 5, 6 & 7	RTV and ATV only due to soft ground, steep slopes, owner wishes, etc. May be upgraded in Winter. Most Snowmobile Trails qualify.
Type "E"	MAT # 11, 12 & 13	Construct New Trail on or adjacent to the transmission line (usually performed by Clearing Subcontractor). May require MNR Permits and Silt/ Erosion Control protection plus cleanup.
Type "H"	Helicopter	Due to Steep Terrain and/or Access limitations, Bridges, Parks, Water crossings, etc.

Numbered the headings MAT used defining Access/Site Work.

RES / MAT

Roads Inventory

East - West Tie Line

Thunder Bay to Nipigon River (85 km)

Location	Road Type (km)					Remarks	Ownership
	A	B	C	D	E		
Lakshore Drive - Lakehead Sub	0.5					All Season Road	Hydro One
Lakehead Sub - Hwy 17			1.0			Four Lane Crossing under construction	Private
Hwy 17 - EWT 1 (LINE)			1.5			Trail along line	Municipal
Hwy - EWT 1	1.0					Gated	Municipal
EWT 1 - EWT 2			2.0			Trail along line / creek	Municipal
Hwy - EWT 2		2.5				Potential Laydown Area	Municipal
EWT 2 - EWT 3					3.0	Creek Crossing / Railway Crossing	Private
Hwy - EWT 3	0.5					Pit Entrance	Private
EWT 3 - EWT 4				4.0		Along Line West	Private
EWT 4 Hwy - EWT4 Line	1.3					Mackenzie Station Road	Municipal
EWT 4 - Mackenzie River				2.3		Along Line East - No River Crossing	Private
Hwy - McKenzie Heights	1.0					Paved to Forks - Laydown Area	Municipal
Forks - Line			1.3			To Line at River	Private
Hwy - EWT 5	3.2					Gravel Truck Road (Maunula)	Private
River - EWT 5			4.6			Along Line / Crosses Pipeline	Private
EWT C - EWT 8	4.5					Gate at Highway	Private
EWT 5 - EWT 8		3.3	2.0			No Crossing at River	Private
EWT 8 - CPR Railway				3.4		Creek & Swamp - 2 wide crossings	Private
CPR Railway - EWT 9			1.8			Laydown Area	Private / Crown
EWT 5 - EWT 9	3.5					Residential / Private Bridge	West Loon Road
EWT 9 - EWT 10				2.3		Creek Crossing	Private
EWT 10 - EWT D		2.5				Bridge	East Loon Road
EWT D - EWT 11		4.0				Residential / Private Bridge	Bass Lake Road
EWT 10 - EWT 11				3.3		Creek Crossing / Rugged	Private / Crown
EWT 11 - Pearl Road 5				2.8		Creek Crossing / Rugged	Private
EWT E - Str. M-TB470			4.5			Gated / Pearl Road 5	Private
Road 5 - Greenwich Sw. Stn.				9.0		5 Creek Crossings / Shuflys	Private / Crown
Greenwich Sw. Stn. - Hwy EWT 6	6.0					80% Paved / Ouimet Canyon Road	Municipal
Greenwich Sw. Stn. - EWT 13			3.6			Farmland / Creek Crossing	Private
EWT 13 - EWT 7		5.5				Potential Laydown Area & Office	Municipal
EWT 7 to EWT 14		4.6				Potential Laydown Area & Office	Municipal
EWT 13 - EWT 14				3.7		2 Creek Crossings	Private
EWT 14 - EWT 15				2.0		Creek Crossing	Private
EWT 15 - Wolf River			1.6			No River Crossing	Private
EWT 15 - EWT G		3.0				Hatchery Road	Municipal
EWT H - Line		2.0				Str. M-TB420	Municipal
Wolf River - M-TB420			0.8			River Bank	Private
M-TB420 - EWT 16			3.0			Proposed Four Lane Crossing	Private
EWT 16 - EWT 17	0.8					Laydown Area Required	Municipal
EWT 16 - EWT 22			6.5	3.0		Four Intermediate Access Roads	Private

RES / MAT

Roads Inventory

East - West Tie Line

Thunder Bay to Nipigon River (85 km)

Location	Road Type (km)					Remarks	Ownership
	A	B	C	D	E		
EWT 22 - EWT K (Hwy 17)		2.5				Laydown Area Required	Public
Ewt 22 - Black Sturgeon River			2.0	1.0		No River Crossing	Private
Black Sturgeon River - M-TB360				0.7		River Park	Private
M-TB360 - EWT 12		1.8				Laydown required	Public
M-TB360 - M-TB371				4.2		3 Creek Crossings	Private
M-TB371 - Hwy 17		2.0				Laydown required (not driven)	Commercial / Public
M-TB371 - M-TB364					2.8	Steep/Rough/Creek Crossing	Private
M-TB364 - EWT 23					2.8	Hwy Crossing/Rough/Laydown required	Private
EWT 23 - EWT L		3.0				Check Bridge	Public?
EWT 23 - EWT 24			1.0	2.0		Creek Crossing / Cross 115 kV	Private
EWT 24 - Hwy 17	3.6					Laydown Area / Cross Railway	Municipal
Totals	25.9	34.2	37.2	43.7	8.6		

NOTES: Helicopters will be useful on a few individual structures in rugged terrain from M-TB 364 to M-TB 370 and M-TB 470 to M-TB 485. Winter work would mitigate damage to fields and crops as well as simplify water crossings from Str M-TB 400± (Hurkett) to Str M-TB 510 (Beck) and reduce conflicts with cottagers and Tourists.

RES / MAT

Roads Inventory

East - West Tie Line

Nipigon River to Terrace Bay

Location	Road Type (km)						Remarks	Ownership
	A	B	C	D	E	H		
Nipigon River - EWT 25				2.0			Track on Line, Wet	Private
EWT 25 - EWT N			1.8				Rail Crossing not visited	Crown?
EWT 25 - CPR Railway				1.6			Swamp Lake	Crown
CPR Railway - Highway Crossing				3.5			Swampy / Three (3) Creeks	Crown
Way Point 15			0.3				Laydown Area	Crown
Hwy - Ewt 26				3.0			Trail on line	Crown
EWT 26 - EWT O	1.0						Laydown Area at Line, Hydro	Crown
EWT 26 - M-TB321				2.5			Trails on Line, Creek	Crown
M-TB320 - Hwy			1.5				Trail through Pit Gate	Private
Jackfish River - Hwy			0.6				No River Crossing	Crown
Hwy & CPR - CPR Str M-TB 311					3.2		Wet (2 Big Crossings)	Crown
CPR & Hwy - EWT 27				1.0			Shallow Rock	Crown
EWT 27 - Hwy & EWT P	0.5						Laydown Area / Truck Road	Crown
EWT 27 - Jackpine River				2.5		1.2	Kama Nature Reserve / Trail on line	Crown
Jackpine River - Lachance Road				3.3			Laydown Area Required / Trail on line	Crown
Lachance Road - M-TB 279				4.5			Steep Cliff East Side	Crown
M-TB 278 - Little Cypress River				2.8			Good Trails / 2 Creek Crossings	Crown
M-TB 275 - EWT R (Hwy 17)			3.3				Not driven	Crown
Little Cypress River - M-TB 256				6.2			Trails and Shuflys /115 kV Line Joins R-O-W	Crown
M-TB256 - EWT S			2.0				Nature Reserve / Sand Trail	Crown
M-TB256 - Gravel River			4.0				No River Crossing	Crown
Gravel River - EWT 28			1.0				Trail Branches South	Crown
EWT 28 - EWT 11		2.0					Laydown Area	Crown
EWT 28 - M-TB240				2.5			Good Trail up Steep Hill	Crown
M-TB240 - Nishin Lake					2.0		No Trail / Very Rough	Crown
Nishin Lake - EWT T		1.5					Laydown Area at narrows	Crown
Nishin Lake - Indian Reserve Trail				4.8			Trail Along Line / Shuflys	Crown
Indian Reserve Trail - Hwy 064			1.3				Laydown Area Required	Crown
Indian Reserve Trail - M-TB 220					2.0		No River Crossing	Indian Reserve # 51
M-TB 220 - EWT W		0.8					Gated / Dump Road	Indian Reserve # 51
M-TB 220 - Elbow Lake			2.0	1.3			Trail up Hill to M-TB 209	Indian Reserve # 51
Elbow Lake - McLean's Lake					3.0	3.0	No Trail / Rough	Crown
McLean's Lake - M-TB 200					2.3	2.3	Very Rough	Crown
M-TB 200 - EWT X			3.5				Laydown Area / Helicopter Pad	Crown
M-TB 200 - M-TB 194				2.4			Trail on Line	Crown

RES / MAT

Roads Inventory

East - West Tie Line

Nipigon River to Terrace Bay

Location	Road Type (km)						Remarks	Ownership
	A	B	C	D	E	H		
M-TB 194 - EWT 29					3.5	2.5	Trail on Line between Lakes	Crown
EWY 29 - EWT Y	4.4						Laydown EWT Z	Crown
Ewt Y - M-TB 175				3.0	2.0		Trail on 2 km, Very Rough	Crown
M-TB 175 - Hwy		4.0	1.0				Controlled Access Road / Town Water / Cook Lake	Private
M-TB 175 - M-TB 161					6.0	6.0	Trails on Line	1/3 km Town / Crown
M-TB 161 - Aquasobon River				5.0		2.6	Very Rough / Some Trail	
Totals	5.9	8.3	22.3	51.9	24.0			

NOTES: Pays Plat Indian Reserve inventory taken on existing alignment. Possible re-alignment adds approximately 8 km of new trail (Type E) west of bend and up to 6 km east of bend. Helicopter will be required. Helicopter Support may be required from Str M-TB 146 to M-TB 156 and M-TB 166 to M-TB 173. Also from M-TB 189 to M-TB 193. And on both sides of McLean's Lake (M-TB 203 to M-TB 208). Winter work would assist in this area.

RES / MAT

Roads Inventory

East - West Tie Line

Terrace Bay to Marathon

Location	Road Type (km)						Remarks	Ownership
	A	B	C	D	E	H		
River - EWT 30			2.5				Sand Trail adjacent to Line	Crown
EWT 30 - Highway					2.0		Trail criss crosses line	Crown
EWT AB - EWT 30	5.5						Laydown at Line	Municipal
EWT 30 - Hwy (Airport)		2.0					alternate Route	Municipal
Hwy (Gate) - M-TB 128				3.1			Trail along Line / Shuflys / Creek	Private
M-TB 127 - M-TB 116				2.0	3.0	1.0	Trail near line / 115 kV crosses	Private / Crown
Highway 17 - M-TB 116				9.5			Snowmobile Trail on 115 kV	Private / Crown
M-TB 115 - Hwy 17 Crossing				1.0			Trail on line	Crown
M-TB 115 - Hwy Entrance			1.4				Narrow Driveway	Private
Hwy Crossing - EWT 31				1.0	1.0	1.0	Steep Hill / Trail on line M-TB 109	Crown
EWT 31 - EWT AF	2.0						Laydown Area (Hwy or Line)	Crown
EWT 31 - M-TB 101		1.4		2.0			Shuflys required	Crown
M-TB101 - Steel River				1.0			Trail on 115 kV Line / Very tight	Crown
Steel River - EWT 17				3.5	2.0	0.5	Steep/Rough Trail along line/Shuflys	Crown
EWT 17 - EWT AG	0.8						Laydown Area / Helipad	Crown
EWT 17 - Hwy & CPR Railway			1.0	2.0	1.0		No River Crossing / Trail on line	Crown
Ripple - CPR / M-TB86					2.0	1.0	Temporary Railway Crossing req'd	Crown
CPR Crossing - EWT 19					3.0		Laydown at Highway. / Consider relocate	Crown
M-TB 64 - Hwy 11					1.5		Incorporate Snowmobile Trail	Crown
EWT 19 - Little Pic River				1.5			Relocate 115 kV? / Shuflys	Crown
Little Pic River - EWT 32			4.0	4.0			Trail along line	Crown
EWT 32 - EWT 21	2.0						Laydown Area / Helipad, Potential Site Office	Crown
EWT 32 - WP 58 (Mirklok)				5.0		5.0	Snowmobile Trail on new line	Crown
WP 58 - Hwy WP 056		1.6					New Bridge WP 57 / Laydown	Crown
WP 58 - Highway					0.5	0.5	No Trail Visible	Crown
Hwy - CPR Railway Crossing				1.5	3.5	5.0	Extreme Terrain / Limited Trail	Crown
WP 054 - Hwy 17			1.0				Hydro One Access to 115 kV Line	Crown
CPR Railway - Bend M-TB16						1.8	Trapped & Wet / Recommend Diversion to 115 kV Line	Crown
M-TB 16 - M-TB 9				3.5			Trail along line / Creek Crossing	Crown
EWT AH - WP 51		1.0					Bridge required on Snowmobile Trail	Crown
M-TB 9 - Marathon TS				3.0			Trail along line / Laydown required	Crown
Totals	10.3	6.0	9.9	43.6	19.5			

Notes: Helicopter assistance may be required for up to 15 individual structures plus one trapped area.

RES / MAT

Roads Inventory

East - West Tie Line

Marathon to Magpie River (Wawa)

Location	Road Type (km)						Remarks	Ownership
	A	B	C	D	E	H		
Marathon TS - EWT AI			3.2				All Season Road / Shuflys	Private/Crown
EWT AI - Str. W-M400				1.2			Two Highway Crossings	Crown
W-M400 - EWT 2-1				2.0			Two Creek Crossings	Crown
EWT 2-1 - EWT AJ	1.2						Highway to Heron Bay	Crown
EWT 2-1 - Pic River				0.8			Laydown Required	Crown
Pic River - CPR Railway				1.8			Trail along line - 3 Creek Crossings	Crown
EWT AK - W-M389			3.0				Trail through Pit (not visited)	Crown
CPR Railway - Black River				3.2	3.2		Trail along Line / Shuflys	Crown
W-M389 - EWT AL (Hwy)	3.0		2.0			5.0	Private Road / Bridge	Wataway
Black River - W-M 358					9.0		Road Access Both Ends	Crown
W-M355 - White River				5.0			Trail on line / Shuflys	Crown
W-M345 - EWT AM	22.0						Umbata Falls Road	Crown
White River - W-M319 Park				10.1		3.0	Trail on line / Shuflys	Crown
W-M335 - Oskabukota R		16.0			1.0		New Trail 1 km / not driven	Crown
Oskabukota R - WP25	11.0						Laydown Area / Helicopter Pad	Crown
WP25 - Highway 17	55.0						Mancamp	Crown
W-M319 - W-M279				6.0	3.0	7.0	No Visible Trail in centre	Federal
W-M279 - W-M257 Park?				9.0		9.0	Good Trail / Access Closed	Federal
W-M257 - W-M232					10.0	10.0	Trail and Shuflys	Federal
W-M232 - EWT 2-2				4.2		0.5	Trail and Shuflys	Crown
EWT 2-2 - Forks		12.0					Remove Barricade Check Bridge	Crown
EWT 2-2 - EWT 2-3				2.2	2.2	2.0	Possible H for 6 Structures	Crown
EWT 2-3 - Road 600	14.0		43.0	43.0			Laydown Area at line	Crown
EWT 2-3 - EWT 2-4			6.3	6.3			Cross Pukaskwa River	Crown
EWT 2-4 - White River	60.0						Road 600 / Laydown Required	Crown
EWT 2-4 - EWT 2-5			4.1				Trails on and adjacent to line	Crown
EWT 2-5 - EWT 2-6			3.8				Trails on and adjacent to line	Crown
EWT 2-6 - Highway 17	38.0						One Lane Bridge / Load Limit	Crown
EWT 2-6 - EWT 2-7				2.0	4.2	1.0	Extreme Terrain / Trails to Numerous water crossings	Private
EWT 2-7 - EWT 25		12.0					Acces Road / Shufly	Private
EWT 2-7 - W-M125 (115 kV)					8.8	3.0	No Trails Visible	Private
W-M125 - W-M116					4.4		Trails and Shuflys / Shuflys	Crown / Park
W-M116 - WES Dome Rd			20.0				Old Access (not visited)	Private
W-M115 - EWT 2-8					5.4	2.4	Trail on/adjacent to line (bridge?)	Crown
W-M 103 - Levesque Branch			10.0				Old Log Road	Crown
w-M 103 - EWT 2-8 (Henson Rd)					4.4	1.5		Crown

RES / MAT

Roads Inventory

East - West Tie Line

Marathon to Magpie River (Wawa)	
1	Marathon to Magpie River (Wawa)

	Road Type (km)							
Location	A	B	C	D	E	H	Remarks	Ownership
EWT 2-8 - Highway 17		15.0					Henson Road	Crown
EWT 2-8 - Dore Lake				1.0	1.2	2.2	Trail for three (3) spans	Crown
W-M 279 - WP 020			19.0				Road Closed Bridge Out	Federal
Dore Lake - ACRail				2.0		3.5	Trail Five (5) spans / Extreme Terrain / Access?	Indian Reserve # 49
ACRail - Magpie River			1.5			3.0	Extreme Terrain ... Good Road	Indian Reserve # 49
EWT 2-9 - EWT AP	6.0						Tremblay Flats Road	Municipal
Totals	210.2	55.0	115.9	99.8	54.6			

Notes:

No Trucks allowed across Magpie River Bridge

Extreme Terrain and Water Crossings may dictate Helicopter Support for Several Structures.

Special Rules in Pukaskwa Park may limit trail construction and access roads.

RES / MAT

Roads Inventory

East - West Tie Line

Marathon to Magpie River (re-Alignment)

Location	Road Type (km)					Remarks	Ownership
	A	B	C	D	E		
Marathon TS - EWT AI			3.2			All Season Road / Shuflys	Private/Crown
EWT AI - Str. W-M400				1.2		Two Highway Crossings	Crown
W-M400 - EWT 2-1				2.0		Two Creek Crossings	Crown
EWT 2-1 - EWT AJ	1.2					Highway to Heron Bay	Crown
EWT 2-1 - Pic River				0.8		Laydown Required	Crown
Pic River - CPR Railway				1.8		Trail along line - 3 Creek Crossings	Crown
EWT AK - W-M389			3.0			Trail through Pit (not visited)	Crown
CPR Railway - Black River				3.2		Trail along Line / Shuflys	Crown
Black River - Umbata Road				2.0	8.0	5 Creek Crossings	Crown
Umbata Road - EWT AM	10.0					Laydown at Line	Crown
Umbata Road - Bend				3.0	3.0	Old Trails	Crown
Bend - Hayward Lake					5.0	3 Creek Crossings	Crown
Proposed Line - Hwy 17		15.6	3.0			Repair Bridge Deck	Crown
Hayward L. - Bend / Herrick L.					4.5	2 Creek Crossings	Crown
Bend - Road 700				3.3		White River Crossing	Crown
Road 700 - Road 750 Jct	45.0					Laydown Required	Crown
Road 700 - Road 721			3.0		2.2	Old Logging Trails cross line	Crown
Road 721 - Road 750 Crossing			1.5		3.0	Trails, Swamp	Crown
Road 721 - WP 22 (Road 750)		3.0				Laydown Area	Crown
Laydown - Camp (WP 14)	3.0					Road 750	Crown
Road 750 - Junction Road 700	16.0					Repair 3 Small Culverts	Crown
Road 750 - WP 17				1.0	2.0	1 Water Crossing on Line	Crown
Camp WP 14 - WP 17		3.5				Access Road	Crown
WP 17 - Bremner River				4.0	9.0	5 Trails Crossings / Water Crossings	Crown
Line - Road 700 (WP006)			7.0			Old Road west side river / Repair Creek Crossing	Crown
Bremner River - McCrea Creek			5.0		4.5	5 Trail Crossings	Crown
WP028 - Road 700	8.0					Road 707 (Very Good)	Crown
McCrea Creek - Road 600					11.0	6 Water Crossings	Crown
Road 600 - White River	35.0					Repair Culverts	Crown
Road 600 - Camp One Road W.				1.0	5.4	4 water Crossings	Crown
Camp One Road - Highway 17		26.0				Check Bridges	Crown
Camp One Road E. - Wilder Lk					5.0	3 Water Crossings	Crown
Wilder Lake - Killins Branch W.					4.2	3 Water Crossings	Crown
Killins Branch W - Wesdome Rd		2.3			1.6	2 Water Crossings / Most Direct	Crown
Wesdome Road - EWT AO	17.0					Laydown Area	Crown
Wesdome Road - Jimmy Kash Line					6.6	5 Water Crossings	Private

RES / MAT

Roads Inventory

East - West Tie Line

Marathon to Magpie River (re-Alignment)

Location	Road Type (km)					Remarks	Ownership
	A	B	C	D	E		
Wesdome Rd - Jimmy Kash R (Road)		13.0				Log Road Crosses Line	
Jimmy Kash R - Levesque Log Rd.					6.7	Water Crossings Line Twice	Private
Levesque Main Rd - Line		11.0				Laydown Area / Old Road	
Levesque Road - Henson Loop					6.7	8 Water Crossings / 115 kV Line	Private
Henson Loop W - Dore River					3.3	2 Creek Crossings / High Hill	Crown
Henson Loop W - Henson Rd. Jct		6.0				Check Bridge	Crown
Dore River - Henson Rd. Crossing				7.8	7.8	4 Creek Crossings / Trails Cross	Crown
Henson Road Jct - Hwy 17		11.0				Laydowns Required / Culvert	Crown
Henson Crossing - ACR Railway					4.8	2 Creek Crossings / High Hill	Crown
ACR Railway - 230 kV EWT					3.5	Water Crossing / High Hill	Crown
ACR Railway - Tremblay Flats Rd.		1.2				Laydowns Required	
230 kV - Magpie River			1.0			Laydown Area	
Magpie River - Hwy 17 (EWT AP)	6.5					Tremblay Flats Road	
Totals	141.7	92.6	26.7	31.1	107.8		

NOTE: This line from Henson Road to White River Crossing is best done in winter due to water crossings and access.
Some individual structures may require helicopter support.

RES / MAT

Roads Inventory

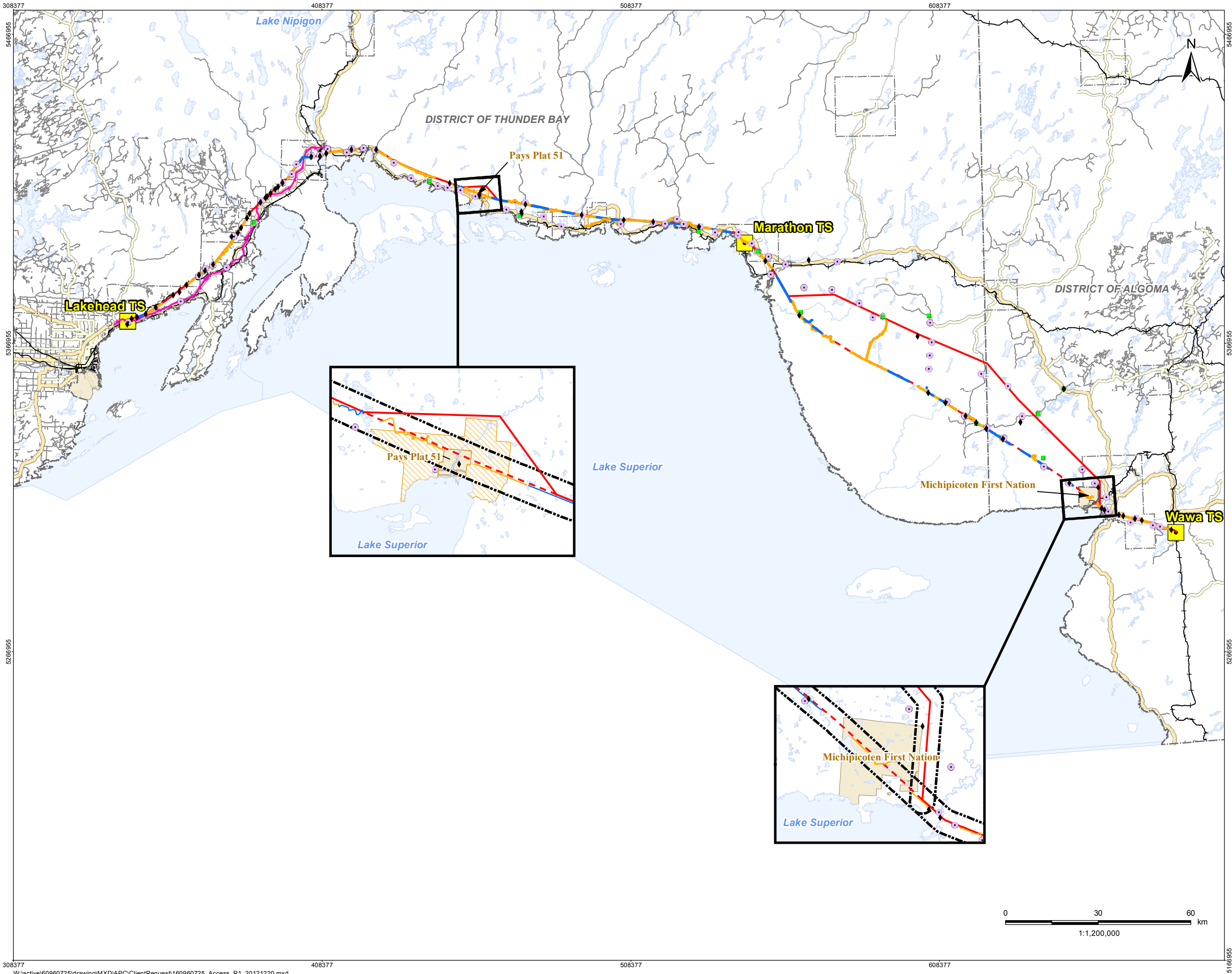
East - West Tie Line

Magpie River to Anjigami T.S.

Location	Road Type (km)						Remarks	Ownership
	A	B	C	D	E	H		
Magpie River - Old Mission Road		1.3					Laydown Area	Crown
Line - Highway 17		0.8					All Season Road	Municipal
Highway 17 - EWT 2 -10 (Line)		1.3		2.0			No Crossing Wawa Creek	Crown
EWT 2-10 - EWT AQ (Road)	3.5						Laydown Area	Municipal
EWT 2-10 - EWT 2-11				1.5			Laydown required, Trails	Crown
EWT 2-11 - EWT 2-12				4.0			Laydown required, Trails	Private
EWT 2-10 - EWT 2-12	6.0	2.0					All Season Road	Municipal
EWT-12 - EWT 2-13				2.3			Laydown Area, Trails on line	Private
EWT 2-13 - Michipicoten River					2.8		Steep Hill / Shufly	Private
Michipicoten R. - Anjigami River					4.5	1.0	Trails on Line / Shuflys	Private
W-M 18 - Anjigami River		5.0	1.0				Logging Road	Private
W-M 10 - Anjigami River		4.5					One Lane Bridge at Dam	Private
Anjigami River - Anjigami T.S.	2.5						Road, Trails on Line	Private / Crown
EWT AR - Anjigamni T.S.	7.0						Common Road / All Season	Municipal
Totals	19.0	14.9	1.0	9.8	7.3			

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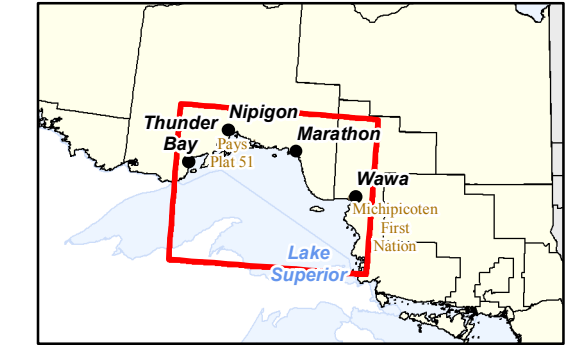


Legend

- | | | | |
|--|--|--|----------------------|
| | Proposed Study Area Corridor | | Railway, |
| | Preliminary Preferred Route** | | Railway, |
| | Reference Route | | Highway |
| | Potential Offroad Access | | Major Road |
| | Potential Camp | | Local Road |
| | Potential Laydown | | First Nation Reserve |
| | Potential Access Road - May Require Upgrade | | First Nation |
| | Potential Access Road - New Construction *** | | Municipal Boundary |
| | Proposed Highway 17 Realignment | | Waterbody |

** Preliminary Preferred Route located approximately 100 m north of existing transmission line, and parallels existing transmission line corridor where feasible, except between Marathon and Wawa where the line would not adjoin the existing line.

*** 'Access Road - New Construction' assumed for Preliminary Preferred Route north of Pukaskwa National Park.



Notes

1. Coordinate System: NAD 1983 UTM Zone 16N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.



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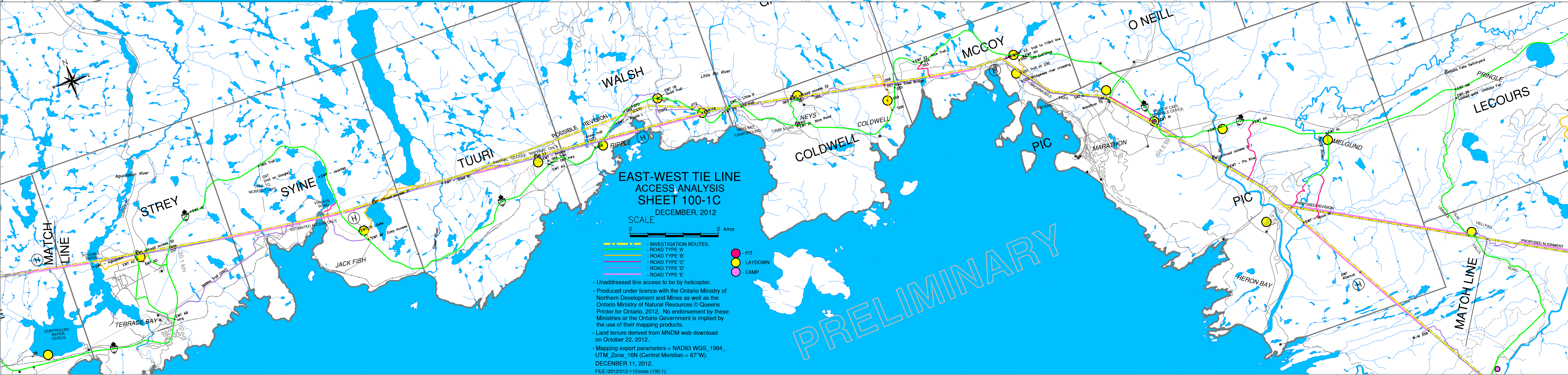
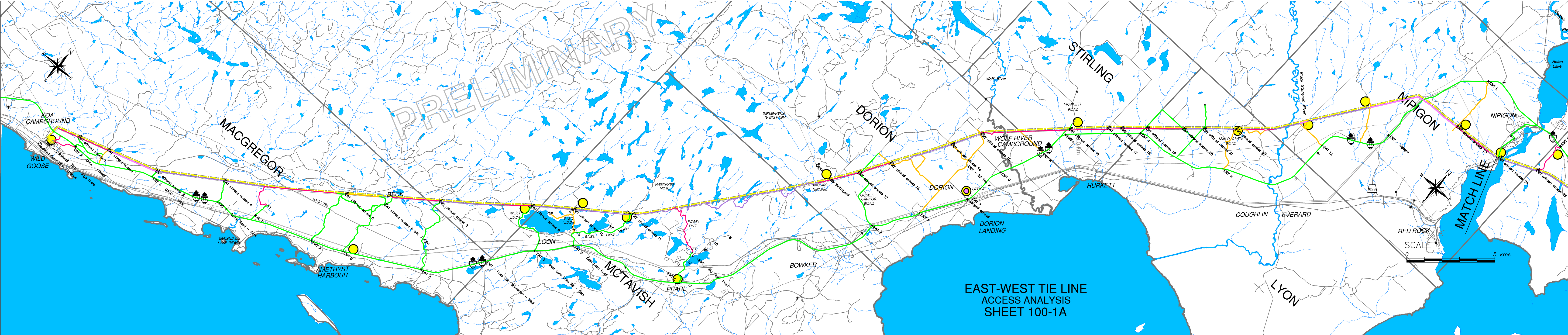
RES Canada Transmission LP
East-West Tie Transmission Line

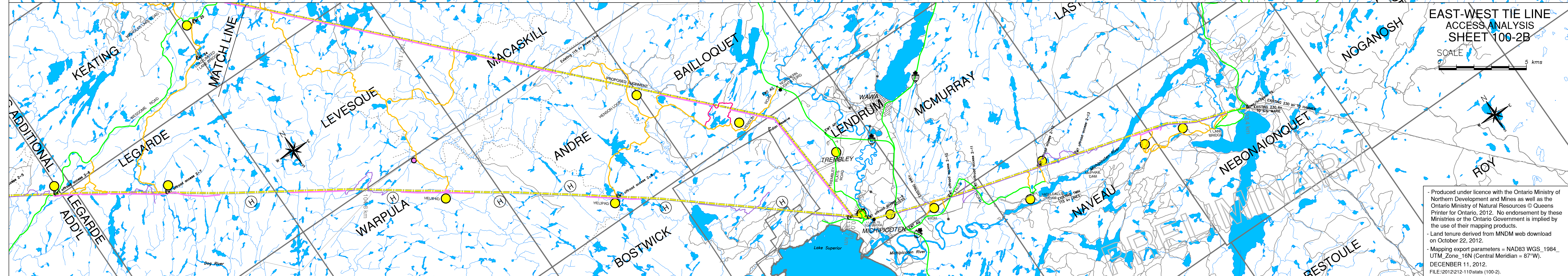
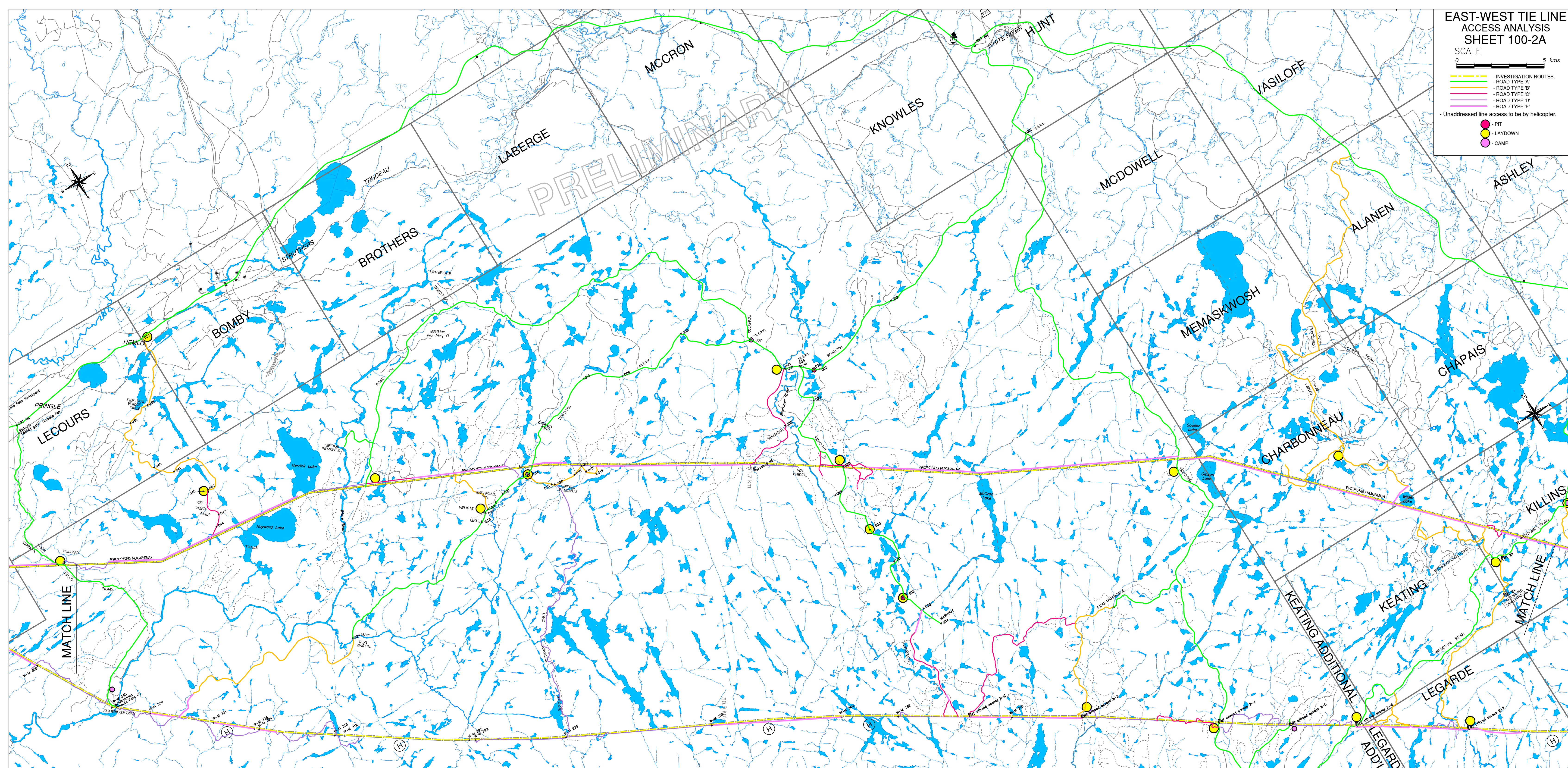
Figure No.
B-3-3

Title

Access Map

Staging Locations Map





Environmental Assessment Plan

Renewable Energy Systems Americas Inc.

East-West Transmission Reinforcement Project Environmental Assessment Plan

Prepared by:

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December 14, 2012

File No. 160960725



Stantec

Record of Revisions

Revision	Date	Description
0	November 2012	Draft submitted to RES for discussion (electronic version)
1	December 2012	Final submitted to RES

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1.0 INTRODUCTION

The Ontario Energy Board has initiated a proceeding to designate an electricity transmitter to undertake development work for a new electricity transmission line between Northeast and Northwest Ontario: the East-West Tie line. The Board assigned File No. EB-2011-0140 to the designation proceeding. The Board's primary objective in this proceeding is to select the most qualified transmission company to develop, and to bring a leave to construct application for, the East-West Tie line.

This Environmental Assessment Plan (Plan) was developed as part of the planning process for the East-West Tie, from Lakehead TS to Wawa TS (the Project). This Plan has been produced for The Applicant in support of their application for designation, consistent with the Ontario Energy Board requirements outlined in the Phase 1 Decision and Order (July 12, 2012).

1.1 Background Information

The Project is proposed to be located immediately adjacent to the existing double circuit Hydro One Wawa TS to Lakehead TS line (Reference Route). Routing a new transmission line adjacent to the Reference Route typically minimizes the negative effects, such as habitat loss/disturbance/fragmentation on environmental and socio economic routing criteria. For example, the existing land use already includes transmission facilities, the increase in Right of Way (ROW) width is typically less than the width of a new ROW and access roads can be shared where applicable, this assumes that the existing ROW and access can be shared.

It is of note that a 2km wide study area was identified within the CEIA Report which is centered on the existing Reference Route. All environmental/social features within this study area have been mapped using desktop information, and information obtained from a site reconnaissance field visit (October 1–3 2012). The CEIA also identified and evaluated route alternatives and identified a preliminary preferred route and potential route refinement areas which will be carried-forward into the ToR. Any proposed deviations from the Reference Route are documented in the CEIA.

The reconnaissance site visit confirmed that the existing Reference Route is relatively accessible using existing access roads between Lakehead and Marathon but fairly inaccessible using existing access roads between Marathon and Wawa. The Reference Route has been sub-divided by the Applicant (see below) based on existing access, constructability, geology/terrain and vegetation. This Plan addresses all Reference Route segments.

Thunder Bay to Nipigon River (85 km)

Rolling terrain and moderate vegetation regrowth after logging.

- Fair to good access roads
- Nipigon River crossing
- New four-lane highway under development (Hwy 17)

Nipigon River to Terrace Bay-Aguabson River Crossing (86 km)

- Fair access roads – several gated
- Hills and large rock outcrops
- Significant waterbodies

Terrace Bay to Marathon (60 km)

- Steep terrain with significant vertical traverse
- Limited access
- Heavy vegetation
- Little Pic River crossing (largest span), railroad and highway crossings

Marathon to White River (28 km)

- Steep terrain with significant vertical traverse
- Limited to no access from Highway
- Heavy vegetation regrowth after logging

White River to Wawa (140 km)

- Low elevation
- Flat terrain with dense vegetation
- Muskeg bogs with significant standing water
- Very limited road access – water hazards

2.0 SCOPE OF WORK

Stantec has developed a comprehensive Environmental Assessment (EA) Plan for the Project. The following is a summary of the Plan:

Terms of Reference

- Data Collection (natural environment and agriculture) (data is presented in the CEIA – additional data collection will be undertaken for the ToR)
- Participation in consultation activities
- Coordination with other departments/agencies/First Nations to obtain information for the ToR
- Preparation of ToR documentation
- Review and revision of ToR documentation with The Applicant and MOE

Environmental Assessment

- Natural environment inventory
- Participation in consultation activities
- Additional route refinements (if required as a result of consultation/fieldwork)
- Preparation of EA documentation
- Review and revision of draft EA documentation with The Applicant and MOE

General Support

- Federal EA requirements
- OEB Application Support

2.1 Terms of Reference

The Applicant must develop and obtain approval for a Terms of Reference (ToR) prior to commencing the EA. The ToR will identify the framework and scope that The Applicant must follow in completing the EA. Stantec will be responsible for activities necessary to complete the ToR, including data collection and consolidation of data from the rest of the study team into one cohesive report for presentation to the MOE. We will also participate as necessary in public and agency consultation activities, and ToR-related meetings with the MOE.

Consistent with the approach used for the Bruce to Milton Transmission Reinforcement Project, Stantec proposes that the ToR be completed in accordance with EAA subsections 6(2)(c) and 6.1(3), which allow “focusing” of the EA, thereby eliminating the requirement for a “need” and “alternatives to” assessment, plus limiting the ‘alternative methods’ analysis. Supporting documentation to the ToR will be developed to elaborate and further support this approach. The final preferred route will be agreed upon at the conclusion of the ToR process, and our work plans

for field programs will be revisited at that time to confirm appropriateness of our approach, schedule, and level of effort.

Two alternatives have been identified for most segments discussed in Section 1.1 (north and south of the Reference Route). Additional alternatives have been identified for Segment E. As this segment passes through the Pukaskwa National Parks, two additional alternatives have been evaluated. One is a greenfield route around the park (Alternative E3 - Pukaskwa National Park By-Pass) and the other alternative would generally run parallel to Highway 17 (Alternative E4 - Highway 17 Parallel). For additional information refer to the Critical Environmental Issues Analysis Report (CEIA).

At the level studied in the CEIA a northern route alignment is generally preferred, with a By-Pass around the Pukaskwa National Park. A northern route alignment also enables First Nation reserves along the proposed route to be By-Passed, if appropriate. Finalization of the preferred route will be completed during the EA process. Route refinement areas may be required in order to accommodate revisions related to terrestrial, archaeological, and aquatic fieldwork information as well as agency, aboriginal, public and landowner comments. A route refinement is a portion of the preferred route where a modification or realignment may have the potential to offer significant environmental or engineering advantages over the preliminary route, or as a result of landowner consultation.

One key component of the ToR that we hope to have approved is that 'ground-truthing' field surveys along the route will eliminate the need to survey/inventory the entire length of the proposed corridor (only key representative areas will be surveyed and data will be extrapolated). Sensitive environmental/social areas identified in the published information or through agency or stakeholder communications will be the only areas subject to 'ground truth' survey. A review of aerial photography and site visit conducted October 1-3 2012 revealed numerous lakes, large rivers, and bogs along the existing ROW between Wawa TS and Lakehead TS (these are discussed in detail in the CEIA). We anticipate that some areas of the Wawa-Marathon section of the Project will be inaccessible, particularly those areas within Pukaskwa National Park. These will not be accessible by foot or ATV due to features such as lakes, rivers, and waterbodies, which cannot be safely crossed. Stemming from this uncertainty is our proposed strategy to document environmental features from aerial photography and cover as much of the proposed corridor as possible through a combination of helicopter flights (terrestrial surveys) and field programs (terrestrial and aquatic), using ATVs, and on foot. Sensitive environmental areas identified in available information or through agency or stakeholder consultation will be addressed. A detailed reconnaissance fly-over (helicopter) will be required by field teams with the aim of refining site access requirements and determining an appropriate fieldwork strategy.

Stantec's consultation activities during the ToR phase will include preparation for and attendance at two Public Information Centres (PICs) announcing the draft ToR. We have assumed that PICs will be held in Thunder Bay and Wawa (4 PIC's total). We have also assumed 2 agency/interest group meetings/workshops will occur (one in Thunder Bay and one in Wawa). Agency/stakeholder mailings and newspaper ads will also be circulated.

At this stage, we will also work with the team to confirm the route selection (any deviations from the Reference Route) and evaluate the route refinement alternatives identified in the CEIA, including defining the refinement routes and selection criteria, the evaluation process and possible outcomes.

CEAA 2012 specifies that for projects on federal lands, it is the responsibility of federal authorities that have a decision in relation to the project to make the determination of whether the project is likely to cause significant adverse environmental effects. It is at the discretion of each federal authority on how to make the determination. However if the Minister of the Environment is satisfied that the substantive requirements of CEAA 2012 can be met by a provincial process, and if that province requests it, he or she must allow for the substitution of the federal environmental assessment process by the provincial process. The Minister of the Environment would make a decision about the project using the environmental assessment report prepared by the province. Stantec has assumed that the provincial process will address federal requirements. Any specific requirements will be determined at the ToR stage.

A "typical" table of contents for the ToR Report is outlined below:

- Introduction
 - Consultation with MOE
 - Consultation with Parks Canada/Aboriginal And Northern Development Canada
 - Purpose of Undertaking
- Environmental Assessment Framework
 - Outline EA Framework and Timelines
 - Identification of Other Permits/Approvals
- Overview of EA Requirements for Proposed Project
- Description of the Undertaking
 - Technical Overview
 - Description of the Study Area

- Existing Conditions
 - Background Data Review – Physical Characteristics (refer to CEIA)
 - Background Data Review – Significant Areas/Wildlife/Habitat (refer to CEIA)
 - Terrestrial Fieldwork Methodologies
 - Aquatic Fieldwork Methodologies
 - Socio-Economic Environment
 - Cultural Environment
- Alternative Methods
 - Evaluation of Methods
 - Route Refinement Evaluations
 - Effects Evaluation and Mitigation
- Commitments and Monitoring
 - Project Effects Monitoring
 - EA Process Monitoring
- Consultation
 - Stakeholder Consultation Plan
 - Public Consultation Plan
 - First Nation and Metis Consultation Plan (refer to stand alone document)
 - Agency Consultation Plan
 - Documentation/Tracking of Issues and Issues Resolution
 - Public Information Centres to Review and Comment on ToR
- Approval of ToR

2.2 Provincial Environmental Assessment

As set out in subsection 6.1(1) of the EAA, an EA Report must be prepared in accordance with an approved ToR. Approval of the EA is required by the Minister and Cabinet prior to proceeding with a project. Submission of an EA must be accompanied by a summary, lists of studies and reports and maps as required by Section 2(1) of O. Reg. 334.

Key components of the EA include:

- consultation during the preparation and submission of the EA to the MOE with those government agencies, members of the public, municipalities, other stakeholders or First Nation/Métis communities which may be affected;
- the consideration of alternatives;

- and the mitigation and management of environmental effects.

Stantec will undertake the following tasks as part of the EA:

2.2.1 Desktop Review of Natural Environment Features and Functions

The Study Area is located in the Superior section of the Boreal Forest Region. Topography is rugged and varied with highlands separated by wide river valleys with wetlands. The forests are characterized by a variety of mixed or coniferous assemblages. A preliminary review of the Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) database was conducted in October 2012 using the smallest available one kilometre square NHIC units. Vegetation communities and wildlife species with Provincial S ranks of S1, S2, S3 or SX are termed provincially rare.

This review indicates that 2 provincially rare vegetation communities are known to occur within and surrounding the proposed reference corridor. These communities are generally associated with the Lake Superior shoreline or cliff and talus physiographic features. Many of the rare species documented in and near the Study Area are plants associated with these communities, or with wetlands.

Considering the size of the Study Area, relatively few provincially rare wildlife species at risk have been recorded. A total of 35 rare species of plants, 12 rare species of terrestrial wildlife (including birds, mollusks, mammals, and insects), and 3 rare species of fish and aquatic wildlife have been documented in the NHIC database.

One of the potentially most sensitive natural features is habitat for woodland caribou, a Threatened species. The Study Area is located in the "Lake Superior Coast Caribou Recovery Zone". The MNR's Caribou Conservation Plan indicates that woodland caribou has a discontinuous distribution in the vicinity of the Project, including a stable population in Pukaskwa National Park, and the East-West Tie crosses a portion of identified woodland caribou wintering area. The Recovery Strategy for the Woodland Caribou identifies some potential effects of transmission lines at the landscape level, including fragmentation, and changes in caribou mortality. Preliminary mapping indicates that the reference route does not pass directly through any Caribou Wintering Areas.

It is of note that an ecosite inventory of Pukaskwa National Park has been completed using the Northwestern Ontario Forested and Wetland Ecosite Classification. Sampling primarily occurred in portions of the park which were accessible to float equipped aircraft. ESG International Inc. (now Stantec) was retained to undertake the inventory (1997). The most common wetland was found to be a Meadow Marsh and the most common hardwood community was trembling aspen. Pukaskwa

Pits were also observed (in cobblestone beaches), these are small holes dug in the ground by ancestors of the Ojibwa.

It is estimated that approximately 300 watercourses (rivers/creeks), 12,000 waterbodies (lakes), and 150 wetland pockets occur along the proposed corridor, from Wawa TS to Lakehead TS, all of which have the potential to support fisheries habitat.

The following tasks will be required for collection of natural sciences data along the proposed route. Some preliminary background data has been reviewed and has been summarised in the CEIA:

Background Data Collection

- Collect information (official plans, GIS data, etc.) from Municipalities, Local Roads Boards, Local Services Boards, Provincial and Federal Agencies, and First Nation/Métis communities, as appropriate;
- Refine mapping of environmental features within the study area (refer to CEIA);
- Review federal and provincial databases to identify locations of terrestrial and aquatic Species at Risk;
- Review federal and provincial documentation and mapping for geology, mining claims, forestry management plans, species management plans, physiography, soils and Canada Land Inventory (CLI) for soils;
- Review federal and provincial databases for water resources related information/data, including water quality, fisheries, and hydrology; and,
- Review MNR fisheries management plans, where they relate to the proposed route and to proposed water crossings for road access points.

In addition to the review undertaken during the CEIA, Stantec will also contact relevant agencies, such as the MNR, Parks Canada and DFO to known locations of significant features and functions in the landscape and to confirm the methods to be used to identify probable locations of any additional significant features and functions.

2.2.2 Natural Environment Field Inventory

Assuming the survey approach is approved during the ToR stage, terrestrial field studies will not cover the entire study area, but will instead focus on “hot spots”, such as those areas that potentially contain significant sensitive features or species, or that support significant natural heritage function, as well as those areas of interest to stakeholders, including provincial and national park lands.

Three seasons of terrestrial field data collection are proposed, including winter wildlife and spring and summer botanical inventories. Woodland Caribou will be a major focus of the wildlife surveys. In addition, during all three seasons incidental sightings of all wildlife including mammals, amphibians, reptiles and breeding birds, will be recorded. The aerial and botanical surveys will include field-checking the Forest Ecosystem Classification (FEC) of vegetation communities within the proposed corridor. The study area for field work activities will be determined in consultation with MNR, however costing as assumed only a typical right of way width (approximately 45 m) will be studied and field work will only be undertaken in representative or sensitive areas.

Aquatic field studies will involve fisheries collections and habitat assessments within the preferred alignment. Surveys will be conducted at watercourses and waterbodies, and will include a general habitat assessment, fisheries inventory (where agency data are not available), and confirmation of mapped characteristics required for the EA (e.g., salmonid spawning areas and migration routes).

Field Data Collection

Field data collection will be achieved through a combination of helicopter and field sampling in representative portions of the Study Area. Field studies will include:

- Background data collection and aerial photo interpretation and mapping;
- Spring and Summer botanical inventories,
- Forest Ecosystem Classification (FEC);
- Winter wildlife field surveys;
- Breeding Bird surveys;
- Fisheries and aquatic habitat assessments; and,
- Agriculture field inventory.

As stated above, the field work study area will generally be based on this typical ROW width. We anticipate that a staked, ROW will be delineated prior to the start of field programs. Where landscape features and functions such as watercourses, wetlands and steep slopes warrant; the study area may be expanded beyond the 45 m ROW to properly assess potential impacts.

Due to access issues related to the remote nature of parts of the study area, the large size of the study area and the relative homogeneity of much of the landscape, it is not possible, nor necessary to walk the entire proposed corridor. Our approach will be to thoroughly characterize the portions of the study area that are accessible and to extrapolate these data, using aerial photography and flyovers, to the more remote sections of the corridor. These portions of the study area will be accessed through a combination of walking and all-terrain vehicles (ATVs). The cost quotation has assumed that a reasonable level of access to approximately 25% of the Study Area will be available

by existing forestry access roads, and ATV or snowmobile trails. Helicopter and/or fixed wing flyovers will be required for inaccessible areas.

For the purposes of the EA, we will review all photomosaic tiles, aerial photography and topographic mapping available for the entire length of the transmission line. As the route consists of approximately half a dozen relatively homogeneous terrestrial environments or landscape units, interpretation of aerial imagery, combined with helicopter and ATV surveys of the proposed corridor, should provide enough detailed information to satisfy EA data requirements. Our team will then conduct terrestrial field surveys along representative sections of each landscape unit in accessible areas of the proposed corridor.

As this area is extremely remote, we propose comprehensive aquatic habitat surveys and field work at a representative sampling of watercourses along the proposed corridor. This will satisfy EA data requirements, and will provide the team with a comprehensive overview of aquatic conditions along the corridor. We intend to propose this work plan to regulatory agencies prior to commencement of the ToR, and will work with agencies to determine the level of effort required in a Northern Ontario context.

The natural environment field inventory will be comprised of the following:

- Reconnaissance level survey for terrestrial and aquatic environments (one week – crew of 2);
- Summer fisheries and aquatic habitat assessments at watercourses and wetland pockets, focusing on sensitive fish species and habitat areas (spawning, nursery and feeding areas; migration routes) (eight weeks – two crews of 2);
- Winter wildlife surveys for caribou and moose wintering areas (this will be completed from aircraft, as recommended in MNR's Significant Wildlife Habitat Technical Guide, if recent MNR survey data for the area are unavailable) (one week – crew of 2);
- Spring botanical inventories, field truthing of FEC of vegetation communities, and habitat assessment for and incidental diurnal observations of amphibians and reptiles (four weeks – crew of 2 mid-May to mid-June);
- Summer botanical inventories, field truthing of FEC of vegetation communities (three weeks – crew of 2 August); and
- Late summer botanical inventories, field truthing of FEC of vegetation communities (two, three weeks – crew of 2)Sept;
- Incidental sightings of mammals, amphibians, reptiles, and breeding birds.

Where appropriate, field guides will be used from First Nations communities. Communities may also wish to provide staff to assist with the terrestrial and aquatic survey efforts.

The majority of watercourses can be spanned by the Project, however crossings will be required for construction and maintenance activities. Aquatic field studies will involve fisheries collections and habitat assessments in all representative watercourses along the proposed corridor. The cost quotation has assumed that a reasonable level of access to approximately 25% of the Study Area will be available for each line segment by existing forestry access roads, and ATV or snowmobile trails.

On-the-ground inventories will include general aquatic habitat assessments and qualitative fisheries collections. Field surveys will identify any habitat for species at risk or species of interest (e.g., salmonids, walleye, pike), and any watercourses that are considered to be critical migration routes or that provide critical (spawning) habitat.

2.2.3 Agriculture and Socio-Economic

The EA must also provide a description of the agricultural environment and how potential impacts are to be mitigated. Due to poor soils conditions, agriculture is not a strong factor in the local economy. To confirm this, and to identify any areas that do have agricultural potential, background data will be collected including active agricultural operations, soil types, CLI soil capability, locations of artificial drainage (if present) and pertinent agricultural data from Statistics Canada. In addition, it is recommended that an agricultural land use survey be undertaken along the proposed corridor to identify agricultural infrastructure, as well as crop types and areas of organic crops (if present).

The agricultural field inventory will examine the following:

- Crops;
- Land-use;
- Agricultural operations;
- Non-agricultural buildings on farms (residential and commercial);
- Farms and residences outside municipal boundaries; and,
- Crop use by car and aerial photo interpretation.

While agriculture is not a major resource in the area, resource extraction activities, including mining, forestry and commercial fishing occur in the vicinity of the proposed corridor. Other economic activities include tourism (mostly snowmobiling, hunting, fishing, and camping), administration and other services. Hunting and fishing in the area are common as subsistence, recreational and commercial activities, and local First Nations may engage in traditional subsistence and trapping activities in the vicinity of the proposed corridor. All of these uses will be considered in the agricultural and socio-economic assessments. Information on the resource bases of uses other than agriculture will be provided by the natural environment study.

Other data collected and assessed during the EA will also be considered during the agricultural assessment:

- Municipal, Regional and Aboriginal community boundaries;
- Existing Land Use and Approved Developments;
- Commercial Activities;
- Community Profile/Human Settlements (study area demographics, household characteristics, dwelling types, etc., as defined by the Census Sub-division data);
- Community Services (such as parks, trails and/or tourism features) crossed or in the vicinity of the proposed corridor;
- Community and Regional Infrastructure;
- First Nations and Métis Traditional Land Use and Approved Developments;
- Cultural Environment (heritage resources and archaeology) to be collected by others; and,
- Traditional Ecological Knowledge Reports.

A chapter of the EA will be prepared following data collection, identification of potential impacts, and determination of potential mitigation measures to reduce or eliminate potential effects to agricultural resources. We also anticipate working to include those reports provided for: 1) visual and landscape assessment; 2) archaeology, built heritage and cultural landscape; and 3) tourism and recreation assessments. We will then work with the study team and The Applicant to identify effects on these features, identify potential mitigation measures, and assess the significance of any remaining residual effects.

2.2.4 Timber Evaluation

The overall context for forest management in Ontario is the Policy Framework for Sustainable Forests which was approved by the Government in 1993. The framework sets broad direction for forest policy and makes forest sustainability the primary objective of forest management. Its legislative authority is found in the *Crown Forest Sustainability Act (CFSA)*.

The CFSA is enabling legislation and provides for the regulation of forest planning, information, operations, licensing, trust funds, processing facilities, remedies and enforcement, and transitional provisions. The CFSA is designed to allow for the management of all forest based values.

The CFSA requires the provision of four manuals to guide various aspects of forest management in Ontario. These manuals are authorized by Section (68) of the Act and form part of the regulations as per Section (69(29)).

The manuals are:

- The *Forest Management Planning Manual*(2009)
- The *Forest Information Manual* (2009)
- The *Forest Operations and Silviculture Manual*(2000)
- The *Scaling Manual* (2007)

The *Forest Management Planning Manual* is the pivotal document which provides direction for all aspects of forest management on Crown lands in Ontario. Forest management plans provide the authority to carry out activities including road construction, timber harvesting, forest renewal and protection treatments, wildlife habitat management, sensitive values protection, surveys and evaluations.

The *Forest Operations and Silviculture Manual* is a compendium of guidance and direction for the conduct of operations authorized by approved forest management plans. This Manual provides for the qualification of persons engaged in forest operations as well as measures for assessing the performance of forest operations.

The *Scaling Manual* provides direction for the measurement of Crown forest resources in Ontario. This measurement provides the means through which Ontario collects revenue from the disposition of Crown forest resources.

The *Forest Information Manual* provides guidance for information management that supports forest management planning and operations. Much of its content has been set by planning and operational information requirements.

Approximately 9 Forest Management Units are located along the Reference Route (MNR, Management Units of Ontario, April 2012). Management Units include:

- 796 – Lakehead Forest
- 35 – Black Spruce Forest
- 815 – Lake Nipigon Forest
- 350 – Kenogami Forest
- 851 – Pic River Obijway Forest
- 67 – Big Pic Forest
- 370 – Black River Forest
- 60 – White River Forest
- 615 – Algoma Forest

Timber evaluations will be undertaken along the route using a local registered professional forester. The Forest Resource Inventory (FRI) will be obtained from MNR and will be verified. A basic ‘loss of use’ valuation will be undertaken using a variety of benchmarks. All work will be undertaken under the supervision of MNR.

2.2.5 Archaeology/Cultural Heritage

A Stage 1 archaeological assessment will be undertaken. The objectives of the Stage 1 assessment are to gather information about the study area’s geography, history, current land conditions and any previous archaeological research within the vicinity. This assessment will provide a description of all features of archaeological potential noted for the study area and a detailed evaluation of the archaeological potential.

The Stage 1 archaeological assessment of the study area will follow the 2011 *Standards and Guidelines for Consultant Archaeologists*, as follows:

- Review of relevant archaeological, historic and environmental literature pertaining to the study area;
- Review of a listing of archaeological sites from the Ontario Ministry of Tourism, Culture and Sport (MTCS);
- Consultation with individuals knowledgeable about the study area;
- Review of historic maps of the study area; and
- GIS mapping of the study area to assist in determining archaeological potential.

The GIS mapping will assist in determining the archaeological potential along the study corridor. According to the 2011 *Standards and Guidelines for Consultant Archaeologists*, in Northern Ontario on the Canadian Shield, archaeological potential is usually evaluated as being present:

- within 50 metres of a modern water source; or
- within 150 metres of other identified features such as:
 - historic water sources (e.g. glacial shorelines);
 - resource areas (e.g. food or medicinal plants, scarce raw materials, early Euro-Canadian industry);
 - pockets of well-drained soil within areas otherwise identified as being of low archaeological potential;
 - distinctive land formations of special or spiritual purpose (usually described by local informants);
 - areas of early Euro-Canadian settlement;

- early historical transportation routes (e.g. portage route);
- or properties designated as a federal, provincial, or municipal historic landmark or site.

The GIS mapping produced will identify all such areas of archaeological potential to be recommended for further archaeological study. Similarly, all other areas that are identified as being of areas of low or negligible archaeological will also be mapped and not recommended for further archaeological study.

2.2.6 Hydrogeology

A Modified Phase I Environmental Site Assessment (ESA) will be undertaken to evaluate the environmental liabilities of the lands being acquired along the proposed route. Given the size of the area encompassed by the route the Modified Phase I ESA will focus on areas in close proximity to the highway and developed transfer stations. For the purposes of this document, Stantec has assumed that the Modified Phase I ESA will include a windshield survey of accessible areas of the route between the Lakehead TS and the Marathon TS (*i.e.*, review of areas visible along Highways 11 and 17) as well as the specific areas located at the intersection of Highways 101 and 17 (in the vicinity of route marker C17) and the termination of the route (in the vicinity of route marker D01). For the purposes of this proposal Stantec has assumed that these areas can be made accessible for the site visit and that the field work portion can be completed over the course of one week.

Stantec will also request and review a completed environmental database report from EcoLog ERIS pertaining to the proposed route between Lakehead TS and Marathon TS (and a 200 m buffer from the route) as well as pertaining to a 3 km section of the route south of Wawa. A review of recently available satellite imagery of the route, as well as one set of historical aerial photographs (e.g., flight lines from 1976 covering the route) and topographic maps will be reviewed for the proposed route.

The windshield survey, site visits, EcoLog ERIS report review, and aerial photography and topographic map review will be completed to attempt to identify potentially contaminating activities that may have occurred on or adjacent to the route which could represent areas of potential environmental concern on the route.

A report will be provided summarizing the findings and potential environmental concerns identified in the study area that may be contributing to areas of potential environmental concern on the route and will include recommendations for further assessment where required.

Additional assessment (e.g., a complete Phase I ESA or subsequent intrusive testing through a Limited Phase II ESA) may be required based on the findings of the Modified Phase I ESA. The work will be completed in general accordance with Ontario Regulation 153/04, as amended, with

the limitations described above and will not follow the detailed reporting or research requirements of the regulation.

If there are water wells (O.Reg 903) or buildings (Occupational Health and Safety Act) within the ROW they will need to be decommissioned in accordance with the regulations.

2.2.7 Route Refinements

In addition to the route refinement areas that will be evaluated at the ToR stage, it is possible that minor route refinements may be required along portions of the Project where additional issues (environmental, technical, stakeholder, etc.) are identified. These issues may be brought to the attention of The Applicant following detailed stakeholder consultation and/o field survey results. We will work with The Applicant to identify and assess these relatively minor deviations where necessary, and include this assessment (and supporting documentation) in the EA report. Any related agency meetings will also be arranged and attended by Stantec staff.

We have assumed that approximately 5 route refinement areas will be required; this assumption is based on one refinement area within each of the line sections identified by the Applicant (refer to Section 1).

2.2.8 Landowner, Municipal and Community Consultation

Consultation activities during the EA will include three sets of PICs, mailings/newspaper ads/newsletter, agency/interest group/landowner meetings, and workshops with the municipal and agency advisory group (in addition to the consultation undertaken during the ToR).

The consultation program will dovetail with the communications and media relations programs developed and implemented by The Applicant. We will provide the following services:

- PICs (3 rounds in 4 locations – assume Thunder Bay, Nipigon, Marathon and Wawa = 12 total)
 - Preparation and printing of materials (panels, questionnaire, sign-in sheets)
 - Logistics (The Applicant to pay rental costs)
 - Ads (The Applicant to pay for ad placement)
 - Attendance (assumes 4 nights hotel and food for 4 people, rental vehicle, panel production, The Applicant to pay for logistics, Stantec to organize)
 - Summary of all comments and questions received, and draft responses for The Applicants signature

- Agency/Interest Group/Landowner meetings (assume 10 meetings)
 - Identifying relevant federal, provincial and municipal contacts
 - Logistics
 - Meeting minutes and follow-up
- Workshops (2) (The Applicant to pay rental costs)
 - Route Refinement
 - EA Update, effects and mitigation
- Publications
 - Notice of Commencement - letters to all landowners along the proposed route, agency and First Nations/Metis letters, contact lists, media releases (assume The Applicants letterhead, Stantec print and mail)
 - Three rounds of Notice of Public Information Centre - letters to all landowners along the proposed route, agency and First Nations/Metis letters, contact lists, media releases (assume The Applicants letterhead, Stantec print and mail)
 - Notice of draft EA release for review - letters to all landowners along the proposed route, agency and First Nations/Metis letters, contact lists, media releases (assume The Applicants letterhead, Stantec print and mail)
 - Newsletters (4)

All consultation activities and contacts will be detailed and collated in the Record of Consultation (ROC) database to be included in the consultation appendix for the EA submission to the MOE.

Activities under this task will include:

- Record keeping
 - Maintaining contact lists;
 - Preparation and maintenance of Consultation Manager database;
 - Managing all correspondence received; and,
 - Preparation of Consultation materials appendix.

For additional detail with regard to consultation activities, please refer to the Landowner, Municipal and Community Consultation Plan, provided as a separate document.

2.2.9 First Nation and Metis Consultation

With specific reference to the EA process the following meetings have been assumed:

- First Nation and Métis Meetings (assume 8)
 - Fort William First Nation
 - Pic Mobert First Nation

- Ojibways of Pic River (Heron Bay First Nation)
- Red Rock Indian Band
- Michipicoten First Nation
- Pays Plat First Nation
- The Métis Nation of Ontario (MNO) – this includes MNO local Councils.
- Red Sky Métis Independent Nation (Red Sky)

For additional detail with regard to First Nation and Metis Consultation, please refer to the First Nation and Metis Consultation Plan and the First Nation and Metis Participation Plan, provided as a separate document.

2.2.10 Environmental Assessment Report (EA Report)

The draft and final EA Report will be written and presented in a manner that allows for easy digestion by all stakeholders, including the public and agency representatives. The report will communicate pertinent information concisely without sacrificing important detail. Background and technical data will be referenced within the main body of the report and presented in technical appendices. Where appropriate, high quality graphics will be used to communicate information. The report will be written collaboratively with The Applicant and the study team in approved format and consistent writing style. The document will be closely vetted to ensure consistent language and appropriate grammar and spelling. Any conclusions and recommendations made throughout the EA process will be discussed with The Applicant prior to becoming part of the EA report.

Stantec will also participate in biweekly team calls/in-person meetings (approximately 50 over two years), and will prepare monthly progress reports for inclusion with invoices for approval by The Applicant.

A “typical” table of contents for the EA is provided below:

- Introduction
- Description of the Undertaking
- Description of Federal EA Requirements
- Description of the Existing Environment
 - Air Photo Interpretation/LiDAR/Topographic Survey/Base Plans
 - Description of Atmospheric/Geology/Physiographic/Soils/Surface Water/Groundwater Hydrology
 - Vegetation Assessment

- Timber Evaluation
- Environmental Significant Areas
- Wildlife and Habitat
- Aquatic Assessment
- Socio-Economic Assessment
- Archaeology and Cultural Assessment
- Visual Landscape Character
- First Nation and Metis Traditional Use
- Alternative Methods
- Effects Evaluation and Mitigation
 - Construction Effects/Mitigation
 - Operation Effects/Mitigation
- Cumulative Effects
- Environmental Management and Monitoring
- Other Permits and Approvals
- First Nation and Metis Consultation and Engagement
- Community and Stakeholder Consultation
- Draft EA Preparation/Review/Submission

2.3 Federal Environmental Assessment Requirements

Under CEAA 2012, the Regulations Designated Physical Activities prescribe the physical activities which, if carried out individually or in combination, constitute a “Designated Project” that will or may be subject to the EA requirements of the new Act. The Act requires proponents of a designated project to submit a description of the project to the Canadian Environmental Assessment Agency. For project that are regulated by the Canadian Nuclear Safety Commission or the National Energy Board those agencies will be responsible for conducting the EA. The Prescribed Information for a Description of a Designated Project Regulations set out the information that the proponent must include. It is our understanding that the Project would not be considered a Designated Physical Activity, as the Project does not have a voltage of 345 kV or more.

It should also be of note that Bill C-38 also makes amendments to the Fisheries Act, the Canadian Environmental Protection Act, the Species At Risk Act and the National Energy Board Act.

For projects on federal lands, it is the responsibility of federal authorities that have a decision in relation to the project to make the determination of whether the project is likely to cause significant adverse environmental effects. The CEAA Agency is not involved in this. It is at the discretion of each federal authority on how to make the determination.

As this Project will cross numerous First Nation Reserves and may cross a National Park, both Aboriginal and Northern Development Canada (AANDC) and Parks Canada (PC) would need to advise on this component of the Project. If the Minister of the Environment is satisfied that the substantive requirements of CEAA 2012 can be met by a provincial process, and if that province requests it, he or she must allow for the substitution of the federal environmental assessment process by the provincial process. The Minister of the Environment would make a decision about the project using the environmental assessment report prepared by the province. Our pricing assumes that the Federal Minister will be satisfied that Ontario's EA meets substance of CEAA.

2.4 Ontario Energy Board (OEB) Applications

Stantec will provide support for the OEB Section 92 Leave to Construct Application and Section 98 (Early Access) Application, if required, including project description, routing rationale, responses to interrogatories and miscellaneous assistance, as required. We will also provide support in responding to any interrogatories that may arise from public and agency review of the application package.

3.0 ASSUMPTIONS

Terrestrial and Aquatic Field Programs

- Due to access issues related to the remote nature of parts of the study area, the large size of the study area and the relative homogeneity of much of the landscape, it is not possible, nor necessary to walk the entire proposed corridor. Our approach will be to thoroughly characterize the portions of the study area that are accessible and to extrapolate these data, using aerial photography and flyovers, to the more remote sections of the corridor. These portions of the study area will be accessed through a combination of walking and all-terrain vehicles (ATVs). The cost quotation has assumed that a reasonable level of access to approximately 25% of the Study Area will be available;
- The cost to conduct the natural environment (terrestrial and aquatic) field inventory does not include additional field surveys that may be requested during agency and stakeholder review of the ToR. The cost does not include field surveys specific to the Endangered Species Act or permitting process, as the field protocols must be developed in consultation with the MNR on a case-by-case basis. Therefore no specific bird, bat, amphibian or caribou tracking surveys have been assumed at this time;
- Aquatic field effort and reporting is focused on EA-related field surveys along the proposed corridor. Additional field requirements associated with permitting for the preferred route (e.g., spawning surveys, cross-sectional profiles of watercourses) are not included in this cost estimate;
- A reconnaissance visit will be required during the ToR stage to confirm access and make sure our assumptions on the line are correct and accurate. This will need to be completed prior to finalization of work plans with regulatory agencies. We propose a one-day fixed-wing aircraft flight of the line, in addition to an on-the-ground review/confirmation of proposed access points;
- It is assumed that towers will not be located within open water or large water bodies – detailed aquatic habitat assessments associated with the placement of these structures, which would trigger the need for *Fisheries Act* Authorization and fish habitat compensation planning, are not included in this cost estimate;
- Field programs are based on 12-hour days, in crews of two Stantec staff (these crews may be supplemented with First Nations members, as appropriate). Field expenses include travel time, accommodations, field equipment, vehicles, etc. for Stantec staff;
- This cost estimate assumes all property access is secured prior to initiation of field work, that a preferred route has been established prior to the initiation of field surveys, and that a surveyed cut line has been prepared in advance of field crews entering the area. Accessing only portions of the Study Area at a time will be a less efficient method of field data collection and will require additional travel and site mobilization, thereby resulting in increased total fees.

- The cost for retaining a helicopter or fixed wing aircraft has not been included

Other

- A precautionary review of all water supply wells will be required within 500 m of any significant blasting activities during construction and has not been included in this proposed scope of work.
- Spill response and environmental impacts may be identified during construction. Provision of services associated with these activities has not been included.
- Visual landscape assessments have not been included in the scope of work
- Stage 2-3 archaeological assessment have not be included in the scope of work
- Costs associated with the TOR/EA/Consultation do not include the costs of the acquisition of land use rights.
- EA costs do not include EA-related work for the proposed Nipigon SS;
- ToR Reporting includes estimated expenses for production of 75 hard copies of draft and final report (estimated at \$100 each);
- EA Reporting includes estimated expenses for production of 75 hard copies and 100 CD copies of draft and final report (estimated at \$300 each);
- We have assumed that our proposed approach will be acceptable to regulatory agencies and other stakeholders, and will be confirmed through the ToR process.
- Costs have been provided to determine federal EA requirements, it has been assumed that one provincial EA report will be produced for the Project which will include any federal requirements;
- Five potential route refinements have been assumed during the EA process.
- Travel costs for PICs includes travel time, air travel, car rental/gas, and accommodations. Each round of PIC's will be held during one trip.
- Budget assumes First Nation Communities will undertake their own Traditional Ecological Knowledge (TEK) studies
- The budget does not include costs for translating any documentation.
- Environmental site inspection and post construction environmental monitoring has not been included in the fee matrix
- Any weather delays would be address using the contingency allowance.

4.0 CLOSING

This Plan for the East-West Tie Project has been prepared by Stantec Consulting Ltd. for the sole benefit of The Applicant, and may not be used by any third party without the express written consent of The Applicant. The data presented in this report are in accordance with Stantec's understanding of the Project as it was presented at the time of reporting.

Should you have any questions or concerns please do not hesitate to contact the undersigned.

Respectfully submitted,
STANTEC CONSULTING LTD.

Written by:

Reviewed/Approved by:



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