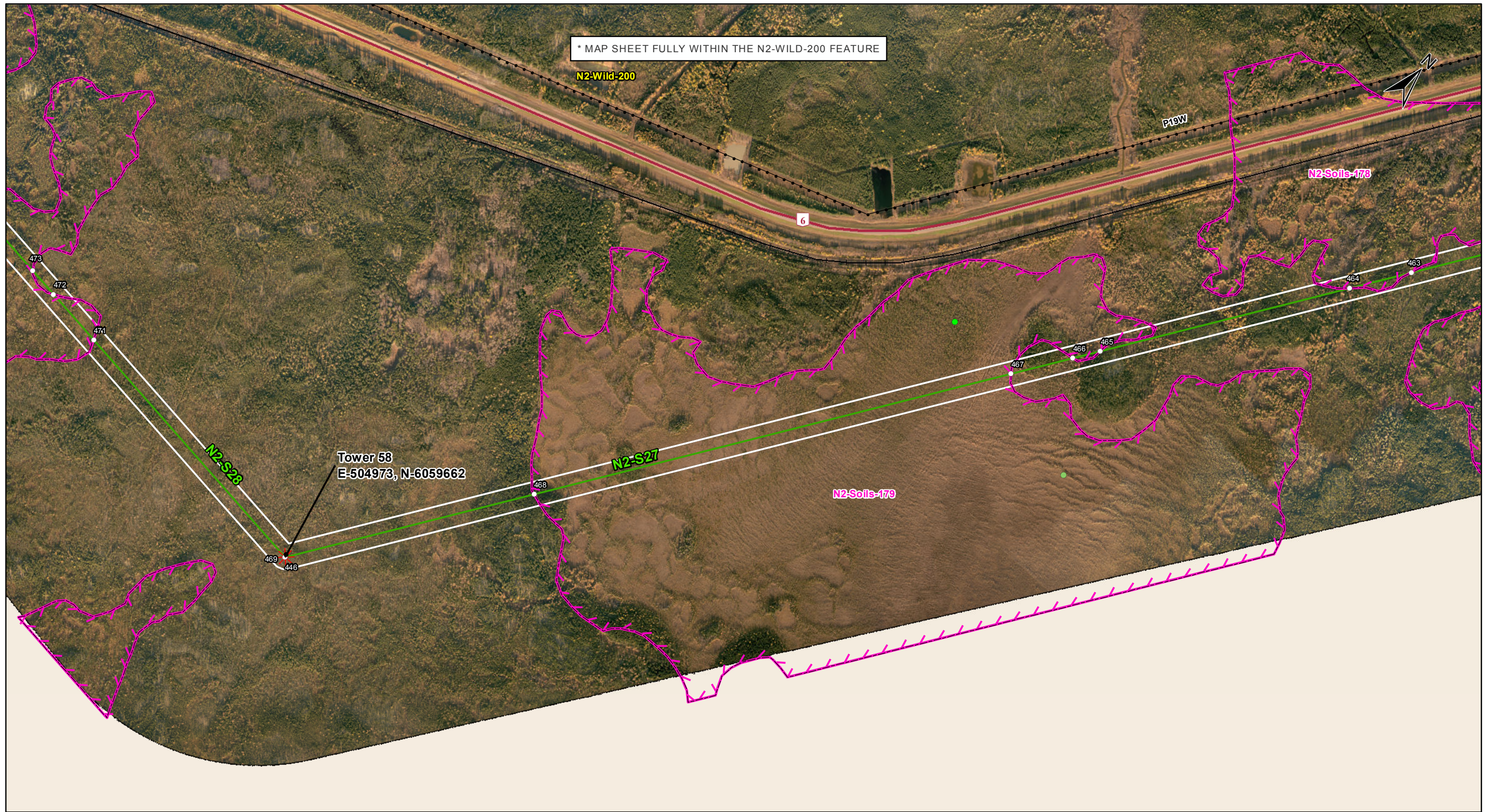


DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\011440054_BPIII_EPP\ARCMAPIESS_N2\BPIII_CENVPP_NIN2\N3\N4\C1\SECTION\BASEMAP_MAPBOOK_BTIB_STANTEC_20131201.MXD



Coordinate System: UTM Zone 14N NAD83
 Data Source: MB Hydro, ProvMB, NRCAN
 Date Created: December 02, 2013

0 120 240 480
 Metres

1:10,000

- Land Base**
- Transmission Line
 - Highway
 - Major Road
 - Local Road
 - Winter Road
 - Railway (Operational)
 - Railway (Discontinued)
 - Mining
 - Provincial Park

- Project Infrastructure**
- * Angle Tower Locations
 - BPIII Final Preferred Route
 - 66 m Right of Way

- Points of Access***
- Proposed Access Point
 - Major Stream Crossing
 - ▲ Abandoned Rail Crossing
 - ▲ Rail Crossing
 - Transmission Line Crossing
 - Proposed Access Route
- *Labels correspond to BPIII Access Management Database

- ESS Features**
- Ecosystem**
- Habitat
 - Species of Concern
- Wildlife**
- Mammals and Habitat
- Soils and Terrain**
- Permafrost

**Bipole III Transmission Project
 Construction Environmental Protection Plan
 Construction Section N2
 Environmentally Sensitive Site Locations**

MAP NUMBER : 110

ESS Group : Mammals

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S28	N2-Wild-200	MCWS Caribou Sensitive Area	Site: 445 to 446	E- 513131 N-6072016	E-504973 N-6059662	14N	14805 m
N2-S28	N2-Wild-200	MCWS Caribou Sensitive Area	Site: 469 to 470	E- 504973 N-6059662	E-501860 N-6060005	14N	3131 m

Potential Effects:

Potential disturbance to and loss of sensitive caribou habitat

Specific Mitigation:

- Harvest within caribou range boundary will not include shear blading except for access, conductor stringing trails, and tower footprints.
- No shear blading to clear the right of way (ROW) in the sensitive range. Selective cutting methods will only be used to remove danger trees, vegetation within tower footprint, access route, and helicopter access points, to maintain low tree, shrub and herb plant communities on the ROW. Use existing access roads and trails to the extent possible
- Maintenance trails to be maintained to reduce line of sight for hunters and predators. Remove trees by low-disturbance methods
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW.
- Any Manitoba Hydro constructed or improved access routes used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction. Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible. Available slash <1 m in height will also be evenly distributed over the access route to reduce the possibility of use by ATV traffic.

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S27	N2-Soils-178	Permafrost	Site: 463 to 464	E-506709 N-6062291	E-506614 N-6062147	14N	172 m
N2-S27	N2-Soils-179	Permafrost	Site: 465 to 466	E-506230 N-6061566	E-506187 N-6061501	14N	77 m
N2-S27	N2-Soils-179	Permafrost	Site: 467 to 468	E-506092 N-6061357	E-505357 N-6060244	14N	1334 m
N2-S28	N2-Soils-180	Permafrost	Site: 471 to 472	E-504193 N-6059748	E-504030 N-6059766	14N	164m
N2-S28	N2-Soils-180	Permafrost	Site: 473 to 474	E-503946 N-6059776	E-502808 N-6059901	14N	1145 m

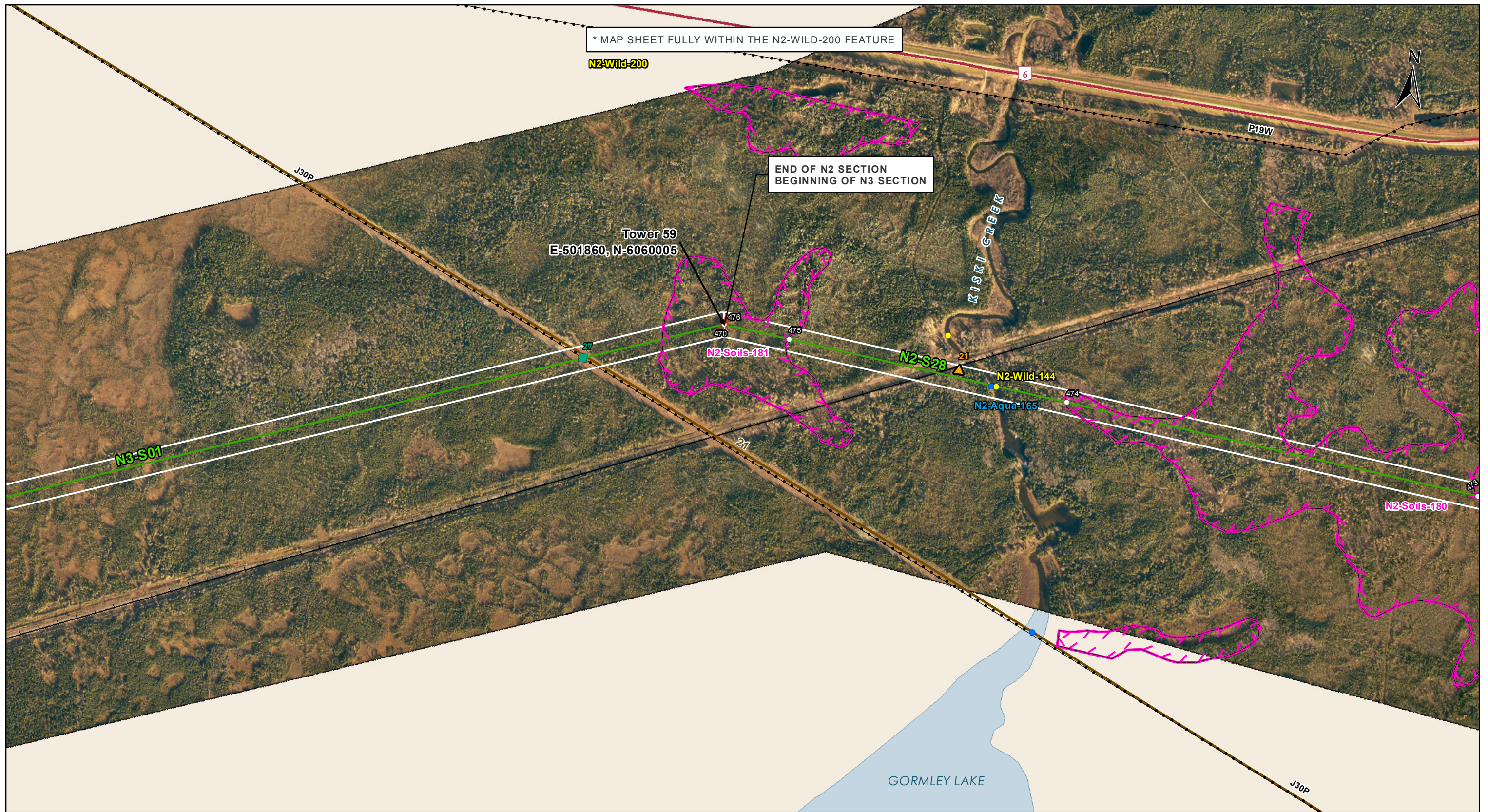
Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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	<p>Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: December 02, 2013</p>	<p>Land Base</p> <ul style="list-style-type: none"> Transmission Line Highway Major Road Local Road Winter Road Railway (Operational) Railway (Discontinued) Mining Provincial Park 	<p>Project Infrastructure</p> <ul style="list-style-type: none"> Angle Tower Locations BPIII Final Preferred Route 66 m Right of Way 	<p>Points of Access*</p> <ul style="list-style-type: none"> Proposed Access Point Major Stream Crossing Abandoned Rail Crossing Rail Crossing Transmission Line Crossing Proposed Access Route <p><small>*Labels correspond to BPIII Access Management Database</small></p>	<p>ESS Features</p> <p>Water</p> <ul style="list-style-type: none"> Water Crossing <p>Wildlife</p> <ul style="list-style-type: none"> Birds and Habitat Mammals and Habitat <p>Soils and Terrain</p> <ul style="list-style-type: none"> Permafrost 	<p>Bipole III Transmission Project Construction Environmental Protection Plan Construction Section N2 Environmentally Sensitive Site Locations</p> <p>Map 111</p>
	<p>0 120 240 480</p> <p style="text-align: center;">Metres</p> <p style="text-align: center;">1:10,000</p>					

MAP NUMBER : 111

ESS Group : Mammals

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S28	N2-Wild-200	MCWS Caribou Sensitive Area	Site: 469 to 470	E- 504973 N-6059662	E-501860 N-6060005	14N	3131 m

Potential Effects:

Potential disturbance to and loss of sensitive caribou habitat

Specific Mitigation:

- Harvest within caribou range boundary will not include shear blading except for access, conductor stringing trails, and tower footprints.
- No shear blading to clear the right of way (ROW) in the sensitive range. Selective cutting methods will only be used to remove danger trees, vegetation within tower footprint, access route, and helicopter access points, to maintain low tree, shrub and herb plant communities on the ROW. Use existing access roads and trails to the extent possible
- Maintenance trails to be maintained to reduce line of sight for hunters and predators. Remove trees by low-disturbance methods
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW.
- Any Manitoba Hydro constructed or improved access routes used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction. Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible. Available slash <1 m in height will also be evenly distributed over the access route to reduce the possibility of use by ATV traffic.

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N2-S28	N2-Wild-145	Unnamed creek crossing	502615	6059921	14N

Potential Effects:

Higher risk of wire collision, disturbance during breeding and nesting, risk of wire collision is localized to the right-of-way while construction disturbance can effect colonies up to 400 meters away

Specific Mitigation:

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites
- Monitor bird density and mortality/injury in accordance with Biophysical Monitoring Plan and adjust mitigation accordingly to reduced risk timing windows for protection of birds (August 1- April 30)

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S28	N2-Soils-181	Permafrost	Site: 475 to 476	E-502040 N-6059985	E-501860 N-6060005	14N	181 m
N2-S28	N2-Soils-180	Permafrost	Site: 47 to 474	E-503946 N-6059776	E-502808 N-6059901	14N	1145 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N2-S22	N2-Aqua-165	Unnamed tributary of Gormley Lake	502615	6059921	14N	N/A	N/A	N/A	N/A

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15