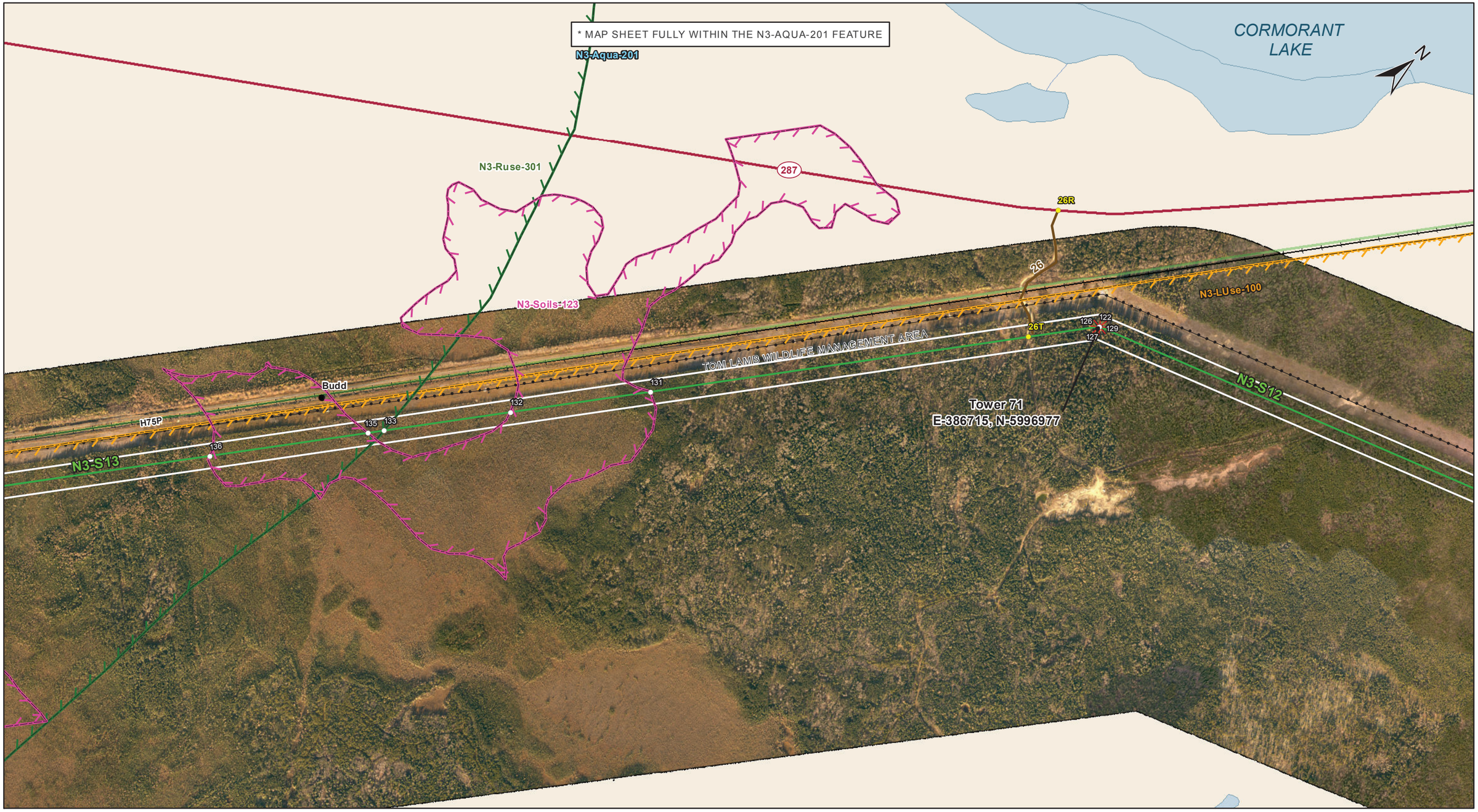

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: November 29, 2013

0 125 250 500
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
- **Land Use**: Conservation
- **Resource Use**: Forestry
- **Soils and Terrain**: Permafrost
- **Water**: Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N3
Environmentally Sensitive Site Locations

Map 145

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPPVARCMAP\ESS_N3\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131128A.MXD

MAP NUMBER : 145

ESS Group : Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S12	N3-Aqua-201	Aquifers vulnerable to contamination	Site: 125 to 126	E-393304 N-6000315	E-386715 N-5996977	14N	7386m
N3-S13	N3-Aqua-201	Aquifers vulnerable to contamination	Site: 129 to 130	E-386715 N-5996977	E-383776 N-5992189	14N	5618m

Potential Effects:

Potential groundwater contamination from a contingency event (e.g., spill)

Specific Mitigation:

- Marshaling yards will be located on upland sites where possible
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery

ESS Group : Conservation

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S12	N3-LUse-100	Tom Lamb WMA	Site: 121 to 122	E-399755 N-6003581	E-386715 N-5996977	14N	14617m
N3-S13	N3-LUse-100	Tom Lamb WMA	Site: 127 to 128	E-386715 N-5996977	E-383776 N-5992189	14N	5618m

Potential Effects:

Potential disruption to resource use activities

Specific Mitigation:

- Subject to permit conditions

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-Soils-123	Permafrost	Site: 131 to 132	E-386070 N-5995926	E-385868 N-5995598	14N	385m
N3-S13	N3-Soils-123	Permafrost	Site: 135 to 136	E-385663 N-5995264	E-385436 N-5994894	14N	434m

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 : Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-RUse-301	Fuel Wood Area	Site: 133 to 134	E-385687 N-5995302	E-383776 N-5992189	14N	3651m

Potential Effects:

Potential to disrupt access to fuel wood area

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Make fuel wood from ROW clearing available to local community where demand exists

* MAP SHEET FULLY WITHIN THE N3-AQUA-201 FEATURE
* MAP SHEET FULLY WITHIN THE N3-RUSE-301 FEATURE

N3-Aqua-201 N3-Ruse-301

287

H75P

N3-Soils-124

TOM LAMB WILDLIFE MANAGEMENT AREA

N3-S13

N3-LUse-100

N3-Wild-107

N3-Aqua-124

L8 138 137 L7

140 139

145 128 143 141 130 134

N3-Wild-300

Tower 72
E-383776, N-5992189

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_N3\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131128A.MXD

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: November 29, 2013

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Metres

1:10,000

Land Base
- Transmission Line
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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

Water
- Water Crossing

Wildlife
- Birds and Habitat

Wildlife
- Wildlife, Reptiles/Amphibians

Land Use
- Conservation

Resource Use
- Forestry

Soils and Terrain
- Permafrost

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N3
Environmentally Sensitive Site Locations

Map 146

MAP NUMBER : 146

ESS Group : Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-Aqua-201	Aquifers vulnerable to contamination	Site: 129 to 130	E-386715 N-5996977	E-383776 N-5992189	14N	5618m
N3-S14	N3-Aqua-201	Aquifers vulnerable to contamination	Site: 145 to 146	E-383776 N-5992189	E-376422 N-5984936	14N	10329m

Potential Effects:

Potential groundwater contamination from a contingency event (e.g., spill)

Specific Mitigation:

- Marshaling yards will be located on upland sites where possible
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery

ESS Group : Conservation

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-LUse-100	Tom Lamb WMA	Site: 127 to 128	E-386715 N-5996977	E-383776 N-5992189	14N	5618m
N3-S14	N3-LUse-100	Tom Lamb WMA	Site: 141 to 142	E-383776 N-5992189	E-376422 N-5984936	14N	10329m

Potential Effects:

Potential disruption to resource use activities

Specific Mitigation:

- Subject to permit conditions

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-Soils-124	Permafrost	Site: 137 to 138	E-384894 N-5994010	E-384719 N-5993726	14N	333m

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 Erosion/Sediment Control Plan

ESS Group : Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-RUse-301	Fuel Wood Area	Site: 133 to 134	E-385687 N-5995302	E-383776 N-5992189	14N	3652m
N3-S14	N3-RUse-301	Fuel Wood Area	Site: 143 to 144	E-383776 N-5992189	E-378823 N-5987304	14N	6957m

Potential Effects:

Potential to disrupt access to fuel wood area

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Make fuel wood from ROW clearing available to local community where demand exists

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S13	N3-Wild-107	Waterfowl sensitivity area	Site: L7 to L8	E-384697 N-5993592	E-384919 N-5994051	14N	539m

Potential Effects:

Higher risk of wire collision, risk of wire collision is localized to the right-of-way

Specific Mitigation:

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain applicable setback during nesting and breeding timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

MAP NUMBER : 146 cont'd

ESS Group : Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N3-S14	N3-Wild-300	Snake Pit	Site: 139 to 140	E-384026 N-5992597	E-383909 N-5992407	14N	223m

Potential Effects:

Potential loss of snake den

Specific Mitigation:

- Use existing access roads and trails to the extent possible
- Carry out tower installation during summer months (June 1-August 31) or conduct summer field investigations prior to construction where polygons overlap tower footprints
- Remove trees by low-disturbance methods
- No blasting within 200 m of hibernacula habitat
- Identify and flag buffer areas prior to start of work
- Confine vehicle traffic to established trails to the extent possible
- Provide a 200 m vegetated (shrub and herbaceous) buffer around site

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N3-S13	N3-Aqua-124	Unnamed Tributary of Unnamed Lake	384758	5993791	14N	N/A	N/A	No Fish Habitat	Low

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

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