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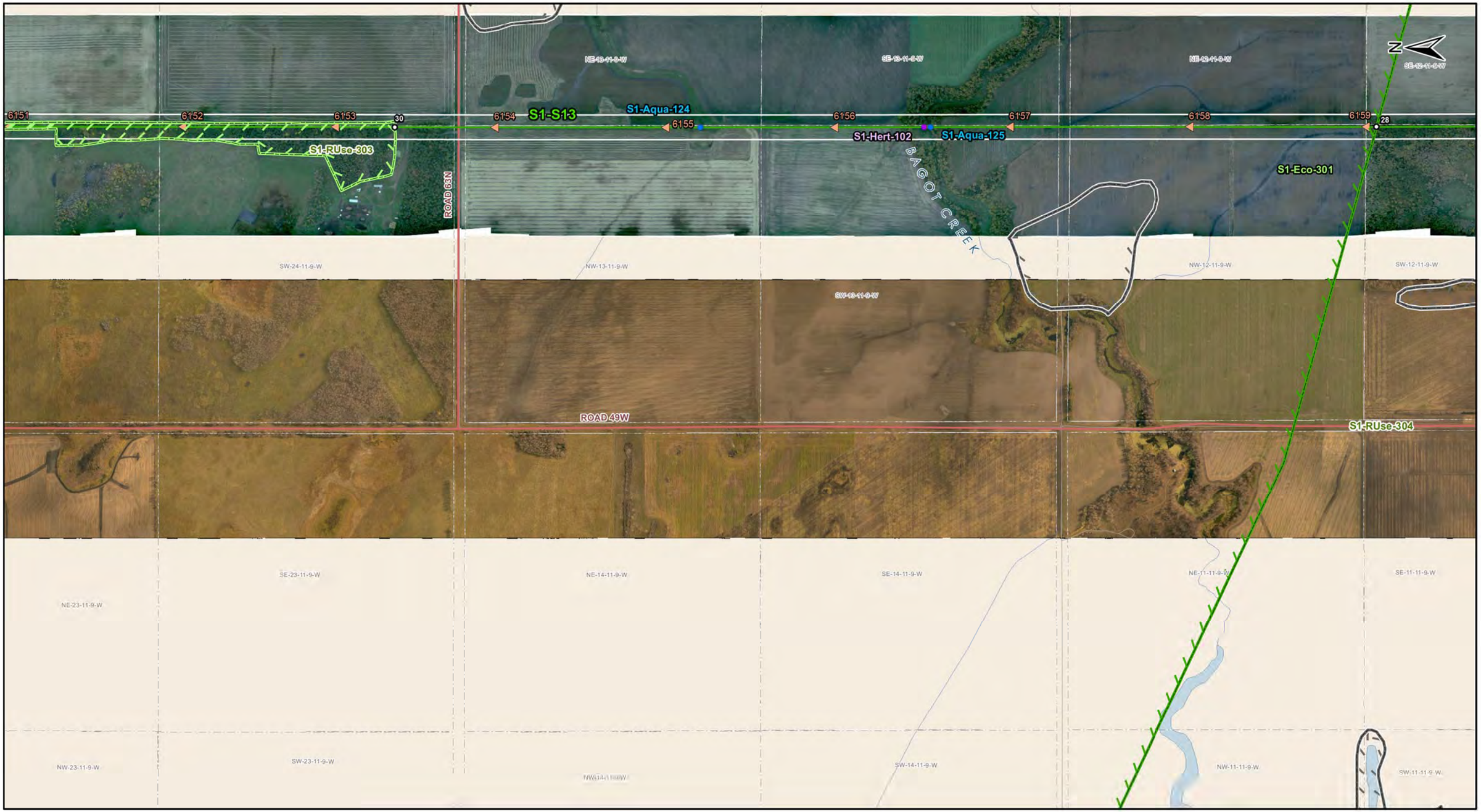

Manitoba Hydro

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Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Mining
- Provincial Forest
- Parcel Fabric

Project Infrastructure
- Angle Tower Locations
- Towers (Preliminary)
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

Sensitive Sites
- Point Features
- Linear Features
- Area Features

*Currently outside the Project footprint

Points of Access*
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features
Heritage
- Archaeological

Water
- Water Crossing

Ecosystem
- Species of Concern

Resource Use
- Forestry

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section S1
Environmentally Sensitive Site Locations

Map 287

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S13	S1-Hert-102	Bagot Creek	529984	5529173	14N

Potential Effects:

Potential disturbance to Heritage Resource

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S13	S1-Aqua-124	Unnamed tributary of Rat Creek	529973	5530875	14N	No Data	No Data	Low	No Fish Habitat

Potential Effects:

Habitat loss and 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.

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S13	S1-Aqua-125	Bagot Creek	529984	5529173	14N	3m	3m	Moderate	Important

Potential Effects:

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

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.
- No instream works or fording from April 1 - July 15

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S13	S1-RUse-303	Shelterbelt	Site: 29 to 30	E-530722 N-5532505	E-530729 N-5531194	14N	1311m

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S13	S1-Eco-301	Species of Concern (Plant)	Site: 27 to 28	E-530721 N-5532715	E-530748 N-5528527	14N	4188 m

Potential Effects:

Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

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- Angle Tower Locations
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Sensitive Sites
- Point Features
- Linear Features
- Area Features

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Points of Access*
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features
Heritage
- Archaeological

Water
- Water Crossing

Resource Use
- Forestry

Wildlife
- Reptiles/Amphibians

Bipole III Transmission Project
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Environmentally Sensitive Site Locations

Map 288

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S13	S1-Hert-103	Rat Creek	530001	5526734	14N

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S13	S1-Aqua-126	Rat Creek	530001	5526726	14N	20m	20m	Moderate	Important

Potential Effects:

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

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.
- No instream works or fording from April 1 - July 15

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-RUse-309	Shelterbelt	Site: 35 to 36	E-529819 N-5524500	E-529819 N-5524469	14N	30m

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Reptiles/Amphibians

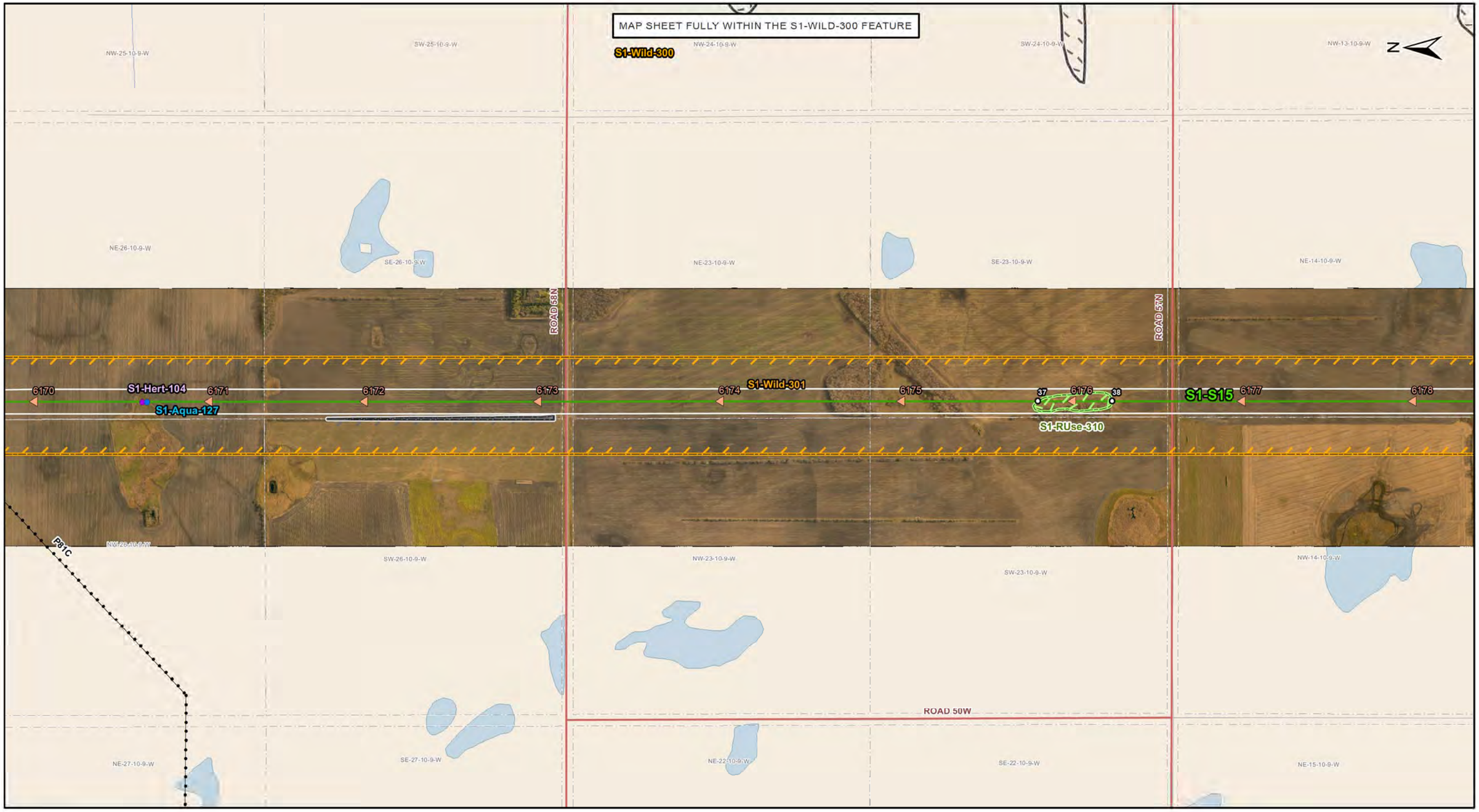
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Wild-300	Skink/Salamander Habitat	Site: 31 to 32	E-529818 N-5524738	E-529882 N-5514486	14N	10252 m
S1-S15	S1-Wild-301	Northern Prairie Skink Habitat	Site: 33 to 34	E-529818 N-5524736	E-529882 N-5514486	14N	10251 m

Potential Effects:

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints



Manitoba Hydro

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Project Infrastructure
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- Towers (Preliminary)
- BPIII Final Preferred Route
- 66 m Right of Way

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Sensitive Sites
- Point Features
- Linear Features
- Area Features

*Currently outside the Project footprint

Points of Access*
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features
Heritage
- Archaeological

Water
- Water Crossing

Resource Use
- Forestry

Wildlife
- Reptiles/Amphibians

Bipole III Transmission Project
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Environmentally Sensitive Site Locations

Map 289

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S15	S1-Hert-104	Potential Archaeological Site	529813	5523974	14N

Potential Effects:

Potential disturbance to Heritage Resource

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S15	S1-Aqua-127	Unnamed Wetland	529812	5523968	14N	No Data	No Data	Low	No Fish Habitat

Potential Effects:

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

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.

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-RUse-310	Shelterbelt	Site: 37 to 38	E-529837 N-5521543	E-529838 N-5521341	14N	202m

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Reptiles/Amphibians

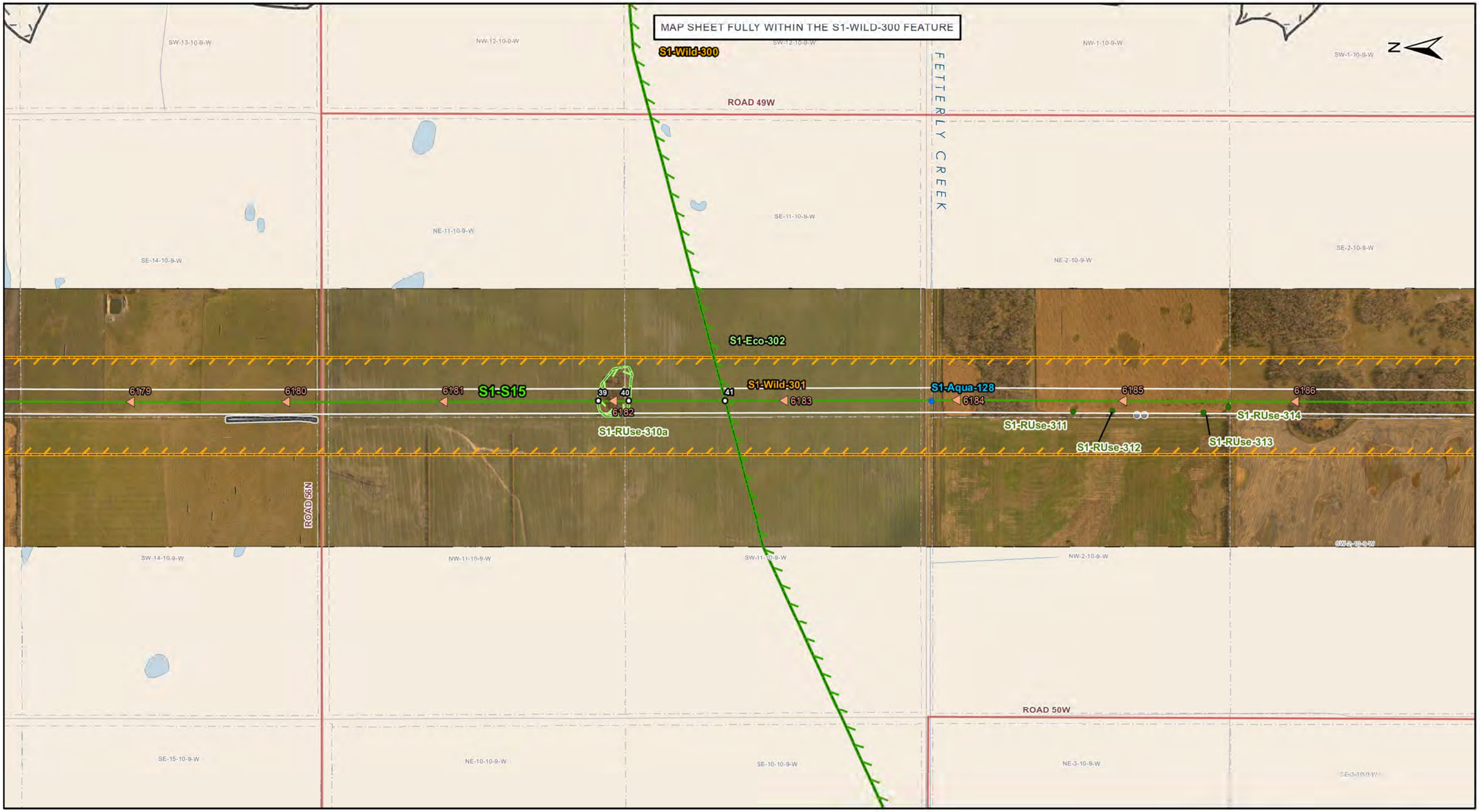
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Wild-300	Skink/Salamander Habitat	Site: 31 to 32	E-529818 N-5524738	E-529882 N-5514486	14N	10252 m
S1-S15	S1-Wild-301	Northern Prairie Skink Habitat	Site: 33 to 34	E-529818 N-5524736	E-529882 N-5514486	14N	10251 m

Potential Effects:

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints



Manitoba Hydro

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- BPIII Final Preferred Route
- 66 m Right of Way

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Sensitive Sites
- Point Features
- Linear Features
- Area Features

*Currently outside the Project footprint

Points of Access*
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features

Resource Use
- Forestry

Water
- Water Crossing

Ecosystem
- Species of Concern

Resource Use
- Forestry

Wildlife
- Reptiles/Amphibians

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section S1
Environmentally Sensitive Site Locations

Map 290

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S15	S1-RUse-311	Shelterbelt	529823	5517484	14N
S1-S15	S1-RUse-312	Shelterbelt	529822	5517381	14N
S1-S15	S1-RUse-313	Shelterbelt	529826	5517130	14N
S1-S15	S1-RUse-314	Shelterbelt	529824	5517065	14N

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-RUse-310a	Shelterbelt	Site: 39 to 40	E-529852 N-5518780	E-529853 N-5518697	14N	82m

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S15	S1-Aqua-128	Rossendale Drain	529844	5517874	14N	No Data	No Data	Low	Marginal

Potential Effects:

Increased erosion and sedimentation of streams

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. If wet conditions, one time fording is permitted
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- Limit machinery fording of the watercourse to a one-time event (over and back) only if no alternative crossing method is available. If repeated crossings of the watercourse are necessary prior approval from the MH Environmental Inspector is required
- Locate crossings perpendicular to the bank, whenever possible.
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.

ESS Group: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Wild-300	Skink/Salamander Habitat	Site: 31 to 32	E-529818 N-5524738	E-529882 N-5514486	14N	10252 m
S1-S15	S1-Wild-301	Northern Prairie Skink Habitat	Site: 33 to 34	E-529818 N-5524736	E-529882 N-5514486	14N	10251 m

Potential Effects:

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Eco-302	Species of Concern (Plant)	Site: 41 to 42	E-529855 N-5518436	E-529882 N-5514486	14N	3950 m

Potential Effects:

Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

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- Area Features

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- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features

Heritage
- Archaeological

Water
- Water Crossing

Access
- Intersection

Resource Use
- Fishing
- Trapping

Soils and Terrain
- Erosion

Soils and Terrain
- Erosion

Ecosystem
- Invasive Species of Concern
- Species of Concern

Resource Use
- Food/Medicinal
- Forestry

Water
- Groundwater

Wildlife
- Reptiles/Amphibians

Bipole III Transmission Project
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Environmentally Sensitive Site Locations

Map 291

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S15	S1-Aqua-129	Unnamed Tributary of Assiniboine River	529869	5514592	14N	No Data	No Data	Low	Marginal

Potential Effects:

Increased erosion and sedimentation of streams

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. If wet conditions, one time fording is permitted
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- Limit machinery fording of the watercourse to a one-time event (over and back) only if no alternative crossing method is available. If repeated crossings of the watercourse are necessary prior approval from the MH Environmental Inspector is required
- Locate crossings perpendicular to the bank, whenever possible.
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.

ESS Group: Intersection

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S15	S1-RecUse-100	C1	Snowmobile Trail	E-529864 N-5516094	14N

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation:

- Identify and flag prior to start of work
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

ESS Group: Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Soils-300	Water Erosion Risk	Site: 87 to 88	E-531568 N-5513319	E-531928 N-5512644	14N	766 m

Potential Effects:

Loss of topsoil due to water erosion (e.g. sheet, rill, gully) on disturbed surfaces; mass-movement due to slope destabilization.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Centerline clearing is a maximum of 12 meters wide
- Locate crossings perpendicular to the bank, whenever possible
- Outside of centre-line clearing, access trails and tower footprints, shrub and herbaceous understory vegetation will be maintained along with trees under MH veg clearance requirements (Refer to engineered drawing for spans between towers 6196-6201
- Outside of centre-line clearing, access trials and tower footprints, stumps should be retained up to a maximum of 20 centimeters in height
- Stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Aqua-202	Aquifer	Site: 45 to 46	E-529879 N-5514739	E-529882 N-5514486	14N	253 m
S1-S16	S1-Aqua-202	Aquifer	Site: 49 to 52	E-529882 N-5514486	E-530627 N-5513765	14N	1036 m
S1-S17	S1-Aqua-202	Aquifer	Site: 60 to 63	E-530627 N-5513765	E-531236 N-5513591	14N	632 m
S1-S18	S1-Aqua-202	Aquifer	Site: 70 to 73	E-531236 N-5513591	E-531568 N-5513318	14N	430 m
S1-S19	S1-Aqua-202	Aquifer	Site: 80 to 85	E-531568 N-5513318	E-531927 N-5512644	14N	763 m

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.
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.

ESS Group: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Wild-300	Skink/Salamander Habitat	Site: 31 to 32	E-529818 N-5524738	E-529882 N-5514486	14N	10252 m
S1-S16	S1-Wild-300	Skink/Salamander Habitat	Site: 50 to 53	E-529882 N-5514486	E-530627 N-5513765	14N	1036 m
S1-S17	S1-Wild-300	Skink/Salamander Habitat	Site: 59 to 66	E-530627 N-5513765	E-531236 N-5513591	14N	632 m
S1-S18	S1-Wild-300	Skink/Salamander Habitat	Site: 69 to 76	E-531236 N-5513591	E-531568 N-5513318	14N	430 m
S1-S19	S1-Wild-300	Skink/Salamander Habitat	Site: 77 to 86	E-531568 N-5513318	E-531927 N-5512644	14N	763 m
S1-S15	S1-Wild-301	Northern Prairie Skink Habitat	Site: 33 to 34	E-529818 N-5524736	E-529882 N-5514486	14N	10251 m
S1-S16	S1-Wild-301	Northern Prairie Skink Habitat	Site: 48 to 54	E-529882 N-5514486	E-530627 N-5513765	14N	1036 m
S1-S17	S1-Wild-301	Northern Prairie Skink Habitat	Site: 57 to 64	E-530627 N-5513765	E-531236 N-5513591	14N	632 m
S1-S18	S1-Wild-301	Northern Prairie Skink Habitat	Site: 68 to 74	E-531236 N-5513591	E-531568 N-5513318	14N	430 m
S1-S19	S1-Wild-301	Northern Prairie Skink Habitat	Site: 79 to 82	E-531568 N-5513318	E-531927 N-5512644	14N	763 m

Potential Effects:

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-Eco-302	Species of Concern (Plant)	Site: 41 to 42	E-529855 N-5518436	E-529882 N-5514486	14N	3950 m
S1-S16	S1-Eco-302	Species of Concern (Plant)	Site: 47 to 51	E-529882 N-5514486	E-530627 N-5513765	14N	1036 m
S1-S17	S1-Eco-302	Species of Concern (Plant)	Site: 58 to 62	E-530627 N-5513765	E-531236 N-5513591	14N	632 m
S1-S18	S1-Eco-302	Species of Concern (Plant)	Site: 71 to 72	E-531236 N-5513591	E-531568 N-5513318	14N	430 m
S1-S19	S1-Eco-302	Species of Concern (Plant)	Site: 78 to 83	E-531568 N-5513318	E-531927 N-5512644	14N	763 m

Potential Effects:

Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S15	S1-RUse-315	Shelterbelt	Site: 43 to 44	E-529863 N-5516208	E-529863 N-5516194	14N	14m

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S16	S1-RUse-200	Berry Harvest	Site: 55 to 56	E-530428 N-5513958	E-530627 N-5513765	14N	277 m
S1-S17	S1-RUse-200	Berry Harvest	Site: 61 to 65	E-530627 N-5513765	E-531236 N-5513591	14N	632 m
S1-S18	S1-RUse-200	Berry Harvest	Site: 67 to 75	E-531236 N-5513591	E-531568 N-5513318	14N	430 m
S1-S19	S1-RUse-200	Berry Harvest	Site: 81 to 84	E-531568 N-5513318	E-531927 N-5512644	14N	763 m

Potential Effects:

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S19	S1-Hert-104a	Potential Heritage Site	531731	5513014	14N

Potential Effects:

Potential disturbance to Heritage Resource

Specific Mitigation:

- Archaeologist will be on site during foundation installation
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation
- The presence of the Project Archaeologist is required to monitor the excavation of tower footings at tower # 6197

ESS Group: Invasive Species of Concern

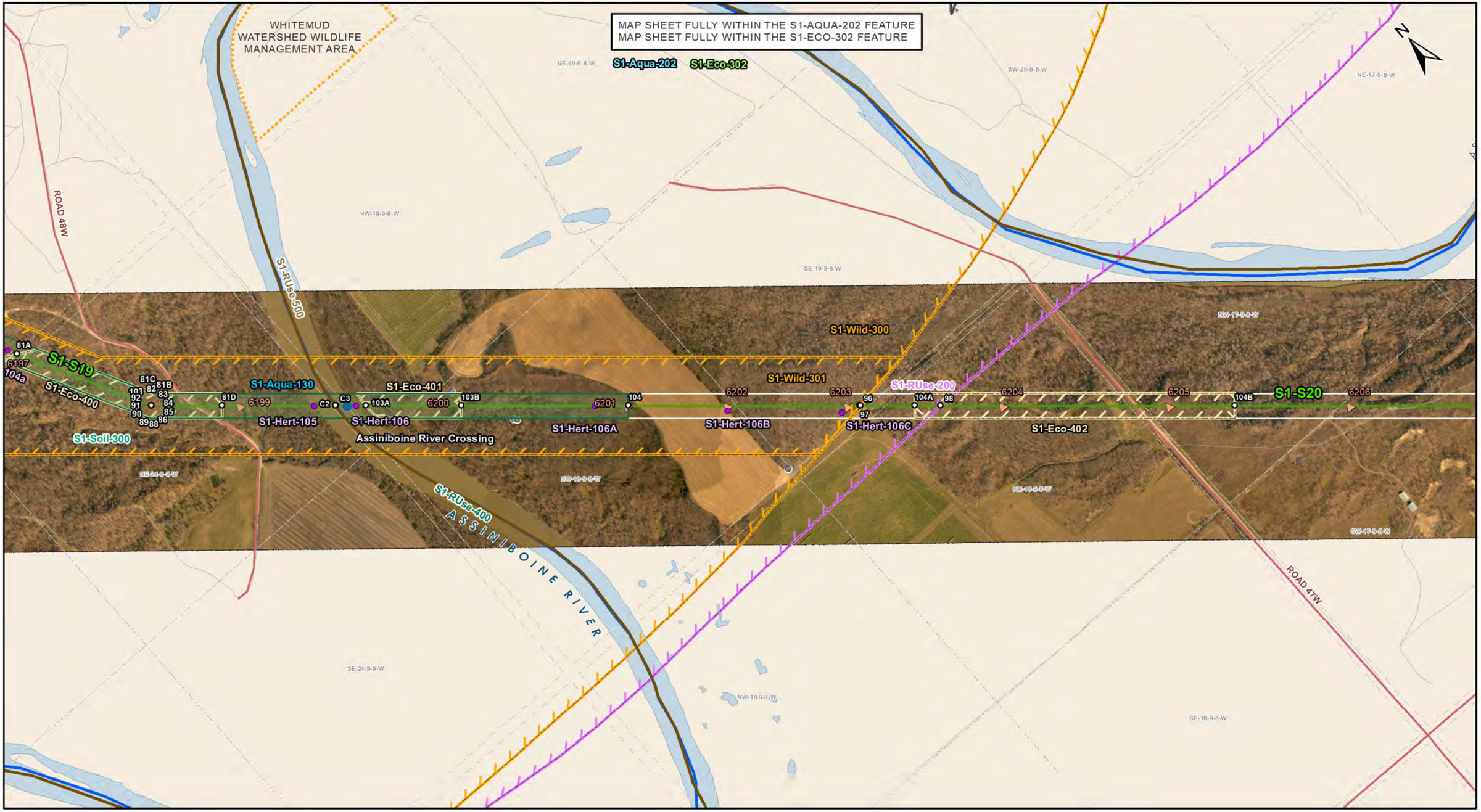
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Eco-400	Invasive species patch	Site: 81A to 81B	E-531744 N-5512988	E-531927 N-5512644	14N	389 m

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation:

- Implement Low-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. If the land parcel contained within this polygon has been designated as High-Risk, full cleaning/washing mitigation is to be followed as per the SOP
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Remove trees by low-disturbance methods
- Implement additional mitigation from site investigation
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan



Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: January 23, 2017
Version: Final 2.03

0 125 250 500
Metres
1:10,000

Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Mining
- Provincial Forest
- Parcel Fabric

Project Infrastructure
- Angle Tower Locations
- Towers (Preliminary)
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

Sensitive Sites
- Point Features
- Linear Features
- Area Features

*Currently outside the Project footprint

Points of Access*
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Approved Access Route

ESS Features

Heritage
- Archaeological

Water
- Water Crossing

Resource Use
- Fishing
- Trapping

Soils and Terrain
- Erosion

Soils and Terrain
- Erosion

Ecosystem
- Invasive Species of Concern
- Species of Concern

Resource Use
- Food/Medicinal

Water
- Groundwater

Wildlife
- Reptiles/Amphibians

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section S1
Environmentally Sensitive Site Locations

Map 292

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S20	S1-Hert-105	Assiniboine River	532262	5512357	14N
S1-S20	S1-Hert-106	Assiniboine River	532347	5512284	14N
S1-S20	S1-Hert-106A	Registered Archaeological Site	532839	5511858	14N
S1-S20	S1-Hert-106B	Registered Archaeological Site	533102	5511612	14N
S1-S20	S1-Hert-106C	Registered Archaeological Site	533334	5511405	14N

Potential Effects:

Potential disturbance to Heritage Resource

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation
- The presence of the Project Archaeologist is required to monitor the excavation of tower footings at tower #'s 6199 and 6200

ESS Group: Trapping

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S20	S1-RUse-500	C2	Trapping - Assiniboine River	E-532304 N-5512319	14N

Potential Effects:

Loss of ATK and local historical record due to access road construction and ROW activities.

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.

ESS Group: Fishing

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S20	S1-RUse-400	C3	Fishing - Assiniboine River	E-532306 N-5512317	14N

Potential Effects:

Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&M.

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.

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S20	S1-Aqua-130	Assiniboine River	532305	5512320	14N	55m	55m	High	Important

Potential Effects:

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

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.
- No instream work or fording from April 1 – July 15

ESS Group: Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Soils-300	Water Erosion Risk	Site: 87 to 88	E-531743 N-5512990	E-531927 N-5512644	14N	391 m
S1-S20	S1-Soils-300	Water Erosion Risk	Site: 94 to 95	E-531928 N-5512644	E-532905 N-5511801	14N	1230 m

Potential Effects:

Loss of topsoil due to water erosion (e.g. sheet, rill, gully) on disturbed surfaces.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- Avoid construction on steep slopes or the creation of steep slopes to the extent possible.
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with the site Rehabilitation Plan

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Aqua-202	Aquifer	Site: 80 to 85	E-531568 N-5513318	E-531927 N-5512644	14N	763 m
S1-S20	S1-Aqua-202	Aquifer	Site: 90 to 100	E-531927 N-5512644	E-535261 N-5509768	14N	4402 m

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.
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.

ESS Group: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Wild-300	Skink/Salamander Habitat	Site: 77 to 86	E-531568 N-5513318	E-531927 N-5512644	14N	763 m
S1-S20	S1-Wild-300	Skink/Salamander Habitat	Site: 93 to 96	E-531927 N-5512644	E-533384 N-5511387	14N	1924 m
S1-S19	S1-Wild-301	Northern Prairie Skink Habitat	Site: 79 to 82	E-531568 N-5513318	E-531927 N-5512644	14N	763 m
S1-S20	S1-Wild-301	Northern Prairie Skink Habitat	Site: 91 to 97	E-531927 N-5512644	E-533386 N-5511386	14N	1926 m

Potential Effects:

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-RUse-200	Berry Harvest	Site: 81 to 84	E-531568 N-5513318	E-531927 N-5512644	14N	763m
S1-S20	S1-RUse-200	Berry Harvest	Site: 92 to 98	E-531927 N-5512644	E-533550 N-5511244	14N	2143m

Potential Effects:

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Eco-302	Species of Concern (Plant)	Site: 78 to 83	E-531568 N-5513318	E-531927 N-5512644	14N	763 m
S1-S20	S1-Eco-302	Species of Concern (Plant)	Site: 89 to 99	E-531927 N-5512644	E-535261 N-5509768	14N	4402 m

Potential Effects:

Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

ESS Group: Invasive Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S19	S1-Eco-400	Invasive species patch	Site: 81A to 81B	E-531744 N-5512988	E-531927 N-5512644	14N	389 m
S1-S20	S1-Eco-400	Invasive species patch	Site: 81C to 81D	E-531927 N-5512644	E-532073 N-5512519	14N	192 m
S1-S19	S1-Eco-401	Invasive species patch	Site: 103A to 103B	E-532368 N- 5512264	E-532565 N-5512094	14N	262 m
S1-S20	S1-Eco-402	Invasive species patch	Site: 104A to 105B	E-533498 N- 5511289	E-534157 N-5510721	14N	870 m

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation:

- Implement Low-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. If the land parcel contained within this polygon has been designated as High-Risk, full cleaning/washing mitigation is to be followed as per the SOP
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Remove trees by low-disturbance methods
- Implement additional mitigation from site investigation
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan