

St. Vital Transmission Complex (V78G)

Construction Environmental Protection Mapbook

Version: 1.00 Date: December 11, 2019

NOTICE: Access routes are approximate. Please refer to Access Management Plan for latest approved access routes.

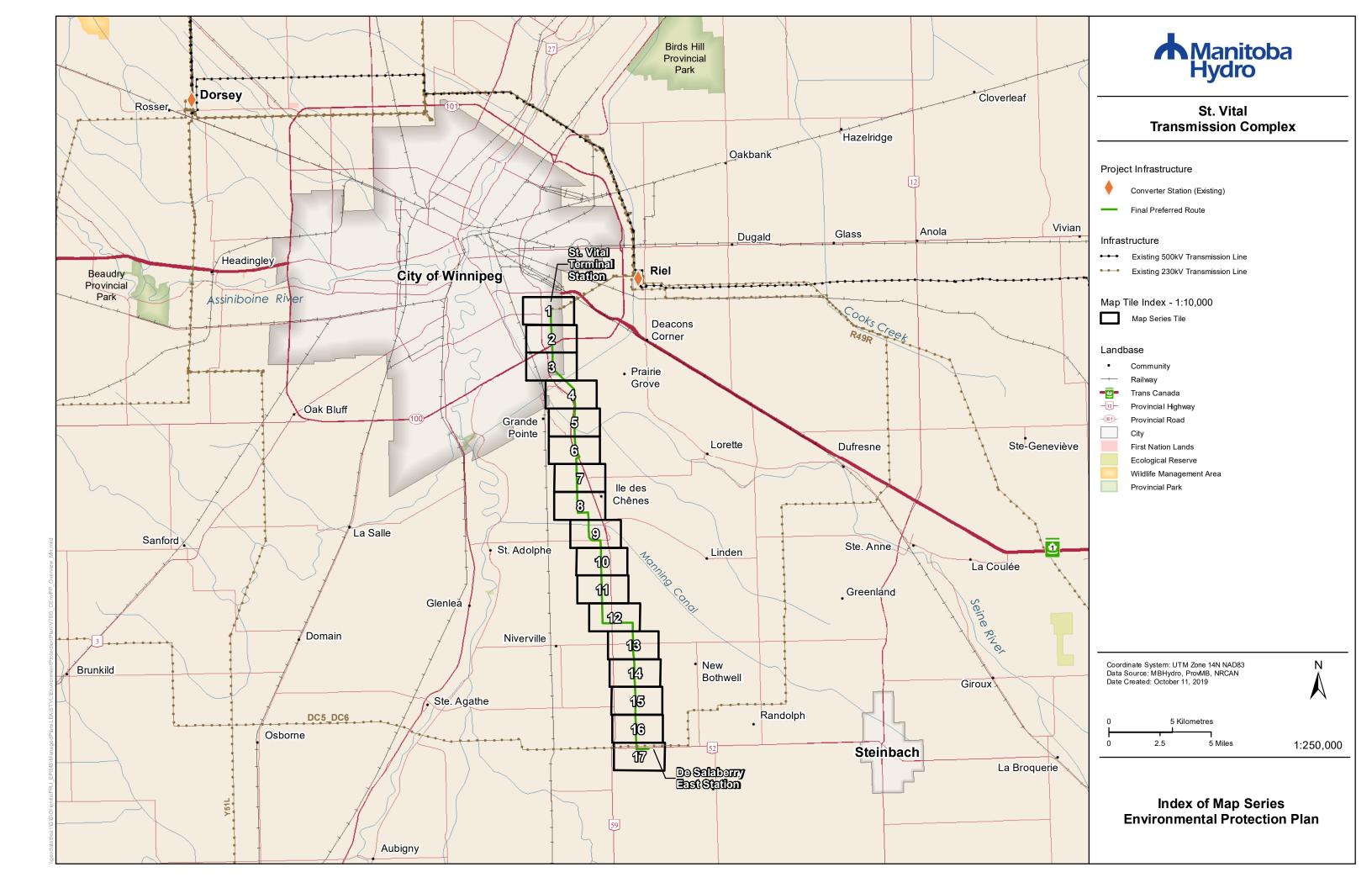


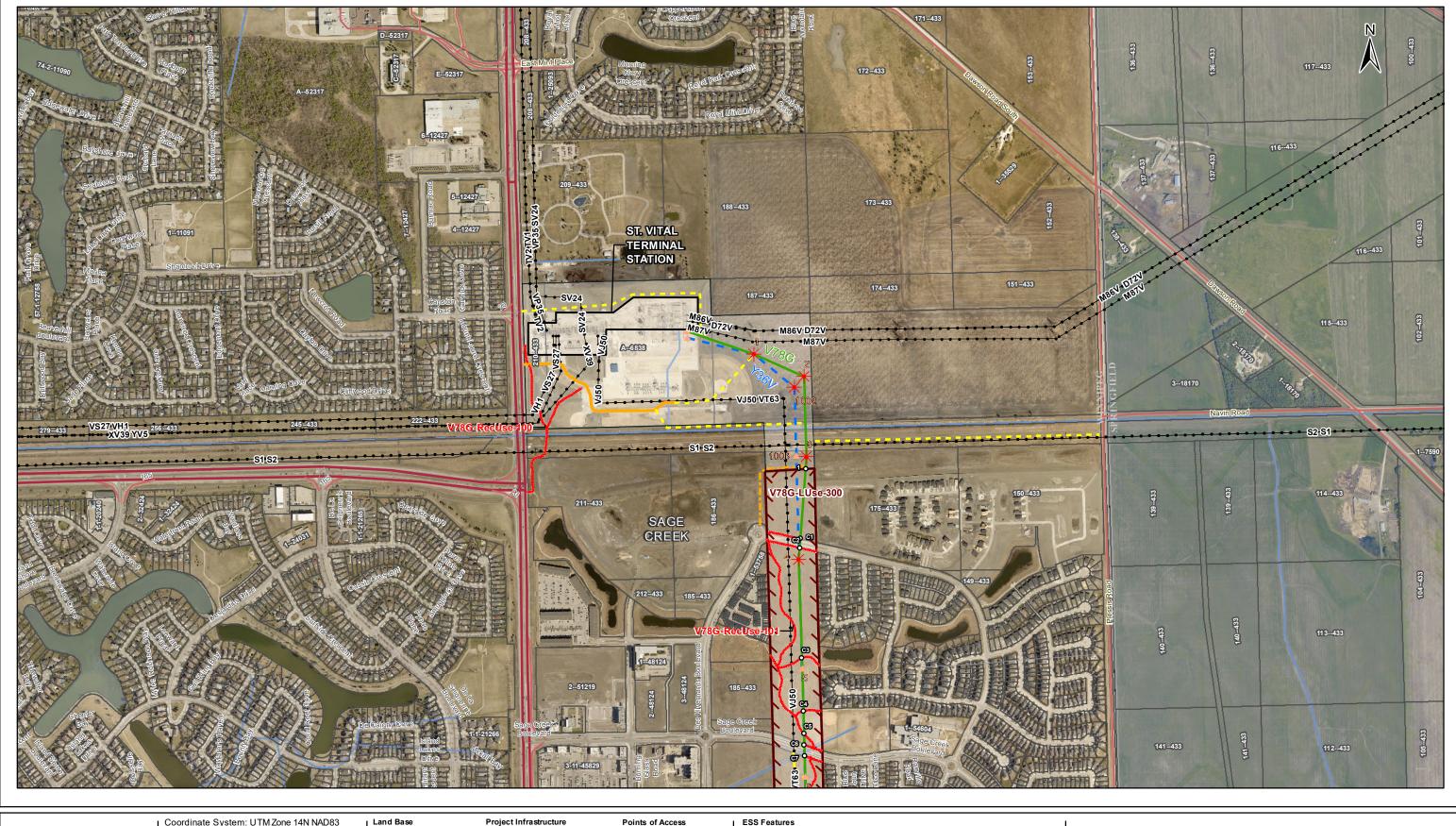
Document Owner:
Licensing and Environmental Assessment Department
Transmission Planning and Design Division
Transmission Business Unit
Manitoba Hydro

Version 1.00

List of Revisions - STVL Construction Environmental Protection Plan Mapbook

Number	Nature of Revision	Map/Table #	Revised By	Date
Draft	Added five Heritage ESS Polygons and four Heritage ESS Points	Maps 1,2,3,4,5,6,7,8,9,10,11, 12,13,14,15,16,17	Manitoba Hydro	20190416
Draft	Added prefix "V78G" to differentiate between "G79L" and "Y36V". Aqua points (V78G-Aqua-102, V78G-Aqua-103 and V78G-Aqua-104) converted to ESS polygon. Retired V78G-RUse-300, V78G-RUse-301, V78G-RUse-304, V78G-RUse-305 and V78G-RUse-306. Reshaped shelterbelt V78G-RUse-303 to retain edge along right-of-way. Removed restricted access from mapbook. Right-of-way extended to include Y36V.	Maps 1,2,3,4,5,6,7,8,9,10,11, 12,13,14,15,16,17	Manitoba Hydro	20191011
1.00	Added Landscaped Prairie ESS site	Maps 1,2	Manitoba Hydro	20191211







1:10,000

Land Base

■ Transmission Line Highway

Tower Location Major Road V78G (Accepted) Local Road

Railway (Operational) Railway (Discontinued) ☐ Parcel Fabric

Right of Way Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion

Project Infrastructure

- Y36V (Accepted)

- G79L (Accepted)

Existing Gravel Road - Existing Gravel/Dirt Road - Field Access

-- New Trail Sensitive Sites

Linear Features Area Features

ESS Features

Rec Use Trail Land Use

Recreation

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-101	Walking Trail	C1	E-641019 N-5522539
V78G-RecUse-101	Walking Trail	C2	E-641017 N-5522513
V78G-RecUse-101	Walking Trail	C3	E-641022 N-5522205
V78G-RecUse-101	Walking Trail	C4	E-641026 N-5522055
V78G-RecUse-101	Walking Trail	C5	E-641028 N-5521992
V78G-RecUse-101	Walking Trail	C6	E-641029 N-5521961
V78G-RecUse-101	Walking Trail	C7	E-641030 N-5521930

Potential Effects:

Potential interference with pedestrian traffic; safety issues

Specific Mitigation (ID# 113):

- Avoid surface damage to and obstruction of recreation route
 Post warning markers and signs at trail location
 Matting is required at the intersection point of any access trails

ESS Group: Recreation

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-LUse-300	Landscaped Prairie	1 to 2	E-641033 N-5522735	E-641048 N-5521311	1425

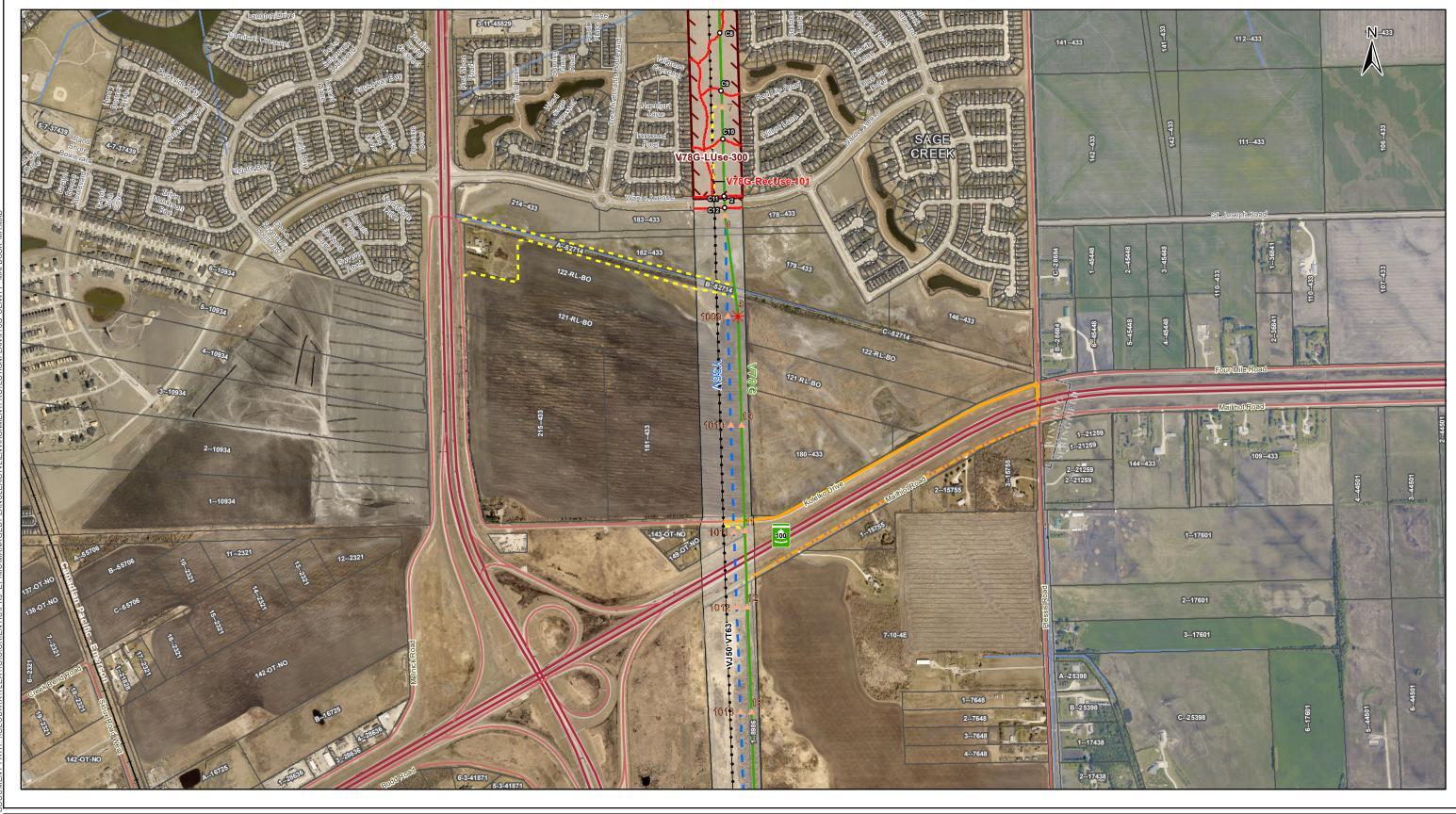
Potential Effects:

Potential loss or disturbance of landscaping that has been planted in native grasses and plant species

Specific Mitigation (ID# 216):

- 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 soil during Non-frozen ground conditions
- Confine vehicle/equipment traffic to Designated access trails as per access management plan In the event of ground disturbance refer to Rehabilitation and Invasive Species Management Plan for mitigation measures

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Land Base

■ Transmission Line

Highway Major Road V78G (Accepted)

Local Road Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure

De Salaberry East Station

*Tower locations subject to final design

* Angle Tower Location

 Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Points of Access

- Y36V (Accepted) - G79L (Accepted) Right of Way

Sensitive Sites Linear Features Area Features

ESS Features

Rec Use Trail Land Use

Recreation

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-101	Walking Trail	C8	E-641034 N-5521774
V78G-RecUse-101	Walking Trail	C9	E-641039 N-5521611
V78G-RecUse-101	Walking Trail	C10	E-641043 N-5521476
V78G-RecUse-101	Walking Trail	C11	E-641047 N-5521316
V78G-RecUse-101	Walking Trail	C12	E-641048 N-5521283

Potential Effects:

Potential interference with pedestrian traffic; safety issues

Specific Mitigation (ID# 113):

- Avoid surface damage to and obstruction of recreation route
 Post warning markers and signs at trail location
- Matting is required at the intersection point of any access trails

ESS Group: Recreation

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-LUse-300	Landscaped Prairie	1 to 2	E-641033 N-5522735	E-641048 N-5521311	1425

Potential Effects:

Potential loss or disturbance of landscaping that has been planted in native grasses and plant species

Specific Mitigation (ID# 216):

- 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 soil during Non-frozen ground conditions
- Confine vehicle/equipment traffic to Designated access trails as per access management plan
- In the event of ground disturbance refer to Rehabilitation and Invasive Species Management Plan for mitigation measures

Version: 1.00





Version: 1.00

0 125 250 50

Metres

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Land Base ← Transmiss

Transmission LineHighwayMajor Road

Local RoadRailway (Operational)Railway (Discontinued)

Parcel Fabric
Rural Municipality
*Some road names have not been verified, use with discretion

Project Infrastructure

↑ Tower Location

★ Angle Tower Location

V78G (Accepted)

V78G (Accepted)
 Y36V (Accepted)
 G79L (Accepted)

Right of Way
 De Salaberry East Station
 *Tower locations subject to final design

Points of Access

Existing Gravel Road
Existing Gravel/Dirt Road
Field Access
New Trail

Sensitive Sites
Point Features
Linear Features

Area Features

ESS Features

WaterWater CrossingRec Use

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-103	Snowmobile Trail	C14	E-641756 N-5517834
V78G-RecUse-104	Snowmobile Trail CT710	C15	E-641946 N-5517654

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation (ID# 103):

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

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-102	Duff Roblin Parkway Trail	C13	E-641594 N-5517988

Potential Effects:

Potential interference with pedestrian traffic; safety issues

Specific Mitigation (ID# 113):

- Avoid surface damage to and obstruction of recreation route Post warning markers and signs at trail location
- Matting is required at the intersection point of any access trails

ESS Group: Water Crossing

*Features represented as points

ESS ID	ESS Name	Location
V78G-Aqua-100	Floodway	E-641715 - N-5517873
V78G-Aqua-101	Old Prairie Grove Drain	E-642030 - N-5517574

Potential Effects:

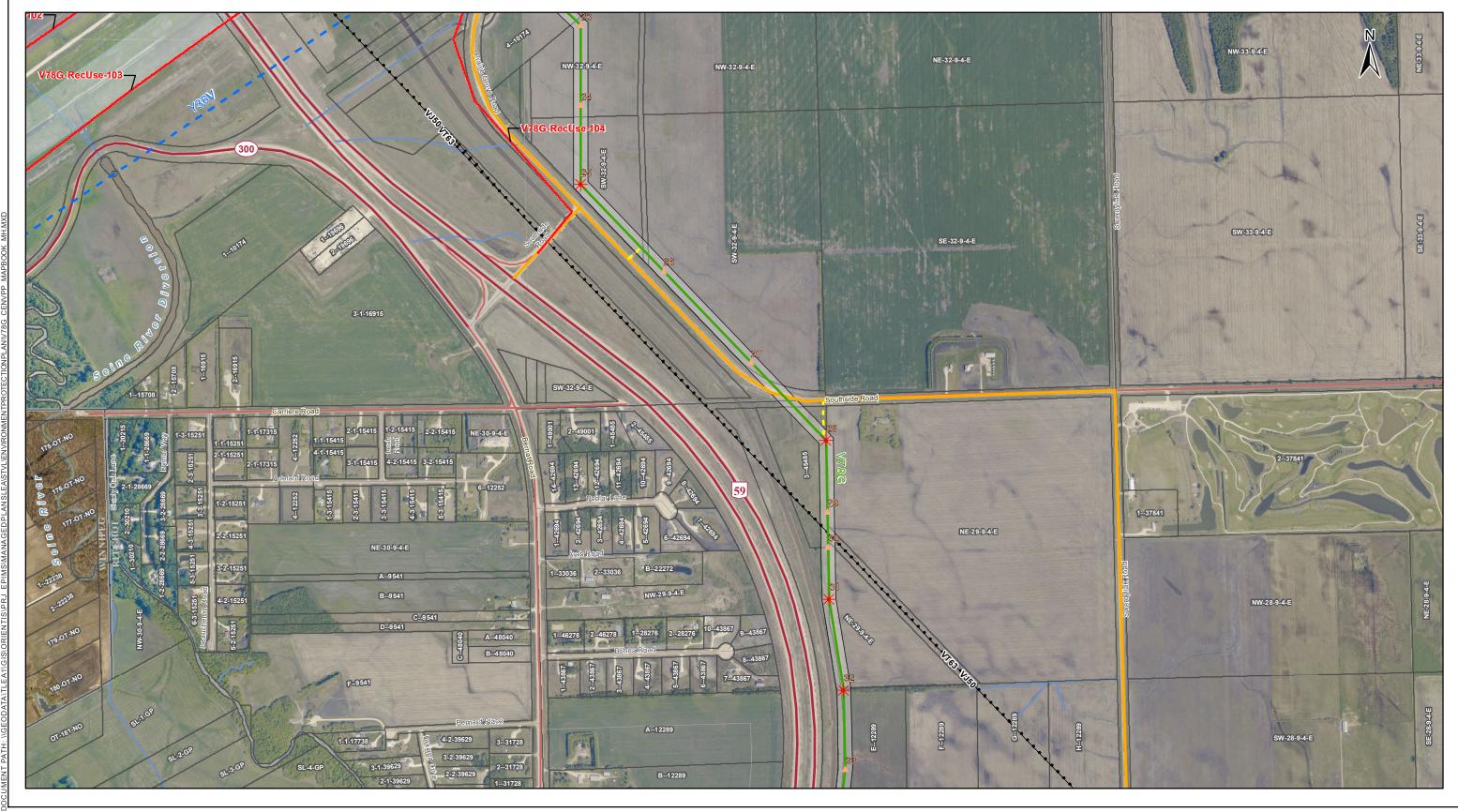
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

Specific Mitigation (ID# 64):

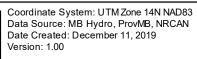
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based 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.

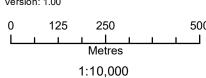
Map Number: 3

Version: 1.00









Land Base Transmission Line Highway

Major Road Local Road Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure

Tower Location * Angle Tower Location V78G (Accepted)

Y36V (Accepted) G79L (Accepted)

*Tower locations subject to final design

Right of Way De Salaberry East Station

Points of Access

 Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Sensitive Sites Linear Features Area Features

ESS Features

Rec Use Trail







0 125 250 50

Metres

1:10,000

Land Base ← Transmission

Transmission LineHighwayMajor Road

— Local Road
 → Railway (Operational)
 --+ Railway (Discontinued)

Parcel Fabric
Rural Municipality
* Some road names have not been verified, use with discretion

Project Infrastructure

V78G (Accepted)

- Y36V (Accepted)

G79L (Accepted)

De Salaberry East Station

Right of Way

Points of Access

Existing Gravel Road

Existing Gravel/Dirt Road

Field Access

New Trail

Sensitive Sites
Point Features
Linear Features

Area Features

ESS Features

Heritage

Archaeological

Water

Water

Water Crossing

Rec Use

Water Cross
Rec Use
Trail
Resource Use

Forestry

Water

Water Crossing

ESS Group: Archaeological

*Features represented as points

ESS ID	ESS Name	Location
V78G-Hert-100	Potential Archaeological Site Seine River	E-642904 - N-5514109
V78G-Hert-101	Potential Archaeological Site Seine River	E-642907 - N-5514001
V78G-Hert-102	Potential Archaeological Site Seine River	E-642917 - N-5513689

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 301):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Conduct site investigation with Archaeologist prior to construction
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered
- Should heritage resources be discovered during a pre-construction survey an archaeologist may prescribe construction matting to be used to protect the area from disturbance

ESS Group: Forestry

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-RUse-302	Shelterbelt	5 to 6	E-642928 N-5513627	E-642948 N-5513117	510

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag 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 pushing debris into adjacent timber

ESS Group: Water Crossing

*Features represented as points

ESS ID	ESS Name	Location
V78G-Aqua-105	Intermittent Stream	E-642916 - N-5513691

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 (ID# 64):

- 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

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-Aqua-102	Seine River	3 to 4	E-642896 N-5514122	E-642899 N-5513933	188

Potential Effects:

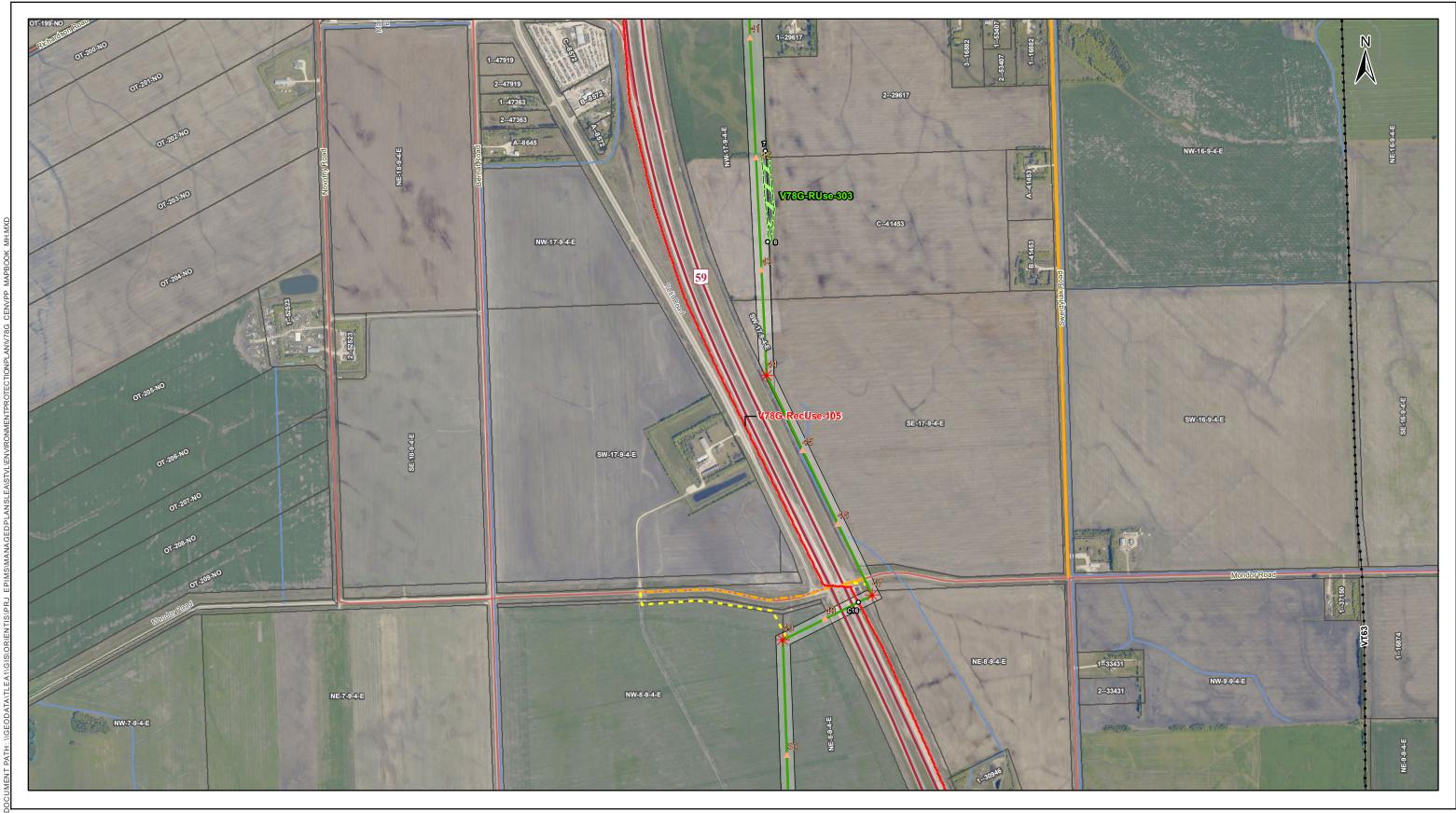
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

Specific Mitigation (ID# 64):

- 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.

Map Number: 5

Version: 1.00





125 Metres 1:10,000

Land Base ■ Transmission Line

Highway Major Road

Local Road Railway (Operational) Railway (Discontinued)

- G79L (Accepted) ☐ Parcel Fabric Right of Way Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion *Tower locations subject to final design

Project Infrastructure

- Y36V (Accepted)

Points of Access Existing Gravel Road Tower Location - Existing Gravel/Dirt Road * Angle Tower Location - Field Access V78G (Accepted) -- New Trail

Sensitive Sites Linear Features

Area Features

ESS Features

Rec Use Trail Resource Use Forestry

ESS Group: Forestry

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-RUse-303	Shelterbelt	7 to 8	E-642963 N-5512704	E-642971 N-5512446	257

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
 Identify and flag 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 pushing debris into adjacent timber

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-105	Snowmobile Trail CT710	C16	E-643227 N-5511424

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation (ID# 103):

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

Version: 1.00





125 Metres 1:10,000

Land Base

■ Transmission Line Highway Major Road

Local Road → Railway (Operational) Railway (Discontinued) ☐ Parcel Fabric

Rural Municipality

* Some road names have not been verified, use with discretion

* Angle Tower Location V78G (Accepted) Y36V (Accepted) - G79L (Accepted) Right of Way De Salaberry East Station

Project Infrastructure

Tower Location

*Tower locations subject to final design

Points of Access

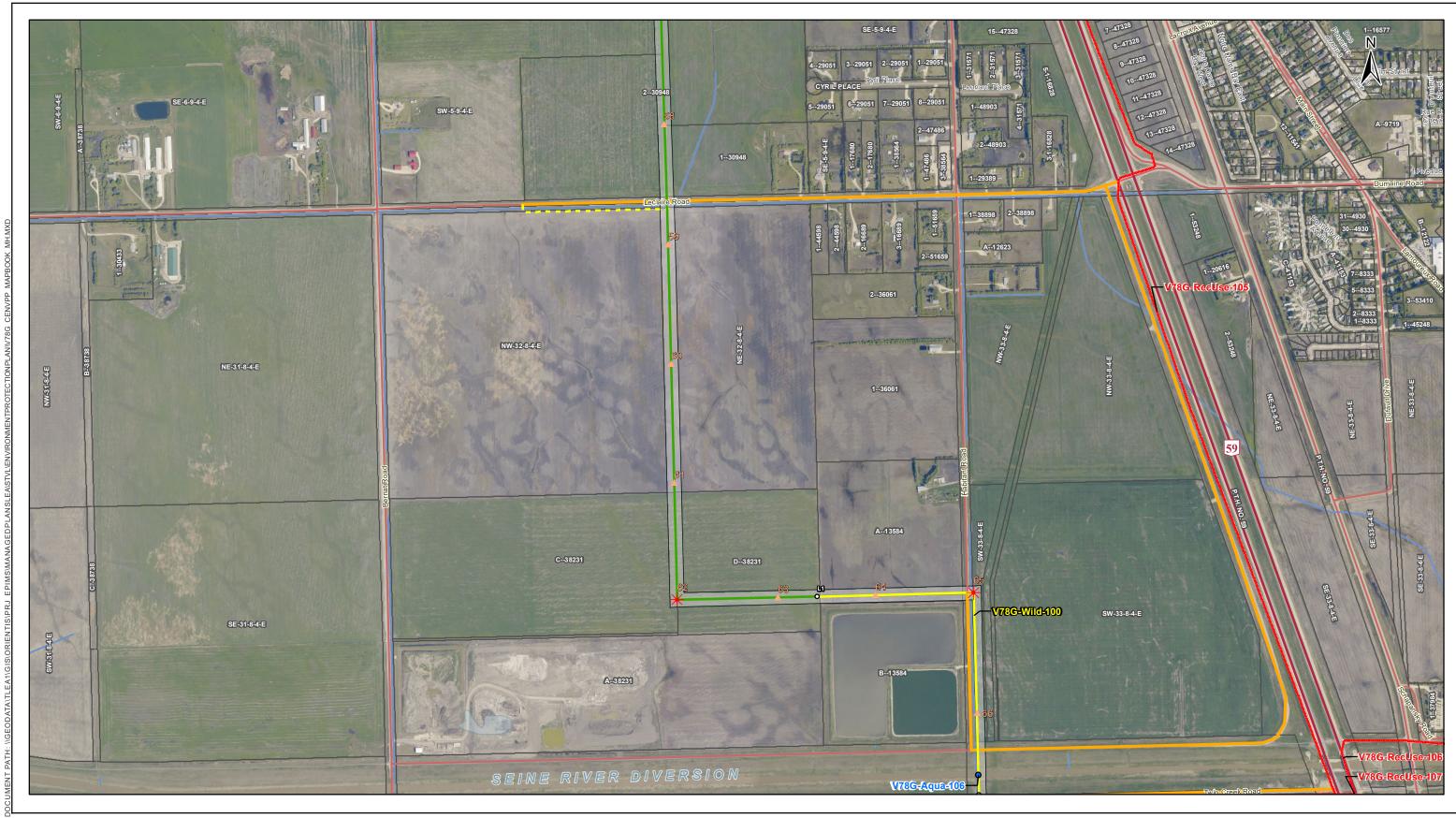
 Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Sensitive Sites Linear Features Area Features

ESS Features

Rec Use Trail







125 Metres 1:10,000

Land Base

■ Transmission Line Highway Major Road

Local Road Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure Tower Location

* Angle Tower Location

V78G (Accepted)

Y36V (Accepted)

G79L (Accepted)

De Salaberry East Station

*Tower locations subject to final design

Right of Way

Points of Access Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Sensitive Sites Linear Features

Area Features

ESS Features

Water Water Crossing Rec Use Trail

Wildlife Birds and Habitat

ESS Group: Birds and Habitat

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-Wild-100	Reservoir adjacent to RoW	L1 to L2	E-643544 N-5507070	E-644002 N-5506508	1015

Potential Effects:

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

Specific Mitigation (ID# 28):

- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites
- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Water Crossing

*Features represented as points

ESS ID	ESS Name	Location
V78G-Aqua-106	Seine River Diversion	E-644000 - N-5506564

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 (ID# 64):

- 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.

Version: 1.00





Metres 1:10,000 Land Base

■ Transmission Line Highway Major Road

Local Road → Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion *Tower locations subject to final design

Project Infrastructure

Tower Location * Angle Tower Location V78G (Accepted)

Y36V (Accepted) - G79L (Accepted) Right of Way

Sensitive Sites Linear Features Area Features

-- New Trail

Points of Access

ESS Features

 Existing Gravel Road - Existing Gravel/Dirt Road - Field Access

Rec Use Trail Wildlife Birds and Habitat

ESS Group: Birds and Habitat

*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
V78G-Wild-100	Reservoir adjacent to RoW	L1 to L2	E-643544 N-5507070	E-644002 N-5506508	1015

Potential Effects:

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

Specific Mitigation (ID# 28):

- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
 Install bird diverters or other measures at high priority sites
 Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-106	Snowmobile Trail PT21	C17	E-644002 N-5506491

Potential Effects:

Potential interference with snowmobilers; safety issues

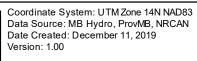
Specific Mitigation (ID# 103):

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

Version: 1.00







Land Base

■ Transmission Line Highway Major Road

Local Road → Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure Tower Location

*Tower locations subject to final design

Points of Access Existing Gravel Road - Existing Gravel/Dirt Road * Angle Tower Location - Field Access V78G (Accepted)

Y36V (Accepted) - G79L (Accepted) Right of Way De Salaberry East Station

-- New Trail Sensitive Sites Linear Features Area Features

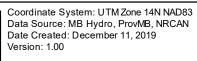
ESS Features

Rec Use Trail









Land Base

■ Transmission Line Highway Major Road

Local Road Railway (Operational) Railway (Discontinued) ☐ Parcel Fabric

Right of Way Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion *Tower locations subject to final design

Project Infrastructure

Tower Location

* Angle Tower Location

V78G (Accepted)

Y36V (Accepted)

- G79L (Accepted)

Points of Access Existing Gravel Road - Existing Gravel/Dirt Road - Field Access

-- New Trail Sensitive Sites Linear Features Area Features

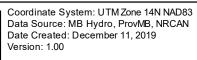
ESS Features

Rec Use Trail









Land Base ■ Transmission Line

Highway Major Road

Local Road Railway (Operational) Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure Tower Location

* Angle Tower Location

V78G (Accepted)

Y36V (Accepted)

- G79L (Accepted)

De Salaberry East Station

*Tower locations subject to final design

Right of Way

Points of Access

Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Sensitive Sites Linear Features Area Features

ESS Features

Heritage Archaeological Rec Use

ESS Group: Archaeological

*Features represented as points

ESS ID	ESS Name	Location
V78G-Hert-103	Potential Archaeological Site	E-645145 - N-5498449

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 301):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion Conduct site investigation with Archaeologist prior to construction
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to **Environmental Inspector**
- Implement additional mitigation from site investigation
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered
- Should heritage resources be discovered during a pre-construction survey an archaeologist may prescribe construction matting to be used to protect the area from disturbance

ESS Group: Intersection

*Features represented as lines

ESS ID	ESS Name	Site	Location
V78G-RecUse-107	Snowmobile Trail CT710	C18	E-645845 N-5498388

Potential Effects:

Potential interference with snowmobilers; safety issues

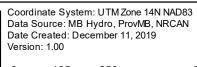
Specific Mitigation (ID# 103):

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

Version: 1.00







Land Base

■ Transmission Line Highway Major Road

Local Road Railway (Operational) Railway (Discontinued) ☐ Parcel Fabric

Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion *Tower locations subject to final design

Project Infrastructure Tower Location

Existing Gravel Road * Angle Tower Location - Field Access -- New Trail

V78G (Accepted) - Y36V (Accepted) - G79L (Accepted) Right of Way

Sensitive Sites Linear Features Area Features

ESS Features Points of Access

Heritage - Existing Gravel/Dirt Road Archaeological

 Water Crossing Rec Use Trail

ESS Group: Archaeological

*Features represented as points

ESS ID	ESS Name	Location
V78G-Hert-104	Potential Archaeological Site Relict Channel	E-647562 - N-5496393

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 301):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Conduct site investigation with Archaeologist prior to construction
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered
- Should heritage resources be discovered during a pre-construction survey an archaeologist may prescribe construction matting to be used to protect the area from disturbance

ESS Group: Water Crossing

*Features represented as points

ESS ID	ESS Name	Location
V78G-Aqua-107	Intermittent Stream	E-647546 - N-5496387

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 (ID# 64):

- 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.

Version: 1.00





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Land Base

■ Transmission Line Highway Major Road

Local Road → Railway (Operational) Railway (Discontinued) ☐ Parcel Fabric

Right of Way Rural Municipality De Salaberry East Station * Some road names have not been verified, use with discretion *Tower locations subject to final design

Project Infrastructure

V78G (Accepted)

Y36V (Accepted)

- G79L (Accepted)

Tower Location

* Angle Tower Location

Points of Access

Existing Gravel Road - Existing Gravel/Dirt Road - Field Access -- New Trail

Sensitive Sites Linear Features Area Features

ESS Features







0 125 250 50 Metres 1:10,000

Land Base → Transmission Li

Transmission LineHighwayMajor Road

── Local Road
 → Railway (Operational)
 ·-+ Railway (Discontinued)
 ☐ Parcel Fabric

Parcel Fabric
Rural Municipality
Some road names have not been verified, use with discretion

Project Infrastructure

↑ Tower Location

★ Angle Tower Location

V78G (Accepted)

Y36V (Accepted)
G79L (Accepted)
Right of Way
De Salaberry East Station

*Tower locations subject to final design

Points of Access Existing Gravel Road

Existing Gravel Road
 Existing Gravel/Dirt Road
 Field Access
 New Trail

Sensitive Sites
Point Features
Linear Features
Area Features

ESS Features







1:10,000

Land Base

■ Transmission Line Highway Major Road

Local Road - Railway (Operational) - ⊢ Railway (Discontinued)

☐ Parcel Fabric Rural Municipality * Some road names have not been verified, use with discretion

Project Infrastructure Tower Location

* Angle Tower Location

V78G (Accepted) Y36V (Accepted) = G79L (Accepted)

Right of Way De Salaberry East Station *Tower locations subject to final design

ESS Features

Points of Access
Existing Gravel Road - Existing Gravel/Dirt Road

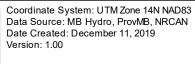
- Field Access -- New Trail Sensitive Sites

Linear Features Area Features









0 125 250 50

Metres

1:10,000

3 Land → T

Local Road
 — Railway (Operational)
 — Railway (Discontinued
 ☐ Parcel Fabric

Project Infrastructure Tower Location

* Angle Tower Location

V78G (Accepted)

- Y36V (Accepted)

- G79L (Accepted)

De Salaberry East Station

*Tower locations subject to final design

Right of Way

Points of Access
Existing Gravel Road
Existing Gravel/Dirt Road
Field Access
New Trail

Sensitive Sites
Point Features
Linear Features

Area Features

ESS Features

Water Crossing

ESS Group: Water Crossing

*Features represented as points

ESS ID	ESS Name	Location
V78G-Aqua-108	Tourond Creek	E-647795 - N-5488585

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 (ID# 64):

- 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.

Version: 1.00

Map Number: 17

Available in accessible formats upon request.