



RUSAGONIS SWITCHING STATION

Public Notification Package

March 12, 2025

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PUBLIC NOTIFICATION PACKAGE

Introduction

NB Power is planning to build a new switching station, including a self-supporting telecommunications tower near Megan Court, west of Wilsey Road, which will be known as the Rusagonis Switching Station Project, to address reliability concerns for its transmission line which provides service to customers in Fredericton South, New Maryland and Oromocto. This project aligns with NB Power's strategic plan to modernize the grid and mitigate the impacts of climate change.

This Public Notification Package contains details of the tower, its location and important information for you about the Rusagonis Switching Station Project. It is important to note that you are receiving this information package as you are located in close proximity to the tower, or it will be constructed in or near your community.

Should you have any questions or comments, please make contact with the following within 30 days of the publication date or no later than April 15, 2025.

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Capital Region Service Commission 11
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Ashley Brown, Development Officer
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INNOVATION, SCIENCE AND ECONOMIC DEVELOPMENT CANADA

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Tower specifications and location

NB Power is proposing to erect a new 33.48 metre self-supporting steel tower similar to photo 1 below on an approximate 3-acre portion of **PID 60188646**, located near Megan Court west of Wilsey Road, Rusagonis, NB at the following coordinates **45.855563, -66.624155**, or **45° 51' 20.3" N, 66° 37' 26.8" W**.



Photo 1: 30.48 metre, self-supporting steel tower with two microwaves and control building

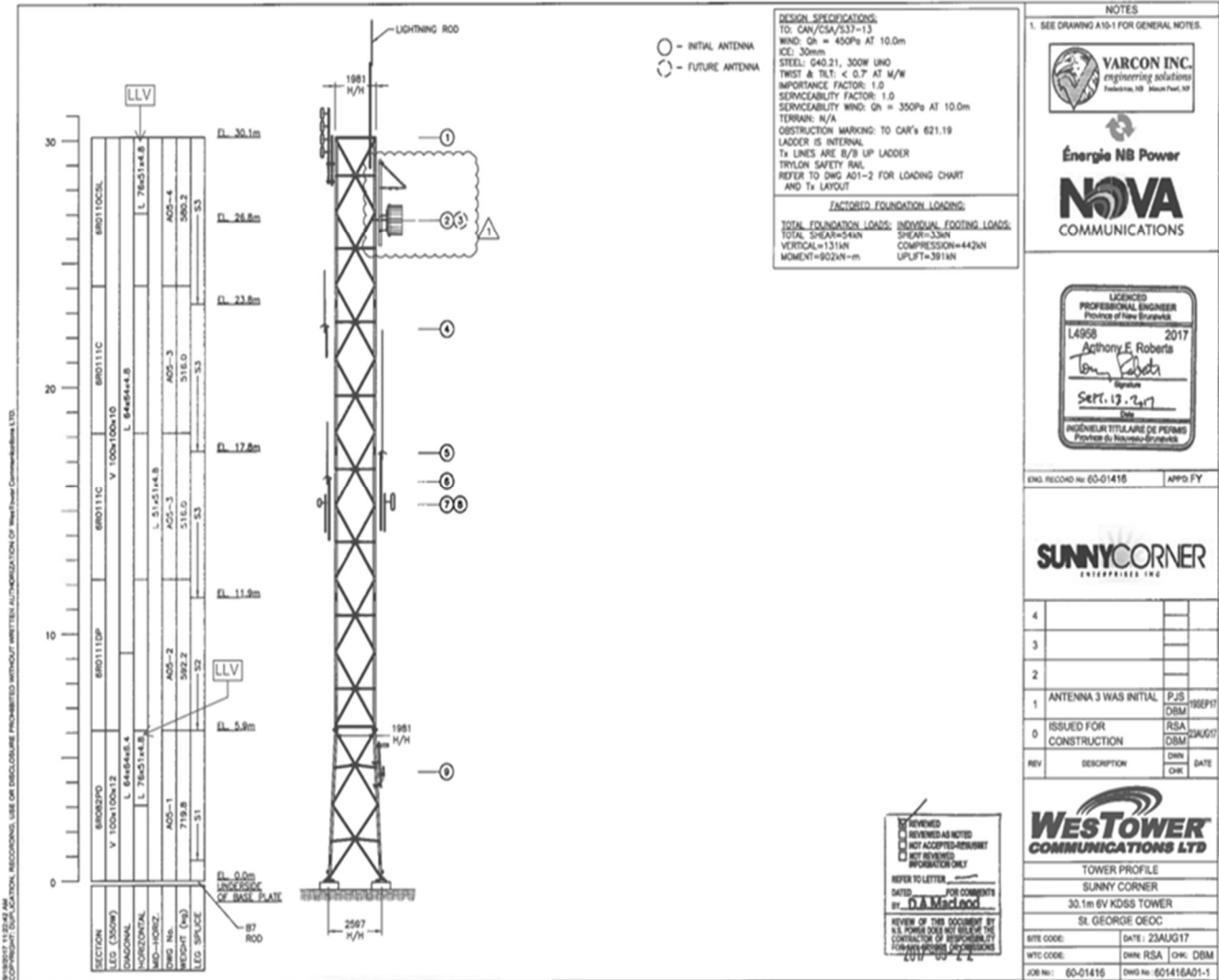


Photo 2: Base of the tower.



The base of the tower is approximately 4.3 metres by 4.3 metres by 4.3 metres. The Tower will have two microwaves installed at an approximate height of 30 metres. For more details, please see Appendix A Microwave Information. A lightning rod of 1.5 to 3 metres tall will be installed at the top of the proposed tower. There will be a control building at the base of the tower and within the fenced premises as shown in the photo 2.

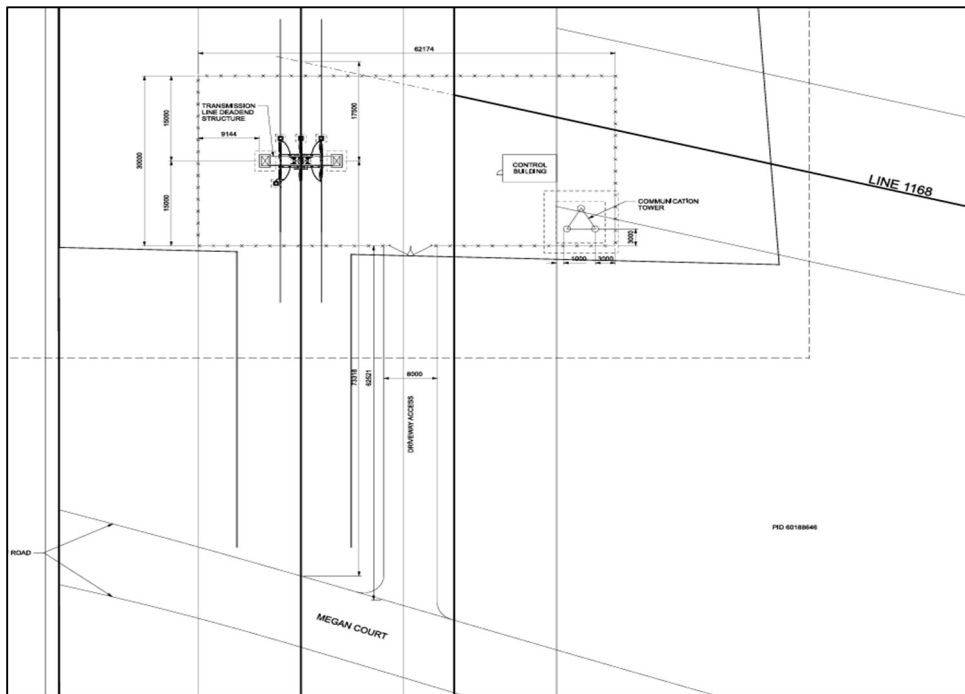
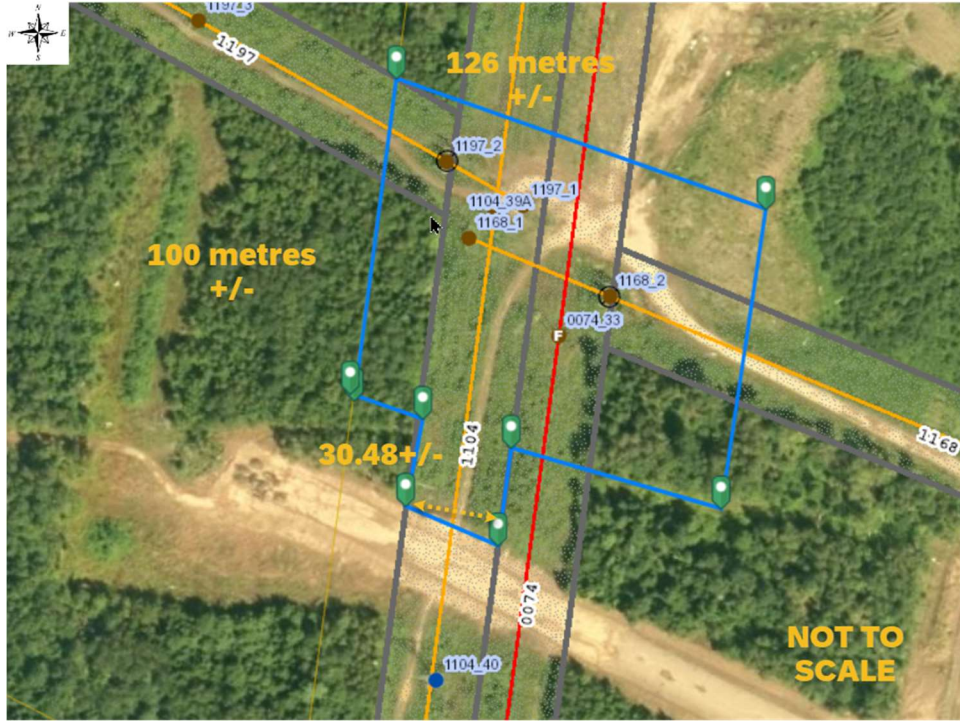
Tower Profile Drawing



Tower location

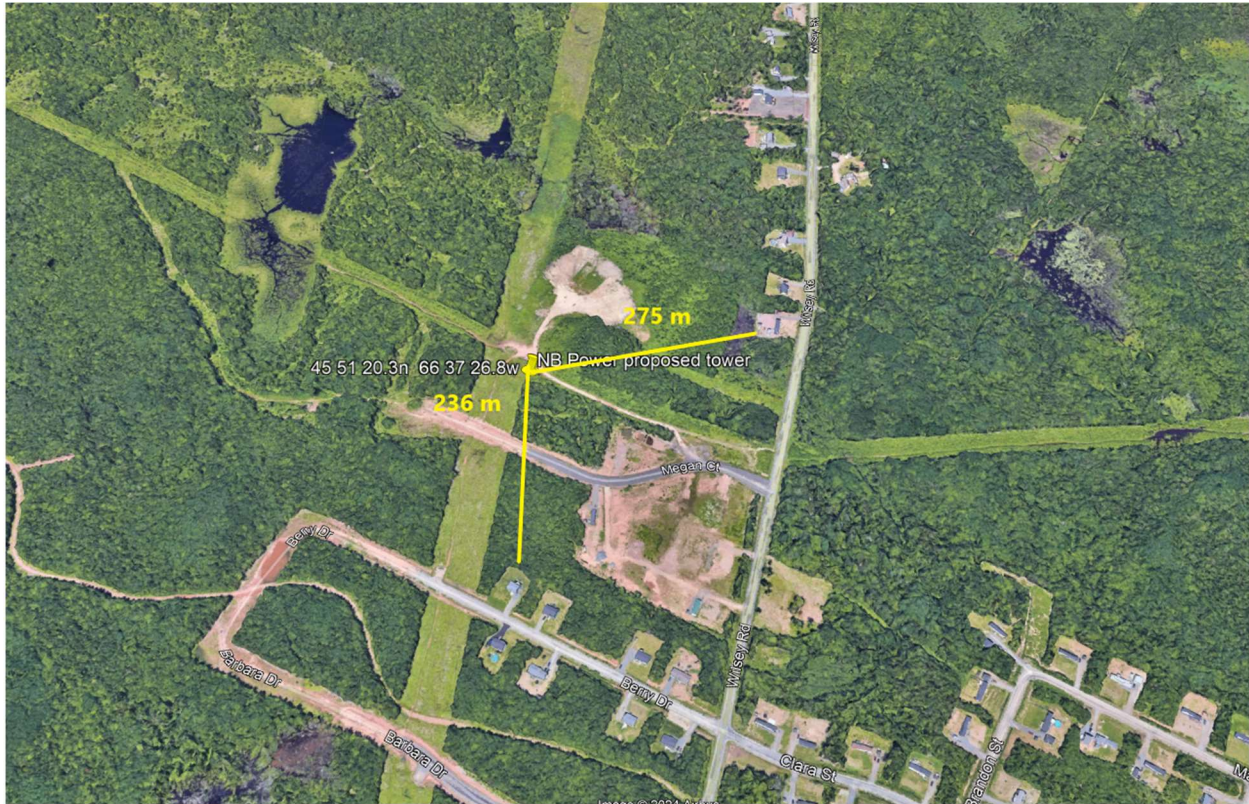
NB Power chose this location based on reliability concerns for transmission line 1104 and the proximity to existing infrastructure. The goal of this installation is to increase reliability for Fredericton South customers and the placement of a breaker at this location will provide a means of isolating faults and limit impact to Fredericton South, New Maryland, and Oromocto customers. The radio tower will provide remote communication and control for the proposed equipment.

Proposed Site location and compound layout



Proximity of homes to the proposed project

The nearest home is located 236 metres from the proposed tower location. There are no schools, hospitals or marked daycares within 100.44 metres (three times the tower radius).



Limit access to the public

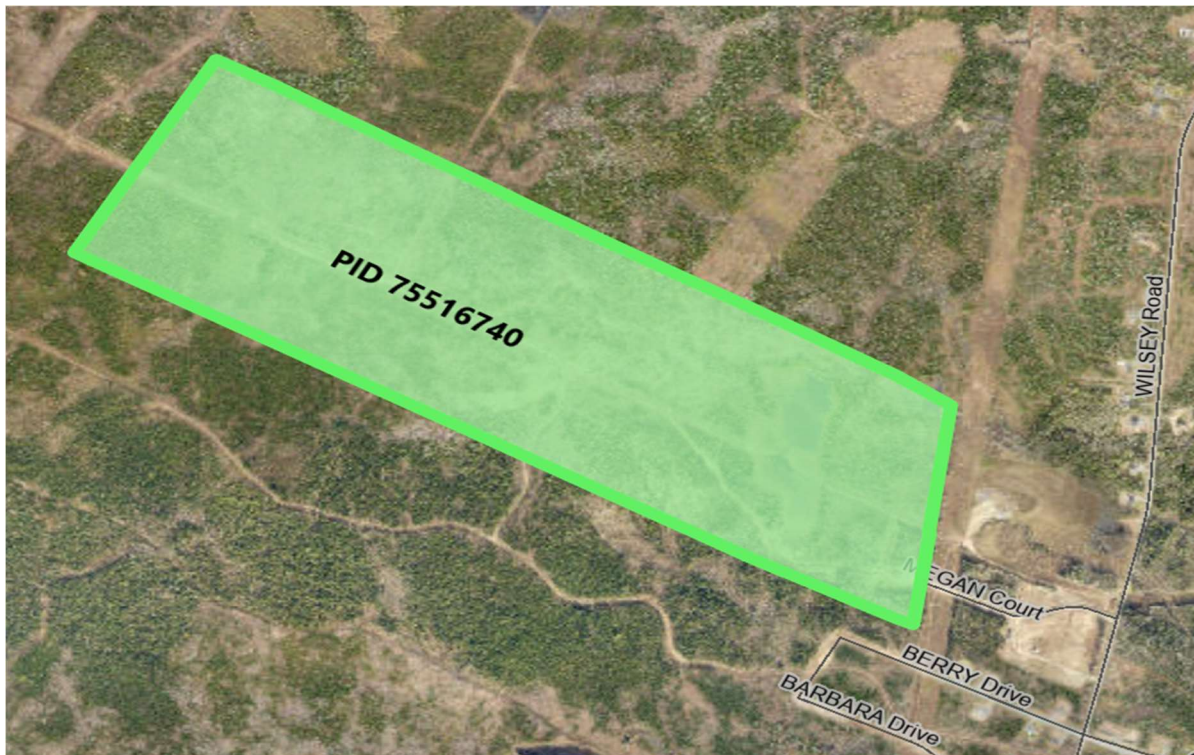
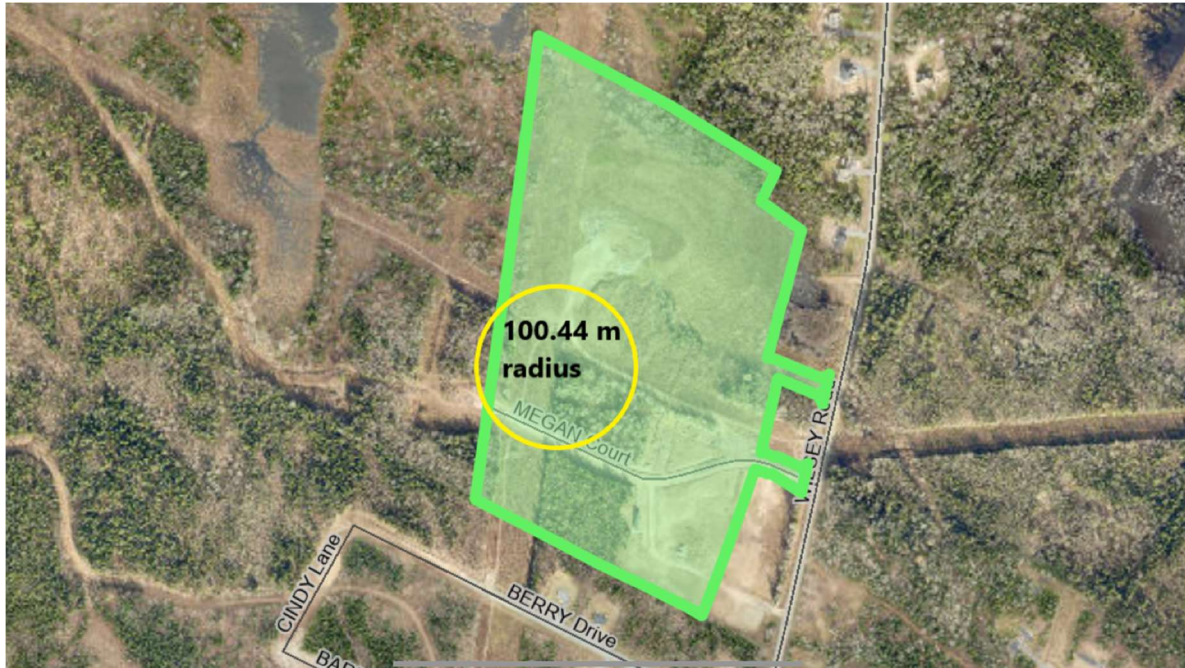
The telecommunications site is setback over 300 metres from Wilsey Road. Access to the site shall be from the existing access off Wilsey Road onto Megan Court over PID 60188646. The access is not currently gated; however, NB Power may install a gate, if required. The tower, other electrical apparatus, and the equipment control building shall be completely fenced to restrict unauthorized access.

Aeronautical obstruction markings

No aeronautical markings are required for this installation. Aeronautical obstruction marking requirements may change over time and NB Power is required to adhere to any change in requirements.

Required Notification Radius

Using a radius of three times the proposed tower height (33.48 metres), notification to all property owners within a 100.44-metre radius is required. There is only one property owner located within this radius, PID 75516740 as noted on the following Notification Radius Mapping.



Co-location option

NB Power is required to first look at co-location where possible, the nearest towers are Eastlink, 78-metre tower, 1.8 kms to the northeast 45.8694, -66.61034, and Rogers with a 40-metre tower at 4.22 kms to the east 45.8535, -66.5696. Both locations are too far from NB Power's targeted search area to allow for co-location or achieve the desired results.



In summary, there are no existing structures on which to co-locate. Should NB Power receive a co-location request by a licensed carrier to install its antennas on the proposed tower, the request will be evaluated in its entirety.

Additional Information

Applicable environmental permitting requirements

NB Power attests that the proposed project will comply with all applicable federal and provincial environmental legislation. The proposed project footprint is greater than 30 metres from the nearest body of water, watercourse or wetland. In addition, it is anticipated that there will be no direct negative impact on migratory birds or species at risk as a result of the erection of the new proposed tower.

Applicable local land-use requirements

This project is located within the Capital Region Service Commission 11 which has its own antenna system tower siting protocol. NB Power will be following this protocol, including its public consultation process, which follows Innovation, Science and Economic Development Canada (ISED) [CPC-2-0-03 — Radiocommunication and Broadcasting Antenna Systems](#).

Innovation, Science and Economic Development Canada

General information relating to antenna systems in Canada is available on ISDE's Spectrum Management and telecommunications website link <https://ised-isde.canada.ca/site/spectrum-management-telecommunications/en/learn-more/key-documents/procedures/client-procedures-circulars-cpc/cpc-2-0-03-radiocommunication-and-broadcasting-antenna-systems>

Safety Code 6 Declaration of Radio Frequency Exposure Compliance Attestation

NB Power will comply with Health Canada's Safety Code 6. This installation will have two microwave antennas installed 30 metres above ground within a locked fenced compound. The site will be designed in a way that the public cannot come close to the antennas. At all times and anywhere the public can have access, emissions from the installation are well below the established limits. Please see attached Appendix B Civil Attestation for Safety Code 6.

Civil Attestation

NB Power is proposing to build a new tower site located at PID 60188646 and attests that all installations will be constructed with the structural standards contained in the latest version of CSA S37 (Antennas, Towers, and Antenna-Supporting Structures) as well as all applicable engineering and construction standards, including the National Building Code of Canada. Please see attached Appendix C Civil Attestation.

Conclusion

This proposed tower will provide an increase in reliability for the transmission grid serving customers in Fredericton South, new Maryland and Oromocto. The rationale, design, and location for the new tower is optimal due to its proximity to existing infrastructure and will have minimal impact on the community or neighbouring properties.

For more information on this project, contact us at RusagonisProject@nbpower.com or visit our website www.nbpower.com/rusagonisproject

Appendix A – Microwave Information

VHLP6-7W-6WH/D



1.8 m | 6 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 7.125–8.500 GHz, CPR112G, white antenna, flexible woven polymer gray radome without flash, standard pack—one-piece reflector

Product Classification

Product Type	Microwave antenna
Product Brand	ValuLine®

General Specifications

Antenna Type	VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Polarization	Single
Antenna Input	CPR112G
Antenna Color	White
Reflector Construction	One-piece reflector
Radome Color	Gray
Radome Material	Polymer
Flash Included	No
Side Struts, Included	1

Side Struts, Optional	1 inboard
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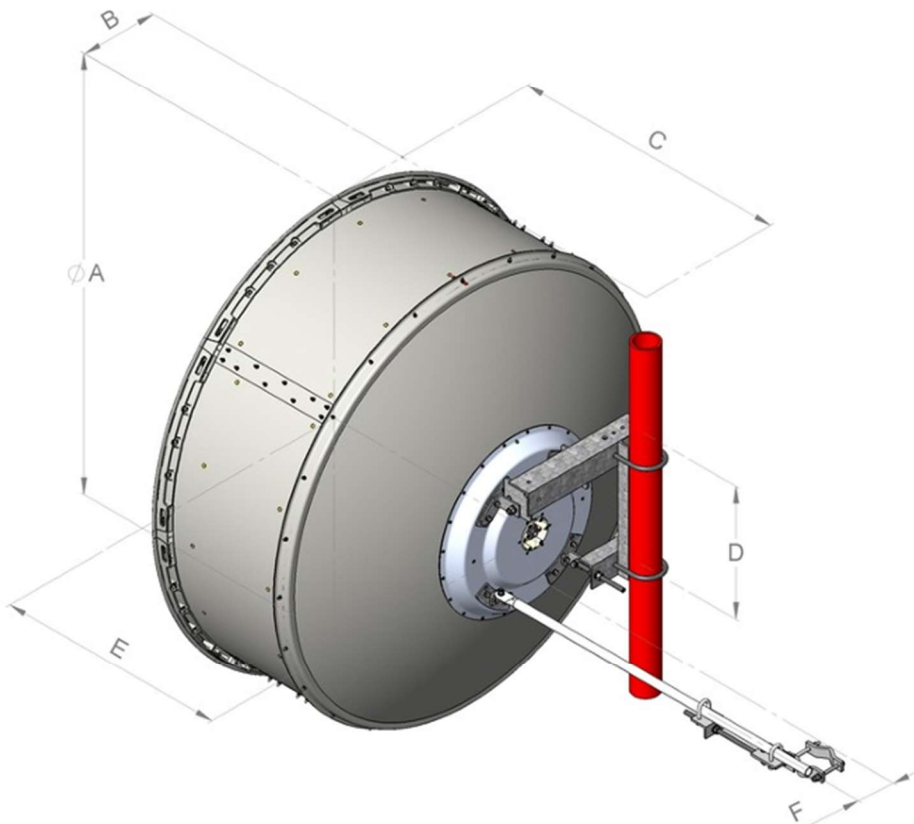
Dimensions

Diameter, nominal	1.8 m 6 ft
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Appendix A – Microwave Information, Continued

Electrical Specifications

Operating Frequency Band	7.125 – 8.500 GHz
Gain, Low Band	40.1 dBi
Gain, Mid Band	40.8 dBi
Gain, Top Band	41.5 dBi
Boresite Cross Polarization Discrimination (XPD)	32 dB
Front-to-Back Ratio	67 dB
Beamwidth, Horizontal	1.5 °



Appendix A – Microwave Information, Continued

Antenna size, ft (m)	Dimensions in inches (mm)					
	A	B	C	D	E	F
6 (1.8)	74.8 (1899)	13.4 (340)	47.5 (1206)	22.4 (570)	39.4 (1001)	6.9 (174)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA)	10670 N 2,398.712 lbf
Angle α for MT Max	-120 °
Side Force (FS)	5286 N 1,188.34 lbf
Twisting Moment (MT)	4752 N-m 42,058.742 in lb
Zcg without Ice	363 mm 14.291 in
Zcg with 1/2 in (12 mm) Radial Ice	543 mm 21.378 in
Weight with 1/2 in (12 mm) Radial Ice	234 kg 515.881 lb

Product Specifications

COMMSCOPE®



VHLP4-11W

1.2 m | 4 ft ValuLine® High Performance Low Profile Antenna, single-polarized,
10.125–11.700 GHz

General Specifications

Antenna Type	VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Diameter, nominal	1.2 m 4 ft
Polarization	Single

Appendix A – Microwave Information, Continued

Electrical Specifications

Beamwidth, Horizontal	1.5 °
Beamwidth, Vertical	1.5 °
Cross Polarization Discrimination (XPD)	30 dB
Electrical Compliance	Brazil Anatel Class 2 ETSI 302 217 Class 3 US FCC Part 101A @ 10.55–10.7 GHz US FCC Part 101A @ 10.7–11.7 GHz US FCC Part 101B @ 10.125–11.7 GHz
Front-to-Back Ratio	66 dB
Gain, Low Band	40.2 dBi
Gain, Mid Band	40.7 dBi
Gain, Top Band	41.0 dBi
Operating Frequency Band	10.125 – 11.700 GHz
Radiation Pattern Envelope Reference (RPE)	7182 7183
Return Loss	17.7 dB
VSWR	1.30

Mechanical Specifications

Fine Azimuth Adjustment	±15°
Fine Elevation Adjustment	±15°
Mounting Pipe Diameter	115 mm 4.5 in
Net Weight	40 kg 88 lb
Side Struts, Included	1 inboard
Side Struts, Optional	1 inboard
Wind Velocity Operational	200 km/h 124 mph
Wind Velocity Survival Rating	250 km/h 155 mph

Wind Forces At Wind Velocity Survival Rating

Axial Force (FA)	5326 N 1197 lbf
Side Force (FS)	2638 N 593 lbf

Product Specifications

COMMSCOPE®

VHLP4-11W

Twisting Moment (MT)	2370 N•m
Weight with 1/2 in (12 mm) Radial Ice	75 kg 165 lb
Zcg with 1/2 in (12 mm) Radial Ice	310 mm 12 in
Zcg without Ice	210 mm 8 in



Appendix B – Safety Code 6 Declaration of Radio Frequency Exposure Compliance Attestation



Safety code 6 Declaration of RF Exposure Compliance Attestation:

Date: 2024-12-19

Project: Rusagonis Switching Station Site 30m Tower

General Site Information	
Site Name	Megan Court Tower Site
Municipality	Sunbury-York south
Latitude	45 51 20.30 N
Longitude	66 37 26.80 W
Tower Height	30m
Tower Type	Free standing
Number of antennas	2, 1.8m and 1.2m Parabolic

To whom it may concern, I attest that Health Canada's Safety Code 6 will be always complied with. To ensure compliance at the design stage, NB Power uses engineering best practices. These practices include preventing access in front of any of the antennas to the public. The nature of this installation will have two microwave antennas installed 30m above ground within a locked fenced compound. The site will be designed in a way that the public cannot come close to the antennas. At all times and anywhere the public can have access, emissions from the installation are well below the established limits.

Once the site is constructed, NB Power continuously monitors the power of the equipment remotely and will ensure Safety Code 6 compliance even if site modifications are made. Upon request by Innovation, Scientific and Economic Development (ISED) or other public authorities, NB Power can engage a third-party entity to perform live measurements to demonstrate compliance with Safety Code 6.

Should you have any questions or wish to receive additional information, please do not hesitate to contact us at your convenience.

Signature: 

RF Engineer Name: Trevor Feltmate, P.Eng.

Date: December 19th, 2024

Company: New Brunswick Power

Appendix C – Civil Attestation



Civil Attestation:

Date: 2024-12-19

Project: Rusagonis Switching Station Site 30m Tower

General Site Information	
Site Name	Megan Court Tower Site
Municipality	Sunbury-York south
Latitude	45 51 20.30 N
Longitude	66 37 26.80 W
Tower Height	30m
Tower Type	Free standing
Number of antennas	2, 1.8m and 1.2m Parabolic

To whom it may concern, NB Power, is proposing to build a new tower, site located at PID 60188646. NB Power attests that all its installations will be constructed with the structural standards contained in CSA S37-18 as well as all applicable engineering and construction standards, including the National Building Code of Canada. Furthermore, a final inspection will be conducted upon completion of the proposed site to confirm adherence to all of the above-mentioned standards.

Should you have any questions or wish to receive additional information, please do not hesitate to contact us at your convenience.

Signature: Troy Stafford

Civil Engineer Name: Troy Stafford, P.Eng.

Date: December 19th, 2024

Company: New Brunswick Power

RUSAGONISH SWITCHING STATION

Public Notification Package



Énergie NB Power

the power of possibility
débordant d'énergie