

# Exhibit 27.1 - Copy of Existing Antenna Structure Registration



## Registration Detail

Reg Number	1060954	Status	Constructed
File Number	A0319899	Constructed	01/01/1981
EMI	No	Dismantled	
NEPA	No		

## Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

### Location (in NAD83 Coordinates)

Lat/Long	45-49-15.0 N 088-02-30.0 W	Address	105 EAST KENT STREET
City, State	IRON MOUNTAIN , MI		
Zip	49801	County	DICKINSON
Center of AM Array		Position of Tower in Array	

### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
477.0	59.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
536.4	59.4

### Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

### FAA Notification

FAA Study	CE-OE-65-807	FAA Issue Date	02/07/1974
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### Owner & Contact Information

FRN	0008743155	Owner Entity Type	
Assignor FRN	0008743155	Assignor ID	L00329430

### Owner

Northern Star Broadcasting, LLC  
 213 South Airport, West  
 Traverse City , MI 49689

P: (800)968-0981  
 F:  
 E:

### Contact

Tillotson , David  
 4606 Charleston Terrace, N.W.  
 Washington , DC 20007

P: (202)625-6241  
 F:  
 E: dtlaw@starpower.net

### Last Action Status

Status	Constructed	Received	04/07/2003
Purpose	Change Owner	Entered	04/07/2003
Mode	Interactive		

### Related Applications

04/07/2003	A0319899 - Change Owner (OC)
02/16/1999	A0071420 - New (NE)

### Comments

#### Comments

None

### History

#### Date

04/08/2003

04/08/2003

04/07/2003

#### Event

Registration Printed

Change of Ownership Letter Sent

Change of Ownership Received

### Automated Letters

04/08/2003 Ownership Change, Reference 279617

04/08/2003 Authorization, Reference 279673

## Exhibit 27.2

### Vertical Plan of Antenna System

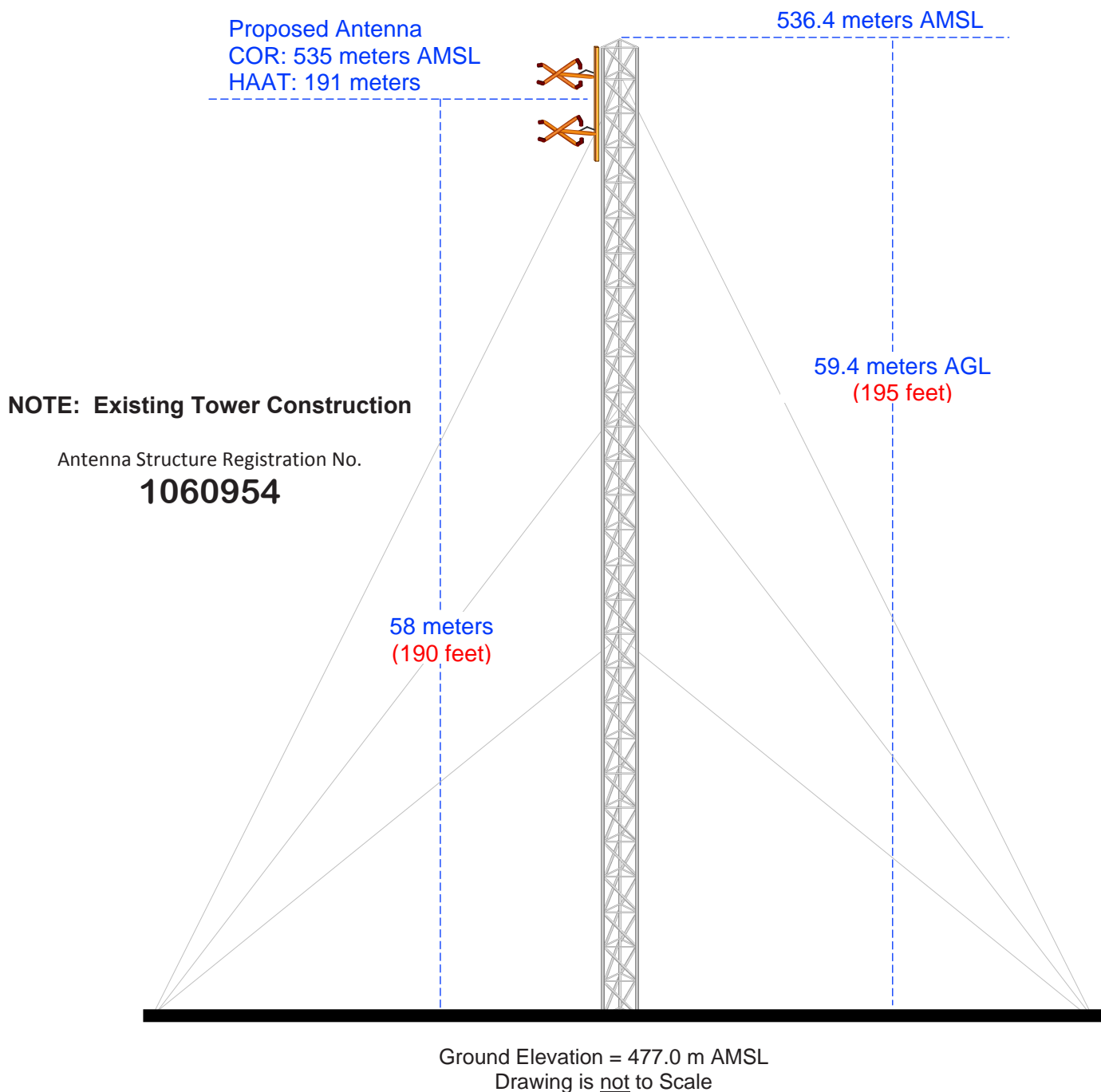
The site is located at 105 East Kent Street,  
the city of Iron Mountain, Dickinson County, Michigan.

#### Site Location (NAD 27)

NL: 45° 49' 15"

WL: 88° 02' 30"

(45-49-15.0NL; 88-02-30.0WL NAD1983)



**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## EXHIBIT 27.3

### PROPOSED FM OPERATING SPECIFICATIONS

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**Applicant:** Sovereign Communications, LLC

**Call:** WZNL(FM)

**City of License:** Norway, MI

**Frequency:** 94.3 MHz    **Channel:** 232C3    **ERP:** 2.55 kW    **HAAT:** 191 M

**Transmitter Location:** The site is located 105 East Kent Street.

**City:** Iron Mountain

**County:** Dickinson

**State:** Michigan

**Site Coordinates:** NL: 45° 49' 15"    /    WL: 88° 02' 30"

**Tower Registration Number:** 1060954

**Proposed Operation:** Class C3

**Effective Radiated Power:** 2.55 kW (H)                      2.55 kW (V)

**Height of Antenna Radiation Center Above:**

	<u>Average Terrain</u>	<u>Mean Sea Level</u>	<u>Ground</u>
Horizontal	191 meters	535 meters	58 meters
Vertical	191 meters	535 meters	58 Meters

**Elevation of Tower Site :** 477.0 Meters AMSL

**Overall Height of Structure Above Ground :** 59.4 Meters AGL

**Overall Height of Structure Above Mean Sea Level:** 536.4 Meters AMSL

Terrain  
176 547 m

NED 03 SEC Terrain Database  
US Census 2010 PL Database

## Exhibit 27.4 Present vs. Proposed Service Contour Study

**WZNL.L**  
Norway, MI  
BLH19950605KA  
Facility ID: 74549  
Latitude: 45-49-15 N  
Longitude: 088-02-25 W  
ERP: 2.40 kW  
Channel: 232C3  
Frequency: 94.3 MHz  
AMSL Height: 543.0 m  
Horiz. Pattern: Omni

**70 dBu Contour**  
Total Population: 28,346  
Total Area: 1,053 sq. km

**60 dBu Contour**  
Total Population: 35,000  
Total Area: 3,097 sq. km

**WZNL.P**  
Norway, MI  
Proposed Operation  
Facility ID: 74549  
Latitude: 45-49-15 N  
Longitude: 088-02-30 W  
ERP: 2.55 kW  
Channel: 232C3  
Frequency: 94.3 MHz  
AMSL Height: 535.0 m

**70 dBu Contour**  
Total Population: 28,282  
Total Area: 1,041 sq. km

**60 dBu Contour**  
Total Population: 34,965  
Total Area: 3,059 sq. km



Scale 1:375,000  
0 5 10 15 km

