

**Registration 1003070** [Map Registration](#)**Exhibit 27.1 Copy of Existing  
Antenna Structure Registration****Registration Detail**

Reg Number	1003070	Status	Granted
File Number	A1054865	Constructed	03/01/1954
EMI	No	Dismantled	
NEPA	No		

**Antenna Structure**

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

**Location** (in NAD83 Coordinates)

Lat/Long	47-06-04.6 N 088-35-29.3 W	Address	1.8 MI SW OF HOUGHTON BUSINESS DISTRICT .2 MI S OF HWY M-26
City, State	PORTAGE TOWNSHIP , MI		
Zip	49931	County	HOUGHTON
Center of AM Array		Position of Tower in Array	

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
289.6	71.9
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
361.5	71.0

**Painting and Lighting Specifications**

FCC Paragraphs 1, 3, 11, 21

**FAA Notification**

FAA Study	2016-AGL-11385-OE	FAA Issue Date	09/12/2016
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**Owner & Contact Information**

FRN	0015161508	Owner Entity Type	Corporation
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**Owner**

J & J Broadcasting, Inc.  
Attention To: Mr. Jerry Hackman  
63120 Phantom Lake Road  
Iron River , WI 54847

P: (715)372-5151  
F: (715)372-6454  
E: jehackman@hotmail.com

**Contact**

Hackman , Jerry J  
Attention To: Mr. Jerry Hackman  
63120 Phantom Lake Road  
Iron River , WI 54847

P: (715)372-5151  
F: (715)372-6454  
E: jehackman@hotmail.com

□

**Last Action Status**

Status	Granted	Received	12/05/2016
Purpose	Modification	Entered	12/05/2016
Mode	Interactive		

**Related Applications**

12/05/2016 A1054865 - Modification (MD)  
02/29/2016 A0999801 - Change Owner (OC)  
09/27/1996 A0003476 - New (NE)

▣

**Comments****Comments**

11/01/1996 ADDED GROUND ELEVATION, ADDED STRUCTURE TYPE AND CLEARED STRUCTURE  
PRESCRIBING APPROPRIATE FCC PARAGRAPHS BASED ON NOS RECORD 23-0258.

▣

**History****Date****Event**

12/10/2016	Registration Printed
12/09/2016	Modification Received
03/01/2016	Registration Printed

All History (6)

▣

**Automated Letters**

12/10/2016	Authorization, Reference
03/01/2016	Authorization, Reference
03/01/2016	Ownership Change, Reference 902395

▣

**CLOSE WINDOW**

## Exhibit 27.2a - USGS Aerial Photograph of Existing Site

**Tower Site:**      **Latitude**   **Longitude**

NAD 27 datum values: 47 06 4.86135 88 35 28.85420

NAD 83 datum values: 47 06 4.60000 88 35 29.30000

▲ 950 ft 290 m



The National Map



## Exhibit 27.2b - USGS Topographic Map of Existing Site

**Tower Site:**      **Latitude**   **Longitude**

NAD 27 datum values: 47 06 4.86135 88 35 28.85420

NAD 83 datum values: 47 06 4.60000 88 35 29.30000

▲ 950 ft/290 m



The National Map

# Exhibit 27.3

## Vertical Plan of Antenna System

THE SITE IS LOCATED 1.8 MI SW OF HOUGHTON BUSINESS DISTRICT .2 MI S OF HWY M-26  
PORTAGE TOWNSHIP; HOUGHTON COUNTY; THE STATE OF MICHIGAN.

Antenna Structure Registration No.

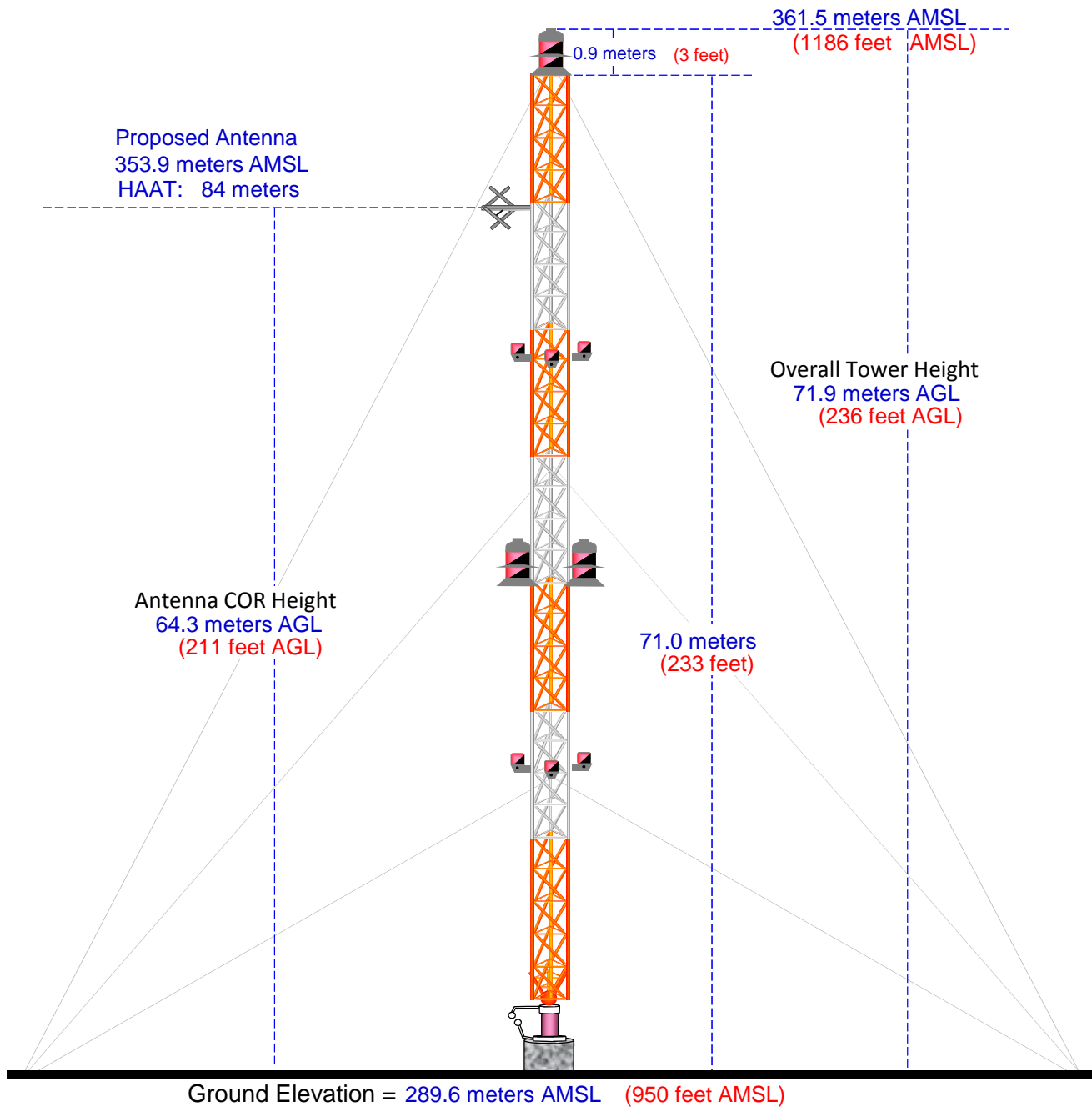
1003070

Latitude (D M S)

Longitude (D M S)

NAD 27 datum values: 47 06 4.86135 88 35 28.85420

NAD 83 datum values: 47 06 4.60000 88 35 29.30000



Drawing is not to Scale

**Munn-Reese**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## Exhibit 27.4

### Proposed FM Operating Specifications

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**Applicant:** J & J Broadcasting, Inc.

**Call:** WKMJ-FM

**City of License:** Hancock, MI

**Frequency:** 93.5 MHz    **Channel:** 228C3    **ERP:** 25.0 kW    **HAAT:** 84 M

**Transmitter Location:** The site is located 1.8 Miles SW of Houghton Business District .2 miles S of HWY M-26

**City:** Portage Township

**County:** Houghton

**State:** Michigan

**Site Coordinates:** NL: 47° 06' 05"    /    WL: 88° 35' 29"

**Tower Registration Number:** 1003070

**Proposed Operation:** Class C3

**Effective Radiated Power:** 25.0 kW (H)                      25.0 kW (V)

**Height of Antenna Radiation Center Above:**

	<u>Average Terrain</u>	<u>Mean Sea Level</u>	<u>Ground</u>
Horizontal	84 meters	354 meters	64 meters
Vertical	84 meters	354 meters	64 Meters

**Elevation of Tower Site :** 289.6 Meters AMSL

**Overall Height of Structure Above Ground :** 71.9 Meters AGL

**Overall Height of Structure Above Mean Sea Level:** 361.5 Meters AMSL

NED 03 SEC Terrain Database  
US Census 2010 PL Database

**WKMJ-FM.P**

Hancock, MI  
Proposed Operation  
BLH19950327KD  
Latitude: 47-06-05 N  
Longitude: 088-35-29 W  
ERP: 25.00 kW  
Channel: 228  
Frequency: 93.5 MHz  
AMSL Height: 353.9 m  
Elevation: 289.6 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

Contour: FCC F(50-50) 60.00 dBu  
Total Population: 40,533  
Coverage Area: 4,392.9 sq. km

Contour: FCC F(50-50) 70.00 dBu  
Total Population: 27,961  
Coverage Area: 1,552.2 sq. km

**WKMJ-FM**

Hancock, MI  
BLH19950327KD  
Latitude: 47-06-06 N  
Longitude: 088-34-11 W  
ERP: 13.50 kW  
Channel: 228  
Frequency: 93.5 MHz  
AMSL Height: 400.0 m  
Elevation: 324.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

Contour: FCC F(50-50) 60.00 dBu  
Total Population: 44,993  
Coverage Area: 4,740.2 sq. km

Contour: FCC F(50-50) 70.00 dBu  
Total Population: 28,518  
Coverage Area: 1,671.9 sq. km

**Exhibit 27.5**  
**Present vs. Proposed**  
**Service Contour Study**

