

**Exhibit 13.1  
Topographic Map of Site  
WVAC-FM - Adrian, MI**

**Transmitter Site**  
41° 53' 49" NL  
84° 03' 40" WL  
NAD 1927

**MUNN-REESE, INC.**  
Broadcast Engineering Consultants  
COLDWATER, MI 49036-0220  
517-278-7339

**The National Map**  
<http://nationalmap.gov/>

Geographic Coordinate System (WGS84)

41°54'11"N  
Map Extent  
41°53'27"N

84°4'17"W 84°3'3"W

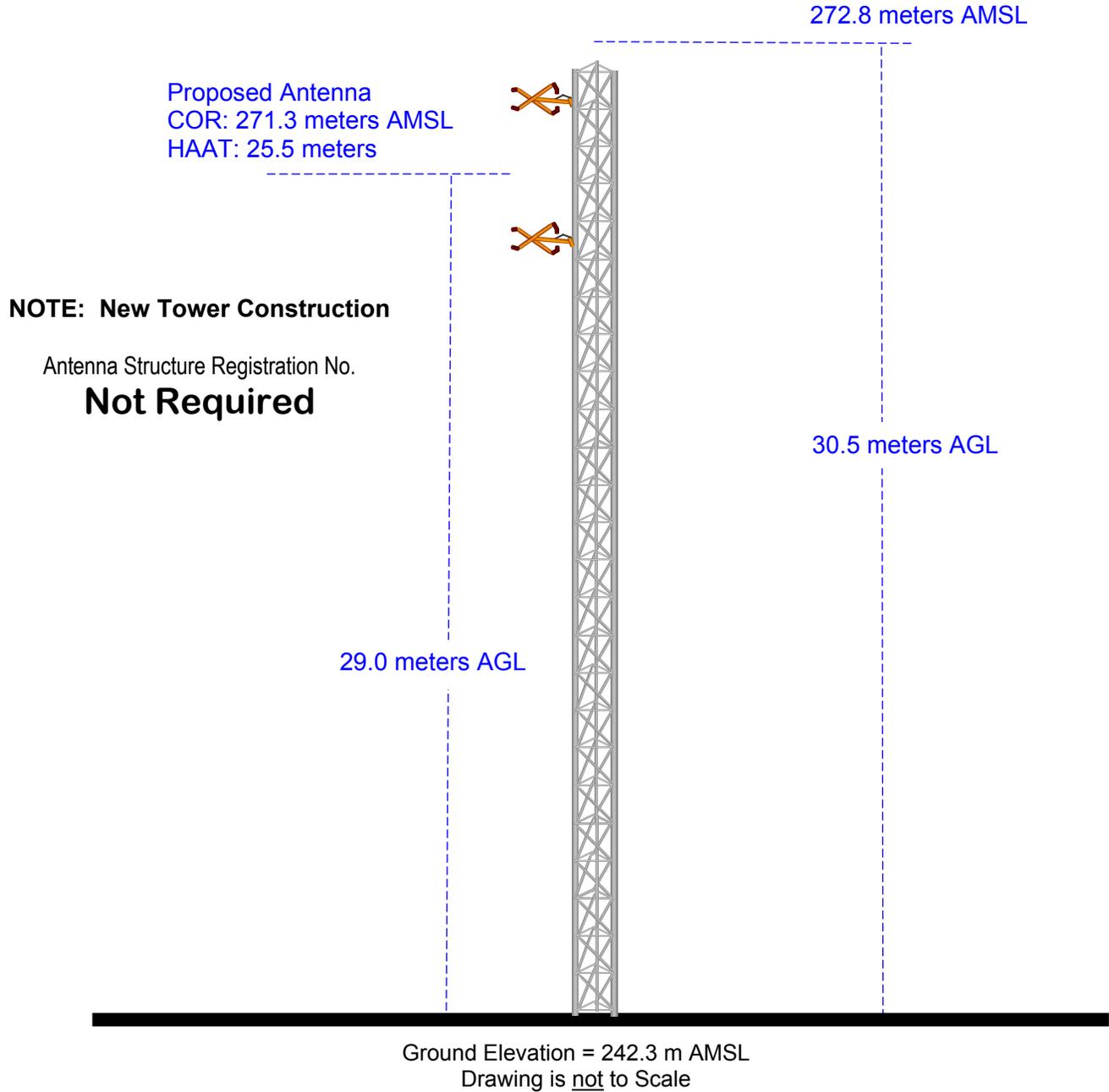
# EXHIBIT 13.2

## VERTICAL PLAN OF ANTENNA SYSTEM

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The site is located at Rush Hall on the Adrian College campus,  
110 South Madison, Adrian, Lenawee County, Michigan.

Site Location  
NL: 41° 53' 49"  
WL: 84° 03' 40"



# EXHIBIT 13.3

## PROPOSED FM OPERATING SPECIFICATIONS

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**Applicant:** Adrian College Board of Trustees

**Call:** WVAC-FM

**City of License:** Adrian, MI

**Frequency:** 107.9 MHz    **Channel:** 300D    **ERP:** 0.087 kW    **HAAT:** 25.5 m

**Transmitter Location:** Rush Hall on the Adrian College campus, 110 South Madison

**City:** Adrian

**County:** Lenawee

**State:** Michigan

**Site Coordinates:** NL 41° 53' 49" / WL 84° 03' 40"

**Tower Registration Number:** Not Required

**Proposed Operation:** Class D

**Effective Radiated Power:** 0.087 kW (H)    0.087 kW (V)

**Height of Antenna Radiation Center Above:**

	<u>Average Terrain</u>	<u>Mean Sea Level</u>	<u>Ground</u>
<b>Horizontal</b>	25.5 meters	271.3 meters	29.0 meters
<b>Vertical</b>	25.5 meters	271.3 meters	29.0 meters

**Elevation of Tower Site** : 242.3 meters AMSL

**Overall Height of Structure Above Ground** : 30.5 meters AGL

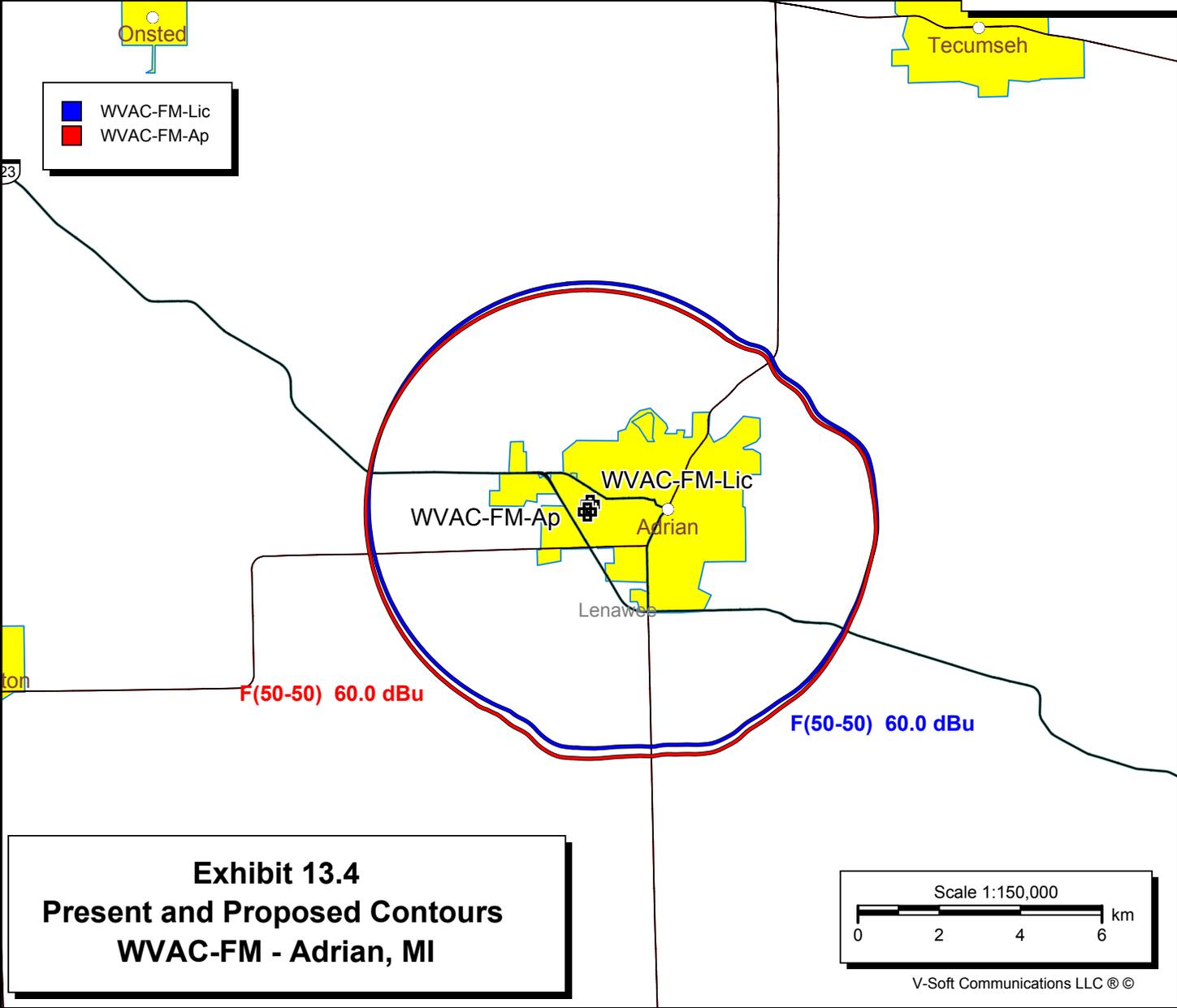
**Overall Height of Structure Above Mean Sea Level:** 272.8 meters AMSL

**WVAC-FM-Lic**  
 BLED20071203ABY  
 Adrian MI  
 Latitude: 41-53-55 N  
 Longitude: 084-03-37 W  
 ERP: 0.087 kW  
 HAAT: 24.7 m  
 Channel: 300  
 Frequency: 107.9 MHz  
 AMSL Height: 270.7 m  
 Elevation: 246.9 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None

2000 US Census Population:  
 33,555  
 Area: 109.24 km<sup>2</sup>

**WVAC-FM-Ap**  
 Proposed  
 Adrian MI  
 Latitude: 41-53-49 N  
 Longitude: 084-03-40 W  
 ERP: 0.087 kW  
 HAAT: 25.5 m  
 Channel: 300  
 Frequency: 107.9 MHz  
 AMSL Height: 271.3 m  
 Elevation: 242.3 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None

2000 US Census Population:  
 33,514  
 Area: 110.20 km<sup>2</sup>



**Exhibit 13.4**  
**Present and Proposed Contours**  
**WVAC-FM - Adrian, MI**

