

Exhibit 13.1

Description of Proposed Antenna System

DAYTIME ANTENNA SYSTEM

1. The daytime/nighttime antenna system consists of two (2) vertical, Insulated, uniform cross-section, guyed steel towers. The towers stand 82.4 meters above 0.8 meter base piers and insulators for overall heights of 83.2 meters AGL. Including aviation beacons (0.9 meters), both towers stand at 84.1 meters AGL. Given the ground elevation of 249.9 meters AMSL, the overall heights stand at 334.0 meters AMSL.
2. The daytime/nighttime antenna system operates on 910 kHz and is arranged in the form of a quarter wave spaced two tower east-west array. The Towers are spaced 82.4 meters (270.2 ft) or 90.0° apart on a line bearing 88.0°T.
3. The existing ground system consists of 120 buried copper radials of #10 AWG soft drawn copper wire, running 82.4 meters (270.2 ft) in length, about the base of each tower excepting where shortened to terminate at the four inch copper transverse straps running midway between the towers or at the property boundaries.
4. The proposed daytime antenna system theoretical parameters are as follows:

Call: WGTO.P

Freq: 910 kHz

Lat: 41-57-14 N

Theo RMS: 544.40 mV/m @ 1km @ 3.0 kW

CASSOPOLIS, MI, US

Lng: 086-00-59 W

Hours: DAY

Power: 3.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.600	114.0	90.0	88.0	90.0	0	0	0.0	0.0	0.0	0.0

Theoretical RMS: 544.40 mV/m@1km

Standard RMS: 571.91 mV/m@1km

Erss = 597.34 mV/m@1km

Q = 17.32 mV/m@1km

5. The proposed nighttime antenna system theoretical parameters are as follows:

Call: WGTO.P

Freq: 910 kHz

Lat: 41-57-14 N

Theo RMS: 50.68 mV/m @ 1km @ 0.026 kW

CASSOPOLIS, MI, US

Lng: 086-00-59 W

Hours: NIGHT

Power: 0.026 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.600	114.0	90.0	88.0	90.0	0	0	0.0	0.0	0.0	0.0

Theoretical RMS: 50.68 mV/m@1km

Standard RMS: 54.24 mV/m@1km

Erss = 55.61 mV/m@1km

Q = 10.00 mV/m@1km

6. The sampling system for the existing array will continue to conform to §73.68 of the Commission's Rules regarding approved sampling systems.

**Exhibit 13.2 - Copies of Existing
Antenna Structure Registration(s)****Registration Detail**

Reg Number	1204670	Status	Granted
File Number	A0099449	Constructed	
FAA Study	86-AGL-2097-OE1	EMI	No
FAA Issue Date	09/30/1986	NEPA	No

Antenna Structure

Structure Type 2TA1 - Antenna Tower Array - 1st N = # towers 2nd N = Position of this tower

Location (in NAD83 Coordinates)

Lat/Long	41-57-14.1 N 086-01-00.5 W	2.2 miles north of city, on the west side of Okeefe Road
City, State	Cassopolis , MI	
Center of AM Array	41-57-14.2 N 086-00-59.0 W	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
249.9	84.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
334.0	83.2

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

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Owner & Contact Information

FRN	0006140008	Licensee ID	L00161631
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Owner

Langford , Larry W
6036 S. Bishop Street
Chicago , IL 60636

P: (773)260-3815
E: wgto910am@aol.com

Contact

P:
E:

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Last Action Status

Status	Granted	Received	10/13/1999
Purpose	New	Entered	10/13/1999
Mode	Interactive		

Related Applications

10/13/1999 A0099449 - New (NE)

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Comments

**Exhibit 13.2 - Copies of Existing
Antenna Structure Registration(s)****Registration Detail**

Reg Number	1204671	Status	Granted
File Number	A0099451	Constructed	
FAA Study	86-AGL-2097-OE2	EMI	No
FAA Issue Date	09/30/1986	NEPA	No

Antenna Structure

Structure Type 2TA2 - Antenna Tower Array - 1st N = # towers 2nd N = Position of this tower

Location (in NAD83 Coordinates)

Lat/Long	41-57-14.3 N 086-00-57.5 W	2.2 miles north of city, on west side of Okeefe Road
City, State	Cassopolis , MI	
Center of AM Array	41-57-14.2 N 086-00-59.0 W	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
249.9	84.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
334.0	83.2

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

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Owner & Contact Information

FRN	0006140008	Licensee ID	L00161631
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Owner

Langford , Larry W
6036 S. Bishop Street
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P: (773)260-3815
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Contact

P:
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Last Action Status

Status	Granted	Received	10/13/1999
Purpose	New	Entered	10/13/1999
Mode	Interactive		

Related Applications

10/13/1999 A0099451 - New (NE)

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Comments

Exhibit 13.3

Vertical Plan of Antenna System

The site is located 2.2 miles north of the city
on the west side of Okeefe Road,
the city of Cassopolis, Cass County, Michigan.

Site Location (NAD 27)

NL: 41° 57' 14"

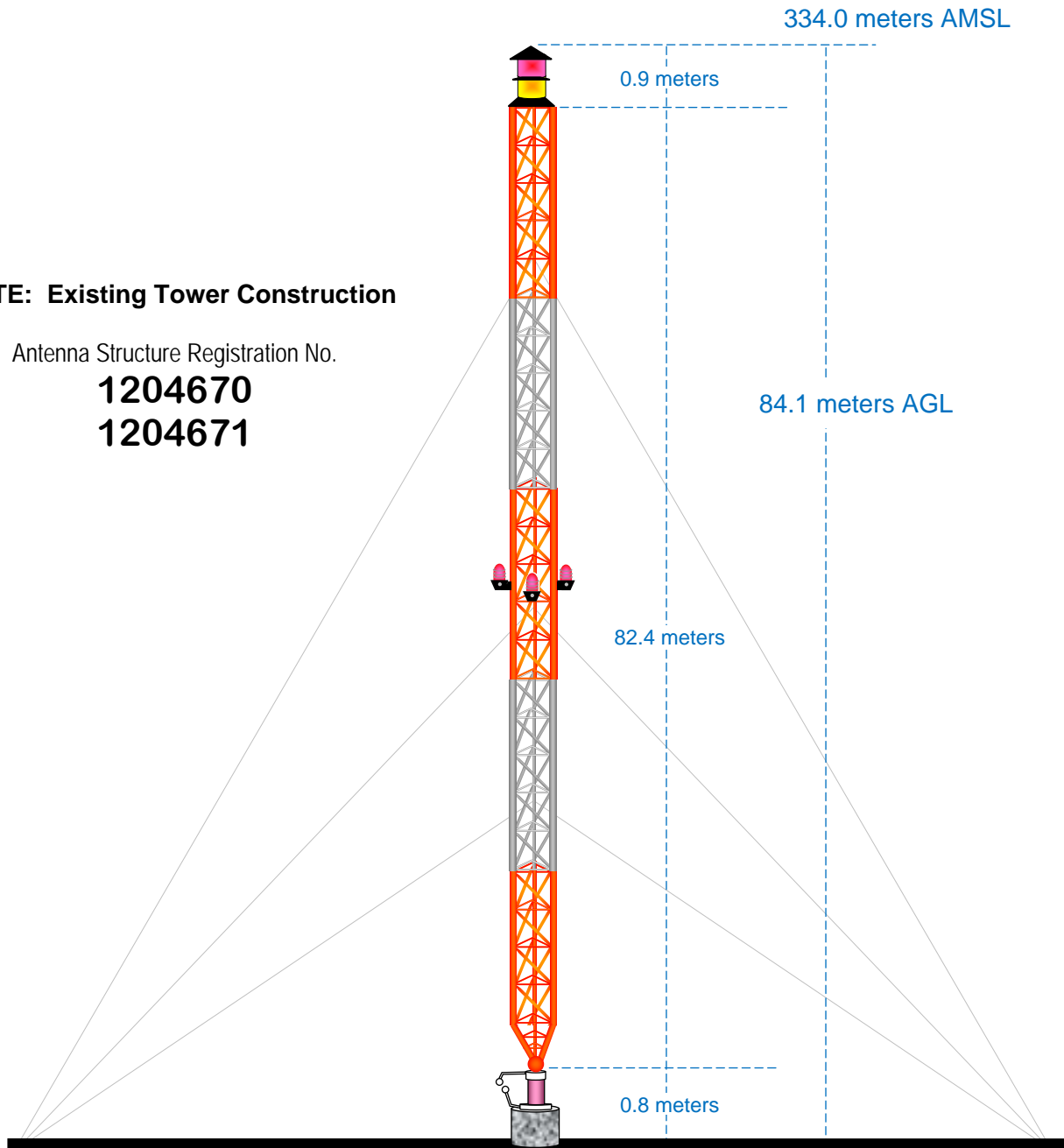
WL: 86° 00' 59"

NOTE: Existing Tower Construction

Antenna Structure Registration No.

1204670

1204671

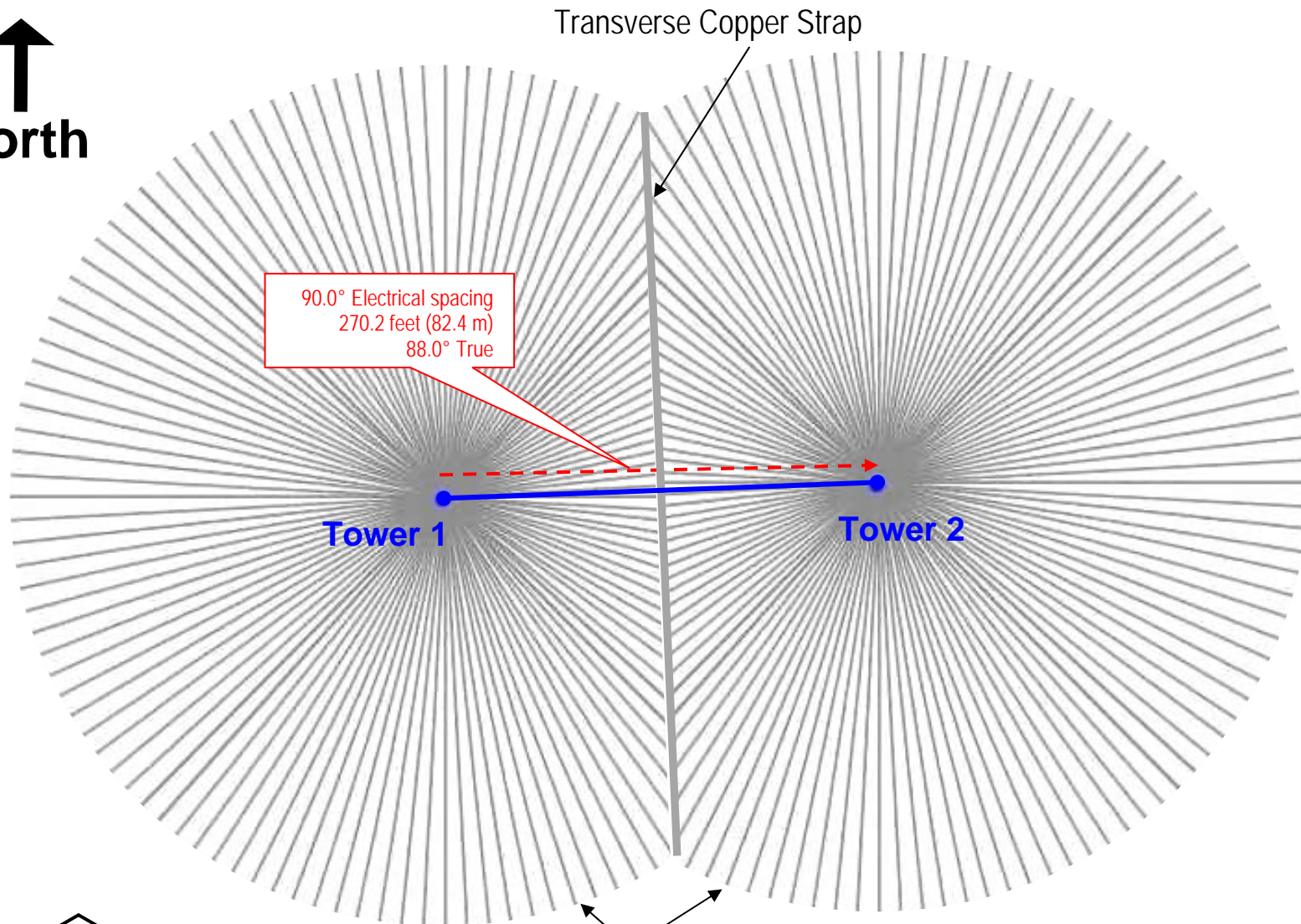


Ground Elevation = 249.9 m AMSL
Drawing is not to Scale

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Broadcast Engineering Consultants
Coldwater, MI 49036

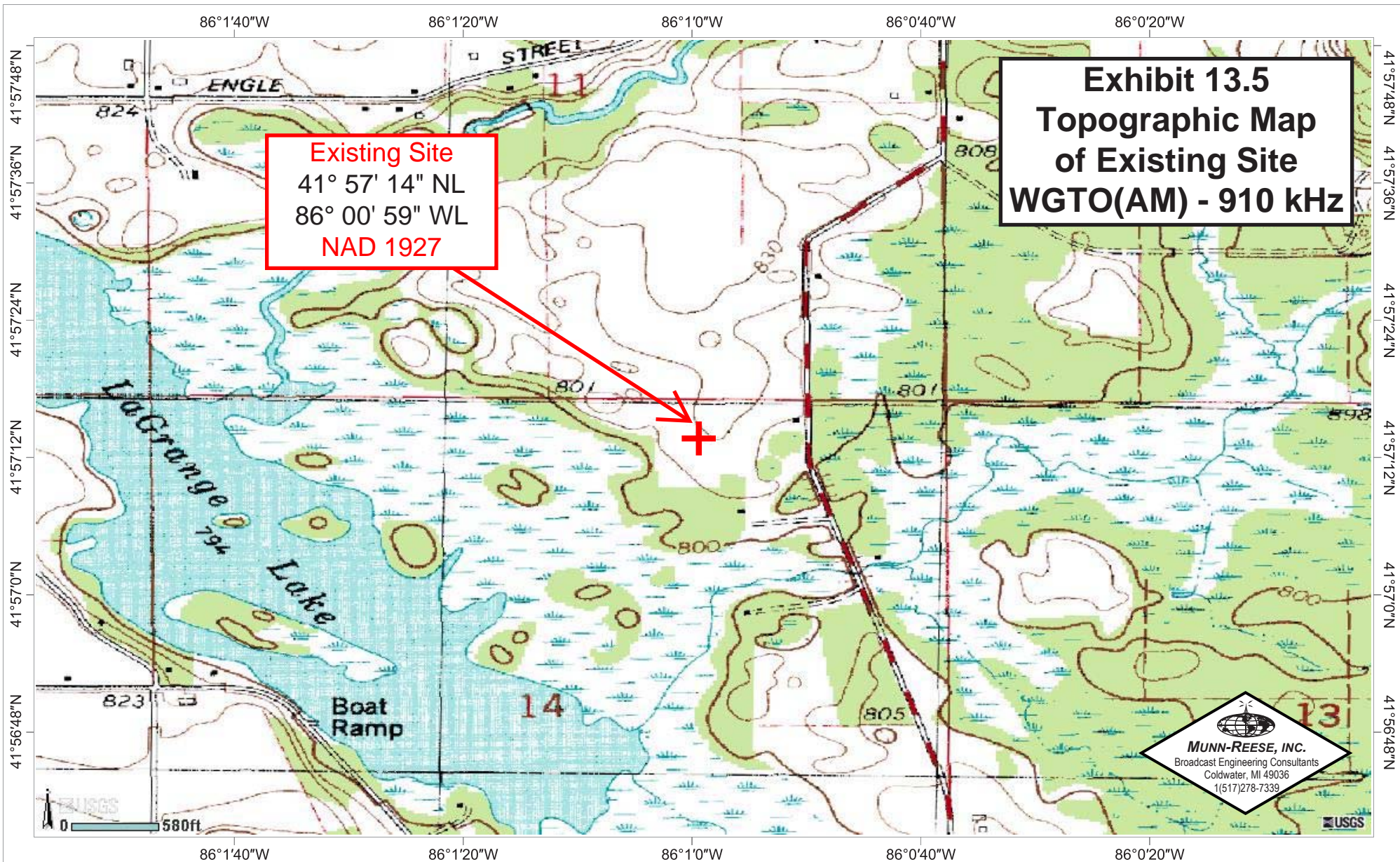
Exhibit 13.4 Horizontal Plat of Antenna Array Ground System

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North



Extent of
Ground System

The existing ground system consists of 120 buried copper radials, extending 82.4 meters (270.2 ft) in length, about the base of the towers except where shortened to terminate at property boundaries. The material used for the radials is #10 AWG, soft drawn copper wire or equivalent.



41°57'49"N
 86°1'57.31"W Map Extent 86°0'0.63"W
 41°56'39"N



Geographic Coordinate System (WGS84)

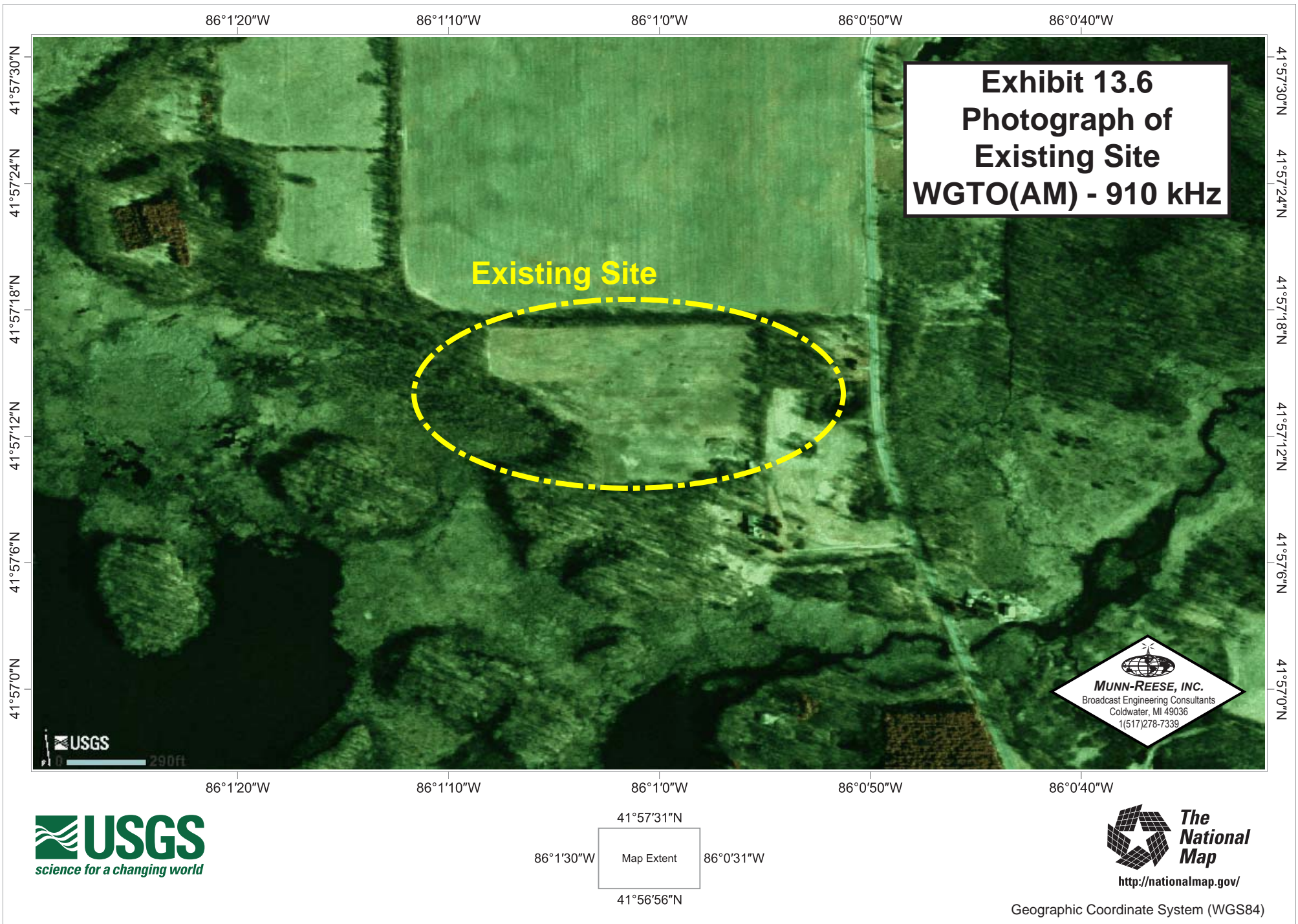


Exhibit 13.7a
Present Daytime
Service Contour Study

WGTO.Lmc
Licensed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 1 kW
RMS: 314.277 mV/m @1km
Towers: 2
Augs: 0

Population
5.0 mV/m Contour
Total Population: 22,907
Coverage Area: 549 sq. km

2.0 mV/m Contour
Total Population: 74,054
Coverage Area: 1,235 sq. km

0.5 mV/m Contour
Total Population: 478,298
Coverage Area: 4,244 sq. km

US Census PL Centroid Datum

WGTO.Lmc
Licensed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 1 kW
RMS: 314.277 mV/m @1km
Towers: 2
Augs: 0

Population
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US Census PL Centroid Datum

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Total Population: 74,054
Coverage Area: 1,235 sq. km

0.5 mV/m Contour
Total Population: 478,298
Coverage Area: 4,244 sq. km


US Census PL Centroid Datum

Scale 1:750,000



0 10 20 30 km

Scale 1:750,000



0 10 20 30 km



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Exhibit 13.7b
Proposed Daytime
Service Contour Study

WGTO.Pmc
Proposed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
RMS: 544.4 mV/m @1km
Towers: 2
Augs: 0

Population
5.0 mV/m Contour
Total Population: 48,640
Coverage Area: 894 sq. km

2.0 mV/m Contour
Total Population: 136,739
Coverage Area: 1,940 sq. km

0.5 mV/m Contour
Total Population: 642,136
Coverage Area: 7,659 sq. km

US Census PL Centroid Datum

WGTO.Pmc
Proposed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
RMS: 544.4 mV/m @1km
Towers: 2
Augs: 0

Population
5.0 mV/m Contour
Total Population: 48,640
Coverage Area: 894 sq. km

2.0 mV/m Contour
Total Population: 136,739
Coverage Area: 1,940 sq. km

0.5 mV/m Contour
Total Population: 642,136
Coverage Area: 7,659 sq. km

US Census PL Centroid Datum

WGTO.Pmc
Proposed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
RMS: 544.4 mV/m @1km
Towers: 2
Augs: 0

Population
5.0 mV/m Contour
Total Population: 48,640
Coverage Area: 894 sq. km

2.0 mV/m Contour
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Coverage Area: 1,940 sq. km

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Coverage Area: 7,659 sq. km

US Census PL Centroid Datum

WGTO.Pmc
Proposed Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
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Towers: 2
Augs: 0

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US Census PL Centroid Datum

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Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
RMS: 544.4 mV/m @1km
Towers: 2
Augs: 0

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Coverage Area: 7,659 sq. km


US Census PL Centroid Datum



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Hebron *Routes*

Scale 1:750,000



0 10 20 30 km

Scale 1:750,000



0 10 20 30 km

WGTO.Pmc
Proposed Daytime Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 3 kW
RMS: 544.4 mV/m @1km
Towers: 2
Aucs: 0

Population
1.0 V/m "Blanket" Contour
Total Population: 10
US Census PL Centroid Datum

WGTO.P
Proposed Nighttime Operation
Freq: 910 kHz
Class: D
Latitude: 41-57-14 N
Longitude: 086-00-59 W
Power: 0.026 kW
RMS: 50.681 mV/m @1km
Towers: 2
Aucs: 0

1.0 V/m "Blanket" Contour
Total Population: none
US Census PL Centroid Datum

Exhibit 13.8 Daytime & Nighttime 1.0 V/m "Blanket" Contour Study

1.0 V/m Daytime Contour

1.0 V/m Nighttime Contour

