

**Engineering Statement
In Support of an
Application for a Construction Permit
WKXN(FM), Channel 239A, Fort Deposit, AL**

Autaugaville Radio, Inc., licensee of WKXN(FM), channel 240A, Greenville, Alabama, hereby submits the instant application for a construction permit. The instant application seeks to change WKXN's community of license from Greenville, Alabama to Fort Deposit, Alabama; modify WKXN's tower site; and relocate WKXN's channel from 240A to 239A. No other spectrum modifications are needed to accomplish this.

Exhibit E, Figure 1 shows that a fully spaced site exists on channel 239A that is mutually exclusive with WKXN and also covers 100% of Fort Deposit (the proposed community of license) with a hypothetical class A 70 dBu contour. Coverage of the community of license is demonstrated in Exhibit E, Figure 2.

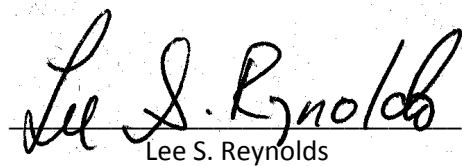
The proposed facility will result in a considerable increase in area and population covered. This is demonstrated in the gain/loss study shown in Exhibit E, Figure 3. The entire loss area is covered by five (5) other aural services, as shown in the remaining services study in Exhibit E, Figure 4.

The proposed tower site is fully spaced to all other stations in the spectrum, as shown in Exhibit E, Figure 5. The proposed facility's F(50,50) 70 dBu contour covers 80.4% of the city of Fort Deposit, in keeping with Commission rules. This coverage is shown in Exhibit E, Figure 6. The numbers used to calculate the distances to the contours is shown in Exhibit E, Figure 7.

Exhibit E, Figure 8 is a vertical sketch of the existing tower (ASRN 1023502) with the proposed 2-bay full-wave antenna. The proposed ERP will be 2.1 kW.

Because the proposed facility will use an existing tower, no environmental impact study is needed. RF Worksheet #1A shows that the maximum permissible exposure to radiofrequency radiation is 0.808%, which is easily within FCC guidelines.

For Autaugaville Radio, Inc.



Lee S. Reynolds

Reynolds Technical Associates
4956 Valleydale Road, Suite 200
Birmingham, AL 35242
(205)618-2020

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WKXN(FM) Allocation Study

| | | |
|------------------------------------|------------------------------|-----------------|
| REFERENCE | | DISPLAY DATES |
| 31 54 47.0 N. | CLASS = A | DATA 01-04-10 |
| 86 39 39.0 W. | Current Spacings to 3rd Adj. | SEARCH 01-05-10 |
| ----- Channel 239 - 95.7 MHz ----- | | |

| Call | Channel | Location | Azi | Dist | FCC | Margin |
|---|-----------------|-------------------|-----------|--------------|-------------|--------------------|
| WKXN | LIC 240A | Greenville | AL | 171.5 | 7.59 | 72.0 -64.41 |
| Of no concern: Licensed coordinates of WKXN. | | | | | | |
| WTVY-FM | LIC 238C0 | Dothan | AL | 118.5 | 151.62 | 152.0 -0.38 |
| WBHJ | LIC-Z 239C2 | Midfield | AL | 354.1 | 172.51 | 166.0 6.51 |
| WXFX | LIC-N 236C2 | Prattville | AL | 38.6 | 69.84 | 55.0 14.84 |
| WJDB-FM | LIC-N 238C3 | Thomasville | AL | 259.8 | 105.99 | 89.0 16.99 |
| WKFP | LIC 239C3 | Navarre | FL | 186.9 | 163.32 | 142.0 21.32 |
| WQKS-FM | LIC-N 241A | Montgomery | AL | 36.5 | 62.91 | 31.0 31.91 |
| WTGZ | LIC 240A | Tuskegee | AL | 58.4 | 119.69 | 72.0 47.69 |

WKXN Allocation

Latitude: 31-54-47 N
Longitude: 086-39-39 W
Channel: 239A

WKXN, Channel 239A
Fort Deposit, AL
Hypothetical 70 dBu
Contour from the Allocation Site

City of License

Fort Deposit

⊕ WKXN Allocation

Greenville

Class A Hypothetical
70 dBu Contour



Exhibit E, Figure 2

Scale 1:200,000



Pop. Gain = 4,239
Pop. Loss = 166
Gain Area = 1,056 sq km
Loss Area =

WKXN, Channel 239A
Fort Deposit, AL
Gain/Loss Study

GAIN AREA

WKXN Allocation ⊕

⊕ WKXN Licensed

LOSS AREA

Exhibit E, Figure 3



Scale 1:350,000

0 4 8 12 km

Stations Covering Loss Area

- 1) WFXX, Channel 299C2, Georgiana, AL
- 2) WZHT, Channel 289C, Troy, AL
- 3) WHLW, Channel 282C1, Luverne, AL
- 4) WAPR, Channel 202C, Selma, AL
- 5) WBAM-FM, Channel 255C1, Montgomery, AL

**WKXN, Channel 239A
Fort Deposit, AL
Remaining Services Study
(Showing Hypothetical 60 dBu Contours)**

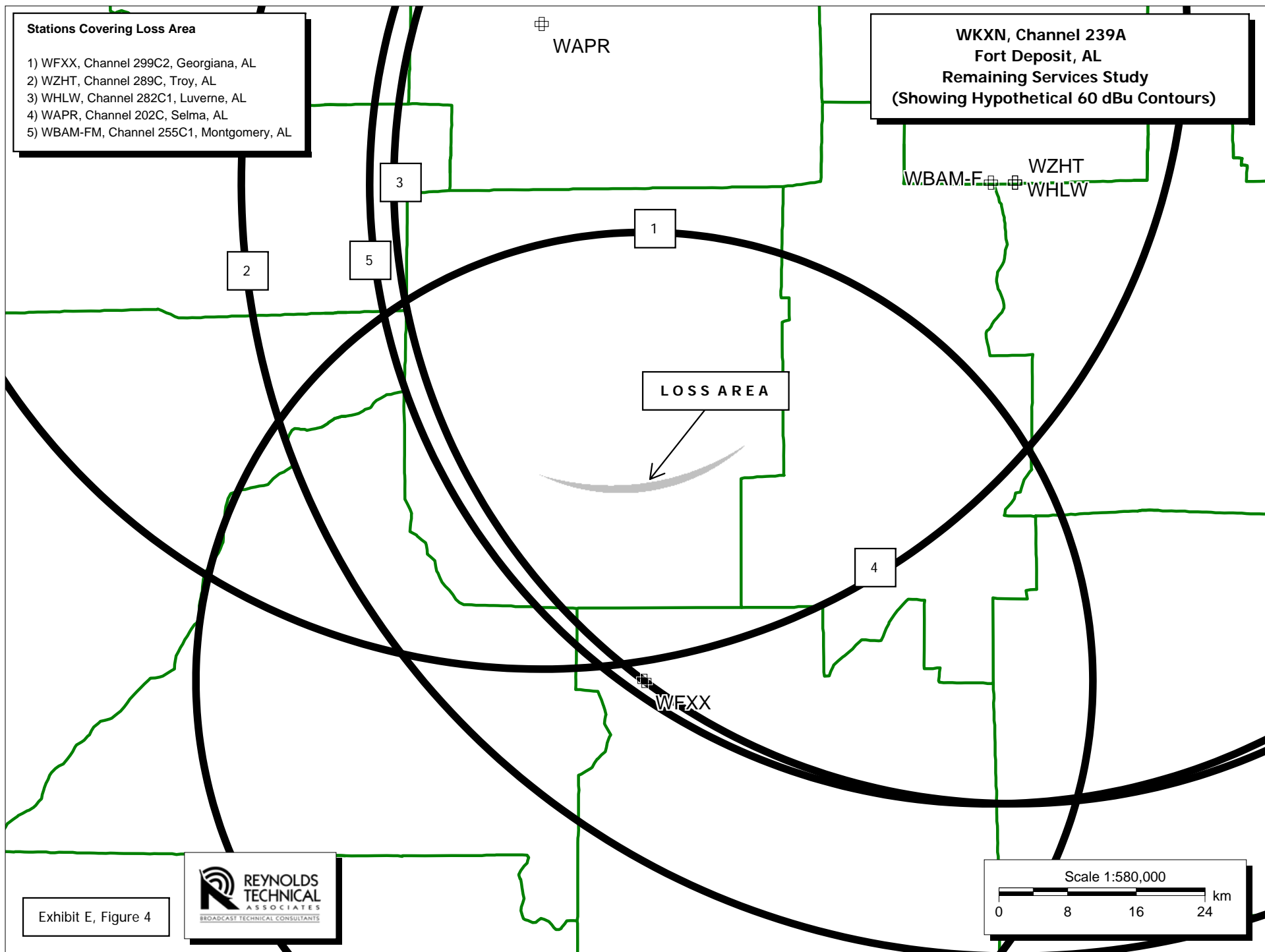


Exhibit E, Figure 4

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WKXN(FM) Channel Spacing Study

| | | |
|------------------------------------|------------------------------|-----------------|
| REFERENCE | | DISPLAY DATES |
| 31 56 52.0 N. | CLASS = A | DATA 01-04-10 |
| 86 42 09.0 W. | Current Spacings to 3rd Adj. | SEARCH 01-05-10 |
| ----- Channel 239 - 95.7 MHz ----- | | |

| Call | Channel | Location | Azi | Dist | FCC | Margin |
|---|-----------------|-------------------|-----------|--------------|--------------|--------------------|
| WKXN | LIC 240A | Greenville | AL | 156.0 | 12.44 | 71.5 -59.06 |
| Of no concern: Licensed coordinates of WKXN. | | | | | | |
| WBHJ | LIC-Z 239C2 | Midfield | AL | 355.3 | 168.31 | 165.5 2.81 |
| WTVY-FM | LIC 238C0 | Dothan | AL | 119.1 | 156.93 | 151.5 5.43 |
| WJDB-FM | LIC-N 238C3 | Thomasville | AL | 257.3 | 102.88 | 88.5 14.38 |
| WXFX | LIC-N 236C2 | Prattville | AL | 43.1 | 69.52 | 54.5 15.02 |
| WKFP | LIC 239C3 | Navarre | FL | 185.4 | 166.72 | 141.5 25.22 |
| WQKS-FM | LIC-N 241A | Montgomery | AL | 41.5 | 62.41 | 30.5 31.91 |
| WTGZ | LIC 240A | Tuskegee | AL | 61.0 | 121.16 | 71.5 49.66 |

WKXN Proposed

Latitude: 31-56-52 N
Longitude: 086-42-09 W
ERP: 2.10 kW
Channel: 239
Frequency: 95.7 MHz
AMSL Height: 283.2 m
Elevation: 149.4 m
HAAT: 171.3 m
Horiz. Pattern: Omni
Prop Model: FCC

WKXN, Channel 239A Fort Deposit, AL F(50,50) Service Contours

Percentage of the city of license
covered by the F(50,50) 70 dBu = 80.4%

F(50,50) 60 dBu

F(50,50) 70 dBu

Fort Deposit
City Limit

★ Site

Wilcox

Oak Hill

Pine Apple

Butler

Greenville

Monroe

Montgomery

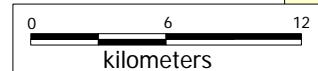
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Exhibit E, Figure 6



**Engineering Statement
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Terrain/Contour Study

Reference Coordinates:

ERP: 2.1 kW

North Latitude: 31-56-52

West Longitude: 86-42-09

| Azimuth °T. | Ave. Elev. 3 to 16 km (Meters AMSL) | FM - 2-6 Tables Effective Antenna Height (Meters AAT) | ERP (dBk) | F(50-50) Distance to 70 dBu Contour (km) | F(50-50) Distance to 60 dBu Contour (km) |
|----------------|--|--|--------------|---|---|
| 0 | 98.3 | 184.9 | 3.222 | 17.9 | 30.5 |
| 5 | 100.5 | 182.7 | 3.222 | 17.8 | 30.4 |
| 10 | 102.1 | 181.1 | 3.222 | 17.7 | 30.2 |
| 15 | 100.5 | 182.7 | 3.222 | 17.8 | 30.4 |
| 20 | 99.5 | 183.7 | 3.222 | 17.8 | 30.4 |
| 25 | 94.9 | 188.3 | 3.222 | 18.0 | 30.8 |
| 30 | 95.5 | 187.7 | 3.222 | 18.0 | 30.8 |
| 35 | 96.6 | 186.6 | 3.222 | 17.9 | 30.7 |
| 40 | 106.0 | 177.2 | 3.222 | 17.5 | 29.9 |
| 45 | 110.7 | 172.5 | 3.222 | 17.3 | 29.6 |
| 50 | 112.9 | 170.3 | 3.222 | 17.1 | 29.4 |
| 55 | 114.3 | 168.9 | 3.222 | 17.1 | 29.3 |
| 60 | 119.2 | 164.0 | 3.222 | 16.8 | 28.9 |
| 65 | 124.5 | 158.7 | 3.222 | 16.5 | 28.4 |
| 70 | 127.8 | 155.4 | 3.222 | 16.2 | 28.2 |
| 75 | 129.5 | 153.7 | 3.222 | 16.1 | 28.0 |
| 80 | 130.1 | 153.1 | 3.222 | 16.1 | 28.0 |
| 85 | 134.6 | 148.6 | 3.222 | 15.8 | 27.6 |
| 90 | 138.0 | 145.2 | 3.222 | 15.6 | 27.3 |
| 95 | 140.6 | 142.6 | 3.222 | 15.4 | 27.1 |
| 100 | 141.1 | 142.1 | 3.222 | 15.4 | 27.1 |
| 105 | 138.9 | 144.3 | 3.222 | 15.5 | 27.2 |
| 110 | 137.1 | 146.1 | 3.222 | 15.6 | 27.4 |
| 115 | 134.3 | 148.9 | 3.222 | 15.8 | 27.6 |
| 120 | 134.8 | 148.4 | 3.222 | 15.8 | 27.6 |
| 125 | 134.5 | 148.7 | 3.222 | 15.8 | 27.6 |
| 130 | 132.0 | 151.2 | 3.222 | 16.0 | 27.8 |
| 135 | 128.4 | 154.8 | 3.222 | 16.2 | 28.1 |
| 140 | 121.9 | 161.3 | 3.222 | 16.6 | 28.7 |
| 145 | 128.1 | 155.1 | 3.222 | 16.2 | 28.1 |
| 150 | 132.0 | 151.2 | 3.222 | 16.0 | 27.8 |
| 155 | 130.5 | 152.7 | 3.222 | 16.1 | 27.9 |

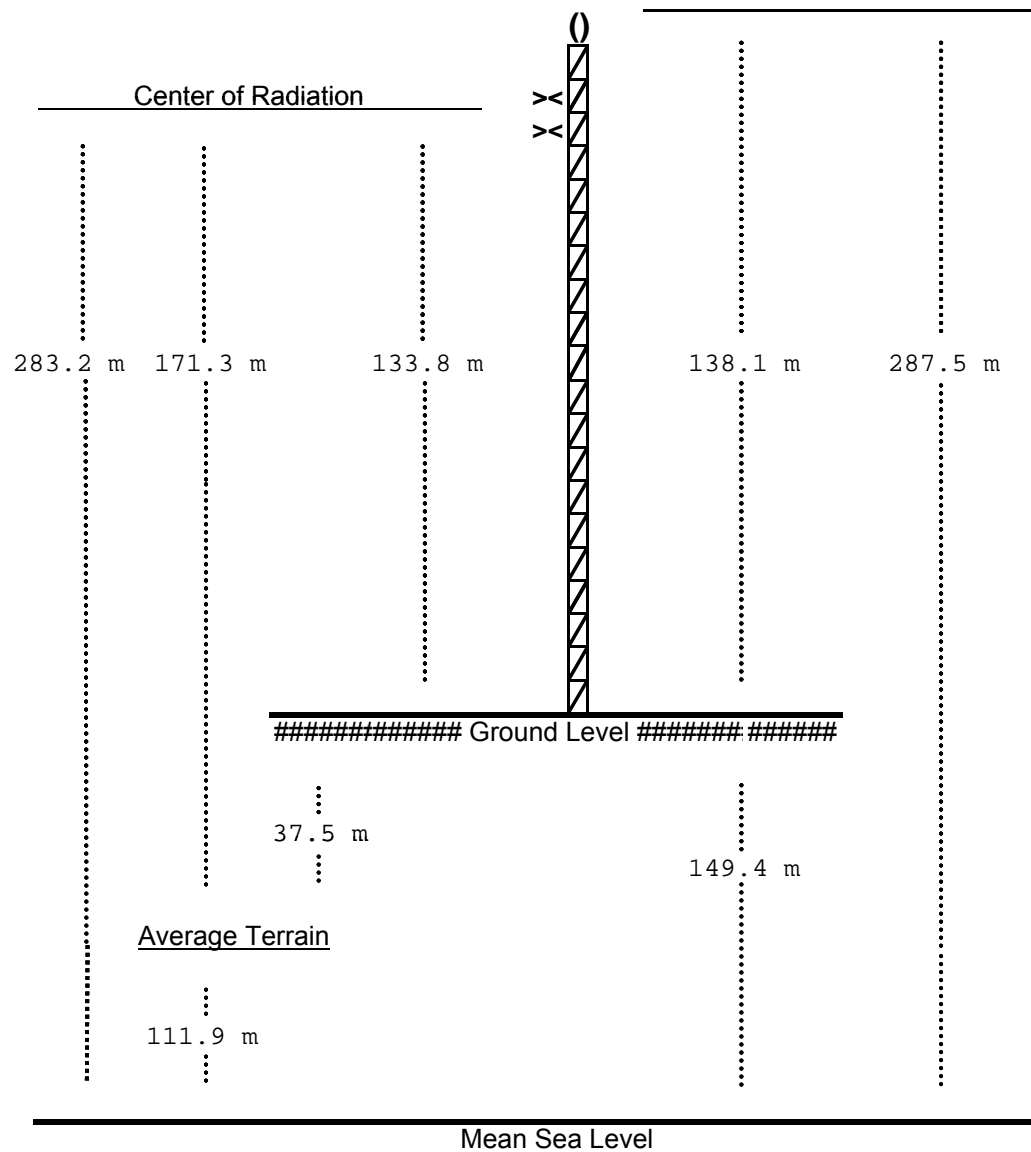
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ERP: 2.1 kW

| Azimuth °T. | Ave. Elev. 3 to 16 km (Meters AMSL) | FM - 2-6 Tables Effective Antenna Height (Meters AAT) | ERP (dBk) | F(50-50) Distance to 70 dBu Contour (km) | F(50-50) Distance to 60 dBu Contour (km) |
|----------------|--|--|--------------|---|---|
| 160 | 126.0 | 157.2 | 3.222 | 16.4 | 28.3 |
| 165 | 123.2 | 160.0 | 3.222 | 16.5 | 28.5 |
| 170 | 120.0 | 163.2 | 3.222 | 16.7 | 28.8 |
| 175 | 122.4 | 160.8 | 3.222 | 16.6 | 28.6 |
| 180 | 122.9 | 160.3 | 3.222 | 16.5 | 28.6 |
| 185 | 124.4 | 158.8 | 3.222 | 16.5 | 28.4 |
| 190 | 121.8 | 161.4 | 3.222 | 16.6 | 28.7 |
| 195 | 119.4 | 163.8 | 3.222 | 16.8 | 28.9 |
| 200 | 116.1 | 167.1 | 3.222 | 17.0 | 29.1 |
| 205 | 116.2 | 167.0 | 3.222 | 16.9 | 29.1 |
| 210 | 112.9 | 170.3 | 3.222 | 17.1 | 29.4 |
| 215 | 111.9 | 171.3 | 3.222 | 17.2 | 29.5 |
| 220 | 109.1 | 174.1 | 3.222 | 17.3 | 29.7 |
| 225 | 108.2 | 175.0 | 3.222 | 17.4 | 29.8 |
| 230 | 108.8 | 174.4 | 3.222 | 17.3 | 29.7 |
| 235 | 107.7 | 175.5 | 3.222 | 17.4 | 29.8 |
| 240 | 102.2 | 181.0 | 3.222 | 17.7 | 30.2 |
| 245 | 101.4 | 181.8 | 3.222 | 17.7 | 30.3 |
| 250 | 94.3 | 188.9 | 3.222 | 18.0 | 30.8 |
| 255 | 83.4 | 199.8 | 3.222 | 18.5 | 31.7 |
| 260 | 88.1 | 195.1 | 3.222 | 18.3 | 31.3 |
| 265 | 87.1 | 196.1 | 3.222 | 18.4 | 31.4 |
| 270 | 88.3 | 194.9 | 3.222 | 18.3 | 31.3 |
| 275 | 88.6 | 194.6 | 3.222 | 18.3 | 31.3 |
| 280 | 89.7 | 193.5 | 3.222 | 18.2 | 31.2 |
| 285 | 95.0 | 188.2 | 3.222 | 18.0 | 30.8 |
| 290 | 93.9 | 189.3 | 3.222 | 18.1 | 30.9 |
| 295 | 94.0 | 189.2 | 3.222 | 18.0 | 30.9 |
| 300 | 97.8 | 185.4 | 3.222 | 17.9 | 30.6 |
| 305 | 104.3 | 178.9 | 3.222 | 17.6 | 30.1 |
| 310 | 102.2 | 181.0 | 3.222 | 17.7 | 30.2 |
| 315 | 100.1 | 183.1 | 3.222 | 17.8 | 30.4 |
| 320 | 97.9 | 185.3 | 3.222 | 17.9 | 30.6 |
| 325 | 90.6 | 192.6 | 3.222 | 18.2 | 31.1 |
| 330 | 92.0 | 191.2 | 3.222 | 18.1 | 31.0 |
| 335 | 89.8 | 193.4 | 3.222 | 18.2 | 31.2 |
| 340 | 87.7 | 195.5 | 3.222 | 18.3 | 31.4 |
| 345 | 89.8 | 193.4 | 3.222 | 18.2 | 31.2 |
| 350 | 91.0 | 192.2 | 3.222 | 18.2 | 31.1 |
| 355 | 96.5 | 186.7 | 3.222 | 17.9 | 30.7 |

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Vertical Sketch



Proposed Location: 31° 56' 52" N. Lat. 86° 42' 09" W. Long. [NAD27]

NOT DRAWN TO SCALE

Proposed Antenna: 2 elements (1 λ between elements)

ASRN: 1023502