

WJWV-FM CHANNEL 215 (90.9 MHz)  
CLASS C1 MINOR CHANGE IN  
LICENSED FACILITY APPLICATION  
*FORT GAINES, GEORGIA*  
*(GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION)*

KESSLER AND GEHMAN ASSOCIATES, INC.  
TELECOMMUNICATIONS CONSULTING ENGINEERS

20070904

*Prepared by William T. Godfrey, Jr.*

**KGGA**

507 N.W. 60th Street, Suite C  
Gainesville, Florida 32607



**Kessler and Gehman Associates, Inc.**

Telecommunications Consulting Engineers

**ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR CHANGE IN LICENSED FACILITY APPLICATION FOR THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) LICENSED WJWV-FM CHANNEL 215 CLASS C1, FORT GAINES, GEORGIA NON-COMMERCIAL EDUCATIONAL FM BROADCAST FACILITY (BLED-19930305KB).**

The firm Kessler and Gehman Associates, Inc., has been retained by the Georgia Public Telecommunications Commission (GPTC), Atlanta, Georgia, in order to prepare engineering studies and the engineering portion of a minor change in licensed facility application for the licensed WJWV-FM Channel 215 Class C1 FM broadcast facility (BLED-19930305KB) requesting authorization to changes antennas and decrease the effective radiated power (ERP) in the horizontally polarized component as authorized in §73.525(e)(4) of the FCC rules.

**Discussion**

GPTC is licensed to operate WJWV-FM Channel 215 C1 with an ERP of 85 kW horizontal polarization and 85 kW vertical polarization using a Jampro model JHPC-5(DA) side-mounted, directional antenna with an antenna height radiation center of 49.0 meters above ground level (AGL).

GPTC is in the process of converting all nine of its full-service television facilities from analog to digital as part of the DTV transition and the contract includes tower upgrades and new antennas for many of its NCE-FM facilities. The new proposed Dielectric model DCRC8CHV antenna will be side-mounted on the WJWV support structure at the same antenna height radiation center as the licensed antenna. The new IBOC capable FM transmitter for the proposed WJWV-FM facility will provide sufficient power to operate with a maximum ERP of 85 kW vertical and 30 kW horizontal (mixed polarization) rather than the licensed 85 kW vertical and



85 kW horizontal (circular polarization). Accordingly, the changes requested in this minor change in license application are: 1) replace the licensed Jampro model JHPC-5(DA) directional antenna with a new Dielectric model DCRC8CHV directional antenna; and 2) decrease the horizontally polarized ERP from the licensed 85 kW to 30 kW so that it can operate with elliptical polarization rather than circular polarization.

Section §73.525(a)(1) states that an affected TV Channel 6 station is a TV broadcast station authorized to operate on Channel 6 that is located within 180 km of a NCE-FM station operating on Channel 215. The WJWJ-FM transmitter site is located approximately 147 km from the WCTV-TV Thomasville, GA Channel 6 station. The WJWV-FM Channel 215 facility is required to be more than 180 km from the WCTV-TV Channel 6 facility in order to be outside the “non-affected” TV Channel 6 separation; therefore, it is short-spaced by approximately 33 km and is considered within the “affected” distance. §73.525(e)(4)(ii) of the FCC rules states:

If the applicant chooses to use mixed polarity, the permissible ERP is as follows:

$[H + (V/A)]$  is no greater than P

- Where: H is the horizontally polarized ERP in kilowatts for mixed polarity;
- V is the vertically polarized ERP in kilowatts for mixed polarity;
- A is 40 if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more, or 10 if it does not; and
- P is the maximum permitted horizontally polarized-only power in kilowatts.

Since WJWV-FM falls within the “affected distance” of a TV Channel 6 station, it may use the formula above. In this case, P is equal 85 since 85 kW is the maximum permitted horizontally polarized-only power; A is equal to 40 since the predicted interference area lies



completely outside the limits of a city of 50,000 persons or more; V is equal to 85 since 85 kW is the vertically polarized ERP for mixed polarity; and H is equal to 30 since 30 kW is the horizontally polarized ERP for mixed polarity. Therefore,  $H + (V/A) \leq 30 + (85/40) = 32.125 \leq 85 = P$ . Accordingly, and ERP of 85 kW vertical and 30 kW horizontal satisfy the rules for mixed polarity.

### **Attached Figures**

The following list is an index of enclosed figures produced by calculations and engineering studies of the proposed WJWV-FM Channel 215 Class C1 facility.

- 1) Proposed Engineering Specifications (Exhibit 1).
- 2) Antenna Data (Exhibit 2).
- 3) Support Structure Profile/Elevation View of Antenna System (Exhibit 3).
- 4) Antenna Azimuth Pattern (Exhibit 4)
- 5) Antenna Azimuth Pattern Tabulation (Exhibit 5)
- 6) Antenna Vertical Pattern: 0° - 11° (Exhibit 6)
- 7) Antenna Vertical Pattern: 0° - 90° (Exhibit 7)
- 8) Antenna Vertical Pattern Tabulation (Exhibit 8)
- 9) USGS 7.5-Minute Topographic Quadrangle Map Depicting The Proposed Transmitter Location And Coordinate Lines (Exhibit 9).
- 10) Licensed WJWV-FM 1 mV/m Contour (Black) vs. Proposed WJWV-FM 1 mV/m Contour (Dashed Red) – Exhibit 10
- 11) Distance to Contour Tabulation of Licensed Facility (Exhibit 11)
- 12) Distance to Contour Tabulation of Proposed Facility (Exhibit 12)
- 13) Distance to Contour Comparison Spreadsheet (Exhibit 13)



14) 2 dB/10 degrees & 15 dB front-to-back ratio compliance spreadsheet (Exhibit 14)

15) Proposed 1mV/m (60 dBuV/m) Community of License Contour (Exhibit 15).

16) TOWAIR Determination

### **Transmitter Location**

The proposed antenna will be side-mounted at the licensed antenna height radiation center of 49.0 meters on the WJWV-FM support structure (Exhibit 3). The overall height of the WJWV-FM tower is less than 200 ft AGL and there are no airports within 8 km of the transmitter site; therefore, the WJWV-FM support structure does not require registration (Exhibit 16).

### **Allocation Studies**

The F(50,50) 60.0 dBuV/m protected service contours for the licensed (black) and proposed (dashed red) WJWV-FM facilities are depicted in Exhibit 10. It can be seen that the proposed F(50,50) 60.0 dBuV/m 1 mV/m contour (dashed red) would not exceed the licensed F(50,50) 60.0 dBuV/m 1 mV/m contour (black) in any direction. In fact, the proposed antenna pattern is exactly the same as the licensed antenna pattern and the proposed antenna height radiation center is exactly the same height as the licensed antenna height radiation center. Therefore, allocation studies are not required since this application does not propose to increase coverage in any direction.

Exhibit 11 is a distance to contour tabulation of the WJWV-FM Channel 215 C1 licensed facility. This exhibit depicts the distance, in kilometers, from the transmitter to the licensed WJWV-FM 1 mV/m (60 dBuV/m) protected service contour in all azimuthal directions.



Exhibit 12 is a distance to contour tabulation of the proposed WJWV-FM Channel 215 C1 facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed WJWV-FM 1 mV/m protected service contour in all azimuthal directions.

Exhibit 13 is a distance to contour comparison spreadsheet which compares the distance from the transmitter to the 1 mV/m protected service contour of the licensed facility (Exhibit 11) and the proposed facility (Exhibit 12). Column four in Exhibit 13 depicts “PASS” if the proposed distance to contour values are less than or equal to the licensed distance to contour values or “FAIL” if the proposed distance to contour values are greater than the licensed distance to contour values. It can be seen that the licensed distance to contour values are equal to the proposed distance to contour values in all azimuthal directions which further verifies quantitatively that the coverage of the proposed facility will not be increased in any direction; thus allocation studies are not required.

### **2 dB per 10 Degrees & 15 dB Front-To-Back Ratio**

Exhibit 14 is a calculation spreadsheet demonstrating compliance with the 2 dB/10 deg and 15 dB front-to-back ratio rules established by the FCC for directional FM antennas. Referring to Exhibit 14, it can be seen that the minimum relative field value is 0.210 which equates to 5.74 dB (3.7 kW) based on a maximum ERP of 85 kW and the maximum relative field value is 1.0 which equates to 19.29 dB (85.0 kW) based on a maximum ERP of 85 kW. Subtracting 5.74 dB from 19.29 dB gives a value of 13.56 dB which is less than the 15 dB threshold. Column 6 in Exhibit 14 depicts “PASS” if the difference between the value in a cell in column 5 is 2 dB or less than the value in the next adjacent ten-degree radial or “FAIL” if the difference between the value in a cell in column 5 compared to the value in the next adjacent ten-degree radial is greater than 2 dB. Referring to Exhibit 14, it can be seen that the proposed antenna azimuth pattern would not exceed 2 dB per 10 degrees along any radial based on thirty six radials.



### **TV Channel 6 Studies**

TV Channel 6 studies are not required since this application does not propose to increase the WJWV-FM 1 mV/m contour in any direction.

### **Principal Community**

The F(50,50) 60.0 dBuV/m protected service contour for the proposed WJWV-FM facility is depicted in Exhibit 15. It can be seen that the proposed facility's F(50,50) 60.0 dBuV/m service contour will completely encompass Fort Gaines, GA in all azimuthal directions. Fort Gaines, GA is the community of license for the WJWV-FM facility.

### **Intermediate Frequency Interference (53<sup>rd</sup> & 54<sup>th</sup> Adjacent Channels)**

The proposed WJWV-FM site will meet all separation requirements pertaining to intermediate frequency ("IF") interference. The IF station (215+53=**268** & 215+54=**269**) with the narrowest gap with respect to distance from the proposed WJWV-FM transmitter site is the licensed WQVE-FM Channel 269 Class A facility located approximately 83.6 km from the WJWV-FM transmitter site in Albany, GA at North Latitude 31 37' 15" and West Longitude 84° 09' 11" where a separation of 62.1 km is required; therefore, the distance is easily met with a margin of 21.5 km.

### **FM Blanketing Interference**

Blanketing is defined as interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBu (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBu contour is referred to as the blanketing contour and the area within this contour is referred to as the



blanketing area. The proposed WJWV-FM Channel 215 blanketing contour extends a maximum of 2.29 km from its transmitter and it is understood that GPTC must assume full financial responsibility for remedying new complaints of blanketing interference for a period of one year to all broadcast stations within the proposed WJWV-FM blanketing contour.

### **Environmental Impact**

The proposed WJWV-FM Channel 215 Class C1 facility will have no significant environmental impact as defined in §1.1307 of the FCC Rules. The FM transmitter, transmission line and antenna system will produce an ERP of 85 kW (vertical) and 30 kW (horizontal). It was determined that the maximum lobe of radiation from the base of the tower will occur at approximately 45.2 feet from the base of the tower (164.1-foot radial distance from the antenna center). At approximately 45.2 feet from the base of the tower, the depression angle of the main lobe will be approximately 74° below the horizontal. At that point, the relative field will be 0.242 and the power density six feet above the ground will be 0.09 mW/cm<sup>2</sup>. This will be 9.0% of the maximum permissible exposure (“MPE”) limits for Occupational/Controlled Exposure and 45.0% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (“ANSI”). Since the operation of the proposed WJWV-FM Channel 215 facility will exceed 5.0% of the MPE limit for Occupational/Controlled Exposure and General Population/Uncontrolled Exposure at various points on the ground, WJWV-FM will be considered a “contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, all broadcast antennas on the WJWV-FM tower must be analyzed and a composite study must be prepared to demonstrate that the total power density of all broadcast antennas mounted on the tower would not exceed 100% of the MPE allowable.

Since the only broadcast antenna mounted on the WJWV-FM support structure is the WJWV-FM antenna, the composite power density on the support structure is equal to the power density produced by the WJWV-FM facility. Therefore, the total RF energy emanating from the single antenna mounted on the WJWV-FM support structure will be 9.0% of the MPE limits for



Occupational/Controlled Exposure and 45.0% of the MPE limits for General Population/Uncontrolled Exposure. Accordingly, the total exposure, which is generated by the WJWV-FM facility alone, will result in exposure levels well below the allowable exposure threshold authorized by the ANSI and the FCC. It is safe to conclude that the emissions will be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the licensee will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna. It is also understood that additional antennas on the support structure could increase the overall RF exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

**Certification**

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications Technical Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.

WILLIAM T. GODFREY, JR.  
Telecommunications Technical Consultant

4 September, 2007



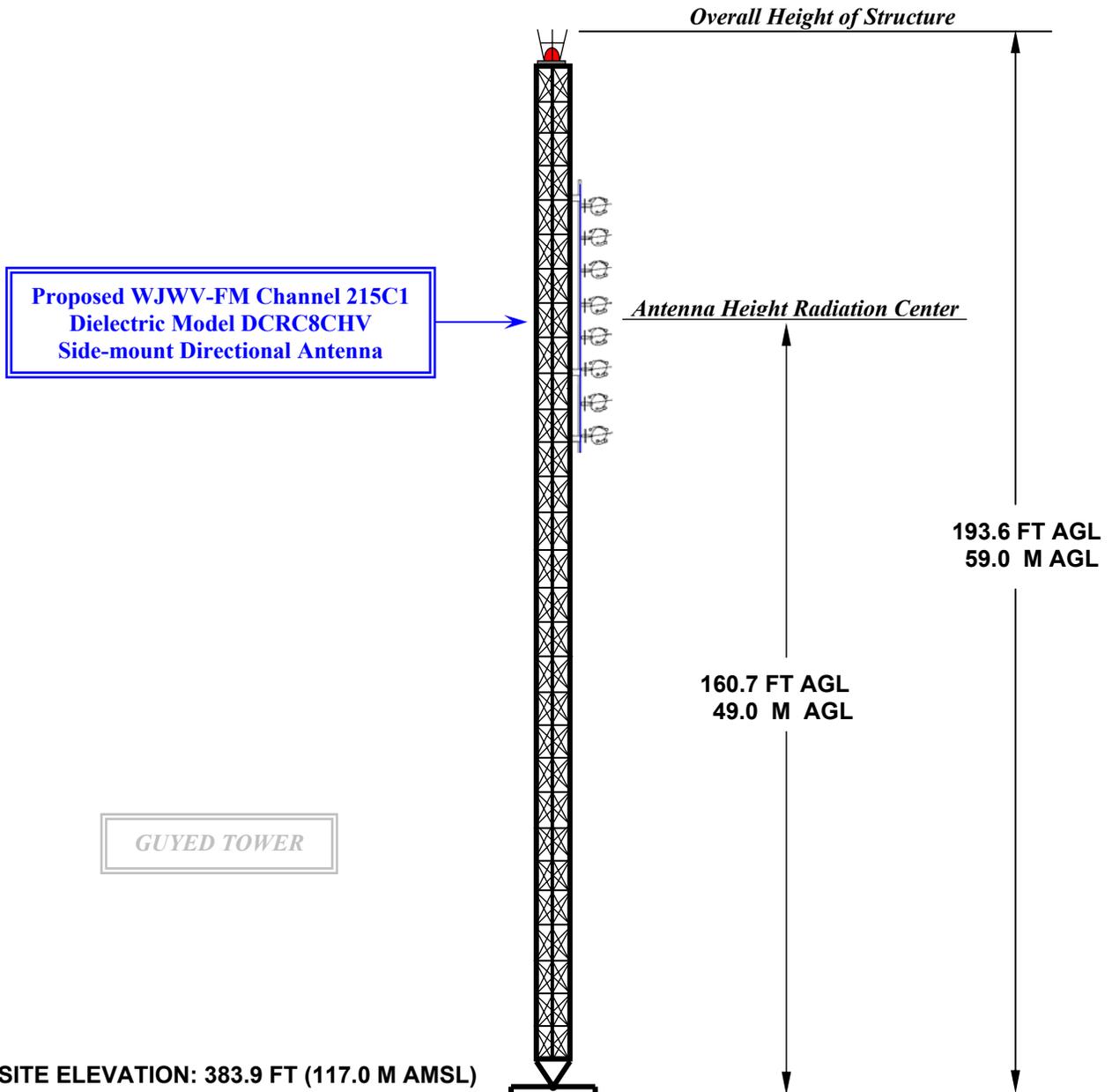
**WJWV-FM Channel 215 C1**  
*Cochran, Georgia*

**DATA FOR PROPOSED  
OMNIOID TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model DCRC8CHV Elliptically Polarized Side-Mount FM Antenna.
- B. **Electrical Beam Tilt:** None
- C. **Mechanical Beam Tilt:** None
- D. 

<b><u>Peak Directional Gain</u></b>	<b><u>Elliptical Polarization</u></b>
Main Lobe V-pol:	11.66 (10.67 dB)
Main Lobe H-pol:	4.11 ( 6.14 dB)
- E. **Length:** 78.0 feet (23.8 meters) – without lightning protector
- F. **Transmitter Power Output (TPO):** 8.0 kW
- G. **Transmission Line:** 1-5/8" (50 ohm) FLEXLine
- H. **Transmission Line Efficiency:** 91.2%
- I. **Transmission Line Length:** 200 feet
- J. **Transmission Line Loss:** 0.200 dB/100 ft
- K. **Transmission Line Attenuation:** 0.40 dB

# PROPOSED WJWV-FM ELEVATION VIEW



OVERALL HEIGHT AGL:	59.0 M
OVERALL HEIGHT AMSL:	176.0 M
RADIATION CENTER AGL:	49.0 M
RADIATION CENTER AMSL:	166.0 M
RADIATION CENTER HAAT:	77.5 M
AVG OF ALL NON-ODD RADIALS:	88.5 M
SITE HAAT:	28.5 M

**COORDINATES (NAD 27):**  
 N. LATITUDE 31° 36' 16"  
 W. LONGITUDE 85° 02' 02"  
Antenna Structure Registration Number:  
 N/A

**NOTE: NOT TO SCALE**

**KESSLER AND GEHMAN**  
 TELECOMMUNICATIONS CONSULTING ENGINEERS  
 507 N.W. 60th Street, Suite C  
 Gainesville, Florida 32607

**WJWV-FM CHANNEL 215C1**  
 FORT GAINES, GEORGIA

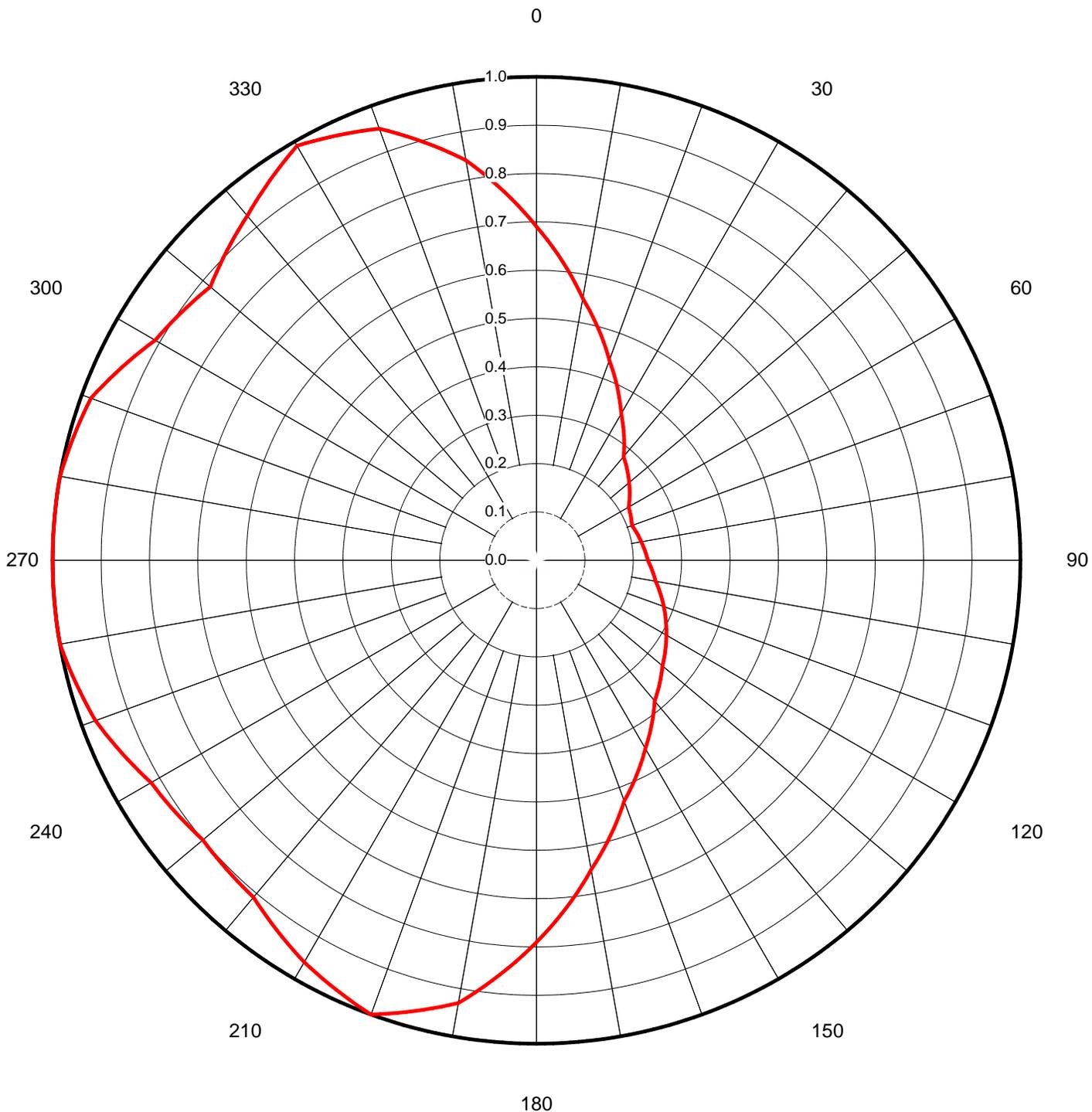
20070831

EXHIBIT 3

**AZIMUTH PATTERN**

Gain **1.93 (2.86 dB)**  
Calculated / Measured **Calculated**

Frequency **90.90 MHz**  
Drawing # **DCRC-0909**



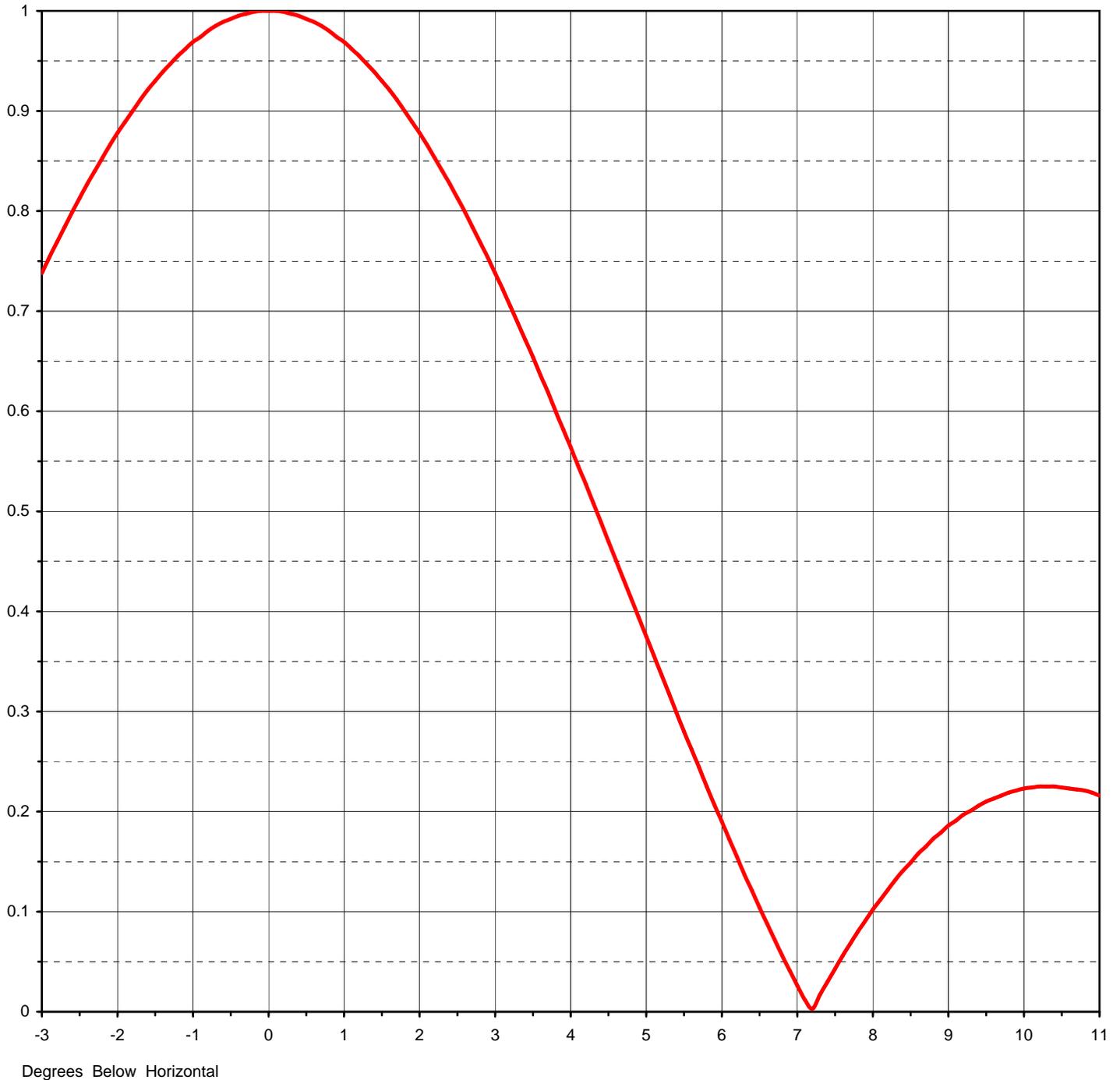




Proposal Number **C-00696-3**      Revision: **3**  
Date **3-Oct-06**  
Call Letters **WJWV**  
Location **Ft Gaine, GA**  
Customer  
Antenna Type **DCRC8CHV**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>1.66</b>	<b>( 2.20 dB )</b>	Beam Tilt	<b>0.00 deg</b>
RMS Gain at Horizontal	<b>1.66</b>	<b>( 2.20 dB )</b>	Frequency	<b>90.90 MHz</b>
Calculated / Measured	<b>Calculated</b>		Drawing #	<b>08C083000</b>

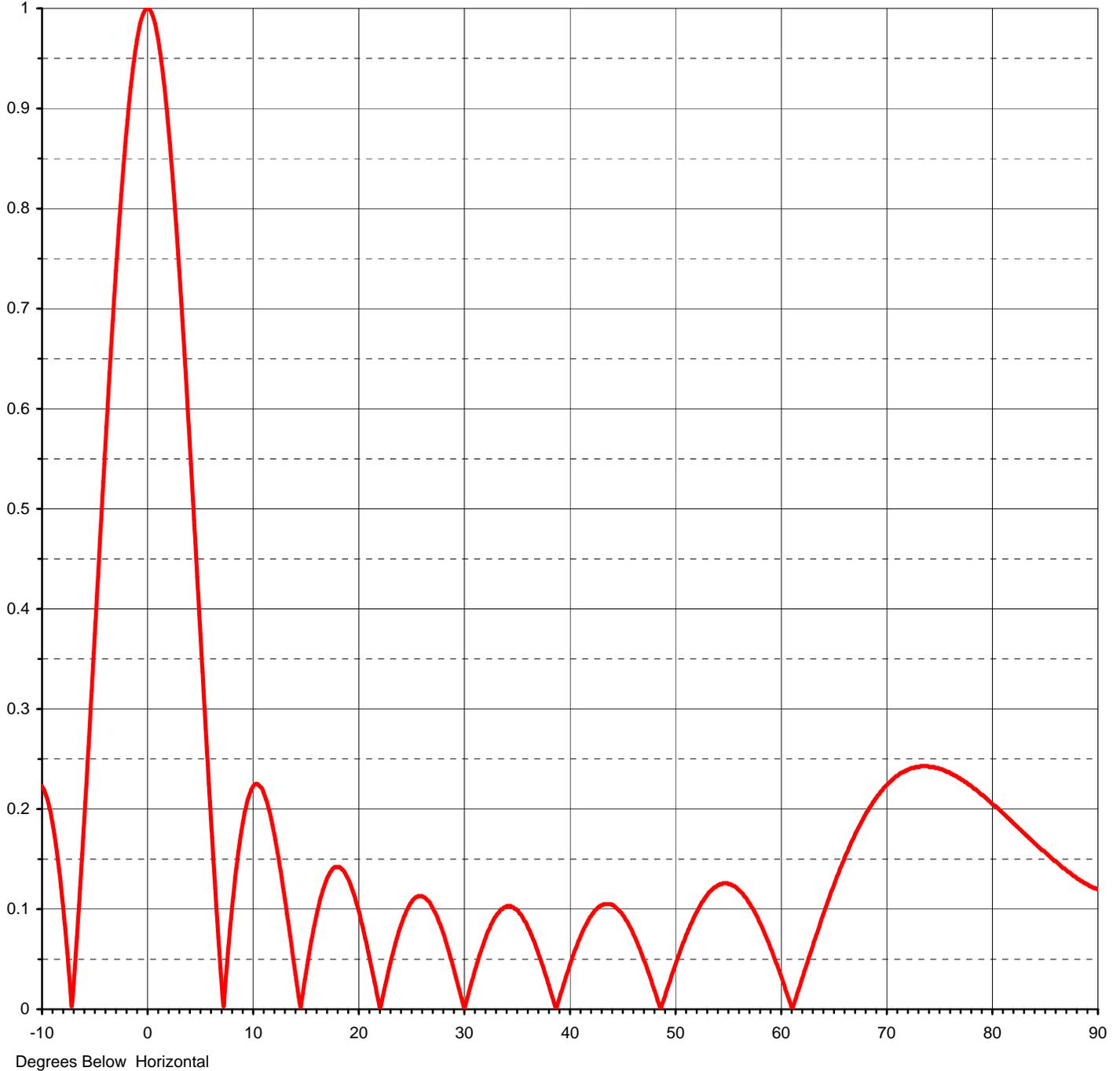




Proposal Number **C-00696-3**      Revision: **3**  
Date **3-Oct-06**  
Call Letters **WJWV**  
Location **Ft Gaine, GA**  
Customer  
Antenna Type **DCRC8CHV**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>1.66</b>	<b>( 2.20 dB )</b>	Beam Tilt	<b>0.00 deg</b>
RMS Gain at Horizontal	<b>1.66</b>	<b>( 2.20 dB )</b>	Frequency	<b>90.90 MHz</b>
Calculated / Measured	<b>Calculated</b>		Drawing #	<b>08C083000-90</b>





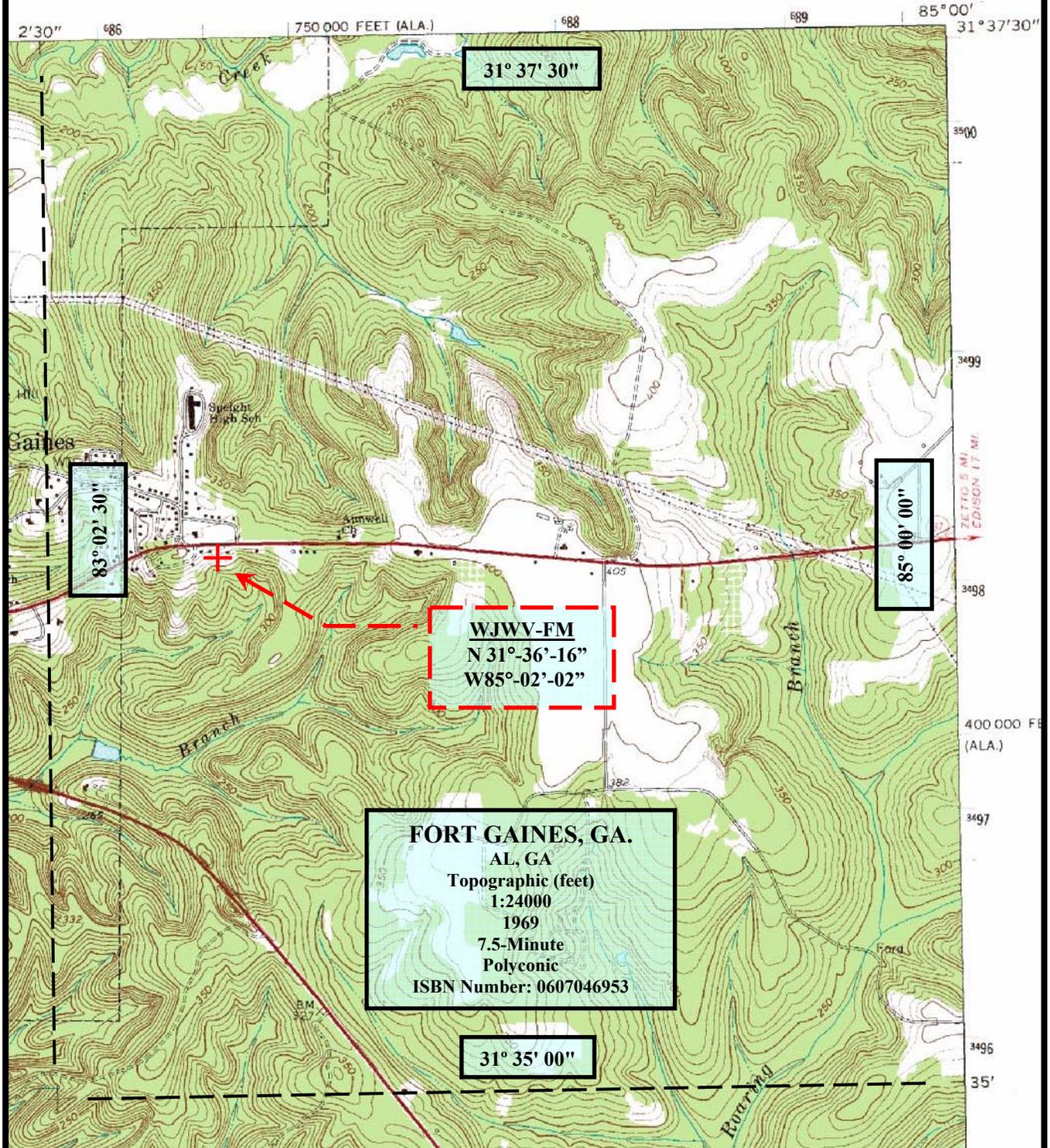
Proposal Number **C-00696-3**      Revision: **3**  
 Date **3-Oct-06**  
 Call Letters **WJWV**  
 Location **Ft Gaine, GA**  
 Customer  
 Antenna Type **DCRC8CHV**

## TABULATION OF ELEVATION PATTERN

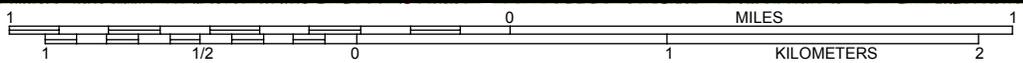
Elevation Pattern Drawing #: **08C083000-90**

Angle	Field										
-10.0	0.223	2.4	0.827	10.6	0.224	30.5	0.016	51.0	0.071	71.5	0.237
-9.5	0.210	2.6	0.799	10.8	0.222	31.0	0.035	51.5	0.084	72.0	0.239
-9.0	0.186	2.8	0.769	11.0	0.219	31.5	0.053	52.0	0.095	72.5	0.241
-8.5	0.149	3.0	0.738	11.5	0.203	32.0	0.068	52.5	0.105	73.0	0.242
-8.0	0.102	3.2	0.705	12.0	0.180	32.5	0.081	53.0	0.113	73.5	0.243
-7.5	0.043	3.4	0.671	12.5	0.151	33.0	0.092	53.5	0.119	74.0	0.242
-7.0	0.026	3.6	0.636	13.0	0.117	33.5	0.099	54.0	0.123	74.5	0.242
-6.5	0.104	3.8	0.600	13.5	0.081	34.0	0.102	54.5	0.125	75.0	0.240
-6.0	0.190	4.0	0.564	14.0	0.043	34.5	0.103	55.0	0.126	75.5	0.238
-5.5	0.280	4.2	0.527	14.5	0.006	35.0	0.100	55.5	0.124	76.0	0.236
-5.0	0.375	4.4	0.489	15.0	0.030	35.5	0.094	56.0	0.120	76.5	0.233
-4.5	0.470	4.6	0.451	15.5	0.062	36.0	0.085	56.5	0.115	77.0	0.230
-4.0	0.564	4.8	0.413	16.0	0.089	36.5	0.073	57.0	0.107	77.5	0.227
-3.5	0.654	5.0	0.375	16.5	0.112	37.0	0.059	57.5	0.099	78.0	0.223
-3.0	0.738	5.2	0.337	17.0	0.128	37.5	0.044	58.0	0.088	78.5	0.219
-2.8	0.769	5.4	0.299	17.5	0.138	38.0	0.027	58.5	0.077	79.0	0.214
-2.6	0.799	5.6	0.262	18.0	0.142	38.5	0.010	59.0	0.064	79.5	0.210
-2.4	0.827	5.8	0.225	18.5	0.140	39.0	0.008	59.5	0.050	80.0	0.205
-2.2	0.853	6.0	0.190	19.0	0.132	39.5	0.025	60.0	0.036	80.5	0.201
-2.0	0.878	6.2	0.155	19.5	0.119	40.0	0.041	60.5	0.020	81.0	0.196
-1.8	0.900	6.4	0.121	20.0	0.102	40.5	0.057	61.0	0.005	81.5	0.191
-1.6	0.921	6.6	0.088	20.5	0.081	41.0	0.070	61.5	0.011	82.0	0.186
-1.4	0.939	6.8	0.056	21.0	0.057	41.5	0.082	62.0	0.028	82.5	0.181
-1.2	0.955	7.0	0.026	21.5	0.032	42.0	0.092	62.5	0.044	83.0	0.176
-1.0	0.969	7.2	0.003	22.0	0.006	42.5	0.099	63.0	0.060	83.5	0.171
-0.8	0.980	7.4	0.030	22.5	0.019	43.0	0.103	63.5	0.076	84.0	0.166
-0.6	0.989	7.6	0.056	23.0	0.042	43.5	0.105	64.0	0.092	84.5	0.161
-0.4	0.995	7.8	0.080	23.5	0.063	44.0	0.105	64.5	0.110	85.0	0.157
-0.2	0.999	8.0	0.102	24.0	0.081	44.5	0.101	65.0	0.124	85.5	0.152
0.0	1.000	8.2	0.122	24.5	0.095	45.0	0.096	65.5	0.138	86.0	0.148
0.2	0.999	8.4	0.141	25.0	0.106	45.5	0.088	66.0	0.151	86.5	0.143
0.4	0.995	8.6	0.158	25.5	0.112	46.0	0.078	66.5	0.163	87.0	0.139
0.6	0.989	8.8	0.173	26.0	0.113	46.5	0.066	67.0	0.175	87.5	0.135
0.8	0.980	9.0	0.186	26.5	0.110	47.0	0.052	67.5	0.185	88.0	0.131
1.0	0.969	9.2	0.197	27.0	0.103	47.5	0.038	68.0	0.195	88.5	0.128
1.2	0.955	9.4	0.206	27.5	0.093	48.0	0.022	68.5	0.203	89.0	0.125
1.4	0.939	9.6	0.213	28.0	0.079	48.5	0.006	69.0	0.211	89.5	0.122
1.6	0.921	9.8	0.216	28.5	0.062	49.0	0.010	69.5	0.218	90.0	0.120
1.8	0.900	10.0	0.221	29.0	0.044	49.5	0.026	70.0	0.224		
2.0	0.878	10.2	0.224	29.5	0.024	50.0	0.042	70.5	0.229		
2.2	0.853	10.4	0.225	30.0	0.004	50.5	0.057	71.0	0.233		

FORT GAINES QUADRANGLE  
ALABAMA-GEORGIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)



**FORT GAINES, GA.**  
AL, GA  
Topographic (feet)  
1:24000  
1969  
7.5-Minute  
Polyconic  
ISBN Number: 0607046953

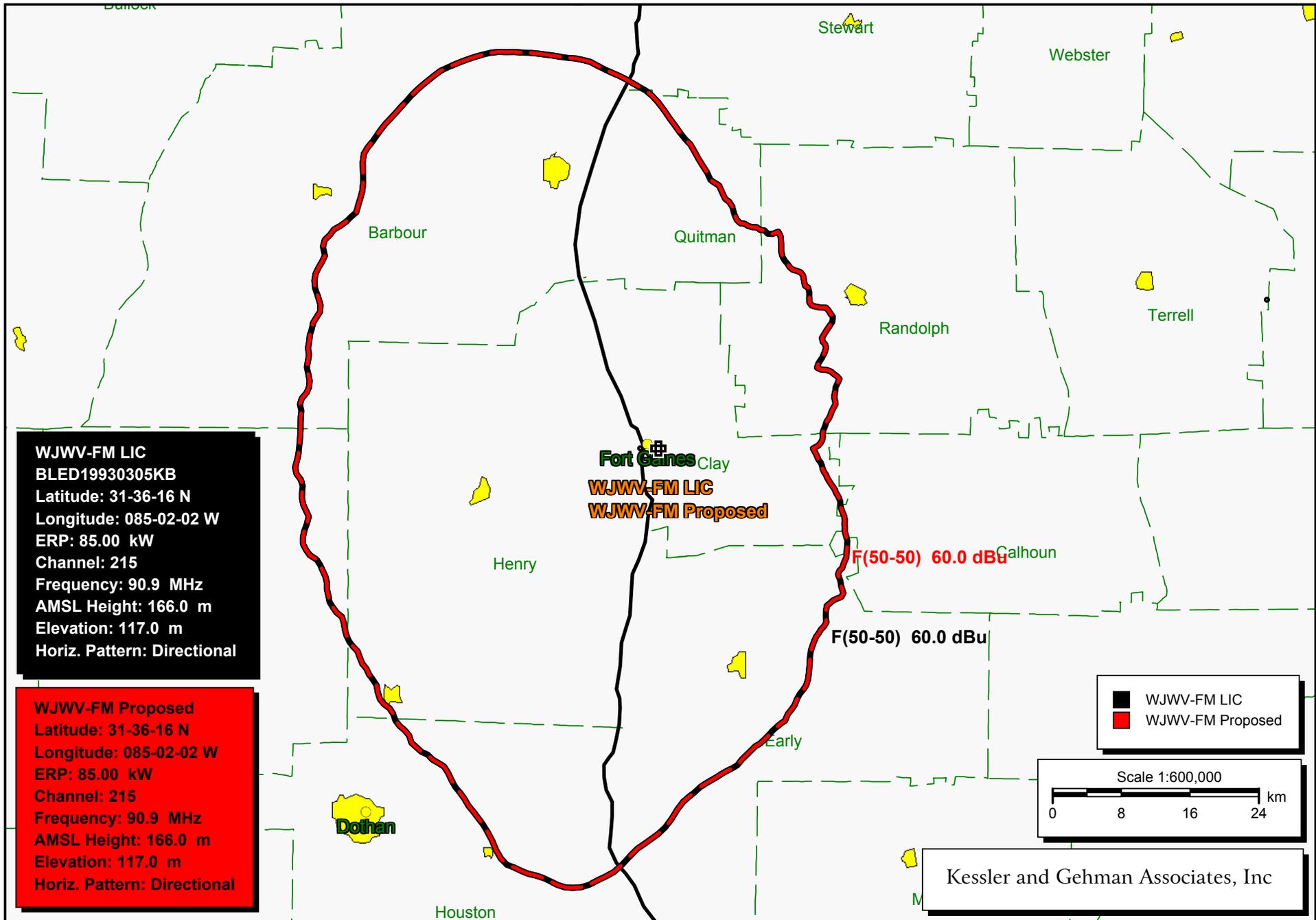


**KESSLER AND GEHMAN**  
TELECOMMUNICATIONS CONSULTING ENGINEERS  
507 N.W. 60th Street, Suite C  
Gainesville, Florida 32607

**WJWV-FM CHANNEL 215C1**  
FORT GAINES, GEORGIA

20070904

EXHIBIT 9



WJWV-FM (License) vs. WJWV-FM (Proposed)

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

Call Letters: WJWV-FM LIC  
File Number: BLED19930305KB  
Latitude: 31-36-16 N  
Longitude: 085-02-02 W  
ERP: 85.00 kW  
Channel: 215  
Frequency: 90.9 MHz  
AMSL Height: 166.0 m  
Elevation: 117.0 m  
Horiz. Antenna Pattern: Directional

Type of contour: FCC  
Location Variability: 50.0 %  
Time Variability: 50.0 %  
# of Radials Calculated: 360  
Field Strength: 60.00 dBuV/m

Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)
0.0	40.2
1.0	39.3
2.0	38.3
3.0	37.5
4.0	36.7
5.0	36.0
6.0	35.5
7.0	34.7
8.0	33.9
9.0	33.2
10.0	32.6
11.0	31.8
12.0	31.5
13.0	31.4
14.0	30.7
15.0	30.0
16.0	29.8
17.0	29.4
18.0	28.6
19.0	28.1
20.0	27.9
21.0	28.0
22.0	27.9
23.0	27.9
24.0	28.1
25.0	28.0
26.0	28.2
27.0	28.0
28.0	28.2
29.0	28.8
30.0	28.4
31.0	27.7
32.0	26.9
33.0	26.5
34.0	26.3
35.0	26.2

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

36.0	26.0
37.0	26.0
38.0	26.2
39.0	26.3
40.0	26.2
41.0	25.8
42.0	25.5
43.0	25.5
44.0	25.3
45.0	24.8
46.0	24.4
47.0	24.4
48.0	24.6
49.0	25.0
50.0	25.4
51.0	25.5
52.0	25.4
53.0	25.4
54.0	25.0
55.0	23.8
56.0	22.9
57.0	22.8
58.0	22.8
59.0	22.7
60.0	22.3
61.0	21.8
62.0	21.1
63.0	20.7
64.0	21.0
65.0	21.6
66.0	22.0
67.0	22.2
68.0	22.4
69.0	22.6
70.0	22.2
71.0	21.8
72.0	21.6
73.0	21.4
74.0	21.3
75.0	21.3
76.0	21.2
77.0	20.9
78.0	20.6
79.0	20.4
80.0	20.1
81.0	19.8
82.0	19.6
83.0	19.4
84.0	19.3
85.0	19.2
86.0	19.2
87.0	19.1
88.0	18.9
89.0	18.6
90.0	18.0
91.0	18.1
92.0	18.3

## WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

93.0	18.5
94.0	18.7
95.0	19.0
96.0	19.1
97.0	19.2
98.0	19.4
99.0	19.7
100.0	20.0
101.0	20.3
102.0	20.6
103.0	21.0
104.0	21.3
105.0	21.7
106.0	22.0
107.0	22.1
108.0	22.3
109.0	22.6
110.0	23.0
111.0	23.2
112.0	23.3
113.0	23.6
114.0	23.7
115.0	24.1
116.0	24.5
117.0	24.6
118.0	24.8
119.0	25.0
120.0	25.2
121.0	25.3
122.0	25.4
123.0	25.5
124.0	25.4
125.0	25.5
126.0	26.2
127.0	26.6
128.0	27.3
129.0	27.4
130.0	27.1
131.0	26.9
132.0	26.9
133.0	26.8
134.0	27.1
135.0	27.5
136.0	28.1
137.0	28.2
138.0	28.3
139.0	28.4
140.0	28.5
141.0	28.8
142.0	29.1
143.0	29.4
144.0	30.0
145.0	30.7
146.0	31.3
147.0	32.0
148.0	32.4
149.0	32.7

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

150.0	32.9
151.0	33.3
152.0	33.8
153.0	34.1
154.0	34.3
155.0	34.9
156.0	35.0
157.0	35.2
158.0	35.4
159.0	35.7
160.0	36.0
161.0	36.3
162.0	36.4
163.0	36.7
164.0	37.1
165.0	37.4
166.0	37.9
167.0	38.1
168.0	38.3
169.0	38.5
170.0	38.8
171.0	39.1
172.0	39.3
173.0	39.7
174.0	40.2
175.0	40.6
176.0	41.2
177.0	42.0
178.0	43.1
179.0	44.1
180.0	44.8
181.0	45.4
182.0	46.0
183.0	46.6
184.0	47.5
185.0	48.6
186.0	49.5
187.0	50.1
188.0	50.7
189.0	51.3
190.0	51.8
191.0	52.0
192.0	52.1
193.0	52.0
194.0	51.8
195.0	51.7
196.0	51.6
197.0	51.7
198.0	51.6
199.0	51.5
200.0	51.5
201.0	51.0
202.0	50.3
203.0	49.5
204.0	48.8
205.0	48.2
206.0	47.8

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

207.0	47.4
208.0	47.0
209.0	46.5
210.0	46.2
211.0	45.9
212.0	45.4
213.0	44.9
214.0	44.6
215.0	44.6
216.0	44.7
217.0	44.5
218.0	44.7
219.0	44.7
220.0	44.6
221.0	44.2
222.0	44.1
223.0	44.1
224.0	44.0
225.0	43.6
226.0	43.5
227.0	43.6
228.0	43.5
229.0	43.2
230.0	42.8
231.0	42.7
232.0	42.7
233.0	42.5
234.0	42.5
235.0	42.4
236.0	42.2
237.0	42.3
238.0	42.4
239.0	42.3
240.0	42.1
241.0	41.8
242.0	41.7
243.0	42.0
244.0	42.1
245.0	42.2
246.0	42.0
247.0	41.9
248.0	41.6
249.0	41.5
250.0	41.5
251.0	41.6
252.0	41.8
253.0	42.4
254.0	42.6
255.0	42.8
256.0	42.6
257.0	42.2
258.0	41.8
259.0	41.4
260.0	41.6
261.0	41.8
262.0	41.8
263.0	41.7

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

264.0	41.6
265.0	41.7
266.0	42.2
267.0	42.3
268.0	42.1
269.0	41.9
270.0	41.8
271.0	41.7
272.0	41.7
273.0	41.7
274.0	41.7
275.0	41.7
276.0	41.7
277.0	42.0
278.0	41.9
279.0	41.4
280.0	41.2
281.0	41.3
282.0	41.6
283.0	42.0
284.0	42.0
285.0	42.1
286.0	42.4
287.0	42.5
288.0	42.6
289.0	42.6
290.0	42.7
291.0	42.6
292.0	42.4
293.0	42.7
294.0	43.3
295.0	44.0
296.0	44.5
297.0	44.7
298.0	44.8
299.0	44.7
300.0	44.8
301.0	45.5
302.0	45.7
303.0	45.5
304.0	45.5
305.0	45.1
306.0	44.9
307.0	44.7
308.0	44.6
309.0	44.9
310.0	45.2
311.0	45.6
312.0	46.2
313.0	47.0
314.0	47.8
315.0	48.4
316.0	48.6
317.0	48.7
318.0	48.9
319.0	49.1
320.0	49.3

WJWV-FM Channel 215 C1 (License) Distance to Contour Tabulation

321.0	49.4
322.0	49.5
323.0	49.7
324.0	49.9
325.0	50.1
326.0	50.2
327.0	50.3
328.0	50.4
329.0	50.6
330.0	50.7
331.0	50.6
332.0	50.5
333.0	50.4
334.0	50.3
335.0	50.2
336.0	50.1
337.0	49.9
338.0	49.7
339.0	49.3
340.0	49.0
341.0	48.6
342.0	48.3
343.0	48.0
344.0	47.6
345.0	47.2
346.0	46.9
347.0	46.6
348.0	46.3
349.0	46.0
350.0	45.6
351.0	45.0
352.0	44.4
353.0	44.0
354.0	43.5
355.0	43.0
356.0	42.5
357.0	42.0
358.0	41.6
359.0	41.0

## WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

Call Letters: WJWV-FM Proposed  
Latitude: 31-36-16 N  
Longitude: 085-02-02 W  
ERP: 85.00 kW  
Channel: 215  
Frequency: 90.9 MHz  
AMSL Height: 166.0 m  
Elevation: 117.0 m  
Horiz. Antenna Pattern: Directional

Type of contour: FCC  
Location Variability: 50.0 %  
Time Variability: 50.0 %  
# of Radials Calculated: 360  
Field Strength: 60.00 dBuV/m

Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)
-----	-----
0.0	40.2
1.0	39.3
2.0	38.3
3.0	37.5
4.0	36.7
5.0	36.0
6.0	35.5
7.0	34.7
8.0	33.9
9.0	33.2
10.0	32.6
11.0	31.8
12.0	31.5
13.0	31.4
14.0	30.7
15.0	30.0
16.0	29.8
17.0	29.4
18.0	28.6
19.0	28.1
20.0	27.9
21.0	28.0
22.0	27.9
23.0	27.9
24.0	28.1
25.0	28.0
26.0	28.2
27.0	28.0
28.0	28.2
29.0	28.8
30.0	28.4
31.0	27.7
32.0	26.9
33.0	26.5
34.0	26.3
35.0	26.2
36.0	26.0

WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

37.0	26.0
38.0	26.2
39.0	26.3
40.0	26.2
41.0	25.8
42.0	25.5
43.0	25.5
44.0	25.3
45.0	24.8
46.0	24.4
47.0	24.4
48.0	24.6
49.0	25.0
50.0	25.4
51.0	25.5
52.0	25.4
53.0	25.4
54.0	25.0
55.0	23.8
56.0	22.9
57.0	22.8
58.0	22.8
59.0	22.7
60.0	22.3
61.0	21.8
62.0	21.1
63.0	20.7
64.0	21.0
65.0	21.6
66.0	22.0
67.0	22.2
68.0	22.4
69.0	22.6
70.0	22.2
71.0	21.8
72.0	21.6
73.0	21.4
74.0	21.3
75.0	21.3
76.0	21.2
77.0	20.9
78.0	20.6
79.0	20.4
80.0	20.1
81.0	19.8
82.0	19.6
83.0	19.4
84.0	19.3
85.0	19.2
86.0	19.2
87.0	19.1
88.0	18.9
89.0	18.6
90.0	18.0
91.0	18.1
92.0	18.3
93.0	18.5

WJVV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

94.0	18.7
95.0	19.0
96.0	19.1
97.0	19.2
98.0	19.4
99.0	19.7
100.0	20.0
101.0	20.3
102.0	20.6
103.0	21.0
104.0	21.3
105.0	21.7
106.0	22.0
107.0	22.1
108.0	22.3
109.0	22.6
110.0	23.0
111.0	23.2
112.0	23.3
113.0	23.6
114.0	23.7
115.0	24.1
116.0	24.5
117.0	24.6
118.0	24.8
119.0	25.0
120.0	25.2
121.0	25.3
122.0	25.4
123.0	25.5
124.0	25.4
125.0	25.5
126.0	26.2
127.0	26.6
128.0	27.3
129.0	27.4
130.0	27.1
131.0	26.9
132.0	26.9
133.0	26.8
134.0	27.1
135.0	27.5
136.0	28.1
137.0	28.2
138.0	28.3
139.0	28.4
140.0	28.5
141.0	28.8
142.0	29.1
143.0	29.4
144.0	30.0
145.0	30.7
146.0	31.3
147.0	32.0
148.0	32.4
149.0	32.7
150.0	32.9

WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

151.0	33.3
152.0	33.8
153.0	34.1
154.0	34.3
155.0	34.9
156.0	35.0
157.0	35.2
158.0	35.4
159.0	35.7
160.0	36.0
161.0	36.3
162.0	36.4
163.0	36.7
164.0	37.1
165.0	37.4
166.0	37.9
167.0	38.1
168.0	38.3
169.0	38.5
170.0	38.8
171.0	39.1
172.0	39.3
173.0	39.7
174.0	40.2
175.0	40.6
176.0	41.2
177.0	42.0
178.0	43.1
179.0	44.1
180.0	44.8
181.0	45.4
182.0	46.0
183.0	46.6
184.0	47.5
185.0	48.6
186.0	49.5
187.0	50.1
188.0	50.7
189.0	51.3
190.0	51.8
191.0	52.0
192.0	52.1
193.0	52.0
194.0	51.8
195.0	51.7
196.0	51.6
197.0	51.7
198.0	51.6
199.0	51.5
200.0	51.5
201.0	51.0
202.0	50.3
203.0	49.5
204.0	48.8
205.0	48.2
206.0	47.8
207.0	47.4

WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

208.0	47.0
209.0	46.5
210.0	46.2
211.0	45.9
212.0	45.4
213.0	44.9
214.0	44.6
215.0	44.6
216.0	44.7
217.0	44.5
218.0	44.7
219.0	44.7
220.0	44.6
221.0	44.2
222.0	44.1
223.0	44.1
224.0	44.0
225.0	43.6
226.0	43.5
227.0	43.6
228.0	43.5
229.0	43.2
230.0	42.8
231.0	42.7
232.0	42.7
233.0	42.5
234.0	42.5
235.0	42.4
236.0	42.2
237.0	42.3
238.0	42.4
239.0	42.3
240.0	42.1
241.0	41.8
242.0	41.7
243.0	42.0
244.0	42.1
245.0	42.2
246.0	42.0
247.0	41.9
248.0	41.6
249.0	41.5
250.0	41.5
251.0	41.6
252.0	41.8
253.0	42.4
254.0	42.6
255.0	42.8
256.0	42.6
257.0	42.2
258.0	41.8
259.0	41.4
260.0	41.6
261.0	41.8
262.0	41.8
263.0	41.7
264.0	41.6

WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

265.0	41.7
266.0	42.2
267.0	42.3
268.0	42.1
269.0	41.9
270.0	41.8
271.0	41.7
272.0	41.7
273.0	41.7
274.0	41.7
275.0	41.7
276.0	41.7
277.0	42.0
278.0	41.9
279.0	41.4
280.0	41.2
281.0	41.3
282.0	41.6
283.0	42.0
284.0	42.0
285.0	42.1
286.0	42.4
287.0	42.5
288.0	42.6
289.0	42.6
290.0	42.7
291.0	42.6
292.0	42.4
293.0	42.7
294.0	43.3
295.0	44.0
296.0	44.5
297.0	44.7
298.0	44.8
299.0	44.7
300.0	44.8
301.0	45.5
302.0	45.7
303.0	45.5
304.0	45.5
305.0	45.1
306.0	44.9
307.0	44.7
308.0	44.6
309.0	44.9
310.0	45.2
311.0	45.6
312.0	46.2
313.0	47.0
314.0	47.8
315.0	48.4
316.0	48.6
317.0	48.7
318.0	48.9
319.0	49.1
320.0	49.3
321.0	49.4

WJWV-FM Channel 215 C1 (Proposed) Distance to Contour Tabulation

322.0	49.5
323.0	49.7
324.0	49.9
325.0	50.1
326.0	50.2
327.0	50.3
328.0	50.4
329.0	50.6
330.0	50.7
331.0	50.6
332.0	50.5
333.0	50.4
334.0	50.3
335.0	50.2
336.0	50.1
337.0	49.9
338.0	49.7
339.0	49.3
340.0	49.0
341.0	48.6
342.0	48.3
343.0	48.0
344.0	47.6
345.0	47.2
346.0	46.9
347.0	46.6
348.0	46.3
349.0	46.0
350.0	45.6
351.0	45.0
352.0	44.4
353.0	44.0
354.0	43.5
355.0	43.0
356.0	42.5
357.0	42.0
358.0	41.6
359.0	41.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

<b>Radial</b>	<b>WJWV-FM LIC distance to contours (km)</b>	<b>WJWV-FM Prop distance to contours (km)</b>	<b>PASS OR FAIL</b>	<b>Difference</b>
0	40.2	40.2	PASS	0.0
1	39.3	39.3	PASS	0.0
2	38.3	38.3	PASS	0.0
3	37.5	37.5	PASS	0.0
4	36.7	36.7	PASS	0.0
5	36.0	36.0	PASS	0.0
6	35.5	35.5	PASS	0.0
7	34.7	34.7	PASS	0.0
8	33.9	33.9	PASS	0.0
9	33.2	33.2	PASS	0.0
10	32.6	32.6	PASS	0.0
11	31.8	31.8	PASS	0.0
12	31.5	31.5	PASS	0.0
13	31.4	31.4	PASS	0.0
14	30.7	30.7	PASS	0.0
15	30.0	30.0	PASS	0.0
16	29.8	29.8	PASS	0.0
17	29.4	29.4	PASS	0.0
18	28.6	28.6	PASS	0.0
19	28.1	28.1	PASS	0.0
20	27.9	27.9	PASS	0.0
21	28.0	28.0	PASS	0.0
22	27.9	27.9	PASS	0.0
23	27.9	27.9	PASS	0.0
24	28.1	28.1	PASS	0.0
25	28.0	28.0	PASS	0.0
26	28.2	28.2	PASS	0.0
27	28.0	28.0	PASS	0.0
28	28.2	28.2	PASS	0.0
29	28.8	28.8	PASS	0.0
30	28.4	28.4	PASS	0.0
31	27.7	27.7	PASS	0.0
32	26.9	26.9	PASS	0.0
33	26.5	26.5	PASS	0.0
34	26.3	26.3	PASS	0.0
35	26.2	26.2	PASS	0.0
36	26.0	26.0	PASS	0.0
37	26.0	26.0	PASS	0.0
38	26.2	26.2	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

39	26.3	26.3	PASS	0.0
40	26.2	26.2	PASS	0.0
41	25.8	25.8	PASS	0.0
42	25.5	25.5	PASS	0.0
43	25.5	25.5	PASS	0.0
44	25.3	25.3	PASS	0.0
45	24.8	24.8	PASS	0.0
46	24.4	24.4	PASS	0.0
47	24.4	24.4	PASS	0.0
48	24.6	24.6	PASS	0.0
49	25.0	25.0	PASS	0.0
50	25.4	25.4	PASS	0.0
51	25.5	25.5	PASS	0.0
52	25.4	25.4	PASS	0.0
53	25.4	25.4	PASS	0.0
54	25.0	25.0	PASS	0.0
55	23.8	23.8	PASS	0.0
56	22.9	22.9	PASS	0.0
57	22.8	22.8	PASS	0.0
58	22.8	22.8	PASS	0.0
59	22.7	22.7	PASS	0.0
60	22.3	22.3	PASS	0.0
61	21.8	21.8	PASS	0.0
62	21.1	21.1	PASS	0.0
63	20.7	20.7	PASS	0.0
64	21.0	21.0	PASS	0.0
65	21.6	21.6	PASS	0.0
66	22.0	22.0	PASS	0.0
67	22.2	22.2	PASS	0.0
68	22.4	22.4	PASS	0.0
69	22.6	22.6	PASS	0.0
70	22.2	22.2	PASS	0.0
71	21.8	21.8	PASS	0.0
72	21.6	21.6	PASS	0.0
73	21.4	21.4	PASS	0.0
74	21.3	21.3	PASS	0.0
75	21.3	21.3	PASS	0.0
76	21.2	21.2	PASS	0.0
77	20.9	20.9	PASS	0.0
78	20.6	20.6	PASS	0.0
79	20.4	20.4	PASS	0.0
80	20.1	20.1	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

81	19.8	19.8	PASS	0.0
82	19.6	19.6	PASS	0.0
83	19.4	19.4	PASS	0.0
84	19.3	19.3	PASS	0.0
85	19.2	19.2	PASS	0.0
86	19.2	19.2	PASS	0.0
87	19.1	19.1	PASS	0.0
88	18.9	18.9	PASS	0.0
89	18.6	18.6	PASS	0.0
90	18.0	18.0	PASS	0.0
91	18.1	18.1	PASS	0.0
92	18.3	18.3	PASS	0.0
93	18.5	18.5	PASS	0.0
94	18.7	18.7	PASS	0.0
95	19.0	19.0	PASS	0.0
96	19.1	19.1	PASS	0.0
97	19.2	19.2	PASS	0.0
98	19.4	19.4	PASS	0.0
99	19.7	19.7	PASS	0.0
100	20.0	20.0	PASS	0.0
101	20.3	20.3	PASS	0.0
102	20.6	20.6	PASS	0.0
103	21.0	21.0	PASS	0.0
104	21.3	21.3	PASS	0.0
105	21.7	21.7	PASS	0.0
106	22.0	22.0	PASS	0.0
107	22.1	22.1	PASS	0.0
108	22.3	22.3	PASS	0.0
109	22.6	22.6	PASS	0.0
110	23.0	23.0	PASS	0.0
111	23.2	23.2	PASS	0.0
112	23.3	23.3	PASS	0.0
113	23.6	23.6	PASS	0.0
114	23.7	23.7	PASS	0.0
115	24.1	24.1	PASS	0.0
116	24.5	24.5	PASS	0.0
117	24.6	24.6	PASS	0.0
118	24.8	24.8	PASS	0.0
119	25.0	25.0	PASS	0.0
120	25.2	25.2	PASS	0.0
121	25.3	25.3	PASS	0.0
122	25.4	25.4	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

123	25.5	25.5	PASS	0.0
124	25.4	25.4	PASS	0.0
125	25.5	25.5	PASS	0.0
126	26.2	26.2	PASS	0.0
127	26.6	26.6	PASS	0.0
128	27.3	27.3	PASS	0.0
129	27.4	27.4	PASS	0.0
130	27.1	27.1	PASS	0.0
131	26.9	26.9	PASS	0.0
132	26.9	26.9	PASS	0.0
133	26.8	26.8	PASS	0.0
134	27.1	27.1	PASS	0.0
135	27.5	27.5	PASS	0.0
136	28.1	28.1	PASS	0.0
137	28.2	28.2	PASS	0.0
138	28.3	28.3	PASS	0.0
139	28.4	28.4	PASS	0.0
140	28.5	28.5	PASS	0.0
141	28.8	28.8	PASS	0.0
142	29.1	29.1	PASS	0.0
143	29.4	29.4	PASS	0.0
144	30.0	30.0	PASS	0.0
145	30.7	30.7	PASS	0.0
146	31.3	31.3	PASS	0.0
147	32.0	32.0	PASS	0.0
148	32.4	32.4	PASS	0.0
149	32.7	32.7	PASS	0.0
150	32.9	32.9	PASS	0.0
151	33.3	33.3	PASS	0.0
152	33.8	33.8	PASS	0.0
153	34.1	34.1	PASS	0.0
154	34.3	34.3	PASS	0.0
155	34.9	34.9	PASS	0.0
156	35.0	35.0	PASS	0.0
157	35.2	35.2	PASS	0.0
158	35.4	35.4	PASS	0.0
159	35.7	35.7	PASS	0.0
160	36.0	36.0	PASS	0.0
161	36.3	36.3	PASS	0.0
162	36.4	36.4	PASS	0.0
163	36.7	36.7	PASS	0.0
164	37.1	37.1	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

165	37.4	37.4	PASS	0.0
166	37.9	37.9	PASS	0.0
167	38.1	38.1	PASS	0.0
168	38.3	38.3	PASS	0.0
169	38.5	38.5	PASS	0.0
170	38.8	38.8	PASS	0.0
171	39.1	39.1	PASS	0.0
172	39.3	39.3	PASS	0.0
173	39.7	39.7	PASS	0.0
174	40.2	40.2	PASS	0.0
175	40.6	40.6	PASS	0.0
176	41.2	41.2	PASS	0.0
177	42.0	42.0	PASS	0.0
178	43.1	43.1	PASS	0.0
179	44.1	44.1	PASS	0.0
180	44.8	44.8	PASS	0.0
181	45.4	45.4	PASS	0.0
182	46.0	46.0	PASS	0.0
183	46.6	46.6	PASS	0.0
184	47.5	47.5	PASS	0.0
185	48.6	48.6	PASS	0.0
186	49.5	49.5	PASS	0.0
187	50.1	50.1	PASS	0.0
188	50.7	50.7	PASS	0.0
189	51.3	51.3	PASS	0.0
190	51.8	51.8	PASS	0.0
191	52.0	52.0	PASS	0.0
192	52.1	52.1	PASS	0.0
193	52.0	52.0	PASS	0.0
194	51.8	51.8	PASS	0.0
195	51.7	51.7	PASS	0.0
196	51.6	51.6	PASS	0.0
197	51.7	51.7	PASS	0.0
198	51.6	51.6	PASS	0.0
199	51.5	51.5	PASS	0.0
200	51.5	51.5	PASS	0.0
201	51.0	51.0	PASS	0.0
202	50.3	50.3	PASS	0.0
203	49.5	49.5	PASS	0.0
204	48.8	48.8	PASS	0.0
205	48.2	48.2	PASS	0.0
206	47.8	47.8	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

207	47.4	47.4	PASS	0.0
208	47.0	47.0	PASS	0.0
209	46.5	46.5	PASS	0.0
210	46.2	46.2	PASS	0.0
211	45.9	45.9	PASS	0.0
212	45.4	45.4	PASS	0.0
213	44.9	44.9	PASS	0.0
214	44.6	44.6	PASS	0.0
215	44.6	44.6	PASS	0.0
216	44.7	44.7	PASS	0.0
217	44.5	44.5	PASS	0.0
218	44.7	44.7	PASS	0.0
219	44.7	44.7	PASS	0.0
220	44.6	44.6	PASS	0.0
221	44.2	44.2	PASS	0.0
222	44.1	44.1	PASS	0.0
223	44.1	44.1	PASS	0.0
224	44.0	44.0	PASS	0.0
225	43.6	43.6	PASS	0.0
226	43.5	43.5	PASS	0.0
227	43.6	43.6	PASS	0.0
228	43.5	43.5	PASS	0.0
229	43.2	43.2	PASS	0.0
230	42.8	42.8	PASS	0.0
231	42.7	42.7	PASS	0.0
232	42.7	42.7	PASS	0.0
233	42.5	42.5	PASS	0.0
234	42.5	42.5	PASS	0.0
235	42.4	42.4	PASS	0.0
236	42.2	42.2	PASS	0.0
237	42.3	42.3	PASS	0.0
238	42.4	42.4	PASS	0.0
239	42.3	42.3	PASS	0.0
240	42.1	42.1	PASS	0.0
241	41.8	41.8	PASS	0.0
242	41.7	41.7	PASS	0.0
243	42.0	42.0	PASS	0.0
244	42.1	42.1	PASS	0.0
245	42.2	42.2	PASS	0.0
246	42.0	42.0	PASS	0.0
247	41.9	41.9	PASS	0.0
248	41.6	41.6	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

249	41.5	41.5	PASS	0.0
250	41.5	41.5	PASS	0.0
251	41.6	41.6	PASS	0.0
252	41.8	41.8	PASS	0.0
253	42.4	42.4	PASS	0.0
254	42.6	42.6	PASS	0.0
255	42.8	42.8	PASS	0.0
256	42.6	42.6	PASS	0.0
257	42.2	42.2	PASS	0.0
258	41.8	41.8	PASS	0.0
259	41.4	41.4	PASS	0.0
260	41.6	41.6	PASS	0.0
261	41.8	41.8	PASS	0.0
262	41.8	41.8	PASS	0.0
263	41.7	41.7	PASS	0.0
264	41.6	41.6	PASS	0.0
265	41.7	41.7	PASS	0.0
266	42.2	42.2	PASS	0.0
267	42.3	42.3	PASS	0.0
268	42.1	42.1	PASS	0.0
269	41.9	41.9	PASS	0.0
270	41.8	41.8	PASS	0.0
271	41.7	41.7	PASS	0.0
272	41.7	41.7	PASS	0.0
273	41.7	41.7	PASS	0.0
274	41.7	41.7	PASS	0.0
275	41.7	41.7	PASS	0.0
276	41.7	41.7	PASS	0.0
277	42.0	42.0	PASS	0.0
278	41.9	41.9	PASS	0.0
279	41.4	41.4	PASS	0.0
280	41.2	41.2	PASS	0.0
281	41.3	41.3	PASS	0.0
282	41.6	41.6	PASS	0.0
283	42.0	42.0	PASS	0.0
284	42.0	42.0	PASS	0.0
285	42.1	42.1	PASS	0.0
286	42.4	42.4	PASS	0.0
287	42.5	42.5	PASS	0.0
288	42.6	42.6	PASS	0.0
289	42.6	42.6	PASS	0.0
290	42.7	42.7	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

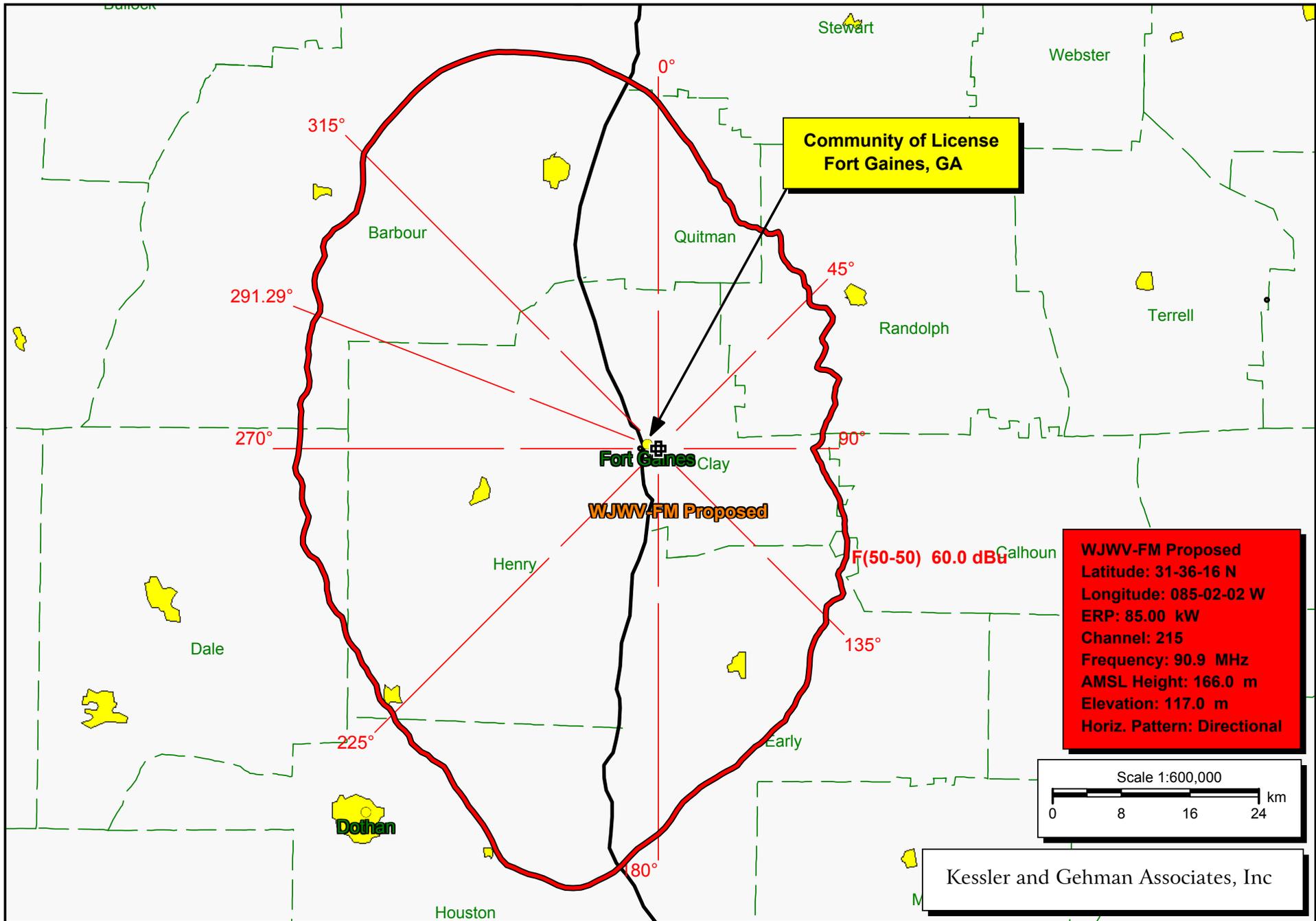
291	42.6	42.6	PASS	0.0
292	42.4	42.4	PASS	0.0
293	42.7	42.7	PASS	0.0
294	43.3	43.3	PASS	0.0
295	44.0	44.0	PASS	0.0
296	44.5	44.5	PASS	0.0
297	44.7	44.7	PASS	0.0
298	44.8	44.8	PASS	0.0
299	44.7	44.7	PASS	0.0
300	44.8	44.8	PASS	0.0
301	45.5	45.5	PASS	0.0
302	45.7	45.7	PASS	0.0
303	45.5	45.5	PASS	0.0
304	45.5	45.5	PASS	0.0
305	45.1	45.1	PASS	0.0
306	44.9	44.9	PASS	0.0
307	44.7	44.7	PASS	0.0
308	44.6	44.6	PASS	0.0
309	44.9	44.9	PASS	0.0
310	45.2	45.2	PASS	0.0
311	45.6	45.6	PASS	0.0
312	46.2	46.2	PASS	0.0
313	47.0	47.0	PASS	0.0
314	47.8	47.8	PASS	0.0
315	48.4	48.4	PASS	0.0
316	48.6	48.6	PASS	0.0
317	48.7	48.7	PASS	0.0
318	48.9	48.9	PASS	0.0
319	49.1	49.1	PASS	0.0
320	49.3	49.3	PASS	0.0
321	49.4	49.4	PASS	0.0
322	49.5	49.5	PASS	0.0
323	49.7	49.7	PASS	0.0
324	49.9	49.9	PASS	0.0
325	50.1	50.1	PASS	0.0
326	50.2	50.2	PASS	0.0
327	50.3	50.3	PASS	0.0
328	50.4	50.4	PASS	0.0
329	50.6	50.6	PASS	0.0
330	50.7	50.7	PASS	0.0
331	50.6	50.6	PASS	0.0
332	50.5	50.5	PASS	0.0

**WJWV-FM (LIC vs. Proposed) Distance to Contour Comparison Chart**

333	50.4	50.4	PASS	0.0
334	50.3	50.3	PASS	0.0
335	50.2	50.2	PASS	0.0
336	50.1	50.1	PASS	0.0
337	49.9	49.9	PASS	0.0
338	49.7	49.7	PASS	0.0
339	49.3	49.3	PASS	0.0
340	49.0	49.0	PASS	0.0
341	48.6	48.6	PASS	0.0
342	48.3	48.3	PASS	0.0
343	48.0	48.0	PASS	0.0
344	47.6	47.6	PASS	0.0
345	47.2	47.2	PASS	0.0
346	46.9	46.9	PASS	0.0
347	46.6	46.6	PASS	0.0
348	46.3	46.3	PASS	0.0
349	46.0	46.0	PASS	0.0
350	45.6	45.6	PASS	0.0
351	45.0	45.0	PASS	0.0
352	44.4	44.4	PASS	0.0
353	44.0	44.0	PASS	0.0
354	43.5	43.5	PASS	0.0
355	43.0	43.0	PASS	0.0
356	42.5	42.5	PASS	0.0
357	42.0	42.0	PASS	0.0
358	41.6	41.6	PASS	0.0
359	41.0	41.0	PASS	0.0

2 dB/10 deg and 15 dB front-to-back ratio analysis

AZ	Az Pat	kW	dBk	2 dB	
0	0.690	40.5	16.07	1.71	PASS
10	0.550	25.7	14.10	1.97	PASS
20	0.440	16.5	12.16	1.94	PASS
30	0.350	10.4	10.18	1.99	PASS
40	0.280	6.7	8.24	1.94	PASS
50	0.250	5.3	7.25	0.98	PASS
60	0.220	4.1	6.14	1.11	PASS
70	0.210	3.7	5.74	0.40	PASS
80	0.220	4.1	6.14	0.40	PASS
90	0.230	4.5	6.53	0.39	PASS
100	0.250	5.3	7.25	0.72	PASS
110	0.280	6.7	8.24	0.98	PASS
120	0.310	8.2	9.12	0.88	PASS
130	0.340	9.8	9.92	0.80	PASS
140	0.380	12.3	10.89	0.97	PASS
150	0.450	17.2	12.36	1.47	PASS
160	0.530	23.9	13.78	1.42	PASS
170	0.650	35.9	15.55	1.77	PASS
180	0.790	53.0	17.25	1.69	PASS
190	0.930	73.5	18.66	1.42	PASS
200	1.000	85.0	19.29	0.63	PASS
210	0.960	78.3	18.94	0.35	PASS
220	0.910	70.4	18.48	0.46	PASS
230	0.900	68.9	18.38	0.10	PASS
240	0.920	71.9	18.57	0.19	PASS
250	0.970	80.0	19.03	0.46	PASS
260	1.000	85.0	19.29	0.26	PASS
270	1.000	85.0	19.29	0.00	PASS
280	1.000	85.0	19.29	0.00	PASS
290	0.980	81.6	19.12	0.18	PASS
300	0.910	70.4	18.48	0.64	PASS
310	0.880	65.8	18.18	0.29	PASS
320	0.930	73.5	18.66	0.48	PASS
330	0.990	83.3	19.21	0.54	PASS
340	0.950	76.7	18.85	0.36	PASS
350	0.840	60.0	17.78	1.07	PASS
Minimum	0.210	3.7	5.74	0.00	
Maximum	1.000	85.0	19.29	1.99	
15 dB Test:			PASS	13.56	



WJWV-FM (License) vs. WJWV-FM (Proposed)

## TOWAIR Determination Results

### \*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

<b>DETERMINATION Results</b>	
<b>Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.</b>	
<b>Your Specifications</b>	
<b>NAD83 Coordinates</b>	
Latitude	31-36-16.0 north
Longitude	085-02-02.0 west
<b>Measurements (Meters)</b>	
Overall Structure Height (AGL)	59
Support Structure Height (AGL)	59
Site Elevation (AMSL)	117
<b>Structure Type</b>	
TOWER - Free standing or Guyed Structure used for Communications Purposes	

#### [Tower Construction Notification](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

Note: Notification does NOT replace [Section 106 Consultation](#).

CLOSE WINDOW