

WNEH-DT CHANNEL 18 GREENWOOD,  
SOUTH CAROLINA MINOR MODIFICATION  
OF CONSTRUCTION PERMIT APPLICATION  
TO CHANGE: 1) ANTENNA SYSTEM; AND 2)  
OVERALL HEIGHT OF SUPPORT STRUCTURE  
*(SOUTH CAROLINA EDUCATIONAL TELEVISION COMMISSION)*

KESSLER & GEHMAN ASSOCIATES, INC.  
TELECOMMUNICATIONS CONSULTING ENGINEERS

20050111

*Prepared by William T. Godfrey, Jr.*

KG&A

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

**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 MODIFICATION OF CONSTRUCTION PERMIT APPLICATION TO MAKE CHANGES TO THE SOUTH CAROLINA EDUCATIONAL TELEVISION COMMISSION DIGITAL BROADCAST FACILITY'S CONSTRUCTION PERMIT (BPEDT-20000501AGM), WNEH-DT CHANNEL 18, GREENWOOD, SOUTH CAROLINA.**

The firm Kessler and Gehman Associates, Inc., ("KGA") has been retained by the South Carolina Educational Television Commission ("SCETC"), Columbia, South Carolina in order to prepare engineering studies and the engineering portion of a minor modification of construction permit application for the authorized WNEH-DT Channel 18 digital television broadcast facility in order to correct site coordinates and make changes to the following: 1) antenna system; 2) and 2) overall height of support structure.

**Discussion**

The SCETC currently has a construction permit (BPEDT-20000501AGM) to build and operate WNEH-DT on digital Channel 18 with an ERP of 50 kW at an antenna height radiation center of 199 meters Above Ground Level ("AGL") using a TCI model 888-8-32-ND nondirectional, top-mount antenna. The SCETC is licensed to operate WNEH-TV on analog Channel 38 with an ERP of 1,780 kW at an antenna height radiation center of 200 meters AGL using a horizontally polarized, top-mounted, nondirectional antenna. The authorized WNEH-DT transmitter site coordinates (NAD27) are: Latitude N 34°-22'-19" and Longitude W 82°-10'-04" however, the correct transmitter site coordinates (NAD27) are: Latitude N 34°-22'-19" and Longitude W 82°-10'-05" which means the longitude is off by one second. Apparently, the previous digital application was filed based on a NAD83-to-NAD27 conversion using the rounded Antenna Structure Registration ("ASR") coordinates rather than the NAD83-to-NAD27 conversion using the more precise coordinates that were filed with the Federal Aviation Administration ("FAA") using Form 7460-1 (98-ASO-3427-OE).

The digital channel allotted to the SCETC for WNEH-DT, Channel 18, is twenty channels below the licensed NTSC facility, Channel 38. Therefore, the SCETC awarded an antenna contract to procure a Dielectric model TUF-O4-14/56H-1-T broadband (D18/N38), nondirectional antenna for the WNEH digital and analog facilities in order to combine the digital and analog signals.

The proposed Dielectric model TUF-O4-14/56H-1-T nondirectional antenna is shorter in length than the existing WNEH-TV top-mounted nondirectional antenna, therefore, the overall height of the WNEH support structure will decrease by 2.2 meters and the authorized antenna height radiation center will not change for the digital facility. The change in antenna system will result in an omni-for-omni swap with a one-kilowatt ERP reduction to prevent the proposed facility's service area from exceeding the authorized facility's service area in any azimuthal direction (see Exhibits 9 through 12). Therefore, a waiver is not required with respect to the freeze on filing certain TV and DTV requests for allotment or service area changes (DA-04-2446).

Accordingly, this minor modification of construction permit application requests authorization to correct the transmitter site coordinates and to make the following changes: 1) change antennas from the authorized TCI model 888-8-32-ND broadband, nondirectional antenna to the proposed Dielectric model TUF-O4-14/56H-1-T broadband, nondirectional antenna; and 2) decrease the overall height of the support structure by 2.2 meters from the authorized height of 211.1 meters AGL (see Exhibit 14) to the proposed height of 208.9 meters AGL.

The FAA issued a Determination of No Hazard to Air Navigation on June 07, 2004 authorizing a 2.2-meter decrease to the overall height of the support structure (see Exhibit 13). It can be seen by referring to Exhibit 15 that the FAA 7460-1 Form filed with the FAA requested an overall height of 208.9 meters (685.4 feet); however, by referring to Exhibit 13 it can be seen that the FAA rounded 685.4 feet up to 686.0 feet.

Exhibit 8 is a principal community map demonstrating that the proposed WNEH-DT Channel 18 F(50,90) 48.0 dBuV/m enhanced principal community contour would completely encompass the principal community of Greenwood, SC.

Exhibit 9 is an FCC coverage contour map depicting the authorized F(50,90) 39.2 dBuV/m protected noise limited contour (black) and the proposed F(50,90) 39.2 dBuV/m protected noise

limited contour (red). It can be seen pictorially that the proposed noise limited contour would be completely encompassed by the authorized noise limited contour in all azimuthal directions.

Exhibit 10 is a distance to contour tabulation of the authorized WNEH-DT facility. This exhibit depicts the distance, in kilometers, from the transmitter to the authorized protected noise limited contour in all azimuthal directions.

Exhibit 11 is a distance to contour tabulation of the proposed WNEH-DT facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed protected noise limited contour in all azimuthal directions.

Exhibit 12 is a distance to contour comparison spread sheet which compares the distance from the transmitter to the protected noise limited contour of the authorized facility (Exhibit 10) and the proposed facility (Exhibit 11). The second column from the right depicts “PASS” if the proposed distance to contour values are less than or equal to the authorized distance to contour values or “FAIL” if the proposed distance to contour values are greater than the authorized distance to contour values. It can be seen that the authorized antenna distance to contour values are greater than or equal to the proposed distance to contour values in all azimuthal directions which verifies quantitatively that the authorized facility’s protected noise limited contour would completely encompass the proposed facility’s noise limited contour.

### **Interference Studies**

Interference studies are not required since the proposed protected noise limited contour would be completely encompassed by the licensed protected noise limited contour in all azimuthal directions.

### **Transmitter Site**

The proposed WNEH-DT antenna is a top-mount Dielectric model TUF-O4-14/56H-1-T horizontally polarized, nondirectional, broadband antenna. The tower is registered with the FCC and the registration number is 1059185. The support structure is located 3.5 miles northeast of Good Hope Church. The proposed antenna height radiation center is 199.4 meters AGL. The

height of the existing support structure will be decreased from the authorized overall height of 211.1 meters AGL to 208.9 meters AGL.

## **Exhibits**

Exhibits 1 and 2 represent WNEH's administration data, antenna and antenna structure specifications.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 and 5 display the elevation pattern and Exhibit 6 displays the elevation pattern tabulation.

Exhibit 7 depicts the location of the WNEH-DT site on a 7.5-Minute (Series) Topographic map.

Exhibit 8 depicts the proposed WNEH-DT enhanced principal community contour, boundaries of the principal community to be served, and the transmitting location with radials every 45°.

Exhibit 9 depicts the WNEH-DT Channel 18 authorized and proposed noise limited contours and demonstrates that the authorized service area would encompass the proposed service area in all azimuthal directions.

Exhibit 10 is a distance to contour tabulation of the WNEH-DT authorized facility. This exhibit depicts the distance, in kilometers, from the transmitter to the authorized protected noise limited contour in all azimuthal directions.

Exhibit 11 is a distance to contour tabulation of the proposed WNEH-DT facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed protected noise limited contour in all azimuthal directions.

Exhibit 12 is a distance to contour comparison tabulation spreadsheet depicting the authorized WNEH-DT facility and the proposed WNEH-DT facility. The spreadsheet demonstrates that the authorized protected noise limited contour would completely encompass the proposed protected noise limited contour.

Exhibit 13 is an FAA Notice of No Hazard to Air Navigation Determination.

Exhibit 14 is the WNEH Antenna Structure Registration.

Exhibit 15 is the latest FAA 7460-1 Form that was submitted to the FCC.

### **Environmental Impact**

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The DTV transmitter, 6-1/8 inch (75-ohm) EIA/DCA transmission line and antenna system would produce an ERP of 49.0 kW. It was determined that the maximum lobe of radiation from the base of the tower out to approximately 3,186.0 feet would occur at approximately 1,037.3 feet from the base of the tower (1,223.2-foot radial distance from the antenna center). At approximately 1,037.3 feet from the base of the tower, the depression angle of the main lobe would be 32.0° below the horizontal. At that point, the relative field would be 0.070 and the power density six feet above the ground would be 0.00006 mW/cm<sup>2</sup>. This is only 0.003% of the maximum permissible exposure (“MPE”) limits for Occupational/Controlled Exposure and only 0.017% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (“ANSI”). Since the proposed operation of WNEH-DT Channel 18 would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, WNEH-DT would not be considered a “significant contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the applicant 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.

## **Certification**

This technical statement was prepared by William T. Godfrey, Jr., Telecommunications 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.*  
WILLIAM T. GODFREY, JR.  
Telecommunications Technical Consultant

January 11, 2005

**WNEH-DT Channel 18**  
**Greenwood, South Carolina**

**ENGINEERING SPECIFICATIONS**

**A. Transmitter Site:**

Geographic coordinates (NAD27):

North Latitude .....	34° 22' 19"
West Longitude .....	82° 10' 05"

Transmitter Site:                      **3.5 miles northeast of Good Hope Church**

**B. Main Studio Site Address:**      **1101 George Rogers Boulevard**  
**Columbia, South Carolina 29201**

**Proposed Facility:**

DTV Channel	Number .....	18
	Frequency .....	494-500 MHz

**C. Antenna Height:**

Height of Site Above Mean Sea Level (AMSL) .....	212.4 M
Overall Height of Structure Above Ground .....	208.9 M
(including all appurtenances)	
Overall Height of Structure Above Mean Sea Level .....	421.3 M
(including all appurtenances)	
Height of Site Above Average Terrain .....	30.3 M
Antenna Height Radiation Center (R/C) Above Ground .....	199.4 M
Antenna Height R/C Above Mean Sea Level .....	411.8 M
Average of All Non-Odd Radials .....	182.1 M
Antenna Height R/C Above Average Terrain .....	229.8 M

**D. System Parameters – Horizontal Polarization:**

Transmitter Power Required: .....	2.3 kW
Maximum Power Input to Antenna: .....	1.8 kW
Transmission Line Loss: .....	0.73 dB
Combiner & Splitter Loss: .....	0.25 dB
Total System Loss: .....	0.98 dB
Transmission Line Efficiency: .....	84.5%
Combiner & Splitter Efficiency: .....	94.4%
Total System Efficiency: .....	79.8%
Maximum Antenna Gain in Beam Maximum: .....	14.27 dB
Maximum Antenna Gain in Horizontal Plane: .....	11.85 dB
Maximum Effective Radiated Power: .....	16.90 dBk
In Beam Maximum: .....	49.0 kW
Maximum Effective Radiated Power: .....	14.48 dBk
In Horizontal Plane: .....	28.1 kW



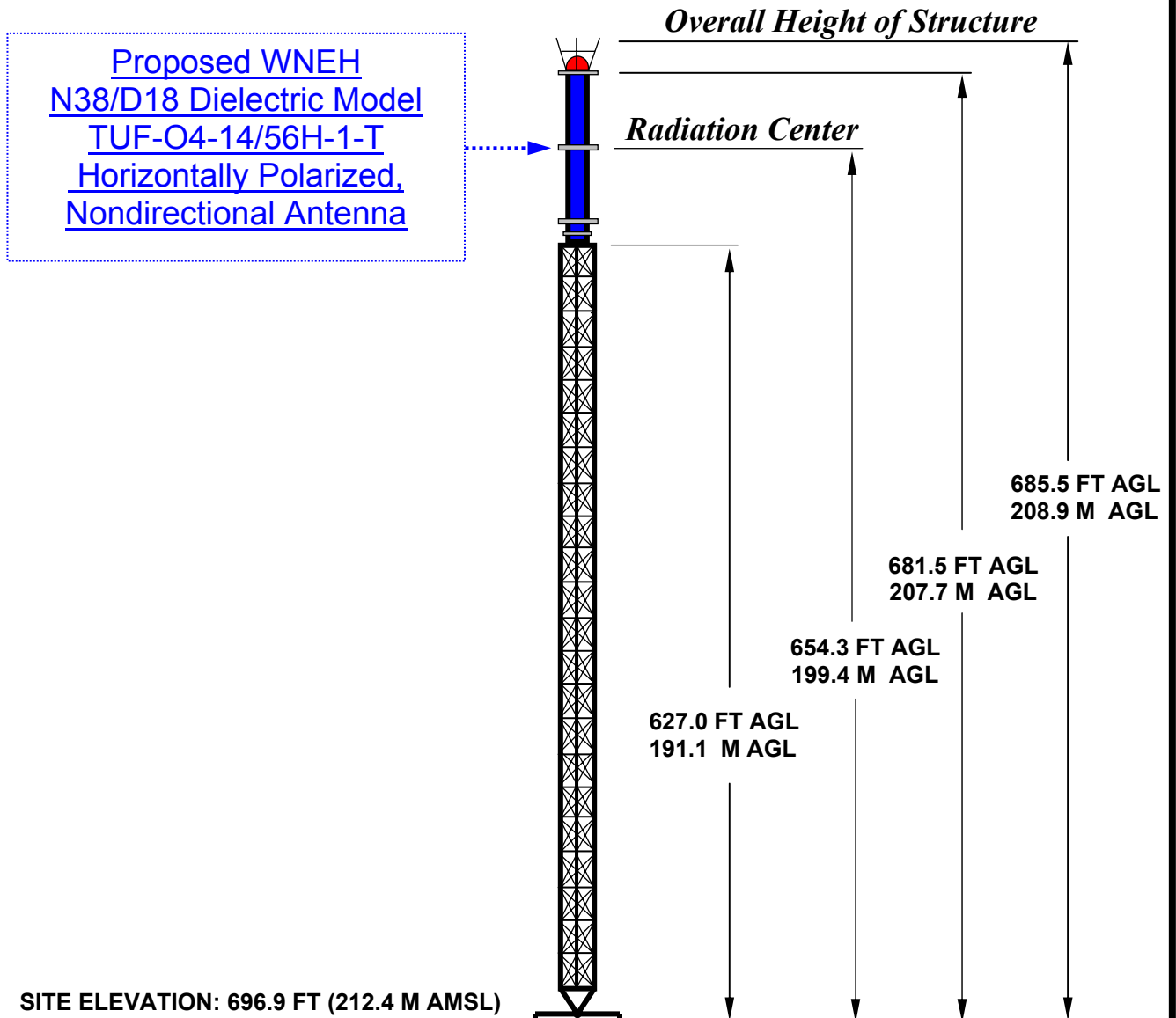
**WNEH-DT Channel 18**  
*Greenwood, South Carolina*

**DATA FOR PROPOSED NONDIRECTIONAL  
TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model TUF-O4-14/56H-1-T, Horizontally Polarized, Nondirectional, Top-mount, Broadband Antenna.
- B. **Electrical Beam Tilt:** 0.75°
- C. **Mechanical Beam Tilt:** None
- D. 

<b><u>Maximum Power Gain</u></b>	<b><u>Horizontal Polarization</u></b>
Maximum: 26.7	(14.27 dB)
Horizontal: 15.3	(11.85 dB)
- E. **Length:** 54.5 feet (16.6 meters) not including lightning protector.
- F. **Transmitter Power Output:** 2.3 kW
- G. **Null Fill:** 17.7%
- H. **Transmission Line:** 6-1/8" 75-ohm EIA/DCA
- I. **Transmission Line Loss:** 0.108 dB/100-feet
- J. **Total Transmission Line:** 677 feet (206.3 meters)
- K. **Transmission Line Attenuation:** 0.73 dB
- L. **Combiner Loss:** 0.25 dB
- M. **Total Antenna System Loss:** 0.98 dB

## ELEVATION VIEW



OVERALL HEIGHT AGL: 208.9 M  
OVERALL HEIGHT AMSL: 421.3 M  
RADIATION CENTER AGL: 199.4 M  
RADIATION CENTER AMSL: 411.8 M  
RADIATION CENTER HAAT: 229.8 M  
AVG OF ALL NON-ODD RADIALS: 182.1 M  
SITE HAAT: 30.3 M

### COORDINATES (NAD 27):

N. LATITUDE 34° 22' 19"  
W. LONGITUDE 82° 10' 05"

Antenna Structure Registration Number:  
1059185

**NOTE: NOT TO SCALE**

**KESSLER & GEHMAN**  
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507 N.W. 60th Street, Suite C  
Gainesville, Florida 32607

**WNEH-DT CHANNEL 18**  
**GREENWOOD, SOUTH CAROLINA**

20050106

EXHIBIT 3

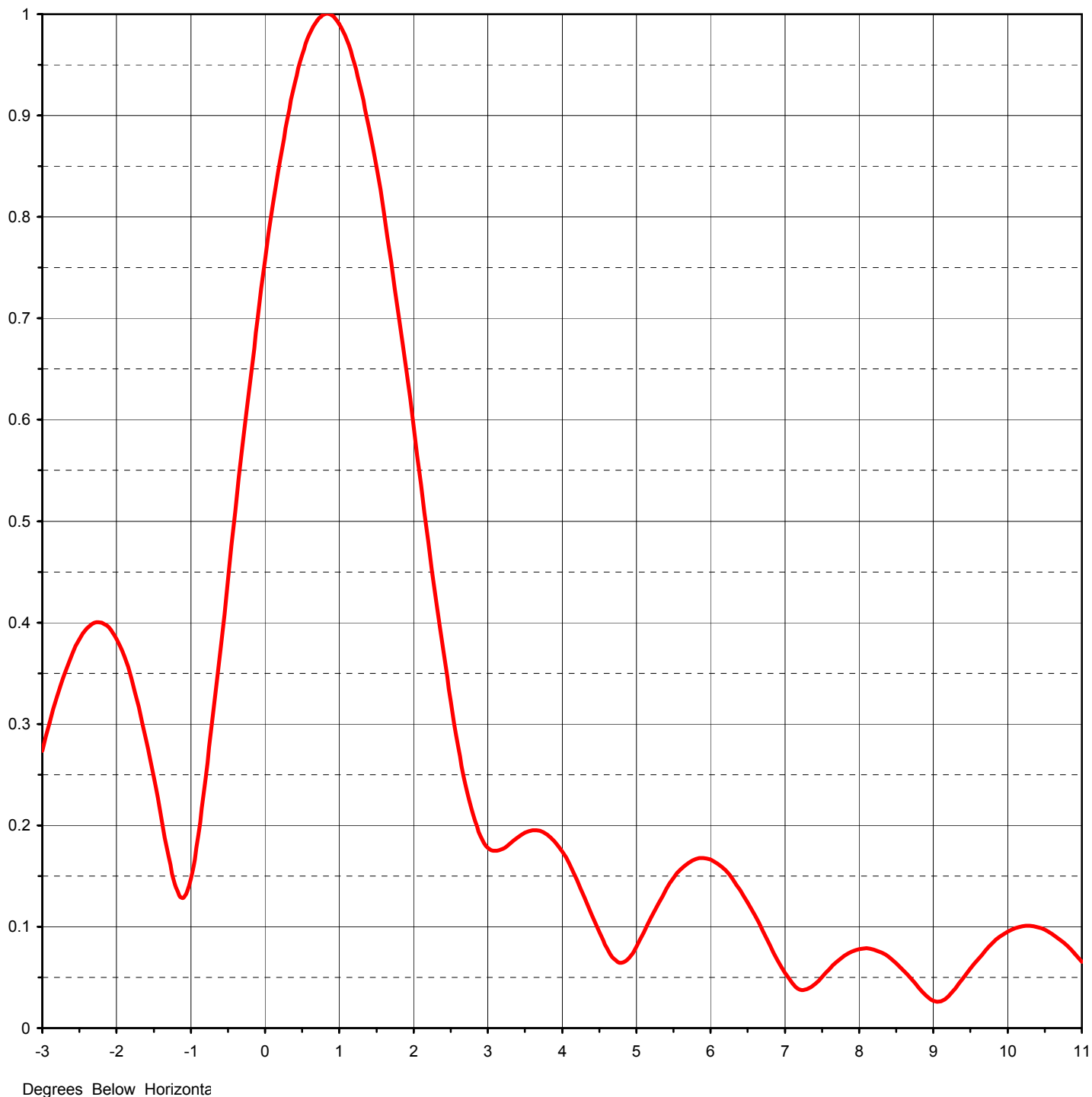


Proposal Number	<b>DCA-10416</b>	Revision:	<b>1</b>
Date	<b>19-Mar-04</b>		
Call Letters	<b>WNEH-DT</b>	Channel	<b>18</b>
Location	<b>Greenwood, SC</b>		
Customer	<b>SCETV</b>		
Antenna Type	<b>TUF-O4-14/56H-1-T</b>		

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>26.70</b>	<b>( 14.27 dB )</b>
RMS Gain at Horizontal	<b>15.30</b>	<b>( 11.85 dB )</b>
Calculated / Measured	<b>Calculated</b>	

Beam Tilt	<b>0.75 deg</b>
Frequency	<b>497.00 MHz</b>
Drawing #	<b>14U267075</b>



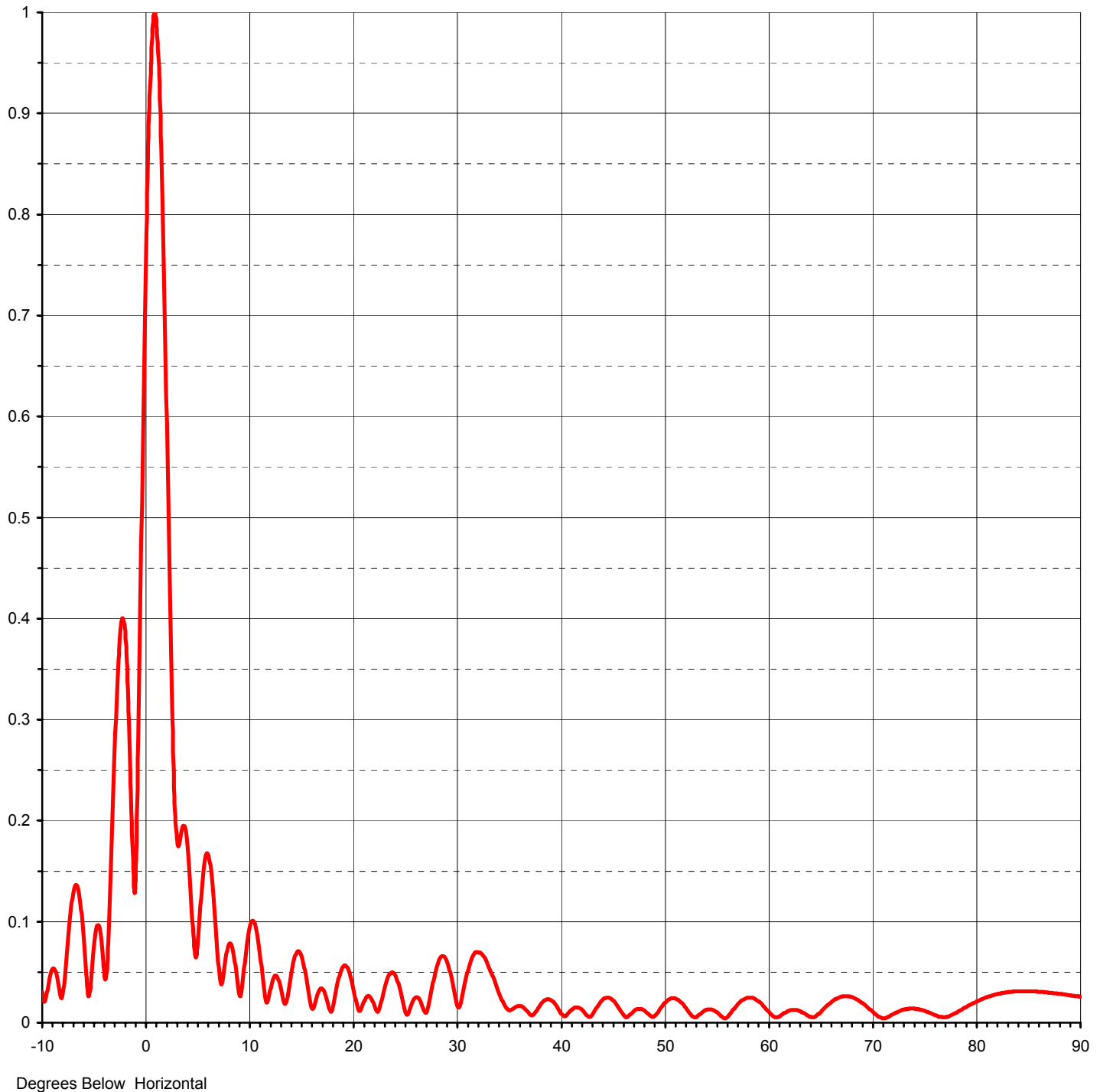


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Location	<b>Greenwood, SC</b>		
Customer	<b>SCETV</b>		
Antenna Type	<b>TUF-O4-14/56H-1-T</b>		

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RMS Gain at Main Lobe	<b>26.70</b>	<b>( 14.27 dB )</b>
RMS Gain at Horizontal	<b>15.30</b>	<b>( 11.85 dB )</b>
Calculated / Measured	<b>Calculated</b>	

Beam Tilt	<b>0.75 deg</b>
Frequency	<b>497.00 MHz</b>
Drawing #	<b>14U267075-90</b>





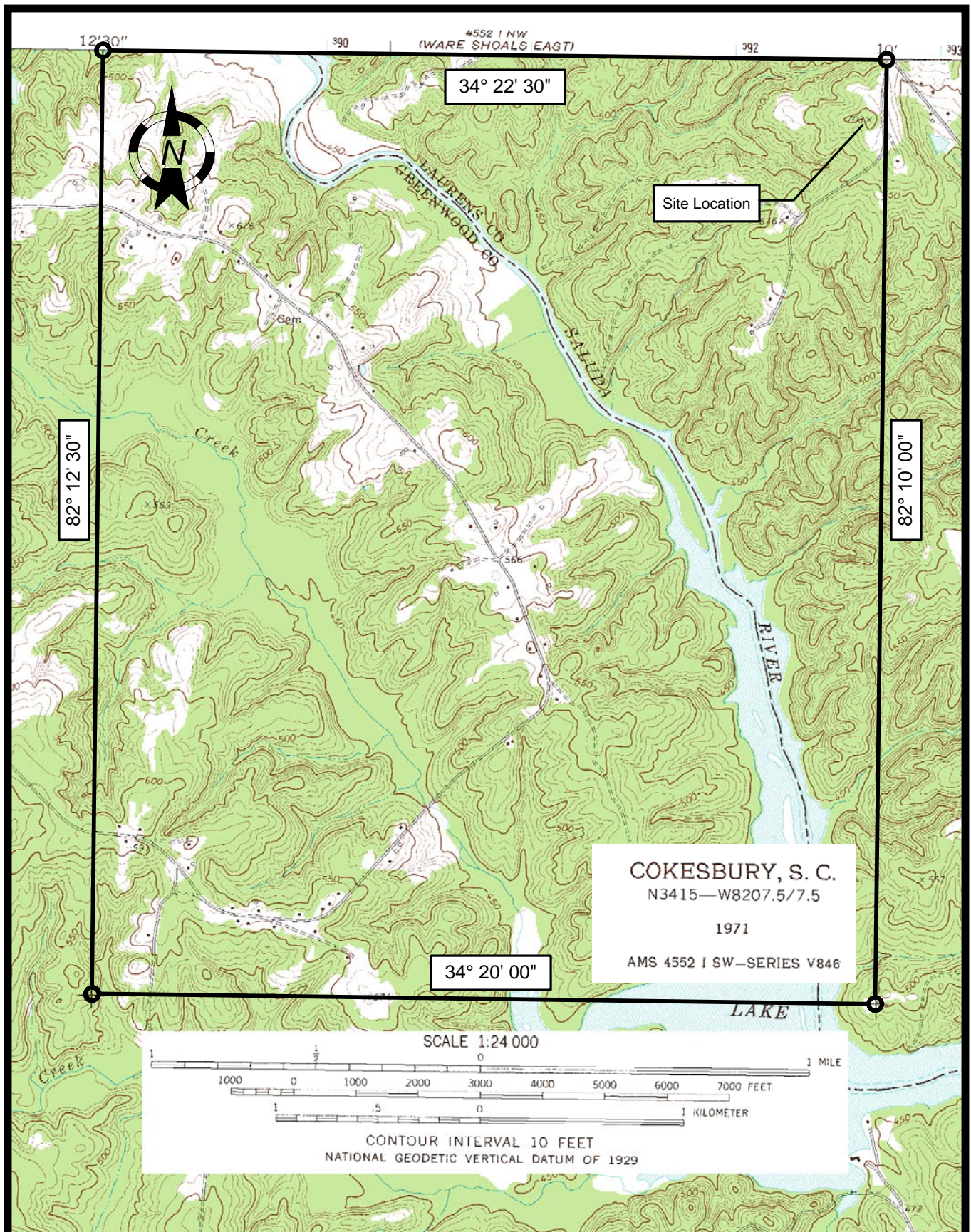
Proposal Number **DCA-10416** Revision: **1**  
Date **19-Mar-04**  
Call Letters **WNEH-DT** Channel **18**  
Location **Greenwood, SC**  
Customer **SCETV**  
Antenna Type **TUF-O4-14/56H-1-T**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **14U267075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.031	2.4	0.372	10.6	0.097	30.5	0.024	51.0	0.024	71.5	0.006
-9.5	0.032	2.6	0.278	10.8	0.087	31.0	0.048	51.5	0.021	72.0	0.009
-9.0	0.053	2.8	0.210	11.0	0.073	31.5	0.064	52.0	0.016	72.5	0.011
-8.5	0.041	3.0	0.178	11.5	0.031	32.0	0.070	52.5	0.009	73.0	0.013
-8.0	0.029	3.2	0.177	12.0	0.029	32.5	0.067	53.0	0.005	73.5	0.014
-7.5	0.084	3.4	0.188	12.5	0.046	33.0	0.058	53.5	0.009	74.0	0.014
-7.0	0.129	3.6	0.195	13.0	0.037	33.5	0.046	54.0	0.012	74.5	0.013
-6.5	0.131	3.8	0.191	13.5	0.018	34.0	0.032	54.5	0.013	75.0	0.012
-6.0	0.083	4.0	0.174	14.0	0.043	34.5	0.020	55.0	0.011	75.5	0.010
-5.5	0.026	4.2	0.146	14.5	0.067	35.0	0.013	55.5	0.007	76.0	0.007
-5.0	0.078	4.4	0.112	15.0	0.068	35.5	0.014	56.0	0.005	76.5	0.006
-4.5	0.094	4.6	0.079	15.5	0.046	36.0	0.016	56.5	0.011	77.0	0.005
-4.0	0.048	4.8	0.064	16.0	0.017	36.5	0.014	57.0	0.017	77.5	0.007
-3.5	0.120	5.0	0.080	16.5	0.024	37.0	0.009	57.5	0.022	78.0	0.010
-3.0	0.273	5.2	0.109	17.0	0.034	37.5	0.009	58.0	0.025	78.5	0.013
-2.8	0.327	5.4	0.137	17.5	0.023	38.0	0.017	58.5	0.024	79.0	0.016
-2.6	0.369	5.6	0.157	18.0	0.012	38.5	0.022	59.0	0.022	79.5	0.019
-2.4	0.394	5.8	0.167	18.5	0.037	39.0	0.023	59.5	0.017	80.0	0.021
-2.2	0.400	6.0	0.166	19.0	0.054	39.5	0.018	60.0	0.012	80.5	0.023
-2.0	0.384	6.2	0.156	19.5	0.054	40.0	0.010	60.5	0.006	81.0	0.025
-1.8	0.345	6.4	0.136	20.0	0.037	40.5	0.007	61.0	0.006	81.5	0.027
-1.6	0.284	6.6	0.111	20.5	0.014	41.0	0.012	61.5	0.009	82.0	0.028
-1.4	0.208	6.8	0.082	21.0	0.019	41.5	0.015	62.0	0.012	82.5	0.029
-1.2	0.139	7.0	0.054	21.5	0.026	42.0	0.014	62.5	0.013	83.0	0.030
-1.0	0.147	7.2	0.038	22.0	0.019	42.5	0.008	63.0	0.012	83.5	0.031
-0.8	0.246	7.4	0.043	22.5	0.012	43.0	0.007	63.5	0.009	84.0	0.031
-0.6	0.375	7.6	0.058	23.0	0.031	43.5	0.015	64.0	0.006	84.5	0.031
-0.4	0.510	7.8	0.071	23.5	0.047	44.0	0.022	64.5	0.006	85.0	0.031
-0.2	0.640	8.0	0.078	24.0	0.049	44.5	0.025	65.0	0.011	85.5	0.031
0.0	0.757	8.2	0.078	24.5	0.035	45.0	0.023	65.5	0.016	86.0	0.031
0.2	0.856	8.4	0.070	25.0	0.014	45.5	0.017	66.0	0.020	86.5	0.030
0.4	0.932	8.6	0.056	25.5	0.014	46.0	0.009	66.5	0.024	87.0	0.030
0.6	0.980	8.8	0.040	26.0	0.024	46.5	0.006	67.0	0.026	87.5	0.029
0.8	1.000	9.0	0.027	26.5	0.022	47.0	0.011	67.5	0.026	88.0	0.029
1.0	0.990	9.2	0.031	27.0	0.010	47.5	0.014	68.0	0.025	88.5	0.028
1.2	0.952	9.4	0.049	27.5	0.027	48.0	0.013	68.5	0.023	89.0	0.027
1.4	0.888	9.6	0.068	28.0	0.051	48.5	0.008	69.0	0.019	89.5	0.026
1.6	0.804	9.8	0.076	28.5	0.065	49.0	0.006	69.5	0.015	90.0	0.026
1.8	0.703	10.0	0.090	29.0	0.063	49.5	0.012	70.0	0.011		
2.0	0.593	10.2	0.098	29.5	0.045	50.0	0.019	70.5	0.006		
2.2	0.480	10.4	0.101	30.0	0.020	50.5	0.023	71.0	0.004		





**KESSLER & GEHMAN**

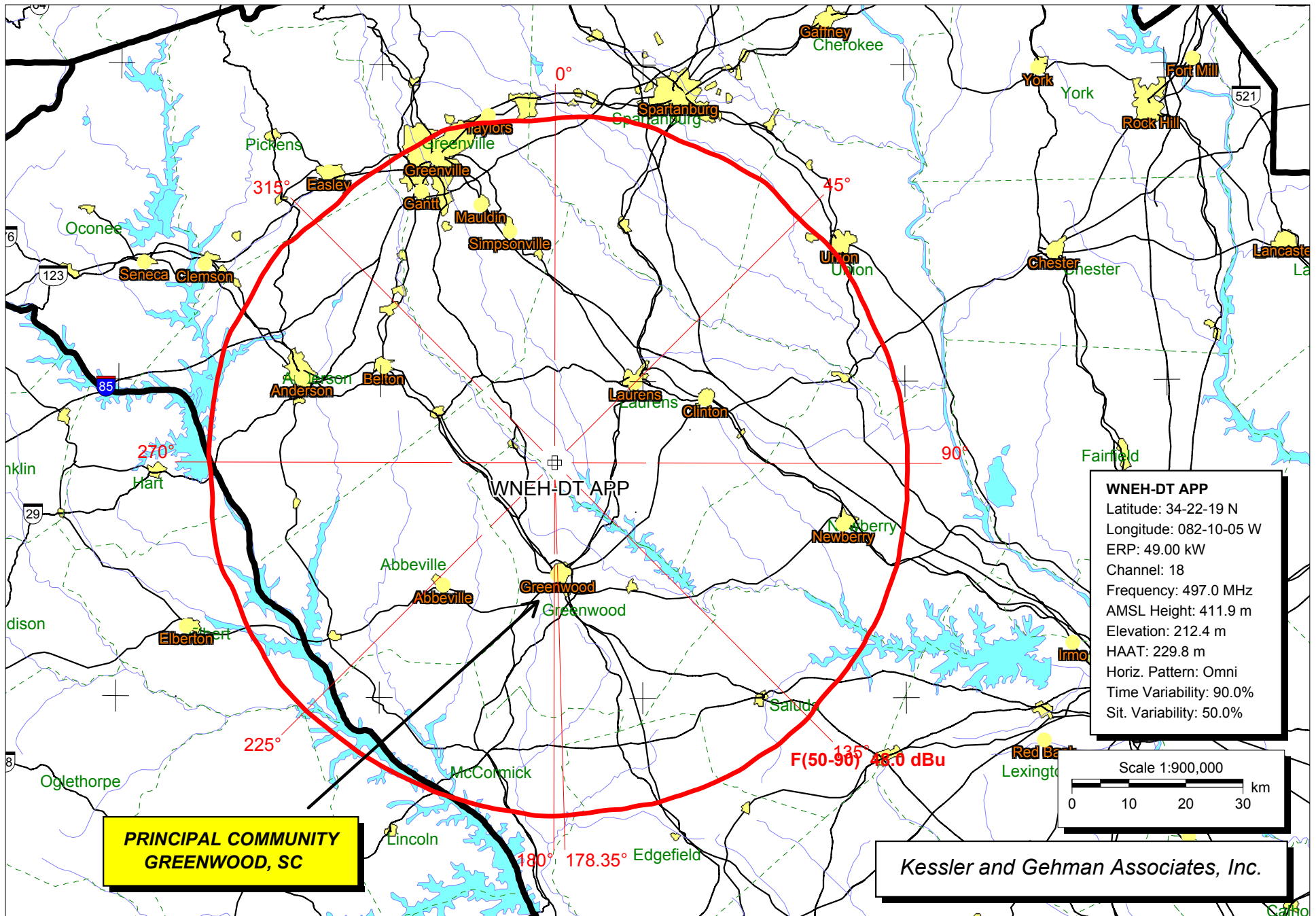
TELECOMMUNICATIONS CONSULTING ENGINEERS  
507 N.W. 60th Street, Suite C  
Gainesville, Florida 32607

**WNEH-TV & WNEH-DT**  
GREENWOOD, SOUTH CAROLINA

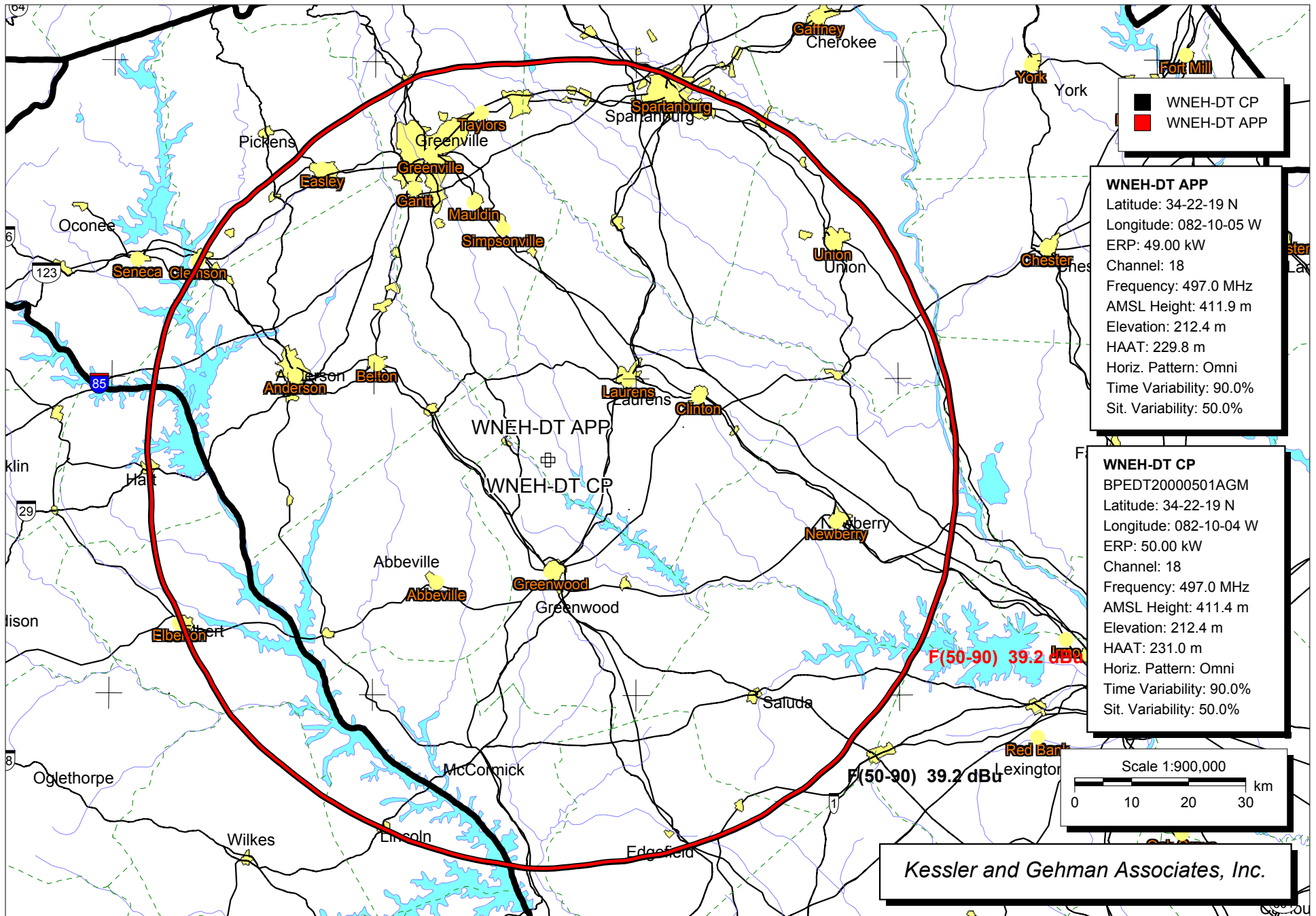
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EXHIBIT E3





WNEH-DT CHANNEL 18 F(50,90) 48.0 dBuV/m ENHANCED PRINCIPAL COMMUNITY CONTOUR



WNEH-DT CHANNEL 18 CP vs. APP F(50,90) 39.2 dBuV/m CONTOUR COMPARISON



## WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

### Transmitter Information:

Call Letters: WNEH-DT CP  
File Number: BPEDT20000501AGM  
Latitude: 34-22-19 N  
Longitude: 082-10-04 W  
ERP: 50.00 kW  
Channel: 18  
Frequency: 497.0 MHz  
AMSL Height: 411.4 m  
Elevation: 212.4 m  
HAAT: 231.0 m  
Horiz. Antenna Pattern: Omni

-----  
Type of curve: FCC  
Location Variability: 50.0%  
Time Variability: 90.0%  
Field Strength: 39.15 dBuV/m

Primary Terrain: V-Soft US 3 Arc-Second Database  
Secondary Terrain: V-Soft High Resolution Alaska Database

Bearing (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	69.9	216.0
1.0	70.1	218.1
2.0	70.2	219.4
3.0	70.3	220.9
4.0	70.4	222.4
5.0	70.5	223.7
6.0	70.6	225.8
7.0	70.6	225.8
8.0	70.5	224.6
9.0	70.6	225.2
10.0	70.8	228.1
11.0	71.0	231.3
12.0	70.9	229.9
13.0	70.7	227.9
14.0	70.8	228.1
15.0	70.8	228.5
16.0	70.8	228.6
17.0	70.7	227.1
18.0	70.5	224.3
19.0	70.4	222.3
20.0	70.2	220.2
21.0	70.1	218.2
22.0	70.1	218.3
23.0	70.2	219.4
24.0	70.3	220.6
25.0	70.2	220.2
26.0	70.2	220.5
27.0	70.4	222.3
28.0	70.6	225.2
29.0	70.6	225.7
30.0	70.6	226.2

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

31.0	70.6	226.0
32.0	70.6	225.2
33.0	70.6	226.0
34.0	70.7	227.3
35.0	70.9	229.7
36.0	71.0	232.0
37.0	71.0	232.4
38.0	70.9	230.6
39.0	70.8	228.3
40.0	70.5	225.0
41.0	70.4	222.7
42.0	70.3	221.0
43.0	70.1	218.4
44.0	70.1	218.5
45.0	70.1	218.9
46.0	70.2	219.1
47.0	70.2	219.9
48.0	70.4	222.2
49.0	70.5	224.7
50.0	70.8	228.2
51.0	70.9	229.9
52.0	70.9	230.6
53.0	71.0	231.8
54.0	71.0	232.5
55.0	71.0	232.0
56.0	70.9	230.0
57.0	70.8	228.6
58.0	70.8	228.4
59.0	70.8	228.9
60.0	70.7	227.4
61.0	70.6	225.6
62.0	70.5	224.6
63.0	70.5	224.9
64.0	70.5	224.4
65.0	70.4	222.8
66.0	70.4	222.8
67.0	70.4	223.2
68.0	70.5	224.5
69.0	70.6	226.4
70.0	70.8	228.5
71.0	70.9	230.3
72.0	71.0	231.3
73.0	71.0	231.9
74.0	71.0	232.1
75.0	71.0	231.9
76.0	71.0	232.1
77.0	71.1	233.5
78.0	71.2	235.2
79.0	71.3	236.2
80.0	71.3	235.9
81.0	71.2	235.0
82.0	71.2	235.0
83.0	71.2	235.3
84.0	71.3	236.2
85.0	71.4	237.7
86.0	71.5	239.5
87.0	71.6	240.0

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

88.0	71.5	239.7
89.0	71.5	238.8
90.0	71.5	239.2
91.0	71.5	239.7
92.0	71.5	239.6
93.0	71.5	239.8
94.0	71.6	240.5
95.0	71.7	242.3
96.0	71.8	244.2
97.0	71.8	243.9
98.0	71.8	243.6
99.0	71.8	243.9
100.0	71.9	244.5
101.0	72.0	245.8
102.0	72.0	246.0
103.0	72.0	246.9
104.0	72.2	248.6
105.0	72.3	250.6
106.0	72.5	252.7
107.0	72.5	252.8
108.0	72.4	251.6
109.0	72.4	251.5
110.0	72.4	251.4
111.0	72.4	251.6
112.0	72.4	252.5
113.0	72.5	253.9
114.0	72.6	255.2
115.0	72.7	255.9
116.0	72.7	256.2
117.0	72.7	256.1
118.0	72.5	253.8
119.0	72.5	253.1
120.0	72.7	255.4
121.0	72.7	256.0
122.0	72.6	254.9
123.0	72.5	253.9
124.0	72.5	253.7
125.0	72.6	254.3
126.0	72.5	253.7
127.0	72.5	253.5
128.0	72.4	251.8
129.0	72.3	250.0
130.0	72.2	249.3
131.0	72.2	248.9
132.0	72.2	249.5
133.0	72.4	252.3
134.0	72.8	256.8
135.0	73.0	259.4
136.0	73.0	260.0
137.0	73.0	259.5
138.0	72.9	258.1
139.0	72.8	257.5
140.0	72.9	258.5
141.0	73.0	259.6
142.0	73.0	259.6
143.0	72.8	257.2
144.0	72.6	254.7

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

145.0	72.5	253.3
146.0	72.5	253.7
147.0	72.6	255.0
148.0	72.8	256.7
149.0	72.8	257.1
150.0	72.7	255.6
151.0	72.6	255.2
152.0	72.6	254.3
153.0	72.5	253.6
154.0	72.4	252.5
155.0	72.4	251.8
156.0	72.3	251.1
157.0	72.2	249.2
158.0	72.1	248.1
159.0	72.1	247.7
160.0	72.0	246.4
161.0	72.0	245.9
162.0	72.0	245.7
163.0	72.0	246.5
164.0	71.9	245.6
165.0	71.7	242.7
166.0	71.6	240.6
167.0	71.5	239.4
168.0	71.6	240.1
169.0	71.6	240.1
170.0	71.4	237.8
171.0	71.3	235.7
172.0	71.2	234.8
173.0	71.2	235.2
174.0	71.3	236.3
175.0	71.3	236.7
176.0	71.4	237.1
177.0	71.4	238.0
178.0	71.5	239.0
179.0	71.6	240.2
180.0	71.6	240.9
181.0	71.6	241.1
182.0	71.6	241.3
183.0	71.6	241.1
184.0	71.5	239.7
185.0	71.4	237.5
186.0	71.3	236.1
187.0	71.2	234.7
188.0	71.2	234.5
189.0	71.2	234.9
190.0	71.2	234.8
191.0	71.1	234.0
192.0	71.1	233.8
193.0	71.1	233.3
194.0	71.1	232.7
195.0	71.0	231.8
196.0	71.0	231.6
197.0	71.0	231.6
198.0	71.0	231.3
199.0	71.0	232.0
200.0	71.0	232.4
201.0	71.0	231.4

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

202.0	70.9	229.5
203.0	70.8	228.7
204.0	70.8	228.5
205.0	70.8	228.2
206.0	70.8	228.4
207.0	70.8	228.8
208.0	70.8	228.8
209.0	70.8	229.0
210.0	70.8	229.1
211.0	70.8	228.8
212.0	70.8	229.0
213.0	70.9	230.0
214.0	70.9	230.4
215.0	70.9	229.9
216.0	70.8	229.0
217.0	70.8	229.1
218.0	70.8	229.2
219.0	70.8	229.5
220.0	70.9	229.6
221.0	70.9	229.8
222.0	71.0	231.1
223.0	71.0	232.0
224.0	71.1	233.4
225.0	71.2	234.8
226.0	71.2	234.7
227.0	71.2	234.7
228.0	71.2	234.8
229.0	71.2	235.2
230.0	71.3	235.9
231.0	71.4	237.3
232.0	71.3	235.9
233.0	71.1	233.8
234.0	71.0	231.9
235.0	70.9	230.4
236.0	70.8	229.4
237.0	70.7	226.7
238.0	70.6	225.5
239.0	70.6	226.4
240.0	70.7	227.4
241.0	70.7	227.3
242.0	70.6	226.5
243.0	70.6	225.1
244.0	70.4	223.5
245.0	70.3	221.7
246.0	70.2	220.5
247.0	70.2	219.6
248.0	70.2	219.3
249.0	70.2	220.0
250.0	70.4	223.2
251.0	70.7	226.9
252.0	70.8	229.1
253.0	70.9	229.8
254.0	70.8	229.5
255.0	70.8	229.0
256.0	70.8	228.1
257.0	70.7	227.0
258.0	70.6	225.8

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

259.0	70.5	224.5
260.0	70.5	223.7
261.0	70.4	222.6
262.0	70.2	220.0
263.0	70.0	216.8
264.0	69.9	214.7
265.0	69.8	213.8
266.0	69.8	214.2
267.0	69.8	214.3
268.0	69.9	214.5
269.0	70.0	216.3
270.0	70.1	218.7
271.0	70.2	220.4
272.0	70.3	220.8
273.0	70.2	220.3
274.0	70.2	220.1
275.0	70.2	220.1
276.0	70.2	220.5
277.0	70.2	220.3
278.0	70.3	220.8
279.0	70.3	221.1
280.0	70.3	221.7
281.0	70.3	222.0
282.0	70.4	222.9
283.0	70.5	224.1
284.0	70.5	224.9
285.0	70.6	225.4
286.0	70.6	225.7
287.0	70.7	227.7
288.0	70.8	229.3
289.0	70.9	230.3
290.0	70.9	230.5
291.0	70.9	230.8
292.0	70.9	230.4
293.0	70.7	227.3
294.0	70.5	224.5
295.0	70.4	223.2
296.0	70.4	222.3
297.0	70.3	220.6
298.0	70.2	220.0
299.0	70.2	220.4
300.0	70.3	221.1
301.0	70.4	222.2
302.0	70.5	223.8
303.0	70.5	224.3
304.0	70.5	223.9
305.0	70.6	225.1
306.0	70.6	225.1
307.0	70.5	224.9
308.0	70.6	225.6
309.0	70.4	222.1
310.0	69.9	214.9
311.0	69.6	211.5
312.0	69.6	210.7
313.0	69.5	208.8
314.0	69.2	205.4
315.0	69.1	203.1

# WNEH-DT (CP) DISTANCE TO CONTOUR TABULATION

316.0	69.0	202.3
317.0	69.0	201.0
318.0	68.9	199.9
319.0	68.8	198.8
320.0	68.8	198.7
321.0	69.0	201.6
322.0	69.3	205.5
323.0	69.4	208.2
324.0	69.5	209.7
325.0	69.6	210.0
326.0	69.6	210.3
327.0	69.6	210.3
328.0	69.6	210.3
329.0	69.6	210.3
330.0	69.6	210.9
331.0	69.7	212.7
332.0	69.8	214.5
333.0	69.9	215.8
334.0	70.0	216.8
335.0	70.0	217.4
336.0	70.1	218.7
337.0	70.3	220.6
338.0	70.4	223.5
339.0	70.6	226.5
340.0	70.8	228.3
341.0	71.0	232.3
342.0	71.0	232.1
343.0	70.9	229.9
344.0	70.8	228.4
345.0	70.7	226.6
346.0	70.7	226.6
347.0	70.6	226.0
348.0	70.4	223.4
349.0	70.2	220.0
350.0	70.1	218.3
351.0	70.1	218.2
352.0	70.0	216.9
353.0	69.9	215.2
354.0	69.8	213.5
355.0	69.6	211.2
356.0	69.6	210.6
357.0	69.6	211.2
358.0	69.7	212.2
359.0	69.8	213.6

## WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

### Transmitter Information:

Call Letters: WNEH-DT APP  
Latitude: 34-22-19 N  
Longitude: 082-10-05 W  
ERP: 49.00 kW  
Channel: 18  
Frequency: 497.0 MHz  
AMSL Height: 411.9 m  
Elevation: 212.4 m  
HAAT: 229.8 m  
Horiz. Antenna Pattern: Omni

-----  
Type of curve: FCC  
Location Variability: 50.0%  
Time Variability: 90.0%  
Field Strength: 39.15 dBuV/m

Primary Terrain: V-Soft US 3 Arc-Second Database  
Secondary Terrain: V-Soft High Resolution Alaska Database

Bearing (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	69.9	216.3
1.0	70.0	218.4
2.0	70.1	219.8
3.0	70.2	221.2
4.0	70.3	222.7
5.0	70.4	224.0
6.0	70.5	226.2
7.0	70.5	226.4
8.0	70.5	225.3
9.0	70.5	225.3
10.0	70.7	228.2
11.0	70.9	231.6
12.0	70.8	230.6
13.0	70.7	228.5
14.0	70.7	228.5
15.0	70.7	228.9
16.0	70.7	229.2
17.0	70.6	227.9
18.0	70.5	225.1
19.0	70.3	222.9
20.0	70.2	220.9
21.0	70.0	218.8
22.0	70.0	218.8
23.0	70.1	219.8
24.0	70.2	221.1
25.0	70.2	220.7
26.0	70.2	220.8
27.0	70.3	222.5
28.0	70.5	225.4
29.0	70.5	226.3
30.0	70.6	226.7
31.0	70.6	226.7



# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

32.0	70.5	225.8
33.0	70.5	226.4
34.0	70.6	227.6
35.0	70.8	230.0
36.0	70.9	232.3
37.0	71.0	232.9
38.0	70.9	231.4
39.0	70.7	229.1
40.0	70.5	226.0
41.0	70.3	223.5
42.0	70.2	221.9
43.0	70.1	219.1
44.0	70.1	219.0
45.0	70.1	219.4
46.0	70.1	219.6
47.0	70.1	220.3
48.0	70.3	222.5
49.0	70.4	224.9
50.0	70.7	228.5
51.0	70.8	230.4
52.0	70.9	231.2
53.0	70.9	232.2
54.0	71.0	233.0
55.0	71.0	232.6
56.0	70.8	230.6
57.0	70.7	229.2
58.0	70.7	228.9
59.0	70.7	229.5
60.0	70.7	228.1
61.0	70.5	226.3
62.0	70.5	225.2
63.0	70.5	225.4
64.0	70.4	225.0
65.0	70.3	223.4
66.0	70.3	223.3
67.0	70.4	223.7
68.0	70.4	224.9
69.0	70.6	226.9
70.0	70.7	228.9
71.0	70.8	230.7
72.0	70.9	231.8
73.0	70.9	232.4
74.0	71.0	232.6
75.0	70.9	232.4
76.0	71.0	232.5
77.0	71.1	234.0
78.0	71.2	235.7
79.0	71.2	236.7
80.0	71.2	236.4
81.0	71.2	235.6
82.0	71.2	235.6
83.0	71.2	235.9
84.0	71.2	236.7
85.0	71.3	238.2
86.0	71.5	240.0
87.0	71.5	240.5
88.0	71.5	240.2

# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

89.0	71.4	239.4
90.0	71.4	239.8
91.0	71.5	240.3
92.0	71.5	240.1
93.0	71.5	240.3
94.0	71.5	241.0
95.0	71.7	242.9
96.0	71.8	244.8
97.0	71.8	244.5
98.0	71.7	244.2
99.0	71.8	244.5
100.0	71.8	245.1
101.0	71.9	246.4
102.0	71.9	246.6
103.0	72.0	247.6
104.0	72.1	249.2
105.0	72.2	251.3
106.0	72.4	253.3
107.0	72.4	253.4
108.0	72.3	252.1
109.0	72.3	252.1
110.0	72.3	252.0
111.0	72.3	252.1
112.0	72.4	253.1
113.0	72.5	254.5
114.0	72.6	255.8
115.0	72.6	256.5
116.0	72.7	256.7
117.0	72.6	256.5
118.0	72.5	254.1
119.0	72.4	253.7
120.0	72.6	255.9
121.0	72.6	256.3
122.0	72.5	255.2
123.0	72.5	254.2
124.0	72.5	254.1
125.0	72.5	254.6
126.0	72.5	254.1
127.0	72.4	253.7
128.0	72.3	252.0
129.0	72.2	250.3
130.0	72.1	249.6
131.0	72.1	249.2
132.0	72.2	250.0
133.0	72.4	253.0
134.0	72.7	257.6
135.0	72.9	260.0
136.0	72.9	260.5
137.0	72.9	259.9
138.0	72.8	258.5
139.0	72.8	258.0
140.0	72.8	259.0
141.0	72.9	260.3
142.0	72.9	260.1
143.0	72.7	257.5
144.0	72.5	255.2
145.0	72.4	253.9

# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

146.0	72.5	254.4
147.0	72.6	255.8
148.0	72.7	257.5
149.0	72.7	257.5
150.0	72.6	256.1
151.0	72.6	255.5
152.0	72.5	254.4
153.0	72.4	253.9
154.0	72.4	252.7
155.0	72.3	252.2
156.0	72.3	251.3
157.0	72.1	249.5
158.0	72.1	248.6
159.0	72.0	248.1
160.0	71.9	246.5
161.0	71.9	246.2
162.0	71.9	246.1
163.0	71.9	246.8
164.0	71.9	245.7
165.0	71.6	242.8
166.0	71.5	240.8
167.0	71.5	240.0
168.0	71.5	240.7
169.0	71.5	240.4
170.0	71.3	238.0
171.0	71.2	236.0
172.0	71.1	235.3
173.0	71.2	235.9
174.0	71.3	236.9
175.0	71.3	237.4
176.0	71.3	237.7
177.0	71.4	238.7
178.0	71.4	239.8
179.0	71.5	241.1
180.0	71.6	241.6
181.0	71.6	241.8
182.0	71.6	241.8
183.0	71.6	241.6
184.0	71.4	239.7
185.0	71.3	237.5
186.0	71.2	236.3
187.0	71.1	235.0
188.0	71.1	234.9
189.0	71.1	235.4
190.0	71.1	235.1
191.0	71.1	234.3
192.0	71.1	234.1
193.0	71.0	233.7
194.0	71.0	233.0
195.0	70.9	232.1
196.0	70.9	232.0
197.0	70.9	232.1
198.0	70.9	231.9
199.0	71.0	232.6
200.0	71.0	232.8
201.0	70.9	231.6
202.0	70.8	229.8

# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

203.0	70.7	229.1
204.0	70.7	229.0
205.0	70.7	228.7
206.0	70.7	229.0
207.0	70.7	229.3
208.0	70.7	229.4
209.0	70.8	229.6
210.0	70.8	229.6
211.0	70.7	229.3
212.0	70.8	229.7
213.0	70.8	230.7
214.0	70.8	231.0
215.0	70.8	230.2
216.0	70.7	229.4
217.0	70.8	229.6
218.0	70.8	229.7
219.0	70.8	230.0
220.0	70.8	230.2
221.0	70.8	230.4
222.0	70.9	231.7
223.0	71.0	232.6
224.0	71.1	234.1
225.0	71.1	235.3
226.0	71.1	235.1
227.0	71.1	235.2
228.0	71.1	235.3
229.0	71.2	235.7
230.0	71.2	236.7
231.0	71.3	237.8
232.0	71.2	236.2
233.0	71.1	234.1
234.0	70.9	232.2
235.0	70.8	230.8
236.0	70.8	229.8
237.0	70.6	227.0
238.0	70.5	226.0
239.0	70.6	226.9
240.0	70.6	227.9
241.0	70.6	227.7
242.0	70.6	226.9
243.0	70.5	225.4
244.0	70.4	223.9
245.0	70.3	222.1
246.0	70.2	220.9
247.0	70.1	220.1
248.0	70.1	219.7
249.0	70.2	220.5
250.0	70.4	223.9
251.0	70.6	227.5
252.0	70.8	229.6
253.0	70.8	230.3
254.0	70.8	229.9
255.0	70.7	229.4
256.0	70.7	228.5
257.0	70.6	227.4
258.0	70.5	226.2
259.0	70.4	224.9

# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

260.0	70.4	224.2
261.0	70.3	222.9
262.0	70.1	220.3
263.0	69.9	217.2
264.0	69.8	215.1
265.0	69.7	214.2
266.0	69.8	214.6
267.0	69.8	214.7
268.0	69.8	214.9
269.0	69.9	216.7
270.0	70.1	219.0
271.0	70.2	220.7
272.0	70.2	221.2
273.0	70.2	220.6
274.0	70.1	220.4
275.0	70.1	220.4
276.0	70.2	220.8
277.0	70.2	220.7
278.0	70.2	221.1
279.0	70.2	221.5
280.0	70.3	222.1
281.0	70.3	222.4
282.0	70.3	223.2
283.0	70.4	224.5
284.0	70.5	225.3
285.0	70.5	225.8
286.0	70.5	226.1
287.0	70.6	227.9
288.0	70.8	229.7
289.0	70.8	230.7
290.0	70.8	230.9
291.0	70.9	231.3
292.0	70.8	231.0
293.0	70.6	227.9
294.0	70.5	225.1
295.0	70.4	223.7
296.0	70.3	222.8
297.0	70.2	221.1
298.0	70.1	220.5
299.0	70.2	220.9
300.0	70.2	221.5
301.0	70.3	222.6
302.0	70.4	224.2
303.0	70.4	224.8
304.0	70.4	224.5
305.0	70.5	225.6
306.0	70.5	225.7
307.0	70.5	225.5
308.0	70.5	226.2
309.0	70.3	223.2
310.0	69.8	215.9
311.0	69.6	212.1
312.0	69.5	211.3
313.0	69.4	209.5
314.0	69.2	206.2
315.0	69.0	203.7
316.0	69.0	202.9

# WNEH-DT (PROPOSED) DISTANCE TO CONTOUR TABULATION

317.0	68.9	201.6
318.0	68.8	200.3
319.0	68.7	199.2
320.0	68.7	198.8
321.0	68.9	201.6
322.0	69.2	205.5
323.0	69.4	208.4
324.0	69.5	210.0
325.0	69.5	210.5
326.0	69.5	210.7
327.0	69.5	210.8
328.0	69.5	210.8
329.0	69.5	210.7
330.0	69.5	211.2
331.0	69.6	212.9
332.0	69.8	214.8
333.0	69.9	216.1
334.0	69.9	217.1
335.0	70.0	217.8
336.0	70.1	219.0
337.0	70.2	220.9
338.0	70.4	223.5
339.0	70.6	226.6
340.0	70.7	228.6
341.0	70.9	232.5
342.0	71.0	232.9
343.0	70.8	230.5
344.0	70.7	229.1
345.0	70.6	227.1
346.0	70.6	227.1
347.0	70.6	226.6
348.0	70.4	224.3
349.0	70.2	220.8
350.0	70.0	218.7
351.0	70.0	218.7
352.0	70.0	217.5
353.0	69.8	215.7
354.0	69.7	214.3
355.0	69.6	212.0
356.0	69.5	211.1
357.0	69.6	211.7
358.0	69.6	212.5
359.0	69.7	213.9

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

Radial	WNEH-DT CP distance to contours (km)	WNEH-DT APP distance to contours (km)	PASS OR FAIL	Difference (km)
0	69.9	69.9	PASS	0.0
1	70.1	70.0	PASS	0.1
2	70.2	70.1	PASS	0.1
3	70.3	70.2	PASS	0.1
4	70.4	70.3	PASS	0.1
5	70.5	70.4	PASS	0.1
6	70.6	70.5	PASS	0.1
7	70.6	70.5	PASS	0.1
8	70.5	70.5	PASS	0.0
9	70.6	70.5	PASS	0.1
10	70.8	70.7	PASS	0.1
11	71.0	70.9	PASS	0.1
12	70.9	70.8	PASS	0.1
13	70.7	70.7	PASS	0.0
14	70.8	70.7	PASS	0.1
15	70.8	70.7	PASS	0.1
16	70.8	70.7	PASS	0.1
17	70.7	70.6	PASS	0.1
18	70.5	70.5	PASS	0.0
19	70.4	70.3	PASS	0.1
20	70.2	70.2	PASS	0.0
21	70.1	70.0	PASS	0.1
22	70.1	70.0	PASS	0.1
23	70.2	70.1	PASS	0.1
24	70.3	70.2	PASS	0.1
25	70.2	70.2	PASS	0.0
26	70.2	70.2	PASS	0.0
27	70.4	70.3	PASS	0.1
28	70.6	70.5	PASS	0.1
29	70.6	70.5	PASS	0.1
30	70.6	70.6	PASS	0.0
31	70.6	70.6	PASS	0.0
32	70.6	70.5	PASS	0.1
33	70.6	70.5	PASS	0.1
34	70.7	70.6	PASS	0.1
35	70.9	70.8	PASS	0.1
36	71.0	70.9	PASS	0.1
37	71.0	71.0	PASS	0.0
38	70.9	70.9	PASS	0.0

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

39	70.8	70.7	PASS	0.1
40	70.5	70.5	PASS	0.0
41	70.4	70.3	PASS	0.1
42	70.3	70.2	PASS	0.1
43	70.1	70.1	PASS	0.0
44	70.1	70.1	PASS	0.0
45	70.1	70.1	PASS	0.0
46	70.2	70.1	PASS	0.1
47	70.2	70.1	PASS	0.1
48	70.4	70.3	PASS	0.1
49	70.5	70.4	PASS	0.1
50	70.8	70.7	PASS	0.1
51	70.9	70.8	PASS	0.1
52	70.9	70.9	PASS	0.0
53	71.0	70.9	PASS	0.1
54	71.0	71.0	PASS	0.0
55	71.0	71.0	PASS	0.0
56	70.9	70.8	PASS	0.1
57	70.8	70.7	PASS	0.1
58	70.8	70.7	PASS	0.1
59	70.8	70.7	PASS	0.1
60	70.7	70.7	PASS	0.0
61	70.6	70.5	PASS	0.1
62	70.5	70.5	PASS	0.0
63	70.5	70.5	PASS	0.0
64	70.5	70.4	PASS	0.1
65	70.4	70.3	PASS	0.1
66	70.4	70.3	PASS	0.1
67	70.4	70.4	PASS	0.0
68	70.5	70.4	PASS	0.1
69	70.6	70.6	PASS	0.0
70	70.8	70.7	PASS	0.1
71	70.9	70.8	PASS	0.1
72	71.0	70.9	PASS	0.1
73	71.0	70.9	PASS	0.1
74	71.0	71.0	PASS	0.0
75	71.0	70.9	PASS	0.1
76	71.0	71.0	PASS	0.0
77	71.1	71.1	PASS	0.0
78	71.2	71.2	PASS	0.0
79	71.3	71.2	PASS	0.1
80	71.3	71.2	PASS	0.1



**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

81	71.2	71.2	PASS	0.0
82	71.2	71.2	PASS	0.0
83	71.2	71.2	PASS	0.0
84	71.3	71.2	PASS	0.1
85	71.4	71.3	PASS	0.1
86	71.5	71.5	PASS	0.0
87	71.6	71.5	PASS	0.1
88	71.5	71.5	PASS	0.0
89	71.5	71.4	PASS	0.1
90	71.5	71.4	PASS	0.1
91	71.5	71.5	PASS	0.0
92	71.5	71.5	PASS	0.0
93	71.5	71.5	PASS	0.0
94	71.6	71.5	PASS	0.1
95	71.7	71.7	PASS	0.0
96	71.8	71.8	PASS	0.0
97	71.8	71.8	PASS	0.0
98	71.8	71.7	PASS	0.1
99	71.8	71.8	PASS	0.0
100	71.9	71.8	PASS	0.1
101	72.0	71.9	PASS	0.1
102	72.0	71.9	PASS	0.1
103	72.0	72.0	PASS	0.0
104	72.2	72.1	PASS	0.1
105	72.3	72.2	PASS	0.1
106	72.5	72.4	PASS	0.1
107	72.5	72.4	PASS	0.1
108	72.4	72.3	PASS	0.1
109	72.4	72.3	PASS	0.1
110	72.4	72.3	PASS	0.1
111	72.4	72.3	PASS	0.1
112	72.4	72.4	PASS	0.0
113	72.5	72.5	PASS	0.0
114	72.6	72.6	PASS	0.0
115	72.7	72.6	PASS	0.1
116	72.7	72.7	PASS	0.0
117	72.7	72.6	PASS	0.1
118	72.5	72.5	PASS	0.0
119	72.5	72.4	PASS	0.1
120	72.7	72.6	PASS	0.1
121	72.7	72.6	PASS	0.1
122	72.6	72.5	PASS	0.1

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

123	72.5	72.5	PASS	0.0
124	72.5	72.5	PASS	0.0
125	72.6	72.5	PASS	0.1
126	72.5	72.5	PASS	0.0
127	72.5	72.4	PASS	0.1
128	72.4	72.3	PASS	0.1
129	72.3	72.2	PASS	0.1
130	72.2	72.1	PASS	0.1
131	72.2	72.1	PASS	0.1
132	72.2	72.2	PASS	0.0
133	72.4	72.4	PASS	0.0
134	72.8	72.7	PASS	0.1
135	73.0	72.9	PASS	0.1
136	73.0	72.9	PASS	0.1
137	73.0	72.9	PASS	0.1
138	72.9	72.8	PASS	0.1
139	72.8	72.8	PASS	0.0
140	72.9	72.8	PASS	0.1
141	73.0	72.9	PASS	0.1
142	73.0	72.9	PASS	0.1
143	72.8	72.7	PASS	0.1
144	72.6	72.5	PASS	0.1
145	72.5	72.4	PASS	0.1
146	72.5	72.5	PASS	0.0
147	72.6	72.6	PASS	0.0
148	72.8	72.7	PASS	0.1
149	72.8	72.7	PASS	0.1
150	72.7	72.6	PASS	0.1
151	72.6	72.6	PASS	0.0
152	72.6	72.5	PASS	0.1
153	72.5	72.4	PASS	0.1
154	72.4	72.4	PASS	0.0
155	72.4	72.3	PASS	0.1
156	72.3	72.3	PASS	0.0
157	72.2	72.1	PASS	0.1
158	72.1	72.1	PASS	0.0
159	72.1	72.0	PASS	0.1
160	72.0	71.9	PASS	0.1
161	72.0	71.9	PASS	0.1
162	72.0	71.9	PASS	0.1
163	72.0	71.9	PASS	0.1
164	71.9	71.9	PASS	0.0

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

165	71.7	71.6	PASS	0.1
166	71.6	71.5	PASS	0.1
167	71.5	71.5	PASS	0.0
168	71.6	71.5	PASS	0.1
169	71.6	71.5	PASS	0.1
170	71.4	71.3	PASS	0.1
171	71.3	71.2	PASS	0.1
172	71.2	71.1	PASS	0.1
173	71.2	71.2	PASS	0.0
174	71.3	71.3	PASS	0.0
175	71.3	71.3	PASS	0.0
176	71.4	71.3	PASS	0.1
177	71.4	71.4	PASS	0.0
178	71.5	71.4	PASS	0.1
179	71.6	71.5	PASS	0.1
180	71.6	71.6	PASS	0.0
181	71.6	71.6	PASS	0.0
182	71.6	71.6	PASS	0.0
183	71.6	71.6	PASS	0.0
184	71.5	71.4	PASS	0.1
185	71.4	71.3	PASS	0.1
186	71.3	71.2	PASS	0.1
187	71.2	71.1	PASS	0.1
188	71.2	71.1	PASS	0.1
189	71.2	71.1	PASS	0.1
190	71.2	71.1	PASS	0.1
191	71.1	71.1	PASS	0.0
192	71.1	71.1	PASS	0.0
193	71.1	71.0	PASS	0.1
194	71.1	71.0	PASS	0.1
195	71.0	70.9	PASS	0.1
196	71.0	70.9	PASS	0.1
197	71.0	70.9	PASS	0.1
198	71.0	70.9	PASS	0.1
199	71.0	71.0	PASS	0.0
200	71.0	71.0	PASS	0.0
201	71.0	70.9	PASS	0.1
202	70.9	70.8	PASS	0.1
203	70.8	70.7	PASS	0.1
204	70.8	70.7	PASS	0.1
205	70.8	70.7	PASS	0.1
206	70.8	70.7	PASS	0.1

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

207	70.8	70.7	PASS	0.1
208	70.8	70.7	PASS	0.1
209	70.8	70.8	PASS	0.0
210	70.8	70.8	PASS	0.0
211	70.8	70.7	PASS	0.1
212	70.8	70.8	PASS	0.0
213	70.9	70.8	PASS	0.1
214	70.9	70.8	PASS	0.1
215	70.9	70.8	PASS	0.1
216	70.8	70.7	PASS	0.1
217	70.8	70.8	PASS	0.0
218	70.8	70.8	PASS	0.0
219	70.8	70.8	PASS	0.0
220	70.9	70.8	PASS	0.1
221	70.9	70.8	PASS	0.1
222	71.0	70.9	PASS	0.1
223	71.0	71.0	PASS	0.0
224	71.1	71.1	PASS	0.0
225	71.2	71.1	PASS	0.1
226	71.2	71.1	PASS	0.1
227	71.2	71.1	PASS	0.1
228	71.2	71.1	PASS	0.1
229	71.2	71.2	PASS	0.0
230	71.3	71.2	PASS	0.1
231	71.4	71.3	PASS	0.1
232	71.3	71.2	PASS	0.1
233	71.1	71.1	PASS	0.0
234	71.0	70.9	PASS	0.1
235	70.9	70.8	PASS	0.1
236	70.8	70.8	PASS	0.0
237	70.7	70.6	PASS	0.1
238	70.6	70.5	PASS	0.1
239	70.6	70.6	PASS	0.0
240	70.7	70.6	PASS	0.1
241	70.7	70.6	PASS	0.1
242	70.6	70.6	PASS	0.0
243	70.6	70.5	PASS	0.1
244	70.4	70.4	PASS	0.0
245	70.3	70.3	PASS	0.0
246	70.2	70.2	PASS	0.0
247	70.2	70.1	PASS	0.1
248	70.2	70.1	PASS	0.1

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

249	70.2	70.2	PASS	0.0
250	70.4	70.4	PASS	0.0
251	70.7	70.6	PASS	0.1
252	70.8	70.8	PASS	0.0
253	70.9	70.8	PASS	0.1
254	70.8	70.8	PASS	0.0
255	70.8	70.7	PASS	0.1
256	70.8	70.7	PASS	0.1
257	70.7	70.6	PASS	0.1
258	70.6	70.5	PASS	0.1
259	70.5	70.4	PASS	0.1
260	70.5	70.4	PASS	0.1
261	70.4	70.3	PASS	0.1
262	70.2	70.1	PASS	0.1
263	70.0	69.9	PASS	0.1
264	69.9	69.8	PASS	0.1
265	69.8	69.7	PASS	0.1
266	69.8	69.8	PASS	0.0
267	69.8	69.8	PASS	0.0
268	69.9	69.8	PASS	0.1
269	70.0	69.9	PASS	0.1
270	70.1	70.1	PASS	0.0
271	70.2	70.2	PASS	0.0
272	70.3	70.2	PASS	0.1
273	70.2	70.2	PASS	0.0
274	70.2	70.1	PASS	0.1
275	70.2	70.1	PASS	0.1
276	70.2	70.2	PASS	0.0
277	70.2	70.2	PASS	0.0
278	70.3	70.2	PASS	0.1
279	70.3	70.2	PASS	0.1
280	70.3	70.3	PASS	0.0
281	70.3	70.3	PASS	0.0
282	70.4	70.3	PASS	0.1
283	70.5	70.4	PASS	0.1
284	70.5	70.5	PASS	0.0
285	70.6	70.5	PASS	0.1
286	70.6	70.5	PASS	0.1
287	70.7	70.6	PASS	0.1
288	70.8	70.8	PASS	0.0
289	70.9	70.8	PASS	0.1
290	70.9	70.8	PASS	0.1

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

291	70.9	70.9	PASS	0.0
292	70.9	70.8	PASS	0.1
293	70.7	70.6	PASS	0.1
294	70.5	70.5	PASS	0.0
295	70.4	70.4	PASS	0.0
296	70.4	70.3	PASS	0.1
297	70.3	70.2	PASS	0.1
298	70.2	70.1	PASS	0.1
299	70.2	70.2	PASS	0.0
300	70.3	70.2	PASS	0.1
301	70.4	70.3	PASS	0.1
302	70.5	70.4	PASS	0.1
303	70.5	70.4	PASS	0.1
304	70.5	70.4	PASS	0.1
305	70.6	70.5	PASS	0.1
306	70.6	70.5	PASS	0.1
307	70.5	70.5	PASS	0.0
308	70.6	70.5	PASS	0.1
309	70.4	70.3	PASS	0.1
310	69.9	69.8	PASS	0.1
311	69.6	69.6	PASS	0.0
312	69.6	69.5	PASS	0.1
313	69.5	69.4	PASS	0.1
314	69.2	69.2	PASS	0.0
315	69.1	69.0	PASS	0.1
316	69.0	69.0	PASS	0.0
317	69.0	68.9	PASS	0.1
318	68.9	68.8	PASS	0.1
319	68.8	68.7	PASS	0.1
320	68.8	68.7	PASS	0.1
321	69.0	68.9	PASS	0.1
322	69.3	69.2	PASS	0.1
323	69.4	69.4	PASS	0.0
324	69.5	69.5	PASS	0.0
325	69.6	69.5	PASS	0.1
326	69.6	69.5	PASS	0.1
327	69.6	69.5	PASS	0.1
328	69.6	69.5	PASS	0.1
329	69.6	69.5	PASS	0.1
330	69.6	69.5	PASS	0.1
331	69.7	69.6	PASS	0.1
332	69.8	69.8	PASS	0.0

**WNEH-DT (CP vs. Proposed) Distance to Contour Comparison Chart**

333	69.9	69.9	PASS	0.0
334	70.0	69.9	PASS	0.1
335	70.0	70.0	PASS	0.0
336	70.1	70.1	PASS	0.0
337	70.3	70.2	PASS	0.1
338	70.4	70.4	PASS	0.0
339	70.6	70.6	PASS	0.0
340	70.8	70.7	PASS	0.1
341	71.0	70.9	PASS	0.1
342	71.0	71.0	PASS	0.0
343	70.9	70.8	PASS	0.1
344	70.8	70.7	PASS	0.1
345	70.7	70.6	PASS	0.1
346	70.7	70.6	PASS	0.1
347	70.6	70.6	PASS	0.0
348	70.4	70.4	PASS	0.0
349	70.2	70.2	PASS	0.0
350	70.1	70.0	PASS	0.1
351	70.1	70.0	PASS	0.1
352	70.0	70.0	PASS	0.0
353	69.9	69.8	PASS	0.1
354	69.8	69.7	PASS	0.1
355	69.6	69.6	PASS	0.0
356	69.6	69.5	PASS	0.1
357	69.6	69.6	PASS	0.0
358	69.7	69.6	PASS	0.1
359	69.8	69.7	PASS	0.1



**Study (ASN):** 2004-ASO-3230-OE  
**Prior Study:** [1998-ASO-3421-OE](#)  
**Status:** Determined

**Received:** 06/02/2004  
**Entered:** 06/02/2004  
**Completed:** 06/07/2004

<b>Sponsor:</b>	SOUTH CAROLINA EDUCATIONAL TV
<b>Attention Of:</b>	COMMISSION
<b>Address:</b>	HAP GRIFFIN
<b>City:</b>	1101 GEORGE ROGERS BLVD
<b>State:</b>	COLUMBIA
<b>Postal Code:</b>	SC
<b>Country:</b>	29211
	USA

<b>Representative:</b>	KESSLER AND GEHMAN ASSOCIATES INC
<b>Attention Of:</b>	RYAN WILLOUR
<b>Address:</b>	507 NW 60TH STREET STE C
<b>City:</b>	GAINESVILLE
<b>State:</b>	FL
<b>Postal Code:</b>	32607
<b>Country:</b>	USA

<b>Notice Of:</b>	Alteration	<b>Months:</b> 0	<b>Days:</b> 0
<b>Duration:</b>	Permanent		

**Beginning:** **End:**

<b>Latitude:</b>	34-22-19.9 N
<b>Longitude:</b>	82-10-3.9 W
<b>Datum:</b>	NAD 83
<b>Accuracy:</b>	
<b>Other:</b>	

<b>Marking/Lighting:</b>	Red lights and paint
<b>Other Description:</b>	
<b>Description:</b>	

FCC Number:

<b>Structure Type:</b>	Antenna Tower
<b>Other Description:</b>	

	Proposed DNE	DET
<b>Site Elevation:</b>	697	
<b>Structure Height:</b>	686	0 686
<b>Total Altitude from Mean Sea Level:</b>	1383	0 1383

Low Freq.	High Freq.	Unit	ERP	Unit
494	500	MHz	50	KW
614	620	MHz	1780	KW



<b>Name:</b>	
<b>NACO Number:</b>	41-0628
<b>City:</b>	DONALDS
<b>State:</b>	SC
<b>Nearest Airport:</b>	
<b>Description of Location:</b>	
<b>Distance (ARP) to structure (feet):</b>	
<b>On Airport:</b>	No
<b>Direction to structure:</b>	
<b>Traverseway:</b>	NO

**Finished Date:** 06/07/2004

**Submitted:**

**Expiration Date:** 12/07/2005

**Date Built:**

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## ASR Registration Search

**Registration 1059185** [Reference Copy](#)  [Map Registration](#)**Registration Detail**

Reg Number	1059185	Status	Constructed
File Number	A0069520	Constructed	01/01/1984
FAA Study	98-ASO-3421-OE	EMI	No
FAA Issue Date	06/24/1998	NEPA	No

**Antenna Structure**

Structure Type	TOWER - Free standing or Guyed Structure used for Communications Purposes
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**Location** (in NAD83 Coordinates)

Lat/Long	34-22-19.0 N 082-10-03.0 W	SITE IS LOCATED 3.5 MI NE OF GOOD HOPE CHURCH
City, State	GREENWOOD , SC	
Center of AM Array		

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
212.4	211.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
423.5	191.1

**Painting and Lighting Specifications**

FAA Chapters 3, 4, 5, 13  
Paint and Light in Accordance with FAA Circular Number 70/7460-1J

**Owner & Contact Information**

FRN	0001861160	Licensee ID	L00012124
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**Owner**

SOUTH CAROLINA EDUCATIONAL TELEVISION DBA = SCETV #37, GREENWOOD, WHEH-TV Attention To: GERALD CROMER 1101 GEORGE ROGERS BLVD COLUMBIA , SC 29201	P: (803)737-3471 E: GCROMER@SCETV.ORG
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**Contact**

P:
E:

**Last Action Status**

Status	Constructed	Received	12/29/1998
Purpose	New	Entered	12/29/1998
Mode	Interactive		

**Related Applications**

12/29/1998	A0069520 - New (NE)
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**Comments**

U.S. Department of Transportation  
Federal Aviation Administration

Failure To Provide All Requested Information May Delay Processing of Your Notice

FOR FAA USE ONLY

Aeronautical Study Number

## Notice of Proposed Construction or Alteration

## 1. Sponsor (person, company, etc. proposing this action) :

Attn. of: Hap GriffinName: South Carolina Educational Television CommissionAddress: 1101 George Rogers Boulevard  
Post Office Box 11000City: Columbia State: SC Zip: 29211Telephone: (803) 737-3500 Fax: (803) 737-3495

## 2. Sponsor's Representative (if other than #1) :

Attn. of: Ryan WilhourName: Kessler and Gehman Associates, Inc.Address: 507 NW 60th Street, Suite CCity: Gainesville State: FL Zip: 32607Telephone: (352) 332-3157 Fax: (352) 332-63923. Notice of: ☐ New Construction ☒ Alteration ☐ Existing4. Duration: ☒ Permanent ☐ Temporary ( months, days)5. Work Schedule: Beginning A.S.A.P. End A.S.A.P.6. Type: ☒ Antenna Tower ☐ Crane ☐ Building ☐ Power Line  
☐ Landfill ☐ Water Tank ☐ Other \_\_\_\_\_

## 7. Marking/Painting and/or Lighting Preferred:

☒ Red Lights and Paint ☐ Dual - Red and Medium Intensity White  
☐ White - Medium Intensity ☐ Dual - Red and High Intensity White  
☐ White - High Intensity ☐ Other \_\_\_\_\_

## 8. FCC Antenna Structure Registration Number (if applicable):

10591859. Latitude: 34 ° 22 ' 19 . 47 "10. Longitude: 82 ° 10 ' 4 . 51 "11. Datum: ☐ NAD 83 ☒ NAD 27 ☐ Other \_\_\_\_\_12. Nearest: City: Donalds State: SC

## 13. Nearest Public-use (not private-use) or Military Airport or Heliport:

Greenwood, SC (ID: GRD)14. Distance from #13. to Structure: 8.5 mi / 7.4 nmi / 13.7 km15. Direction from #13. to Structure: South16. Site Elevation (AMSL): 697 ft.17. Total Structure Height (AGL): 685.4 ft.18. Overall height (#16. + #17.) (AMSL): 1382.4 ft.

## 19. Previous FAA Aeronautical Study Number (if applicable):

98-ASO-3421 - OE20. Description of Location: (Attach a USGS 7.5 minute  
Quadrangle Map with the precise site marked and any certified survey.)

REFER TO EXHIBIT E1 FOR SITE MAP

REFER TO EXHIBIT E2 FOR TOWER SKETCH

## 21. Complete Description of Proposal:

IT IS PROPOSED TO REMOVE THE TOP MOUNTED NTSC TV ANTENNA AND REPLACE IT WITH A BROADBAND DTV  
& NTSC ANTENNA. THE NEW ANTENNA IS 2.2 METERS OR 7.2 FEET SHORTER THAN THE EXISTING ANTENNA.  
THUS, IT IS HEREIN PROPOSED TO REDUCE THE OVERALL TOWER HEIGHT FROM 692.6 FT 685.4 FT

## Frequency/Power (kW)

494 - 500 MHz 50 kW614 - 620 MHz 1780 kW

Notice is required by 14 Code of Federal Regulations, part 77 pursuant to 49 U.S.C., Section 44718. Persons who knowingly and willingly violate the notice requirements of part 77 are subject to a civil penalty of \$1,000 per day until the notice is received, pursuant to 49 U.S.C., section 46301 (a).

I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking and lighting standards as necessary.

Date

May 28, 2004

Typed or Printed name and Title of Person Filing Notice

Ryan Wilhour

Signature