

WACS-DT CHANNEL 8 MINOR  
MODIFICATION OF CONSTRUCTION  
PERMIT APPLICATION FOR PRE- AND  
FINAL POST-TRANSITION DTV OPERATION  
*DAWSON, GEORGIA*  
*(Georgia Public Telecommunications Commission)*

KESSLER AND GEHMAN ASSOCIATES, INC.  
TELECOMMUNICATIONS CONSULTING ENGINEERS

20080225

*Prepared by William T. Godfrey, Jr.*

KG&A

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 MODIFICATION OF CONSTRUCTION PERMIT (BMPEDT-20020923ABC) APPLICATION FOR THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) PRE-TRANSITION AND POST-TRANSITION DIGITAL TELEVISION BROADCAST FACILITY, WACS-DT CHANNEL 25, DAWSON, GEORGIA**

The firm Kessler and Gehman Associates, Inc. has been retained by the Georgia Public Telecommunications Commission (GPTC), Atlanta, GA to prepare engineering studies and the engineering portion of a minor modification of construction permit application requesting authorization to decrease the overall height of support structure Above Ground Level (AGL), change antenna model and azimuth pattern, increase the antenna height radiation center, and decrease the Effective Radiated Power (ERP) of the authorized (BMPEDT-20020923ABC) WACS-DT Channel 8 digital television broadcast facility. The current construction permit height is based on a side-mount antenna; however, the WACS tower was completely destroyed by a tornado last year and it now makes more sense to mount the digital post-transition antenna on top of the tower. Therefore, the proposed antenna height is greater than the authorized height and the proposed ERP is less than the authorized ERP to compensate for the increased antenna height. The changes proposed in this application are for the pre-transition and final post-transition digital Channel 8 facilities.

**Discussion**

GPTC is authorized to operate WACS-DT on DTV Channel 8 with an ERP of 6 kW at an antenna height radiation center of 307 meters AGL using a side-mounted, directional antenna. On March 1, 2007 a tornado touched down in Dawson, GA and traveled directly over the WACS site causing the tower to collapse on the transmitter building and completely destroying the antenna. Construction of the new tower is underway.



The GPTC design-build contract calls for a new tower to replace the previous tower. The overall height of the previous tower was 334 meters AGL and the overall height of the new tower will be 329 meters AGL. The land surveying drawings prepared by Sims & Associates on October 17, 2007 determined that the site elevation at the tower base is actually 143 meters Above Mean Sea Level (AMSL) which is greater than the site elevation of 138 meters AMSL depicted in the Antenna Structure Registration (ASRN: 1018782). As a result, the overall height of the tower AGL will only be 329 meters so that the overall height AMSL will not exceed the current FAA authorization. A 7460-1 Form was electronically filed with the FAA on February 8, 2008 to notify the FAA that the tower elevations will be corrected but the overall height AMSL will not change (Exhibit 12 - 2008-ASO-766-OE).

As part of the statewide digital transition project, GPTC awarded an antenna contract to procure a Dielectric model THV-5A8-R C170 top-mount directional antenna for the WACS-DT Channel 8 pre/post-transition facility and a Dielectric model TFU-18JSC P230 side-mount directional antenna for the WACS-TV Channel 25 analog facility. This minor modification of construction permit application requests FCC authorization to make the following changes for the WACS-DT Channel 8 pre/post-transition facility: 1) change antenna system from the authorized Dielectric model THV-13A8-R C170 side-mount, directional antenna to the proposed Dielectric model THV-5A8-R C170 top-mount, directional antenna; 2) increase the antenna height radiation center from the authorized height of 307 meters AGL to the proposed height of 322 meters AGL; 3) decrease the ERP from the authorized 6 kW to the proposed 4.7 kW; and 4) decrease the overall height of the support structure from the authorized height of 334 meters AGL to the proposed 329 meters AGL; however, the overall height of the support structure will remain 472 meters AMSL.

Exhibit 10 is an FCC coverage contour map depicting the authorized F(50,90) 36.0 dBuV/m protected noise limited contour (black contour) and the proposed F(50,90) 36.0 dBuV/m protected noise limited contour (red contour). It can be seen that the proposed noise



limited contour would be completely encompassed by the authorized noise limited contour in all azimuthal directions.

Exhibit 11 is a principal community contour map demonstrating that the proposed WACS-DT Channel 8 F(50,90) 43.0 dBuV/m City Grade contour would completely encompass the principal community of Dawson, GA.

### **Expedited Processing**

The WACS-DT Channel 8 Final DTV TOA facility's F(50,90) 36.0 dBuV/m noise limited contour completely encompasses the proposed WACS-DT Channel 8 facility's F(50,90) 36.0 dBuV/m noise limited contour. Therefore, the proposed facility will not expand the noise limited service contour in any direction beyond that established in Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. Section 73.622(i) ("new DTV Table Appendix B".) Accordingly, this application qualifies for expedited processing.

It should be noted that §VII-DTV Engineering, Item 1(c) of this application is checked "No" because the proposed pre-/post-transition antenna HAAT (333 m) will exceed the DTV reference HAAT for this station as established in 47 C.F.R. Section 73.622 by only two meters (331 m). However, the proposed pre-/post-transition facility's ERP (4.7 kW) is 200 W less than the DTV reference ERP (4.9 kW) for this station as established in 47 C.F.R. Section 73.622 which more than compensates for the two meter disparity. Referring to Exhibit 13, it can be seen that the proposed pre-/post-transition facility's F(50,90) 36.0 dBuV/m noise limited contour (red) is completely encompassed by the DTV reference facility's F(50,90) 36.0 dBuV/m noise limited contour (black).

GPTC is in the process of building its pre-/post-transition facilities for its nine digital television broadcast stations and the construction for the WACS-DT Channel 8 pre-/post-



transition DTV facility is scheduled to be completed in April 2008. Therefore, GPTC requests expedited processing of this application since it qualifies for such under the guidelines established by the Commission and so that it can begin pre-/post-transition DTV operation as soon as possible.

Accordingly, GPTC respectfully requests expedited processing pursuant to §V.D.1. (¶140) of the Report and Order in MB Docket No. 07-91, FCC 07-228 *In the Matter of Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, Released on December 31, 2007. This application demonstrates all three of the following requirements and is therefore eligible for expedited processing:

- (1) This application does not seek to expand the station's facilities beyond its final post-transition DTV Table Appendix B facilities;
- (2) This application specifies facilities that match or closely approximate the DTV Table Appendix B facilities (*i.e.*, if the station is unable to build precisely the facilities specified in the new DTV Table Appendix B, then it must apply for facilities that are no more than five percent smaller than its facility specified in Appendix B facilities with respect to predicted population); and
- (3) This application was filed within 45 days of the effective date of the Report and Order.

### **Transmitter Site**

The tower destroyed by the tornado is registered with the FCC; the registration number is 1018782. The overall height AMSL of the new tower will be constructed to the same overall height AMSL as the previous tower but will actually be shorter in length. This is because the land surveying drawings prepared by Sims & Associates on October 17, 2007 determined that the site elevation at the tower base is actually 143.2 meters above mean sea level (AMSL) which is greater than the site elevation of 138.0 meters AMSL depicted in the ASR (1018782). As a result, the overall height of the tower AGL will only be 328.9 meters so that the overall height



AMSL will not exceed the current FAA authorization. An FAA 7460-1 was electronically filed with the FAA on February 8, 2008 to notify the FAA that the elevations will be corrected but the overall height AMSL will not change (Exhibit 12: 2008-ASO-766-OE). The support structure is located at TV Tower Road, 6.2 km NW of Parrott, GA.

## **Exhibits**

Exhibits 1 and 2 represent WACS'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 antenna azimuth pattern azimuth pattern tabulation respectively.

Exhibits 6 (11 deg) and 7 (90 deg) display the elevation pattern and Exhibit 8 displays the elevation pattern tabulation.

Exhibit 9 depicts the location of the WACS-DT site on a 7.5-Minute (Series) Topographic map.

Exhibit 10 is an FCC coverage contour map depicting the authorized F(50,90) 36.0 dBuV/m protected noise limited contour (black contour) and the proposed F(50,90) 36.0 dBuV/m protected noise limited contour (red contour).

Exhibit 11 depicts the proposed WACS-DT F(50,90) 43.0 dBuV/m Principal Community contour, boundaries of the principal community to be served, and the transmitter location with



radials every 45° and demonstrates that the principal community requirement would be satisfied by completely encompassing the entire city limits of Dawson, GA.

Exhibit 12 is a copy of the FAA 7460-1 Form that was electronically filed with the FCC on February 8, 2008.

### **Environmental Impact**

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The DTV transmitter, 3-1/8 inch (50-ohm) transmission line and antenna system shall produce an ERP of 4.7 kW. Assuming the maximum lobe of radiation were oriented toward the base of the tower, the proposed WACS-DT facility's power density six feet above the ground would be 0.0015 mW/cm<sup>2</sup>. That would only be 0.15% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 0.77% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI). Since operation of the proposed WACS-DT Channel 8 facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed WACS-DT facility 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 electromagnetic radiation emanating from the antenna.



**Kessler and Gehman Associates, Inc.**

Telecommunications Consulting Engineers

**Certification**

This technical statement was prepared by William T. Godfrey, 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.

A handwritten signature in blue ink that reads 'William T. Godfrey, Jr.' The signature is written over a horizontal line.

WILLIAM T. GODFREY, JR.  
Telecommunications Technical Consultant

26 February, 2008



# WACS-DT Channel 8

Dawson, Georgia

## ENGINEERING SPECIFICATIONS

**A. Transmitter Site:**

Geographic coordinates (NAD27):

North Latitude ..... 31° 56' 15"

West Longitude ..... 84° 33' 15"

Transmitter Site Address: **Route, 1 Box 75 A Parrott, GA 31777 (6.2 km NW of Parrott, GA)**

**B. Main Studio Site Address: 260 14<sup>th</sup> Street N.W., Atlanta, GA 30318.**

**C. Proposed Facility:**

DTV Channel	Number	8
	Frequency	180-186 MHz
	Offset	N/A

**D. Antenna Height:**

Height of Site Above Mean Sea Level (AMSL) ..... 143 M

Overall Height of Structure Above Ground ..... 329 M  
(including all appurtenances)

Overall Height of Structure Above Mean Sea Level ..... 472 M  
(including all appurtenances)

Height of Site Above Average Terrain ..... 11 M

Antenna Height Radiation Center (R/C) Above Ground ..... 322 M

Antenna Height R/C Above Mean Sea Level ..... 465 M

Average of All Non-Odd Radials ..... 132 M

Antenna Height R/C Above Average Terrain ..... 333 M

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

Transmitter Power Required ..... 0.83 kW

Maximum Power Input to Antenna ..... 0.66 kW

Total System Loss ..... 1.74 dB

Transmission Line Efficiency ..... 67.0%

Maximum Antenna Gain in Beam Maximum ..... 9.29 dB

Maximum Antenna Gain in Horizontal Plane ..... 9.08 dB

Maximum Effective Radiated Power ..... 6.72 dBk

In Beam Maximum ..... 4.70 kW

Maximum Effective Radiated Power ..... 6.51 dBk

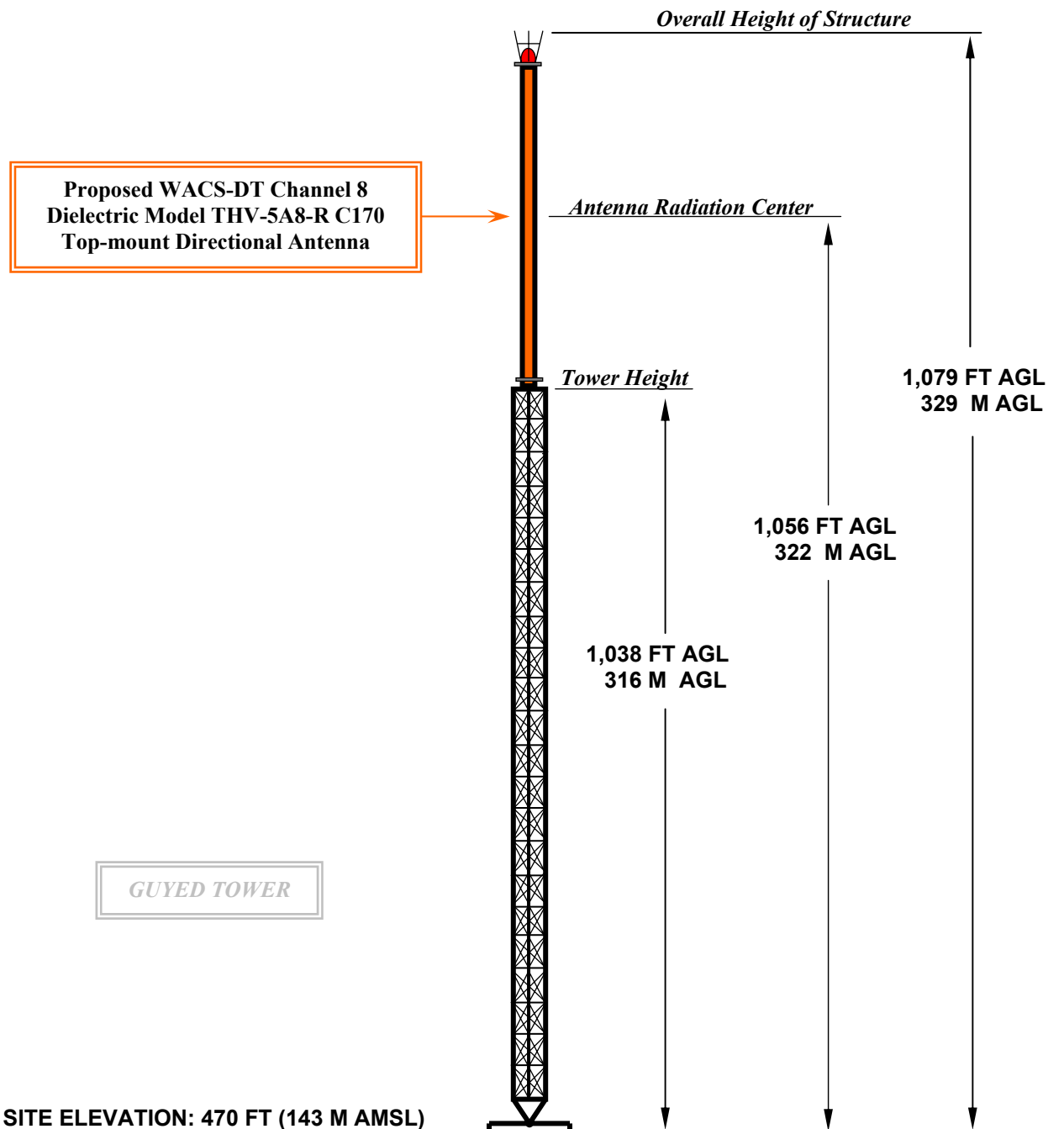
In Horizontal Plane ..... 4.48 kW

**WACS-DT Channel 8**  
*Dawson, Georgia*

**DATA FOR PROPOSED DIRECTIONAL  
TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model THV-5A8-R C170, Horizontally Polarized, Directional, Top-mount Antenna.
- B. **Electrical Beam Tilt:** 1.5°
- C. **Mechanical Beam Tilt:** None
- D. **Maximum Power Gain Horizontal Polarization**  
Maximum: 8.5 (9.29 dB)  
Horizontal: 8.1 (9.08 dB)
- E. **Length:** 37.2 feet (11.3 meters) not including appurtenances.
- F. **TPO:** 0.83 kW
- G. **Null Fill:** 3.5%
- H. **Transmission Line:** 3-1/8" 50 ohm FLEXLine ®
- I. **Transmission Line Loss:** 0.167 dB/100-feet
- J. **Total Transmission Line:** 1,040 feet
- K. **Transmission Line Attenuation:** 1.74 dB

## PROPOSED WACS-DT ELEVATION VIEW



OVERALL HEIGHT AGL:	329 M
OVERALL HEIGHT AMSL:	472 M
RADIATION CENTER AGL:	322 M
RADIATION CENTER AMSL:	465 M
RADIATION CENTER HAAT:	333 M
AVG OF ALL NON-ODD RADIALS:	132 M
SITE HAAT:	11 M

### COORDINATES (NAD 27):

N. LATITUDE 31° 56' 15"

W. LONGITUDE 84° 33' 15"

### Antenna Structure Registration Number:

1018782

**NOTE: NOT TO SCALE**

**KESSLER AND GEHMAN**

TELECOMMUNICATIONS CONSULTING ENGINEERS

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

**WACS-DT CHANNEL 8**

**DAWSON, GEORGIA**

**20080221**

**EXHIBIT 3**

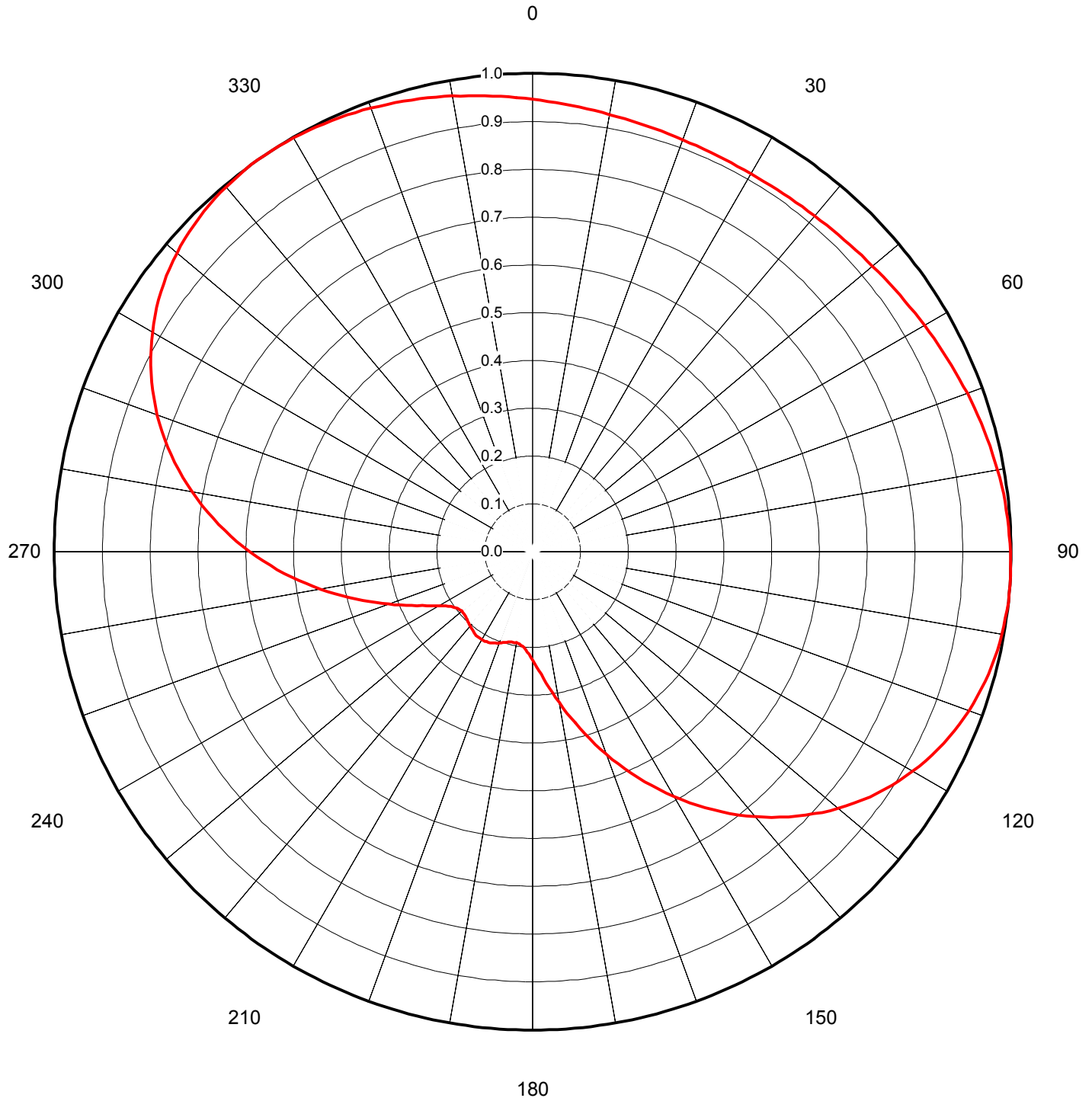


Proposal Number	<b>DCA-10986</b>		
Date	<b>26-May-05</b>		
Call Letters	<b>WACS-DT</b>	Channel	<b>8</b>
Location	<b>Dawson, GA</b>		
Customer	<b>Georgia Public Television</b>		
Antenna Type	<b>THV-5A8-R C170</b>		

## AZIMUTH PATTERN

Gain	<b>1.70</b>	<b>( 2.30 dB)</b>
Calculated / Measured	<b>Calculated</b>	

Frequency	<b>183.00 MHz</b>
Drawing #	<b>THV-C170</b>





Proposal Number **DCA-10986**  
 Date **26-May-05**  
 Call Letters **WACS-DT** Channel **8**  
 Location **Dawson, GA**  
 Customer **Georgia Public Television**  
 Antenna Type **THV-5A8-R C170**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **THV-C170**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.946	45	0.921	90	0.999	135	0.782	180	0.226	225	0.196	270	0.591	315	0.987
1	0.944	46	0.923	91	0.999	136	0.771	181	0.220	226	0.195	271	0.605	316	0.989
2	0.942	47	0.924	92	1.000	137	0.759	182	0.214	227	0.194	272	0.618	317	0.991
3	0.940	48	0.925	93	1.000	138	0.747	183	0.210	228	0.193	273	0.632	318	0.993
4	0.938	49	0.927	94	1.000	139	0.735	184	0.205	229	0.193	274	0.646	319	0.995
5	0.936	50	0.928	95	1.000	140	0.723	185	0.202	230	0.193	275	0.659	320	0.996
6	0.935	51	0.930	96	0.999	141	0.710	186	0.199	231	0.194	276	0.672	321	0.997
7	0.933	52	0.931	97	0.999	142	0.698	187	0.197	232	0.195	277	0.685	322	0.998
8	0.931	53	0.933	98	0.998	143	0.685	188	0.195	233	0.197	278	0.698	323	0.999
9	0.930	54	0.935	99	0.997	144	0.672	189	0.194	234	0.199	279	0.710	324	1.000
10	0.928	55	0.936	100	0.996	145	0.659	190	0.193	235	0.202	280	0.723	325	1.000
11	0.927	56	0.938	101	0.995	146	0.646	191	0.193	236	0.205	281	0.735	326	1.000
12	0.925	57	0.940	102	0.993	147	0.632	192	0.193	237	0.210	282	0.747	327	1.000
13	0.924	58	0.942	103	0.991	148	0.618	193	0.194	238	0.214	283	0.759	328	1.000
14	0.923	59	0.944	104	0.989	149	0.605	194	0.195	239	0.220	284	0.771	329	0.999
15	0.921	60	0.946	105	0.987	150	0.591	195	0.196	240	0.226	285	0.782	330	0.999
16	0.920	61	0.948	106	0.984	151	0.577	196	0.197	241	0.233	286	0.793	331	0.998
17	0.919	62	0.950	107	0.981	152	0.563	197	0.199	242	0.240	287	0.804	332	0.997
18	0.918	63	0.952	108	0.978	153	0.549	198	0.200	243	0.249	288	0.814	333	0.996
19	0.917	64	0.954	109	0.974	154	0.535	199	0.202	244	0.257	289	0.824	334	0.995
20	0.917	65	0.956	110	0.971	155	0.521	200	0.203	245	0.267	290	0.834	335	0.994
21	0.916	66	0.958	111	0.967	156	0.507	201	0.205	246	0.276	291	0.844	336	0.993
22	0.915	67	0.960	112	0.963	157	0.492	202	0.206	247	0.287	292	0.853	337	0.991
23	0.915	68	0.963	113	0.958	158	0.478	203	0.207	248	0.297	293	0.862	338	0.990
24	0.914	69	0.965	114	0.953	159	0.464	204	0.209	249	0.309	294	0.871	339	0.988
25	0.914	70	0.967	115	0.948	160	0.450	205	0.210	250	0.320	295	0.880	340	0.987
26	0.913	71	0.969	116	0.943	161	0.437	206	0.211	251	0.332	296	0.888	341	0.985
27	0.913	72	0.971	117	0.937	162	0.423	207	0.211	252	0.344	297	0.896	342	0.983
28	0.913	73	0.973	118	0.931	163	0.409	208	0.212	253	0.357	298	0.904	343	0.981
29	0.913	74	0.975	119	0.924	164	0.396	209	0.212	254	0.369	299	0.911	344	0.979
30	0.912	75	0.977	120	0.918	165	0.383	210	0.212	255	0.383	300	0.918	345	0.977
31	0.913	76	0.979	121	0.911	166	0.369	211	0.212	256	0.396	301	0.924	346	0.975
32	0.913	77	0.981	122	0.904	167	0.357	212	0.212	257	0.409	302	0.931	347	0.973
33	0.913	78	0.983	123	0.896	168	0.344	213	0.211	258	0.423	303	0.937	348	0.971
34	0.913	79	0.985	124	0.888	169	0.332	214	0.211	259	0.437	304	0.943	349	0.969
35	0.914	80	0.987	125	0.880	170	0.320	215	0.210	260	0.450	305	0.948	350	0.967
36	0.914	81	0.988	126	0.871	171	0.309	216	0.209	261	0.464	306	0.953	351	0.965
37	0.915	82	0.990	127	0.862	172	0.297	217	0.207	262	0.478	307	0.958	352	0.963
38	0.915	83	0.991	128	0.853	173	0.287	218	0.206	263	0.492	308	0.963	353	0.960
39	0.916	84	0.993	129	0.844	174	0.276	219	0.205	264	0.507	309	0.967	354	0.958
40	0.917	85	0.994	130	0.834	175	0.267	220	0.203	265	0.521	310	0.971	355	0.956
41	0.917	86	0.995	131	0.824	176	0.257	221	0.202	266	0.535	311	0.974	356	0.954
42	0.918	87	0.996	132	0.814	177	0.249	222	0.200	267	0.549	312	0.978	357	0.952
43	0.919	88	0.997	133	0.804	178	0.240	223	0.199	268	0.563	313	0.981	358	0.950
44	0.920	89	0.998	134	0.793	179	0.233	224	0.197	269	0.577	314	0.984	359	0.948



Proposal Number	<b>DCA-10986</b>	
Date	<b>26-May-05</b>	
Call Letters	<b>WACS-DT</b>	Channel <b>8</b>
Location	<b>Dawson, GA</b>	
Customer	<b>Georgia Public Television</b>	
Antenna Type	<b>THV-5A8-R C170</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>5.00</b>	<b>( 6.99 dB )</b>
RMS Gain at Horizontal	<b>4.70</b>	<b>( 6.72 dB )</b>
Calculated / Measured	<b>Calculated</b>	

Beam Tilt	<b>1.50 deg</b>
Frequency	<b>183.00 MHz</b>
Drawing #	<b>05V050150</b>



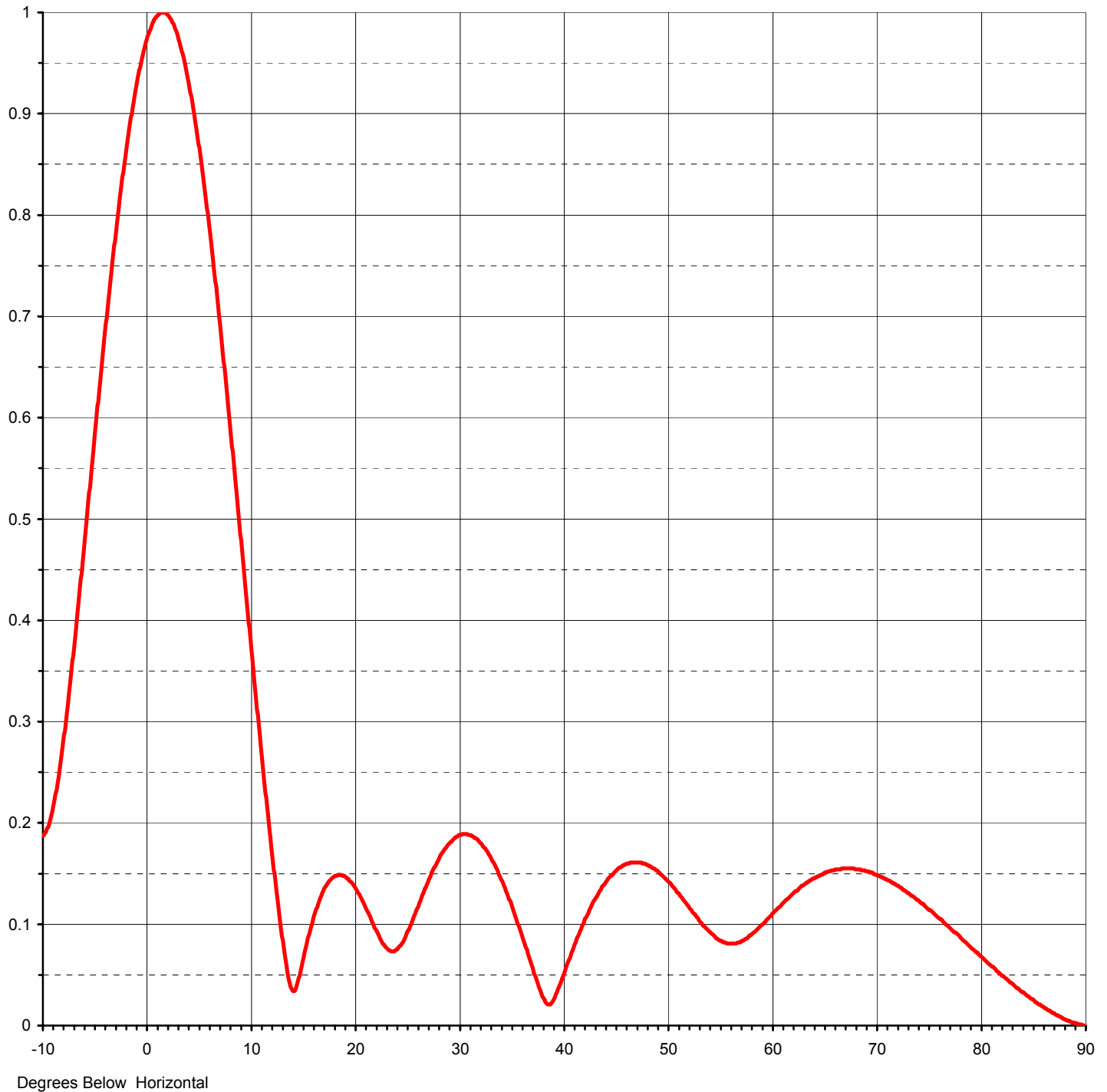


Proposal Number	<b>DCA-10986</b>	
Date	<b>26-May-05</b>	
Call Letters	<b>WACS-DT</b>	Channel <b>8</b>
Location	<b>Dawson, GA</b>	
Customer	<b>Georgia Public Television</b>	
Antenna Type	<b>THV-5A8-R C170</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>5.00</b>	<b>( 6.99 dB )</b>
RMS Gain at Horizontal	<b>4.70</b>	<b>( 6.72 dB )</b>
Calculated / Measured	<b>Calculated</b>	

Beam Tilt	<b>1.50 deg</b>
Frequency	<b>183.00 MHz</b>
Drawing #	<b>05V050150-90</b>





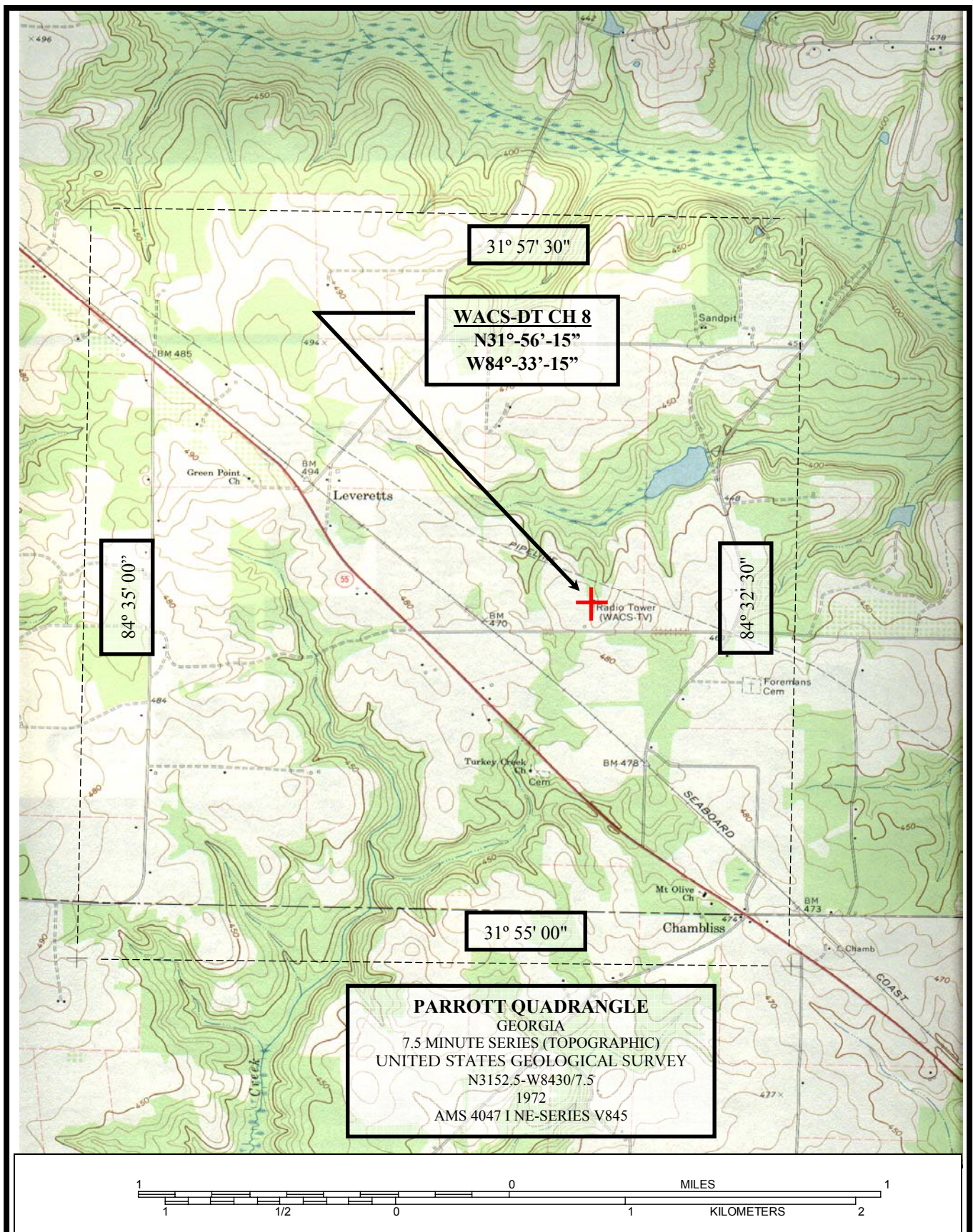
Proposal Number **DCA-10986**  
 Date **26-May-05**  
 Call Letters **WACS-DT** Channel **8**  
 Location **Dawson, GA**  
 Customer **Georgia Public Television**  
 Antenna Type **THV-5A8-R C170**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **05V050150-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.187	2.4	0.991	10.6	0.317	30.5	0.189	51.0	0.131	71.5	0.141
-9.5	0.196	2.6	0.986	10.8	0.296	31.0	0.188	51.5	0.124	72.0	0.138
-9.0	0.216	2.8	0.981	11.0	0.275	31.5	0.185	52.0	0.118	72.5	0.134
-8.5	0.245	3.0	0.974	11.5	0.225	32.0	0.181	52.5	0.111	73.0	0.131
-8.0	0.283	3.2	0.967	12.0	0.177	32.5	0.175	53.0	0.104	73.5	0.127
-7.5	0.327	3.4	0.959	12.5	0.132	33.0	0.167	53.5	0.098	74.0	0.123
-7.0	0.374	3.6	0.950	13.0	0.091	33.5	0.157	54.0	0.093	74.5	0.119
-6.5	0.425	3.8	0.940	13.5	0.056	34.0	0.146	54.5	0.088	75.0	0.114
-6.0	0.478	4.0	0.930	14.0	0.035	34.5	0.133	55.0	0.084	75.5	0.110
-5.5	0.531	4.2	0.918	14.5	0.041	35.0	0.120	55.5	0.082	76.0	0.105
-5.0	0.585	4.4	0.906	15.0	0.063	35.5	0.105	56.0	0.081	76.5	0.101
-4.5	0.637	4.6	0.893	15.5	0.085	36.0	0.090	56.5	0.081	77.0	0.096
-4.0	0.688	4.8	0.880	16.0	0.104	36.5	0.075	57.0	0.083	77.5	0.092
-3.5	0.737	5.0	0.866	16.5	0.120	37.0	0.059	57.5	0.086	78.0	0.087
-3.0	0.783	5.2	0.851	17.0	0.133	37.5	0.043	58.0	0.089	78.5	0.082
-2.8	0.801	5.4	0.835	17.5	0.142	38.0	0.029	58.5	0.094	79.0	0.077
-2.6	0.818	5.6	0.819	18.0	0.147	38.5	0.021	59.0	0.099	79.5	0.072
-2.4	0.834	5.8	0.802	18.5	0.149	39.0	0.024	59.5	0.104	80.0	0.068
-2.2	0.850	6.0	0.785	19.0	0.148	39.5	0.036	60.0	0.110	80.5	0.063
-2.0	0.865	6.2	0.767	19.5	0.143	40.0	0.049	60.5	0.115	81.0	0.058
-1.8	0.879	6.4	0.748	20.0	0.137	40.5	0.063	61.0	0.120	81.5	0.054
-1.6	0.893	6.6	0.730	20.5	0.128	41.0	0.077	61.5	0.125	82.0	0.049
-1.4	0.906	6.8	0.710	21.0	0.118	41.5	0.090	62.0	0.130	82.5	0.045
-1.2	0.918	7.0	0.691	21.5	0.107	42.0	0.102	62.5	0.134	83.0	0.041
-1.0	0.929	7.2	0.671	22.0	0.095	42.5	0.114	63.0	0.138	83.5	0.037
-0.8	0.940	7.4	0.650	22.5	0.085	43.0	0.124	63.5	0.142	84.0	0.033
-0.6	0.950	7.6	0.629	23.0	0.077	43.5	0.133	64.0	0.145	84.5	0.029
-0.4	0.959	7.8	0.608	23.5	0.073	44.0	0.140	64.5	0.148	85.0	0.025
-0.2	0.967	8.0	0.587	24.0	0.075	44.5	0.147	65.0	0.151	85.5	0.021
0.0	0.974	8.2	0.566	24.5	0.081	45.0	0.152	65.5	0.152	86.0	0.018
0.2	0.981	8.4	0.544	25.0	0.091	45.5	0.156	66.0	0.154	86.5	0.015
0.4	0.986	8.6	0.523	25.5	0.103	46.0	0.159	66.5	0.154	87.0	0.012
0.6	0.991	8.8	0.501	26.0	0.116	46.5	0.161	67.0	0.155	87.5	0.009
0.8	0.994	9.0	0.479	26.5	0.129	47.0	0.161	67.5	0.155	88.0	0.006
1.0	0.997	9.2	0.457	27.0	0.141	47.5	0.161	68.0	0.154	88.5	0.004
1.2	0.999	9.4	0.435	27.5	0.153	48.0	0.159	68.5	0.153	89.0	0.002
1.4	1.000	9.6	0.414	28.0	0.163	48.5	0.156	69.0	0.152	89.5	0.001
1.6	1.000	9.8	0.403	28.5	0.172	49.0	0.153	69.5	0.151	90.0	0.000
1.8	0.999	10.0	0.381	29.0	0.179	49.5	0.148	70.0	0.149		
2.0	0.997	10.2	0.360	29.5	0.184	50.0	0.143	70.5	0.146		
2.2	0.994	10.4	0.338	30.0	0.188	50.5	0.137	71.0	0.144		





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

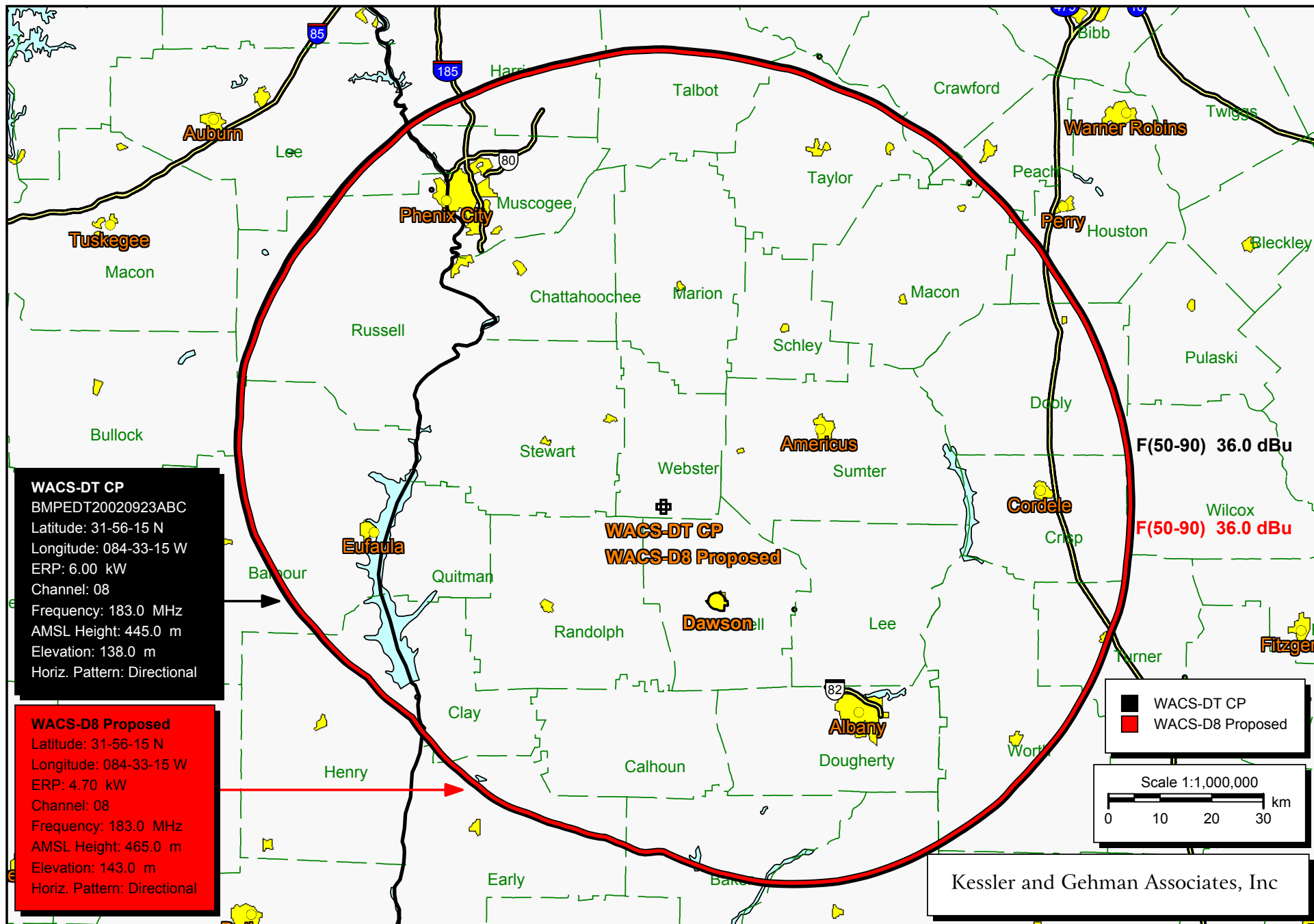
**WACS-DT CHANNEL 8**

*Dawson, Georgia*

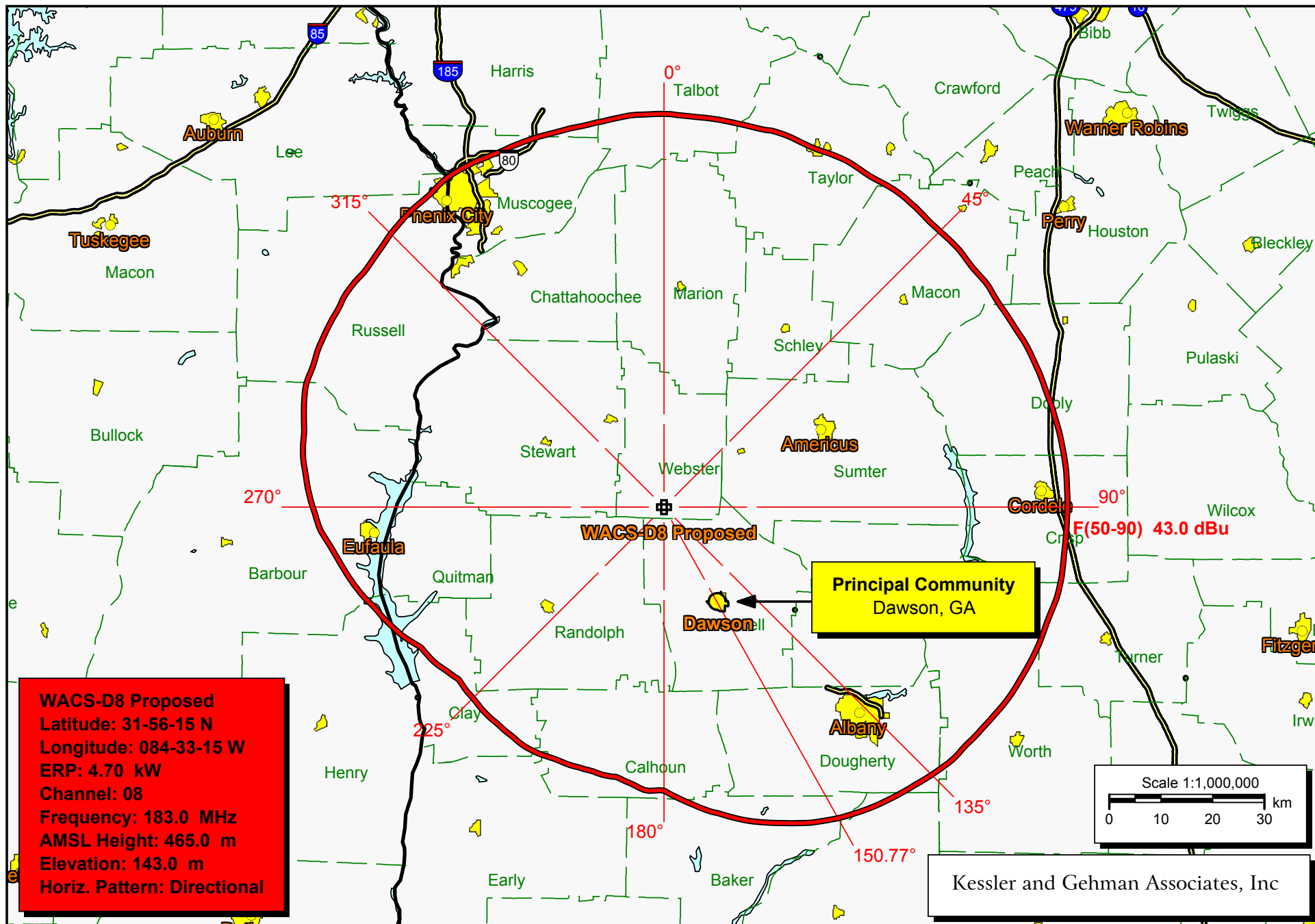
20080222

EXHIBIT 9





Authorized WACS-DT Channel 8 (black) vs. Proposed WACS-DT Channel 8 (red)



Proposed WACS-DT Channel 8 F(50,90) 43.0 dBuV/m Principal Community Contour

## Notice of Proposed Construction or Alteration - Off Airport

**Project Name:** GEORG-000087837-08

**Sponsor:** Georgia Public Telecommunications Commission

### Details for Case : WACS Tower

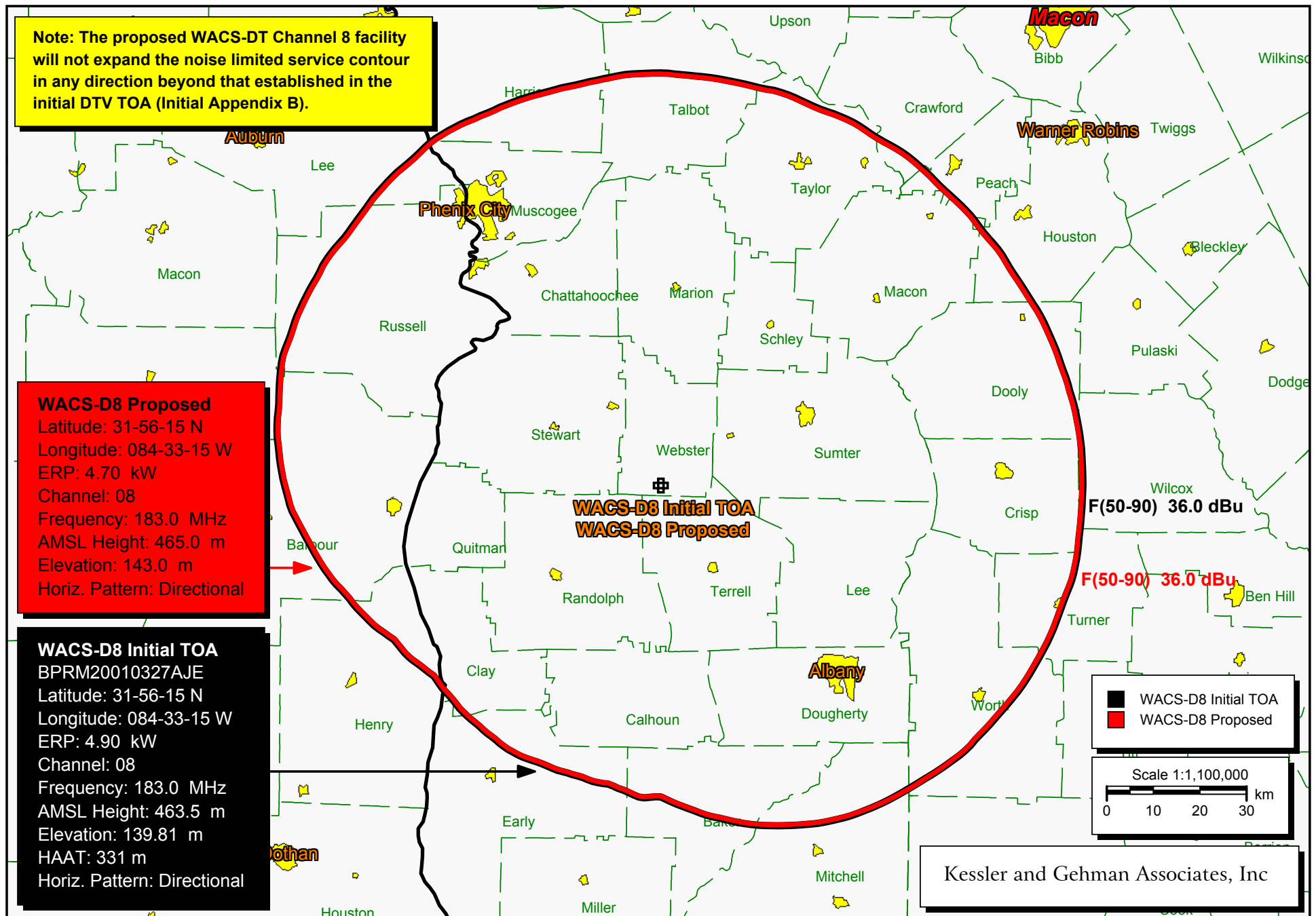
[Show Project Summary](#)

Case Status	
<b>ASN:</b> 2008-ASO-766-OE	<b>Date Accepted:</b> 02/08/2008
<b>Status:</b> Accepted	<b>Date Determined:</b>
	<b>Letters:</b> None

Construction / Alteration Information	Structure Summary
<b>Notice Of:</b> Alteration	<b>Structure Type:</b> Antenna Tower
<b>Duration:</b> Permanent	<b>Structure Name:</b> WACS Tower
<b>if Temporary :</b> Months: Days:	<b>FCC Number:</b> 1018782
<b>Work Schedule - Start:</b> 01/07/2008	<b>Prior ASN:</b>
<b>Work Schedule - End:</b> 03/21/2008	
<b>State Filing:</b> Not filed with State	

Structure Details	Common Frequency Bands
<b>Latitude:</b> 31° 56' 16" N	<b>Low Freq</b> <b>High Freq</b> <b>Freq Unit</b> <b>ERP</b> <b>ERP Unit</b>
<b>Longitude:</b> 84° 33' 15" W	
<b>Horizontal Datum:</b> NAD83	
<b>Site Elevation (SE):</b> 470 (nearest foot)	
<b>Structure Height (AGL):</b> 1079 (nearest foot)	
<b>Marking/Lighting:</b> Red lights and paint	
<b>Other :</b>	
<b>Nearest City:</b> Parrott	
<b>Nearest State:</b> Georgia	
<b>Description of Location:</b> Located off of TV Tower Road approximately 6.2 km NW (321.7 deg) of Parrott, GA.	
<b>Description of Proposal:</b> The WACS tower was torn down by a tornado on March 1, 2007 and a new tower is being constructed to replace it. The overall height of the WACS tower was 1,096 ft AGL and the overall height of the new replacement tower will only be 1,079 ft AGL	

Specific Frequencies					
Low Freq	High Freq	Freq Unit	ERP	ERP Unit	
180	186	MHz	5	KW	
536	542	MHz	90	KW	



WACS-DT CH 8 assigned in Initial DTV TOA (Black) vs. Proposed WACS-DT CH 8 Pre-/Post-Transition (Red) EXHIBIT 13