

ENGINEERING STATEMENT
RE DTV BROADCAST ENGINEERING DATA
APPLICATION FOR CONSTRUCTION PERMIT
ON BEHALF OF
PARKIN BROADCASTING OF SAVANNAH LICENSE, LLC
WTGS-DT, HARDEEVILLE, SOUTH CAROLINA
CHANNEL 28 1000 KW MAX ERP 455 METERS HAAT

JULY 2008

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

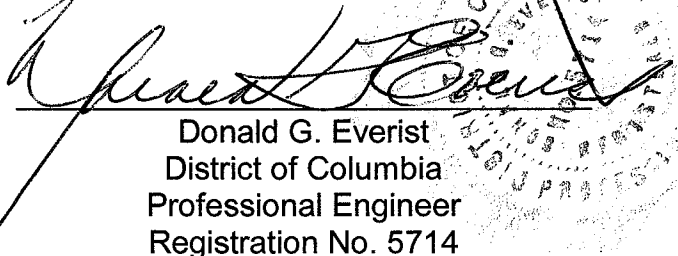
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

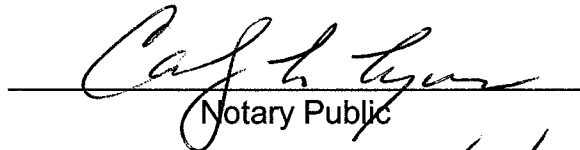
That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

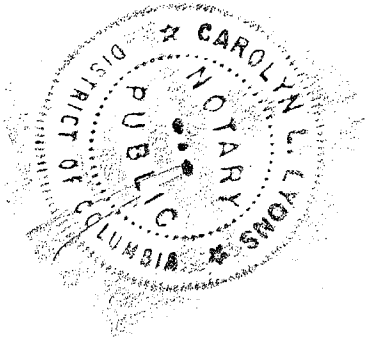
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 16th day of July, 2008.


Notary Public

My Commission Expires: 2/28/2013



This engineering statement has been prepared in support of an application for outstanding construction permit on behalf of Parkin Broadcasting of Savannah License, LLC, licensee of WTGS, Hardeeville, South Carolina. The purpose of the application is to specify the technical parameters and the radiation pattern of the allotted Appendix B¹ facilities.

WTGS(TV) is licensed to operate on NTSC television Channel 28 with a maximum visual ERP of 5000 kW and an antenna height above average terrain (“HAAT”) of 452.5 meters (1484.6 feet). WTGS-DT has been allocated DTV Channel 28 with facilities of 1000 kW and HAAT of 455 meters (1492.8 feet) in the final DTV Table of Allotments.² WTGS-DT proposes to construct DTV facilities of 1000 kW (directional) at the height above average terrain of 455 meters (1492.8 feet). These proposed facilities match the current technical parameters in Appendix B.

There are no AM stations located within 3.2 km of the existing WTGS(TV) tower site. There are three FM and there are no other NTSC stations and one other full-service DTV facilities within 100 meters.

The TV antenna will be top-mounted on the existing tower. The WTGS-DT antenna will be located on the WTGS(TV) existing tower having a total overall structure height above ground of 467 meters (1532 feet). The existing transmitter site is located 4.3 miles west of I-95 on Highway 204. The registration number for the existing tower is 1032657.

¹“In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service”, MM Docket 87-268, Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eighth Report and Order (FCC 08-72) Released March 6, 2008.

²Ibid.

Since there is no change in overall height, FAA airspace approval is not required. Exhibit E-1 is a vertical sketch of the existing tower and the proposed transmitting antenna.

The geographic coordinates of the proposed site are as follows:

North Latitude: 32° 02' 45"

West Longitude: 81° 20' 27"

NAD-27

Equipment Data

Antenna: ERI, Model ATW28H3-HTTXU-28H (or equivalent) antenna with 0.75° electrical beam tilt. The vertical plane pattern and other exhibits required by Section 73.625(c) are herein included as Exhibit E-2.

Transmission Line: 566.9 meters (1860 ft) of Dielectric, Type WR1500 waveguide, or equivalent

Power Data

Transmitter output including Combiner loss	25.84 kW	14.12 dBk
Transmission line efficiency/loss	75.93%	1.20 dB
Input power to the antenna	19.62 kW	12.93 dBk
Antenna power gain, Main Lobe	50.96	17.07 dB
Effective Radiated Power, Maximum	1000 kW	30 dBk

Elevation Data
(unchanged)

Vertical dimension for Channel 28 antenna including beacon and lightning rod	17.98 meters 59 feet
Overall height above ground of the existing antenna structure (including beacon and lightning rod)	467 meters 1532 feet
Center of radiation of Channel 28 antenna above ground	457.7 meters 1502 feet
Elevation of site above mean sea level	4.3 meters 14 feet
Center of radiation of Channel 28 antenna above mean sea level	462 meters 1516 feet
Overall height above mean sea level of existing tower and stacked antenna (including appertances)	471.3 meters 1546 feet
Antenna height above average terrain	455 meters

Note: Slight height differences may result due to conversion to metric.

Allocation

An allocation study from the proposed site has not been performed since the proposed DTV facilities are identical to that listed in Appendix B.

Coverage

The average elevation data for 3.2 to 16.1 km along each radial are based upon the 3-second NGDC profile data.

The F(50,90) DTV coverage contour has been computed from reference to the propagation data for Channels 14-69, as published by the FCC in Figure 10b and Figure 10c, Section 73.699 of the FCC Rules and Regulations.

Utilizing the formula in Section 73.625(b)(2) of the Rules for the effective heights, it is found that the depression angle, A_h , varies from 0.586 to 0.594 degrees. Since the relative vertical field is greater than 90% of the maximum at these depression angles, the maximum power was used in determining the distance to the DTV contour.

Table I includes the distances to the 48 and 41 dBu F(50,90) coverage contours, the average elevation 3.2 to 16.1 km, and the antenna height above average terrain for each radial spaced every 10 degrees beginning at true north. Exhibit E-3 provides the 48 and 41 dBu F(50,90) coverage contours and demonstrates that the community of license is covered by the F(50,90) 48 dBu contour.

Total Radiofrequency Field Levels at WTGS-DT Tower Site

The percentage of radiofrequency field levels ("RFF") can be calculated by the following formula:

WTGS-DT DTV

Channel	28	Frequency:	554-560 MHz Range
		Total ERP =	1000 kW
		Polarization =	Horizontal
		RCAGL-2 meters =	455.7 meters

WTGS-DT proposes to use a ERI, Model ATW28H3-HTTXU-28H with a field factor less than 0.2 at any angle below the horizontal in the vicinity of the WTGS-DT tower site. A value of 0.2 will be used in the calculation.

$S = 33.4 (F^2) \text{ Total ERP}$ Total ERP = 1,000,000 watts (Horizontal Polarization)

R^2

$R = 455.7$ meters

$F = 0.2$ (field factor)

$S = \leq 6.5 \mu\text{W}/\text{cm}^2$

WTGS-DT contributes less than $6.5 \mu\text{W}/\text{cm}^2$ at two meters above ground level. The limit for an uncontrolled environment is $371.3 \mu\text{W}/\text{cm}^2$ for a station broadcasting in the 300-1500 MHz range.

Therefore:

The WTGS-DT facility contributes less than 1.8% RFF for an uncontrolled environment two meters above ground in the vicinity of the WTGS-DT tower site.

The total “worst-case” post-transition RFF contribution of the post-transition operation of WTGS-DT two meters above the ground at the base of the WTGS-DT tower is no more than 1.8% of the FCC guidelines for an uncontrolled environment which is no more than 0.4% of the proposed FCC guidelines for a controlled environment. WTGS-DT will likely not operate its post-transition facilities until 2009, thereby potentially reducing the RFF at the site after analog operation is removed from the tower and the vicinity.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

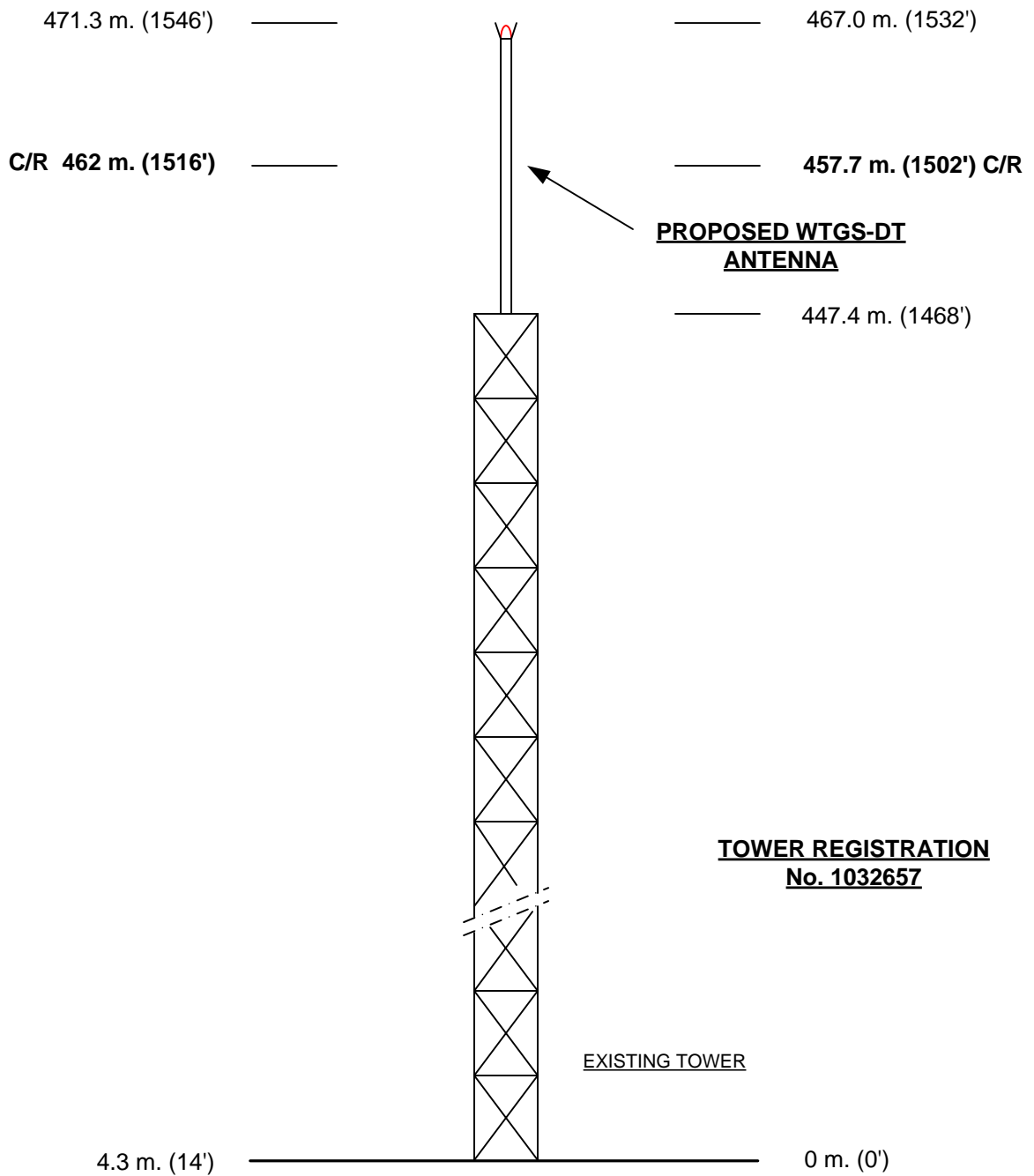
Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

ABOVE MEAN SEA LEVEL

ABOVE GROUND



(NOT TO SCALE)

EXHIBIT E - 1
VERTICAL SKETCH
FOR THE PROPOSED OPERATION OF
WTGS-DT, HARDEEVILLE, SOUTH CAROLINA
JULY 2008

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

WTGS-DT, HARDEEVILLE, SOUTH CAROLINA

FINAL SPECIFICATION FOR DUAL ADJACENT CHANNEL TRASAR® HORIZONTALLY POLARIZED COAXIAL SLOTTED ARRAY ANTENNA

ELECTRICAL CHARACTERISTICS:

CHANNEL :	NTSC	28
	DTV :	27
FREQUENCY RANGE :	NTSC	554 - 560 MHz
	DTV :	548 - 554 MHz
AZIMUTH PATTERN NUMBER :		CH287HAZ-TX
ELEVATION PATTERN NUMBER :	NTSC	ATW28H3H
	DTV :	ATW28H5H
AZIMUTH DIRECTIVITY :	NTSC	1.82 (2.60 dBd)
	DTV :	1.82 (2.60 dBd)
ELEVATION DIRECTIVITY :	NTSC	28.00 (14.47 dBd)
	DTV :	28.00 (14.47 dBd)
PEAK POWER GAIN :	NTSC	50.96 (17.07 dBd)
	DTV :	50.96 (17.07 dBd)
GAIN AT HORIZONTAL :	NTSC	28.06 (14.48 dBd)
	DTV :	7.55 (8.78 dBd)
ELECTRICAL BEAM TILT :	NTSC	0.75 Degrees
	DTV :	1.25 Degrees
INPUT POWER REQUIRED :	NTSC	98.12 kW (19.92 dBk)
	DTV :	19.62 kW (12.93 dBk)
INPUT TYPE :		WR1500 (8 3/16-75 Ohm Transition)
INPUT POWER MAXIMUM :		90 kW, Average
ANTENNA VSWR (MAXIMUM) :	NTSC	1.05 Over Visual Carrier 1.08 Over Sub-carrier 1.10 Over Remainder of Channel
	DTV :	1.10 Over 6MHz Channel

Broadcast Antenna System

Power Analysis

WTGS-TV
Hardeeville, SC
ATW28H3-HTTXU-28H

Channel 28

ANTENNA PARAMETERS :

Azimuth Directivity :

Hor. Pol : 1.82
 dBd : 2.60

Elevation Directivity :

Hor. Pol : 28.00
 dBd : 14.47

TRANSMISSION LINE :

VERTICAL RUN :

Type: WR1500
 Length, ft. : 1460
 Attenuation , dB/100 ft: 0.0634

HORIZONTAL RUN :

Type: WR1500
 Length, ft. : 400
 Attenuation , dB/100 ft: 0.0634

OTHER LINE LOSSES:

Type: N/A
 Length, ft. : 0
 Attenuation , dB/100 ft: 0

Line Efficiency : 76.22%

ERP :

kW : 5000.00
 dBk : 36.99

POWER GAIN :

Ratio : 50.96
 dBd : 17.07

ANTENNA INPUT :

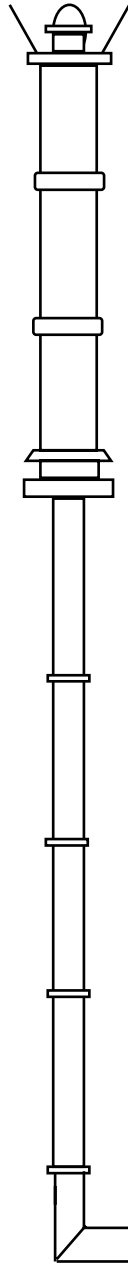
kW : 98.12
 dBk : 19.92

LINE LOSS :

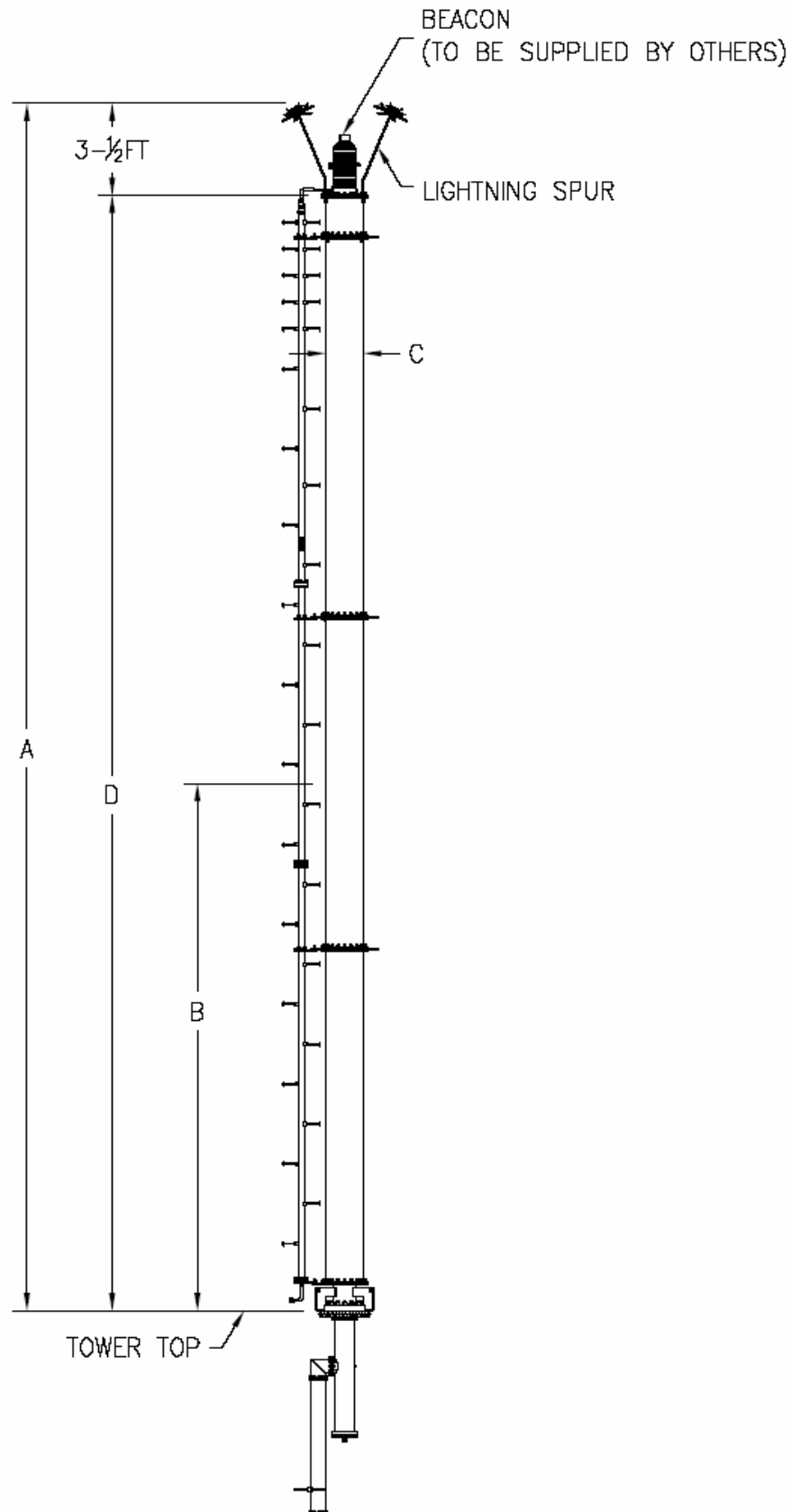
kW : 30.61
 dB : 1.18

TRANSMITTER POWER :

kW : 128.73
 dBk : 21.10



TYPICAL MOUNTING CONFIGURATION SHOWN. ACTUAL CONFIGURATION MAY VARY.



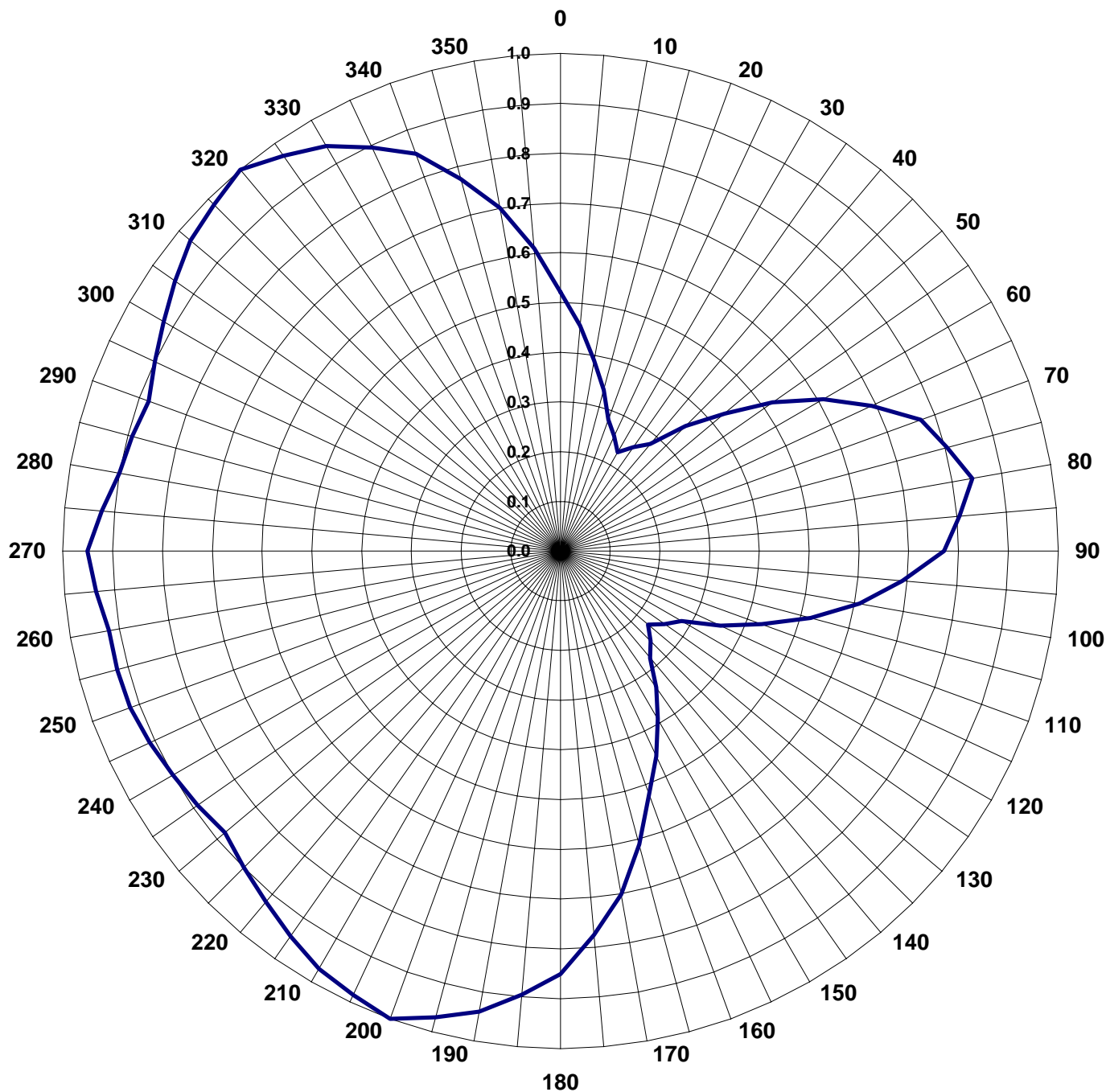
AZIMUTH PATTERN

TYPE: CH287HAZ-TX

	<u>Numeric</u>	<u>dB</u>
Directivity:	<u>1.82</u>	<u>2.60</u>
Peak(s) at:	<u> </u>	<u> </u>
	<u> </u>	<u> </u>

Frequency: 28 (Analog) / 27 (Digital)
Location: Hardeeville, SC
Polarization: Horizontal

Note: Pattern shape and directivity may vary with channel and mounting configuration.



TABULATED DATA FOR AZIMUTH PATTERN

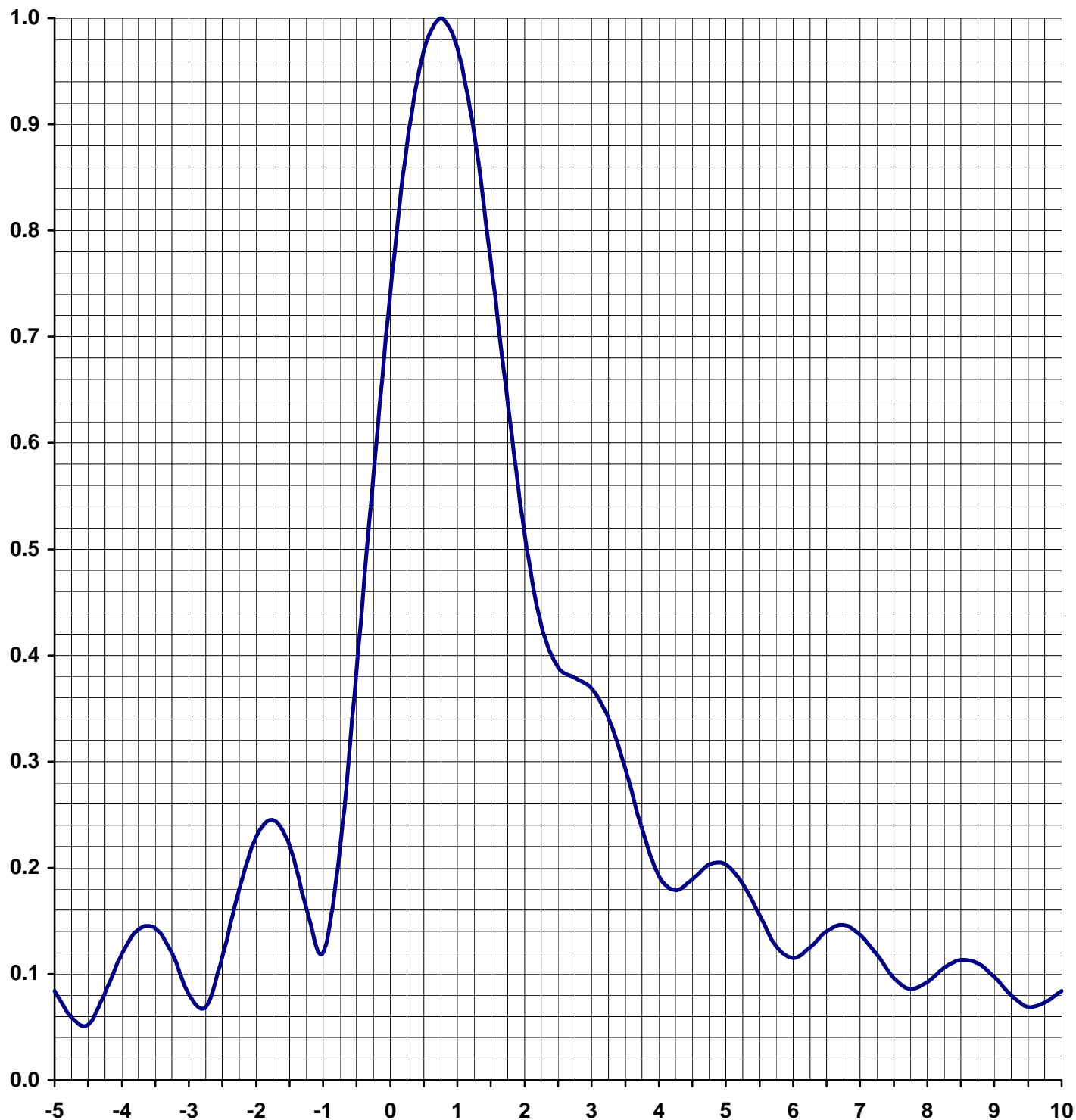
TYPE: CH287HAZ-TX

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.520	-5.68	92	0.738	-2.64	184	0.886	-1.05	276	0.920	-0.72
2	0.494	-6.13	94	0.706	-3.02	186	0.904	-0.88	278	0.910	-0.82
4	0.468	-6.60	96	0.674	-3.43	188	0.922	-0.71	280	0.900	-0.92
6	0.442	-7.09	98	0.642	-3.85	190	0.940	-0.54	282	0.896	-0.95
8	0.416	-7.62	100	0.610	-4.29	192	0.952	-0.43	284	0.892	-0.99
10	0.390	-8.18	102	0.574	-4.82	194	0.964	-0.32	286	0.888	-1.03
12	0.368	-8.68	104	0.538	-5.38	196	0.976	-0.21	288	0.884	-1.07
14	0.346	-9.22	106	0.502	-5.99	198	0.988	-0.10	290	0.880	-1.11
16	0.324	-9.79	108	0.466	-6.63	200	1.000	0.00	292	0.888	-1.03
18	0.302	-10.40	110	0.430	-7.33	202	0.994	-0.05	294	0.896	-0.95
20	0.280	-11.06	112	0.400	-7.96	204	0.988	-0.10	296	0.904	-0.88
22	0.270	-11.37	114	0.370	-8.64	206	0.982	-0.16	298	0.912	-0.80
24	0.260	-11.70	116	0.340	-9.37	208	0.976	-0.21	300	0.920	-0.72
26	0.250	-12.04	118	0.310	-10.17	210	0.970	-0.26	302	0.930	-0.63
28	0.240	-12.40	120	0.280	-11.06	212	0.960	-0.35	304	0.940	-0.54
30	0.230	-12.77	122	0.270	-11.37	214	0.950	-0.45	306	0.950	-0.45
32	0.240	-12.40	124	0.260	-11.70	216	0.940	-0.54	308	0.960	-0.35
34	0.250	-12.04	126	0.250	-12.04	218	0.930	-0.63	310	0.970	-0.26
36	0.260	-11.70	128	0.240	-12.40	220	0.920	-0.72	312	0.976	-0.21
38	0.270	-11.37	130	0.230	-12.77	222	0.912	-0.80	314	0.982	-0.16
40	0.280	-11.06	132	0.240	-12.40	224	0.904	-0.88	316	0.988	-0.10
42	0.310	-10.17	134	0.250	-12.04	226	0.896	-0.95	318	0.994	-0.05
44	0.340	-9.37	136	0.260	-11.70	228	0.888	-1.03	320	1.000	0.00
46	0.370	-8.64	138	0.270	-11.37	230	0.880	-1.11	322	0.988	-0.10
48	0.400	-7.96	140	0.280	-11.06	232	0.884	-1.07	324	0.976	-0.21
50	0.430	-7.33	142	0.302	-10.40	234	0.888	-1.03	326	0.964	-0.32
52	0.466	-6.63	144	0.324	-9.79	236	0.892	-0.99	328	0.952	-0.43
54	0.502	-5.99	146	0.346	-9.22	238	0.896	-0.95	330	0.940	-0.54
56	0.538	-5.38	148	0.368	-8.68	240	0.900	-0.92	332	0.922	-0.71
58	0.574	-4.82	150	0.390	-8.18	242	0.904	-0.88	334	0.904	-0.88
60	0.610	-4.29	152	0.416	-7.62	244	0.908	-0.84	336	0.886	-1.05
62	0.642	-3.85	154	0.442	-7.09	246	0.912	-0.80	338	0.868	-1.23
64	0.674	-3.43	156	0.468	-6.60	248	0.916	-0.76	340	0.850	-1.41
66	0.706	-3.02	158	0.494	-6.13	250	0.920	-0.72	342	0.820	-1.72
68	0.738	-2.64	160	0.520	-5.68	252	0.920	-0.72	344	0.790	-2.05
70	0.770	-2.27	162	0.556	-5.10	254	0.920	-0.72	346	0.760	-2.38
72	0.784	-2.11	164	0.592	-4.55	256	0.921	-0.71	348	0.730	-2.73
74	0.798	-1.96	166	0.628	-4.04	258	0.921	-0.71	350	0.700	-3.10
76	0.812	-1.81	168	0.664	-3.56	260	0.921	-0.71	352	0.664	-3.56
78	0.826	-1.66	170	0.700	-3.10	262	0.927	-0.66	354	0.628	-4.04
80	0.840	-1.51	172	0.730	-2.73	264	0.933	-0.60	356	0.592	-4.55
82	0.826	-1.66	174	0.760	-2.38	266	0.938	-0.56	358	0.556	-5.10
84	0.812	-1.81	176	0.790	-2.05	268	0.944	-0.50	360	0.520	-5.68
86	0.798	-1.96	178	0.820	-1.72	270	0.950	-0.45			
88	0.784	-2.11	180	0.850	-1.41	272	0.940	-0.54			
90	0.770	-2.27	182	0.868	-1.23	274	0.930	-0.63			

ELEVATION PATTERN

TYPE:	ATW28H3H	
Directivity:	Numeric	dBd
Main Lobe:	28.00	14.47
Horizontal:	15.42	11.88

Frequency:	28 (Analog)
Location:	Hardeeville, SC
Beam Tilt:	0.75
Polarization:	Horizontal



TABULATED DATA FOR ELEVATION PATTERN

TYPE: ATW28H3H

-5 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.084	-21.51	6.75	0.146	-16.71	27.00	0.033	-29.63	50.50	0.027	-31.37	74.00	0.021	-33.56
-4.75	0.059	-24.58	7.00	0.137	-17.27	27.50	0.034	-29.37	51.00	0.019	-34.42	74.50	0.014	-37.08
-4.50	0.052	-25.68	7.25	0.118	-18.56	28.00	0.024	-32.40	51.50	0.012	-38.42	75.00	0.007	-43.10
-4.25	0.082	-21.72	7.50	0.096	-20.35	28.50	0.021	-33.56	52.00	0.018	-34.89	75.50	0.002	-53.98
-4.00	0.119	-18.49	7.75	0.086	-21.31	29.00	0.031	-30.17	52.50	0.026	-31.70	76.00	0.008	-41.94
-3.75	0.142	-16.95	8.00	0.092	-20.72	29.50	0.033	-29.63	53.00	0.029	-30.75	76.50	0.015	-36.48
-3.50	0.143	-16.89	8.25	0.106	-19.49	30.00	0.023	-32.77	53.50	0.025	-32.04	77.00	0.020	-33.98
-3.25	0.120	-18.42	8.50	0.113	-18.94	30.50	0.020	-33.98	54.00	0.016	-35.92	77.50	0.025	-32.04
-3.00	0.081	-21.83	8.75	0.110	-19.17	31.00	0.030	-30.46	54.50	0.011	-39.17	78.00	0.029	-30.75
-2.75	0.069	-23.22	9.00	0.097	-20.26	31.50	0.032	-29.90	55.00	0.018	-34.89	78.50	0.031	-30.17
-2.50	0.116	-18.71	9.25	0.080	-21.94	32.00	0.023	-32.77	55.50	0.026	-31.70	79.00	0.032	-29.90
-2.25	0.180	-14.89	9.50	0.069	-23.22	32.50	0.018	-34.89	56.00	0.029	-30.75	79.50	0.032	-29.90
-2.00	0.229	-12.80	9.75	0.073	-22.73	33.00	0.027	-31.37	56.50	0.026	-31.70	80.00	0.032	-29.90
-1.75	0.245	-12.22	10.00	0.084	-21.51	33.50	0.031	-30.17	57.00	0.018	-34.89	80.50	0.030	-30.46
-1.50	0.221	-13.11	10.50	0.092	-20.72	34.00	0.024	-32.40	57.50	0.010	-40.00	81.00	0.028	-31.06
-1.25	0.161	-15.86	11.00	0.069	-23.22	34.50	0.016	-35.92	58.00	0.013	-37.72	81.50	0.026	-31.70
-1.00	0.120	-18.42	11.50	0.058	-24.73	35.00	0.023	-32.77	58.50	0.022	-33.15	82.00	0.023	-32.77
-0.75	0.218	-13.23	12.00	0.076	-22.38	35.50	0.030	-30.46	59.00	0.028	-31.06	82.50	0.021	-33.56
-0.50	0.385	-8.29	12.50	0.073	-22.73	36.00	0.026	-31.70	59.50	0.029	-30.75	83.00	0.018	-34.89
-0.25	0.570	-4.88	13.00	0.050	-26.02	36.50	0.017	-35.39	60.00	0.024	-32.40	83.50	0.015	-36.48
0.00	0.742	-2.59	13.50	0.055	-25.19	37.00	0.018	-34.89	60.50	0.016	-35.92	84.00	0.012	-38.42
0.25	0.880	-1.11	14.00	0.067	-23.48	37.50	0.027	-31.37	61.00	0.008	-41.94	84.50	0.010	-40.00
0.50	0.970	-0.26	14.50	0.055	-25.19	38.00	0.028	-31.06	61.50	0.012	-38.42	85.00	0.008	-41.94
0.75	1.000	0.00	15.00	0.039	-28.18	38.50	0.020	-33.98	62.00	0.021	-33.56	85.50	0.006	-44.44
1.00	0.972	-0.25	15.50	0.052	-25.68	39.00	0.015	-36.48	62.50	0.027	-31.37	86.00	0.005	-46.02
1.25	0.891	-1.00	16.00	0.057	-24.88	39.50	0.023	-32.77	63.00	0.030	-30.46	86.50	0.003	-50.46
1.50	0.772	-2.25	16.50	0.042	-27.54	40.00	0.029	-30.75	63.50	0.027	-31.37	87.00	0.002	-53.98
1.75	0.638	-3.90	17.00	0.036	-28.87	40.50	0.025	-32.04	64.00	0.021	-33.56	87.50	0.002	-53.98
2.00	0.514	-5.78	17.50	0.049	-26.20	41.00	0.016	-35.92	64.50	0.012	-38.42	88.00	0.001	-60.00
2.25	0.429	-7.35	18.00	0.048	-26.38	41.50	0.017	-35.39	65.00	0.005	-46.02	88.50	0.001	-60.00
2.50	0.389	-8.20	18.50	0.032	-29.90	42.00	0.026	-31.70	65.50	0.012	-38.42	89.00	0.001	-60.00
2.75	0.379	-8.43	19.00	0.035	-29.12	42.50	0.029	-30.75	66.00	0.021	-33.56	89.50	0.000	---
3.00	0.369	-8.66	19.50	0.046	-26.74	43.00	0.023	-32.77	66.50	0.027	-31.37	90.00	0.000	---
3.25	0.341	-9.34	20.00	0.040	-27.96	43.50	0.014	-37.08	67.00	0.030	-30.46			
3.50	0.293	-10.66	20.50	0.027	-31.37	44.00	0.018	-34.89	67.50	0.030	-30.46			
3.75	0.237	-12.51	21.00	0.035	-29.12	44.50	0.026	-31.70	68.00	0.026	-31.70			
4.00	0.192	-14.33	21.50	0.042	-27.54	45.00	0.028	-31.06	68.50	0.019	-34.42			
4.25	0.179	-14.94	22.00	0.033	-29.63	45.50	0.022	-33.15	69.00	0.011	-39.17			
4.50	0.189	-14.47	22.50	0.025	-32.04	46.00	0.013	-37.72	69.50	0.002	-53.98			
4.75	0.203	-13.85	23.00	0.035	-29.12	46.50	0.018	-34.89	70.00	0.009	-40.92			
5.00	0.203	-13.85	23.50	0.039	-28.18	47.00	0.026	-31.70	70.50	0.018	-34.89			
5.25	0.185	-14.66	24.00	0.029	-30.75	47.50	0.029	-30.75	71.00	0.025	-32.04			
5.50	0.155	-16.19	24.50	0.023	-32.77	48.00	0.024	-32.40	71.50	0.030	-30.46			
5.75	0.126	-17.99	25.00	0.034	-29.37	48.50	0.015	-36.48	72.00	0.032	-29.90			
6.00	0.115	-18.79	25.50	0.037	-28.64	49.00	0.015	-36.48	72.50	0.032	-29.90			
6.25	0.125	-18.06	26.00	0.026	-31.70	49.50	0.024	-32.40	73.00	0.030	-30.46			
6.50	0.140	-17.08	26.50	0.022	-33.15	50.00	0.029	-30.75	73.50	0.026	-31.70			

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WTGS-DT, HARDEEVILLE, SOUTH CAROLINA
CHANNEL 28 1000 KW ERP 455 METERS HAAT
JULY 2008

<u>Radial</u> N ° E, T	<u>Average*</u>	<u>Effective</u>	<u>Depression</u>	<u>ERP</u> kW	<u>Distance to Contour</u>	
	<u>Elevation</u> meters	<u>Height</u> meters	<u>Angle</u> degrees		<u>48 dBu</u> km	<u>41 dBu</u> km
0	8.4	453.6	0.590	270.4	85.8	98.1
10	7.2	454.8	0.591	152.1	82.1	93.4
20	6.3	455.7	0.591	78.4	78.0	88.5
30	6.1	455.9	0.591	52.9	75.5	85.8
40	6.5	455.5	0.591	78.4	78.0	88.4
50	6.0	456.0	0.592	184.9	83.4	95.0
60	4.7	457.3	0.592	372.1	88.2	101.4
70	4.6	457.4	0.592	592.9	91.6	105.9
80	4.9	457.1	0.592	705.6	92.9	107.6
90	5.2	456.8	0.592	592.9	91.5	105.8
100	3.6	458.4	0.593	372.1	88.2	101.4
110	3.3	458.7	0.593	184.9	83.5	95.2
120	2.8	459.2	0.594	78.4	78.1	88.7
130	3.0	459.0	0.593	52.9	75.6	85.9
140	2.6	459.4	0.594	78.4	78.2	88.7
150	2.1	459.9	0.594	152.1	82.3	93.7
160	3.0	459.0	0.593	270.4	86.1	98.6
170	3.0	459.0	0.593	490.0	90.3	104.1
180	3.1	458.9	0.593	722.5	93.2	108.0
190	3.1	458.9	0.593	883.6	94.8	110.0
200	3.1	458.9	0.593	1000.0	95.9	111.3
210	5.0	457.0	0.592	940.9	95.2	110.5
220	5.3	456.7	0.592	846.4	94.3	109.4
230	6.0	456.0	0.592	774.4	93.6	108.5
240	6.6	455.4	0.591	810.0	93.9	108.9
250	6.7	455.3	0.591	846.4	94.2	109.3
260	9.2	452.8	0.589	848.2	94.1	109.1
270	11.1	450.9	0.588	902.5	94.4	109.6
280	12.8	449.2	0.587	810.0	93.4	108.3

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WTGS-DT, HARDEEVILLE, SOUTH CAROLINA
CHANNEL 28 1000 KW ERP 455 METERS HAAT
JULY 2008
(continued)

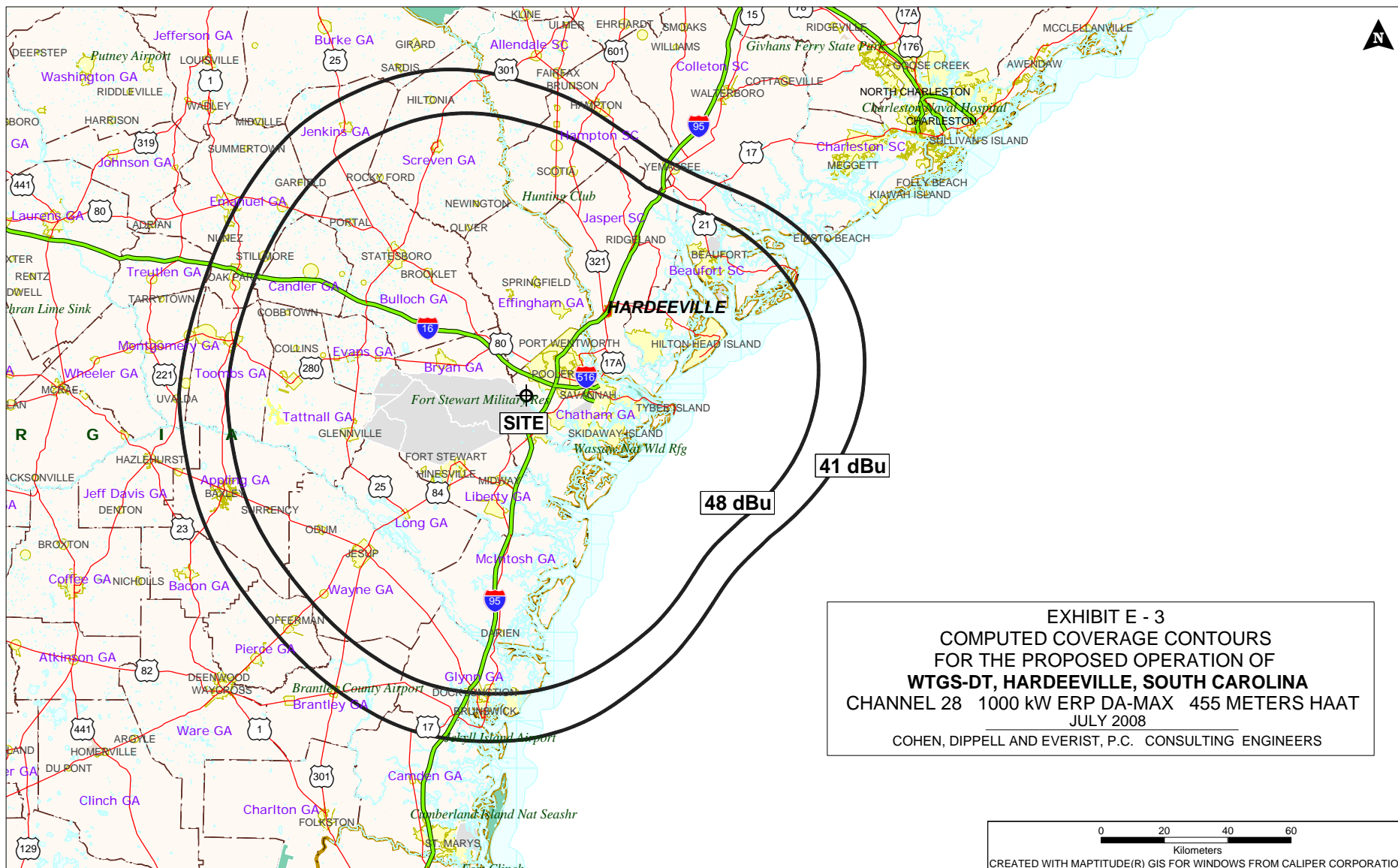
<u>Radial</u> N ° E, T	<u>Average*</u> <u>Elevation</u>	<u>Effective</u> <u>Height</u>	<u>Depression</u> <u>Angle</u>	<u>ERP</u> kW	<u>Distance to Contour</u>	
	meters	meters	degrees		<u>48 dBu</u> km	<u>41 dBu</u> km
290	13.2	448.8	0.587	774.4	93.1	107.8
300	13.8	448.2	0.586	846.4	93.7	108.7
310	11.1	450.9	0.588	940.9	94.8	110.0
320	8.3	453.7	0.590	1000.0	95.5	110.9
330	8.1	453.9	0.590	883.6	94.5	109.6
340	7.6	454.4	0.590	722.5	92.9	107.6
350	7.3	454.7	0.591	490.0	90.0	103.8
Average	6.2	455				

*Based on data from FCC 3-second data base.

DTV Channel 28 (548-554 MHz)
Average Elevation 3.2 to 16.1 km 6.2 meters AMSL
Center of Radiation 462 meters AMSL
Antenna Height Above Average Terrain 455 meters
Effective Radiated Power 1000 kW (30 dBk) Max

North Latitude: 32° 02' 45"
West Longitude: 81° 20' 27"

(NAD-27)



SECTION III - D - DTV Engineering

Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction pen-nit application to modify pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by 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. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:
 - (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
 - (b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
 - (c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
 - (d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by 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. § 73.622(i) ("new DTV Table Appendix B"). ☐ Yes ☐ No
☐ N/A
 - (e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B. ☐ Yes ☐ No
☐ N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RIF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☐ Yes ☐ No

Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☐ Yes ☐ No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☐ Yes ☐ No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☐ Yes ☐ No

SECTION III - D DTV Engineering

TECHNICAL SPECIFICATIONS Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel Number: DTV _____ Analog TV, if any _____
2. Zone: ☐ I ☐ II ☐ III
3. Antenna Location Coordinates: (NAD 27)
- _____ ° _____ ' _____ " ☐ N ☐ S Latitude
_____ ° _____ ' _____ " ☐ E ☐ W Longitude
4. Antenna Structure Registration Number: _____
- ☐ Not applicable ☐ FAA Notification Filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level: _____ meters
6. Overall Tower Height Above Ground Level: _____ meters
7. Height of Radiation Center Above Ground Level: _____ meters
8. Height of Radiation Center Above Average Terrain: _____ meters
9. Maximum Effective Radiated Power (average power): _____ kW
10. Antenna Specifications:
- a.

Manufacturer	Model
--------------	-------
- b. Electrical Beam Tilt: _____ degrees ☐ Not Applicable
- c. Mechanical Beam Tilt: _____ degrees toward azimuth _____ degrees True ☐ Not Applicable
- Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No.
- d. Polarization: ☐ Horizontal ☐ Circular ☐ Elliptical

TECH BOX

e. Directional Antenna Relative Field Values:

☐

Not applicable (Nondirectional)

Rotation: _____

☐

No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No.

11. Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616?

☐

Yes

☐

No

If "No," attach as an Exhibit justification therefore, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No.

- a. If **Certification Checklist Item 2** is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

PREPARER'S CERTIFICATION IN SECTION III MUST BE COMPLETED AND SIGNED.

13. **Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.** If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the FM Table of Allotments (47 C.F.R. Section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter-proponent will apply to participate in the auction of the channel allotment requested and specified in this application.

☐ Yes ☐ No ☐ N/A

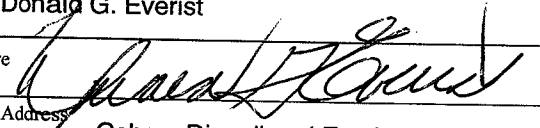
I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in 'good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name Donald G. Everist	Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature 	Date July 16, 2008	
Mailing Address Cohen, Dippell and Everist, P.C, 1300 L Street, NW Suite 1100		
City Washington	State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) (202) 898-0111	E-Mail Address (if available) cde@attglobal.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).