

ENGINEERING REPORT
RE MODIFICATION OF CONSTRUCTION PERMIT
(BPCDT-19990706KH)
FOR A NEW DTV STATION
WZVN-DT, NAPLES, FLORIDA
CHANNEL 41 1000 KW ERP DA 453 METERS HAAT

FEBRUARY 2002

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)

Sudhir K. Khanna, being duly sworn upon his oath, deposes and states:

That he is a registered professional engineer in the District of Columbia, holds the degree of Master of Science in Electrical Engineering, and is Secretary-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;

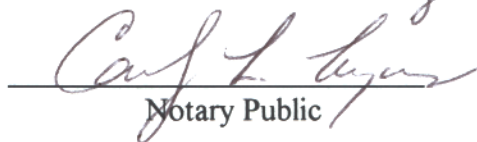
That the attached engineering report was prepared by him or under his supervision and direction; and

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.



Sudhir K. Khanna
District of Columbia
Professional Engineer
Registration No. 8057

Subscribed and sworn to before me this 19th day of February, 2002.


Notary Public

My Commission Expires:

2/28/2003

Introduction

This engineering statement has been prepared on behalf of Montclair Communications, Inc., licensee of TV station WZVN-TV, Naples, Florida in support of a modification of its construction permit (BPCDT-19990706KH) to make a minor change in its transmitter site and antenna. At present, WZVN-TV operates on analog Channel 26 (542-548 MHz) with 5000 kW effective radiated power (ERP) and 371 meters antenna height above average terrain (HAAT). The current Channel 26 analog operation is with a directional TV antenna. WZVN-TV has been allotted Channel 41 (632-638 MHz) for its digital TV operation with 283.7 kW maximum ERP and 371 meters HAAT from its analog Channel 26 antenna site. WZVN-DT was granted a construction permit (BPCDT-19990706KH) to operate on Channel 41 with a maximum ERP of 1000 kW at 451 meters HAAT from the WBBH-TV tower, which is located more than 5 kilometers from the licensed WZVN-TV site. It is now proposed to operate WZVN-DT from a new site which is located approximately 650 meters southeast of the existing WBBH-TV tower. The proposed WZVN-DT operation would be with 1000 kW maximum ERP and 453 meters HAAT using a directional TV antenna manufactured by Andrew Corporation.

Antenna Site

It is proposed to top-mount the Channel 41 DTV antenna on a new tower to be constructed near the existing WBBH-TV tower. The proposed TV antenna will be also used by the Channel 15 DTV operation of WBBH-DT.

The geographic coordinates (NAD-27) of the proposed tower are as follows.

North Latitude: 26° 49' 21"

West Longitude: 81° 45' 47"

The proposed site is shown on an attached 7.5 minute series USGS map.

The following data shows the pertinent information concerning the proposed DTV operation.

Antenna and Elevation Data

Antenna:	Andrew	Model No. ABBP14H3-HTP4X-41
	Beam Tilt	0.75 degrees electrical
	Directivity	Directional
Elevation of the site above mean sea level:		10.9 meters
Elevation of the top of supporting structure: above ground including DTV antenna		461.2 meters
Elevation of the top of supporting structure: above mean sea level including DTV antenna		472.1 meters
Height of antenna radiation center: meters above ground		450.9 meters
Height of antenna radiation center: above mean sea level		461.8 meters
Height of antenna radiation center: above average terrain		453 meters

Analog TV and DTV Allocation Situation

The attached Tables I and II show the nearest pertinent analog TV and DTV stations and allotments. Since the proposed WZVN-DT antenna would be located more than 5 kilometers from the licensed WZVN-TV site, an electromagnetic interference study has been conducted according to OET Bulletin 69 to determine any potential impact on the existing analog and allotted DTV operations. The attached Table III shows the area and population that may receive interference from the proposed WZVN-DT operation. Table III indicates the potential interference population will not exceed the Commission's guidelines provided in its Public Notice dated August 10, 1998 (Additional Application Processing Guidelines for Digital Television (DTV)). Therefore, the proposed WZVN-DT operation would not have any adverse impact on the existing analog or proposed DTV allotments.

The only pertinent Class A LPTV station (WJAN-CA), requiring further study is located at Miami, Florida. WJAN-CA is authorized to operate on Channel 41 with 101 kW ERP and 159 meters antenna radiation center above mean sea level. The attached Table IV indicates the proposed WZVN-DT operation would not cause any interference to WJAN-CA.

Computed Principal Community Contour

According to Section 73.625 of the Commission's rules DTV stations operating on UHF TV Channels 14-69 are required to provide 41 dBu signal level over the principal community. In addition, under MM Docket No. 00-83, the Commission has mandated that UHF DTV stations provide 48 dBu signal level over its principal community by December 31, 2004.

The predicted 41 dBu and 48 dBu contours were computed according to Section 73.625(b) of the Commission's rules. The average elevation data for eight cardinal and other radials between 3.2 and 16.1 km is based on the 3-second computerized terrain database.

The distances along these radials to the predicted F(50,90) 48 and 41 dBu contours, the average elevations, and the effective antenna heights are included on the attached tabulation (Table V).

The attached map (Exhibits E-3) shows the computed F(50,90) 48 dBu and 41 dBu contours predicted according to Section 73.625(b) of the Commission's rules based on the DTV facilities of 1000 kW maximum effective radiated power (ERP) and 452 meters antenna height above average terrain (HAAT). Exhibits E-3 indicates the proposed 48 dBu and 41 dBu contours would serve all of Naples, Florida, the principal community of WZVN-DT.

Environmental Statement

The proposed antenna site is approximately 220 meters southeast of an existing tower. According to the applicant, the antenna site is not located near any known wilderness area, wildlife preserve, historic place or Indian religious sites or critical habitats which can affect the endangered or threatened species. The proposed facilities are not located in a flood plain area. The construction of a guyed tower and a building to house the TV transmitters do not involve significant changes in the surface features.

The new guyed tower will be lighted and painted as required by the FAA. The proposed site is not located near any residential neighborhood.

The proposed facilities will not affect any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 1000 kW and a radiation center of 450.9 meters above ground level, the proposed DTV operation would have a maximum of 1.6 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower, assuming an antenna field factor of 0.1 in the downward direction. The Commission's guidelines for Channel 41 TV operation are $2,107 \mu\text{W}/\text{cm}^2$ for the occupational/controlled and $421 \mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment. The RF field contributed by WZVN-DT on the ground would be less than 1% of the Commission's guidelines for Channel 41.

Therefore, the proposed operation of WZVN-DT complies with the Commission's guidelines with respect to RF fields exposure to members of the public and personnel working around the proposed WZVN-DT, Channel 41 DTV facility. With respect to work performed on the tower, station WZVN-DT, in coordination with other stations, will establish procedure to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from the environmental processing.



TABULATED DATA FOR AZIMUTH PATTERN
TYPE : CH41AZ-H-BID-P4X

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	0.813	-1.80	110	0.789	-2.05	220	0.593	-4.54	330	0.959	-0.36
2	0.772	-2.24	112	0.799	-1.95	222	0.573	-4.84	332	0.919	-0.73
4	0.712	-2.95	114	0.816	-1.77	224	0.553	-5.14	334	0.869	-1.22
6	0.635	-3.95	116	0.838	-1.53	226	0.539	-5.37	336	0.814	-1.78
8	0.545	-5.28	118	0.866	-1.25	228	0.530	-5.51	338	0.756	-2.42
10	0.450	-6.93	120	0.894	-0.97	230	0.531	-5.49	340	0.708	-3.00
12	0.365	-8.75	122	0.920	-0.73	232	0.537	-5.40	342	0.676	-3.40
14	0.310	-10.18	124	0.941	-0.52	234	0.545	-5.27	344	0.663	-3.57
16	0.303	-10.36	126	0.958	-0.37	236	0.552	-5.16	346	0.672	-3.46
18	0.341	-9.34	128	0.965	-0.31	238	0.553	-5.15	348	0.697	-3.13
20	0.397	-8.02	130	0.967	-0.30	240	0.545	-5.28	350	0.734	-2.69
22	0.454	-6.86	132	0.963	-0.33	242	0.525	-5.61	352	0.774	-2.23
24	0.502	-5.98	134	0.954	-0.41	244	0.491	-6.17	354	0.808	-1.85
26	0.535	-5.43	136	0.945	-0.49	246	0.446	-7.01	356	0.829	-1.62
28	0.554	-5.13	138	0.937	-0.56	248	0.391	-8.16	358	0.832	-1.60
30	0.560	-5.03	140	0.931	-0.62	250	0.340	-9.38	360	0.813	-1.80
32	0.557	-5.09	142	0.927	-0.66	252	0.313	-10.08			
34	0.549	-5.21	144	0.922	-0.71	254	0.330	-9.63			
36	0.540	-5.36	146	0.913	-0.79	256	0.393	-8.12			
38	0.533	-5.46	148	0.902	-0.90	258	0.482	-6.33			
40	0.531	-5.50	150	0.886	-1.05	260	0.582	-4.71			
42	0.535	-5.44	152	0.864	-1.27	262	0.676	-3.40			
44	0.545	-5.28	154	0.837	-1.55	264	0.757	-2.42			
46	0.560	-5.04	156	0.804	-1.90	266	0.815	-1.78			
48	0.578	-4.77	158	0.767	-2.30	268	0.848	-1.43			
50	0.592	-4.55	160	0.732	-2.72	270	0.857	-1.34			
52	0.601	-4.42	162	0.701	-3.08	272	0.839	-1.53			
54	0.601	-4.42	164	0.678	-3.38	274	0.803	-1.91			
56	0.589	-4.59	166	0.667	-3.52	276	0.756	-2.44			
58	0.567	-4.92	168	0.669	-3.49	278	0.706	-3.03			
60	0.536	-5.41	170	0.683	-3.32	280	0.666	-3.53			
62	0.496	-6.10	172	0.704	-3.05	282	0.648	-3.77			
64	0.451	-6.91	174	0.728	-2.76	284	0.655	-3.67			
66	0.410	-7.75	176	0.747	-2.53	286	0.688	-3.25			
68	0.376	-8.50	178	0.758	-2.40	288	0.737	-2.65			
70	0.358	-8.93	180	0.760	-2.39	290	0.790	-2.05			
72	0.357	-8.94	182	0.751	-2.49	292	0.842	-1.49			
74	0.372	-8.60	184	0.731	-2.73	294	0.888	-1.04			
76	0.398	-8.01	186	0.699	-3.11	296	0.919	-0.73			
78	0.432	-7.29	188	0.658	-3.64	298	0.940	-0.54			
80	0.472	-6.53	190	0.607	-4.33	300	0.949	-0.45			
82	0.514	-5.78	192	0.550	-5.18	302	0.949	-0.45			
84	0.557	-5.08	194	0.494	-6.12	304	0.944	-0.50			
86	0.601	-4.42	196	0.442	-7.08	306	0.936	-0.58			
88	0.642	-3.84	198	0.405	-7.86	308	0.929	-0.64			
90	0.681	-3.34	200	0.388	-8.23	310	0.925	-0.67			
92	0.716	-2.91	202	0.399	-7.98	312	0.926	-0.66			
94	0.744	-2.56	204	0.435	-7.23	314	0.935	-0.58			
96	0.766	-2.31	206	0.480	-6.37	316	0.948	-0.46			
98	0.781	-2.15	208	0.528	-5.55	318	0.964	-0.32			
100	0.789	-2.06	210	0.570	-4.88	320	0.980	-0.18			
102	0.791	-2.04	212	0.598	-4.47	322	0.993	-0.06			
104	0.789	-2.06	214	0.613	-4.24	324	1.000	0.00			
106	0.787	-2.08	216	0.617	-4.19	326	0.997	-0.03			
108	0.787	-2.08	218	0.609	-4.31	328	0.984	-0.14			

ANDREW **AZIMUTH PATTERN**

Type: CH41AZ-H-BID-P4X

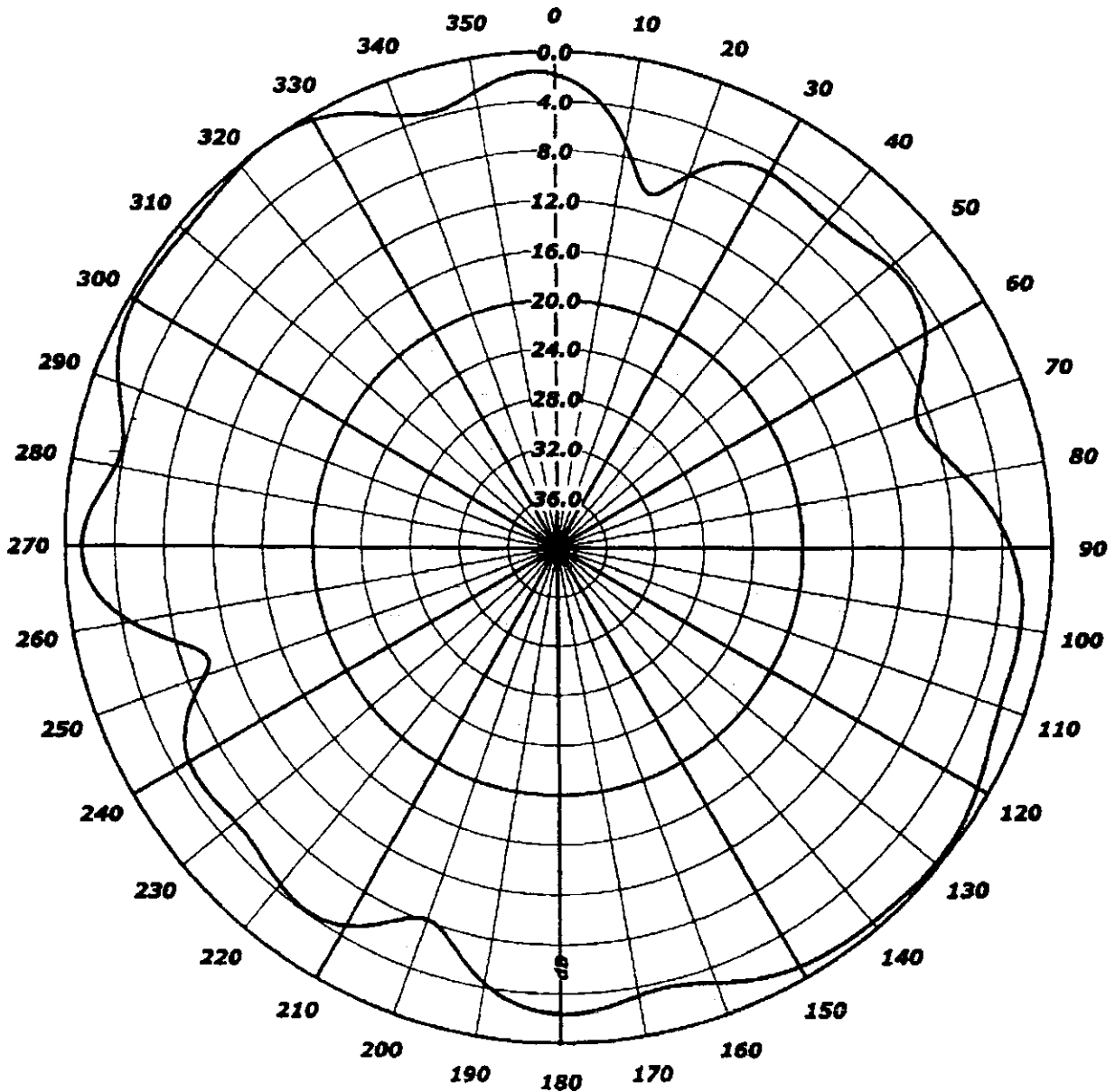
	Numeric	dBd
Directivity:	<u>2.00</u>	<u>(3.01)</u>

Peak(s) At: _____

Polarization: Horizontal

Channel: 41

Location: Pt. Myers, FL.





TABULATED DATA FOR ELEVATION PATTERN
TYPE : ATW14H3H-41

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5 To 10			10 To 90								
In 0.25 Increments			In 0.5 Increments								
-5.00	0.138	-17.22	8.75	0.076	-22.41	35.00	0.027	-31.37	62.50	0.075	-22.45
-4.75	0.125	-18.08	9.00	0.055	-25.19	35.50	0.023	-32.69	63.00	0.063	-24.05
-4.50	0.107	-19.40	9.25	0.047	-26.58	36.00	0.014	-37.08	63.50	0.050	-26.02
-4.25	0.106	-19.52	9.50	0.059	-24.52	36.50	0.018	-34.70	64.00	0.039	-28.18
-4.00	0.124	-18.10	9.75	0.082	-21.71	37.00	0.030	-30.54	64.50	0.031	-30.12
-3.75	0.154	-16.26	10.00	0.100	-20.03	37.50	0.033	-29.74	65.00	0.027	-31.40
-3.50	0.176	-15.11	10.50	0.095	-20.49	38.00	0.025	-32.15	65.50	0.025	-31.90
-3.25	0.175	-15.12	11.00	0.050	-26.02	38.50	0.014	-37.08	66.00	0.025	-32.15
-3.00	0.160	-15.90	11.50	0.059	-24.55	39.00	0.021	-33.60	66.50	0.024	-32.51
-2.75	0.141	-16.99	12.00	0.095	-20.48	39.50	0.032	-29.98	67.00	0.022	-33.15
-2.50	0.142	-16.95	12.50	0.087	-21.22	40.00	0.034	-29.47	67.50	0.020	-34.02
-2.25	0.183	-14.75	13.00	0.055	-25.21	40.50	0.026	-31.57	68.00	0.018	-35.04
-2.00	0.235	-12.59	13.50	0.066	-23.65	41.00	0.019	-34.33	68.50	0.016	-35.92
-1.75	0.273	-11.27	14.00	0.084	-21.47	41.50	0.024	-32.32	69.00	0.015	-36.36
-1.50	0.291	-10.71	14.50	0.067	-23.44	42.00	0.031	-30.03	69.50	0.015	-36.36
-1.25	0.281	-11.03	15.00	0.034	-29.40	42.50	0.031	-30.09	70.00	0.015	-36.25
-1.00	0.266	-11.49	15.50	0.046	-26.65	43.00	0.023	-32.69	70.50	0.015	-36.25
-0.75	0.300	-10.46	16.00	0.058	-24.79	43.50	0.014	-37.33	71.00	0.015	-36.48
-0.50	0.391	-8.16	16.50	0.035	-29.09	44.00	0.017	-35.60	71.50	0.014	-37.02
-0.25	0.538	-5.38	17.00	0.008	-42.27	44.50	0.023	-32.58	72.00	0.013	-37.79
0.00	0.697	-3.14	17.50	0.044	-27.21	45.00	0.024	-32.54	72.50	0.011	-38.86
0.25	0.834	-1.58	18.00	0.053	-25.60	45.50	0.016	-36.03	73.00	0.010	-40.00
0.50	0.942	-0.52	18.50	0.033	-29.66	46.00	0.003	-51.70	73.50	0.009	-40.92
0.75	0.989	-0.10	19.00	0.016	-35.92	46.50	0.011	-38.86	74.00	0.009	-41.31
1.00	0.991	-0.08	19.50	0.036	-28.78	47.00	0.022	-33.31	74.50	0.009	-41.11
1.25	0.927	-0.66	20.00	0.041	-27.66	47.50	0.025	-32.04	75.00	0.009	-40.54
1.50	0.827	-1.65	20.50	0.030	-30.37	48.00	0.021	-33.47	75.50	0.010	-39.91
1.75	0.691	-3.21	21.00	0.029	-30.75	48.50	0.012	-38.13	76.00	0.011	-39.41
2.00	0.547	-5.24	21.50	0.038	-28.29	49.00	0.008	-42.27	76.50	0.011	-39.02
2.25	0.418	-7.57	22.00	0.036	-28.85	49.50	0.015	-36.42	77.00	0.011	-38.86
2.50	0.319	-9.93	22.50	0.026	-31.63	50.00	0.021	-33.51	77.50	0.011	-38.94
2.75	0.274	-11.25	23.00	0.033	-29.58	50.50	0.022	-33.15	78.00	0.011	-39.09
3.00	0.255	-11.87	23.50	0.045	-27.01	51.00	0.019	-34.56	78.50	0.011	-39.41
3.25	0.244	-12.25	24.00	0.044	-27.23	51.50	0.015	-36.36	79.00	0.010	-40.00
3.50	0.225	-12.96	24.50	0.040	-28.05	52.00	0.017	-35.55	79.50	0.009	-40.54
3.75	0.196	-14.18	25.00	0.062	-24.11	52.50	0.021	-33.47	80.00	0.009	-41.11
4.00	0.167	-15.55	25.50	0.100	-20.04	53.00	0.024	-32.54	80.50	0.008	-41.62
4.25	0.153	-16.33	26.00	0.129	-17.80	53.50	0.022	-33.00	81.00	0.008	-42.05
4.50	0.149	-16.53	26.50	0.138	-17.18	54.00	0.018	-34.66	81.50	0.008	-42.27
4.75	0.149	-16.52	27.00	0.125	-18.04	54.50	0.017	-35.55	82.00	0.008	-42.27
5.00	0.144	-16.86	27.50	0.095	-20.44	55.00	0.021	-33.68	82.50	0.008	-42.27
5.25	0.126	-18.01	28.00	0.062	-24.17	55.50	0.027	-31.34	83.00	0.008	-42.05
5.50	0.103	-19.76	28.50	0.045	-26.97	56.00	0.032	-30.03	83.50	0.008	-41.94
5.75	0.086	-21.34	29.00	0.043	-27.31	56.50	0.032	-29.87	84.00	0.008	-41.72
6.00	0.082	-21.73	29.50	0.039	-28.18	57.00	0.030	-30.57	84.50	0.008	-41.51
6.25	0.093	-20.65	30.00	0.032	-29.98	57.50	0.028	-30.90	85.00	0.009	-41.31
6.50	0.103	-19.78	30.50	0.030	-30.43	58.00	0.035	-29.19	85.50	0.009	-41.11
6.75	0.102	-19.84	31.00	0.031	-30.17	58.50	0.048	-26.39	86.00	0.009	-41.01
7.00	0.093	-20.61	31.50	0.026	-31.70	59.00	0.064	-23.92	86.50	0.009	-40.92
7.25	0.080	-21.94	32.00	0.019	-34.42	59.50	0.079	-22.09	87.00	0.009	-40.92
7.50	0.072	-22.85	32.50	0.022	-33.35	60.00	0.090	-20.90	87.50	0.009	-40.82
7.75	0.078	-22.11	33.00	0.026	-31.77	60.50	0.097	-20.26	88.00	0.009	-40.82
8.00	0.090	-20.96	33.50	0.023	-32.62	61.00	0.098	-20.14	88.50	0.009	-40.82
8.25	0.095	-20.44	34.00	0.019	-34.38	61.50	0.095	-20.48	89.00	0.009	-40.82
8.50	0.092	-20.73	34.50	0.023	-32.88	62.00	0.087	-21.25	89.50	0.009	-40.92

ANDREW **ELEVATION PATTERN**

Type:	ATW14H3H-41	
Directivity:	Numeric	dBd
Main Lobe:	26.90	(14.30)
Horizontal:	13.08	(11.17)
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	41	
Location:	Pt. Myers, FL.	

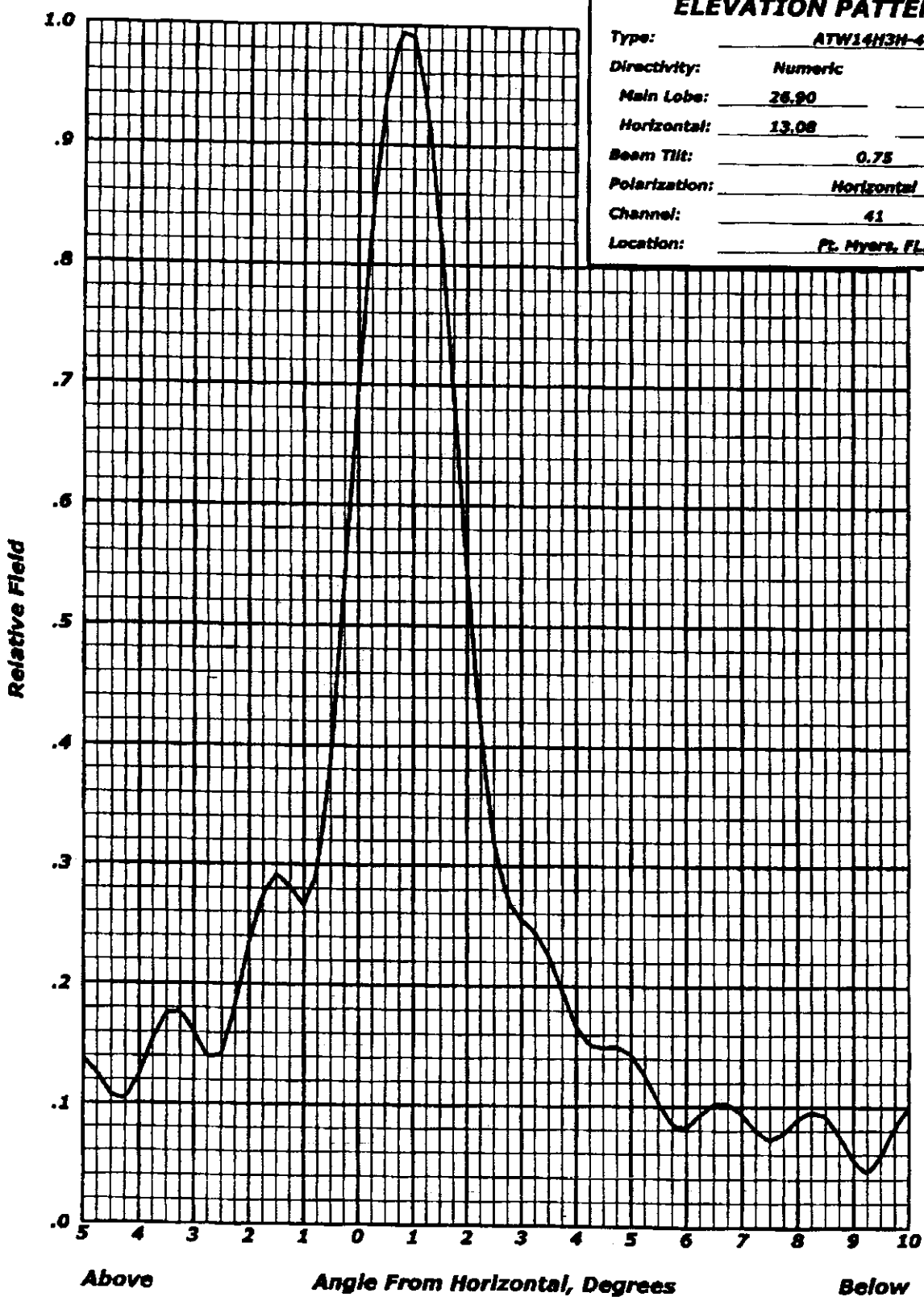


TABLE I
ANALOG TV ALLOCATION SITUATION
FOR THE PROPOSED CHANNEL 41 DTV OPERATION OF
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Geographic Coordinates</u>	<u>Actual Distance km</u>
41	WZVN-DT	Naples, FL	26°49'21" 81°45'47"	—
26	WVEN-TV	Daytona Beach, FL	29°17'10" 81°29'37"	274.3
27	WRDQ	Orlando, FL	28°16'44" 81°01'25"	177.1
33	WBFS-TV	Miami, FL	25°57'59" 80°12'33"	181.8
34	WTVX	Fort Pierce, FL	27°07'20" 80°23'21"	140.4
37	None within 300 km			
38	WTTA	St. Petersburg, FL	27°50'32" 82°15'46"	123.3
39	WBZL	Miami, FL	25°58'07" 80°13'20"	180.5
40	WWSB (Lic)	Sarasota, FL	27°33'27" 82°21'59"	101.0
40	WWSB (CP)	Sarasota, FL	27°33'21" 82°21'49"	100.7
41	NEW	Lake City, FL	30°17'07" 82°11'01"	386.0
42	WXEL-TV	West Palm Beach, FL	26°34'37" 80°14'32"	153.8
43	WFUO-TV	Melbourne, FL	28°18'26" 80°54'48"	184.6

TABLE I
ANALOG TV ALLOCATION SITUATION
FOR THE PROPOSED CHANNEL 41 DTV OPERATION OF
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002
 (continued)

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Geographic Coordinates</u>	<u>Actual Distance km</u>
44	WTOG-TV	St. Petersburg, FL	27°49'48" 82°15'59"	122.2
45	WHFT-TV	Miami, FL	25°59'34" 80°10'27"	183.3
48	None within 200 km			
49	WRXY-TV	Tice, FL	26°47'08" 81°47'41"	5.2

TABLE II
DTV ALLOCATION SITUATION
FOR THE PROPOSED CHANNEL 41 DTV OPERATION OF
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Geographic Coordinates</u>	<u>Actual Distance km</u>
41	WZVN-DT	Naples, FL	26°49'21" 81°45'47"	—
40	WACX-DT CP	Leesburg, FL	28°35'12" 81°04'58"	206.7
41	WRBW-DT	Orlando, FL	28°34'51" 81°04'32"	209.8
42	WXPX-DT	Bradenton, FL	27°24'30" 82°15'00"	121.0

TABLE III
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Record Selected for Analysis

WZVN-TV	OTHER	-SKK263	NAPLES	FL US
Channel 41	ERP 1000	kW	HAAT 0	m
RCAMSL 00461 m				
Latitude 26	-49-21	Longitude 81	-45-54	
Status CP	Zone 3	Border		
Last update	Cutoff date	Docket		

Comments

Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	660.969	449.6	106.4
45.0	315.282	446.8	99.0
90.0	463.761	450.1	102.9
135.0	900.601	454.3	109.9
180.0	532.900	455.8	104.7
225.0	315.844	453.4	99.5
270.0	734.449	453.9	107.8
315.0	926.406	449.9	109.8

Evaluation toward Class A Stations

Contour overlap to Class A station

WJAN-CA 41 MIAMI FL BLTTL 19971010JK

D/U ratio at contour 24.0 dB

Offset Proposed Offset Class A + Required D/U ratio: 34.0

Radial 0.0 degrees

Bearing to point on contour 127.8 degrees
D/U ratio at contour 24.2 dB
Radial 10.0 degrees
Bearing to point on contour 127.2 degrees
D/U ratio at contour 24.5 dB
Radial 20.0 degrees
Bearing to point on contour 126.3 degrees
D/U ratio at contour 25.0 dB
Radial 30.0 degrees
Bearing to point on contour 123.3 degrees
D/U ratio at contour 25.9 dB
Radial 40.0 degrees
Bearing to point on contour 121.9 degrees
D/U ratio at contour 27.0 dB
Radial 50.0 degrees
Bearing to point on contour 121.5 degrees
D/U ratio at contour 27.9 dB
Radial 60.0 degrees
Bearing to point on contour 121.9 degrees
D/U ratio at contour 28.7 dB
Radial 70.0 degrees
Bearing to point on contour 122.7 degrees
D/U ratio at contour 29.2 dB
Radial 80.0 degrees
Bearing to point on contour 123.8 degrees
D/U ratio at contour 29.6 dB
Radial 90.0 degrees
Bearing to point on contour 125.1 degrees
D/U ratio at contour 29.9 dB
Radial 100.0 degrees
Bearing to point on contour 126.4 degrees
D/U ratio at contour 30.2 dB
Radial 110.0 degrees
Bearing to point on contour 127.7 degrees
D/U ratio at contour 30.4 dB
Radial 120.0 degrees
Bearing to point on contour 129.1 degrees
D/U ratio at contour 30.5 dB
Radial 130.0 degrees
Bearing to point on contour 130.6 degrees
D/U ratio at contour 30.5 dB
Radial 140.0 degrees
Bearing to point on contour 132.1 degrees
D/U ratio at contour 30.2 dB
Radial 150.0 degrees
Bearing to point on contour 133.4 degrees
D/U ratio at contour 29.7 dB
Radial 160.0 degrees

Bearing to point on contour 134.6 degrees
D/U ratio at contour 28.8 dB
Radial 170.0 degrees
Bearing to point on contour 135.1 degrees
D/U ratio at contour 27.3 dB
Radial 180.0 degrees
Bearing to point on contour 134.5 degrees
D/U ratio at contour 26.6 dB
Radial 190.0 degrees
Bearing to point on contour 134.4 degrees
D/U ratio at contour 26.1 dB
Radial 200.0 degrees
Bearing to point on contour 134.3 degrees
D/U ratio at contour 25.7 dB
Radial 210.0 degrees
Bearing to point on contour 134.4 degrees
D/U ratio at contour 25.4 dB
Radial 220.0 degrees
Bearing to point on contour 134.4 degrees
D/U ratio at contour 25.0 dB
Radial 230.0 degrees
Bearing to point on contour 134.3 degrees
D/U ratio at contour 24.7 dB
Radial 240.0 degrees
Bearing to point on contour 134.1 degrees
D/U ratio at contour 24.4 dB
Radial 250.0 degrees
Bearing to point on contour 133.9 degrees
D/U ratio at contour 24.1 dB
Radial 260.0 degrees
Bearing to point on contour 133.6 degrees
D/U ratio at contour 23.8 dB
Radial 270.0 degrees
Bearing to point on contour 133.2 degrees
D/U ratio at contour 23.6 dB
Radial 280.0 degrees
Bearing to point on contour 132.7 degrees
D/U ratio at contour 23.5 dB
Radial 290.0 degrees
Bearing to point on contour 132.1 degrees
D/U ratio at contour 23.3 dB
Radial 300.0 degrees
Bearing to point on contour 131.5 degrees
D/U ratio at contour 23.3 dB
Radial 310.0 degrees
Bearing to point on contour 130.9 degrees
D/U ratio at contour 23.3 dB
Radial 320.0 degrees

Bearing to point on contour 130.2 degrees
D/U ratio at contour 23.4 dB
Radial 330.0 degrees
Bearing to point on contour 129.6 degrees
D/U ratio at contour 23.5 dB
Radial 340.0 degrees
Bearing to point on contour 129.0 degrees
D/U ratio at contour 23.7 dB
Radial 350.0 degrees
Bearing to point on contour 128.4 degrees

Contour overlap to Class A station

WJAN-CA 41 MIAMI FL BPTTA 20010116AGG
D/U ratio at contour 22.9 dB
Offset Proposed Offset Class A + Required D/U ratio: 34.0
Radial 0.0 degrees
Bearing to point on contour 124.3 degrees
D/U ratio at contour 23.6 dB
Radial 10.0 degrees
Bearing to point on contour 123.6 degrees
D/U ratio at contour 24.3 dB
Radial 20.0 degrees
Bearing to point on contour 121.9 degrees
D/U ratio at contour 25.2 dB
Radial 30.0 degrees
Bearing to point on contour 120.1 degrees
D/U ratio at contour 26.5 dB
Radial 40.0 degrees
Bearing to point on contour 118.9 degrees
D/U ratio at contour 27.8 dB
Radial 50.0 degrees
Bearing to point on contour 118.7 degrees
D/U ratio at contour 28.9 dB
Radial 60.0 degrees
Bearing to point on contour 119.4 degrees
D/U ratio at contour 29.8 dB
Radial 70.0 degrees
Bearing to point on contour 120.5 degrees
D/U ratio at contour 30.5 dB
Radial 80.0 degrees
Bearing to point on contour 122.0 degrees
D/U ratio at contour 31.1 dB
Radial 90.0 degrees
Bearing to point on contour 123.5 degrees
D/U ratio at contour 31.7 dB
Radial 100.0 degrees
Bearing to point on contour 125.1 degrees
D/U ratio at contour 32.1 dB

Radial 110.0 degrees
Bearing to point on contour 126.8 degrees
D/U ratio at contour 32.2 dB
Radial 120.0 degrees
Bearing to point on contour 128.7 degrees
D/U ratio at contour 32.2 dB
Radial 130.0 degrees
Bearing to point on contour 130.5 degrees
D/U ratio at contour 32.2 dB
Radial 140.0 degrees
Bearing to point on contour 132.4 degrees
D/U ratio at contour 32.1 dB
Radial 150.0 degrees
Bearing to point on contour 134.2 degrees
D/U ratio at contour 31.7 dB
Radial 160.0 degrees
Bearing to point on contour 136.0 degrees
D/U ratio at contour 31.0 dB
Radial 170.0 degrees
Bearing to point on contour 137.5 degrees
D/U ratio at contour 30.0 dB
Radial 180.0 degrees
Bearing to point on contour 138.6 degrees
D/U ratio at contour 28.9 dB
Radial 190.0 degrees
Bearing to point on contour 139.0 degrees
D/U ratio at contour 27.6 dB
Radial 200.0 degrees
Bearing to point on contour 138.7 degrees
D/U ratio at contour 26.5 dB
Radial 210.0 degrees
Bearing to point on contour 138.2 degrees
D/U ratio at contour 25.8 dB
Radial 220.0 degrees
Bearing to point on contour 138.5 degrees
D/U ratio at contour 25.1 dB
Radial 230.0 degrees
Bearing to point on contour 138.5 degrees
D/U ratio at contour 24.4 dB
Radial 240.0 degrees
Bearing to point on contour 137.8 degrees
D/U ratio at contour 23.7 dB
Radial 250.0 degrees
Bearing to point on contour 137.5 degrees
D/U ratio at contour 23.1 dB
Radial 260.0 degrees
Bearing to point on contour 136.8 degrees
D/U ratio at contour 22.4 dB

Radial 270.0 degrees
Bearing to point on contour 136.3 degrees
D/U ratio at contour 21.7 dB
Radial 280.0 degrees
Bearing to point on contour 135.5 degrees
D/U ratio at contour 21.2 dB
Radial 290.0 degrees
Bearing to point on contour 134.2 degrees
D/U ratio at contour 21.0 dB
Radial 300.0 degrees
Bearing to point on contour 132.6 degrees
D/U ratio at contour 21.1 dB
Radial 310.0 degrees
Bearing to point on contour 131.0 degrees
D/U ratio at contour 21.3 dB
Radial 320.0 degrees
Bearing to point on contour 129.5 degrees
D/U ratio at contour 21.6 dB
Radial 330.0 degrees
Bearing to point on contour 128.2 degrees
D/U ratio at contour 22.0 dB
Radial 340.0 degrees
Bearing to point on contour 126.9 degrees
D/U ratio at contour 22.3 dB
Radial 350.0 degrees
Bearing to point on contour 125.4 degrees

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

**

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN	
41	WZVN-TV	NAPLES FL	OTHER	SKK263

Stations Potentially Affected by Proposed Station

Chan Ref. No.	Call	City/State	Dist(km)	Status	Application
41 -19971010JK	WJAN-CA	MIAMI FL	177.4	LIC	BLTTL

%%
%

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
41	WJAN-CA	MIAMI FL	BLTTL	-19971010JK

Stations Potentially Affecting This Station

Chan Ref. No.	Call	City/State	Dist(km)	Status	Application
33 -19850125KE	WBFS-TV	MIAMI FL	30.3	LIC	BLCT
34 -19800624KF	WTVX	FORT PIERCE FL	150.0	LIC	BLCT
38 -20000103AAT	WTCE	FORT PIERCE FL	141.3	CP	BPEDT
39 -19970401LW	WBZL	MIAMI FL	29.6	LIC	BLCT
40 -20000328AAE	WPPB-TV	BOCA RATON FL	34.8	APP	BPRM
41 -DTVP1093	WZVN-DT	NAPLES FL	140.5	PLN	DTVPLN
41 -SKK263	WZVN-TV	NAPLES FL	177.4	CP	OTHER
41 -20000501ADF	WRBW	ORLANDO FL	321.5	CP	BPCDT
41 -DTVP1094	WRBW-DT	ORLANDO FL	318.7	PLN	DTVPLN
42 -19820625KF	WXEL-TV	WEST PALM BEACH FL	91.1	LIC	BLET

44	WPPB-TV	BOCA RATON FL	34.8	CP	BPEDT
-19991028ACM					
44	WPPB-DT	BOCA RATON FL	34.8	PLN	DTVPLN
-DTVP1193					
45	WHFT-TV	MIAMI FL	34.8	LIC	BLCT
-19951208KF					
45	WTVK-DT	NAPLES FL	140.5	PLN	DTVPLN
-DTVP1227					
49	WFGC	PALM BEACH FL	93.0	APP	BPCDT
-19991028ABC					
49	WFGC-DT	PALM BEACH FL	112.1	PLN	DTVPLN
-DTVP1347					
55	WPTV	WEST PALM BEACH FL	93.1	APP	BMPCDT
-20011025ABN					
55	WPTV	WEST PALM BEACH FL	93.1	CP	BPCDT
-19991014ABI					
55	WPTV-DT	WEST PALM BEACH FL	93.1	PLN	DTVPLN
-DTVP1492					

Proposal causes no interference

##

TABLE IV
TV INTERFERENCE and SPACING SUMMARY

WZVN-TV OTHER -SKK263 NAPLES FL US
Channel 41 ERP 1000 kW HAAT 0 m RCAMSL 00461 m

Facility meets maximum height/power limits

Contour overlap to Class A station
WJAN-CA 41 MIAMI FL BLTTL 19971010JK

Contour overlap to Class A station
WJAN-CA 41 MIAMI FL BPTTA 20010116AGG

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Analysis of Interference to Affected Station 1

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
26	WZVNTV	NAPLES FL	DTVPLN	-NPLN0347

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	WZVN-TV	NAPLES FL	BLCT	-19890711KI

Proposal causes no interference

##

Analysis of Interference to Affected Station 2

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
34	WTVX	FORT PIERCE FL	DTVPLN	-NPLN0263

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
34	WTVX	FORT PIERCE FL	BLCT	-19800624KF

Proposed station is beyond the site to
nearest cell evaluation distance

##

Analysis of Interference to Affected Station 3

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
38	WTTA	ST. PETERSBURG FL	DTVPLN	-NPLN0367

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
38	WTTA	ST. PETERSBURG FL	BLCT	-19910703KG

Proposal causes no interference

##

Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
---------	------	------------	-------------	----------

38 WTTA ST. PETERSBURG FL BPCT -19950629KQ

Proposal causes no interference

##

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
40	WPPB-TV	BOCA RATON FL	BPRM	-20000328AAE

Proposal causes no interference

##

Analysis of Interference to Affected Station 6

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
40	WACX-DT	LEESBURG FL	DTVPLN	-DTVP1059

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
55	WACX	LEESBURG FL	DTVPLN	-NPLN0389

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
40	WACX	LEESBURG FL	BPCDT	-19991004ABN

Proposal causes no interference

##

Analysis of Interference to Affected Station 7

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
40	WWSB	SARASOTA FL	DTVPLN	-NPLN0370

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
40	WWSB	SARASOTA FL	BLCT	-19790920KI

Total scenarios = 2

Scenario 1 % New Interference 0.00 OK

Scenario 2 % New Interference 0.00 OK

##

Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
40	WWSB	SARASOTA FL	BPCT	-19991012AAS

Total scenarios = 2

Scenario 1 % New Interference 0.00 OK

Scenario 2 % New Interference 0.00 OK

##

Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
---------	------	------------	-------------	----------

41 960724KW LAKE CITY FL BPET -19960724KW

Proposed station is beyond the site to
nearest cell evaluation distance

##

Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
41	WJAN-CA	MIAMI FL	BLTTL	-19971010JK

Proposal causes no interference

##

Analysis of Interference to Affected Station 11

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
41	WJAN-CA	MIAMI FL	BPTTA	-20010116AGG

Proposal causes no interference

##

Analysis of Interference to Affected Station 12

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
41	WRBW-DT	ORLANDO FL	DTVPLN	-DTVP1094

NTSC Baseline Analysis

Channel	Call	City/State
65	WRBW	ORLANDO FL

Application Ref. No.
DTVPLN -NPLN0397

Analysis of current record

Channel	Call	City/State
41	WRBW	ORLANDO FL

Application Ref. No.
BPCDT -20000501ADF

Total scenarios = 4

Scenario 1 % New Interference	1.17	OK
Scenario 2 % New Interference	1.17	OK
Scenario 3 % New Interference	1.17	OK
Scenario 4 % New Interference	1.17	OK

##

Analysis of Interference to Affected Station 13

Analysis of current record

Channel	Call	City/State
41	WRBW-DT	ORLANDO FL

Application Ref. No.
DTVPLN -DTV1094

Total scenarios = 4

Scenario 1 % New Interference	0.14	OK
Scenario 2 % New Interference	0.37	OK
Scenario 3 % New Interference	0.14	OK
Scenario 4 % New Interference	0.37	OK

##

Analysis of Interference to Affected Station 14

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
42	WFCT-DT	BRADENTON FL	DTVPLN	-DTVP1124

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
66	WFCT	BRADENTON FL	DTVPLN	-NPLN0299

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
42	WXPX	BRADENTON FL	BPCDT	-19990602KF

Total scenarios = 5

Scenario 1	% New Interference	0.01	OK
Scenario 2	% New Interference	0.01	OK
Scenario 3	% New Interference	0.01	OK
Scenario 4	% New Interference	0.01	OK
Scenario 5	% New Interference	0.01	OK

##

Analysis of Interference to Affected Station 15

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
42	WFCT-DT	BRADENTON FL	DTVPLN	-DTVP1124

Proposal causes no interference

##

Analysis of Interference to Affected Station 16

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
42	WXEL-TV	WEST PALM BEACH FL	DTVPLN	-NPLN0372

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
42	WXEL-TV	WEST PALM BEACH FL	BLET	-19820625KF

Proposal causes no interference

##

Analysis of Interference to Affected Station 17

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
43	WWDT-CA	NAPLES FL	BLTTL	-20001208ABI

Proposed station is beyond the site to
nearest cell evaluation distance

##

Analysis of Interference to Affected Station 18

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
44	WTOG	ST. PETERSBURG FL	DTVPLN	-NPLN0375

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
---------	------	------------	-------------	----------

44 WTOG ST. PETERSBURG FL BLCT -19990415KI

Proposal causes no interference

##

Analysis of Interference to Affected Station 19

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
49	WRXYTV	TICE FL	DTVPLN	-NPLN0382

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
49	WRXY-TV	TICE FL	BLCT	-19950208KE

Proposal causes no interference

##

Analysis of Interference to Affected Station 20

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
41	WZVN-DT	NAPLES FL	DTVPLN	-DTVP1093

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
26	WZVNTV	NAPLES FL	DTVPLN	-NPLN0347

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
41	WZVN-TV	NAPLES FL	OTHER	-SKK263

TABLE V
DTV COVERAGE DATA
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002

<u>Radial</u> N ° E, T	<u>Average*</u> <u>Elevation</u> <u>3.2-16.1 km</u>	<u>Effective</u> <u>Height</u> meters	<u>ERP</u> kW	<u>Distance to F(50,90) Contour</u>	
	km			<u>41 dBu</u> km	<u>48 dBu</u> km
0	11.4	450.4	661.0	106.3	91.9
45	14.1	447.7	315.3	99.0	86.5
90	11.0	450.8	463.8	102.9	89.3
135	6.8	455.0	900.6	109.9	94.7
180	5.3	456.5	532.9	104.7	90.7
225	7.6	454.2	315.8	99.5	86.8
270	7.0	454.8	734.4	107.8	93.0
315	11.2	450.6	926.4	109.8	94.6
182	5.5	456.3	497.0	104.0	90.2

*Based on NGDC 3-second terrain data base

DTV Channel 41 (632-638 MHz)
Average Elevation 3 to 16 km 9.3 meters AMSL
Center of Radiation 461.8 meters AMSL
Antenna Height Above Average Terrain 453 meters
Effective Radiated Power 1000 kW

NAD-27

North Latitude: 26° 49' 21"
West Longitude: 81° 45' 47"

ABOVE MEAN SEA LEVEL

ABOVE GROUND

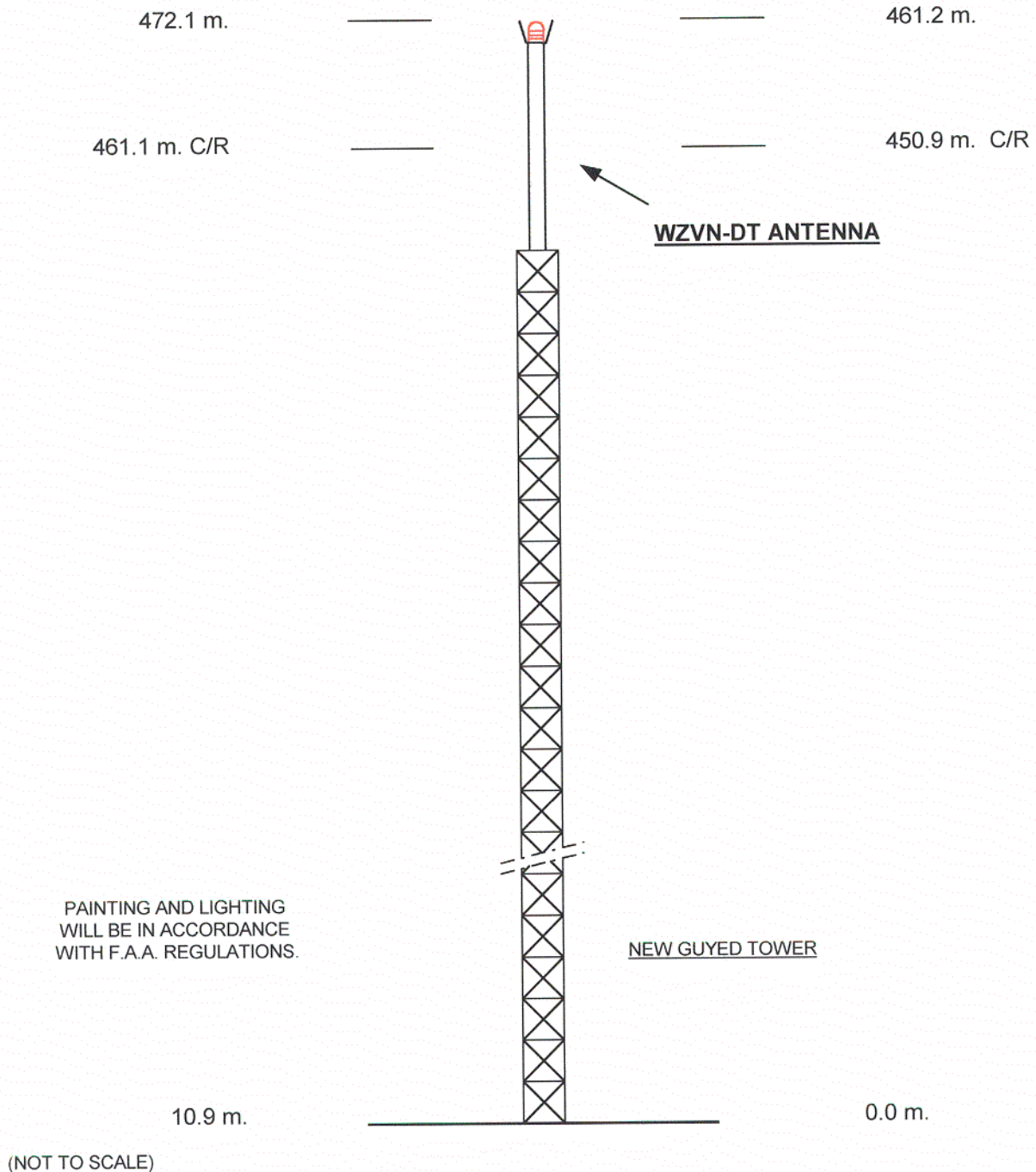
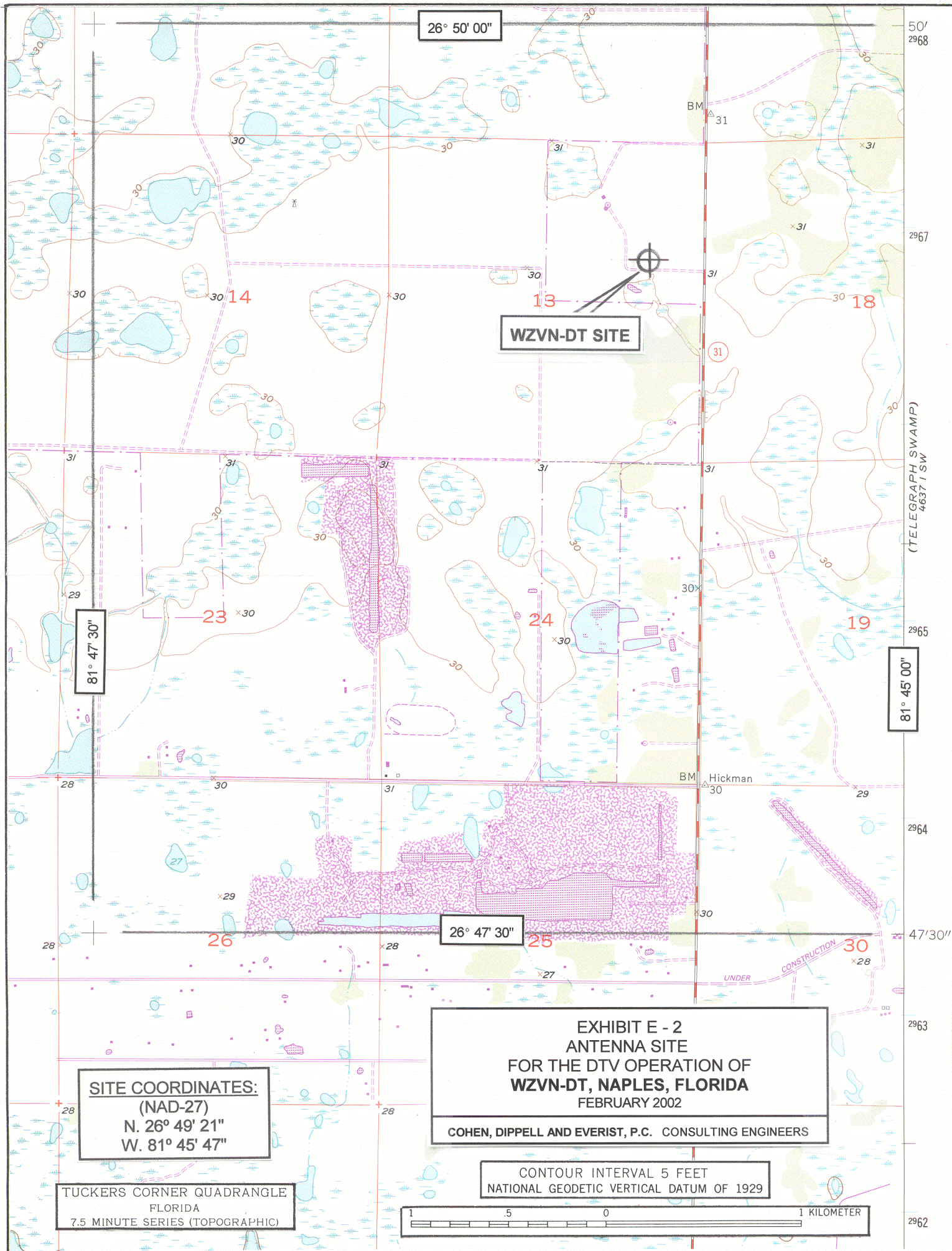


EXHIBIT E - 1
VERTICAL SKETCH
FOR THE PROPOSED **DTV** OPERATION OF
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002



26° 50' 00"

50'
2968

BM
31

WZVN-DT SITE

(TELEGRAPH SWAMP)
4637 I SW

81° 47' 30"

81° 45' 00"

2965

2964

2963

2962

26° 47' 30"

47'30"

SITE COORDINATES:

(NAD-27)
N. 26° 49' 21"
W. 81° 45' 47"

**EXHIBIT E - 2
ANTENNA SITE
FOR THE DTV OPERATION OF
WZVN-DT, NAPLES, FLORIDA
FEBRUARY 2002**

COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS

**TUCKERS CORNER QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)**

**CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929**





EXHIBIT E - 3
COMPUTED CONTOURS
FOR THE PROPOSED DTV OPERATION OF
WZVN-DT, NAPLES, FLORIDA
CHANNEL 41 1000 kW MAX DA. 453 METERS
FEBRUARY 2002

COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS