TECHNICAL EXHIBIT
AMENDMENT TO THE PENDING A
APPLICATION FOR DTV CONSTRUCTION PERMIT
STATION WUTR-DT
UTICA, NEW YORK
CH 30 50 KW (MAX-DA) 227 M

Technical Narrative

This Technical Exhibit supports an amendment to the pending application (BPCDT-19991027ACO) for digital television (DTV) station WUTR-DT which is paired with NTSC (analog) channel 20 at Utica, New York. This amendment proposes to modify the pending application by reducing the antenna radiation center height and employing a directional antenna instead of a non-directional antenna.

Proposed Facilities

Station WUTR-DT proposes to operate DTV channel 30 from its currently licensed NTSC site. It is proposed to operate with an Andrew ALP16L2-HSOC-30 directional type antenna with a maximum average effective radiated power of 50 kilowatts. The antenna height above average terrain for the channel 30 DTV operation will be 227 meters. Since the proposed facilities do not exceed those allocated by the Commission, no allocation study is necessary for this “checklist” application.

The existing DTV transmitter site will be located on an existing tower located at (NAD-27):

43° 08′ 43″ North Latitude
75° 10′ 35″ West Longitude

A map of the transmitter site is provided in Figure 1. A sketch of antenna and pertinent elevations are included as Figure 2.

The Appendix contains the antenna manufacturer's horizontal and vertical plane radiation patterns for the proposed DTV antenna system. The directional "omnioid" pattern will be oriented such that the main lobe will be at 240° true.

Figure 3 is a map showing the DTV predicted coverage contour. The map provides the predicted F(50,90) noise limited contour. The extent of the contour has been calculated using the normal FCC prediction method. The Utica city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Canadian Interference Consideration

The proposed site is located 141 kilometers from the Canadian border, and therefore is considered within the Canadian border area. However, since the proposed facilities are less than those allotted, it is believed Canada should not be an issue. Figure 4 is a map displaying the 12.4 dBu F(50,10) interfering contours for both the allotted and proposed WUTR-DT operations. As shown, the proposed interfering contour is entirely encompassed by the allotted interfering contour.

Radiofrequency Electromagnetic Field Exposure

The proposed WUTR-DT facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed WUTR-DT antenna is located 104 meters above ground level. The maximum effective radiated power is 50 kilowatts. A relative field value of 0.3 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.016 mW/cm^2. This is less than five percent of the Commission's recommended limit of 0.38 mW/cm^2 for channel 30 in an "uncontrolled" environment.

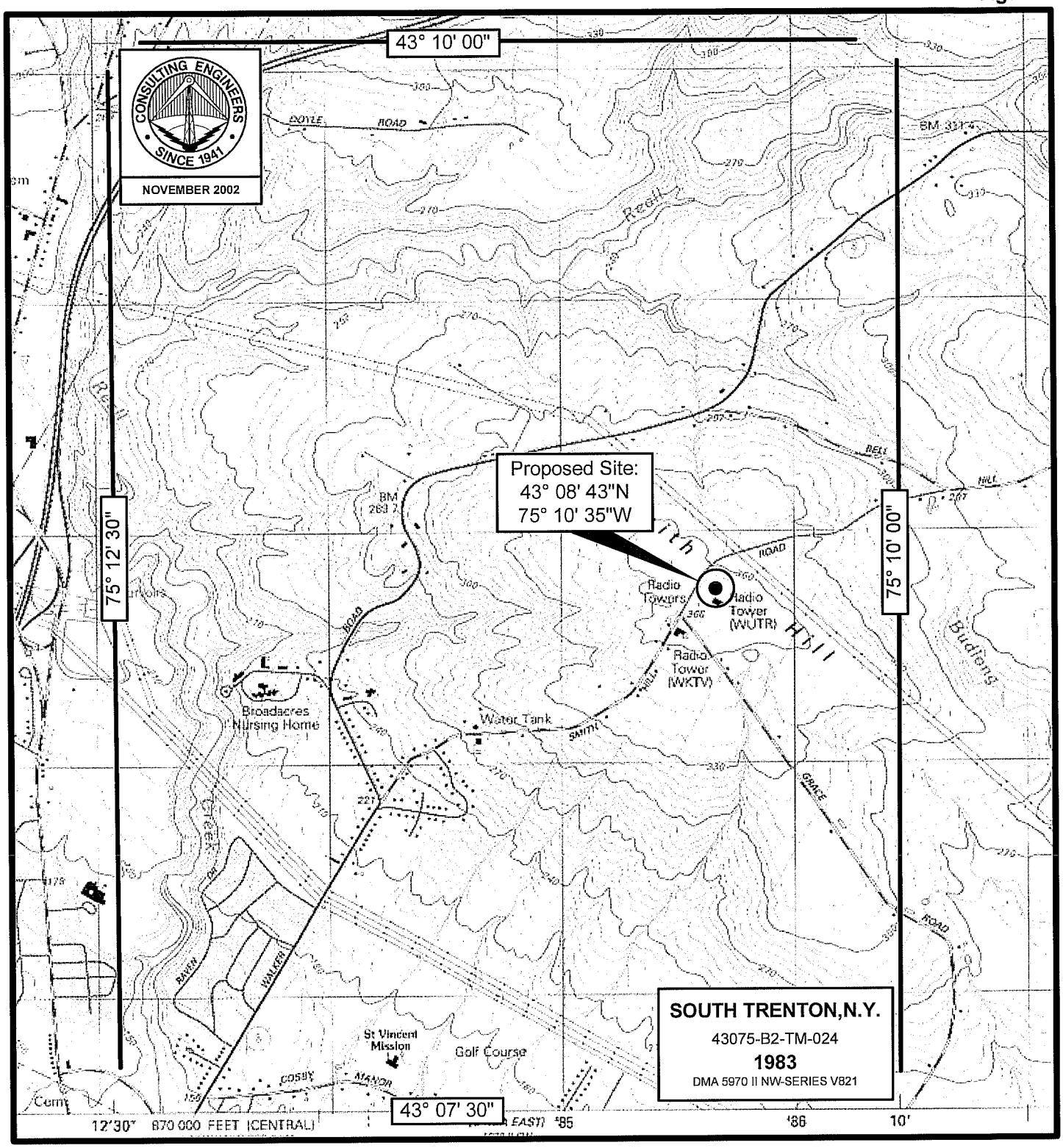
Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site, an agreement will control access to the site. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

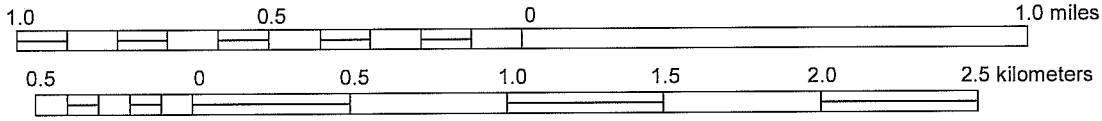
Jerome J. Manarchuck

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 324237
941.329.6000

November 12, 2002

Figure 1





PROPOSED TRANSMITTER LOCATION

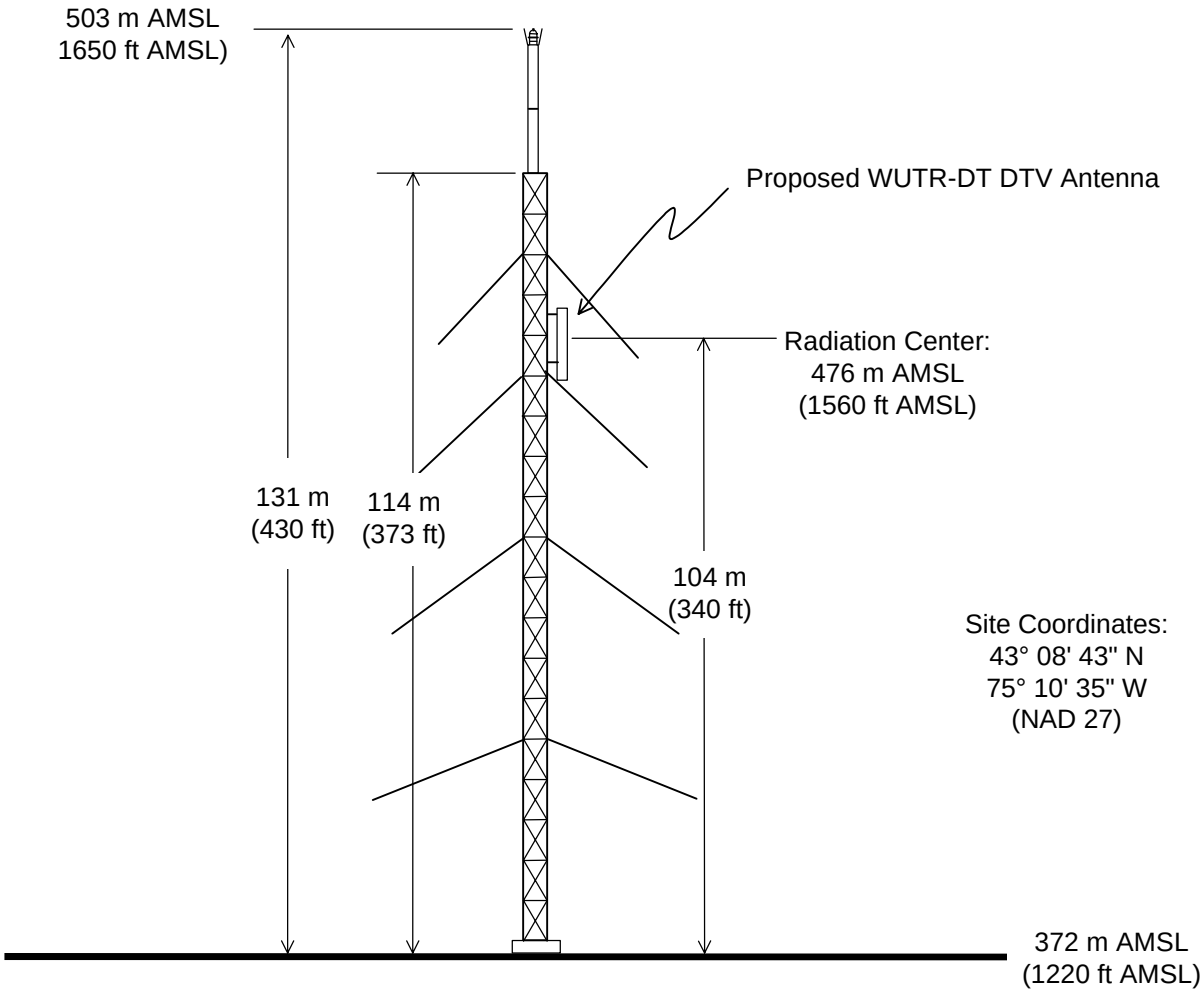
TELEVISION STATION WUTR-DT
UTICA, NEW YORK
CH 30 50 KW (MAX-DA) 227 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2

Tower Reg. No. 1003764

NOVEMBER 2002



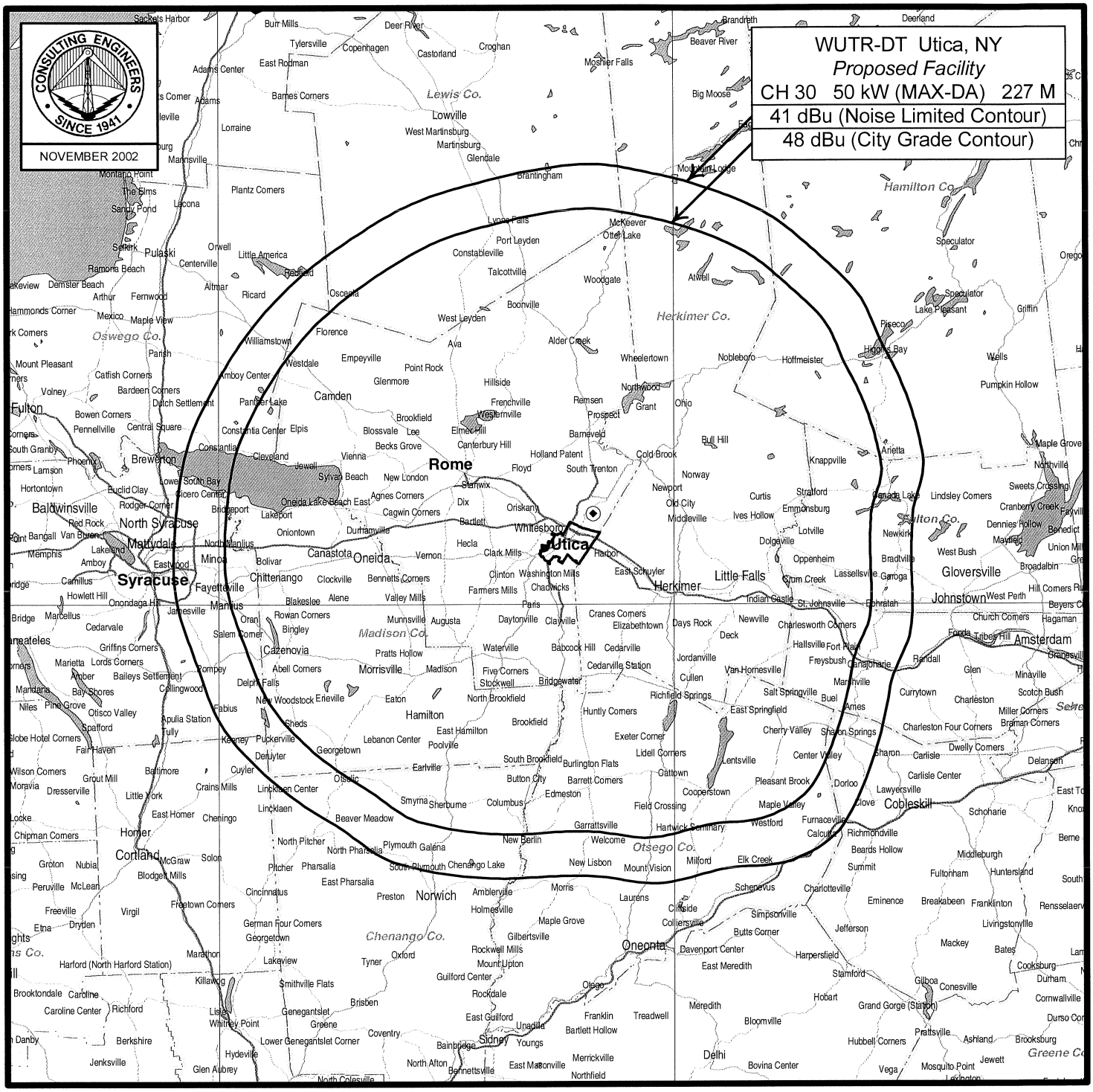
Not to Scale

PROPOSED ANTENNA AND SUPPORTING STRUCTURE

TELEVISION STATION WUTR-DT
UTICA, NEW YORK
CH 30 50 KW (MAX-DA) 227 M

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

Figure 3



PREDICTED COVERAGE CONTOURS

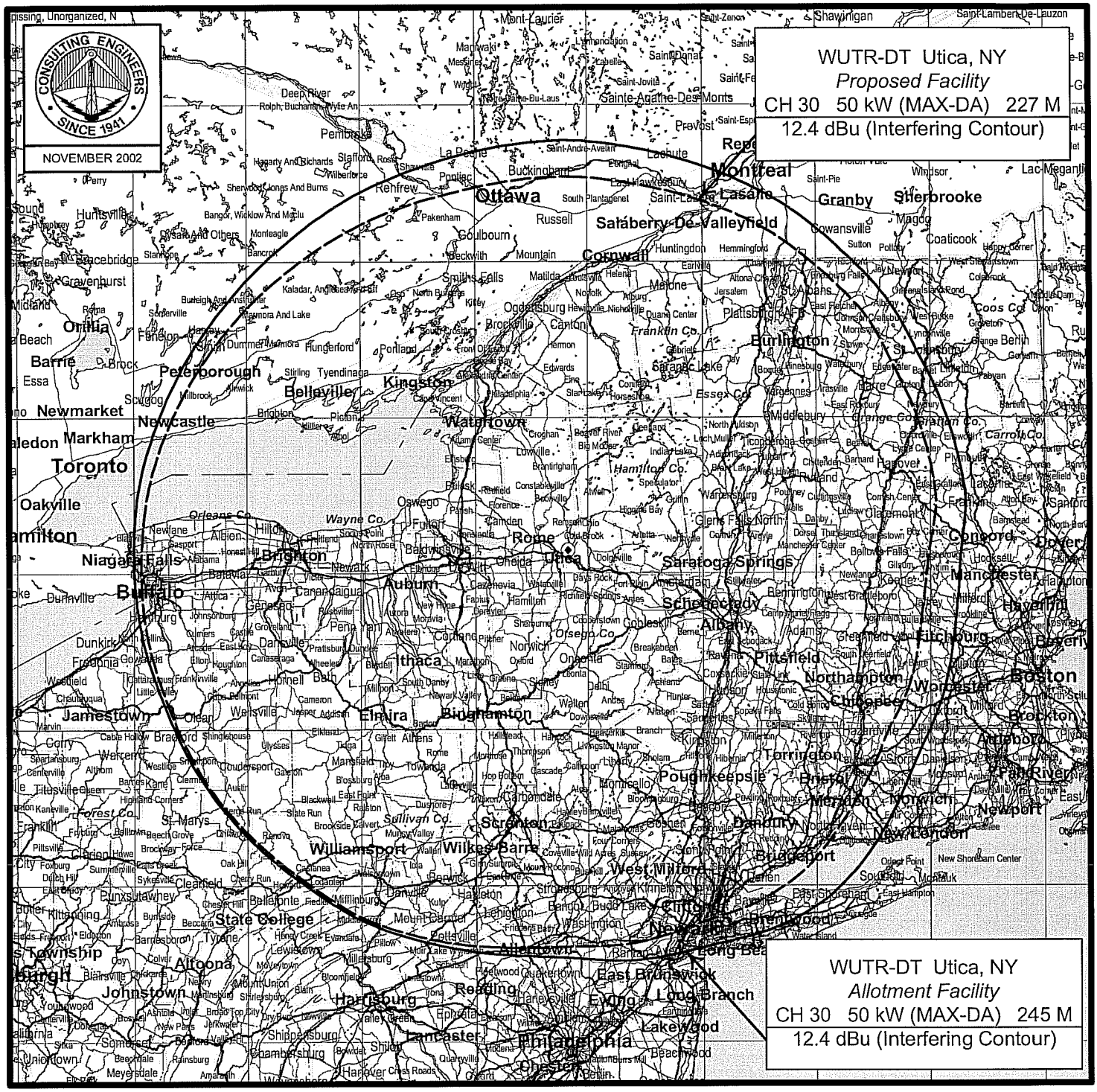
TELEVISION STATION WUTR-DT

UTICA, NEW YORK

CH 30 50 KW (MAX-DA) 227 M

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

Figure 4


CONSULTING ENGINEERS
SINCE 1941
NOVEMBER 2002
WUTR-DT Utica, NY
Proposed Facility
CH 30 50 kW (MAX-DA) 227 M
12.4 dBu (Interfering Contour)
WUTR-DT Utica, NY
Allotment Facility
CH 30 50 kW (MAX-DA) 245 M
12.4 dBu (Interfering Contour)
Montreal
Ottawa
Toronto
Buffalo
Rochester
Syracuse
Albany
Boston
Philadelphia
Harrisburg
Pittsburgh
Cleveland
Erie
Utica
Rome
Watertown
Kingston
Peterborough
Niagara Falls
Jamestown
Elmira
Binghamton
Scranton
Williamsport
Wilkes-Barre
Allentown
Reading
Lancaster
Altoona
State College
Johnstown
Cornwall
Saint-Jerome
Granby
Sherbrooke
Burlington
Plattsburgh
Saint-Jean
Lasalle
Saint-Lambert
Saint-Hyacinthe
Saint-Eustache
Saint-Jerome
Saint-Lambert-De-Lauzon
Shawinigan
Mont-Laurier
Deep River
Pembroke
Renfrew
Pembroke
Pontiac
Buckingham
Gatineau
Hawkesbury
Saint-Andre-Avellin
Lachute
Prevost
Saint-Eustache
Saint-Jerome
Saint-Hyacinthe
Saint-Lambert
Saint-Lambert-De-Lauzon
Sainte-Agathe-Des-Monts
Saint-Jovite
Saint-Donat
Saint-Zenon
Shawinigan
Lac Meganti
Windsor
Saint-Pie
Granby
Magog
Coaticook
Cowansville
Sutton
Potton
Huntingdon
Hemmingford
Russell
Saint-Lazare
South Plantagenet
Saint-Eustache
Saint-Jerome
Saint-Hyacinthe
Saint-Lambert
Saint-Lambert-De-Lauzon
Saint-Zenon
Shawinigan
Mont-Laurier
Saint-Donat
Saint-Jovite
Sainte-Agathe-Des-Monts
Prevost
Saint-Eustache
Saint-Jerome
Saint-Hyacinthe
Saint-Lambert
Saint-Lambert-De-Lauz

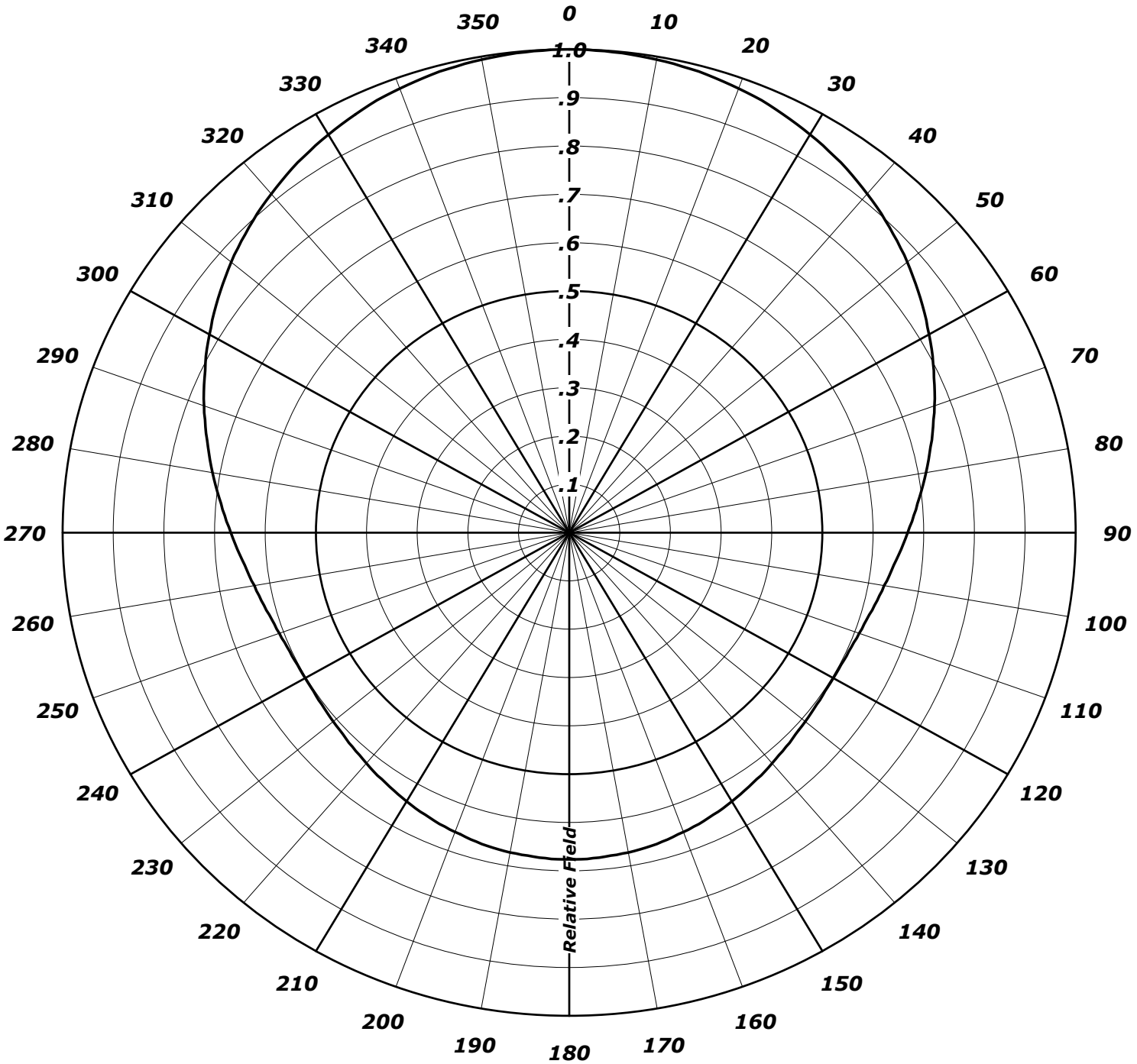
APPENDIX

MANUFACTURER TRANSMITTING ANTENNA SPECIFICATIONS

ANDREW

AZIMUTH PATTERN

Type:	ALP-OC	
	Numeric	dBd
Directivity:	1.70	(2.30)
Peak(s) At:		
Polarization:		
Channel:		
Location:		



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

ANDREW

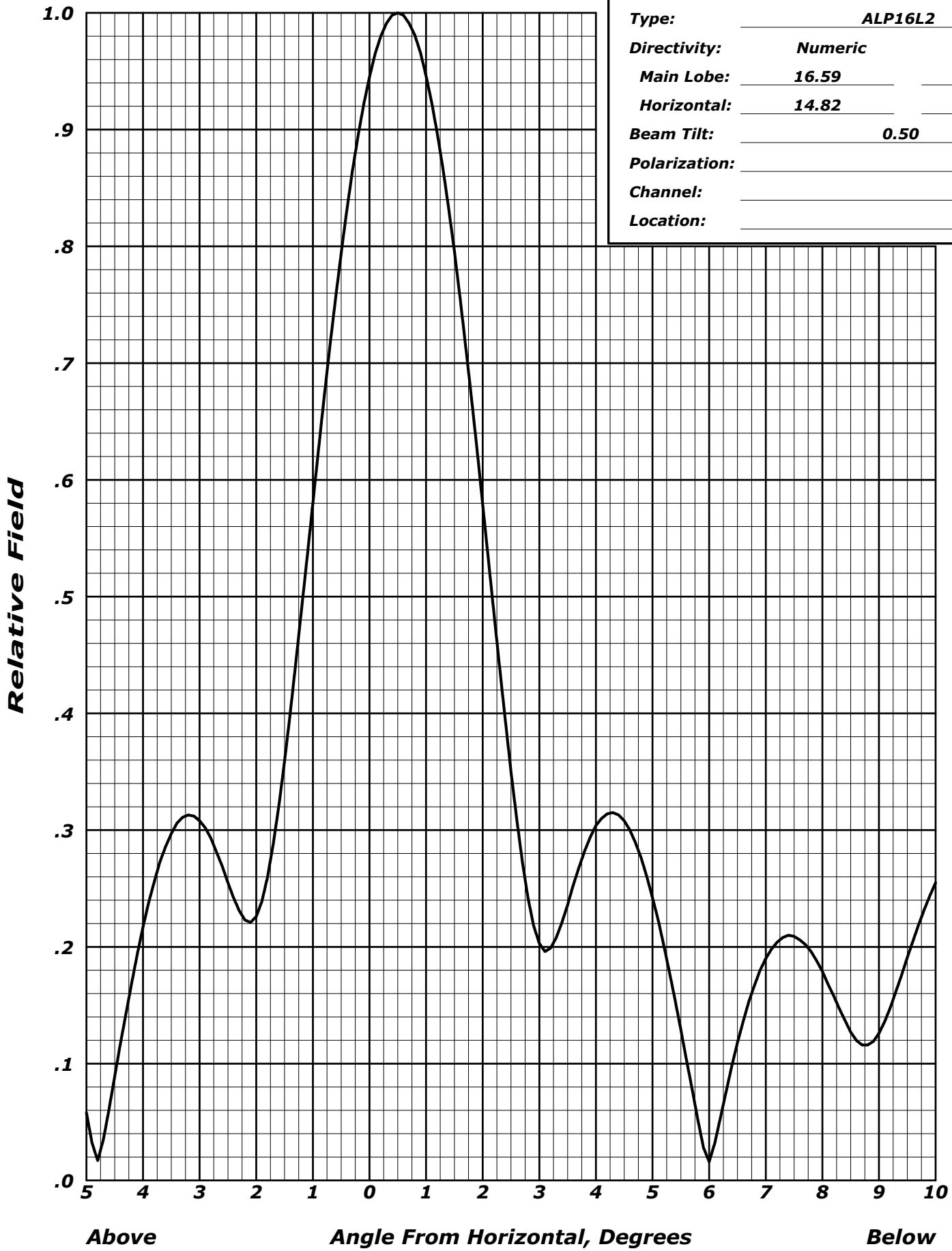
TABULATED DATA FOR AZIMUTH PATTERN
TYPE : ALP-OC

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	1.000	0.00	110	0.609	-4.31	220	0.623	-4.11	330	0.951	-0.44
2	1.000	0.00	112	0.606	-4.35	222	0.619	-4.17	332	0.957	-0.38
4	0.999	-0.01	114	0.604	-4.38	224	0.616	-4.21	334	0.963	-0.33
6	0.998	-0.02	116	0.603	-4.39	226	0.613	-4.25	336	0.969	-0.27
8	0.996	-0.03	118	0.602	-4.41	228	0.610	-4.29	338	0.974	-0.23
10	0.994	-0.05	120	0.602	-4.41	230	0.608	-4.32	340	0.978	-0.19
12	0.992	-0.07	122	0.602	-4.41	232	0.606	-4.35	342	0.982	-0.16
14	0.989	-0.10	124	0.603	-4.39	234	0.604	-4.38	344	0.986	-0.12
16	0.986	-0.12	126	0.604	-4.38	236	0.603	-4.39	346	0.989	-0.10
18	0.982	-0.16	128	0.606	-4.35	238	0.602	-4.41	348	0.992	-0.07
20	0.978	-0.19	130	0.608	-4.32	240	0.602	-4.41	350	0.994	-0.05
22	0.974	-0.23	132	0.610	-4.29	242	0.602	-4.41	352	0.996	-0.03
24	0.969	-0.27	134	0.613	-4.25	244	0.603	-4.39	354	0.998	-0.02
26	0.963	-0.33	136	0.616	-4.21	246	0.604	-4.38	356	0.999	-0.01
28	0.957	-0.38	138	0.619	-4.17	248	0.606	-4.35	358	1.000	0.00
30	0.951	-0.44	140	0.623	-4.11	250	0.609	-4.31	360	1.000	0.00
32	0.945	-0.49	142	0.627	-4.05	252	0.612	-4.26			
34	0.938	-0.56	144	0.630	-4.01	254	0.616	-4.21			
36	0.931	-0.62	146	0.634	-3.96	256	0.621	-4.14			
38	0.923	-0.70	148	0.638	-3.90	258	0.626	-4.07			
40	0.915	-0.77	150	0.642	-3.85	260	0.631	-4.00			
42	0.907	-0.85	152	0.646	-3.80	262	0.638	-3.90			
44	0.898	-0.93	154	0.649	-3.76	264	0.644	-3.82			
46	0.889	-1.02	156	0.653	-3.70	266	0.652	-3.72			
48	0.880	-1.11	158	0.656	-3.66	268	0.660	-3.61			
50	0.871	-1.20	160	0.659	-3.62	270	0.668	-3.50			
52	0.861	-1.30	162	0.662	-3.58	272	0.677	-3.39			
54	0.851	-1.40	164	0.665	-3.54	274	0.686	-3.27			
56	0.841	-1.50	166	0.668	-3.50	276	0.695	-3.16			
58	0.831	-1.61	168	0.670	-3.48	278	0.705	-3.04			
60	0.820	-1.72	170	0.672	-3.45	280	0.715	-2.91			
62	0.810	-1.83	172	0.673	-3.44	282	0.725	-2.79			
64	0.799	-1.95	174	0.674	-3.43	284	0.735	-2.67			
66	0.788	-2.07	176	0.675	-3.41	286	0.746	-2.55			
68	0.778	-2.18	178	0.676	-3.40	288	0.756	-2.43			
70	0.767	-2.30	180	0.676	-3.40	290	0.767	-2.30			
72	0.756	-2.43	182	0.676	-3.40	292	0.778	-2.18			
74	0.746	-2.55	184	0.675	-3.41	294	0.788	-2.07			
76	0.735	-2.67	186	0.674	-3.43	296	0.799	-1.95			
78	0.725	-2.79	188	0.673	-3.44	298	0.810	-1.83			
80	0.715	-2.91	190	0.672	-3.45	300	0.820	-1.72			
82	0.705	-3.04	192	0.670	-3.48	302	0.831	-1.61			
84	0.695	-3.16	194	0.668	-3.50	304	0.841	-1.50			
86	0.686	-3.27	196	0.665	-3.54	306	0.851	-1.40			
88	0.677	-3.39	198	0.662	-3.58	308	0.861	-1.30			
90	0.668	-3.50	200	0.659	-3.62	310	0.871	-1.20			
92	0.660	-3.61	202	0.656	-3.66	312	0.880	-1.11			
94	0.652	-3.72	204	0.653	-3.70	314	0.889	-1.02			
96	0.644	-3.82	206	0.649	-3.76	316	0.898	-0.93			
98	0.638	-3.90	208	0.646	-3.80	318	0.907	-0.85			
100	0.631	-4.00	210	0.642	-3.85	320	0.915	-0.77			
102	0.626	-4.07	212	0.638	-3.90	322	0.923	-0.70			
104	0.621	-4.14	214	0.634	-3.96	324	0.931	-0.62			
106	0.616	-4.21	216	0.630	-4.01	326	0.938	-0.56			
108	0.612	-4.26	218	0.627	-4.05	328	0.945	-0.49			

ANDREW

ELEVATION PATTERN

Type:	ALP16L2	
Directivity:	Numeric	dBd
Main Lobe:	16.59	(12.20)
Horizontal:	14.82	(11.71)
Beam Tilt:	0.50	
Polarization:		
Channel:		
Location:		



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

ANDREW

TABULATED DATA FOR ELEVATION PATTERN
TYPE : ALP16L2

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	0.058	-24.73	8.75	0.116	-18.71	35.00	0.156	-16.14	62.50	0.091	-20.82
-4.75	0.026	-31.70	9.00	0.126	-17.99	35.50	0.159	-15.97	63.00	0.086	-21.31
-4.50	0.089	-21.01	9.25	0.155	-16.19	36.00	0.149	-16.54	63.50	0.079	-22.05
-4.25	0.156	-16.14	9.50	0.191	-14.38	36.50	0.128	-17.86	64.00	0.070	-23.10
-4.00	0.217	-13.27	9.75	0.226	-12.94	37.00	0.098	-20.18	64.50	0.064	-23.88
-3.75	0.264	-11.55	10.00	0.255	-11.87	37.50	0.066	-23.61	65.00	0.066	-23.61
-3.50	0.297	-10.54	10.50	0.289	-10.78	38.00	0.043	-27.33	65.50	0.077	-22.27
-3.25	0.312	-10.12	11.00	0.284	-10.93	38.50	0.045	-26.94	66.00	0.095	-20.45
-3.00	0.308	-10.23	11.50	0.246	-12.18	39.00	0.058	-24.73	66.50	0.117	-18.64
-2.75	0.287	-10.84	12.00	0.186	-14.61	39.50	0.068	-23.35	67.00	0.140	-17.08
-2.50	0.255	-11.87	12.50	0.120	-18.42	40.00	0.068	-23.35	67.50	0.163	-15.76
-2.25	0.227	-12.88	13.00	0.063	-24.01	40.50	0.059	-24.58	68.00	0.183	-14.75
-2.00	0.226	-12.92	13.50	0.024	-32.40	41.00	0.042	-27.54	68.50	0.201	-13.94
-1.75	0.274	-11.24	14.00	0.007	-43.10	41.50	0.021	-33.56	69.00	0.216	-13.31
-1.50	0.359	-8.90	14.50	0.001	-60.00	42.00	0.004	-47.96	69.50	0.228	-12.84
-1.25	0.467	-6.62	15.00	0.013	-37.72	42.50	0.021	-33.56	70.00	0.236	-12.54
-1.00	0.580	-4.73	15.50	0.025	-32.04	43.00	0.035	-29.12	70.50	0.240	-12.40
-0.75	0.692	-3.19	16.00	0.029	-30.75	43.50	0.042	-27.54	71.00	0.241	-12.36
-0.50	0.794	-2.00	16.50	0.021	-33.56	44.00	0.042	-27.54	71.50	0.239	-12.43
-0.25	0.880	-1.11	17.00	0.003	-50.46	44.50	0.037	-28.64	72.00	0.234	-12.62
0.00	0.945	-0.49	17.50	0.027	-31.37	45.00	0.029	-30.75	72.50	0.227	-12.88
0.25	0.985	-0.13	18.00	0.053	-25.51	45.50	0.021	-33.56	73.00	0.217	-13.27
0.50	1.000	0.00	18.50	0.069	-23.22	46.00	0.018	-34.89	73.50	0.206	-13.72
0.75	0.986	-0.12	19.00	0.071	-22.97	46.50	0.021	-33.56	74.00	0.193	-14.29
1.00	0.946	-0.48	19.50	0.059	-24.58	47.00	0.023	-32.77	74.50	0.180	-14.89
1.25	0.881	-1.10	20.00	0.057	-24.88	47.50	0.021	-33.56	75.00	0.166	-15.60
1.50	0.796	-1.98	20.50	0.090	-20.92	48.00	0.014	-37.08	75.50	0.152	-16.36
1.75	0.692	-3.19	21.00	0.141	-17.02	48.50	0.002	-53.98	76.00	0.138	-17.20
2.00	0.579	-4.75	21.50	0.190	-14.42	49.00	0.012	-38.42	76.50	0.124	-18.13
2.25	0.462	-6.71	22.00	0.224	-13.00	49.50	0.027	-31.37	77.00	0.110	-19.17
2.50	0.350	-9.12	22.50	0.237	-12.51	50.00	0.041	-27.74	77.50	0.098	-20.18
2.75	0.258	-11.78	23.00	0.227	-12.88	50.50	0.053	-25.51	78.00	0.086	-21.31
3.00	0.203	-13.85	23.50	0.196	-14.15	51.00	0.059	-24.58	78.50	0.075	-22.50
3.25	0.204	-13.83	24.00	0.150	-16.48	51.50	0.061	-24.29	79.00	0.065	-23.74
3.50	0.236	-12.54	24.50	0.100	-20.00	52.00	0.057	-24.88	79.50	0.056	-25.04
3.75	0.275	-11.21	25.00	0.056	-25.04	52.50	0.049	-26.20	80.00	0.048	-26.38
4.00	0.304	-10.34	25.50	0.036	-28.87	53.00	0.039	-28.18	80.50	0.041	-27.74
4.25	0.314	-10.05	26.00	0.042	-27.54	53.50	0.031	-30.17	81.00	0.036	-28.87
4.50	0.308	-10.23	26.50	0.047	-26.56	54.00	0.033	-29.63	81.50	0.031	-30.17
4.75	0.282	-10.98	27.00	0.043	-27.33	54.50	0.043	-27.33	82.00	0.027	-31.37
5.00	0.242	-12.32	27.50	0.031	-30.17	55.00	0.056	-25.04	82.50	0.024	-32.40
5.25	0.189	-14.45	28.00	0.017	-35.39	55.50	0.065	-23.74	83.00	0.021	-33.56
5.50	0.129	-17.79	28.50	0.004	-47.96	56.00	0.071	-22.97	83.50	0.019	-34.42
5.75	0.065	-23.74	29.00	0.003	-50.46	56.50	0.071	-22.97	84.00	0.017	-35.39
6.00	0.016	-35.92	29.50	0.004	-47.96	57.00	0.065	-23.74	84.50	0.016	-35.92
6.25	0.065	-23.74	30.00	0.001	-60.00	57.50	0.054	-25.35	85.00	0.015	-36.48
6.50	0.118	-18.56	30.50	0.007	-43.10	58.00	0.039	-28.18	85.50	0.013	-37.72
6.75	0.160	-15.92	31.00	0.012	-38.42	58.50	0.020	-33.98	86.00	0.012	-38.42
7.00	0.190	-14.42	31.50	0.014	-37.08	59.00	0.005	-46.02	86.50	0.011	-39.17
7.25	0.206	-13.72	32.00	0.017	-35.39	59.50	0.024	-32.40	87.00	0.009	-40.92
7.50	0.209	-13.60	32.50	0.031	-30.17	60.00	0.044	-27.13	87.50	0.008	-41.94
7.75	0.199	-14.02	33.00	0.055	-25.19	60.50	0.062	-24.15	88.00	0.007	-43.10
8.00	0.179	-14.94	33.50	0.085	-21.41	61.00	0.076	-22.38	88.50	0.005	-46.02
8.25	0.153	-16.33	34.00	0.115	-18.79	61.50	0.086	-21.31	89.00	0.003	-50.46
8.50	0.127	-17.92	34.50	0.140	-17.08	62.00	0.091	-20.82	89.50	0.002	-53.98