WCCV-TV LICENSE APPLICATION – TECHNICAL VARIATIONS FROM CP SPECIFICATIONS

WCCV-TV is filing a license application to cover its current construction permit, File Num. 0000067514. The antenna installed by WCCV-TV differs from the antenna specified in the CP in that it incorporates elliptical polarization instead of the horizontal polarization specified in the CP. As shown in the figures included herein provided by PSI, the antenna manufacturer, the antenna pattern vertical field values along any azimuth are within the horizontal values. This change in polarization required an increase in TPO, the final antenna system gain and power figures to be licensed being:

Transmitter Output Power: 5.40 dBk (3.47 kW)

Transmission Line Loss: 1.42 dB (Eff. = 0.721%)

Antenna Input Power (Hpol): 3.98 dBk (2.50 kW)

Antenna Gain - Hpol: 13.8 dB (24.0 X)

ERP (Hpol): 17.78 dBk (60.0 kW)

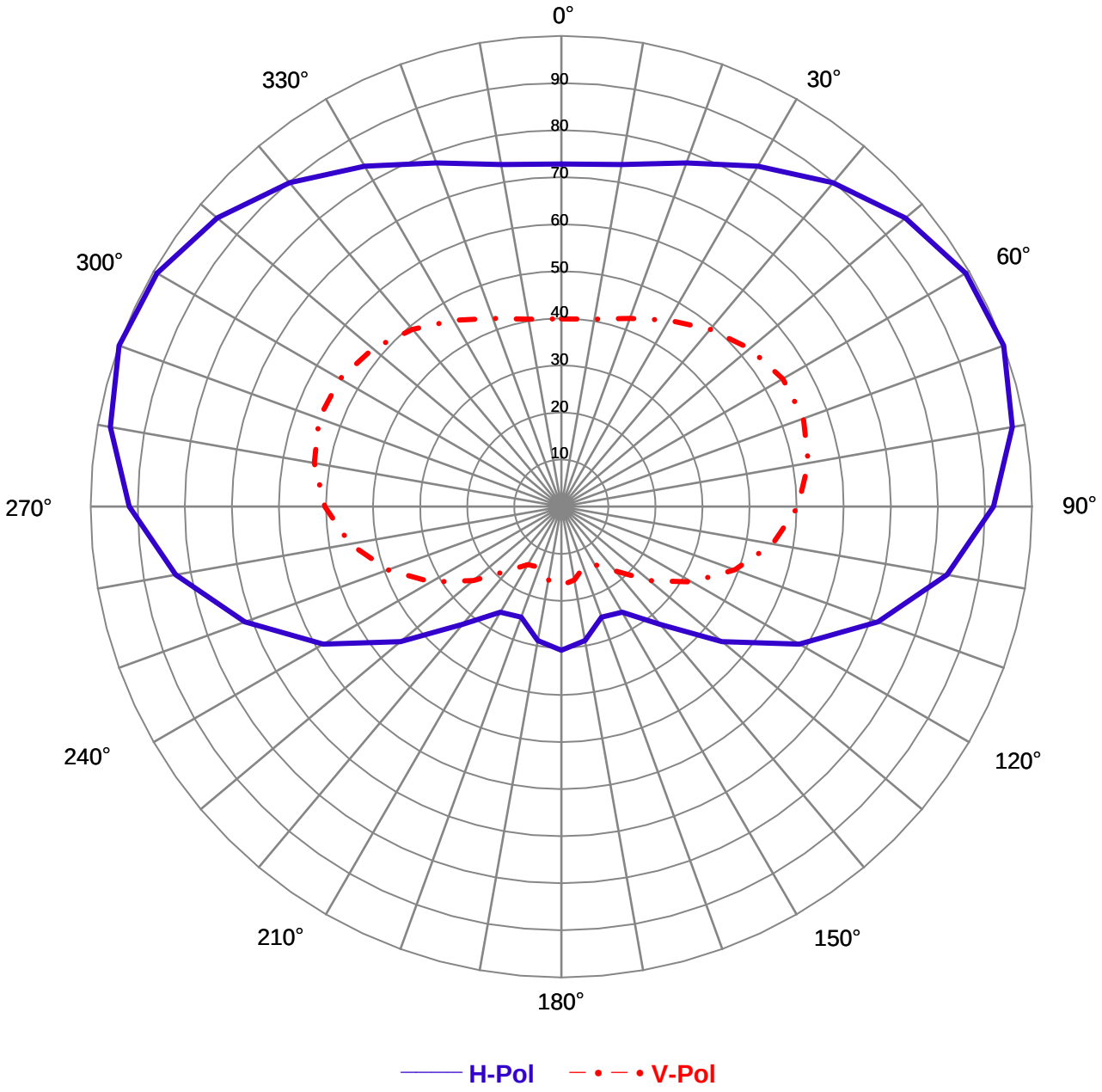
Antenna Input Power (Vpol): 3.98 dBk (2.50 kW)

Antenna Gain - Vpol: 8.57 dB (7.20 X)

ERP (Vpol): 12.55 dBk (18.0 kW)

Propagation Systems, Inc.

Relative Field
Azimuth Plane Pattern



Pattern Type:	**Relative Field**	Type:	**16-Bay UHF Slot**
Antenna Model:	**PSILP16AP-35-EP**	Rotation:	**345 Degree**
Polarization:	**Elliptical**	Channel:	**23**
Gain (h-pol):	**24.0 (13.80 dB)**	Station:	**WCCV-TV**
Gain (v-pol):	**7.20 (8.57 dB)**	Location:	**Arecibo, PR**

PROPAGATION SYSTEMS INC.

Relative Field Tabulation

Antenna Model: PSILP16AP-35-EP

Gain (H-pol): 24.0 (13.80 dBd)

Horizontal Component

Angle	Relative Field	Power Gain	Gain dB
0	0.728	12.72	11.04
10	0.738	13.07	11.16
20	0.777	14.49	11.61
30	0.835	16.73	12.24
40	0.898	19.35	12.87
50	0.954	21.84	13.39
60	0.992	23.62	13.73
70	1.000	24.00	13.80
80	0.973	22.72	13.56
90	0.918	20.23	13.06
100	0.832	16.61	12.20
110	0.716	12.30	10.90
120	0.584	8.19	9.13
130	0.446	4.77	6.79
140	0.326	2.55	4.07
150	0.259	1.61	2.07
160	0.250	1.50	1.76
170	0.289	2.00	3.02
180	0.305	2.23	3.49
190	0.289	2.00	3.02
200	0.250	1.50	1.76
210	0.259	1.61	2.07
220	0.326	2.55	4.07
230	0.446	4.77	6.79
240	0.584	8.19	9.13
250	0.716	12.30	10.90
260	0.832	16.61	12.20
270	0.918	20.23	13.06
280	0.973	22.72	13.56
290	1.000	24.00	13.80
300	0.992	23.62	13.73
310	0.954	21.84	13.39
320	0.898	19.35	12.87
330	0.835	16.73	12.24
340	0.777	14.49	11.61
350	0.738	13.07	11.16

PROPAGATION SYSTEMS INC.

Relative Field Tabulation

Antenna Model: PSILP16AP-35-EP

Gain (V-pol): 7.20 (8.57 dBd)

Vertical Component

Angle	Relative Field	Power Gain	Gain dB
0	0.399	3.82	5.82
10	0.404	3.92	5.93
20	0.426	4.35	6.38
30	0.457	5.02	7.01
40	0.492	5.81	7.64
50	0.523	6.55	8.16
60	0.543	7.08	8.50
70	0.548	7.20	8.57
80	0.533	6.82	8.34
90	0.503	6.07	7.83
100	0.456	4.98	6.98
110	0.392	3.69	5.67
120	0.320	2.46	3.90
130	0.244	1.43	1.56
140	0.179	0.77	-1.16
150	0.142	0.48	-3.16
160	0.137	0.45	-3.47
170	0.158	0.60	-2.21
180	0.167	0.67	-1.74
190	0.158	0.60	-2.21
200	0.137	0.45	-3.47
210	0.142	0.48	-3.16
220	0.179	0.77	-1.16
230	0.244	1.43	1.56
240	0.320	2.46	3.90
250	0.392	3.69	5.67
260	0.456	4.98	6.98
270	0.503	6.07	7.83
280	0.533	6.82	8.34
290	0.548	7.20	8.57
300	0.543	7.08	8.50
310	0.523	6.55	8.16
320	0.492	5.81	7.64
330	0.457	5.02	7.01
340	0.426	4.35	6.38
350	0.404	3.92	5.93