



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
A MINOR MODIFICATION OF A
POST REPACK LICENSE
FILE # 0000117317
WRSP-TV - SPRINGFIELD, ILLINOIS
DTV - CH. 16 - 310 kW - 436 m HAAT**

Prepared for: GOCOM MEDIA OF ILLINOIS, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by GOCOM MEDIA OF ILLINOIS, LLC, licensee of WRSP-TV, channel 16, facility ID number 62009, licensed to Springfield, Illinois, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a minor modification of its post-reassignment license, File #0000117317, that authorizes WRSP-TV to use channel 16 for its post-reassignment broadcasting. The instant application proposes only to alter the elevation pattern of WRSP-TV's authorized Dielectric model TFU-26GTH/VP-R O6 DC elliptically polarized non-directional antenna by adding "future-fill" provided by the manufacturer. Additionally the ERP shall be reduced from 360 kW to 310 kW. No other changes are herein proposed.

NON-DIRECTIONAL ANTENNA

The Dielectric model TFU-26GTH/VP-R O6 DC antenna's center of radiation is located at WRSP-TV's authorized height of 432.2 meters AGL and at its authorized height above average terrain of 436 meters. The antenna manufacturer's antenna data, including the horizontal azimuth patterns of both the horizontal and vertical signal components and the vertical plane elevation radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane are shown and tabulated in the antenna exhibit.

REDUCTION IN ERP FROM 360 kW TO 310 kW

The reduction in ERP is made to accommodate the "future-fill" alteration to the antenna that is shared with WICS. All remaining parameters remain unchanged. These include, but are not limited to, Allocation Considerations, Blanketing and Intermodulation Interference and Radio Frequency Impact.

OCCUPATIONAL SAFETY

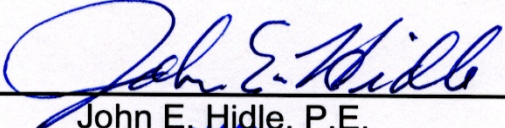
The licensee of WRSP-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WRSP-TV antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel. See Appendix A that demonstrates compliance with radio frequency radiation safety guidelines.

STATEMENT OF JOHN E. HIDLE, P.E.
WRSP-TV - Springfield, Illinois
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SUMMARY

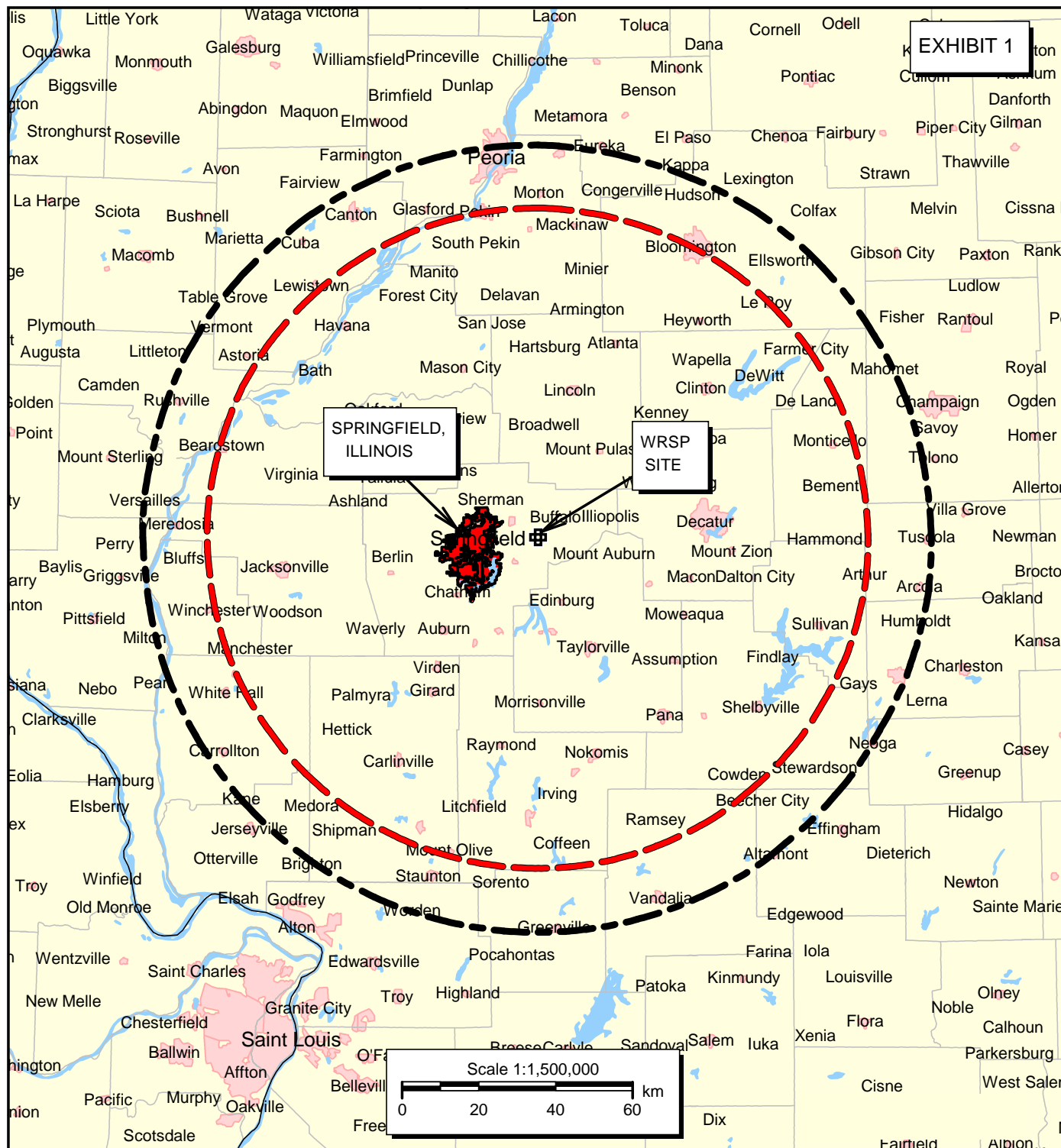
It is submitted that the instant application for a minor modification of its post-reassignment channel 16 license, file # 0000117317, to modify its authorized Dielectric model TFU-26GTH/VP-R O6 DC elliptically polarized non-directional antenna to include "future-fill" and to reduce its ERP, as described herein, does comply with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: May 26, 2021



John E. Hidle, P.E.





PREDICTED COVERAGE CONTOURS

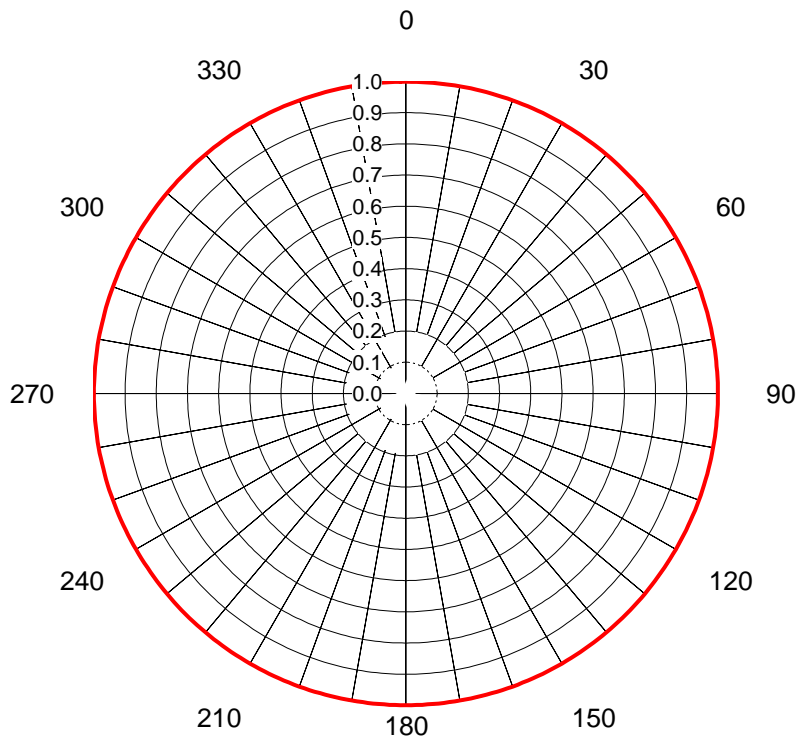
WRSP-TV SPRINGFIELD, ILLINOIS
DTV Channel 16 - 310 kW ERP - 436.0 M HAAT
MAY, 2021

Predicted Noise Limited 38.94 dBu
F(50,90) Coverage Contour



Predicted Principal Community 48 dBu
F(50,90) Coverage Contour

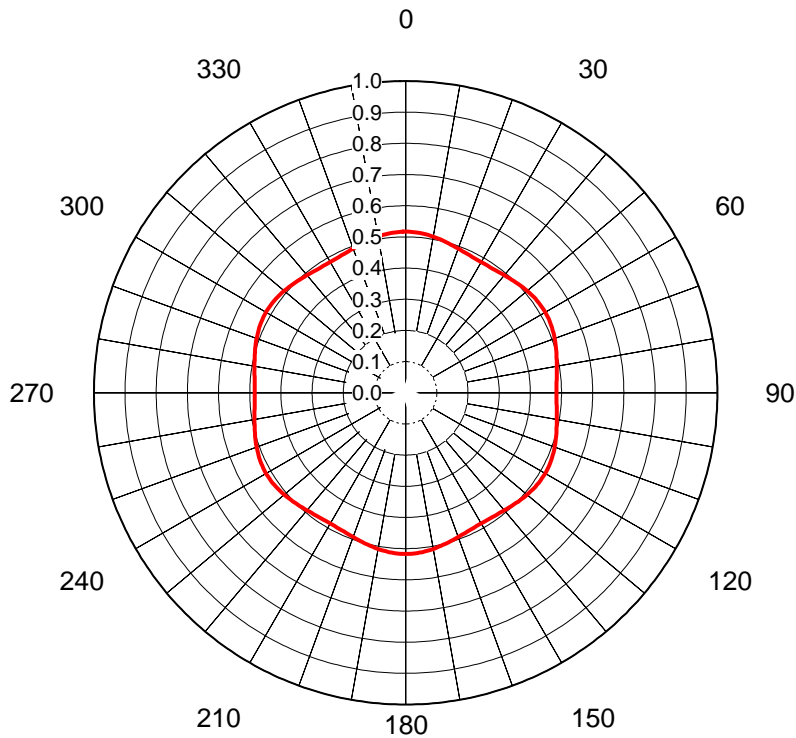
AZIMUTH PATTERN Horizontal Polarization



Proposal No. **C-70981-4**
 Date **16-Feb-21**
 Call Letters **WRSP**
 Channel **16**
 Frequency **485 MHz**
 Antenna Type **TFU-26GTH/VP-R O6 DC**
 Gain **1 (0dB)**
 Calculated
 Circularity **+/- 1.0 dB**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.999	36	1.000	72	1.000	108	1.000	144	1.000	180	0.999	216	1.000	252	1.000	288	1.000	324	1.000
1	0.999	37	1.000	73	1.000	109	0.999	145	1.000	181	0.999	217	1.000	253	1.000	289	0.999	325	1.000
2	0.999	38	1.000	74	1.000	110	0.999	146	1.000	182	0.999	218	1.000	254	1.000	290	0.999	326	1.000
3	0.999	39	1.000	75	1.000	111	0.999	147	1.000	183	0.999	219	1.000	255	1.000	291	0.999	327	1.000
4	0.999	40	1.000	76	1.000	112	0.999	148	1.000	184	0.999	220	1.000	256	1.000	292	0.999	328	1.000
5	0.999	41	1.000	77	1.000	113	0.999	149	1.000	185	0.999	221	1.000	257	1.000	293	0.999	329	1.000
6	0.999	42	1.000	78	1.000	114	0.999	150	1.000	186	0.999	222	1.000	258	1.000	294	0.999	330	1.000
7	0.999	43	1.000	79	1.000	115	0.999	151	1.000	187	0.999	223	1.000	259	1.000	295	0.999	331	1.000
8	0.999	44	1.000	80	1.000	116	0.999	152	1.000	188	0.999	224	1.000	260	1.000	296	0.999	332	1.000
9	0.999	45	1.000	81	1.000	117	0.999	153	1.000	189	0.999	225	1.000	261	1.000	297	0.999	333	1.000
10	0.999	46	1.000	82	1.000	118	0.999	154	1.000	190	0.999	226	1.000	262	1.000	298	0.999	334	1.000
11	0.999	47	1.000	83	1.000	119	0.999	155	1.000	191	0.999	227	1.000	263	1.000	299	0.999	335	1.000
12	1.000	48	1.000	84	1.000	120	0.999	156	1.000	192	1.000	228	1.000	264	1.000	300	0.999	336	1.000
13	1.000	49	0.999	85	1.000	121	0.999	157	1.000	193	1.000	229	0.999	265	1.000	301	0.999	337	1.000
14	1.000	50	0.999	86	1.000	122	0.999	158	1.000	194	1.000	230	0.999	266	1.000	302	0.999	338	1.000
15	1.000	51	0.999	87	1.000	123	0.999	159	1.000	195	1.000	231	0.999	267	1.000	303	0.999	339	1.000
16	1.000	52	0.999	88	1.000	124	0.999	160	1.000	196	1.000	232	0.999	268	1.000	304	0.999	340	1.000
17	1.000	53	0.999	89	1.000	125	0.999	161	1.000	197	1.000	233	0.999	269	1.000	305	0.999	341	1.000
18	1.000	54	0.999	90	1.000	126	0.999	162	1.000	198	1.000	234	0.999	270	1.000	306	0.999	342	1.000
19	1.000	55	0.999	91	1.000	127	0.999	163	1.000	199	1.000	235	0.999	271	1.000	307	0.999	343	1.000
20	1.000	56	0.999	92	1.000	128	0.999	164	1.000	200	1.000	236	0.999	272	1.000	308	0.999	344	1.000
21	1.000	57	0.999	93	1.000	129	0.999	165	1.000	201	1.000	237	0.999	273	1.000	309	0.999	345	1.000
22	1.000	58	0.999	94	1.000	130	0.999	166	1.000	202	1.000	238	0.999	274	1.000	310	0.999	346	1.000
23	1.000	59	0.999	95	1.000	131	0.999	167	1.000	203	1.000	239	0.999	275	1.000	311	0.999	347	1.000
24	1.000	60	0.999	96	1.000	132	1.000	168	1.000	204	1.000	240	0.999	276	1.000	312	1.000	348	1.000
25	1.000	61	0.999	97	1.000	133	1.000	169	0.999	205	1.000	241	0.999	277	1.000	313	1.000	349	0.999
26	1.000	62	0.999	98	1.000	134	1.000	170	0.999	206	1.000	242	0.999	278	1.000	314	1.000	350	0.999
27	1.000	63	0.999	99	1.000	135	1.000	171	0.999	207	1.000	243	0.999	279	1.000	315	1.000	351	0.999
28	1.000	64	0.999	100	1.000	136	1.000	172	0.999	208	1.000	244	0.999	280	1.000	316	1.000	352	0.999
29	1.000	65	0.999	101	1.000	137	1.000	173	0.999	209	1.000	245	0.999	281	1.000	317	1.000	353	0.999
30	1.000	66	0.999	102	1.000	138	1.000	174	0.999	210	1.000	246	0.999	282	1.000	318	1.000	354	0.999
31	1.000	67	0.999	103	1.000	139	1.000	175	0.999	211	1.000	247	0.999	283	1.000	319	1.000	355	0.999
32	1.000	68	0.999	104	1.000	140	1.000	176	0.999	212	1.000	248	0.999	284	1.000	320	1.000	356	0.999
33	1.000	69	0.999	105	1.000	141	1.000	177	0.999	213	1.000	249	0.999	285	1.000	321	1.000	357	0.999
34	1.000	70	0.999	106	1.000	142	1.000	178	0.999	214	1.000	250	0.999	286	1.000	322	1.000	358	0.999
35	1.000	71	0.999	107	1.000	143	1.000	179	0.999	215	1.000	251	0.999	287	1.000	323	1.000	359	0.999

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AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70981-4**
 Date **16-Feb-21**
 Call Letters **WRSP**
 Channel **16**
 Frequency **485 MHz**
 Antenna Type **TFU-26GTH/VP-R O6 DC**
 Gain **1.07 (0.28dB)**
 Calculated
 Circularity **+/- 1.0 dB**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.517	36	0.487	72	0.506	108	0.506	144	0.487	180	0.517	216	0.487	252	0.506	288	0.506
1	0.517	37	0.488	73	0.504	109	0.507	145	0.486	181	0.517	217	0.488	253	0.504	289	0.507
2	0.517	38	0.489	74	0.502	110	0.509	146	0.486	182	0.517	218	0.489	254	0.502	290	0.509
3	0.516	39	0.491	75	0.500	111	0.510	147	0.485	183	0.516	219	0.491	255	0.500	291	0.510
4	0.516	40	0.492	76	0.499	112	0.511	148	0.484	184	0.516	220	0.492	256	0.499	292	0.511
5	0.515	41	0.494	77	0.497	113	0.513	149	0.484	185	0.515	221	0.494	257	0.497	293	0.513
6	0.514	42	0.495	78	0.495	114	0.514	150	0.484	186	0.514	222	0.495	258	0.495	294	0.514
7	0.513	43	0.497	79	0.494	115	0.515	151	0.484	187	0.513	223	0.497	259	0.494	295	0.515
8	0.511	44	0.499	80	0.492	116	0.516	152	0.484	188	0.511	224	0.499	260	0.492	296	0.516
9	0.510	45	0.500	81	0.491	117	0.516	153	0.485	189	0.510	225	0.500	261	0.491	297	0.516
10	0.509	46	0.502	82	0.489	118	0.517	154	0.486	190	0.509	226	0.502	262	0.489	298	0.517
11	0.507	47	0.504	83	0.488	119	0.517	155	0.486	191	0.507	227	0.504	263	0.488	299	0.517
12	0.506	48	0.506	84	0.487	120	0.517	156	0.487	192	0.506	228	0.506	264	0.487	300	0.517
13	0.504	49	0.507	85	0.486	121	0.517	157	0.488	193	0.504	229	0.507	265	0.486	301	0.517
14	0.502	50	0.509	86	0.486	122	0.517	158	0.489	194	0.502	230	0.509	266	0.486	302	0.517
15	0.500	51	0.510	87	0.485	123	0.516	159	0.491	195	0.500	231	0.510	267	0.485	303	0.516
16	0.499	52	0.511	88	0.484	124	0.516	160	0.492	196	0.499	232	0.511	268	0.484	304	0.516
17	0.497	53	0.513	89	0.484	125	0.515	161	0.494	197	0.497	233	0.513	269	0.484	305	0.515
18	0.495	54	0.514	90	0.484	126	0.514	162	0.495	198	0.495	234	0.514	270	0.484	306	0.514
19	0.494	55	0.515	91	0.484	127	0.513	163	0.497	199	0.494	235	0.515	271	0.484	307	0.513
20	0.492	56	0.516	92	0.484	128	0.511	164	0.499	200	0.492	236	0.516	272	0.484	308	0.511
21	0.491	57	0.516	93	0.485	129	0.510	165	0.500	201	0.491	237	0.516	273	0.485	309	0.510
22	0.489	58	0.517	94	0.486	130	0.509	166	0.502	202	0.489	238	0.517	274	0.486	310	0.509
23	0.488	59	0.517	95	0.486	131	0.507	167	0.504	203	0.488	239	0.517	275	0.486	311	0.507
24	0.487	60	0.517	96	0.487	132	0.506	168	0.506	204	0.487	240	0.517	276	0.487	312	0.506
25	0.486	61	0.517	97	0.488	133	0.504	169	0.507	205	0.486	241	0.517	277	0.488	313	0.504
26	0.486	62	0.517	98	0.489	134	0.502	170	0.509	206	0.486	242	0.517	278	0.489	314	0.502
27	0.485	63	0.516	99	0.491	135	0.500	171	0.510	207	0.485	243	0.516	279	0.491	315	0.500
28	0.484	64	0.516	100	0.492	136	0.499	172	0.511	208	0.484	244	0.516	280	0.492	316	0.499
29	0.484	65	0.515	101	0.494	137	0.497	173	0.513	209	0.484	245	0.515	281	0.494	317	0.497
30	0.484	66	0.514	102	0.495	138	0.495	174	0.514	210	0.484	246	0.514	282	0.495	318	0.495
31	0.484	67	0.513	103	0.497	139	0.494	175	0.515	211	0.484	247	0.513	283	0.497	319	0.494
32	0.484	68	0.511	104	0.499	140	0.492	176	0.516	212	0.484	248	0.511	284	0.499	320	0.492
33	0.485	69	0.510	105	0.500	141	0.491	177	0.516	213	0.485	249	0.510	285	0.500	321	0.491
34	0.486	70	0.509	106	0.502	142	0.489	178	0.517	214	0.486	250	0.509	286	0.502	322	0.489
35	0.486	71	0.507	107	0.504	143	0.488	179	0.517	215	0.486	251	0.507	287	0.504	323	0.488

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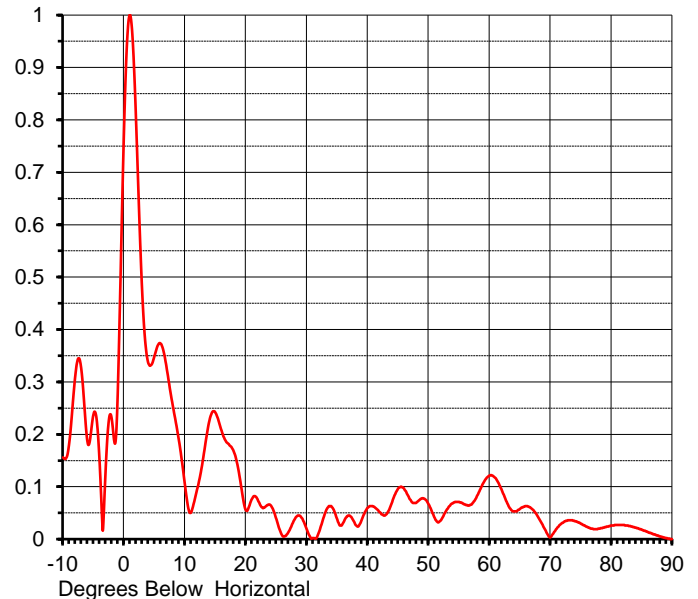
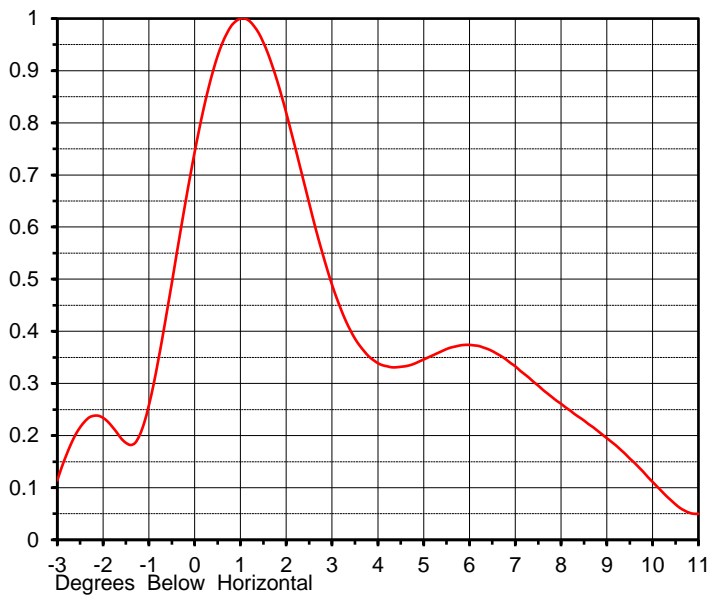
ELEVATION PATTERN

Proposal No. **C-70981-4**
 Date **16-Feb-21**
 Call Letters **WRSP**
 Channel **16**
 Frequency **485 MHz**
 Antenna Type **TFU-26GTH/VP-R O6 DC**

Future Fill Pattern

RMS Directivity at Main Lobe **16.3 (12.12 dB)**
 RMS Directivity at Horizontal **10.1 (10.04 dB)**
Calculated

Beam Tilt **0.95 deg**
 Pattern Number **26G22010-FF095**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.156	10.0	0.102	30.0	0.018	50.0	0.066	70.0	0.004
-9.0	0.184	11.0	0.051	31.0	0.002	51.0	0.040	71.0	0.020
-8.0	0.313	12.0	0.096	32.0	0.014	52.0	0.036	72.0	0.031
-7.0	0.322	13.0	0.156	33.0	0.050	53.0	0.057	73.0	0.036
-6.0	0.185	14.0	0.226	34.0	0.063	54.0	0.069	74.0	0.034
-5.0	0.239	15.0	0.241	35.0	0.037	55.0	0.071	75.0	0.029
-4.0	0.142	16.0	0.207	36.0	0.032	56.0	0.066	76.0	0.023
-3.0	0.140	17.0	0.183	37.0	0.045	57.0	0.066	77.0	0.019
-2.0	0.227	18.0	0.167	38.0	0.027	58.0	0.084	78.0	0.020
-1.0	0.297	19.0	0.116	39.0	0.037	59.0	0.108	79.0	0.023
0.0	0.788	20.0	0.055	40.0	0.060	60.0	0.121	80.0	0.026
1.0	1.000	21.0	0.077	41.0	0.062	61.0	0.116	81.0	0.027
2.0	0.785	22.0	0.073	42.0	0.051	62.0	0.093	82.0	0.027
3.0	0.464	23.0	0.060	43.0	0.047	63.0	0.066	83.0	0.025
4.0	0.335	24.0	0.065	44.0	0.071	64.0	0.053	84.0	0.022
5.0	0.350	25.0	0.038	45.0	0.097	65.0	0.058	85.0	0.018
6.0	0.373	26.0	0.006	46.0	0.095	66.0	0.063	86.0	0.013
7.0	0.325	27.0	0.014	47.0	0.075	67.0	0.057	87.0	0.009
8.0	0.254	28.0	0.038	48.0	0.070	68.0	0.041	88.0	0.005
9.0	0.188	29.0	0.043	49.0	0.078	69.0	0.020	89.0	0.002
								90.0	0.000

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WRSP-TV
Channel 16 - Springfield IL
ERP = 310000.00 WATTS

APPENDIX A

Maximum ERP 310 kW

Polarization ----- 2 Circular
Antenna Height Above Ground -- 432.2 meters 1418.0 feet
FCC Uncontrolled RFR Limit ---- 323.33 $\mu\text{W}/\text{cm}^2$

Maximum Computed Power Density 1.229 $\mu\text{W}/\text{cm}^2$
0.38% of limit

Angle Below Horizontal (degrees)	<Point X> Horiz Distance from tower to 2 m AGL (meters)	Slant Distance from antenna to Point X (meters)	Vertical Pattern (REL. FIELD)	WRSP-TV ERP (kW)	WRSP-TV Calculated Power Density $\mu\text{W}/\text{cm}^2$	Percent Limit	Limit Exceeded?
0			1.000	310.0000			
5	4917.2	4936.0	0.350	37.9750	0.104	0.03%	No
10	2439.8	2477.4	0.102	3.2252	0.035	0.01%	No
15	1605.5	1662.2	0.241	18.0051	0.435	0.13%	No
20	1182.0	1257.8	0.055	0.9378	0.040	0.01%	No
25	922.6	1017.9	0.038	0.4476	0.029	0.01%	No
30	745.1	860.4	0.018	0.1004	0.009	0.00%	No
35	614.4	750.0	0.037	0.4244	0.050	0.02%	No
40	512.7	669.3	0.060	1.1160	0.166	0.05%	No
45	430.2	608.4	0.097	2.9168	0.526	0.16%	No
50	361.0	561.6	0.066	1.3504	0.286	0.09%	No
55	301.2	525.2	0.071	1.5627	0.378	0.12%	No
60	248.4	496.8	0.121	4.5387	1.229	0.38%	No
65	200.6	474.7	0.058	1.0428	0.309	0.10%	No
70	156.6	457.8	0.004	0.0050	0.002	0.00%	No
75	115.3	445.4	0.029	0.2607	0.088	0.03%	No
80	75.9	436.8	0.026	0.2096	0.073	0.02%	No
85	37.6	431.8	0.018	0.1004	0.036	0.01%	No
90	0.0	430.2	0.000	0.0000	0.000	0.00%	No

