Compliance with Special Operating Conditions or Restrictions

Special Condition #1

The applicant in coordination with other users of the site is committed to reducing power or ceasing operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Special Conditions #2, #3, #4, #6 and #7

See attached directional antenna report of test, certification of directional antenna installation, and certification of directional antenna orientation.

Special Condition #5

See attached map which demonstrates compliance with section 73.315 considering the measured directional antenna pattern as set forth in the antenna manufacturer's directional antenna report of test.

Special Conditions #8 and #9

Upon completion of construction and during the equipment test period, when KTPR(FM) was able to operate at full power with the facility specified herein, proper RF field measurements were made throughout the transmitter site area. It was determined that there were no areas where the FCC guidelines for human exposure to RF fields were exceeded. As demonstrated in the attached statement, the highest RF field measurement recorded at the KRPR(FM) transmitter site represented less than 0.5% of the occupational guideline value.

Shively Labs®
a division of Howell Laboratories,Inc.

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S.O. 36834

Report of Test 6025-2/4-DA

for

TEXAS PUBLIC RADIO

KTPR 89.9 MHz STANTON, TX

OBJECTIVE:

The objective of this test was to demonstrate the directional characteristics of a 6025-2/4-DA to meet the needs of KTPR and to comply with the requirements of the FCC construction permit, file number BPED-20171115AAW. This test characterizes only the radiation characteristics of the antenna when mounted on the tower as described. It does not represent or imply any guarantee of specific coverage which can be influenced by factors beyond the scope of this test.

RESULTS:

The following Figures are the results of the measurements from our pattern range:

Figure 1A - Measured Azimuth Pattern with the FCC Composite
Figure 1B - Measured Composite Azimuth Pattern with the FCC Composite
Figure 1C - Tabulation of the Horizontal Polarization for the Measured Azimuth Pattern
Figure 1D - Tabulation of the Vertical Polarization for the Measured Azimuth Pattern
Figure 1E - Tabulation of the Measured Composite Azimuth Pattern
Figure 1F - Tabulation of the FCC Composite

The calculated elevation pattern of the antenna is shown in Figure 3.

Construction permit file number BPED-20171115AAW indicates that the Horizontal radiation component shall not exceed 100 kW at any azimuth and is restricted to the following values at the azimuths specified:

140 Degrees True: 12.25 kilowatts

320 Degrees True: 4.162 kilowatts

From Figure 1A, the maximum radiation of the Horizontal component occurs at 60 Degrees True and at 230 Degrees True. At the restricted azimuth of 140 Degrees True the Horizontal component is 21.21 dB down from the maximum of 100 kW, or 0.76 kW; and at the restricted azimuth of 320 Degrees True the horizontal component is 19.09 dB down from the maximum of 100 kW, or 1.23 kW.

The R.M.S. of the Horizontal component is 0.595. The total Horizontal power gain is 6.973. The R.M.S. of the Vertical component is 0.588. The total Vertical power gain is 5.800. See Figure 4 for calculations. The R.M.S. of the FCC composite pattern is 0.718. The R.M.S. of the measured composite pattern is 0.621. Eighty-five percent (85%) of the original authorized FCC composite pattern is 0.61. Therefore this pattern complies with the FCC requirement of 73.316(c)(2)(ix)(A).

METHOD OF DIRECTIONALIZATION:

One bay of the 6025-2/4-DA was mounted on a tower of precise scale to the 33 inch face tower at the KTPR site. The spacing of the antenna to the tower was varied to achieve the vertical pattern shown in Figure 1A. See Figure 2 for mechanical details.

METHOD OF MEASUREMENT:

As allowed by the construction permit, file number BPED-20171115AAW, a single level of the 6025-2/4-DA was set up on the Shively Labs scale model antenna pattern measuring range. A scale of 4.5:1 was used.

EQUIPMENT:

The 4.5:1 scale model pattern range consists of a wooden rotating pedestal equipped with a position indicator. The scale model bay is placed on the top of this pedestal and is used in the transmission mode at approximately 20 feet above ground level. The receiving parabolic dish is spaced 50 feet away from the rotating pedestal at the same level above ground as the transmitting model. The transmitting and receiving signals are carried to a control building by means of Hypercell Superflex and Cellflex lCF cabling respectively.

The control building is equipped with:

Hewlett Packard Model 4395-A Network Analyzer

PC Based Controller

Output Standard Printer or 'pdf'

All testing is carried out in strict accordance with approved procedures under our ISO9001.

TEST PROCEDURES:

The receiving antenna system is mounted so that the horizontal and vertical azimuth patterns are measured independently. The network analyzer was set to 404.55 MHz Calibrated pads are used to check the linearity of the measuring system. For example, 6 dB padding yields a scale reading of 50 from an unpadded reading of 100 in voltage. From the recorded patterns, the R.M.S. values are calculated and recorded as shown in Figure 1A.

Respectfully submitted by:

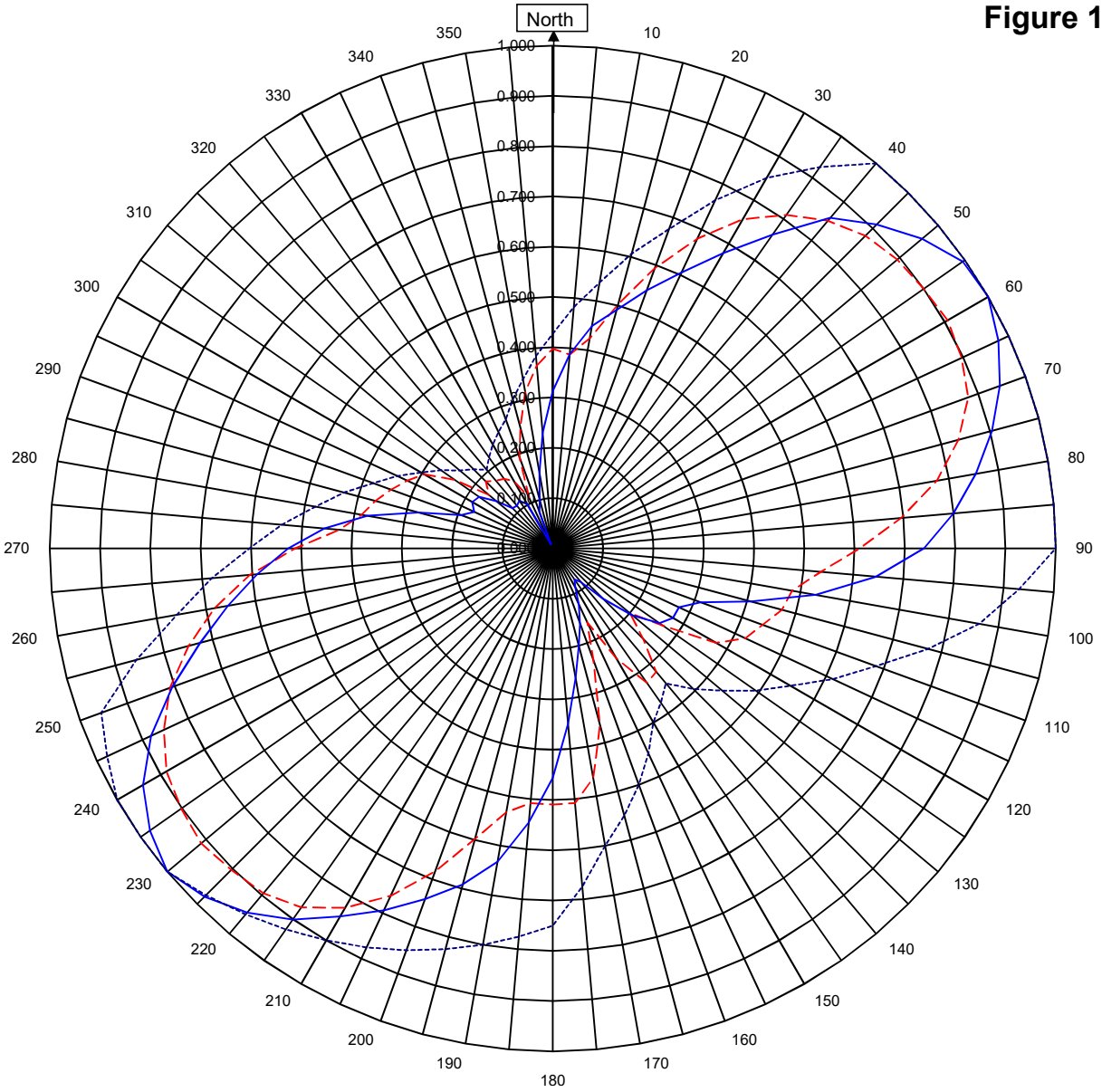
Angela Gillespie
Vice President, Shively Labs

S/O 36834
Date 6 Dec 2019

Shively Labs

Shively Labs, a division of Howell Laboratories, Inc. Bridgton, ME (207)647-3327

Figure 1A



KTPR Stanton, TX

36834

December 5, 2019

Horizontal RMS	0.595
Vertical RMS	0.588
H/V Composite RMS	0.621
FCC Composite RMS	0.718

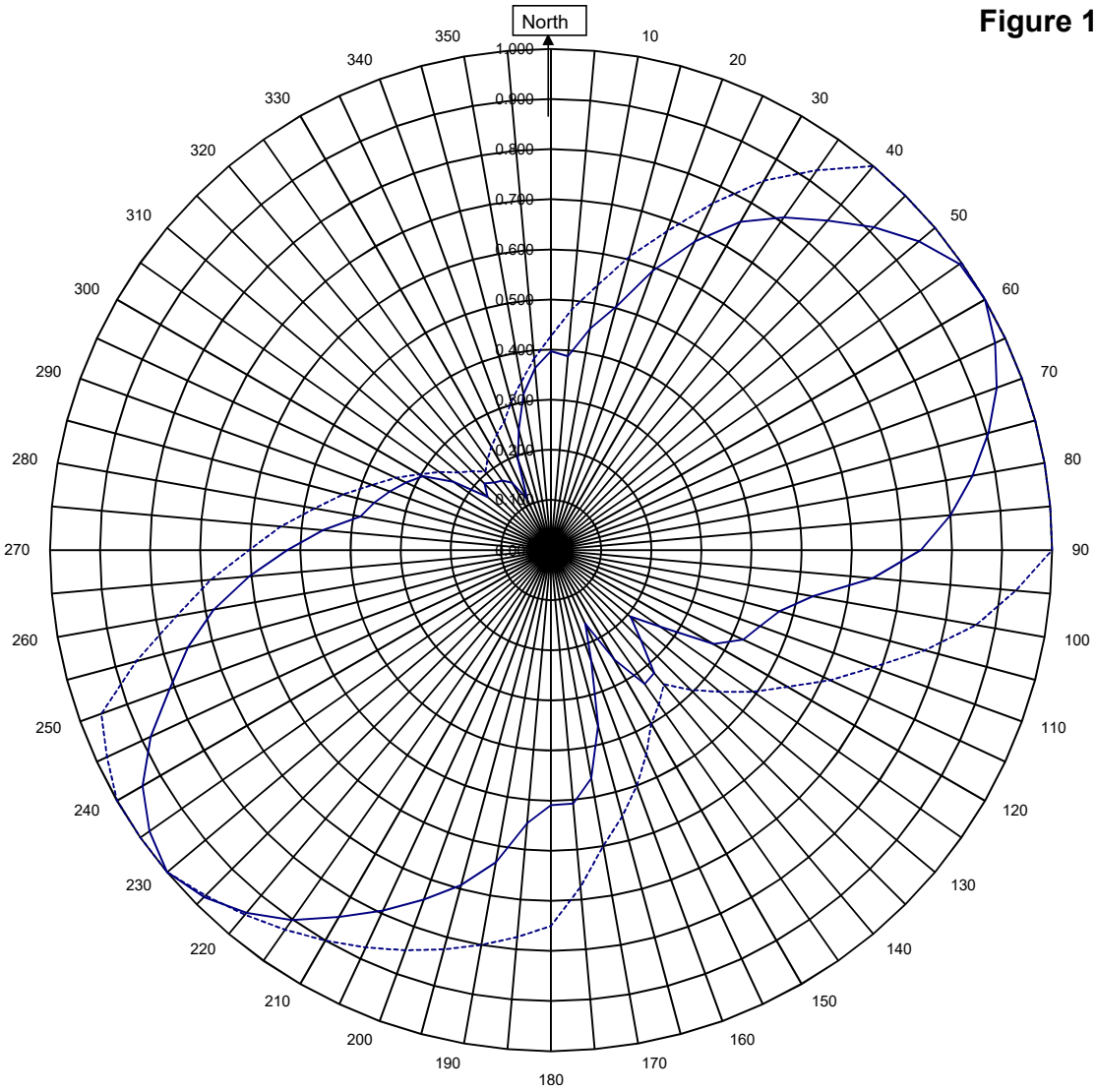
Frequency	89.9 / 404.55 mHz
Plot	Relative Field
Scale	4.5 : 1
	See Figure 2 for Mechanical Details

Antenna Model	6025-2/4-DA
Pattern Type	Directional Azimuth

Shively Labs

Shively Labs, a division of Howell Laboratories, Inc. Bridgton, ME (207)647-3327

Figure 1B



KTPR Stanton, TX

36834

December 5, 2019

_____H/VComposite RMS	0.621
……FCC Composite RMS	0.718

Frequency	89.9 / 404.55 mHz
Plot	Relative Field
Scale	4.5 : 1
	See Figure 2 for Mechanical Details

Antenna Model	6025-2/4-DA
Pattern Type	Directional H/V Composite

Figure 1C

Tabulation of Horizontal Azimuth Pattern
KTPR Stanton, TX

Azimuth	Rel Field	Azimuth	Rel Field
0	0.313	180	0.456
10	0.449	190	0.633
20	0.546	200	0.742
30	0.678	210	0.845
40	0.858	220	0.945
45	0.911	225	0.979
50	0.958	230	1.000
60	1.000	240	0.941
70	0.946	250	0.805
80	0.854	260	0.656
90	0.738	270	0.526
100	0.531	280	0.374
110	0.313	290	0.194
120	0.276	300	0.185
130	0.207	310	0.146
135	0.141	315	0.113
140	0.087	320	0.111
150	0.090	330	0.101
160	0.159	340	0.077
170	0.261	350	0.151

Figure 1D

Tabulation of Vertical Azimuth Pattern
KTPR Stanton, TX

Azimuth	Rel Field	Azimuth	Rel Field
0	0.397	180	0.509
10	0.424	190	0.533
20	0.593	200	0.683
30	0.756	210	0.825
40	0.851	220	0.895
45	0.879	225	0.904
50	0.894	230	0.912
60	0.907	240	0.887
70	0.879	250	0.810
80	0.776	260	0.683
90	0.610	270	0.512
100	0.483	280	0.386
110	0.444	290	0.342
120	0.375	300	0.295
130	0.201	310	0.165
135	0.254	315	0.188
140	0.320	320	0.176
150	0.253	330	0.155
160	0.235	340	0.193
170	0.463	350	0.316

Figure 1E

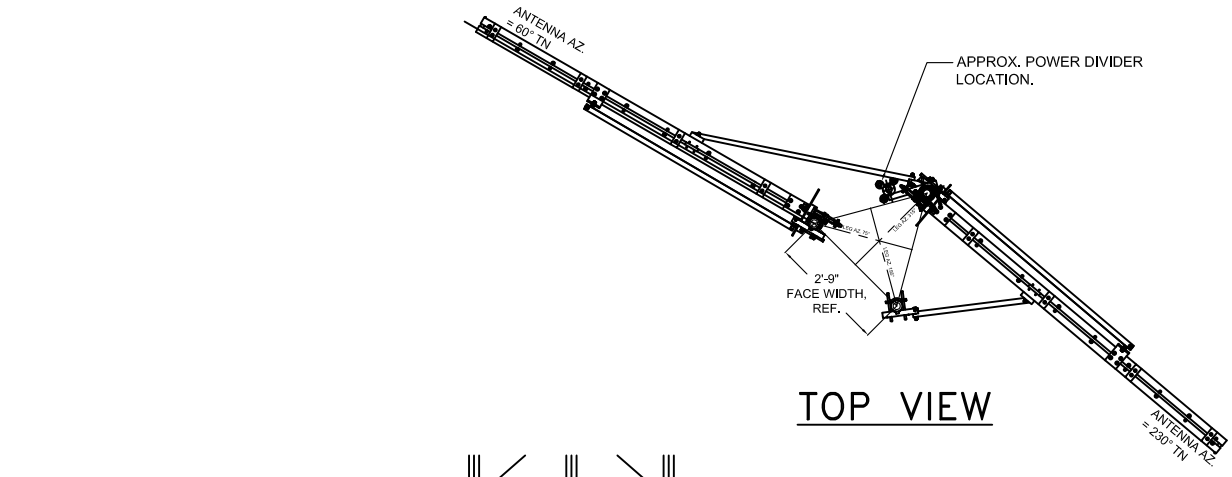
Tabulation of Composite Azimuth Pattern
KTPR Stanton, TX

Azimuth	Rel Field	Azimuth	Rel Field
0	0.397	180	0.509
10	0.449	190	0.633
20	0.593	200	0.742
30	0.756	210	0.845
40	0.858	220	0.945
45	0.911	225	0.979
50	0.958	230	1.000
60	1.000	240	0.941
70	0.946	250	0.810
80	0.854	260	0.683
90	0.738	270	0.526
100	0.531	280	0.386
110	0.444	290	0.342
120	0.375	300	0.295
130	0.207	310	0.165
135	0.254	315	0.188
140	0.320	320	0.176
150	0.253	330	0.155
160	0.235	340	0.193
170	0.463	350	0.316

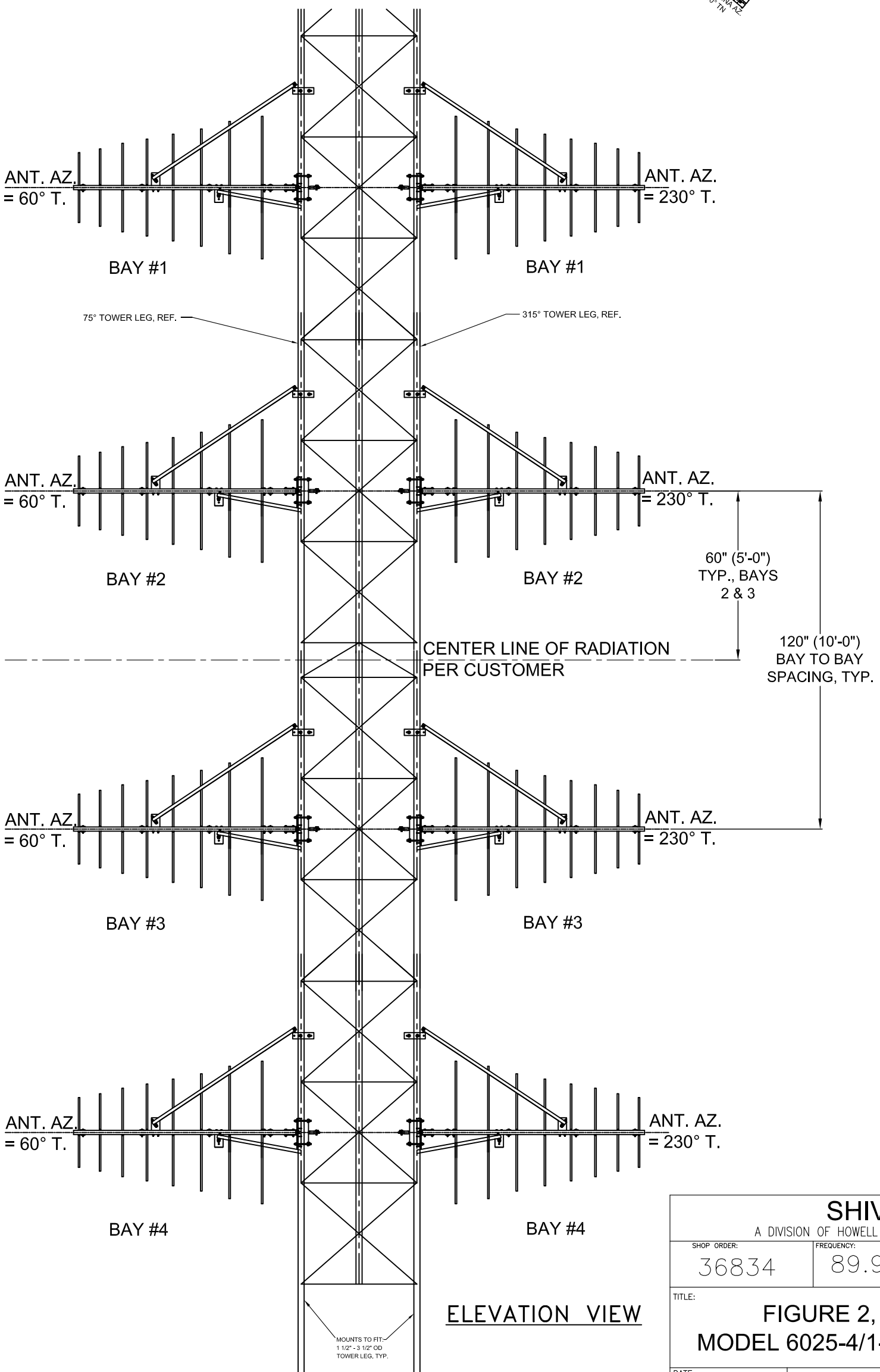
Figure 1F

Tabulation of FCC Directional Composite
KTPR Stanton, TX

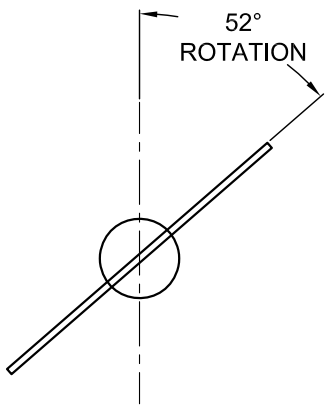
Azimuth	Rel Field	Azimuth	Rel Field
0	0.427	180	0.750
10	0.537	190	0.800
20	0.676	200	0.850
30	0.851	210	0.900
40	1.000	220	0.950
50	1.000	230	1.000
60	1.000	240	1.000
70	1.000	250	0.955
80	1.000	260	0.759
90	1.000	270	0.603
100	0.861	280	0.479
110	0.684	290	0.380
120	0.546	300	0.302
130	0.440	310	0.241
140	0.350	320	0.204
150	0.400	330	0.238
160	0.500	340	0.273
170	0.600	350	0.341



TOP VIEW



ELEVATION VIEW



FRONT VIEW OF BAYS

SHIVELY LABS ®
A DIVISION OF HOWELL LABORATORIES INC., BRIDGTON, MAINE

SHOP ORDER:	FREQUENCY:	SCALE:	DRAWN BY:
36834	89.9	N.T.S.	JHFF
			APPROVED BY: SCE

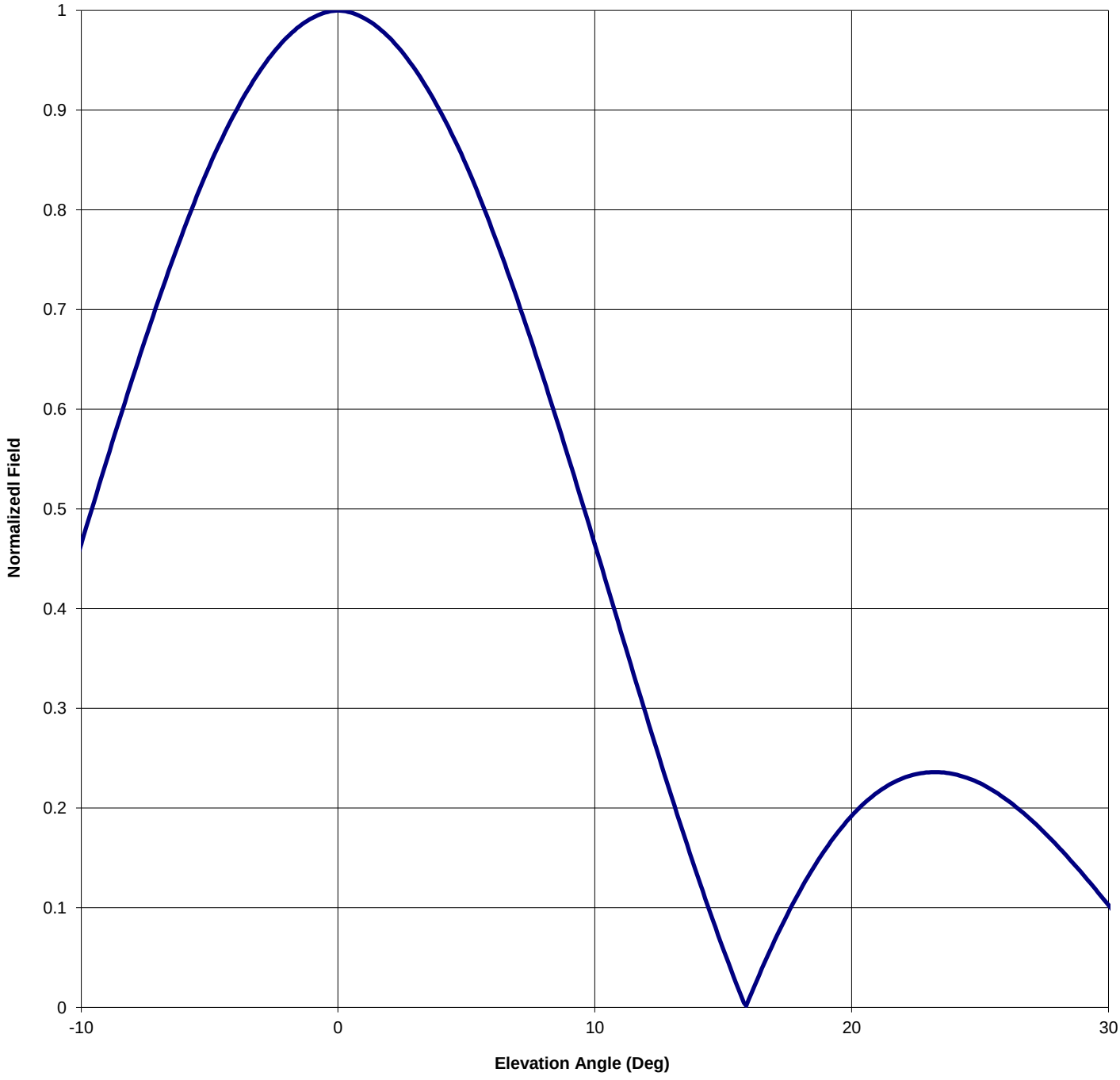
TITLE:

FIGURE 2, WNVU, 89.9 MHz
MODEL 6025-4/1-DA, SLANT ELEMENTS

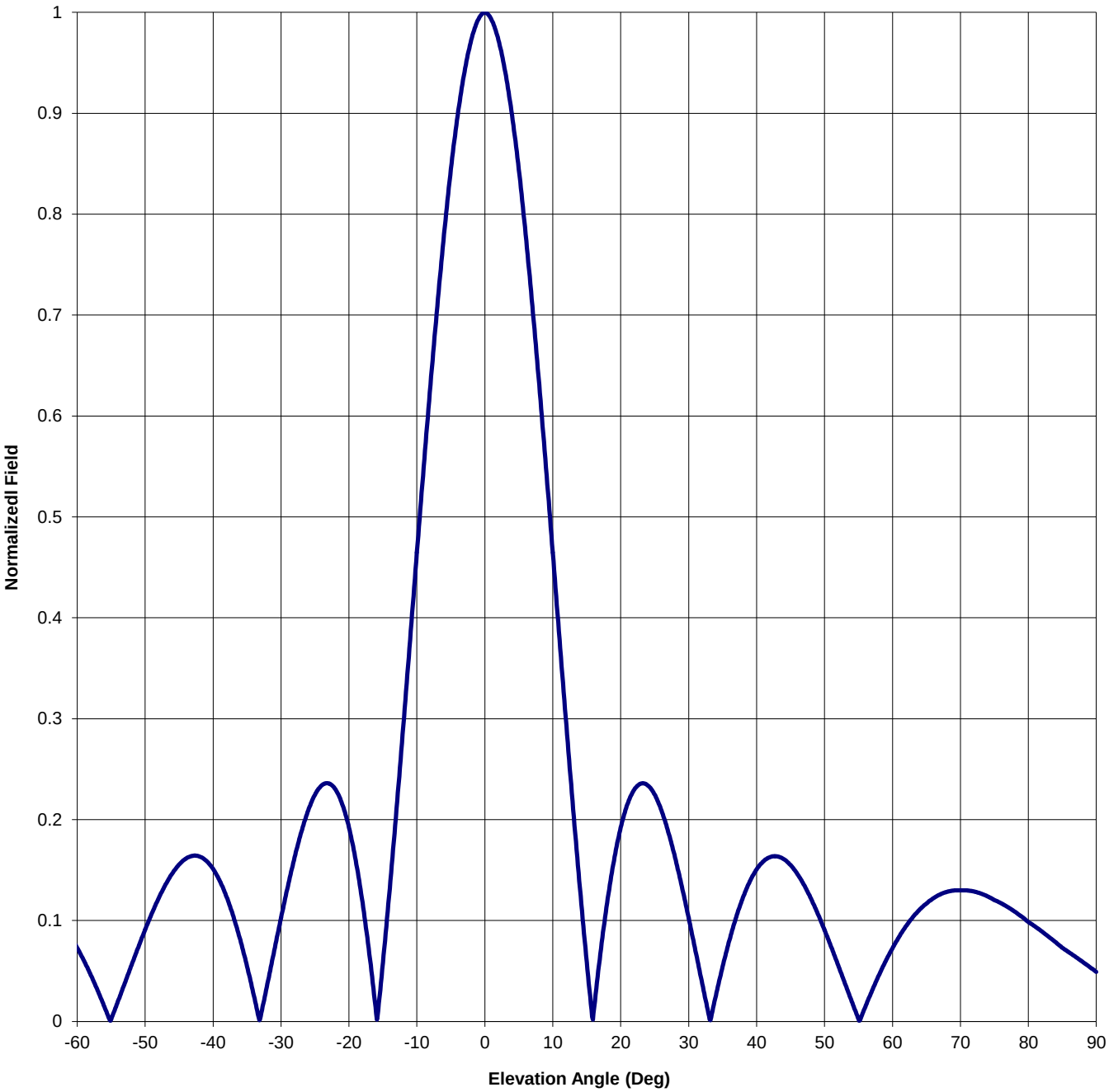
DATE: 12-5-19

FIGURE 2

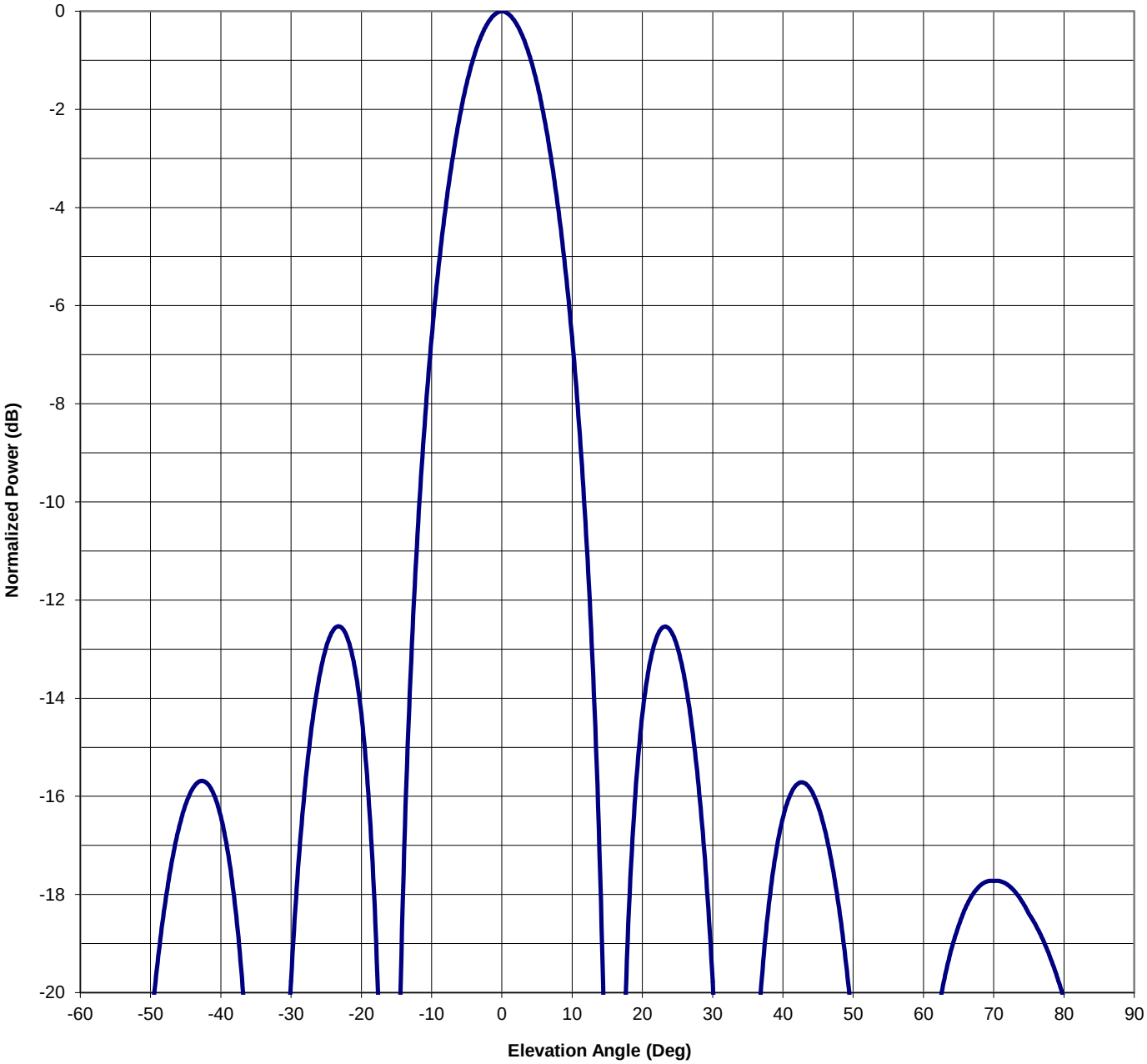
Antenna Mfg.:	**Shively Labs**			**Date:**	**12/14/2019**
Antenna Type:	**6025**				
Station:	**KTPR**	**Beam Tilt**	**0**		
Frequency:	**89.9**	**Gain (Max)**	**6.973**	**8.434**	**dB**
Channel #:	**210**	**Gain (Horizon)**	**6.973**	**8.434**	**dB**
Figure:	**Figure 3**				



Antenna Mfg.:	**Shively Labs**			**Date:**	**12/14/2019**
Antenna Type:	**6025**				
Station:	**KTPR**	**Beam Tilt**	**0**		
Frequency:	**89.9**	**Gain (Max)**	**6.973**	**8.434**	**dB**
Channel #:	**210**	**Gain (Horizon)**	**6.973**	**8.434**	**dB**
Figure:	**Figure 3**				



Antenna Mfg.:	**Shively Labs**			**Date:**	**12/14/2019**
Antenna Type:	**6025**				
Station:	**KTPR**	**Beam Tilt**	**0**		
Frequency:	**89.9**	**Gain (Max)**	**6.973**	**8.434**	**dB**
Channel #:	**210**	**Gain (Horizon)**	**6.973**	**8.434**	**dB**
Figure:	**Figure 3**				



Antenna Mfg.: Shively Labs **Date:** 12/14/2019

Antenna Type: 6025

Station: KTPR **Beam Tilt** 0

Frequency: 89.9 **Gain (Max)** 6.973 8.434 dB

Channel #: 210 **Gain (Horizon)** 6.973 8.434 dB

Figure: Figure 3

Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.049	-44	0.161	0	1.000	46	0.146
-89	0.054	-43	0.164	1	0.992	47	0.135
-88	0.059	-42	0.164	2	0.973	48	0.122
-87	0.064	-41	0.159	3	0.941	49	0.107
-86	0.068	-40	0.151	4	0.898	50	0.091
-85	0.073	-39	0.139	5	0.845	51	0.073
-84	0.079	-38	0.123	6	0.780	52	0.056
-83	0.084	-37	0.104	7	0.709	53	0.038
-82	0.089	-36	0.081	8	0.631	54	0.020
-81	0.094	-35	0.055	9	0.549	55	0.002
-80	0.099	-34	0.026	10	0.465	56	0.015
-79	0.104	-33	0.005	11	0.378	57	0.031
-78	0.109	-32	0.037	12	0.293	58	0.046
-77	0.113	-31	0.070	13	0.210	59	0.060
-76	0.117	-30	0.103	14	0.132	60	0.073
-75	0.120	-29	0.134	15	0.059	61	0.084
-74	0.124	-28	0.163	16	0.008	62	0.095
-73	0.127	-27	0.188	17	0.067	63	0.103
-72	0.129	-26	0.209	18	0.118	64	0.111
-71	0.130	-25	0.225	19	0.159	65	0.117
-70	0.130	-24	0.234	20	0.192	66	0.122
-69	0.130	-23	0.236	21	0.215	67	0.126
-68	0.129	-22	0.230	22	0.230	68	0.128
-67	0.126	-21	0.216	23	0.236	69	0.130
-66	0.122	-20	0.192	24	0.234	70	0.130
-65	0.117	-19	0.159	25	0.225	71	0.130
-64	0.111	-18	0.118	26	0.209	72	0.129
-63	0.104	-17	0.067	27	0.188	73	0.127
-62	0.095	-16	0.008	28	0.162	74	0.124
-61	0.085	-15	0.059	29	0.134	75	0.120
-60	0.073	-14	0.132	30	0.103	76	0.117
-59	0.060	-13	0.210	31	0.070	77	0.113
-58	0.046	-12	0.293	32	0.037	78	0.109
-57	0.031	-11	0.378	33	0.005	79	0.104
-56	0.015	-10	0.465	34	0.026	80	0.099
-55	0.002	-9	0.549	35	0.054	81	0.094
-54	0.020	-8	0.631	36	0.081	82	0.089
-53	0.038	-7	0.709	37	0.103	83	0.084
-52	0.056	-6	0.780	38	0.123	84	0.079
-51	0.074	-5	0.845	39	0.139	85	0.073
-50	0.091	-4	0.898	40	0.151	86	0.068
-49	0.107	-3	0.941	41	0.159	87	0.064
-48	0.122	-2	0.973	42	0.163	88	0.059
-47	0.136	-1	0.992	43	0.164	89	0.054
-46	0.147	0	1.000	44	0.161	90	0.049
-45	0.156			45	0.155		

Engineer's Declaration

I, Wayne Coble, declare under penalty of perjury that the following is true and correct:

1. I am Chief Operations Officer of Texas Public Radio, licensee of KTPR, and serve as the chief engineer of the organization's broadcast stations,
2. I have been employed as a broadcast engineer since 1988 and have served as the chief operator and chief engineer of Texas Public Radio's stations since 1994,
3. I have previously overseen the construction of both non-directional and directional FM broadcast stations which were successfully licensed,
4. I am familiar with the terms and conditions of the KTPR construction permit (file number BPED-20171115AAW),
5. I have overseen the installation of the KTPR directional antenna and certify it was installed pursuant to the manufacturer's instructions.

Executed this 18 day of August, 2020.

Wayne Coble
Chief Operations Officer
Texas Public Radio

Surveyor's Declaration

I, Michael Lynn McBrayer, RPLS, declare under penalty of perjury that the following is true and correct:

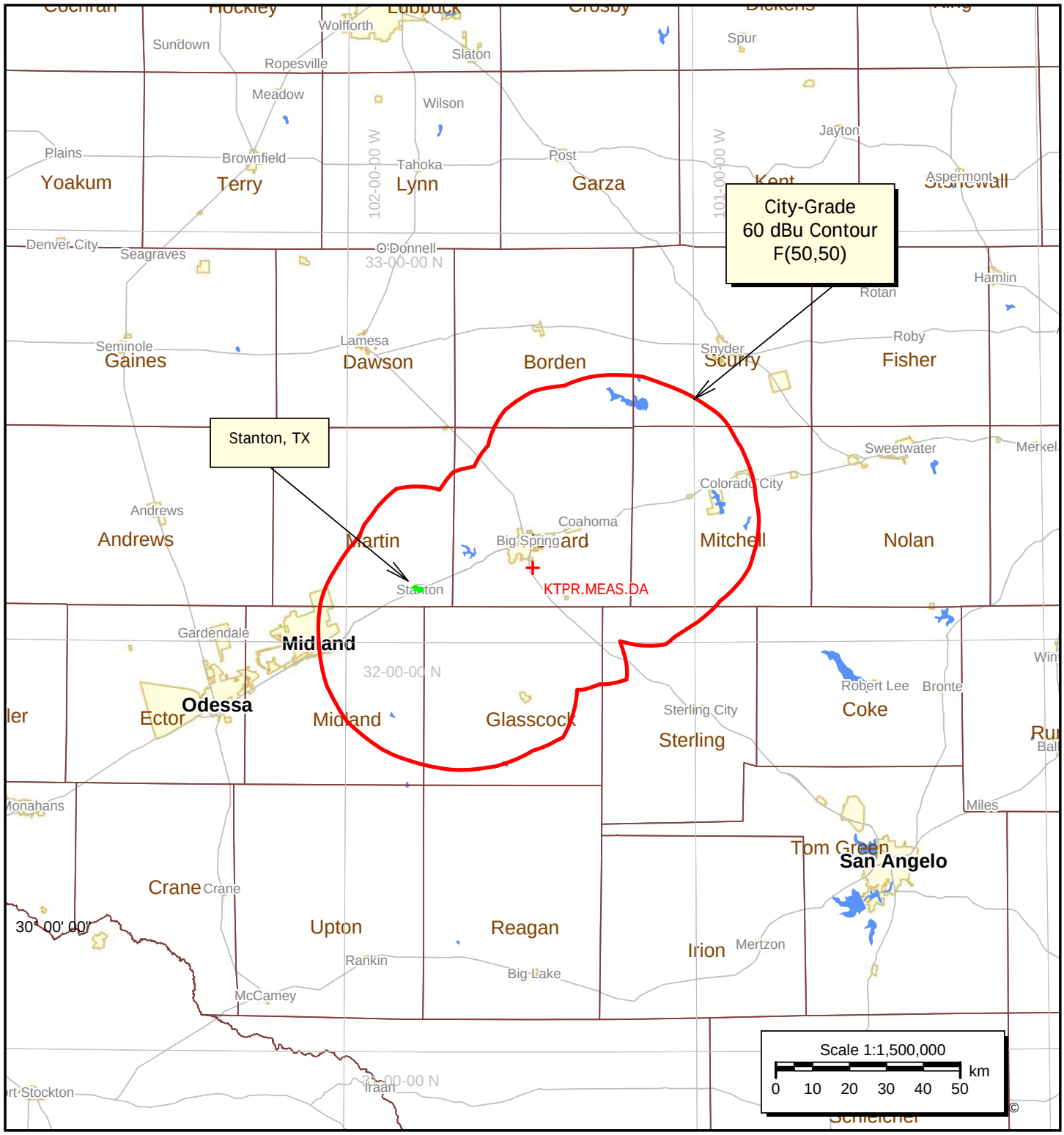
1. I am registered with the State of Texas as a professional land surveyor.
2. I have provided professional services to Texas Public Radio, licensee of KTPR Stanton.
3. I certify that the KTPR directional antenna has been properly installed as specified by the pattern study provided by the manufacturer with the azimuth of four bays oriented to 60° and the other four bays oriented to 230° referenced to True North.
4. The azimuths were determined by utilizing survey grade equipment (GNSS (GPS) Trimble R10s).
5. The accuracy of my determination is +/- 00°-05'-00" (five minutes).

Executed this 17 day of August, 2020.

Michael Lynn McBrayer, RPLS 4161.
Bradshaw & Associates Inc.

The 60 dBu contour depicted encompasses Stanton, TX, the KTPR community of license, in compliance with §73.515.

Exhibit 1



Section 73.515 Study
Using Measured Directional Antenna
Composite Azimuth Pattern
KTPR(FM), Stanton, TX
CP: Ch. 210C1, 100.0 kW (DA-MAX), 200 m HAAT
September, 2020

Consulting Engineers
CTJC
CARL T. JONES CORPORATION

RF Field Strength Declaration

I, Wayne Coble, declare under penalty of perjury that the following is true and correct:

1. I am Chief Operations Officer of Texas Public Radio, licensee of KTPR, and serve as the chief engineer of the organization's broadcast stations,
2. I have been employed as a broadcast engineer since 1988 and have served as the chief operator and chief engineer of Texas Public Radio's stations since 1994,
3. I have made radiofrequency electromagnetic field strength measurements precisely following instructions provided by the test equipment manufacturer,
4. I certify that the measured radiofrequency electromagnetic field did not exceed 0.4143% of the FCC occupational guidelines for exposure to RF fields at any test point within the transmitter site area located at the antenna structure registered as 1055400,
5. The radiofrequency electromagnetic field strength was measured with a Narda NBM-550 Broadband Field Meter with calibration valid from 3/31/2020 to 3/31/2022 and a Narda EA-5091 Shaped Response E-Field Probe (300 kHz to 50 GHz) with calibration valid from 8/21/2020 to 8/21/2022,
6. The measurements were made with KTPR temporarily on-air at 100% ERP from the Shively 6025-2/4-DA antenna and the Narda test equipment configured to utilize :30 second averaging mode, frequency shaping to match the FCC standard for occupational/controlled environments and direct display of "percent of standard."

Executed this 2 day of September, 2020.

Wayne Coble
Chief Operations Officer
Texas Public Radio