APPLICATION FOR CONSTRUCTION PERMIT

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PROPOSED NEW FM TRANSLATOR STATION
BEAUMONT, TEXAS
FACILITY ID: 156318
97.1 MHz / 0.200 kW ERP / DA

E-STRING WIRELESS, LTD.

AUGUST, 2013

APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **E-String Wireless, Ltd.** ("E-String"), applicant for a new FM translator station to serve Beaumont, Texas, and are in support of their application for construction permit.[1]

This application is being filed as the long-form application for the original short-form engineering proposal submitted by E-String in 2003 during the Commission's Translator Auction 83 window. The original short-form engineering proposal was assigned FCC File No. BNPFT-20030317HRU. The short-form proposal was found to be mutually exclusive with two other applications, and was assigned to MX Group 451.

During the settlement window, E-String submitted a short-form amendment, which extricated its application from the MX Group. The technical parameters proposed under this application are identical to those proposed in the short-form amendment. As a result, the LPFM grid study will be omitted from this application despite the fact that the proposed facility is located within the Beaumont-Port Arthur LPFM market. This omission is consistent with the Commission's Public Notice announcing the long-form application window under DA 13-1675 released on July 31, 2013 under the ***Minor Amendments*** section on page 2.

The proposed facility would operate on channel 246 with an effective radiated power of 200 Watts at a center of radiation of 70.8 meters AMSL.[2] A non-directional antenna is proposed for use with the facility in order to provide contour protection to other facilities. The site specified in

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[1] The Facility ID for the proposed translator facility is 156318.

[2] The average terrain for the proposed facility is determined by the 180 degree true radial on which the average elevation is 0.4 meters AMSL. Terrain was sampled from the FCC 30-second terrain database.

this long-form application is the same that was originally specified in 2003, and was specified in the settlement amendment.

The primary station for the proposed facility was originally specified as KBSJ at Humble, Texas.[3] No changes to this original specification are proposed under this application. Exhibit E-1 illustrates the predicted 60 dBu service contour of the proposed facility along with the 60 dBu service contour of KSBJ(FM) at Humble.

The proposed facility complies with the provisions of Section 74.1204 of the Commission's Rules. Exhibit E-2 is a tabular allocation study for the proposed facility. This study demonstrates that the proposed facility would comply with all of the contour overlap provisions of Section 74.1204 to all facilities with the exception of KFNC at Mont Belvieu, Texas, and the Black Media Works translator application at Beaumont, Texas.[4] The interference situation between the proposed facility and these facilities will be subsequently discussed pursuant to Section 74.1204(d). This tabular allocation study is graphically depicted in Exhibit E-3.

Although normally prohibited contour overlap between the proposed facility and KFNC would occur, no populated areas would be affected by the predicted regions of interference. Exhibit E-4 depicts the location of the KFNC and proposed translator sites along with the KFNC 77.6 dBu service contour. As this map demonstrates, the 77.6 dBu service contour intersects the proposed translator site. Any predicted interference would be localized to the immediate vicinity of the antenna due to the low effective radiated power utilized by the translator facility. KFNC is

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[3] The Facility ID for KSBJ(FM) at Humble, Texas is 35590.
[4] The Black Media Works, Inc. application at Beaumont, TX is under FCC File No. BNPFT-20030317LYD.

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authorized on a second adjacent channel to the proposed facility. Interference may be present when the translator field strength is equal to or greater than 117.6 dBu.

The power density at the interfering field strength is determined by the following equation:

$$S = \frac{E^2}{Z_0}$$

In this equation, S represents the calculated power density in Watts per square meter, E is the electric field intensity, and Z_0 is the characteristic impedance of free space of 377 ohms.

The power density is also given by:

$$S = \frac{P}{4\pi R^2}$$

Where S is the same units, P is the power in Watts, and R is the distance from the antenna at which this field strength occurs.[5] Rearranging the terms in the equation, it can be solved for the distance to the desired power density as follows:

$$R^2 = \frac{P}{4\pi S}$$

The results of the calculations for depression angles of 0 degrees to 90 degrees for the KFNC case are tabulated in Exhibit E-5. As this tabulation and the associated graphs demonstrate, the closest point of approach to ground level of the predicted potential area occurs at a depression angle of 45 degrees at 20.2 meters AGL. This area is also 44.8 meters away from

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[5] It should be noted that this distance is the distance from the antenna, which will not necessarily be equivalent to the distance from the supporting structure.

the tower on which the antenna would be located. The street level image below illustrates the tower, and demonstrates there are no structures or populated areas in the interference region.

The next case to be considered pertains to the Black Media Works application. In that case, since neither the E-String application nor the Black Media Works application has been granted, it is necessary to demonstrate compliance with Section 74.1204(d) in both directions. Exhibit E-6 demonstrates that the 94.2 dBu service contour from the E-String facility intersects the Black Media Works site, and the 102.2 dBu contour from the Black Media Works facility intersects the E-String site. Since these facilities would be second adjacent to each other, for interference to occur to E-String, the Black Media Works field strength would need to be at least 134.2 dBu. For interference to occur to Black Media Works, the E-String field strength would need to be at least 142.2 dBu.

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Exhibit E-7 provides the computations for the case where E-String may receive interference from Black Media Works. Since the Black Media Works antenna pattern in the vertical plane is not readily available, a worst case scenario assuming a relative field of 1.0 at all depression angles will be utilized. Under the worst case-scenario, the interference zone would encompass a sphere of radius of 17 meters centered on the antenna, or at least 80 meters above ground level (262.5 feet). The Black Media Works tower has not yet been constructed; however, the following satellite image pinpoints its location. From this image it is clear that there are no structures of that height in the vicinity of the tower. As a result, no interference to E-String would be caused by Black Media Works.

For the reverse situation where E-String may cause interference to Black Media Works, the relevant tabulation is in Exhibit E-8. As this tabulation demonstrates, the predicted interference zone would lie at an elevation no less than 62.4 meters above ground level. The previous photograph illustrating the E-String proposed tower also confirms no structures in this area. As a result, zero population would receive interference from E-String to Black Media Works. Since no interference would be received in either direction, the two facilities are not mutually exclusive, and both can be considered singletons.

The proposed facility would not create a significant environmental impact, and is exempt from environmental processing. The facility would utilize an existing tower that is registered with the Commission. In addition, the facility would not constitute an RF exposure hazard to the general public.
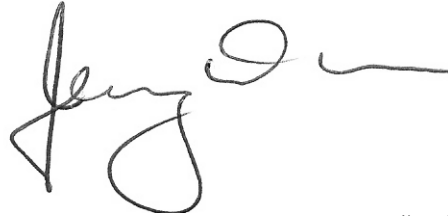
The Commission's *FM Model* software package predicts a worst-case maximum power density at ground level of 2.02 $\mu W/cm^2$. This value is sufficiently low to categorically exclude the proposed facility. E-String certifies that it will coordinate with all other users of the site to ensure that workers and other personnel having access to the site are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.
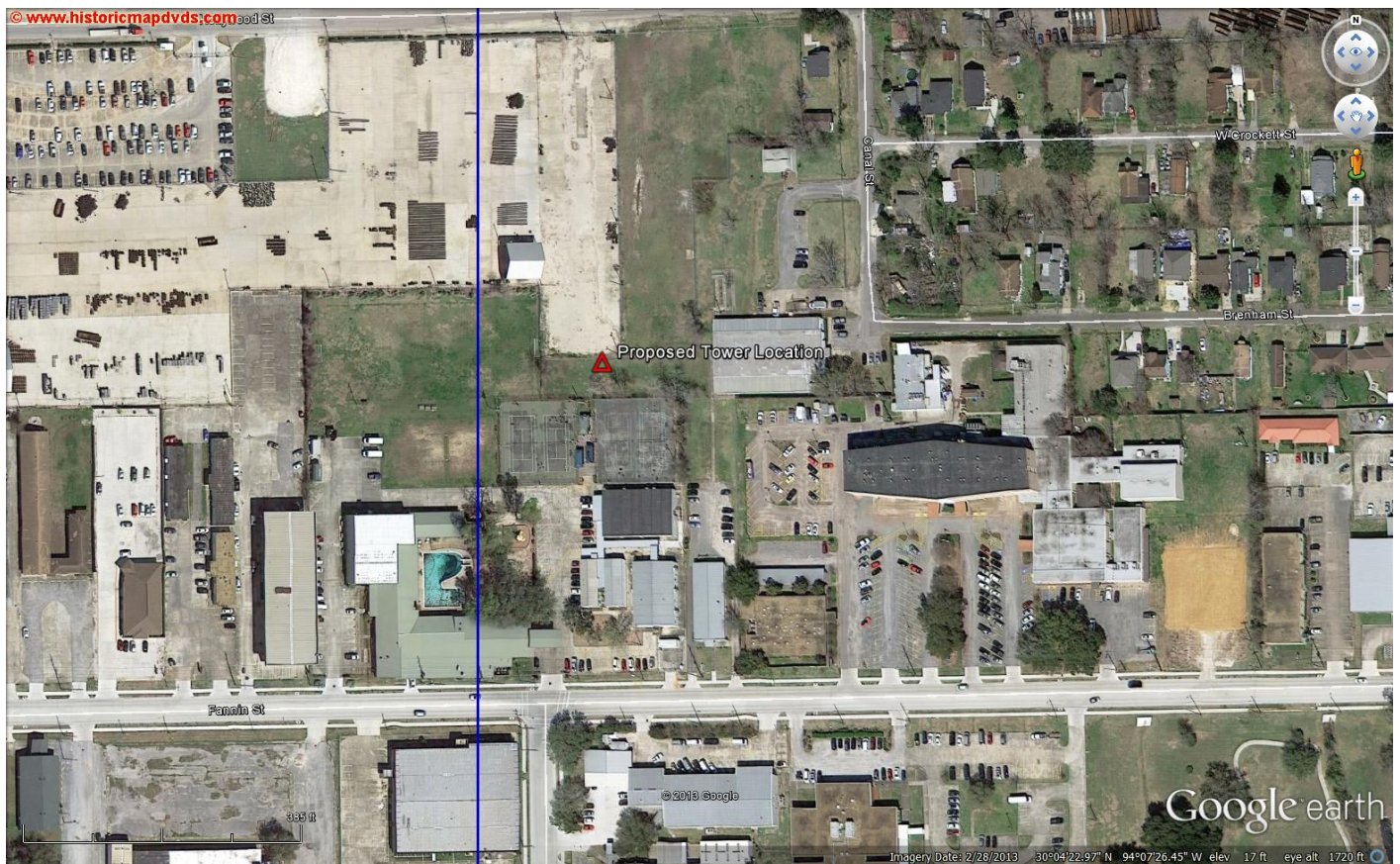
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The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.
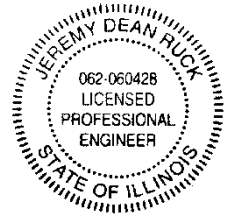
Above signature is digitized copy of actual signature
License Expires November 30, 2013

Jeremy D. Ruck, PE
August 30, 2013

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8.30.2013

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1563128.A
BNPFT20030317HRU
Latitude: 30-04-43 N
Longitude: 094-07-51 W
ERP: 0.20 kW
Channel: 246
Frequency: 97.1 MHz
AMSL Height: 70.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KSBJ
BMLED20101012AES
Latitude: 30-12-26 N
Longitude: 095-05-28 W
ERP: 100.00 kW
Channel: 207
Frequency: 89.3 MHz
AMSL Height: 286.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KSBJ 60 dBu
Service Contour

Proposed 60 dBu
Service Contour

Jeremy Ruck & Associates, Inc.

Exhibit E-1
Service Contour Comparison
NEW - Beaumont, Texas
E-String Wireless, Ltd.
August, 2013

Scale 1:1,250,000

km
0   10   20   30

Exhibit E-2 - Tabular Allocation Study
NEW - Beaumont, Texas

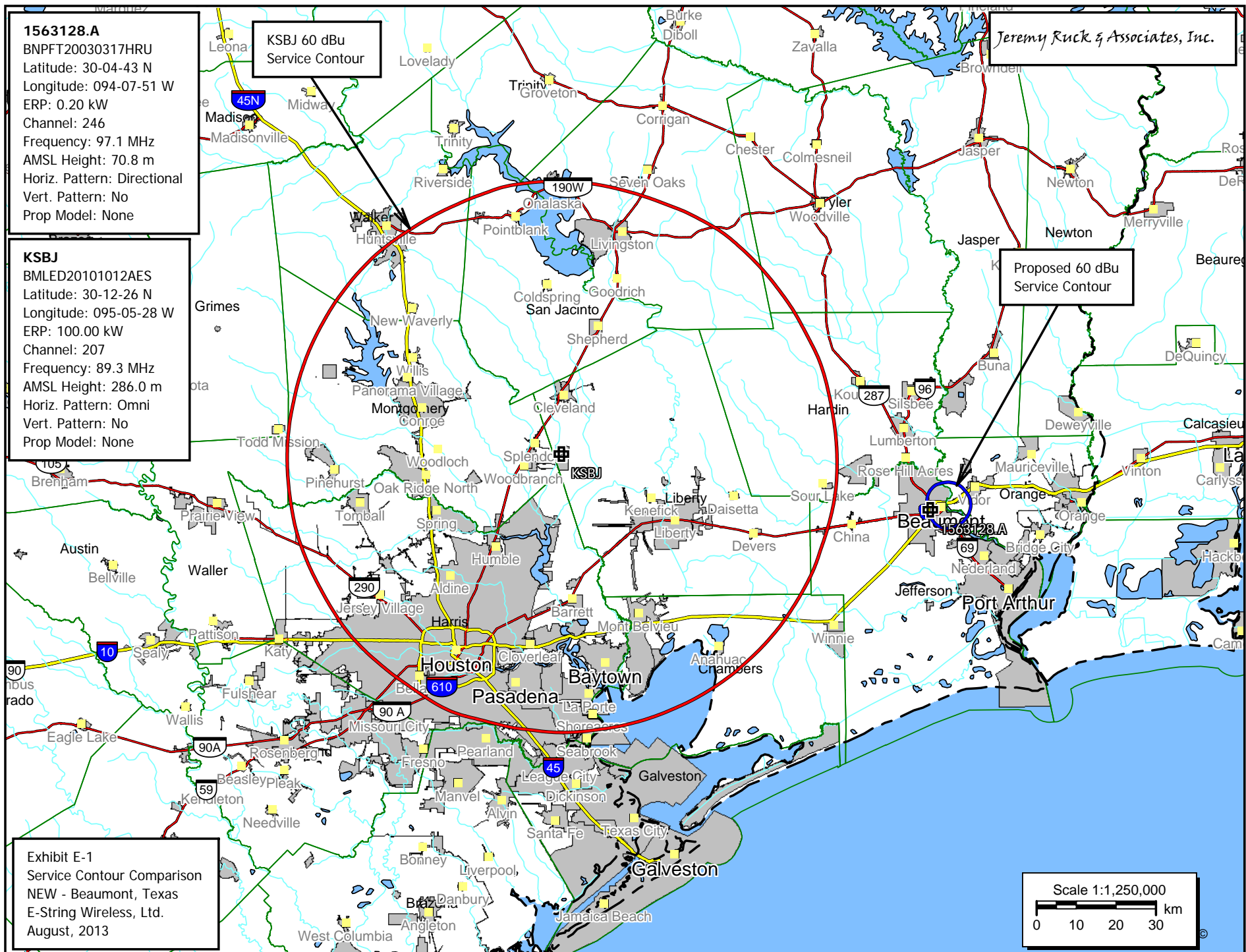| REFERENCE	CH# 246D - 97.1 MHz, Pwr= 0.2 kW DA, HAAT= 0.0 M, COR= 71 M	DISPLAY DATES
30 04 43.0 N.	Average Protected F(50-50)= 6.71 km	DATA 08-30-13
94 07 51.0 W.	Standard Directional	SEARCH 08-30-13

CH CALL	TYPE ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY	STATE	<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
246C KTHT	LIC _C_	301.0	99.10	30 32 06.0	100.000	196.9	91.3	-100.2*	0.0
Cleveland	TX	120.6	BLH20001031AAA	95 01 04.0	563	609	Cox Radio, Inc.		
248C KFNC	LIC _CX	211.8	49.78	29 41 52.0	100.000	13.7	91.7	33.6	-42.0*
Mont Belvieu	TX	31.7	BLH20120716AFA	94 24 09.0	597	598	Gow Communications, L.l.c.		
246D 1563128	APP DC_	0.0	0.00	30 04 43.0	0.200	15.7	4.9	-20.6*	-20.6*
Beaumont	TX	0.0	BNPFT20030317HRU	94 07 51.0		71	E-string Wireless, Ltd		
244D 648615	APP _C_	133.6	0.85	30 04 24.0	0.250	1.1	12.2	-6.9*	-11.8*
Beaumont	TX	313.7	BNPFT20030317LYD	94 07 28.0	95	100	Black Media Works, Inc.		
300C KQQK	LIC NCX	260.4	40.57	30 01 01.0	90.000	12.0	82.5	28.5R	12.1M
Beaumont	TX	80.2	BMLH20071113AGR	94 32 47.0	596	611	Liberman Broadcasting Of H		
245L1 KSAP-LP	LIC ___	141.0	29.66	29 52 16.0	0.100			14.5	15.3
Port Arthur	TX	321.1	BLL20120822ABS	93 56 14.0	17	17	Truth And Education		
243D K243AV	CP _C_	74.4	32.80	30 09 28.0	0.098	0.7	13.0	21.8	18.8
Pinehurst	TX	254.5	BPFT20130419ABD	93 48 08.0		162	Educational Media Foundati		
245D 1568696	APP _C_	28.4	51.73	30 29 15.0	0.250	16.5	11.4	26.4	29.0
Buna	TX	208.6	BNPFT20130813AAL	93 52 25.0		90	Gerald R. Proctor		
245D 1563113	APP _C_	28.4	51.73	30 29 15.0	0.250	16.5	11.4	26.4	29.0
Buna	TX	208.6	BNPFT20030314AOL	93 52 25.0		90	Gerald R. Proctor		
243D K243AV	LIC _C_	74.4	50.12	30 11 55.0	0.205	1.0	12.2	38.8	36.9
Vinton	LA	254.7	BLFT20070702BAN	93 37 42.0	97	100	Educational Media Foundati		

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Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.
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1563128.A
BNPFT20030317HRU
Latitude: 30-04-43 N
Longitude: 094-07-51 W
ERP: 0.20 kW
Channel: 246
Frequency: 97.1 MHz
AMSL Height: 70.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

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■ 60 dBu F(50,50) Service Contour
■ 40 dBu F(50,10) Interference Contour
■ 54 dBu F(50,10) Interference Contour
■ 100 dBu F(50,10) Interference Contour

Exhibit E-3
Contour Allocation Study
NEW - Beaumont, Texas
E-String Wireless, Ltd.
August, 2013

Scale 1:1,000,000

km
0   10   20   30

1563128.A
BNPFT20030317HRU
Latitude: 30-04-43 N
Longitude: 094-07-51 W
ERP: 0.20 kW
Channel: 246
Frequency: 97.1 MHz
AMSL Height: 70.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KFNC
BLH20120716AFA
Latitude: 29-41-52 N
Longitude: 094-24-09 W
ERP: 100.00 kW
Channel: 248
Frequency: 97.5 MHz
AMSL Height: 598.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Jeremy Ruck & Associates, Inc.

FCC F(50-50) 77.60 dBu (FCC HAAT)

KFNC 77.6 dBu
Service Contour

KFNC Site

KFNC

Exhibit E-4
Interference Study
NEW - Beaumont, Texas
E-String Wireless, Ltd.
August, 2013

Scale 1:375,000

0   5   10   15
km

Antenna No:	74	
Manufacturer:	Shively	
Model:	6025	
Number of Bays:	1	
Bay Spacing:	Log	

Center of Radiation:	65 m AGL
Effective Radiated Power:	200 Watts
FS Contour:	117.6 dBu
E Field Strength:	0.75858 V/m
Z0 (Ohms):	377 Ohms
Power Density:	0.001526366 W/m^2
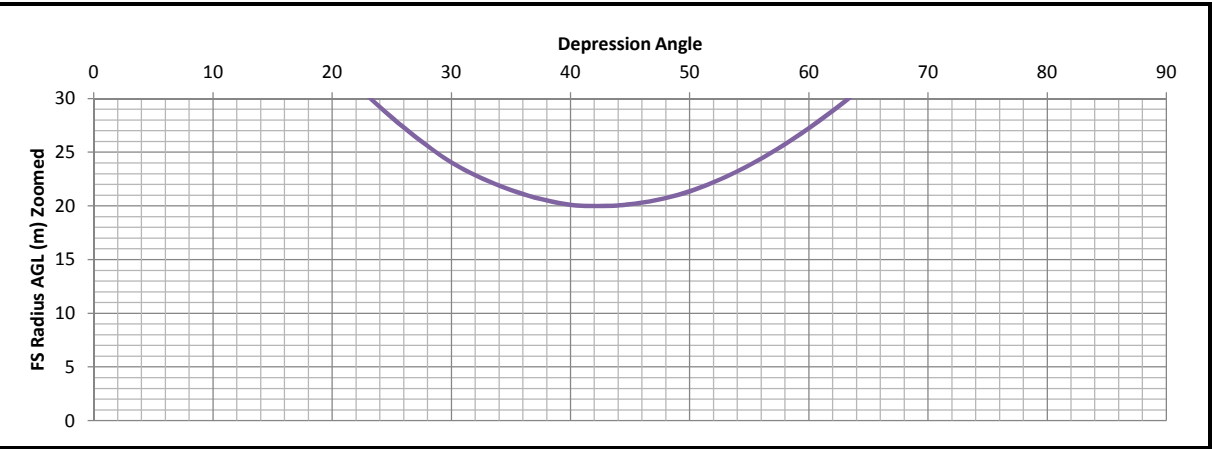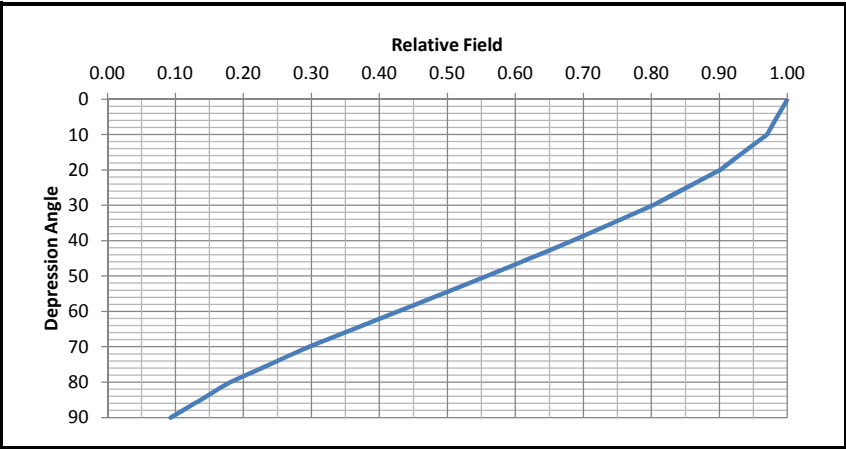
Relative Field (chart)

Depression Angle (chart)

Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	200.00	102.11	102.11	0.00	65.00
1	0.9970	0.9940	198.80	101.81	101.79	1.78	63.22
2	0.9940	0.9880	197.61	101.50	101.44	3.54	61.46
3	0.9910	0.9821	196.42	101.19	101.06	5.30	59.70
4	0.9880	0.9761	195.23	100.89	100.64	7.04	57.96
5	0.9850	0.9702	194.05	100.58	100.20	8.77	56.23
6	0.9820	0.9643	192.86	100.27	99.73	10.48	54.52
7	0.9790	0.9584	191.69	99.97	99.22	12.18	52.82
8	0.9760	0.9526	190.52	99.66	98.69	13.87	51.13
9	0.9730	0.9467	189.35	99.36	98.13	15.54	49.46
10	0.9700	0.9409	188.18	99.05	97.54	17.20	47.80
11	0.9631	0.9276	185.51	98.34	96.54	18.77	46.23
12	0.9562	0.9143	182.86	97.64	95.51	20.30	44.70
13	0.9493	0.9012	180.23	96.94	94.45	21.81	43.19
14	0.9424	0.8881	177.62	96.23	93.37	23.28	41.72
15	0.9355	0.8752	175.03	95.53	92.27	24.72	40.28
16	0.9286	0.8623	172.46	94.82	91.15	26.14	38.86
17	0.9217	0.8495	169.91	94.12	90.01	27.52	37.48
18	0.9148	0.8369	167.37	93.41	88.84	28.87	36.13
19	0.9079	0.8243	164.86	92.71	87.66	30.18	34.82
20	0.9010	0.8118	162.36	92.00	86.46	31.47	33.53
21	0.8911	0.7941	158.81	90.99	84.95	32.61	32.39
22	0.8812	0.7765	155.30	89.98	83.43	33.71	31.29
23	0.8713	0.7592	151.83	88.97	81.90	34.76	30.24
24	0.8614	0.7420	148.40	87.96	80.36	35.78	29.22
25	0.8515	0.7251	145.01	86.95	78.80	36.75	28.25
26	0.8416	0.7083	141.66	85.94	77.24	37.67	27.33
27	0.8317	0.6917	138.34	84.93	75.67	38.56	26.44
28	0.8218	0.6754	135.07	83.92	74.09	39.40	25.60
29	0.8119	0.6592	131.84	82.91	72.51	40.19	24.81
30	0.8020	0.6432	128.64	81.89	70.92	40.95	24.05
31	0.7902	0.6244	124.88	80.69	69.16	41.56	23.44
32	0.7784	0.6059	121.18	79.48	67.41	42.12	22.88
33	0.7666	0.5877	117.54	78.28	65.65	42.63	22.37
34	0.7548	0.5697	113.94	77.07	63.90	43.10	21.90
35	0.7430	0.5520	110.41	75.87	62.15	43.52	21.48
36	0.7312	0.5347	106.93	74.66	60.41	43.89	21.11
37	0.7194	0.5175	103.51	73.46	58.67	44.21	20.79
38	0.7076	0.5007	100.14	72.26	56.94	44.48	20.52
39	0.6958	0.4841	96.83	71.05	55.22	44.71	20.29
40	0.6840	0.4679	93.57	69.85	53.50	44.90	20.10
41	0.6714	0.4508	90.16	68.56	51.74	44.98	20.02
42	0.6588	0.4340	86.80	67.27	49.99	45.01	19.99
43	0.6462	0.4176	83.51	65.99	48.26	45.00	20.00
44	0.6336	0.4014	80.29	64.70	46.54	44.94	20.06
45	0.6210	0.3856	77.13	63.41	44.84	44.84	20.16

Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
45	0.6210	0.3856	77.13	63.41	44.84	44.84	20.16
46	0.6084	0.3702	74.03	62.13	43.16	44.69	20.31
47	0.5958	0.3550	71.00	60.84	41.49	44.49	20.51
48	0.5832	0.3401	68.02	59.55	39.85	44.26	20.74
49	0.5706	0.3256	65.12	58.27	38.23	43.97	21.03
50	0.5580	0.3114	62.27	56.98	36.63	43.65	21.35
51	0.5449	0.2969	59.38	55.64	35.02	43.24	21.76
52	0.5318	0.2828	56.56	54.30	33.43	42.79	22.21
53	0.5187	0.2690	53.81	52.97	31.88	42.30	22.70
54	0.5056	0.2556	51.13	51.63	30.35	41.77	23.23
55	0.4925	0.2426	48.51	50.29	28.85	41.20	23.80
56	0.4794	0.2298	45.96	48.95	27.37	40.58	24.42
57	0.4663	0.2174	43.49	47.62	25.93	39.93	25.07
58	0.4532	0.2054	41.08	46.28	24.52	39.25	25.75
59	0.4401	0.1937	38.74	44.94	23.15	38.52	26.48
60	0.4270	0.1823	36.47	43.60	21.80	37.76	27.24
61	0.4139	0.1713	34.26	42.26	20.49	36.97	28.03
62	0.4008	0.1606	32.13	40.93	19.21	36.14	28.86
63	0.3877	0.1503	30.06	39.59	17.97	35.27	29.73
64	0.3746	0.1403	28.07	38.25	16.77	34.38	30.62
65	0.3615	0.1307	26.14	36.91	15.60	33.46	31.54
66	0.3484	0.1214	24.28	35.58	14.47	32.50	32.50
67	0.3353	0.1124	22.49	34.24	13.38	31.52	33.48
68	0.3222	0.1038	20.76	32.90	12.32	30.51	34.49
69	0.3091	0.0955	19.11	31.56	11.31	29.47	35.53
70	0.2960	0.0876	17.52	30.23	10.34	28.40	36.60
71	0.2844	0.0809	16.18	29.04	9.45	27.46	37.54
72	0.2728	0.0744	14.88	27.86	8.61	26.49	38.51
73	0.2612	0.0682	13.65	26.67	7.80	25.51	39.49
74	0.2496	0.0623	12.46	25.49	7.03	24.50	40.50
75	0.2380	0.0566	11.33	24.30	6.29	23.47	41.53
76	0.2264	0.0513	10.25	23.12	5.59	22.43	42.57
77	0.2148	0.0461	9.23	21.93	4.93	21.37	43.63
78	0.2032	0.0413	8.26	20.75	4.31	20.30	44.70
79	0.1916	0.0367	7.34	19.56	3.73	19.21	45.79
80	0.1800	0.0324	6.48	18.38	3.19	18.10	46.90
81	0.1713	0.0293	5.87	17.49	2.74	17.28	47.72
82	0.1626	0.0264	5.29	16.60	2.31	16.44	48.56
83	0.1539	0.0237	4.74	15.72	1.92	15.60	49.40
84	0.1452	0.0211	4.22	14.83	1.55	14.75	50.25
85	0.1365	0.0186	3.73	13.94	1.21	13.89	51.11
86	0.1278	0.0163	3.27	13.05	0.91	13.02	51.98
87	0.1191	0.0142	2.84	12.16	0.64	12.14	52.86
88	0.1104	0.0122	2.44	11.27	0.39	11.27	53.73
89	0.1017	0.0103	2.07	10.38	0.18	10.38	54.62
90	0.0930	0.0086	1.73	9.50	0.00	9.50	55.50
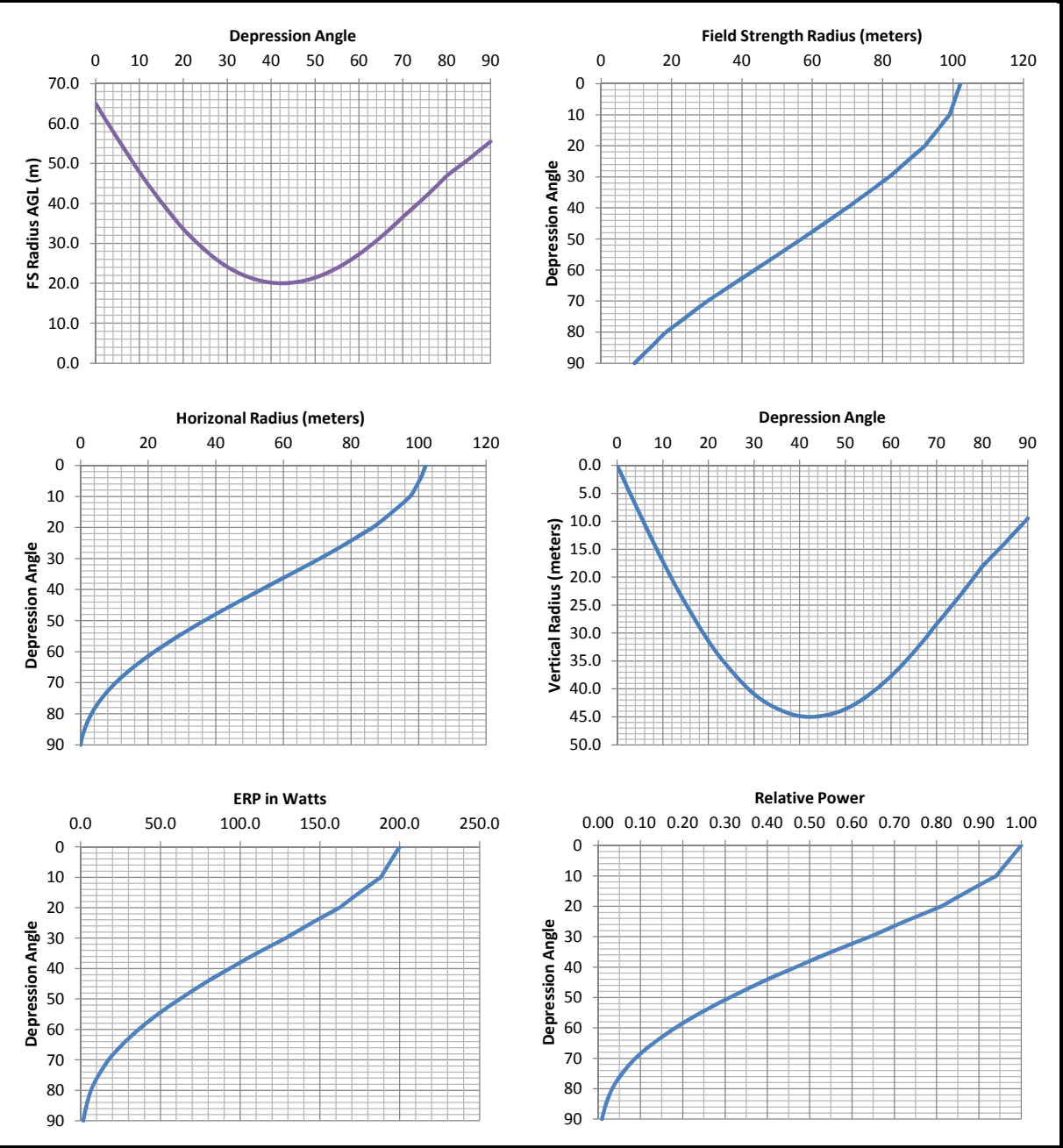
Depression Angle (chart) — FS Radius AGL (m)

Field Strength Radius (meters) (chart)

Horizonal Radius (meters) (chart)

Depression Angle (chart) — Vertical Radius (meters)

ERP in Watts (chart)

Relative Power (chart)

1563128.A
BNPFT20030317HRU
Latitude: 30-04-43 N
Longitude: 094-07-51 W
ERP: 0.20 kW
Channel: 246
Frequency: 97.1 MHz
AMSL Height: 70.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

648615.A
BNPFT20030317LYD
Latitude: 30-04-24 N
Longitude: 094-07-28 W
ERP: 0.25 kW
Channel: 244
Frequency: 96.7 MHz
AMSL Height: 100.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Jeremy Ruck & Associates, Inc.

E-String 94.2 dBu
Service Contour

Beaumont

1563128.A

FCC F(50-50) 94.20 dBu (FCC HAAT)

648615.A

FCC F(50-50) 102.20 dBu (FCC HAAT)

Black Media Works 102.2 dBu
Service Contour

Exhibit E-6
Interference Study
NEW - Beaumont, Texas
E-String Wireless, Ltd.
August, 2013

Scale 1:25,000

| | | | km |
| 0 | 0.33 | 0.67 | 1.0 |

30-04-30 N
30-04-00 N

Antenna No:	54	Center of Radiation:	97 m AGL
Manufacturer:	Scala	Effective Radiated Power:	250 Watts
Model:	FMO	FS Contour:	134.2 dBu
Number of Bays:	1	E Field Strength:	5.12861 V/m
Bay Spacing:	N/A	Z0 (Ohms):	377 Ohms
		Power Density:	0.069768382 W/m^2
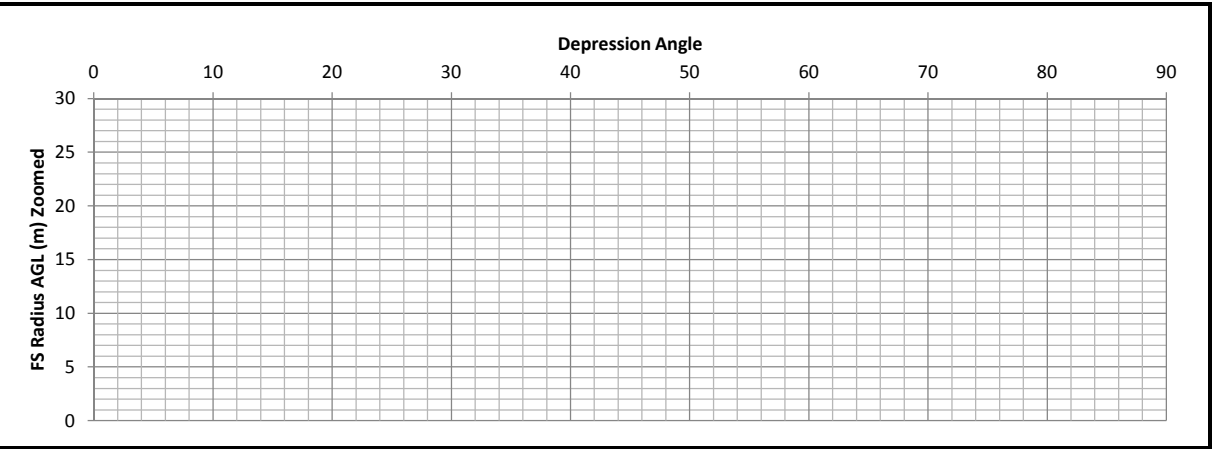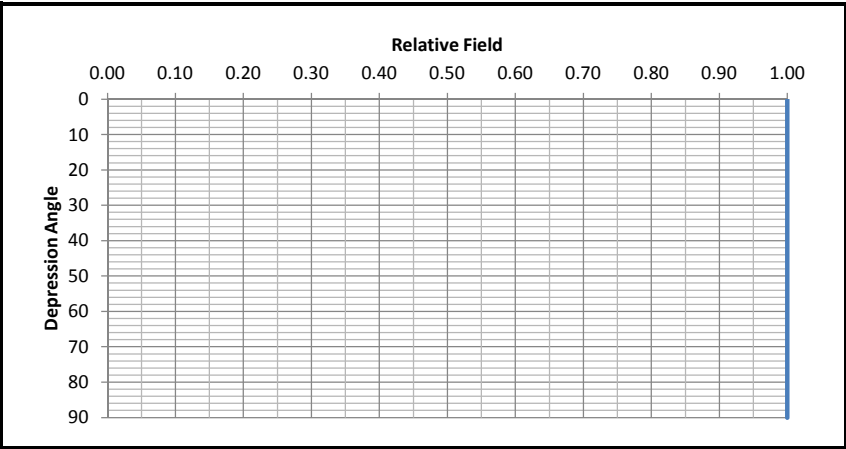
Relative Field

Depression Angle

Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	250.00	16.89	16.89	0.00	97.00
1	1.0000	1.0000	250.00	16.89	16.88	0.29	96.71
2	1.0000	1.0000	250.00	16.89	16.88	0.59	96.41
3	1.0000	1.0000	250.00	16.89	16.86	0.88	96.12
4	1.0000	1.0000	250.00	16.89	16.85	1.18	95.82
5	1.0000	1.0000	250.00	16.89	16.82	1.47	95.53
6	1.0000	1.0000	250.00	16.89	16.79	1.77	95.23
7	1.0000	1.0000	250.00	16.89	16.76	2.06	94.94
8	1.0000	1.0000	250.00	16.89	16.72	2.35	94.65
9	1.0000	1.0000	250.00	16.89	16.68	2.64	94.36
10	1.0000	1.0000	250.00	16.89	16.63	2.93	94.07
11	1.0000	1.0000	250.00	16.89	16.58	3.22	93.78
12	1.0000	1.0000	250.00	16.89	16.52	3.51	93.49
13	1.0000	1.0000	250.00	16.89	16.45	3.80	93.20
14	1.0000	1.0000	250.00	16.89	16.38	4.09	92.91
15	1.0000	1.0000	250.00	16.89	16.31	4.37	92.63
16	1.0000	1.0000	250.00	16.89	16.23	4.65	92.35
17	1.0000	1.0000	250.00	16.89	16.15	4.94	92.06
18	1.0000	1.0000	250.00	16.89	16.06	5.22	91.78
19	1.0000	1.0000	250.00	16.89	15.97	5.50	91.50
20	1.0000	1.0000	250.00	16.89	15.87	5.78	91.22
21	1.0000	1.0000	250.00	16.89	15.76	6.05	90.95
22	1.0000	1.0000	250.00	16.89	15.66	6.33	90.67
23	1.0000	1.0000	250.00	16.89	15.54	6.60	90.40
24	1.0000	1.0000	250.00	16.89	15.43	6.87	90.13
25	1.0000	1.0000	250.00	16.89	15.30	7.14	89.86
26	1.0000	1.0000	250.00	16.89	15.18	7.40	89.60
27	1.0000	1.0000	250.00	16.89	15.05	7.67	89.33
28	1.0000	1.0000	250.00	16.89	14.91	7.93	89.07
29	1.0000	1.0000	250.00	16.89	14.77	8.19	88.81
30	1.0000	1.0000	250.00	16.89	14.62	8.44	88.56
31	1.0000	1.0000	250.00	16.89	14.47	8.70	88.30
32	1.0000	1.0000	250.00	16.89	14.32	8.95	88.05
33	1.0000	1.0000	250.00	16.89	14.16	9.20	87.80
34	1.0000	1.0000	250.00	16.89	14.00	9.44	87.56
35	1.0000	1.0000	250.00	16.89	13.83	9.69	87.31
36	1.0000	1.0000	250.00	16.89	13.66	9.93	87.07
37	1.0000	1.0000	250.00	16.89	13.49	10.16	86.84
38	1.0000	1.0000	250.00	16.89	13.31	10.40	86.60
39	1.0000	1.0000	250.00	16.89	13.12	10.63	86.37
40	1.0000	1.0000	250.00	16.89	12.94	10.85	86.15
41	1.0000	1.0000	250.00	16.89	12.74	11.08	85.92
42	1.0000	1.0000	250.00	16.89	12.55	11.30	85.70
43	1.0000	1.0000	250.00	16.89	12.35	11.52	85.48
44	1.0000	1.0000	250.00	16.89	12.15	11.73	85.27
45	1.0000	1.0000	250.00	16.89	11.94	11.94	85.06

Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
45	1.0000	1.0000	250.00	16.89	11.94	11.94	85.06
46	1.0000	1.0000	250.00	16.89	11.73	12.15	84.85
47	1.0000	1.0000	250.00	16.89	11.52	12.35	84.65
48	1.0000	1.0000	250.00	16.89	11.30	12.55	84.45
49	1.0000	1.0000	250.00	16.89	11.08	12.74	84.26
50	1.0000	1.0000	250.00	16.89	10.85	12.94	84.06
51	1.0000	1.0000	250.00	16.89	10.63	13.12	83.88
52	1.0000	1.0000	250.00	16.89	10.40	13.31	83.69
53	1.0000	1.0000	250.00	16.89	10.16	13.49	83.51
54	1.0000	1.0000	250.00	16.89	9.93	13.66	83.34
55	1.0000	1.0000	250.00	16.89	9.69	13.83	83.17
56	1.0000	1.0000	250.00	16.89	9.44	14.00	83.00
57	1.0000	1.0000	250.00	16.89	9.20	14.16	82.84
58	1.0000	1.0000	250.00	16.89	8.95	14.32	82.68
59	1.0000	1.0000	250.00	16.89	8.70	14.47	82.53
60	1.0000	1.0000	250.00	16.89	8.44	14.62	82.38
61	1.0000	1.0000	250.00	16.89	8.19	14.77	82.23
62	1.0000	1.0000	250.00	16.89	7.93	14.91	82.09
63	1.0000	1.0000	250.00	16.89	7.67	15.05	81.95
64	1.0000	1.0000	250.00	16.89	7.40	15.18	81.82
65	1.0000	1.0000	250.00	16.89	7.14	15.30	81.70
66	1.0000	1.0000	250.00	16.89	6.87	15.43	81.57
67	1.0000	1.0000	250.00	16.89	6.60	15.54	81.46
68	1.0000	1.0000	250.00	16.89	6.33	15.66	81.34
69	1.0000	1.0000	250.00	16.89	6.05	15.76	81.24
70	1.0000	1.0000	250.00	16.89	5.78	15.87	81.13
71	1.0000	1.0000	250.00	16.89	5.50	15.97	81.03
72	1.0000	1.0000	250.00	16.89	5.22	16.06	80.94
73	1.0000	1.0000	250.00	16.89	4.94	16.15	80.85
74	1.0000	1.0000	250.00	16.89	4.65	16.23	80.77
75	1.0000	1.0000	250.00	16.89	4.37	16.31	80.69
76	1.0000	1.0000	250.00	16.89	4.09	16.38	80.62
77	1.0000	1.0000	250.00	16.89	3.80	16.45	80.55
78	1.0000	1.0000	250.00	16.89	3.51	16.52	80.48
79	1.0000	1.0000	250.00	16.89	3.22	16.58	80.42
80	1.0000	1.0000	250.00	16.89	2.93	16.63	80.37
81	1.0000	1.0000	250.00	16.89	2.64	16.68	80.32
82	1.0000	1.0000	250.00	16.89	2.35	16.72	80.28
83	1.0000	1.0000	250.00	16.89	2.06	16.76	80.24
84	1.0000	1.0000	250.00	16.89	1.77	16.79	80.21
85	1.0000	1.0000	250.00	16.89	1.47	16.82	80.18
86	1.0000	1.0000	250.00	16.89	1.18	16.85	80.15
87	1.0000	1.0000	250.00	16.89	0.88	16.86	80.14
88	1.0000	1.0000	250.00	16.89	0.59	16.88	80.12
89	1.0000	1.0000	250.00	16.89	0.29	16.88	80.12
90	1.0000	1.0000	250.00	16.89	0.00	16.89	80.11

Depression Angle

Field Strength Radius (meters)

Horizonal Radius (meters)

Depression Angle

ERP in Watts

Relative Power
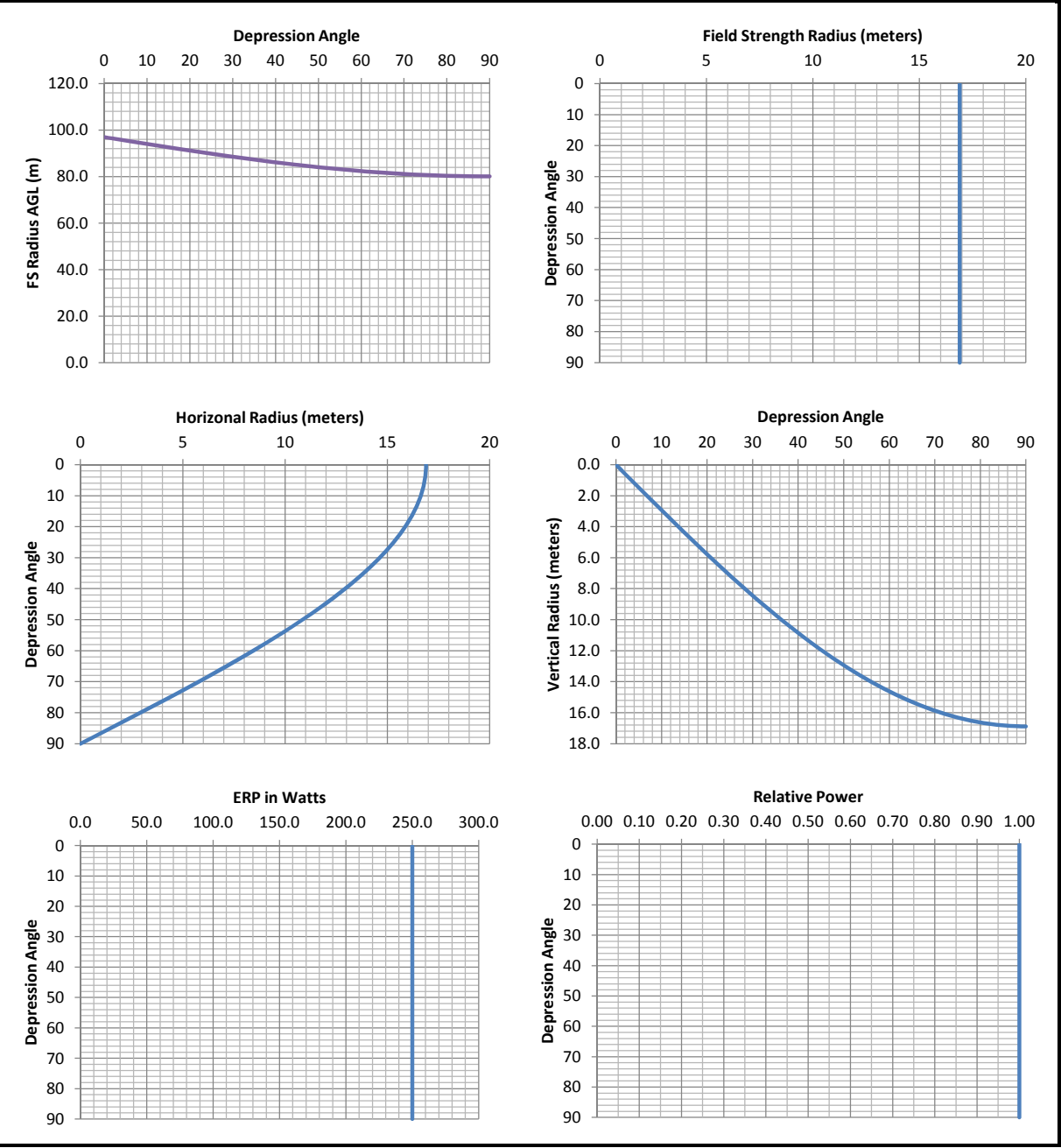
Translator Proximity Interference Analysis
NEW - Beaumont, Texas - E-String to Black Media Works

Antenna No:	74	
Manufacturer:	Shively	
Model:	6025	
Number of Bays:	1	
Bay Spacing:	Log	

Center of Radiation:	65 m AGL
Effective Radiated Power:	200 Watts
FS Contour:	142.2 dBu
E Field Strength:	12.88250 V/m
Z0 (Ohms):	377 Ohms
Power Density:	0.440208729 W/m^2
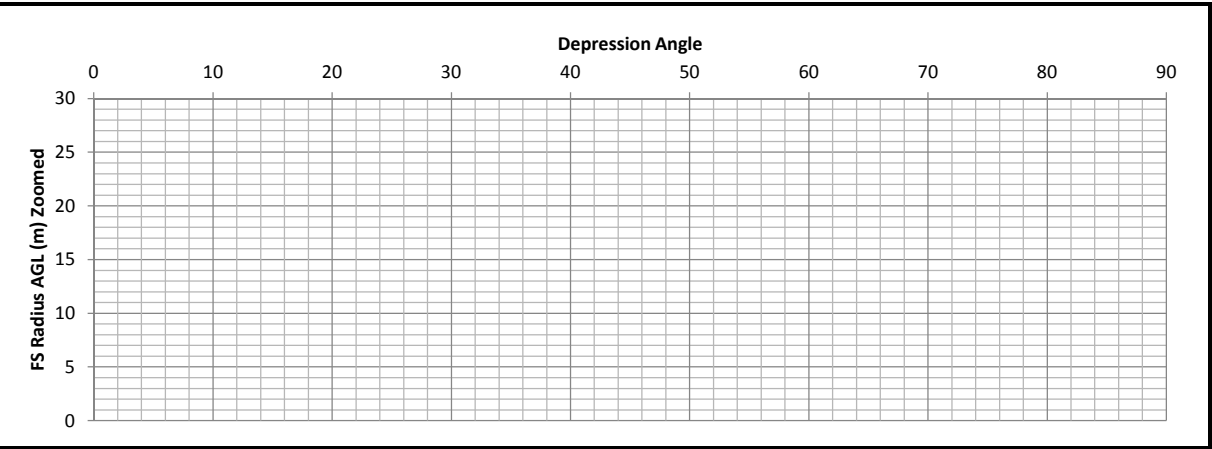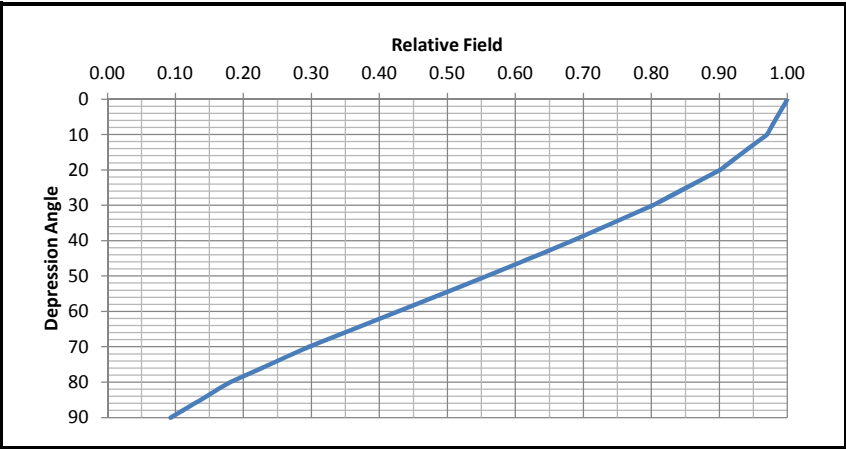
Relative Field (chart)

Depression Angle (chart — FS Radius AGL (m) Zoomed)

Depression Angle	Relative Field	Relative Power	ERP Watts	Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	200.00	6.01	6.01	0.00	65.00
1	0.9970	0.9940	198.80	5.99	5.99	0.10	64.90
2	0.9940	0.9880	197.61	5.98	5.97	0.21	64.79
3	0.9910	0.9821	196.42	5.96	5.95	0.31	64.69
4	0.9880	0.9761	195.23	5.94	5.93	0.41	64.59
5	0.9850	0.9702	194.05	5.92	5.90	0.52	64.48
6	0.9820	0.9643	192.86	5.90	5.87	0.62	64.38
7	0.9790	0.9584	191.69	5.89	5.84	0.72	64.28
8	0.9760	0.9526	190.52	5.87	5.81	0.82	64.18
9	0.9730	0.9467	189.35	5.85	5.78	0.92	64.08
10	0.9700	0.9409	188.18	5.83	5.74	1.01	63.99
11	0.9631	0.9276	185.51	5.79	5.68	1.10	63.90
12	0.9562	0.9143	182.86	5.75	5.62	1.20	63.80
13	0.9493	0.9012	180.23	5.71	5.56	1.28	63.72
14	0.9424	0.8881	177.62	5.67	5.50	1.37	63.63
15	0.9355	0.8752	175.03	5.63	5.43	1.46	63.54
16	0.9286	0.8623	172.46	5.58	5.37	1.54	63.46
17	0.9217	0.8495	169.91	5.54	5.30	1.62	63.38
18	0.9148	0.8369	167.37	5.50	5.23	1.70	63.30
19	0.9079	0.8243	164.86	5.46	5.16	1.78	63.22
20	0.9010	0.8118	162.36	5.42	5.09	1.85	63.15
21	0.8911	0.7941	158.81	5.36	5.00	1.92	63.08
22	0.8812	0.7765	155.30	5.30	4.91	1.98	63.02
23	0.8713	0.7592	151.83	5.24	4.82	2.05	62.95
24	0.8614	0.7420	148.40	5.18	4.73	2.11	62.89
25	0.8515	0.7251	145.01	5.12	4.64	2.16	62.84
26	0.8416	0.7083	141.66	5.06	4.55	2.22	62.78
27	0.8317	0.6917	138.34	5.00	4.46	2.27	62.73
28	0.8218	0.6754	135.07	4.94	4.36	2.32	62.68
29	0.8119	0.6592	131.84	4.88	4.27	2.37	62.63
30	0.8020	0.6432	128.64	4.82	4.18	2.41	62.59
31	0.7902	0.6244	124.88	4.75	4.07	2.45	62.55
32	0.7784	0.6059	121.18	4.68	3.97	2.48	62.52
33	0.7666	0.5877	117.54	4.61	3.87	2.51	62.49
34	0.7548	0.5697	113.94	4.54	3.76	2.54	62.46
35	0.7430	0.5520	110.41	4.47	3.66	2.56	62.44
36	0.7312	0.5347	106.93	4.40	3.56	2.58	62.42
37	0.7194	0.5175	103.51	4.33	3.45	2.60	62.40
38	0.7076	0.5007	100.14	4.25	3.35	2.62	62.38
39	0.6958	0.4841	96.83	4.18	3.25	2.63	62.37
40	0.6840	0.4679	93.57	4.11	3.15	2.64	62.36
41	0.6714	0.4508	90.16	4.04	3.05	2.65	62.35
42	0.6588	0.4340	86.80	3.96	2.94	2.65	62.35
43	0.6462	0.4176	83.51	3.89	2.84	2.65	62.35
44	0.6336	0.4014	80.29	3.81	2.74	2.65	62.35
45	0.6210	0.3856	77.13	3.73	2.64	2.64	62.36

Depression Angle	Relative Field	Relative Power	ERP Watts	Field Strength	Horizontal	Vertical	AGL
45	0.6210	0.3856	77.13	3.73	2.64	2.64	62.36
46	0.6084	0.3702	74.03	3.66	2.54	2.63	62.37
47	0.5958	0.3550	71.00	3.58	2.44	2.62	62.38
48	0.5832	0.3401	68.02	3.51	2.35	2.61	62.39
49	0.5706	0.3256	65.12	3.43	2.25	2.59	62.41
50	0.5580	0.3114	62.27	3.36	2.16	2.57	62.43
51	0.5449	0.2969	59.38	3.28	2.06	2.55	62.45
52	0.5318	0.2828	56.56	3.20	1.97	2.52	62.48
53	0.5187	0.2690	53.81	3.12	1.88	2.49	62.51
54	0.5056	0.2556	51.13	3.04	1.79	2.46	62.54
55	0.4925	0.2426	48.51	2.96	1.70	2.43	62.57
56	0.4794	0.2298	45.96	2.88	1.61	2.39	62.61
57	0.4663	0.2174	43.49	2.80	1.53	2.35	62.65
58	0.4532	0.2054	41.08	2.73	1.44	2.31	62.69
59	0.4401	0.1937	38.74	2.65	1.36	2.27	62.73
60	0.4270	0.1823	36.47	2.57	1.28	2.22	62.78
61	0.4139	0.1713	34.26	2.49	1.21	2.18	62.82
62	0.4008	0.1606	32.13	2.41	1.13	2.13	62.87
63	0.3877	0.1503	30.06	2.33	1.06	2.08	62.92
64	0.3746	0.1403	28.07	2.25	0.99	2.02	62.98
65	0.3615	0.1307	26.14	2.17	0.92	1.97	63.03
66	0.3484	0.1214	24.28	2.09	0.85	1.91	63.09
67	0.3353	0.1124	22.49	2.02	0.79	1.86	63.14
68	0.3222	0.1038	20.76	1.94	0.73	1.80	63.20
69	0.3091	0.0955	19.11	1.86	0.67	1.74	63.26
70	0.2960	0.0876	17.52	1.78	0.61	1.67	63.33
71	0.2844	0.0809	16.18	1.71	0.56	1.62	63.38
72	0.2728	0.0744	14.88	1.64	0.51	1.56	63.44
73	0.2612	0.0682	13.65	1.57	0.46	1.50	63.50
74	0.2496	0.0623	12.46	1.50	0.41	1.44	63.56
75	0.2380	0.0566	11.33	1.43	0.37	1.38	63.62
76	0.2264	0.0513	10.25	1.36	0.33	1.32	63.68
77	0.2148	0.0461	9.23	1.29	0.29	1.26	63.74
78	0.2032	0.0413	8.26	1.22	0.25	1.20	63.80
79	0.1916	0.0367	7.34	1.15	0.22	1.13	63.87
80	0.1800	0.0324	6.48	1.08	0.19	1.07	63.93
81	0.1713	0.0293	5.87	1.03	0.16	1.02	63.98
82	0.1626	0.0264	5.29	0.98	0.14	0.97	64.03
83	0.1539	0.0237	4.74	0.93	0.11	0.92	64.08
84	0.1452	0.0211	4.22	0.87	0.09	0.87	64.13
85	0.1365	0.0186	3.73	0.82	0.07	0.82	64.18
86	0.1278	0.0163	3.27	0.77	0.05	0.77	64.23
87	0.1191	0.0142	2.84	0.72	0.04	0.72	64.28
88	0.1104	0.0122	2.44	0.66	0.02	0.66	64.34
89	0.1017	0.0103	2.07	0.61	0.01	0.61	64.39
90	0.0930	0.0086	1.73	0.56	0.00	0.56	64.44

Charts: Depression Angle (FS Radius AGL (m)); Field Strength Radius (meters); Horizonal Radius (meters); Depression Angle (Vertical Radius (meters)); ERP in Watts; Relative Power