SpectraSite ASR 1053614
Christian Broadcasting Of Portsmouth, Inc.

REFERENCE CH# 233D - 94.5 MHz, Pwr= 0.25 kW DA, HAAT= 109.0 M, COR= 109.7 M DISPLAY DATES
36 48 36.9 N. Average Protected F(50-50)= 13.42 km DATA 07-09-18
76 16 58.4 W. Standard Directional SEARCH 07-11-18

CH CALL / CITY	TYPE ANT / STATE	AZI / <--	DIST / FILE #	LAT / LNG	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* / (Overlap in km)	*OUT*	
235B WPTE Virginia Beach	LIC _CX VA	281.2 101.2	0.01 BMLH20050413ABF	36 48 37.0 76 16 59.0	50.000 152	6.0 156	65.3 Entercom License, Llc	-18.0*<	-66.2*<	/1
233B WRVQ Richmond	LIC _CN VA	306.1 125.4	113.02 BLH6152	37 24 13.0 77 18 59.0	200.000 107	165.9 132	73.4 Cbs Radio East, Llc	-64.4*<	0.3	
233C1 WCMS-FM Hatteras	LIC ZC_ NC	170.1 350.3	149.12 BMLH20040610AAV	35 29 10.0 75 59 58.0	100.000 299	151.6 299	64.0 Max Radio Of The Carolinas	-15.7*<	39.9	
233C1 WCMS-FM Hatteras	APP ZCX NC	170.2 350.3	149.21 BPH20180705AAS	35 29 06.4 76 00 02.3	100.000 299	151.6 299	64.0 Max Radio Of The Carolinas	-15.6*<	39.9	
231B WVSP-FM Yorktown	LIC ZCN VA	332.6 152.4	49.95 BLH19960430KB	37 12 33.0 76 32 35.0	40.000 162	5.8 166	64.1 Mhr License Llc	32.2	-15.0*<	/1
233C1 WCMS-FM Hatteras	RSV-A ___ NC	159.8 340.2	183.12	35 15 38.0 75 35 02.0	100.000 299	171.9 299	72.3 Max Radio Of The Carolinas	-2.0<	65.4	
287B WNOH Windsor	LIC _CX VA	270.7 90.6	16.02 BLH20080924AAN	36 48 43.0 76 27 45.0	50.000 150	0.0 156	0.0 Cc Licenses, Llc, As Debto	14.5R	1.5M	

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone= East 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 restricted contour.
« = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap

/1 Please see request for waiver of 47 C.F.R. 74.1204(a)(3) for separation between this station and the proposed facility in the following pages.

Protected zones report for Proposed on channel 233D 08-20-2018
Lat. 36 48 36.9 Lng. 76 16 58.4, ERP= 0.25 kw, HAAT= 106.5 m

Facility is okay with respect to AM station towers.
Closest AM Facility is WCPK, CHESAPEAKE, VA, L, ND1 at 179.3° at a distance of 0.8 km
Facility is okay with respect to FCC monitoring stations.
Closest FCC Monitoring Station is 265.6 km= Laurel, MD
Facility is okay toward West Virginia Quiet Zone. Distance to center = 333.0 km
Facility is okay toward Table Mountain. Distance to Center = 2553.8 km, Azimuth = 287.3 Degrees True

WPTE Interference

The site for the proposed facility is located on a channel which is second-adjacent to WPTE (the "Affected Station") and within its protected contour. We predict the affected station protected contour at the proposed site will be 160.23 dBu F[50,50]. According to established second-adjacent channel contour Undesired-to-Desired (UD/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 200.23 dBu F[50,10]. Distance to the interference area is 0.01m from RC.

WVSP-FM Interference

The site for the proposed facility is located on a channel which is second-adjacent to WVSP-FM (the "Affected Station") and within its protected contour. We predict the affected station protected contour at the proposed site will be 60.73 dBu F[50,50]. According to established second-adjacent channel contour Undesired-to-Desired (UD/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 100.73 dBu F[50,10]. Distance to the interference area is 1020m from RC.

Protection to WVSP-FM from Interference

The predicted distance to the interfering contour at maximum radiation (the Affected Area) is 1020 meters (blue circle on an aerial view map in **Figure 1** and on a topo map in **Figure 2**). The actual 100.73 dBu interference contour (Interference Contour) from the directional antenna radiating outward is displayed red in both **Figure 1** and **Figure 2**.

The tallest structures within the Interference Contour that can be occupied by the public (Tallest Structures) are:

1. Rena B. Wright Primary School (2-story),
2. Truitt Jr High School (2-story),
3. South Norfolk Memorial Library (3-story), and
4. South Norfolk Jordan Bridge (167 ft AMSL).

The proposed radiation center is 124m AGL (126.7m AMSL). The elevation plane interference within the Affected Area is plotted in **Figure 3** which shows the interference more than 30m AGL (>32.7m AMSL). The Tallest Structures that are buildings are visualized in **Figure 4** which are on sites not exceeding 5 m AMSL and that do not exceed 3 stories AGL. The interference hovers well above these buildings.

The highest ERP of the directional antenna near the South Norfolk Jordan Bridge (Bridge) at azimuth 250 degrees true (orange arrow in **Figure 1**) from the proposed tower (Reference Site) is 0.075 kW (**Figure 5**). The lowest elevation point of radiation at 0.075 ERP is more than 72m AGL (74.7m AMSL) for the reference site (**Figure 6**). The highest elevation of the Bridge is 51m (167 ft)[1] AMSL therefore the interference hovers well above the Bridge.

Therefore, all structures and public locations within the Affected Area are well below the actual interference area.

Request for Waiver

Since this proposal complies with 47CFR74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the Affected Area, we hereby request waiver of 47CFR74.1204(a)(3) for separation between this proposed facility and the Affected Station.

Please see the following pages for the remaining part of this exhibit.

[1] https://www.google.com/search?num=30&newwindow=1&safe=active&client=firefox-b-1&ei=HwF8W5KtDsW8sAXDtr_YDg&q=South+Norfolk+Jordan+Bridge+CHESAPEAKE+%2C+VA&oq=South+Norfolk+Jordan+Bridge+CHESAPEAKE+%2C+VA&gs_l=psy-ab.3..0j0i8i30k1l2.39577.39577.0.40091.1.1.0.0.0.0.194.194.0j1.1.0....0...1.1.64.psy-ab..0.1.193....0.Nls4w5PmGMY

Exhibit 13 - Figure 1

Exhibit 13 - Figure 2

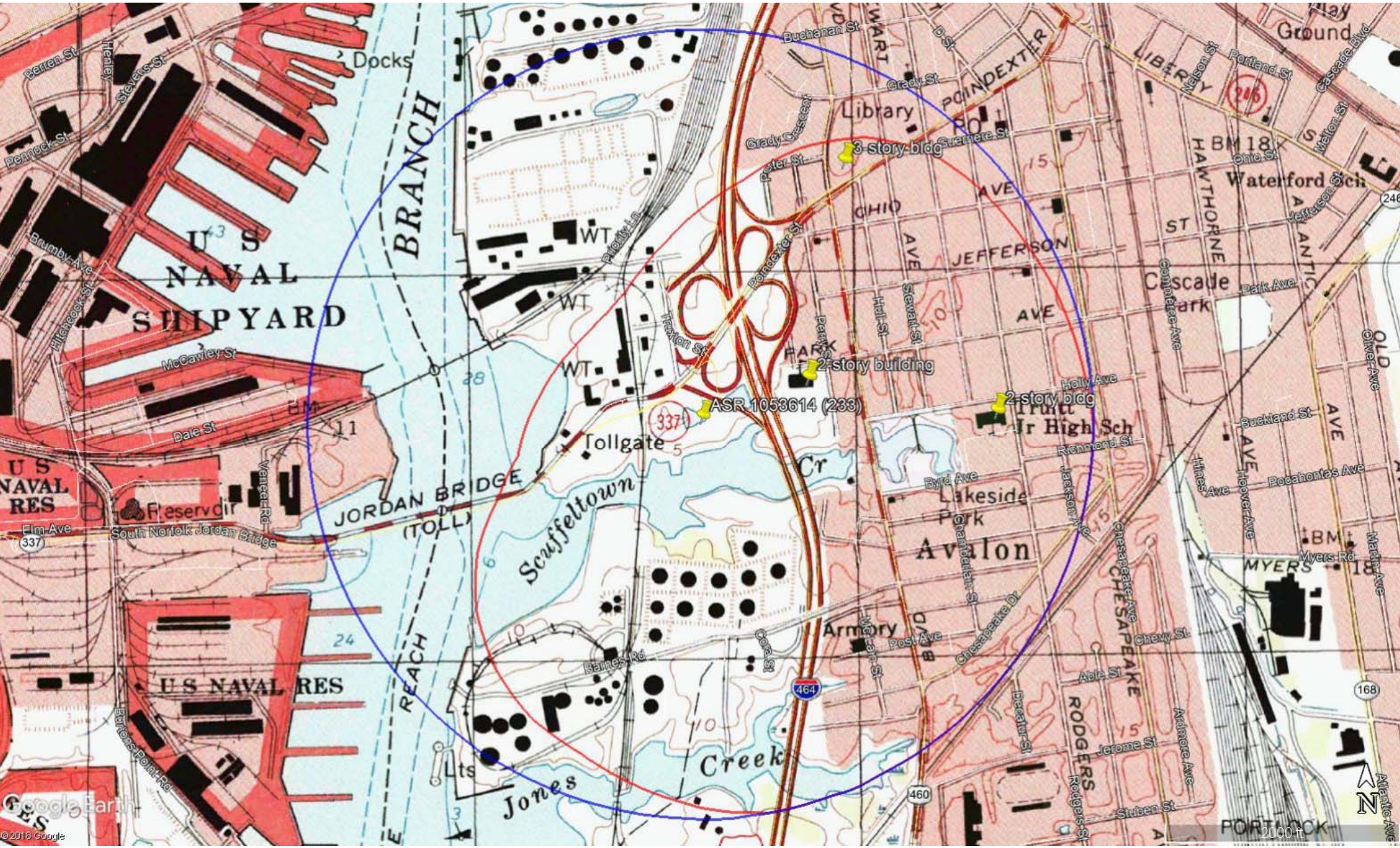
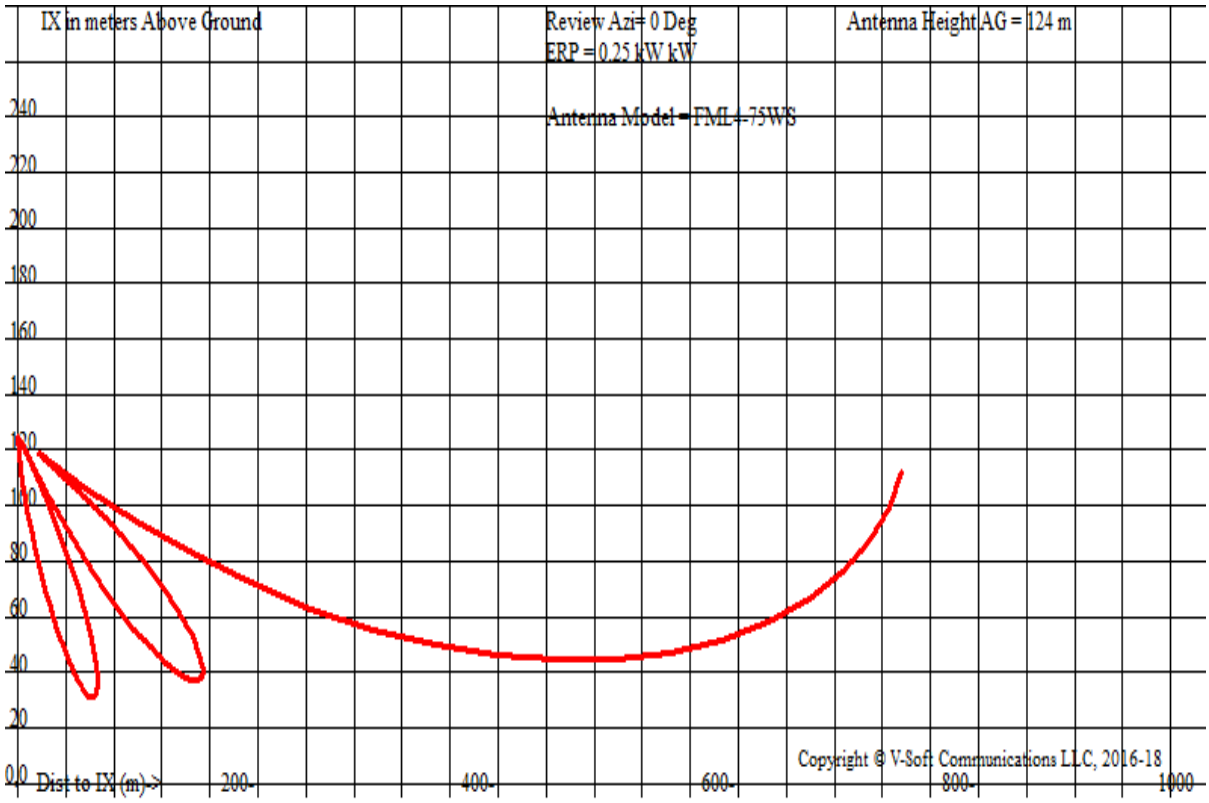


Exhibit 13, Figure 3

XField (C) 2016-18, V-Soft Communications LLC



ASR 1053614 SpectraSite , , Showing Protection to WVSP-FM
Geographic Coordinates: N. 36 48 36.87 W. 76 16 58.42
74.1204(d) Study - Using USGS 03 SEC Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.25
Translator or LPFM Antenna Height AG = 124 Meters
ASR 1053614 SpectraSite Antenna Model = FML4-75WS

Protected Station's Contour = 60.70935 dBu
Translator's or LPFM's full Interference contour 100.70935

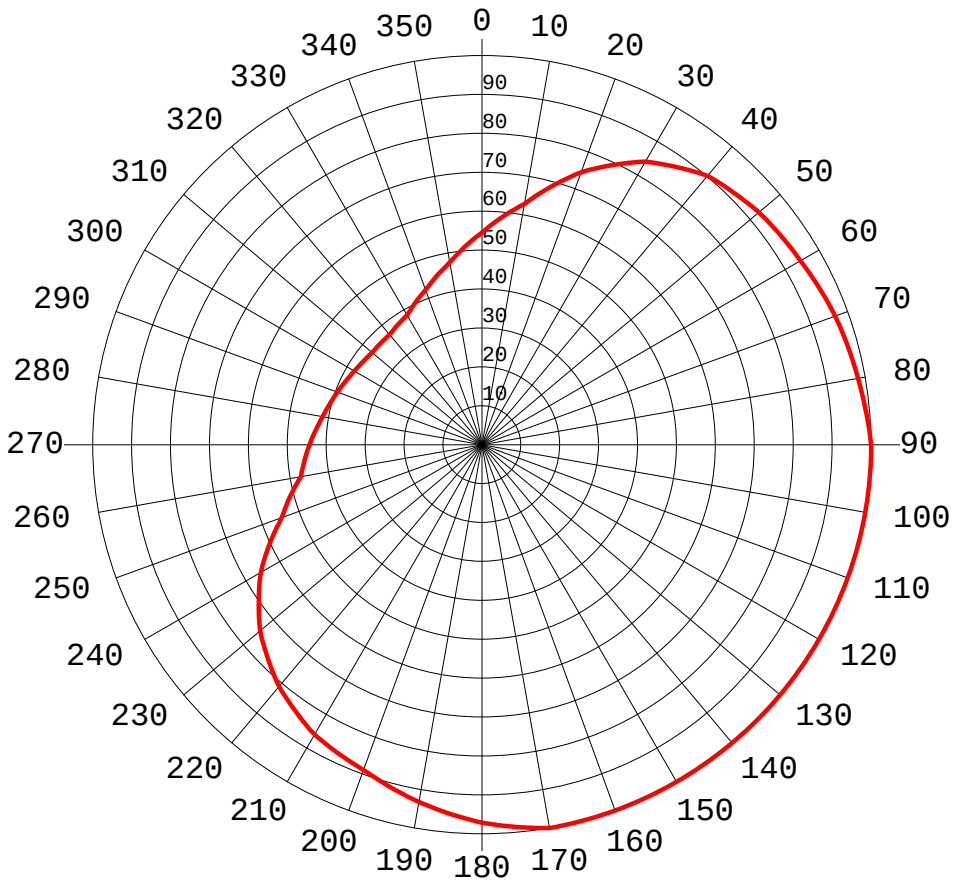
Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 0.545
Translator/LPFM ERP on the horizon at Review Azimuth = 0.074 kW
Distance between stations = 50.0 km
Protected Station= WVSP-FM, 40 kW, 166 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	0.55	0.1363	754.5721	754.5721	124.000
05.0	0.894	0.55	0.1089	674.5875	672.0205	065.206
10.0	0.617	0.55	0.0519	465.5710	458.4979	043.154
15.0	0.272	0.55	0.0101	205.2436	198.2501	070.879
20.0	0.027	0.55	0.0001	020.3734	019.1448	117.032
25.0	0.201	0.55	0.0055	151.6690	137.4588	059.902
30.0	0.234	0.55	0.0075	176.5699	152.9140	035.715
35.0	0.161	0.55	0.0035	121.4861	099.5156	054.318
40.0	0.043	0.55	0.0003	032.4466	024.8555	103.144
45.0	0.066	0.55	0.0006	049.8018	035.2152	088.785
50.0	0.133	0.55	0.0024	100.3581	064.5089	047.121
55.0	0.152	0.55	0.0031	114.6950	065.7863	030.047
60.0	0.133	0.55	0.0024	100.3581	050.1790	037.087
65.0	0.097	0.55	0.0013	073.1935	030.9329	057.664
70.0	0.057	0.55	0.0004	043.0106	014.7105	083.583
75.0	0.027	0.55	0.0001	020.3734	005.2730	104.321
80.0	0.008	0.55	0.0000	006.0366	001.0482	118.055
85.0	0.001	0.55	0.0000	000.7546	000.0658	123.248
90.0	0.001	0.55	0.0000	000.7546	000.0000	123.245

Rena B. Wright Primary School

Truitt Jr High School

South Norfolk Memorial Library



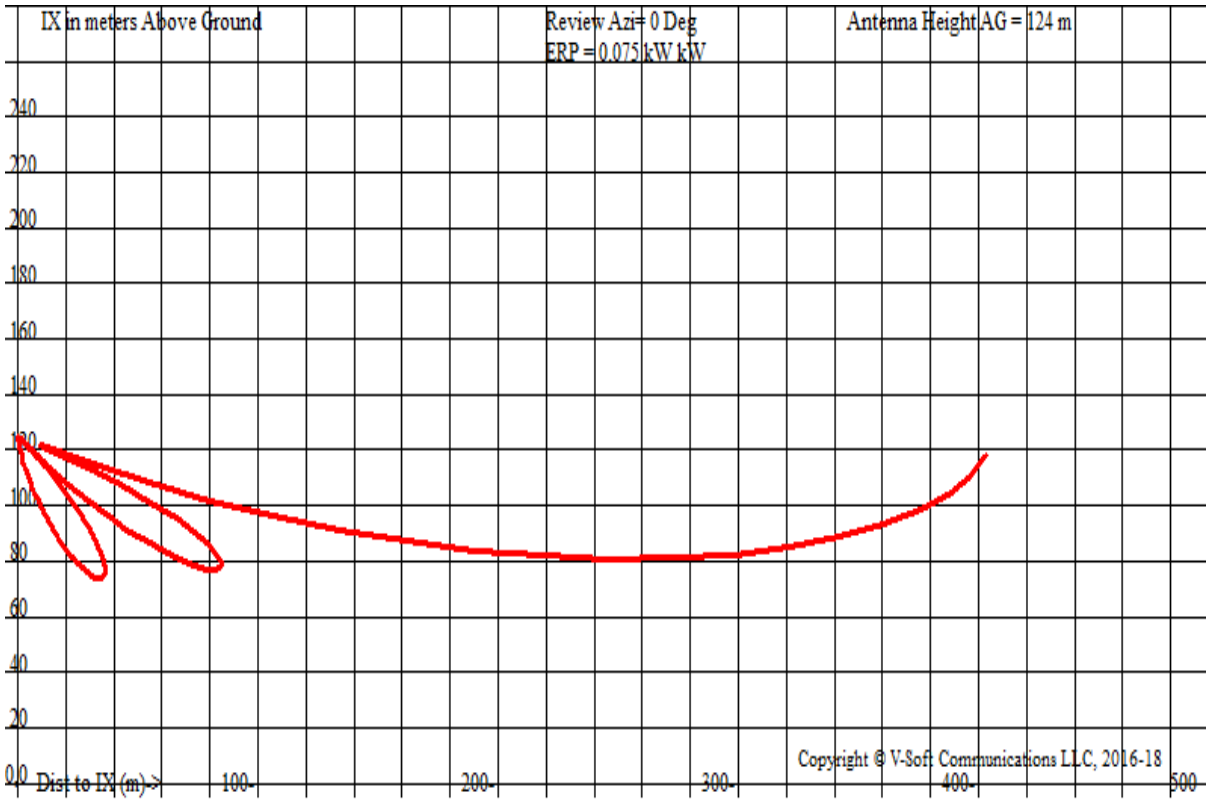
Azi	Rel	dBk	kW	dB
0	0.545	-11.29	0.074	-5.27
10	0.628	-10.06	0.099	-4.04
20	0.745	-8.58	0.139	-2.56
30	0.840	-7.54	0.176	-1.51
40	0.902	-6.92	0.203	-0.90
50	0.929	-6.66	0.216	-0.64
60	0.945	-6.51	0.223	-0.49
70	0.966	-6.32	0.233	-0.30
80	0.981	-6.19	0.241	-0.17
90	1.000	-6.02	0.250	0.00
100	1.000	-6.02	0.250	0.00
110	1.000	-6.02	0.250	0.00
120	1.000	-6.02	0.250	0.00
130	1.000	-6.02	0.250	0.00
140	1.000	-6.02	0.250	0.00
150	1.000	-6.02	0.250	0.00
160	1.000	-6.02	0.250	0.00
170	1.000	-6.02	0.250	0.00

Azi	Rel	dBk	kW	dB
180	0.971	-6.28	0.236	-0.26
190	0.932	-6.63	0.217	-0.61
200	0.889	-7.04	0.198	-1.02
210	0.860	-7.33	0.185	-1.31
220	0.811	-7.84	0.164	-1.82
230	0.744	-8.59	0.138	-2.57
240	0.656	-9.68	0.108	-3.66
250	0.547	-11.26	0.075	-5.24
260	0.472	-12.54	0.056	-6.52
270	0.443	-13.09	0.049	-7.07
280	0.415	-13.66	0.043	-7.64
290	0.395	-14.09	0.039	-8.07
300	0.378	-14.47	0.036	-8.45
310	0.368	-14.70	0.034	-8.68
320	0.369	-14.68	0.034	-8.66
330	0.384	-14.33	0.037	-8.31
340	0.423	-13.49	0.045	-7.47
350	0.475	-12.49	0.056	-6.47

Rotation Angle = 0

Exhibit 13 - Figure 6

XField (C) 2016-18, V-Soft Communications LLC



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Translator or LPFM Antenna Height AG = 124 Meters
ASR 1053614 SpectraSite Antenna Model = FML4-75WS

Protected Station's Contour = 60.70935 dBu
Translator's or LPFM's full Interference contour 100.70935

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 0.545
Translator/LPFM ERP on the horizon at Review Azimuth = 0.022 kW
Distance between stations = 50.0 km
Protected Station= WVSP-FM, 40 kW, 166 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	0.55	0.0409	413.2962	413.2962	124.000
05.0	0.894	0.55	0.0327	369.4868	368.0808	091.797
10.0	0.617	0.55	0.0156	255.0037	251.1297	079.719
15.0	0.272	0.55	0.0030	112.4166	108.5861	094.904
20.0	0.027	0.55	0.0000	011.1590	010.4860	120.183
25.0	0.201	0.55	0.0017	083.0725	075.2893	088.892
30.0	0.234	0.55	0.0022	096.7113	083.7544	075.644
35.0	0.161	0.55	0.0011	066.5407	054.5069	085.834
40.0	0.043	0.55	0.0001	017.7717	013.6139	112.577
45.0	0.066	0.55	0.0002	027.2775	019.2881	104.712
50.0	0.133	0.55	0.0007	054.9684	035.3330	081.892
55.0	0.152	0.55	0.0009	062.8210	036.0327	072.540
60.0	0.133	0.55	0.0007	054.9684	027.4842	076.396
65.0	0.097	0.55	0.0004	040.0897	016.9427	087.666
70.0	0.057	0.55	0.0001	023.5579	008.0573	101.863
75.0	0.027	0.55	0.0000	011.1590	002.8882	113.221
80.0	0.008	0.55	0.0000	003.3064	000.5741	120.744
85.0	0.001	0.55	0.0000	000.4133	000.0360	123.588
90.0	0.001	0.55	0.0000	000.4133	000.0000	123.587