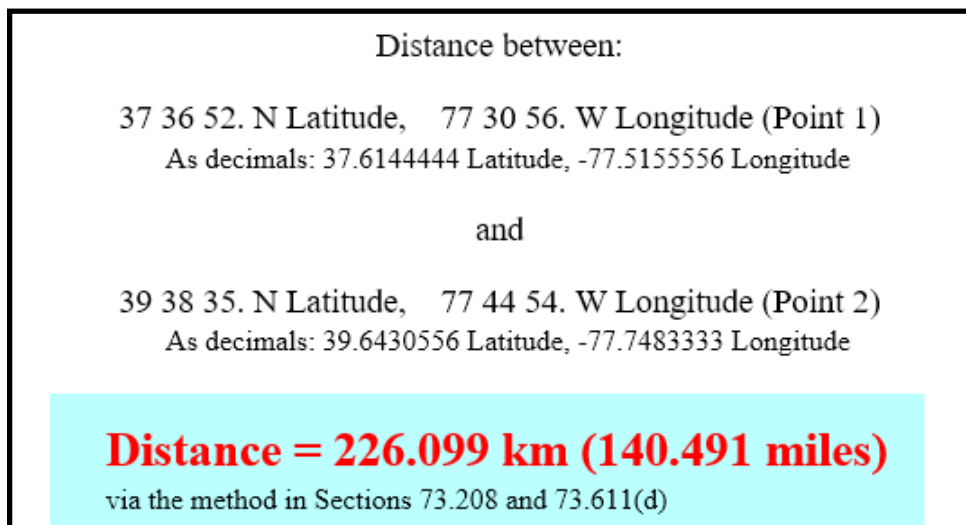


**W227DJ (#20934)
MODIFICATION OF CP
BPFT-20161027ABG**

W227DJ (#20934) as modified to non-adjacent channel 258 will rebroadcast class D AM facility WXGI (facility ID # 74207) at Richmond, VA. The move is 140.49 miles which remains in compliance with the 250 mile waiver rules. The modification to non-adjacent channel 258 is permissible in accordance with footnote 22 of FCC 17-14 which permits CPs and licenses that were originally filed as apart of the 250 mile waiver window to further modify their facilities in accordance with the provisions of that order which included non-adjacent channel changes.



Allocation discussion:

All exhibits utilize the USGS 3 second terrain database.

- E1 Channel study
- E1A Interference analysis to WKJM
- E1B Interference analysis to WLFV on 255B1
- E1C Interference analysis to WYFJ on 260A
- E1D Aerial photograph of site
- E1E DA
- E2 60 dBu and 2 mV/m contours
- E3 ASR

A channel study is included as E1 demonstrating compliance with §74.1204 with the exception of 2nd adjacent facilities analyzed below. A plot of the proposed 60 dBu contour is provided as E2 showing that it is contained within primary station WXGI(AM)'s 2 mV/m and 40 km radius and that it overlaps the CP 60 dBu.

WLFV analysis (E1B):

The proposed facility will be located inside the protected contours of 2nd adjacent channel WLFV on 255B1. Interference analyses have been conducted based on the U/D ratio of +40 dB at the proposed site and the elevation pattern of the ERI 100A antenna and are included as E1B. WLFV places an 82.85 dBu (50:50) at the site resulting in an interference contour of 122.85 dBu (50:10) which clears the ground by at least 176.6 meters.

WYFJ analysis (E1C):

The proposed facility will be located inside the protected contours of 2nd adjacent channel WYFJ on 260A which places an 81.87 dBu (50:50) at the site resulting in an interference contour of 121.87 dBu (50:10) based on the U/D ratio of +40 dB. The interference contour clears the ground by at least 174.1 meters.

It is clear from E1B, E1C and E1D (aerial view) that the interference contours will not reach any occupied/populated area or any major highways. Based on this showing, a waiver of Section 74.1204 is requested in accordance with *Living Way Ministries, Inc.* (FCC 08-242).

RF Exposure Calculation:

The proposed facility will utilize a single bay ERI 100A bay circularly polarized antenna. The RF contribution of the proposed translator was calculated using the formula included below and a worst case F factor of 1.0 to be 0.17uWatts/cm² or 0.09% of the maximum permissible 200 uWatts/cm² exposure for general population/uncontrolled exposure, and well below the 5% of that limit which requires consideration.

$$S \text{ (RF in } \mu\text{Watts/cm}^2\text{)} = \frac{33.4 (F^2 \text{ Vertical Factor}) X (H \text{ ERP} + V \text{ ERP in Watts})}{R^2 \text{ (distance to radiation center in meters} - 2 \text{ m)}}$$

E1 CHANNEL STUDY

REFERENCE CH# 258D - 99.5 MHz, Pwr= 0.099 kw DA, HAAT= 216.4 M, COR= 275 M DISPLAY DATES
 37 36 52.0 N. Average Protected F(50-50)= 15.07 km DATA 04-14-17
 77 30 56.0 W. Standard Directional SEARCH 04-14-17

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
255B1 WLFV		LIC ZCX		0.0	0.00	37 36 52.0	4.800	3.3	42.7	-43.6*
Midlothian		VA		0.0	BMLH20161207AAW	77 30 56.0	227	285	Educational Media Foundati	

See E1B and E1D for disproval of interference to WLFV per Living Way.

260A WYFJ		LIC _CX		138.0	7.56	37 33 50.0	6.000	2.5	25.0	-17.7*
Ashland		VA		318.0	BLED20100726ALK	77 27 29.0	100	148	Bible Broadcasting Network	

See E1C and E1D for disproval of interference to WYFJ per Living Way.

257A WKJM		LIC DCN		163.8	44.08	37 14 01.0	6.000	46.3	30.0	0.3
Petersburg		VA		343.9	BLH19940531KZ	77 22 36.0	100	139	Radio One Licenses, Llc	
257A WVBX		LIC _CX		345.2	60.64	38 08 30.0	3.000	37.4	24.7	13.5
Spotsylvania		VA		165.1	BLH20090924AAP	77 41 34.0	100	190	Alpha Media Licensee Llc	
259B WCYK-FM		LIC _CN		294.2	123.77	38 03 52.0	3.300	88.1	73.9	18.1
Staunton		VA		113.4	BLH19891222KD	78 48 18.0	516	914	Monticello Media Llc	
258B WIHT		LIC _CN		13.3	154.21	38 57 49.0	22.000	129.4	65.3	23.5
Washington		DC		193.6	BLH19931215KE	77 06 18.0	229	306	Amfm Radio Licenses, L.L.c	
258D W258AK		LIC _C_		245.9	84.94	37 17 57.0	0.170	23.6	7.0	29.3
Farmville		VA		65.4	BLFT20070208AAC	78 23 32.0	15	135	Delmarva Educational Assoc	

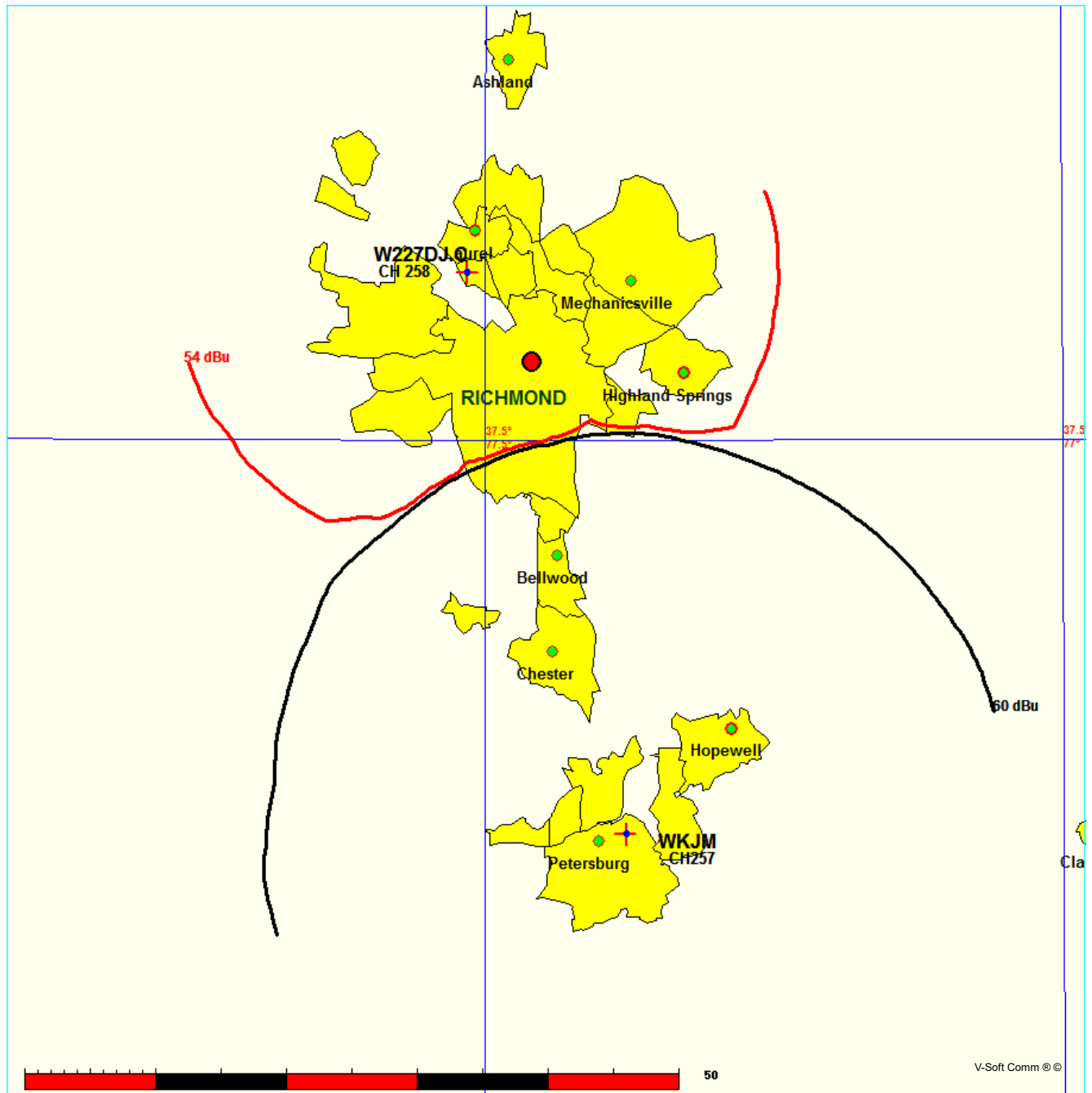
Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 Incoming contour overlap is ignored.
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 Reference station has protected zone issue: AM tower

E1A WKJM PLOT

FMCommander Single Allocation Study - 04-14-2017 - USGS 03 SEC
W227DJ.C's Overlaps (In= 0.0 km, Out= 0.0 km)

W227DJ.C CH 258 D DA
Lat= 37 36 52.0, Lng= 77 30 56.0
0.099 kW 216.4 m HAAT, 275 m COR
Prot.= 60 dBu, Intef.= 54 dBu

WKJM CH 257 A DA BLH19940531KZ
Lat= 37 14 01.0, Lng= 77 22 36.0
6.0 kW 100 m HAAT, 139 m COR
Prot.= 60 dBu, Intef.= 54 dBu



E1A FMOVER TO WKJM

04-14-2017 Terrain Data: USGS 03 SEC FMOVER Analysis

WKJM BLH19940531KZ

W227DJ.C

Channel = 257A
Max ERP = 6 kW
RCAMSL = 139 m
N. Lat. 37 14 01.0
W. Lng. 77 22 36.0
Protected
60 dBu

Channel = 258D
Max ERP = 0.099 kW
RCAMSL = 275 m
N. Lat. 37 36 52.0
W. Lng. 77 30 56.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
325.0	006.0000	0108.9	029.4	194.2	000.0448	0210.2	018.8	53.47	
326.0	006.0000	0109.2	029.5	193.3	000.0420	0210.2	018.4	53.53	
327.0	006.0000	0109.5	029.5	192.2	000.0392	0210.0	018.0	53.54	
328.0	006.0000	0109.8	029.6	191.1	000.0362	0209.9	017.6	53.52	
329.0	006.0000	0110.3	029.6	190.0	000.0333	0210.0	017.2	53.48	
330.0	006.0000	0110.8	029.7	188.8	000.0315	0210.5	016.9	53.58	
331.0	006.0000	0111.1	029.7	187.5	000.0296	0211.4	016.5	53.65	
332.0	006.0000	0111.4	029.7	186.1	000.0277	0212.9	016.2	53.69	
333.0	006.0000	0111.7	029.8	184.6	000.0257	0214.8	015.9	53.71	
334.0	006.0000	0111.9	029.8	183.0	000.0236	0217.1	015.6	53.68	
335.0	006.0000	0112.1	029.8	181.3	000.0216	0219.5	015.3	53.60	
336.0	006.0000	0112.2	029.8	179.6	000.0199	0219.5	015.1	53.46	
337.0	006.0000	0112.3	029.9	177.7	000.0194	0219.3	014.9	53.26	
338.0	006.0000	0112.4	029.9	175.8	000.0190	0219.5	014.7	53.37	
339.0	006.0000	0112.5	029.9	173.9	000.0184	0219.4	014.5	53.44	
340.0	006.0000	0112.7	029.9	171.9	000.0179	0219.3	014.4	53.49	
341.0	006.0000	0112.8	029.9	169.9	000.0174	0219.4	014.3	53.50	
342.0	006.0000	0113.0	029.9	167.8	000.0171	0218.9	014.2	53.51	
343.0	006.0000	0113.2	030.0	165.7	000.0168	0219.2	014.1	53.51	
344.0	006.0000	0113.5	030.0	163.6	000.0164	0221.4	014.1	53.56	
345.0	006.0000	0113.7	030.0	161.4	000.0161	0225.4	014.1	53.63	
346.0	006.0000	0113.8	030.0	159.3	000.0159	0227.9	014.1	53.65	
347.0	006.0000	0113.5	030.0	157.2	000.0163	0229.5	014.2	53.67	
348.0	006.0000	0112.8	029.9	155.2	000.0166	0229.8	014.4	53.55	
349.0	006.0000	0112.5	029.9	153.3	000.0169	0228.3	014.6	53.37	
350.0	006.0000	0113.3	030.0	151.2	000.0173	0230.4	014.6	53.46	
351.0	006.0000	0113.9	030.0	149.2	000.0176	0233.0	014.7	53.51	
352.0	006.0000	0114.1	030.1	147.3	000.0179	0234.1	014.9	53.41	
353.0	006.0000	0114.4	030.1	145.4	000.0182	0234.0	015.1	53.60	
354.0	006.0000	0114.7	030.1	143.6	000.0185	0233.1	015.4	53.45	
355.0	006.0000	0114.9	030.2	141.9	000.0188	0232.3	015.6	53.27	
356.0	006.0000	0114.6	030.1	140.4	000.0191	0231.8	015.9	53.03	
357.0	006.0000	0114.7	030.1	138.9	000.0207	0231.5	016.2	53.11	
358.0	006.0000	0114.9	030.2	137.4	000.0229	0231.8	016.6	53.30	
359.0	006.0000	0114.9	030.2	136.1	000.0250	0232.1	016.9	53.39	
000.0	006.0000	0115.0	030.2	134.8	000.0271	0232.4	017.3	53.45	
001.0	006.0000	0114.8	030.1	133.6	000.0290	0232.6	017.7	53.43	
002.0	006.0000	0114.7	030.1	132.6	000.0310	0232.6	018.1	53.38	
003.0	006.0000	0114.5	030.1	131.6	000.0327	0232.7	018.5	53.27	
004.0	006.0000	0114.2	030.1	130.7	000.0344	0232.7	018.9	53.13	
005.0	006.0000	0113.9	030.0	129.8	000.0365	0232.7	019.4	53.02	
006.0	006.0000	0113.6	030.0	129.1	000.0402	0232.7	019.8	53.08	
007.0	006.0000	0113.2	030.0	128.4	000.0438	0232.5	020.3	53.06	

E1B WLFV ANALYSIS

W227DJ Richmond, VA

74.1204(d) Showing

Translator or LPFM Maximum Licensed ERP = 0.099

Translator or LPFM Antenna Height AG = 197 Meters

W227DJ Antenna Model = ERI 100A-1

Protected Station's Contour = 82.8504 dBu

Translator's or LPFM's full Interference contour 122.8504

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 1.000

Translator/LPFM ERP on the horizon at Review Azimuth = 0.099 kW

Distance between stations = 11.1 km

Protected Station= WLFV, 4.8 kW, 285 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)
00.00	1.000	1.0	0.0990	050.2687	050.2687	197.000
05.00	0.993	1.0	0.0976	049.9168	049.7269	192.649
10.00	0.974	1.0	0.0939	048.9617	048.2179	188.498
15.00	0.941	1.0	0.0877	047.3028	045.6910	184.757
20.00	0.897	1.0	0.0797	045.0910	042.3717	181.578
25.00	0.843	1.0	0.0704	042.3765	038.4062	179.091
30.00	0.78	1.0	0.0602	039.2096	033.9565	177.395
35.00	0.709	1.0	0.0498	035.6405	029.1950	176.557
40.00	0.633	1.0	0.0397	031.8201	024.3756	176.546
45.00	0.554	1.0	0.0304	027.8489	019.6921	177.308
50.00	0.473	1.0	0.0221	023.7771	015.2836	178.786
55.00	0.394	1.0	0.0154	019.8059	011.3602	180.776
60.00	0.317	1.0	0.0099	015.9352	007.9676	183.200
65.00	0.245	1.0	0.0059	012.3158	005.2049	185.838
70.00	0.181	1.0	0.0032	009.0986	003.1119	188.450
75.00	0.124	1.0	0.0015	006.2333	001.6133	190.979
80.00	0.077	1.0	0.0006	003.8707	000.6721	193.188
85.00	0.041	1.0	0.0002	002.0610	000.1796	194.947
90.00	0.016	1.0	0.0000	000.8043	000.0000	196.196

E1C WYFJ ANALYSIS

W227DJ Richmond, VA
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.099
 Translator or LPFM Antenna Height AG = 197 Meters
 W227DJ Antenna Model = ERI 100A-1

Protected Station's Contour = 81.86547 dBu
 Translator's or LPFM's full Interference contour 121.86547

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.099 kW
 Distance between stations = 7.5 km
 Protected Station= WYFJ, 6 kW, 148 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)
00.00	1.000	1.0	0.0990	056.3046	056.3046	197.000
05.00	0.993	1.0	0.0976	055.9105	055.6977	192.127
10.00	0.974	1.0	0.0939	054.8407	054.0076	187.477
15.00	0.941	1.0	0.0877	052.9827	051.1773	183.287
20.00	0.897	1.0	0.0797	050.5053	047.4594	179.726
25.00	0.843	1.0	0.0704	047.4648	043.0177	176.941
30.00	0.78	1.0	0.0602	043.9176	038.0338	175.041
35.00	0.709	1.0	0.0498	039.9200	032.7005	174.103
40.00	0.633	1.0	0.0397	035.6408	027.3025	174.091
45.00	0.554	1.0	0.0304	031.1928	022.0566	174.943
50.00	0.473	1.0	0.0221	026.6321	017.1188	176.599
55.00	0.394	1.0	0.0154	022.1840	012.7242	178.828
60.00	0.317	1.0	0.0099	017.8486	008.9243	181.543
65.00	0.245	1.0	0.0059	013.7946	005.8299	184.498
70.00	0.181	1.0	0.0032	010.1911	003.4856	187.423
75.00	0.124	1.0	0.0015	006.9818	001.8070	190.256
80.00	0.077	1.0	0.0006	004.3355	000.7528	192.730
85.00	0.041	1.0	0.0002	002.3085	000.2012	194.700
90.00	0.016	1.0	0.0000	000.9009	000.0000	196.099

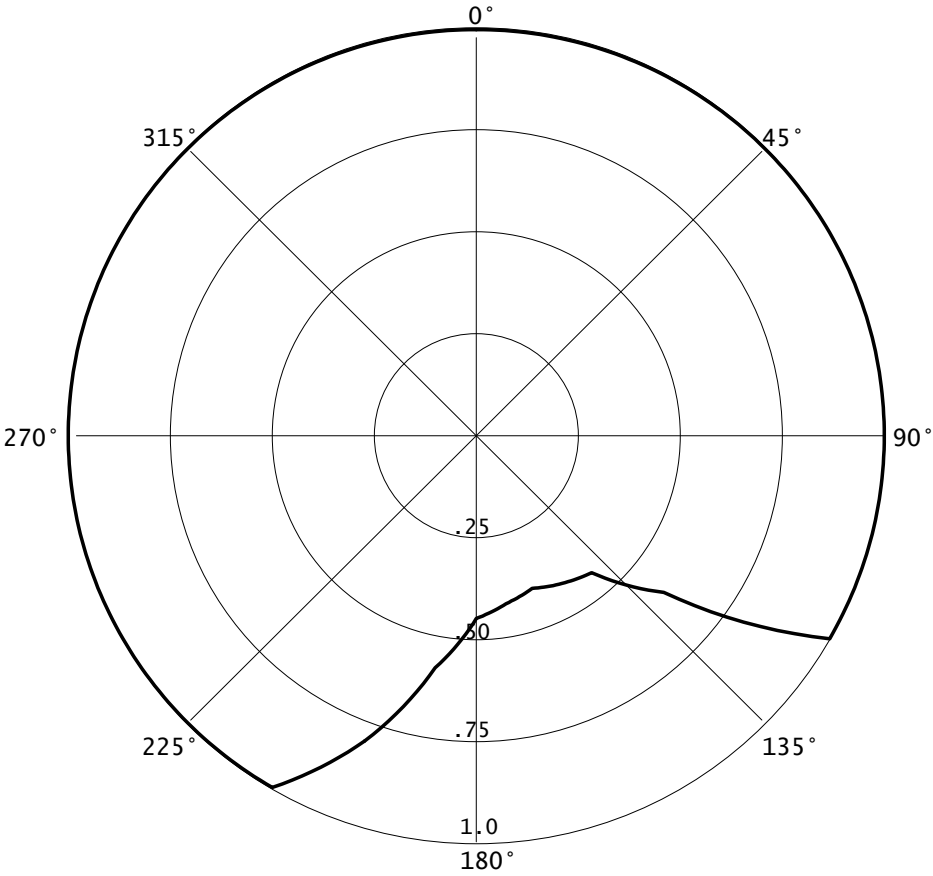
E1D AERIAL VIEW OF PROPOSED SITE



E1E DA TABULATION

Graph is Relative Field

Azi	Field	dBk	kw
000	1.000	-10.044	0.099
010	1.000	-10.044	0.099
020	1.000	-10.044	0.099
030	1.000	-10.044	0.099
040	1.000	-10.044	0.099
050	1.000	-10.044	0.099
060	1.000	-10.044	0.099
070	1.000	-10.044	0.099
080	1.000	-10.044	0.099
090	1.000	-10.044	0.099
100	1.000	-10.044	0.099
110	1.000	-10.044	0.099
120	1.000	-10.044	0.099
130	0.600	-14.481	0.036
140	0.440	-17.175	0.019
150	0.420	-17.579	0.017
160	0.400	-18.002	0.016
170	0.420	-17.579	0.017
180	0.450	-16.979	0.020
190	0.580	-14.775	0.033
200	0.800	-11.982	0.063
210	1.000	-10.044	0.099
220	1.000	-10.044	0.099
230	1.000	-10.044	0.099
240	1.000	-10.044	0.099
250	1.000	-10.044	0.099
260	1.000	-10.044	0.099
270	1.000	-10.044	0.099
280	1.000	-10.044	0.099
290	1.000	-10.044	0.099
300	1.000	-10.044	0.099
310	1.000	-10.044	0.099
320	1.000	-10.044	0.099
330	1.000	-10.044	0.099
340	1.000	-10.044	0.099
350	1.000	-10.044	0.099



W227DJ

BPFT20161027ABG

Latitude: 37-36-52 N

Longitude: 077-30-56 W

ERP: 0.099 kW

Channel: 258

Frequency: 99.5 MHz

AMSL Height: 275.0 m

Elevation: 78.0 m

Horiz. Pattern: Directional

E2 CONTOURS

AP 60 DBU

CP 60 DBU

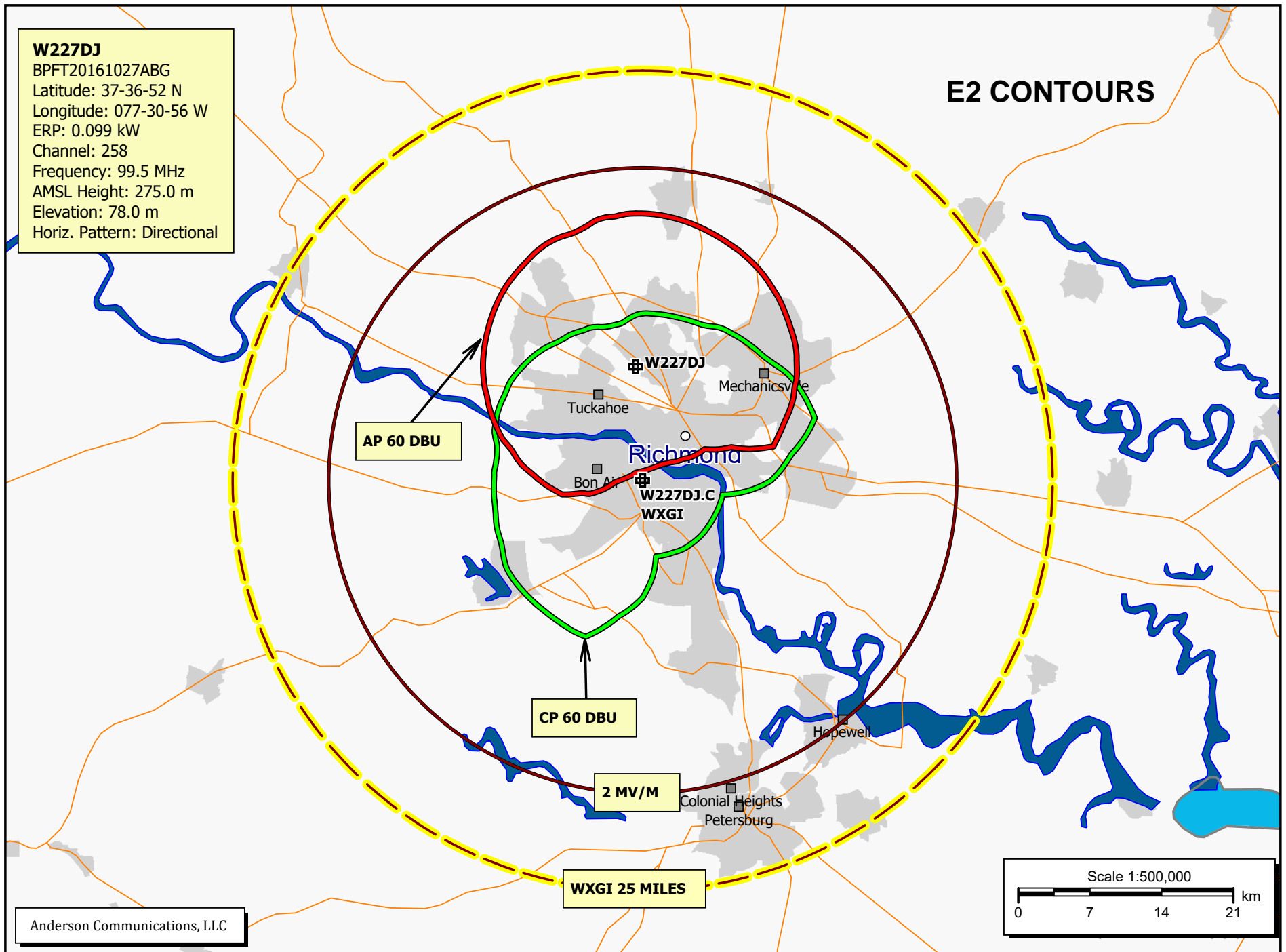
2 MV/M

WXGI 25 MILES

Anderson Communications, LLC

Scale 1:500,000

0 7 14 21 km



E3 TOWER REGISTRATION

Registration Detail

Reg Number	1026628	Status	Constructed
File Number	A0997472	Constructed	07/01/1992
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	37-36-53.0 N 077-30-55.0 W	Address	3245 BASIE ROAD
City, State	RICHMOND , VA		
Zip	23228	County	HENRICO
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
78.3	228.3
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
306.6	227.4

Painting and Lighting Specifications

FAA Chapters 4, 7, 12
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	00-AEA-4933-OE	FAA Issue Date	03/23/2001
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Owner & Contact Information

FRN	0023451453	Owner Entity Type	Limited Liability Company
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Owner

Vertical Bridge Towers, LLC	P: (561)221-0987
Attention To: FCC Contact	F:
750 Park of Commerce Drive	E: FCC-FAA@verticalbridge.com
Suite 200	
Boca Raton , FL 33487	

Contact

Lindeman , Leslie N	P: (561)221-0987
Attention To: FCC Contact	F:
750 Park of Commerce Drive	E: FCC-FAA@verticalbridge.com
Suite 200	
Boca Raton , FL 33487	

Last Action Status

Status	Constructed	Received	02/02/2016
Purpose	Notification	Entered	02/02/2016
Mode	Interactive		

Related Applications

02/02/2016	A0997472 - Notification (NT)
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Output from NADCON for station W227DJ

North American Datum Conversion

NAD 83 to NAD 27

NADCON Program Version 2.11

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Transformation #: 1 Region: Conus

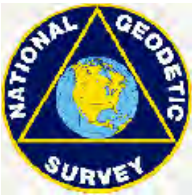
	Latitude	Longitude
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NAD 27 datum values:	37 36 52.47572	77 30 56.05211
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NAD 83 datum values:	37 36 53.00000	77 30 55.00000
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NAD 27 - NAD 83 shift values:	-0.52428	1.05211 (secs.)
	-16.164	25.803 (meters)

Magnitude of total shift: 30.448 (meters)



[NGS HOME PAGE](#)

N 37-36-52 W 77-30-56 NAD 27 ROUNDED