

**Channel Study**

REFERENCE 33 45 51.7 N. 84 21 41.7 W.		CH# 222D - 92.3 MHz, Pwr= 0.25 kW DA, HAAT= 299.2 M, COR= 577 M Average Protected F(50-50)= 22.5 km Standard Directional								DISPLAY DATES DATA 10-23-19 SEARCH 10-23-19	
CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
222D Marietta	W222AF.P!	USR D GA		199.7 19.7	0.02	33 45 51.0 84 21 42.0	0.250 299	577	---Reference---		
225C1 Atlanta	WZGC	LIC N GA		23.3 203.3	5.19 BMLH20080226ABQ	33 48 26.4 84 20 21.5	66.000 340	9.4 612	69.8 Entercom License, LLC	-20.6*<	-65.2*<
222D Marietta	W222AF!	LIC D GA		21.8 201.8	5.17 BMLFT20190710AAD	33 48 27.4 84 20 26.7	0.099	529	---Reference---		
222C0 Chattanooga	WDEF-FM	LIC TN		330.2 149.7	175.88 BMLH20050831ADG	35 08 06.3 85 19 24.9	100.000 360	191.9 743	87.7 Jackson Telecasters, Inc.	-39.1*<	18.7
222A Bostwick	WMOQ	CP D GA		91.3 271.7	74.63 BPH20170228AAS	33 44 49.4 83 33 22.6	5.900 102	83.8 324	26.1 Bostwick Broadcasting Grou	-23.3*<	1.6
220A Atlanta	WCLK	LIC N GA		23.2 203.3	5.19 BLED20130403AAI	33 48 26.4 84 20 21.7	0.480 302	1.5 588	26.2 Clark Atlanta University	-12.8*<	-21.6*<
222A Bostwick	WMOQ	LIC GA		91.3 271.7	74.63 BLH20071022BXC	33 44 49.4 83 33 22.6	3.000 100	73.0 324	22.4 Bostwick Broadcasting Grou	-12.5<	5.4
223D Lithia Springs	W223BP	LIC GA		282.4 102.2	30.19 BLFT20120313AAR	33 49 19.4 84 40 48.8	0.120 35	11.3 324	7.9 Immanuel Broadcasting Netw	-4.3<	-12.4*<
223C3 Zebulon	WEKS	LIC GA		192.4 12.3	71.00 BLH20060714AAC	33 08 20.4 84 31 30.7	12.000 145	59.1 380	39.6 Legacy Media - South Atlan	-8.7<	0.8
*223D Bainbridge	W290AS	CP D GA		322.9 142.8	29.81 BPFT20160728AFT	33 58 41.4 84 33 24.8	0.250 429	3.4 429	2.3 Educational Media Foundati	3.3	-7.0*<
*223D Lithia Springs	W223BP.P	USR D GA		290.2 110.0	37.44	33 52 47.4 84 44 29.7	0.001 57	3.4 362	2.4 10.7		0.1
222L1 Sugarhill	WESI-LP	LIC GA		22.7 202.8	60.21 BLL20170111AAS	34 15 52.3 84 06 29.6	0.100 29	381	25.2 Iglesia De Cristo Elim Geo		1.2
221A Carrollton	WBTR-FM	CP GA		250.1 69.8	64.69 BPH20170228AAQ	33 33 54.4 85 01 01.8	1.650 194	39.4 498	26.2 Wyai, Inc.	3.0	5.3
223D Lawrenceville	W223CQ	LIC GA		48.6 228.8	37.44 BLFT20190221AAJ	33 59 12.0 84 03 25.0	0.250	17.5 366	12.0 Radio Training Network, In	5.0	3.1
221A Jackson	WJGA-FM	LIC D GA		145.8 326.0	65.34 BLH20180813AAK	33 16 37.4 83 57 58.7	5.500 105	39.6 300	25.8 Earnhart Broadcasting Co.,	4.5	8.1
221A Carrollton	WBTR-FM	LIC GA		250.1 69.8	64.69 BLH19861029KC	33 33 54.3 85 01 01.7	0.580 194	30.6 498	20.7 Wyai, Inc.	11.9	10.8

Terrain database is FCC NGDC 30 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.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtlt(Y,N,X)  
\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
< = Station meets FCC minimum distance spacing for its class.  
< = Contour Overlap

\*Note: The facility contemplated herein is being filed contingently with an application for W223BP, Lithia Springs, GA according to the guidelines of 47 C.F.R. 73.3517(e). The proposed contingent facilities are marked with a "P" following the call sign. Also, W290AS is being dismissed as part of this filing.

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WZGC, channel 225C1, Atlanta, GA. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W222AF.P:	250 watts
The proposed COR for W222AF.P:	280 meters
WZGC F(50/50) contour at proposed site:	107.9 dBu
The F(50/10) contour of proposed W222AF.P	147.9 dBu
The predicted distance to WZGC interference contour:	4.4 meters

The signal is predicted to not reach the ground or any regularly occupied area.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

Exhibit 13-B

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= -39.14 km, Out= 18.72 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

WDEF-FM CH 222 C0 BMLH20050831ADG  
Lat= 35 08 06.3, Lng= 85 19 24.9  
100.0 kW 360 m HAAT, 743 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

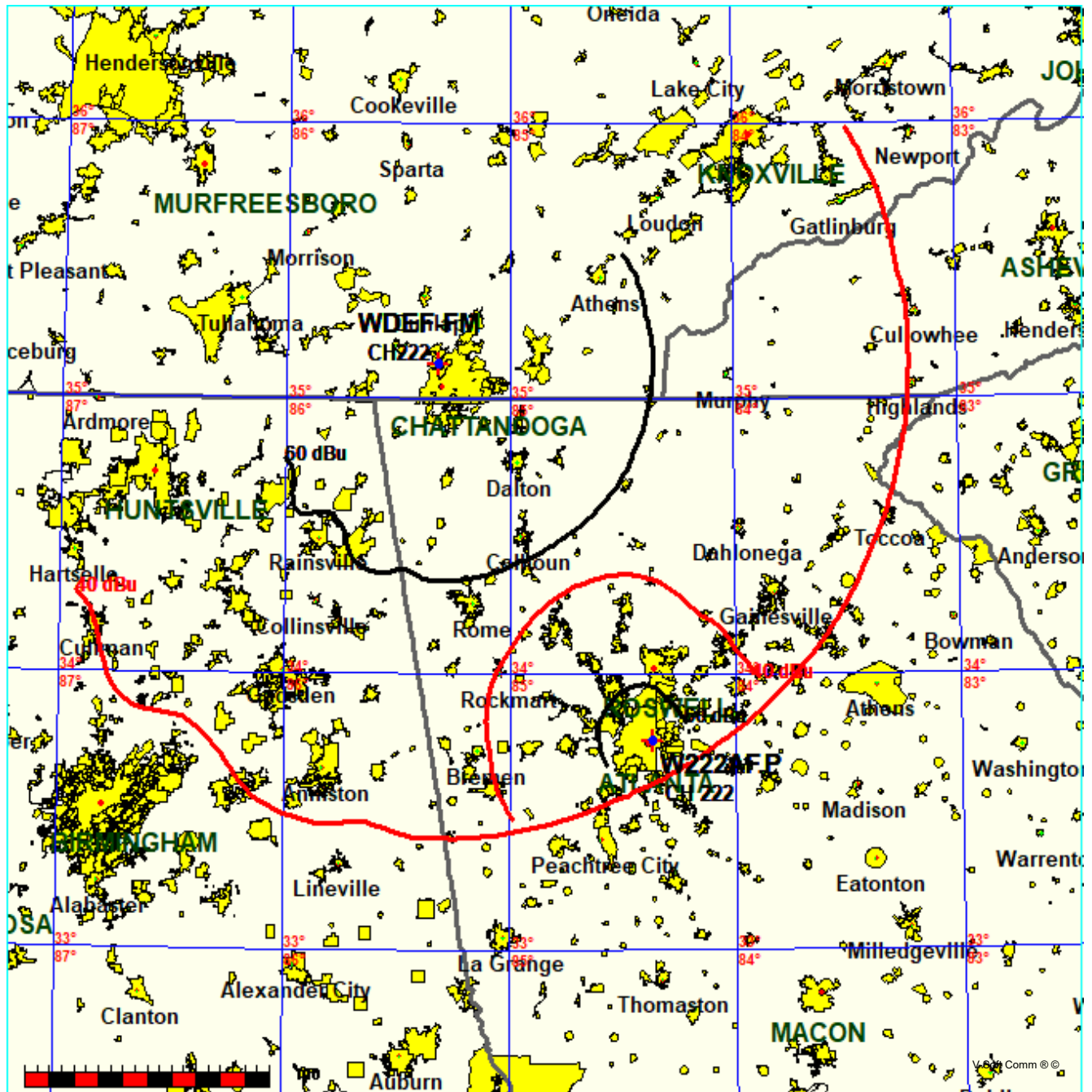
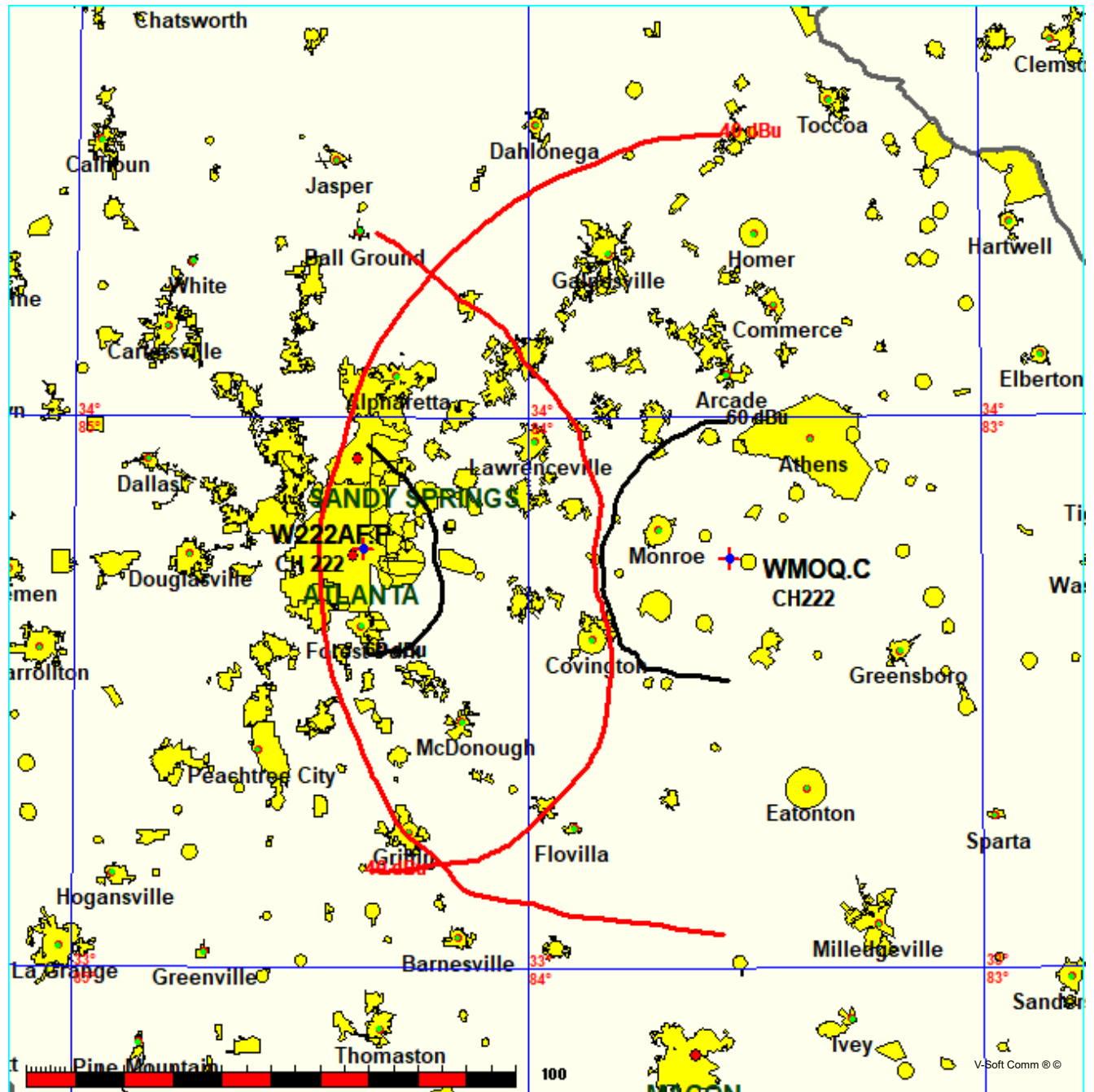


Exhibit 13-C

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= -23.28 km, Out= 1.64 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

WMOQ-C CH 222 A DA BPH20170228AAS  
Lat= 33 44 49.4, Lng= 83 33 22.6  
5.9 kW 102 m HAAT, 324 m COR  
Prot.= 60 dBu, Intef.= 40 dBu



**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WCLK, channel 220A, Atlanta, GA. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W222AF.P:	250 watts
The proposed COR for W222AF.P:	280 meters
WCLK F(50/50) contour at proposed site:	86.3 dBu
The F(50/10) contour of proposed W222AF.P	106.3 dBu
The predicted distance to W222AF.P interference contour:	p54.0 meters

The signal is predicted to not reach the ground or any regularly occupied area.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

Exhibit 13-E

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= -12.51 km, Out= 5.36 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

WMOQ CH 222 A BLH20071022BXC  
Lat= 33 44 49.4, Lng= 83 33 22.6  
3.0 kW 100 m HAAT, 324 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

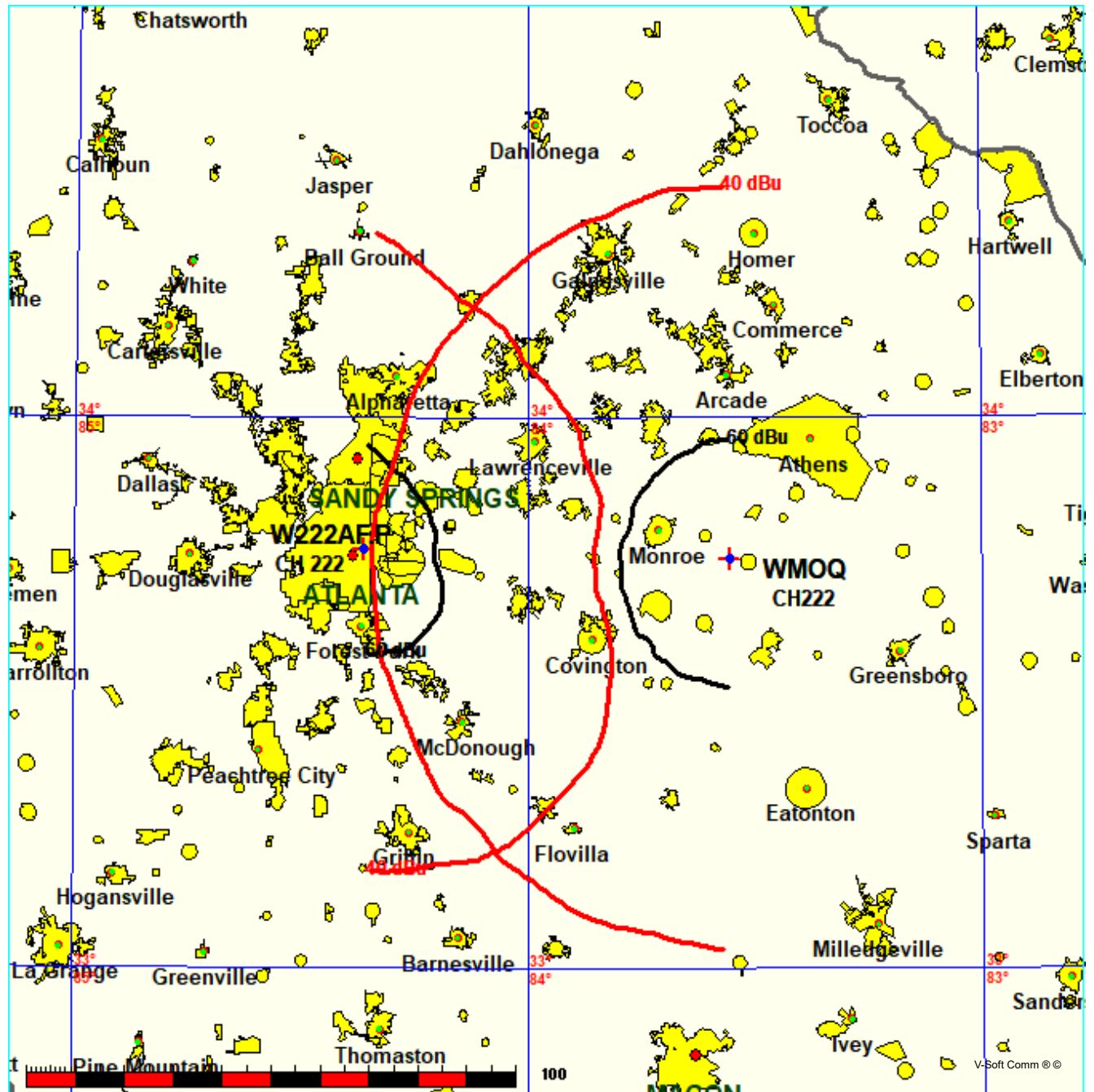


Exhibit 13-F

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= -8.7 km, Out= 0.85 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

WEKS CH 223 C3 BLH20060714AAC  
Lat= 33 08 20.4, Lng= 84 31 30.7  
12.0 kW 145 m HAAT, 380 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

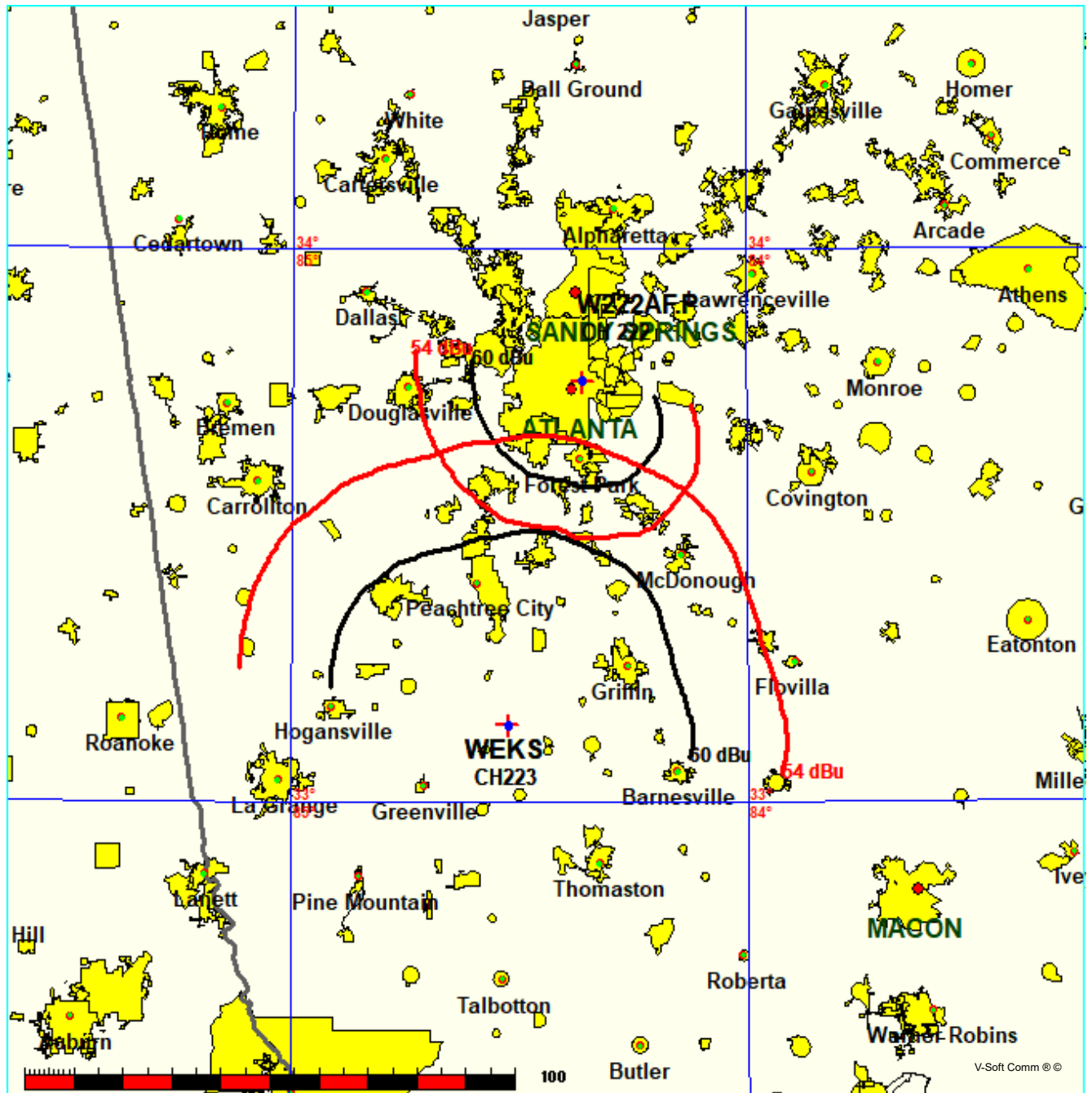




Exhibit 13-G

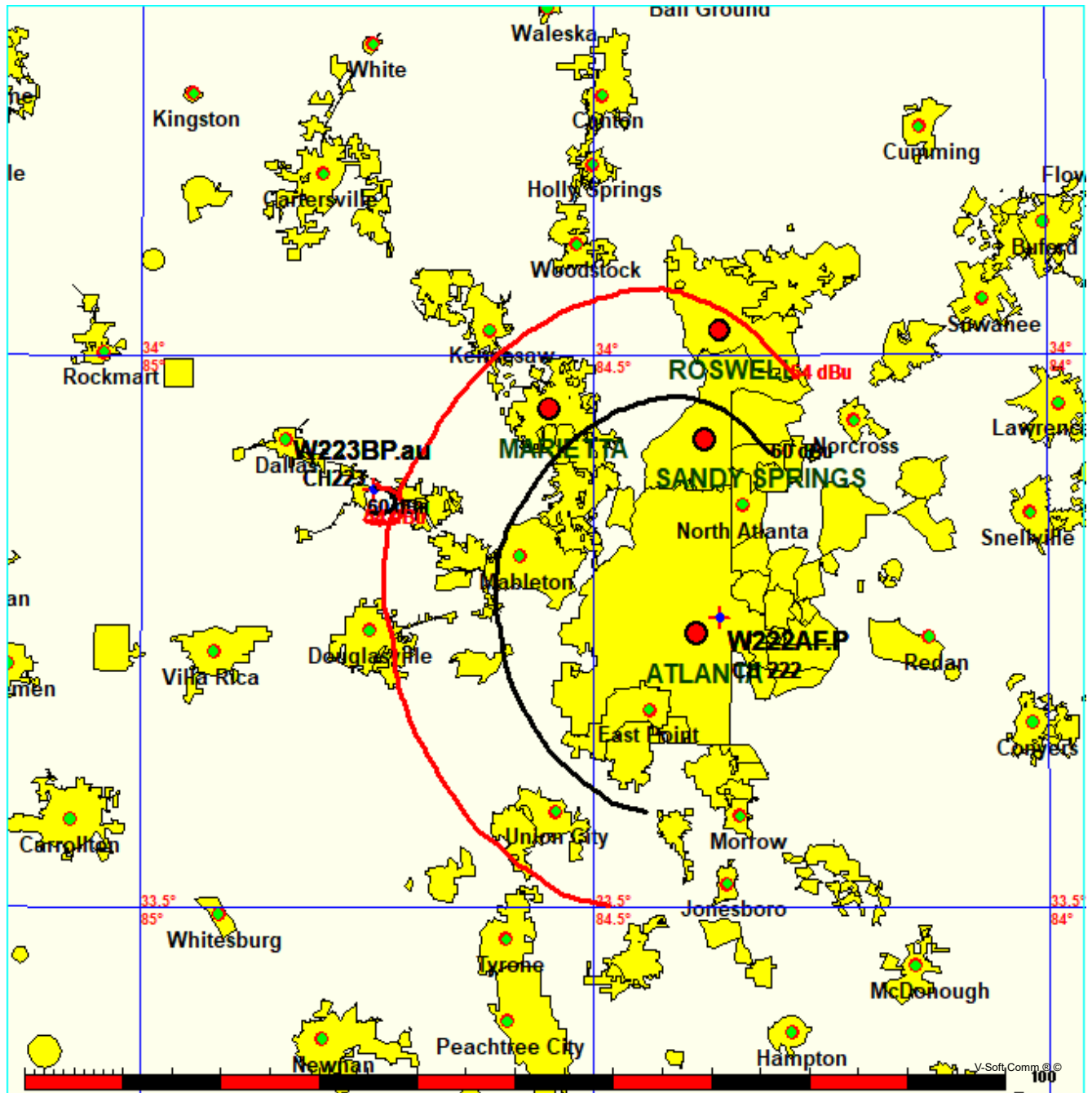
FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= 11.37 km, Out= 0.61 km)

W222AF.P CH 222 D DA

Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

W223BP CH 223 D DA

Lat= 33 52 47.4, Lng= 84 44 29.7  
0.001 kW 56.9 m HAAT, 362 m COR  
Prot.= 60 dBu, Intef.= 54 dBu





# Exhibit 13-G1

Marietta, GA

## W222AF.P vs. W223BP.P

10-24-2019

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

W223BP

Channel = 223D  
Max ERP = 0.001 kW  
RCAMSL = 362 m  
N. Lat. 33 52 47.4  
W. Lng. 84 44 29.7  
Protected  
60 dBu

W222AF.P

Channel = 222D  
Max ERP = 0.25 kW  
RCAMSL = 577 m  
N. Lat. 33 45 51.7  
W. Lng. 84 21 41.7  
Interfering  
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
080.0	000.0000	0083.7	000.2	290.4	000.2500	0321.0	037.3	52.91	
081.0	000.0000	0084.4	000.2	290.4	000.2500	0321.0	037.3	52.91	
082.0	000.0000	0084.4	000.2	290.3	000.2500	0321.0	037.3	52.91	
083.0	000.0000	0084.7	000.2	290.3	000.2500	0321.0	037.3	52.91	
084.0	000.0000	0084.9	000.2	290.4	000.2500	0321.0	037.2	52.92	
085.0	000.0000	0084.9	000.3	290.4	000.2500	0321.0	037.2	52.93	
086.0	000.0000	0084.7	000.3	290.4	000.2500	0321.0	037.2	52.95	
087.0	000.0000	0084.5	000.3	290.4	000.2500	0321.0	037.1	52.96	
088.0	000.0000	0084.2	000.4	290.4	000.2500	0321.0	037.1	52.97	
089.0	000.0000	0084.2	000.4	290.4	000.2500	0321.0	037.0	53.01	
090.0	000.0000	0084.4	000.5	290.5	000.2500	0321.0	037.0	53.05	
091.0	000.0000	0084.6	000.6	290.5	000.2500	0321.0	036.9	53.09	
092.0	000.0000	0084.7	000.7	290.5	000.2500	0321.0	036.8	53.13	
093.0	000.0000	0084.5	000.8	290.5	000.2500	0321.0	036.7	53.17	
094.0	000.0000	0084.5	000.9	290.6	000.2500	0321.0	036.6	53.22	
095.0	000.0000	0084.3	001.0	290.6	000.2500	0321.0	036.5	53.27	
096.0	000.0000	0084.5	001.1	290.6	000.2500	0321.0	036.4	53.32	
097.0	000.0000	0085.0	001.2	290.6	000.2500	0321.0	036.2	53.38	
098.0	000.0000	0085.2	001.3	290.6	000.2500	0321.0	036.1	53.43	
099.0	000.0000	0085.1	001.5	290.6	000.2500	0321.0	036.0	53.51	
100.0	000.0001	0085.2	001.6	290.6	000.2500	0321.0	035.9	53.56	
101.0	000.0001	0085.7	001.6	290.6	000.2500	0321.0	035.8	53.57	
102.0	000.0001	0086.4	001.6	290.6	000.2500	0321.0	035.8	53.57	
103.0	000.0001	0086.4	001.6	290.5	000.2500	0321.0	035.8	53.57	
104.0	000.0001	0086.2	001.6	290.5	000.2500	0321.0	035.9	53.54	
105.0	000.0001	0086.2	001.6	290.4	000.2500	0321.0	035.8	53.57	
106.0	000.0001	0086.7	001.7	290.4	000.2500	0321.0	035.8	53.60	
107.0	000.0001	0088.3	001.7	290.3	000.2500	0321.0	035.7	53.63	
108.0	000.0002	0089.8	001.8	290.3	000.2500	0321.0	035.6	53.66	
109.0	000.0002	0090.9	001.8	290.2	000.2500	0321.0	035.6	53.69	
110.0	000.0002	0091.3	001.9	290.2	000.2500	0321.0	035.5	53.71	
111.0	000.0002	0090.8	001.9	290.1	000.2500	0321.0	035.5	53.73	
112.0	000.0002	0090.3	002.0	290.1	000.2500	0321.0	035.5	53.74	
113.0	000.0002	0090.1	002.0	290.0	000.2500	0321.0	035.4	53.76	
114.0	000.0002	0090.5	002.0	290.0	000.2500	0321.1	035.4	53.78	
115.0	000.0002	0091.1	002.1	289.9	000.2500	0321.1	035.4	53.80	
116.0	000.0003	0091.6	002.1	289.8	000.2500	0321.1	035.3	53.82	
117.0	000.0003	0092.1	002.2	289.8	000.2500	0321.1	035.3	53.83	
118.0	000.0003	0092.7	002.2	289.7	000.2500	0321.1	035.3	53.85	
119.0	000.0003	0093.8	002.2	289.6	000.2500	0321.2	035.2	53.87	
120.0	000.0003	0094.9	002.3	289.5	000.2500	0321.2	035.2	53.89	
121.0	000.0003	0095.5	002.3	289.5	000.2500	0321.3	035.2	53.90	
122.0	000.0004	0095.2	002.4	289.4	000.2500	0321.3	035.1	53.91	

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Marietta, GA

123.0	000.0004	0094.6	002.4	289.3	000.2500	0321.3	035.1	53.92
124.0	000.0004	0094.3	002.4	289.2	000.2500	0321.4	035.1	53.93
125.0	000.0004	0094.7	002.4	289.2	000.2500	0321.4	035.1	53.94
126.0	000.0004	0095.2	002.5	289.1	000.2500	0321.5	035.1	53.95
127.0	000.0005	0095.2	002.5	289.0	000.2500	0321.5	035.1	53.96
128.0	000.0005	0094.9	002.5	288.9	000.2500	0321.6	035.0	53.96
129.0	000.0005	0094.5	002.5	288.8	000.2500	0321.6	035.0	53.97
130.0	000.0005	0094.0	002.6	288.8	000.2500	0321.7	035.0	53.97
131.0	000.0005	0093.1	002.6	288.7	000.2500	0321.7	035.0	53.97
132.0	000.0006	0092.0	002.6	288.6	000.2500	0321.7	035.0	53.97
133.0	000.0006	0090.8	002.6	288.5	000.2500	0321.8	035.1	53.97
134.0	000.0006	0089.7	002.6	288.5	000.2500	0321.8	035.1	53.96
135.0	000.0006	0088.8	002.6	288.4	000.2500	0321.8	035.1	53.96
136.0	000.0006	0088.1	002.6	288.3	000.2500	0321.8	035.1	53.95
137.0	000.0006	0087.2	002.7	288.2	000.2500	0321.9	035.1	53.95
138.0	000.0007	0086.0	002.7	288.2	000.2500	0321.9	035.1	53.94
139.0	000.0007	0084.7	002.7	288.1	000.2500	0321.9	035.1	53.93
140.0	000.0007	0083.6	002.7	288.0	000.2500	0321.9	035.2	53.92
141.0	000.0007	0082.5	002.7	288.0	000.2500	0321.9	035.2	53.91
142.0	000.0007	0081.3	002.7	287.9	000.2500	0321.9	035.2	53.90
143.0	000.0008	0080.1	002.7	287.8	000.2500	0321.9	035.2	53.89
144.0	000.0008	0079.5	002.7	287.8	000.2500	0321.9	035.3	53.88
145.0	000.0008	0079.9	002.7	287.7	000.2500	0321.9	035.3	53.87
146.0	000.0008	0081.0	002.7	287.6	000.2500	0321.9	035.3	53.87
147.0	000.0008	0081.7	002.7	287.5	000.2500	0322.0	035.3	53.86
148.0	000.0008	0081.9	002.8	287.4	000.2500	0322.0	035.3	53.85
149.0	000.0009	0081.7	002.8	287.4	000.2500	0322.0	035.3	53.84
150.0	000.0009	0080.9	002.8	287.3	000.2500	0322.0	035.4	53.82
151.0	000.0009	0079.2	002.8	287.3	000.2500	0322.0	035.4	53.80
152.0	000.0009	0076.6	002.7	287.2	000.2500	0322.0	035.5	53.78
153.0	000.0009	0073.7	002.7	287.2	000.2500	0322.0	035.5	53.75
154.0	000.0009	0071.4	002.7	287.2	000.2500	0322.0	035.6	53.73
155.0	000.0009	0069.7	002.7	287.2	000.2500	0322.0	035.6	53.71
156.0	000.0009	0068.6	002.6	287.1	000.2500	0322.0	035.7	53.69
157.0	000.0009	0067.7	002.6	287.1	000.2500	0321.9	035.7	53.67
158.0	000.0010	0066.5	002.6	287.1	000.2500	0321.9	035.7	53.65
159.0	000.0010	0065.0	002.6	287.0	000.2500	0321.9	035.8	53.62
160.0	000.0010	0063.6	002.6	287.0	000.2500	0321.9	035.8	53.60
161.0	000.0010	0062.9	002.6	287.0	000.2500	0321.9	035.9	53.58
162.0	000.0010	0062.9	002.6	286.9	000.2500	0321.9	035.9	53.57
163.0	000.0010	0063.1	002.6	286.9	000.2500	0321.9	035.9	53.55
164.0	000.0010	0063.0	002.6	286.8	000.2500	0321.9	036.0	53.53
165.0	000.0010	0062.3	002.6	286.8	000.2500	0321.9	036.0	53.51
166.0	000.0010	0061.9	002.6	286.8	000.2500	0321.9	036.1	53.49
167.0	000.0010	0062.0	002.6	286.7	000.2500	0321.9	036.1	53.47
168.0	000.0010	0062.1	002.6	286.7	000.2500	0321.9	036.1	53.46
169.0	000.0010	0061.9	002.6	286.7	000.2500	0321.9	036.2	53.44

Exhibit 13-H

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= 25.2 km, Out= 1.17 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

WESI-LP CH 222 L1 BLL20170111AAS  
Lat= 34 15 52.3, Lng= 84 06 29.6  
0.1 kW 29 m HAAT, 381 m COR  
Prot.= 60 dBu, Intef.= 40 dBu

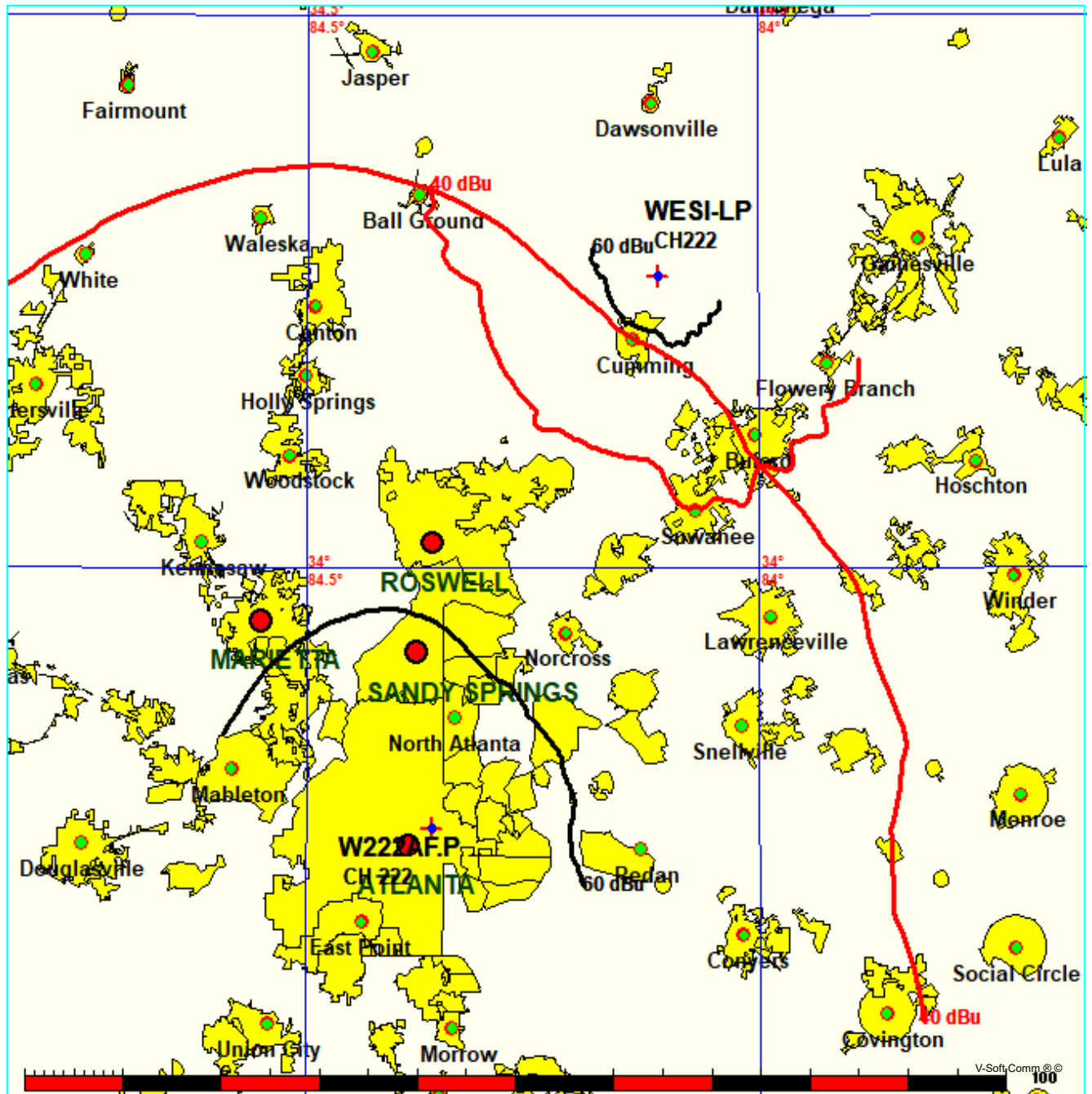


Exhibit 13-I

FMCommander Single Allocation Study - 10-24-2019 - FCC NGDC 30 Sec  
W222AF.P's Overlaps (In= 2.97 km, Out= 5.28 km)

W222AF.P CH 222 D DA  
Lat= 33 45 51.7, Lng= 84 21 41.7  
0.25 kW 299.2 m HAAT, 577 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

WBTR-FM CH 221 A BPH20170228AAQ  
Lat= 33 33 54.4, Lng= 85 01 01.8  
1.65 kW 194 m HAAT, 498 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

