

TECHNICAL NARRATIVE

This Technical Statement and attached exhibits were prepared on behalf of Ploener Radio Group, LLC (“Ploener”) licensee of WFDR-FM Channel 233A, Facility ID No. 171035, Woodbury, Georgia. Ploener herein proposes to modify the license of WFDR-FM to operate from a different transmit location.

Ploener is proposing to implement this change at an existing tower site. As such, the Federal Aviation Administration will not be apprised of this proposal. The coordinates of the proposed application site are 32° 51' 06.8" North Latitude, 84° 42'-05.5" West Longitude (NAD 83). The existing tower is 336.0 meters in overall height and is registered with the Commission and assigned Antenna Structure Registration (ASR) No. 1018795.

The application site Channel Study for WFDR-FM on Channel 233A shows one short-spacing to an existing full power FM station. The proposed WFDR-FM application site is short spaced to station WJOX-FM, Channel 233C0, Birmingham, Alabama. WFDR-FM proposes to adopt Section 73.215 contour protection with respect to WJOX-FM. The proposed WFDR-FM facility would operate with 0.360 kW ERP non-directional at 271 meters above ground level and 401.46 meters HAAT.

The FCC F(50,50) 70 dBu contour does not reach 80 percent of the Woodbury corporate limits. Therefore a Section 73.315 Supplemental Showing using the Longley-Rice methodology is provided to demonstrate city grade coverage. The attached exhibit includes a map clearly showing the proposed WFDR-FM FCC F(50,50) 60 dBu contour reaches 100 percent of the

Woodbury corporate limits. The Longley-Rice 70 dBu mean occurrence contour also extends well beyond Woodbury. Longley-Rice signal shading also shows that 100 percent of Woodbury receives a signal strength of 74 dBu or greater. Therefore, should 4 dB of Urban Clutter be applied to the Longley-Rice signal strength, the proposed WFDR-FM facility easily meets that criteria.

A study has been undertaken and an exhibit included demonstrating that the proposed WFDR-FM facility is in compliance with the Commission's environmental and radio frequency emission limits.

WFDR-FM @ ASR #1018795

REFERENCE							DISPLAY DATES	
32 51 06.8 N.		CLASS = A Int = A					DATA	06-18-22
84 42 05.5 W.		Current Spacings to 3rd Adj.					SEARCH	06-18-22
----- Channel 233 - 94.5 MHz -----								
Call	Channel	Location		Azi	Dist	FCC	Margin	
Lat.	Lng.	Ant	Power		HAAT			
WFDR-FM	LIC 233A	Woodbury		GA 96.3	7.3	114.5	-107.2	
32 50 40.5	84 37 24.7	CN	1.900 kW		181 M			
	Ploener Radio Group, LLC		BLH20150507AAA					
WJOX-FM	LIC-N 233C0	Birmingham		AL 289.3	211.5	214.5	-3.0	
33 27 45.4	86 50 59.0	NCN	100.000 kW		309 M			
	Radio License Holding Cbc,		BLH20000929AEE					
Note: Adopt Section 73.215 contour protection with respect to WJOX-FM								
WGZZ	LIC-N 232A	Waverly		AL 260.4	75.7	71.5	4.2	
32 44 11.0	85 29 54.0	NCN	4.200 kW		120 M			
	Auburn Network, Inc.		BLH20100511ACX					
WGZZ	RSV 232A	Waverly		AL 257.7	76.5	71.5	5.0	
32 42 11.5	85 29 54.8		0.000 kW		100 M			
	From CDBS							
WLEL	LIC-N 232A	Ellaville		GA 146.3	79.8	71.5	8.3	
32 15 10.6	84 13 49.7	NCN	4.800 kW		100 M			
	Summer Rose Broadcasting		BLH20090326ADU					
WGZZ	APP-Z 232A	Waverly		AL 255.8	82.1	71.5	10.6	
32 40 03.5	85 33 00.8	ZCN	2.600 kW		155 M			
	Auburn Network, Inc.		BPH20170720AAN					
W234BX	LIC 234D	Highland Pines		GA 217.6	47.6	33.5	14.1	
32 30 45.0	85 00 41.0	CN	0.220 kW	0 M				
	Radio Training Network, In		BLFT20150922ACZ					
WSTR	LIC 231C0	Smyrna		GA 17.6	104.0	85.5	18.5	
33 44 41.0	84 21 35.7	CN	100.000 kW		316 M			
	Audacy License, LLC		BLH20180301AAS					
W233BF	LIC 233D	Atlanta		GA 17.6	104.0	84.5	19.5	
33 44 41.4	84 21 35.7	CN	0.166 kW	0 M				
	Core Communicators Broadca		BLFT20190919AAX					
AL5038	RSV 231C0	Smyrna		GA 18.5	106.3	85.5	20.8	
33 45 35.4	84 20 06.7		0.000 kW		450 M			
	From CDBS		RM10983					
W231AO	LIC-D 231D	Columbus		GA 217.6	47.6	25.5	22.1	
32 30 45.0	85 00 41.0	DCN	0.099 kW	0 M				
	Radio Training Network, In		BLFT20180702ABI					
WDEC-FM	LIC 234C3	Americus		GA 161.0	111.9	88.5	23.4	
31 53 52.5	84 18 52.6	CN	25.000 kW		100 M			
	Sumter Broadcasting Co., I		BLH19960401KA					
WBYZ	LIC 233C0	Baxley		GA 118.7	242.8	214.5	28.3	
31 47 06.7	82 26 57.5	CN	100.000 kW		309 M			
	South Georgia Broadcasters		BMLH20070403ABX					

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
WUBL	LIC 235C1	Atlanta		GA 17.5	111.2	74.5	36.7
33 48 26.4	84 20 21.5	CN	80.000 kW		330 M		
	Ihm Licenses, LLC		BLH20131218COP				
WMGB	LIC-N 236C2	Montezuma		GA 109.8	96.2	54.5	41.7
32 33 20.5	83 44 13.7	NCN	46.000 kW		119 M		
	Cumulus Licensing LLC		BLH20010810AAD				
WRDG	LIC-N 287C1	Bowdon		GA 349.2	63.2	21.5	41.7
33 24 41.4	84 49 47.8	NCN	61.000 kW		367 M		
	Ihm Licenses, LLC		BLH20020220AAB				
W234BQ	LIC 234D	Auburn		AL 299.7	75.3	33.5	41.8
33 11 07.4	85 24 13.8	CN	0.155 kW	0 M			
	Eagle's Nest Inc.		BLFT20150520AAL				

WFDR-FM Channel 233A Woodbury, Georgia
FCC Section 73.315 Supplemental Showing
City Grade Coverage of Woodbury

This Supplemental Showing is based upon the standards established in the FCC DA-10-1760 Skytower Communications decision. A supplemental showing using the Longley-Rice mean occurrence 70 dBu contour is used to show city coverage of Woodbury, GA. The Longley-Rice contour was calculated using the standard settings established in OET Bulletin No. 69. The contour was created using V-Soft Probe Version 4.118 Professional. The specific Longley-Rice software settings are listed on the coverage map in the upper left hand corner of the map.

A table is included showing the distances to the FCC 70 dBu contour and Longley-Rice mean occurrence 70 dBu contour for eight radials between 34 and 41 degrees true azimuth that cross over Woodbury. The radials are clearly shown on a separate map included with this exhibit. The supplemental showing clearly establishes that the Longley-Rice 70 dBu median occurrence contours along the radials that cross the corporate boundaries of Woodbury are more than 10% greater than the FCC F(50,50) 70 dBu contours.

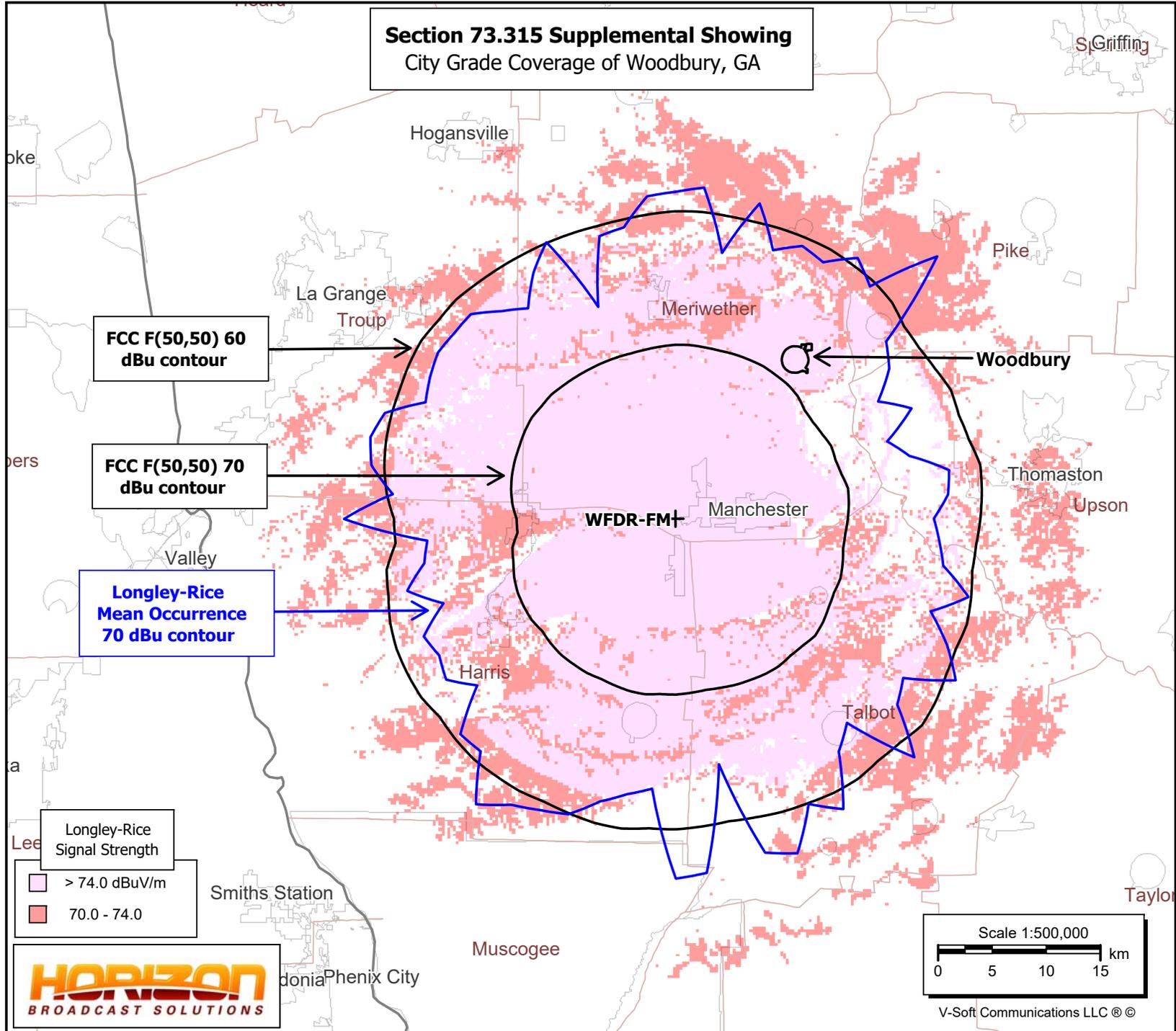
The attached map shows the FCC F(50,50) 60 dBu and 70 dBu contours as well as the Longley Rice 70 dBu median occurrence contour. 100 percent of Woodbury is contained in the FCC F(50,50) 60 dBu contour. The Longley-Rice 70 dBu median occurrence contour reaches 100 percent of the area and population of Woodbury. The Longley-Rice 74 dBu or greater signal area is shaded in pink. 100 percent of Woodbury receives a Longley-Rice signal of 74 dBu or greater.

Longley-Rice signal shading of 74 dBu is shown in pink shading on the map (74 dBu - 4 dB of Urban Clutter loss = 70 dBu). There are no terrain obstructions. Therefore, it is believed Urban Clutter is not required. However, in an abundance of caution, 4 dBu of Urban Clutter is assumed. 100 percent of Woodbury receives a Longley-Rice 74 dBu or greater signal strength.

Therefore, it is believed that this proposed the WFDR-FM Channel 233A modification is in compliance with the Section 73.315 community coverage rules.

WFDR-FM
 Woodbury, GA
 BLH20150507AAA
 Latitude: 32-51-06.80 N
 Longitude: 084-42-05.50 W
 ERP: 0.36 kW
 HAAT: 401.46
 Channel: 233
 Frequency: 94.5 MHz
 AMSL Height: 669.0 m
 Elevation: 398.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: Longley-Rice
 Climate: Cont temperate
 Conductivity: 0.0050
 Dielec Const: 15.0
 Refractivity: 311.0
 Receiver Ht AG: 9.1 m
 Receiver Gain: 0 dB
 Time Variability: 50.0%
 Sit. Variability: 50.0%
 ITM Mode: Broadcast

Section 73.315 Supplemental Showing
 City Grade Coverage of Woodbury, GA

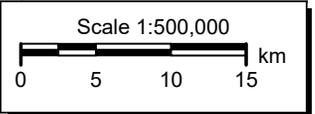


**FCC F(50,50) 60
 dBu contour**

**FCC F(50,50) 70
 dBu contour**

**Longley-Rice
 Mean Occurrence
 70 dBu contour**

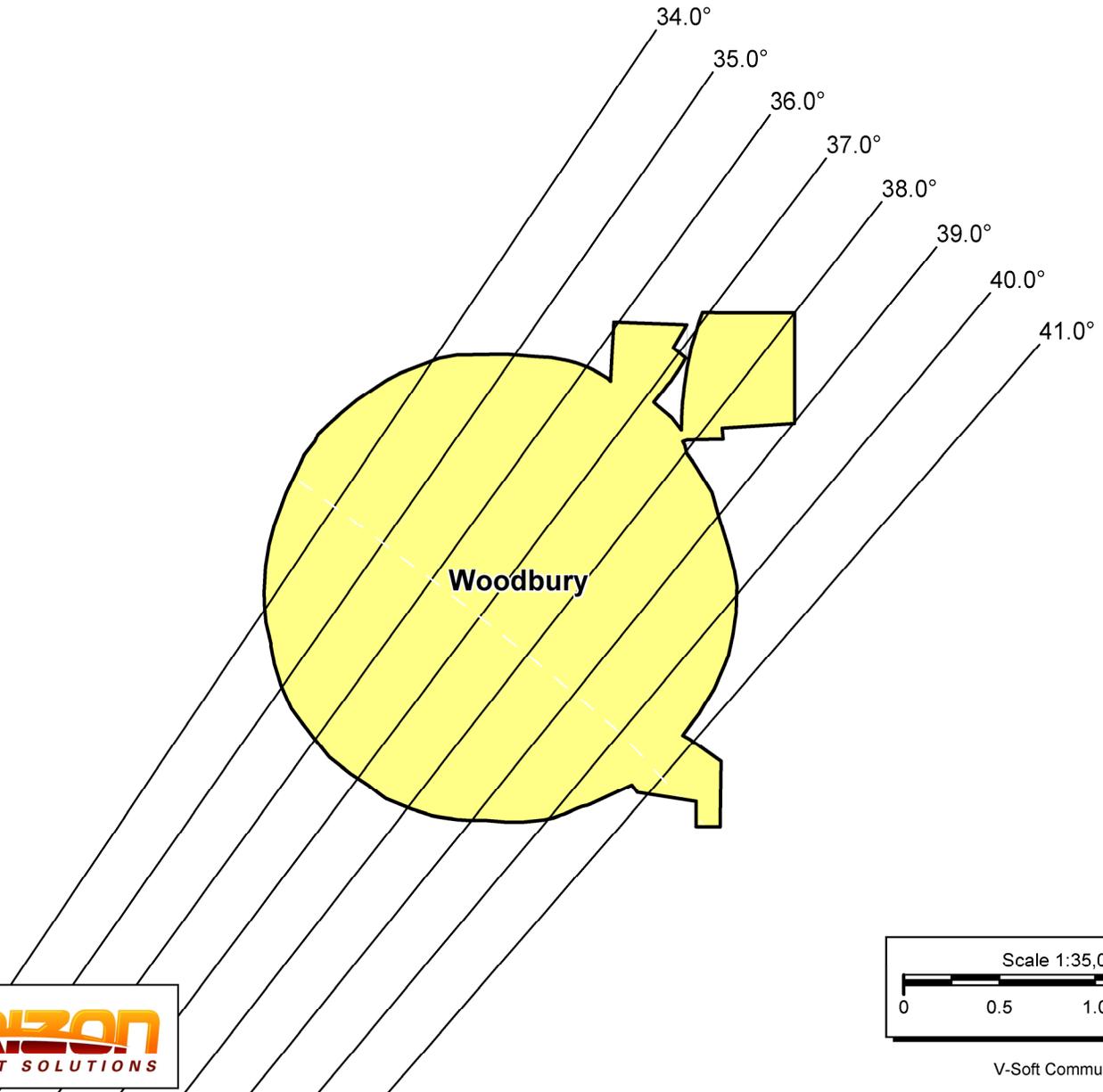
Longley-Rice
 Signal Strength
 > 74.0 dBuV/m
 70.0 - 74.0



V-Soft Communications LLC ©

WFDR-FM
Woodbury, GA
BLH20150507AAA
Latitude: 32-51-06.80 N
Longitude: 084-42-05.50 W
ERP: 0.36 kW
HAAT: 401.46
Channel: 233
Frequency: 94.5 MHz
AMSL Height: 669.0 m
Elevation: 398.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 73.315 Supplemental Showing
City Grade Coverage of Woodbury, GA
(A total of 8 radials cross Woodbury)



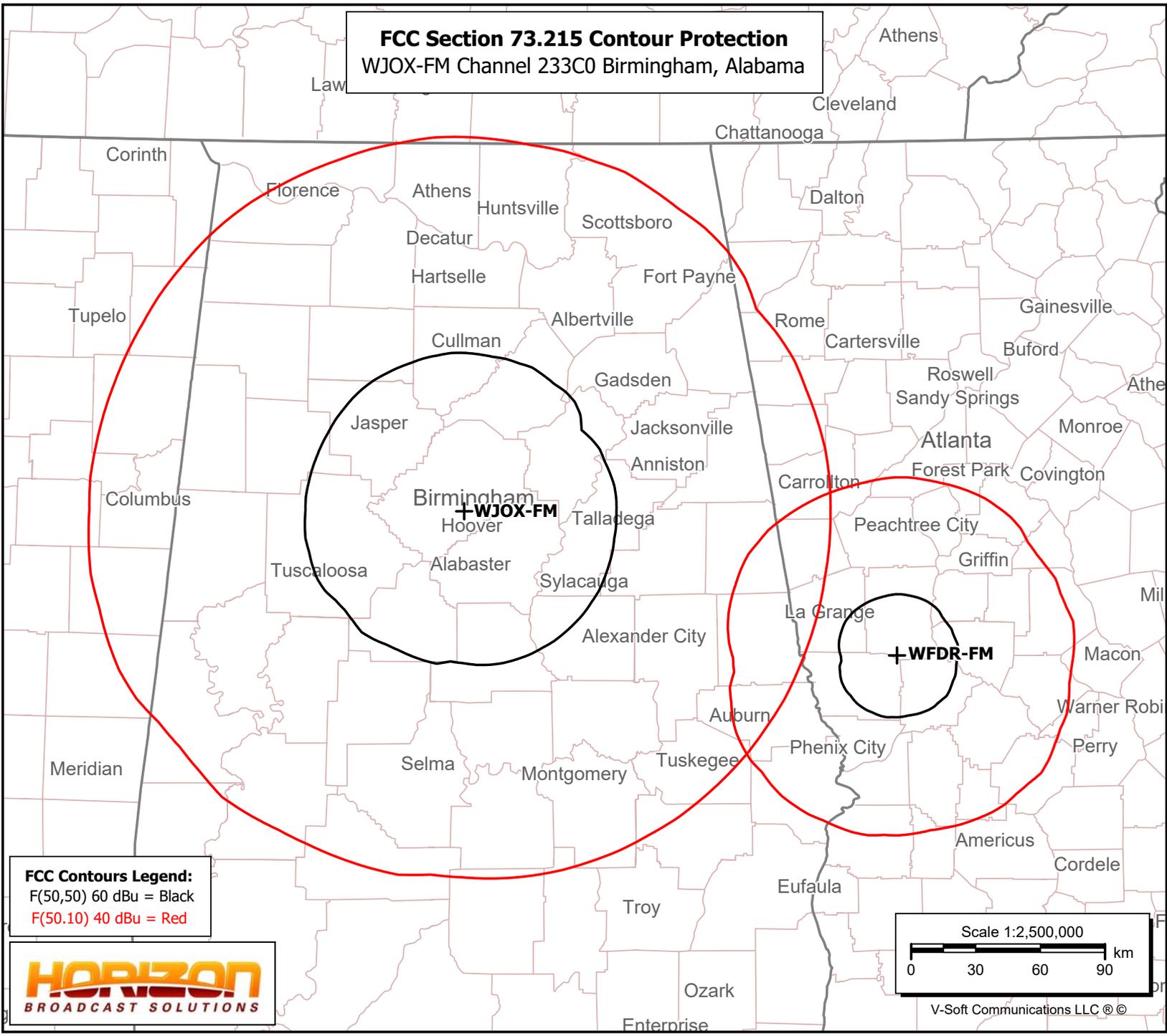
Section 73.315 Supplemental Coverage Showing
 WFDR-FM Channel 233A Woodbury, GA
 Comparison of FCC F(50,50) 70 dBu contour distance
 vs.
 Longley-Rice Mean Occurrence 70 dBu Contour
 (8 radials which cross Woodbury are shown)

Site:	WFDR-FM Channel 233A Woodbury, GA				
Coordinates:	32-51-06.8 N ~ 84-42-05.5 W				
Freq:(MHz)	94.5				
ERP:(kW)	0.36				
HAAT:(m)	401.46				
Bearing (degrees)	ERP kW	HAAT (m)	FCC F(50,50) 70 dBu Distance (km)	Longley-Rice 70 dBu Mean Occurrence Contour Distance (km)	Percentage Increase
34	0.360	407	16.10	28.90	79.5%
35	0.360	407	16.10	29.30	82.0%
36	0.360	407	16.10	29.00	80.1%
37	0.360	407	16.10	28.80	78.9%
38	0.360	407	16.10	28.50	77.0%
39	0.360	407	16.10	28.20	75.2%
40	0.360	407	16.10	27.90	73.3%
41	0.360	402	16.00	29.20	82.5%
Avg.	0.360	406.4	16.09	28.73	62.8%

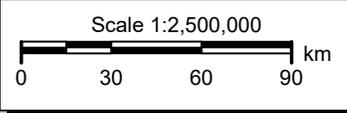
WFDR-FM
 Woodbury, GA
 BLH20150507AAA
 Latitude: 32-51-06.80 N
 Longitude: 084-42-05.50 W
 ERP: 0.36 kW
 HAAT: 401.46
 Channel: 233
 Frequency: 94.5 MHz
 AMSL Height: 669.0 m
 Elevation: 398.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%
 HAAT Mthd: FCC

WJOX-FM
 Birmingham, AL
 BLH20000929AEE
 Latitude: 33-27-45.40 N
 Longitude: 086-50-59 W
 ERP: 100.00 kW
 HAAT: 309.0
 Channel: 233
 Frequency: 94.5 MHz
 AMSL Height: 491.0 m
 Elevation: 287.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: FCC Model
 Loc. Variability: 50.0%
 Time Variability: 50.0%
 HAAT Mthd: FCC

FCC Section 73.215 Contour Protection
 WJOX-FM Channel 233C0 Birmingham, Alabama



FCC Contours Legend:
 F(50,50) 60 dBu = Black
 F(50,10) 40 dBu = Red



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**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Ploener Radio Group, LLC ("Ploener") licensee of WFDR-FM Channel 233A, Facility ID No. 171035, Woodbury, Georgia seeks to modify the license of WFDR-FM to operate from a different transmit location. The transmitting site will be an existing tower 336 meters in overall height with ASR Registration number 1018795. The tower is located at 32° 51' 06.8 N ~ 82° 42' 05.5" W (NAD 83). The proposed antenna is a side mounted Shively Model 6832 two bay half wave spaced antenna with a center of radiation of 271 meters AGL. WFDR-FM will operate with 0.360 kW ERP at 401.46 meters HAAT. Because WFDR-FM proposes to operate from an existing tower and no modifications are being made to the tower, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The Shively antenna is included in the Commission's FM Model for Windows program under Type Two, Opposed "V" dipole. Using EPA Type 2 as the EPA Element, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 0.035 $\mu\text{W}/\text{cm}^2$ at 501 meters, which is 0.017 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

FM Model

Radio Frequency Safety

[FCC Policy on Human Exposure](#)

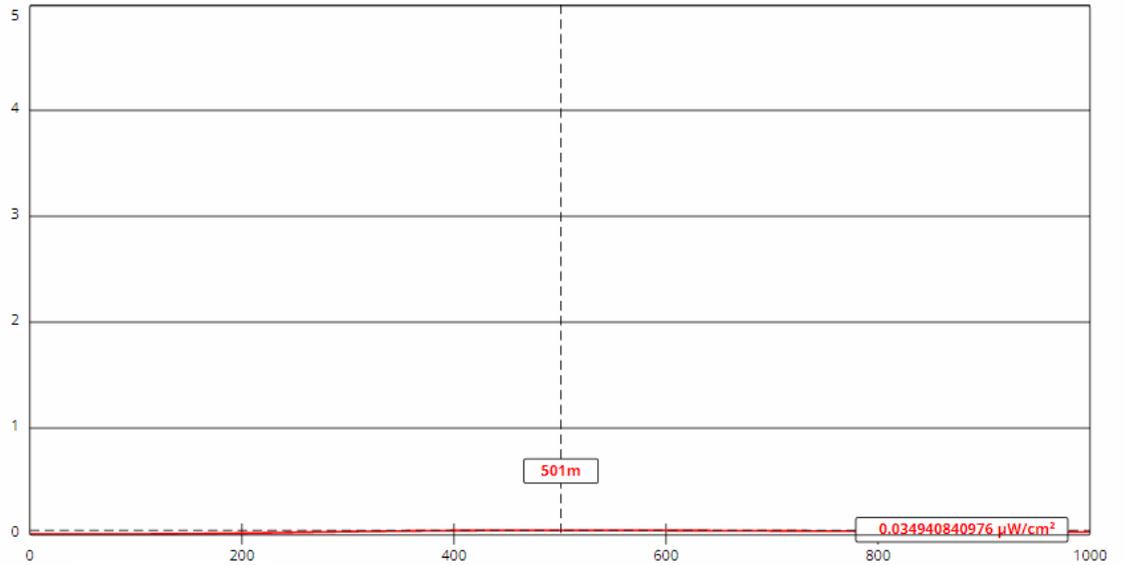
[RF Safety FAQ](#)

[Body Tissue Dielectric Parameters](#)

[RF Safety Highlighted Releases](#)

FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA. [Show More....](#)



[View Tabular Results +](#)

Channel Selection	Channel 233 (94.5 MHz) ▼		
Antenna Type +	EPA Type 2: Opposed V Dipole ▼		
Height (m)	<input type="text" value="271"/>	Distance (m)	<input type="text" value="1000"/>
ERP-H (W)	<input type="text" value="360"/>	ERP-V (W)	<input type="text" value="360"/>
Num of Elements	<input type="text" value="2"/>	λ	<input type="text" value="0.5"/>
Num of Points	<input type="text" value="2000"/>	<input type="button" value="Apply"/>	