

**Technical Report  
W284DO.CP Minor Modification**

**Contingent Application With W286DP**

This application requesting minor changes for the W284DO.CP (BNPFT-20180809ABI) is filed simultaneously and contingent with an application for W286DP whereby the two authorized facilities exchange channels, in each case to their 2<sup>nd</sup> adjacent channel. These changes are required to facilitate the timely construction of both facilities at the permittee's owned tower sites prior to the CPs expiration.

The W284DO.CP modifications include a change to second adjacent channel 286 with corresponding changes in tower site, COR AGL, antenna and ERP. The translator will serve as a fill-in facility to rebroadcast WMXV(FM) 268A at St. Joseph, TN, FCC facility I.D. no. 6709.

**W284DO.CP Modification Analysis:**

An overlap study in exhibit E-1 shows the W284DO.CP modification to channel 286D produces an interference overlap to W286DP.CP at Florence, AL. However, a contingent application to move W286DP.CP to the second adjacent channel 284 at a new site eliminates the interference overlap (exhibit E-2). The 60 dBu F(50-50) contour overlaps the current CP 60 dBu contour and is contained within the 60 dBu contour of the primary WMXV(FM) facility (exhibit E-3).

**Antenna System:**

The W284DO.CP modification will be located on the existing 122.8 meter tower, ASR no. 1257554, at coordinates:

**34 55 47.8N 087 31 44.3W NAD 83.**

A Scala FMV single bay, directional antenna rotated at a 270 degree azimuth (exhibit E-4) will be mounted at a COR AGL of 97.5 meters, 326.1 meters AMSL, 115 meter HAAT (exhibit E-5) and operate at 0.250 kW ERP.

**RF Exposure Calculation:**

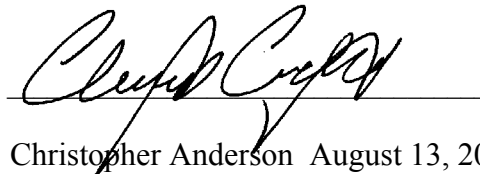
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

Using a worst case vertical (F) factor of 1.0, the RF is calculated to be 0.916  $\mu\text{W}/\text{cm}^2$  to the ground, which is less than 5% of the 200  $\mu\text{W}/\text{cm}^2$  maximum permissible for general public exposure allowing exclusion from consideration.

**Conclusion:**

It is concluded that the W284DO.CP modification complies with all Commission rules and policies.



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# E-1 W284DO.CP Mod. 286D Overlap Study

REFERENCE 34 55 47.80 N. 87 31 44.30 W.		CH# 286D - 105.1 MHz, Pwr= 0.25 kW DA, HAAT= 115.0 M, COR= 326.1 M Average Protected F(50-50)= 13.78 km Standard Directional										DISPLAY DATES DATA 08-13-21 SEARCH 08-13-21	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)		
286D Florence	W286DP	CP	DCN AL	215.3 35.3	23.63 BMPFT20180918AAM	34 45 23.30 87 40 43.10	0.250	41.6 247	11.4 Singing River Media Group,	-32.8*	-38.4*	(1)	
286C2 Waverly	WOWQ	LIC	_CN TN	355.8 175.7	129.36 BLH19890619KB	36 05 25.20 87 38 05.10	50.000 150	139.1 355	53.3 Consolidated Media LLC	-22.9*	32.9		
285C2 Iuka	WKZU	LIC	_CN MS	258.1 77.6	80.78 BLH19900827KB	34 46 35.30 88 23 40.10	50.000 135	76.5 290	50.6 Jc Media LLC	-10.5	7.8		
284D Florence	W284DO	CP	_CN AL	237.6 57.5	13.51 BNPFT20180809ABI	34 51 53.30 87 39 14.10	0.250	213	---Reference---				
288A Muscle Shoals	WVNA-FM	LIC	_CN AL	210.7 30.6	33.03 BLH20040304ACS	34 40 27.30 87 42 48.10	4.400 118	2.9 297	30.9 Singing River Media Group,	14.8	1.0		
286D Athens	W286DF	CP	_CN AL	108.5 288.8	49.20 0000113312	34 47 19.20 87 01 04.30	0.250	37.3 274	10.9 Southern Broadcasting LLC	1.4	2.4		
288A Muscle Shoals	WVNA-FM	CP	NCN AL	211.5 31.4	32.93 0000112065	34 40 38.00 87 43 02.00	1.600 190	2.4 375	30.2 Singing River Media Group,	15.3	1.7		
286C2 Waverly	WVWB/WOWQ	APP	ZCN TN	357.0 176.9	152.60 0000145248	36 18 02.20 87 37 09.70	50.000 150	133.8 333	47.6 Consolidated Media LLC	5.7	62.9		
287D Lawrenceburg	W287AA	LIC	_CN TN	27.1 207.2	40.63 BLFT20170717ABR	35 15 18.30 87 19 30.10	0.250	23.7 385	14.1 Roger W. Wright DbA/ Prosp	7.1	10.7		
286D Ardmore	W286DF	LIC	_CN TN	83.3 263.7	61.70 BLFT20180817AAZ	34 59 35.30 86 51 22.00	0.250	27.7 255	7.9 Southern Broadcasting LLC	24.8	18.1		
285D Priceville	W285EN	LIC	_CN AL	127.0 307.4	71.66 BLFT20111109AQK	34 32 24.80 86 54 15.30	0.250 45	13.7 232	9.9 Somerville Baptist Church	46.9	45.8		
289A Addison	WQAH-FM	LIC	_CN AL	148.9 329.1	80.84 BLH20140129AAJ	34 18 24.30 87 04 25.00	4.500 115	2.9 356	31.3 Abercrombie Broadcasting F	65.7	48.1		

Terrain database is FCC 30 meter, 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)  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
« = Station meets FCC minimum distance spacing for its class.

(1) A contingent application for W286DP.CP site move and change to channel 284D clears interference overlap to the current CP facility (exhibit E-2).

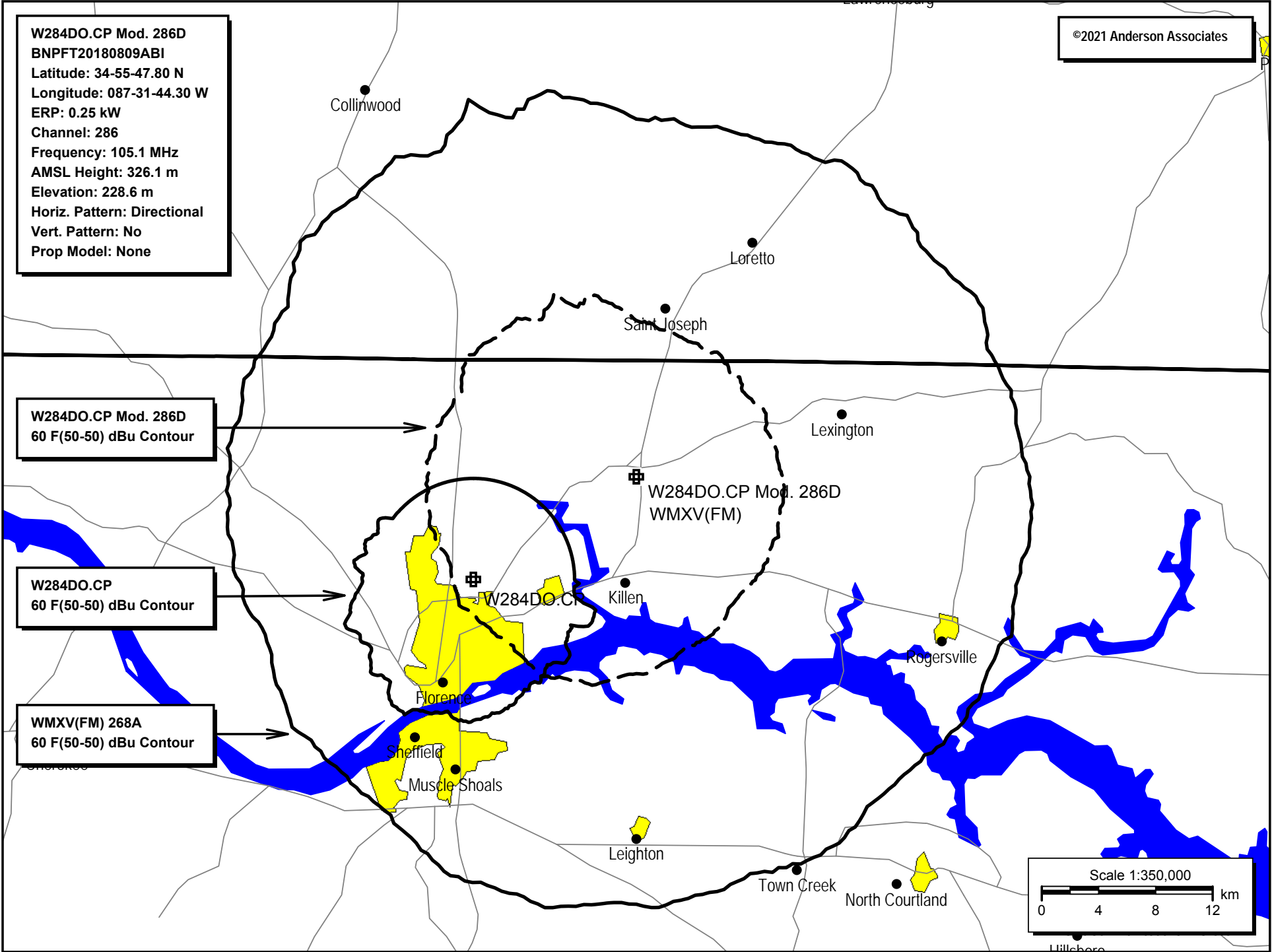
## E-2 W284DO Overlap Study With W286DP Contingent Application Parameters

REFERENCE 34 55 47.80 N. 87 31 44.30 W.		CH# 286D - 105.1 MHz, Pwr= 0.25 kW DA, HAAT= 126.8 M, COR= 326.1 M Average Protected F(50-50)= 14.45 km Standard Directional								DISPLAY DATES DATA 08-12-21 SEARCH 08-13-21	
CH CI TY	CALL	TYPE ANT STATE	AZI <--	DI ST FI LE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LI CENSEE	*IN* (Overl ap in km)	*OUT*	
286C2	WOWQ Waverly	LI C _CN TN	355.8 175.7	129.36 BLH19890619KB	36 05 25.20 87 38 05.10	50.000 150	139.8 355	53.9 Consolidated Medi a LLC	-23.5*	31.2	
285C2	WKZU Iuka	LI C _CN MS	258.1 77.6	80.78 BLH19900827KB	34 46 35.30 88 23 40.10	50.000 135	76.2 290	50.3 Jc Medi a LLC	-10.4	7.7	
284D	W284DO Florence	CP _CN AL	237.6 57.5	13.50 BNPFT20180809ABI	34 51 53.30 87 39 14.10	0.250	1.1 213	7.1 Si ngi ng Ri ver Medi a Group,	-2.8*	5.3	
286D	W286DF Athens	CP _CN AL	108.5 288.8	49.20 0000113312	34 47 19.20 87 01 04.30	0.250	38.4 274	11.3 Southern Broadcasting LLC	-0.1	1.4	
288A	WVNA-FM Muscle Shoals	LI C _CN AL	210.7 30.6	33.03 BLH20040304ACS	34 40 27.30 87 42 48.10	4.400 118	2.9 297	31.4 Si ngi ng Ri ver Medi a Group,	14.7	0.6	
288A	WVNA-FM Muscle Shoals	CP NCN AL	211.5 31.4	32.93 0000112065	34 40 38.00 87 43 02.00	1.600 190	2.4 375	30.4 Si ngi ng Ri ver Medi a Group,	15.2	1.4	
286C2	WVWB/WOWQ Waverly	APP ZCN TN	357.0 176.9	152.60 0000145248	36 18 02.20 87 37 09.70	50.000 150	134.3 333	48.4 Consolidated Medi a LLC	5.3	61.2	
287D	W287AA Lawrenceburg	LI C _CN TN	27.1 207.2	40.63 BLFT20170717ABR	35 15 18.30 87 19 30.10	0.250	23.9 385	14.5 Roger W. Wright Db a/ Prosp	6.7	10.3	
284D	W286DP Florence	CP DCN AL	211.5 31.4	32.90 BMPFT20180918AAM	34 40 38.00 87 43 02.00	0.080 148	0.6 247	12.9 Si ngi ng Ri ver Medi a Group,	16.9	19.0	(1)
286D	W286DF Ardmore	LI C _CN TN	83.3 263.7	61.70 BLFT20180817AAZ	34 59 35.30 86 51 22.00	0.250	27.0 255	8.0 Southern Broadcasting LLC	24.4	17.2	

Terrain database is 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= 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.

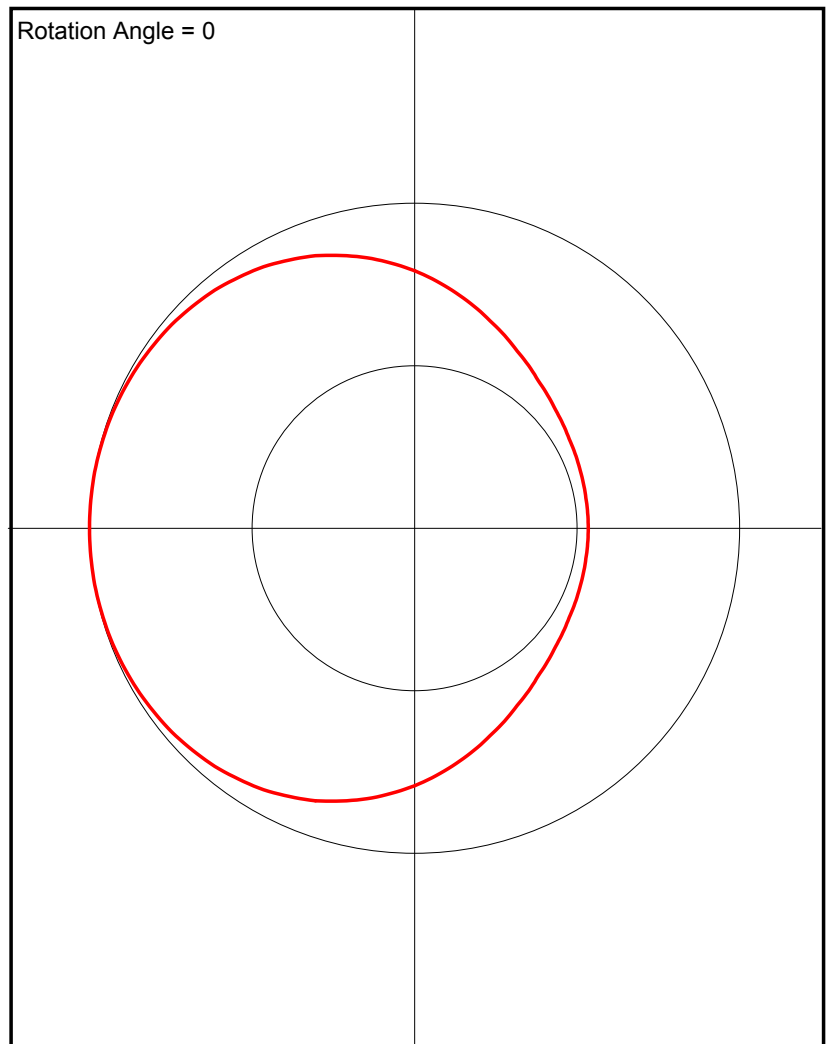
(1) W286DP on channel 284 with parameters from contingent application demonstrating clearance between the two applications.

E-3 W284DO.CP Mod. 286D 60 F(50-50) dBu Contour Plot



## E-4 Directional Antenna Pattern

Azimuth (deg)	Relative Field
0.0	0.792
10.0	0.735
20.0	0.679
30.0	0.63
40.0	0.592
50.0	0.566
60.0	0.549
70.0	0.54
80.0	0.535
90.0	0.534
100.0	0.535
110.0	0.54
120.0	0.549
130.0	0.566
140.0	0.592
150.0	0.63
160.0	0.679
170.0	0.735
180.0	0.792
190.0	0.845
200.0	0.892
210.0	0.929
220.0	0.956
230.0	0.975
240.0	0.987
250.0	0.995
260.0	0.999
270.0	1.0
280.0	0.999
290.0	0.995
300.0	0.987
310.0	0.975
320.0	0.956
330.0	0.929
340.0	0.892
350.0	0.845



## Antenna Height Above Average Terrain Calculations -- Results

### Input Data

Latitude    **34° 55' 47.8"** North  
Longitude   **87° 31' 44.3"** West   (NAD 83)

Height of antenna radiation center above mean sea level: **326.1** meters ~~AMSL~~

Number of Evenly Spaced Radials = **12**      0° is referenced to True North

### Results

Calculated HAAT = **115 meters**

Antenna Height Above Average Terrain calculated  
using 1 km [GLOBE terrain data](#)

### Individual "Radial HAAT" Values, in meters

0°	90.3 m
30°	95.0 m
60°	94.5 m
90°	107.4 m
120°	118.6 m
150°	129.4 m
180°	140.9 m
210°	141.1 m
240°	124.5 m
270°	119.6 m
300°	116.4 m
330°	102.0 m

## Registration 1257554

### Registration Detail

Reg Number	1257554	Status	Constructed
File Number	A1177001	Constructed	12/10/2007
EMI	No	Dismantled	
NEPA	No		

### Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

#### Location (in NAD83 Coordinates)

Lat/Long	34-55-47.8 N 087-31-44.3 W	Address	0.18 mi. NE of intersection of US 43 and SR 64
City, State	Killen , AL		
Zip	35645	County	LAUDERDALE
Center of AM Array		Position of Tower in Array	

#### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
228.6	122.8
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
351.4	121.9

#### Painting and Lighting Specifications

FAA Chapters 4, 8, 12  
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

#### FAA Notification

FAA Study	2007-ASO-7003-OE	FAA Issue Date	12/11/2007
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#### Owner & Contact Information

FRN	0027930635	Owner Entity Type	Limited Liability Company
Assignor FRN	0005016209	Assignor ID	L00542146

#### Owner

Singing River Media Group LLC	P: (256)412-8210
Attention To: Mike Self	F:
509 North Main St	E: radio7933@aol.com
Tuscumbia , AL 35674	

#### Contact

Williams , Robert	P: (205)294-0500
Attention To: Robert Williams	F:
509 North Main St	E: robert2@bellsouth.net
Tuscumbia , AL 35674	

#### Last Action Status

Status	Constructed	Received	10/28/2020
Purpose	Change Owner	Entered	10/27/2020
Mode	Interactive		