

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of full-power digital television station WFBD-DT, Channel 29 in Destin, Florida, in support of its application for modification of Construction Permit LMS-0000182313, which authorizes operation with a Distributed Transmission System (DTS) comprised of two single-frequency network (SFN) nodes and a new DTS reference site. The purpose of this application is to specify a different transmitter site and effective antenna height for the DTS-2 node that will serve Mobile, Alabama. No change in the DTS-1 node or in the newly authorized DTS reference site is specified herein.

**AUTHORIZED DTS REFERENCE COORDINATES**

In the above-referenced Construction Permit, the Commission granted a change in the reference coordinates for the authorized WFBD-DT DTS facility. The new reference site coordinates are 30-53-32.5 N, 87-05-08.1 W (NAD83). No change in these coordinates is specified herein.

**DESTIN NODE (WFBD-DT DTS-1)**

It is proposed to utilize the licensed WFBD-DT facility (LMS-0000131443) as the primary facility for the DTS operation. It is important to note that, as a result, no "loss area" continues to be created by the instant application. No change in the authorized WFBD-DT transmitter site, effective radiated power, antenna pattern or antenna height is proposed herein. It is intended to use the authorized Dielectric directional horizontally-polarized slotted cylinder

antenna, which is mounted at the 326.8-meter level of an existing 336.5-meter tower. The effective radiated power for the facility is 704 kW in the horizontal plane.

It should be noted that the licensed WFBD-DT facility (now proposed DTS-1) exceeds the power/height limits for a UHF station, as set forth in Section 73.622(f)(8)(i) of the Commission's Rules. However, since the area within the WFBD-DT F(50,90) service contour, as authorized in LMS-0000131443 comprises 24,274 square kilometers, and it is smaller than that of the WEAR-TV authorized service contour (47,876 square kilometers), it means that the WFBD-DT DTS-1 facility proposed herein continues to meet the requirements of Section 73.622(f)(5) of the Rules, which stipulates that the Commission's power/height limitations of Section 73.622(f)(8)(i) can be exceeded as long as the coverage area of the proposed operation does not exceed that of the largest station in the same market.

Below are operating parameters for the Destin DTS-1 node.

Site coordinates: 30-5-52.4 N, 86-43-13.1 W (NAD83)

Site elevation: 44.2 meters AMSL

Overall tower height: 336.5 meters AMSL

FCC Antenna Structure Registration Number: 1315368

Antenna height above ground: 326.8 meters

Antenna height above mean sea level: 371.0 meters

Antenna height above average terrain: 312.0 meters

Antenna make/model: Dielectric TFU-24DSC-R S200

FCC Antenna ID Number: 1007775

Antenna orientation: 240 degrees true

Line of symmetry: 240 degrees true

Electrical beam tilt: 0.5 degrees

Effective radiated power: 704 kW

EXHIBIT A

Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Destin, Florida, is completely encompassed by the proposed 48 dBu city-grade service contour. Azimuth and elevation pattern data for the existing antenna is provided in Exhibit C. A power density calculation appears as Exhibit D.

Since no change in the overall height or location of the existing WFBD-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1315368 to this tower.

**MOBILE NODE (WFBD-DT DTS-2)**

It is proposed to install a Dielectric directional panel antenna at the 200-meter level of an existing 577.3-meter tower located 12.3 kilometers northeast of Robertsdale, Alabama. The effective radiated power this DTS-2 node remains 80 kW (H), as presently authorized.

Below are operating parameters for the proposed Mobile, Alabama DTS-2 node.

Site coordinates: 30-36-41.0 N, 87-36-26.4 W (NAD83)

Site elevation: 32.3 meters AMSL

Overall structure height: 577.3 meters AMSL

FCC Antenna Structure Registration Number: 1064671

Antenna height above ground: 200 meters

Antenna height above mean sea level: 232.3 meters

Antenna height above average terrain: 191.6 meters

Antenna make/model: Dielectric TUL-C1-6/6M-1-K Panel

FCC Antenna ID Number: 1009245

Antenna orientation: 295 degrees

Electrical beam tilt: 0.75 degrees

Effective radiated power: 80.0 kW

EXHIBIT A

Exhibit E is a map upon which we have plotted the predicted service contours of the Mobile DTS node. Azimuth and elevation pattern data for the proposed Dielectric antenna are provided in Exhibit F, and a detailed power density calculation appears in Exhibit G.

Since no change in the overall height or location of the existing communications tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1064671 to this tower.

**PROPOSAL MEETS THE REQUIREMENTS OF THE FCC'S DTS RULES**

The newly proposed WFBD-DT Channel 29 facility meets all of the requirements of Section 73.626(f) of the Commission's DTS Rules based on the following analysis.

Exhibit H is a map on which we have plotted the noise-limited, dipole-adjusted 40.23 dBu F(50,90) coverage contours of the two SFN nodes in the DTS facility. As shown, each node's contour overlaps the contour of the other facility in the system. In addition, in Exhibit B we plotted the 48 dBu city-grade coverage contour resulting from the Destin DTS-1 node. As shown in that exhibit, the community of Destin, Florida, lies completely within that contour.

In Exhibit I, we have plotted the transmitter sites of the two DTS nodes in relation to the arc originating from the revised DTS reference site and defined by the coverage area of the largest station in the Mobile, AL-Pensacola, FL-Ft. Walton Beach, FL DMA, of which WFBD-DT is a part. As noted previously the largest station in this market is WEAR-TV, Channel 17, and its FCC authorization LMS- 0000121008. Based upon its noise-limited dipole-adjusted F(50,90)

EXHIBIT A

service area, the resultant arc has a radius of 123.4 kilometers. As shown, both of the proposed WFBD-DT DTS nodes have transmitter sites located within that Largest Station in the Market arc. In Exhibit I, we have also demonstrated that the proposed noise-limited, dipole-adjusted 40.23 dBu F(50,90) service contours of the DTS facilities are completely contained within the same 123.4 kilometer arc from the new WFBD-DT reference site. Thus, the instant proposal meets the requirements of the FCC's prior DTS service contour Rules.

The new DTS Rules recently adopted by the Commission state that the noise-limited, dipole-adjusted F(50,50) contour of a UHF SFN node must be located within an F(50,50)-based arc originating from the DTS reference site. Again, we utilized the Largest Station in the Market exception to define the radius of this arc. WEAR-TV has a noise-limited dipole adjusted F(50,50) contour that encompasses an area containing 87,719 square kilometers. This translates to an arc with a radius of 167.1 kilometers. We provide a map in Exhibit J that shows both WFBD-DT SFN nodes have noise-limited, dipole-adjusted 40.23 dBu F(50,50) service contours that are completely contained within that arc from the new reference site.

The newly adopted Rules also require that the 26.8 dBu F(50,10) contour of the DTS node be located within an interference F(50,10)-based arc from the reference site. Once again, we utilized WEAR-TV, the largest station in the Mobile, AL-Pensacola, FL-Ft. Walton Beach, FL DMA to define the radius of this arc. WEAR-TV has a 36 dBu F(50,10) interference contour that encompasses an area containing 219,318 square kilometers. This translates to an arc with a radius of 264.2 kilometers. We provide a map in Exhibit K that shows that the proposed WFBD-DT DTS-2 facility's 26.8 dBu F(50,10) interference contour is completely contained within the previously defined reference arc. It is important to note that the presently licensed WFBD-DT

facility (DTS-1 herein) facility has an interference contour that extends beyond the arc from the reference site. If the Commission requires that that contour also be contained within the arc from the reference facility, a power-reduction amendment will be submitted to the instant application in order to do so. However, since the presently licensed WFBD-DT facility meets all of the other DTS Rules from a coverage standpoint, and since no change in the licensed facility is proposed herein, it is believed that the public interest is served by allowing continued operation of the facility as licensed.

Finally, in Exhibit L, we provide the summary results from a TVStudy interference study, which was conducted using a cell size of 2.0 kilometers as well as an increment spacing of 1.0 kilometer. It concludes that the newly proposed WFBD-DT DTS facility on Channel 29 meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel full-power and Class A facilities. It is important to note that the interference study indicates that the proposed WFBD-DT DTS facility would receive interference to a portion of its service population from other television facilities. That interference is hereby accepted by WFBD-DT and can be ignored.

I declare under penalty of perjury that the foregoing statements and the attached exhibits are true and correct to the best of my knowledge and belief.



June 8, 2023

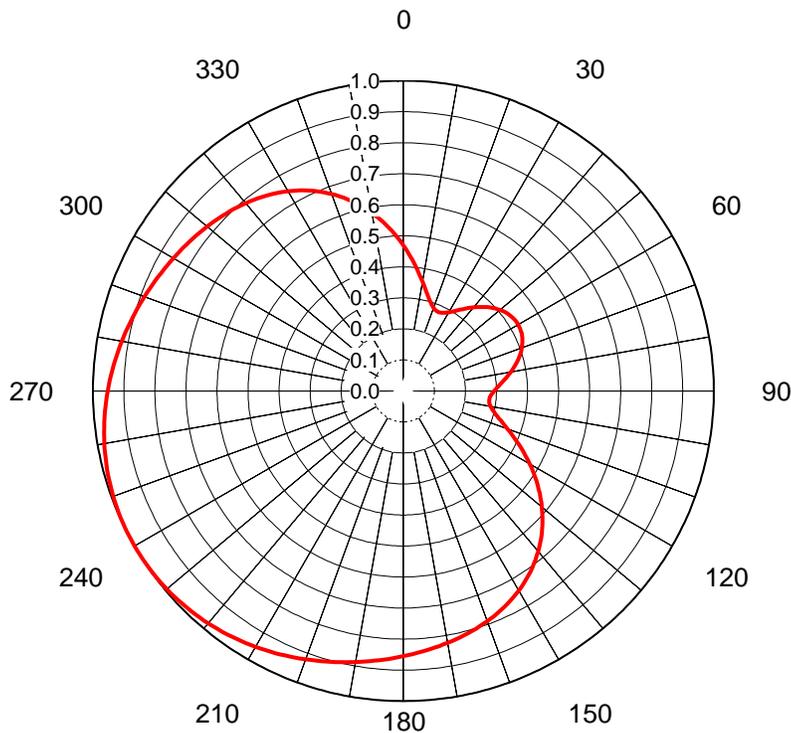
KEVIN T. FISHER



### AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-70932-1**  
 Date **28-Jun-17**  
 Call Letters **WFBD**  
 Channel **29**  
 Frequency **563 MHz**  
 Antenna Type **TFU-24DSC-R S200**  
 Gain **1.94 (2.88dB)**  
 Calculated



Deg	Value																		
0	0.470	36	0.326	72	0.397	108	0.337	144	0.706	180	0.855	216	0.969	252	0.992	288	0.894	324	0.773
1	0.458	37	0.332	73	0.392	109	0.347	145	0.712	181	0.858	217	0.971	253	0.990	289	0.891	325	0.769
2	0.446	38	0.339	74	0.387	110	0.357	146	0.719	182	0.862	218	0.973	254	0.989	290	0.887	326	0.764
3	0.435	39	0.345	75	0.382	111	0.367	147	0.725	183	0.865	219	0.976	255	0.987	291	0.884	327	0.759
4	0.423	40	0.352	76	0.376	112	0.378	148	0.732	184	0.868	220	0.978	256	0.986	292	0.881	328	0.754
5	0.411	41	0.358	77	0.370	113	0.389	149	0.738	185	0.871	221	0.980	257	0.984	293	0.878	329	0.749
6	0.400	42	0.364	78	0.364	114	0.400	150	0.743	186	0.874	222	0.982	258	0.982	294	0.874	330	0.743
7	0.389	43	0.370	79	0.358	115	0.411	151	0.749	187	0.878	223	0.984	259	0.980	295	0.871	331	0.738
8	0.378	44	0.376	80	0.352	116	0.423	152	0.754	188	0.881	224	0.986	260	0.978	296	0.868	332	0.732
9	0.367	45	0.382	81	0.345	117	0.435	153	0.759	189	0.884	225	0.987	261	0.976	297	0.865	333	0.725
10	0.357	46	0.387	82	0.339	118	0.446	154	0.764	190	0.887	226	0.989	262	0.973	298	0.862	334	0.719
11	0.347	47	0.392	83	0.332	119	0.458	155	0.769	191	0.891	227	0.990	263	0.971	299	0.858	335	0.712
12	0.337	48	0.397	84	0.326	120	0.470	156	0.773	192	0.894	228	0.992	264	0.969	300	0.855	336	0.706
13	0.329	49	0.402	85	0.320	121	0.482	157	0.778	193	0.898	229	0.993	265	0.966	301	0.852	337	0.698
14	0.320	50	0.406	86	0.314	122	0.493	158	0.782	194	0.901	230	0.994	266	0.963	302	0.849	338	0.691
15	0.313	51	0.410	87	0.308	123	0.505	159	0.786	195	0.904	231	0.995	267	0.961	303	0.846	339	0.683
16	0.305	52	0.414	88	0.302	124	0.516	160	0.790	196	0.908	232	0.996	268	0.958	304	0.843	340	0.676
17	0.299	53	0.417	89	0.297	125	0.528	161	0.794	197	0.911	233	0.997	269	0.955	305	0.840	341	0.667
18	0.293	54	0.420	90	0.293	126	0.539	162	0.798	198	0.914	234	0.998	270	0.952	306	0.837	342	0.659
19	0.289	55	0.422	91	0.289	127	0.550	163	0.801	199	0.918	235	0.999	271	0.949	307	0.834	343	0.650
20	0.285	56	0.424	92	0.285	128	0.561	164	0.805	200	0.921	236	0.999	272	0.946	308	0.831	344	0.641
21	0.282	57	0.425	93	0.282	129	0.572	165	0.808	201	0.924	237	0.999	273	0.943	309	0.828	345	0.632
22	0.280	58	0.426	94	0.280	130	0.583	166	0.812	202	0.927	238	1.000	274	0.940	310	0.824	346	0.623
23	0.279	59	0.427	95	0.279	131	0.593	167	0.815	203	0.931	239	1.000	275	0.937	311	0.821	347	0.613
24	0.278	60	0.427	96	0.278	132	0.603	168	0.818	204	0.934	240	1.000	276	0.934	312	0.818	348	0.603
25	0.279	61	0.427	97	0.279	133	0.613	169	0.821	205	0.937	241	1.000	277	0.931	313	0.815	349	0.593
26	0.280	62	0.426	98	0.280	134	0.623	170	0.824	206	0.940	242	1.000	278	0.927	314	0.812	350	0.583
27	0.282	63	0.425	99	0.282	135	0.632	171	0.828	207	0.943	243	0.999	279	0.924	315	0.808	351	0.572
28	0.285	64	0.424	100	0.285	136	0.641	172	0.831	208	0.946	244	0.999	280	0.921	316	0.805	352	0.561
29	0.289	65	0.422	101	0.289	137	0.650	173	0.834	209	0.949	245	0.999	281	0.918	317	0.801	353	0.550
30	0.293	66	0.420	102	0.293	138	0.659	174	0.837	210	0.952	246	0.998	282	0.914	318	0.798	354	0.539
31	0.297	67	0.417	103	0.299	139	0.667	175	0.840	211	0.955	247	0.997	283	0.911	319	0.794	355	0.528
32	0.302	68	0.414	104	0.305	140	0.676	176	0.843	212	0.958	248	0.996	284	0.908	320	0.790	356	0.516
33	0.308	69	0.410	105	0.313	141	0.683	177	0.846	213	0.961	249	0.995	285	0.904	321	0.786	357	0.505
34	0.314	70	0.406	106	0.320	142	0.691	178	0.849	214	0.963	250	0.994	286	0.901	322	0.782	358	0.493
35	0.320	71	0.402	107	0.329	143	0.698	179	0.852	215	0.966	251	0.993	287	0.898	323	0.778	359	0.482

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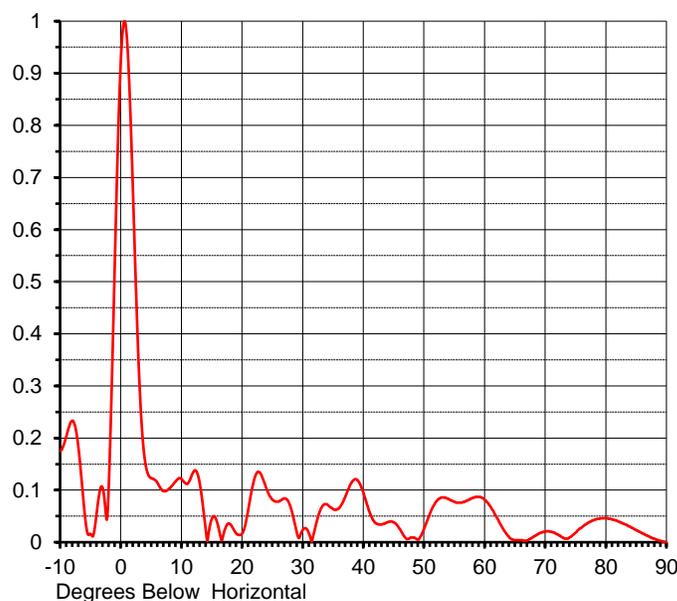
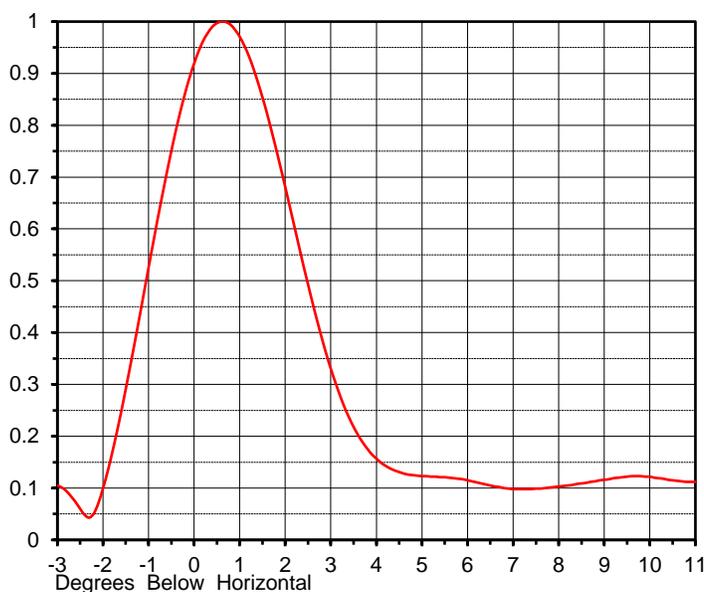
## EXHIBIT C

### ELEVATION PATTERN

Proposal No. **C-70932-1**  
 Date **28-Jun-17**  
 Call Letters **WFBD**  
 Channel **29**  
 Frequency **563 MHz**  
 Antenna Type **TFU-24DSC-R S200**

RMS Directivity at Main Lobe **19.5 ( 12.90 dB )**  
 RMS Directivity at Horizontal **17.3 ( 12.38 dB )**  
**Calculated**

Beam Tilt **0.50 deg**  
 Pattern Number **24Q195050**



Angle	Field								
-10.0	0.175	10.0	0.120	30.0	0.025	50.0	0.028	70.0	0.021
-9.0	0.206	11.0	0.113	31.0	0.015	51.0	0.058	71.0	0.020
-8.0	0.233	12.0	0.137	32.0	0.029	52.0	0.079	72.0	0.015
-7.0	0.174	13.0	0.108	33.0	0.066	53.0	0.086	73.0	0.008
-6.0	0.051	14.0	0.017	34.0	0.072	54.0	0.083	74.0	0.010
-5.0	0.015	15.0	0.047	35.0	0.063	55.0	0.077	75.0	0.019
-4.0	0.062	16.0	0.029	36.0	0.067	56.0	0.076	76.0	0.029
-3.0	0.101	17.0	0.022	37.0	0.089	57.0	0.080	77.0	0.037
-2.0	0.131	18.0	0.034	38.0	0.115	58.0	0.085	78.0	0.043
-1.0	0.572	19.0	0.016	39.0	0.118	59.0	0.087	79.0	0.046
0.0	0.943	20.0	0.018	40.0	0.092	60.0	0.081	80.0	0.046
1.0	0.954	21.0	0.067	41.0	0.056	61.0	0.066	81.0	0.044
2.0	0.643	22.0	0.124	42.0	0.036	62.0	0.046	82.0	0.040
3.0	0.304	23.0	0.131	43.0	0.034	63.0	0.025	83.0	0.035
4.0	0.149	24.0	0.101	44.0	0.039	64.0	0.009	84.0	0.029
5.0	0.123	25.0	0.081	45.0	0.038	65.0	0.004	85.0	0.023
6.0	0.113	26.0	0.078	46.0	0.024	66.0	0.004	86.0	0.017
7.0	0.098	27.0	0.084	47.0	0.007	67.0	0.004	87.0	0.011
8.0	0.104	28.0	0.064	48.0	0.009	68.0	0.011	88.0	0.006
9.0	0.117	29.0	0.016	49.0	0.005	69.0	0.017	89.0	0.002
								90.0	0.000

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POWER DENSITY CALCULATION

PROPOSED WFBD-DT DTS-1 FACILITY  
CHANNEL 29 – DESTIN, FLORIDA  
[MODIFICATION OF LMS-0000182313]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Destin DTS-1 facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 407 kW (H-only), an antenna radiation center 326.8 meters above ground, and the specific elevation pattern of the licensed Dielectric TFU-24DSC-R S200 antenna, maximum power density two meters above ground of 0.00072 mW/cm<sup>2</sup> is calculated to occur 195 meters west-southwest of the base of the tower. Since this value is only 0.2 percent of the 0.37 mW/cm<sup>2</sup> reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 29 (560-566 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.

**CONTOUR POPULATION**  
**2020 U.S. CENSUS DATA**  
**CITY-GRADE : 418,890 (188,267 HH)**  
**NOISE-LIMITED : 518,573 (228,537 HH)**



FCC NOISE-LIMITED SERVICE CONTOUR

FCC CITY-GRADE CONTOUR

Proposed DTS-2 Site

**EXHIBIT E**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED WFB-DT DTS-2 FACILITY**  
**CHANNEL 29 - DESTIN, FLORIDA**  
**[MODIFICATION OF LMS-000182313]**

## EXHIBIT F

### Horizontal Polarization AZIMUTH PATTERN

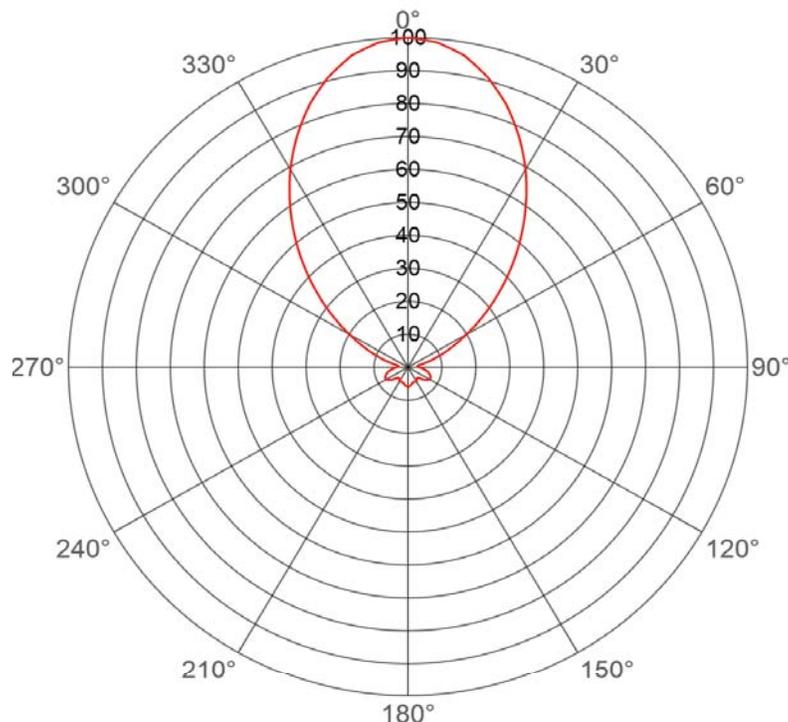


Exhibit No.  
Date **21 Dec 2021**  
Call Letters **WFBD-DT DTS-2**  
Channel **29**  
Antenna Type **TUM-C1-04/04M-T**  
Location **Mobile, AL**  
Customer

Gain **5.8 (7.67 dB)**  
**Calculated**  
Drawing # **TUM-C1B**

Deg	Value																		
0	1.000	36	0.589	72	0.079	108	0.067	144	0.044	180	0.062	216	0.044	252	0.067	288	0.079	324	0.589
1	0.998	37	0.571	73	0.071	109	0.068	145	0.045	181	0.061	217	0.044	253	0.066	289	0.086	325	0.606
2	0.996	38	0.554	74	0.064	110	0.069	146	0.046	182	0.060	218	0.043	254	0.064	290	0.093	326	0.624
3	0.994	39	0.536	75	0.057	111	0.070	147	0.046	183	0.059	219	0.043	255	0.063	291	0.103	327	0.641
4	0.991	40	0.518	76	0.051	112	0.071	148	0.047	184	0.058	220	0.042	256	0.061	292	0.112	328	0.658
5	0.989	41	0.501	77	0.046	113	0.072	149	0.048	185	0.057	221	0.043	257	0.059	293	0.121	329	0.676
6	0.983	42	0.484	78	0.041	114	0.073	150	0.049	186	0.057	222	0.043	258	0.057	294	0.130	330	0.693
7	0.977	43	0.466	79	0.035	115	0.074	151	0.049	187	0.056	223	0.044	259	0.055	295	0.140	331	0.709
8	0.972	44	0.449	80	0.030	116	0.074	152	0.049	188	0.055	224	0.045	260	0.053	296	0.151	332	0.725
9	0.966	45	0.432	81	0.029	117	0.074	153	0.049	189	0.055	225	0.045	261	0.051	297	0.163	333	0.741
10	0.960	46	0.415	82	0.029	118	0.074	154	0.049	190	0.054	226	0.048	262	0.048	298	0.175	334	0.757
11	0.950	47	0.398	83	0.029	119	0.074	155	0.050	191	0.053	227	0.050	263	0.046	299	0.186	335	0.773
12	0.940	48	0.381	84	0.028	120	0.074	156	0.049	192	0.052	228	0.052	264	0.044	300	0.198	336	0.788
13	0.930	49	0.365	85	0.028	121	0.073	157	0.049	193	0.051	229	0.055	265	0.041	301	0.212	337	0.803
14	0.920	50	0.348	86	0.029	122	0.072	158	0.049	194	0.050	230	0.057	266	0.039	302	0.227	338	0.818
15	0.910	51	0.332	87	0.029	123	0.070	159	0.048	195	0.050	231	0.059	267	0.037	303	0.241	339	0.833
16	0.897	52	0.316	88	0.030	124	0.069	160	0.048	196	0.049	232	0.061	268	0.035	304	0.255	340	0.848
17	0.885	53	0.301	89	0.031	125	0.068	161	0.048	197	0.049	233	0.063	269	0.034	305	0.269	341	0.860
18	0.873	54	0.285	90	0.032	126	0.065	162	0.049	198	0.049	234	0.065	270	0.032	306	0.285	342	0.873
19	0.860	55	0.269	91	0.034	127	0.063	163	0.049	199	0.048	235	0.068	271	0.031	307	0.301	343	0.885
20	0.848	56	0.255	92	0.035	128	0.061	164	0.049	200	0.048	236	0.069	272	0.030	308	0.316	344	0.897
21	0.833	57	0.241	93	0.037	129	0.059	165	0.050	201	0.048	237	0.070	273	0.029	309	0.332	345	0.910
22	0.818	58	0.227	94	0.039	130	0.057	166	0.050	202	0.049	238	0.072	274	0.029	310	0.348	346	0.920
23	0.803	59	0.212	95	0.041	131	0.055	167	0.051	203	0.049	239	0.073	275	0.028	311	0.365	347	0.930
24	0.788	60	0.198	96	0.044	132	0.052	168	0.052	204	0.049	240	0.074	276	0.028	312	0.381	348	0.940
25	0.773	61	0.186	97	0.046	133	0.050	169	0.053	205	0.050	241	0.074	277	0.029	313	0.398	349	0.950
26	0.757	62	0.175	98	0.048	134	0.048	170	0.054	206	0.049	242	0.074	278	0.029	314	0.415	350	0.960
27	0.741	63	0.163	99	0.051	135	0.045	171	0.055	207	0.049	243	0.074	279	0.029	315	0.432	351	0.966
28	0.725	64	0.151	100	0.053	136	0.045	172	0.055	208	0.049	244	0.074	280	0.030	316	0.449	352	0.972
29	0.709	65	0.140	101	0.055	137	0.044	173	0.056	209	0.049	245	0.074	281	0.035	317	0.466	353	0.977
30	0.693	66	0.130	102	0.057	138	0.043	174	0.057	210	0.049	246	0.073	282	0.041	318	0.484	354	0.983
31	0.676	67	0.121	103	0.059	139	0.043	175	0.057	211	0.048	247	0.072	283	0.046	319	0.501	355	0.989
32	0.658	68	0.112	104	0.061	140	0.042	176	0.058	212	0.047	248	0.071	284	0.051	320	0.518	356	0.991
33	0.641	69	0.103	105	0.063	141	0.043	177	0.059	213	0.046	249	0.070	285	0.057	321	0.536	357	0.994
34	0.624	70	0.093	106	0.064	142	0.043	178	0.060	214	0.046	250	0.069	286	0.064	322	0.554	358	0.996
35	0.606	71	0.086	107	0.066	143	0.044	179	0.061	215	0.045	251	0.068	287	0.071	323	0.571	359	0.998

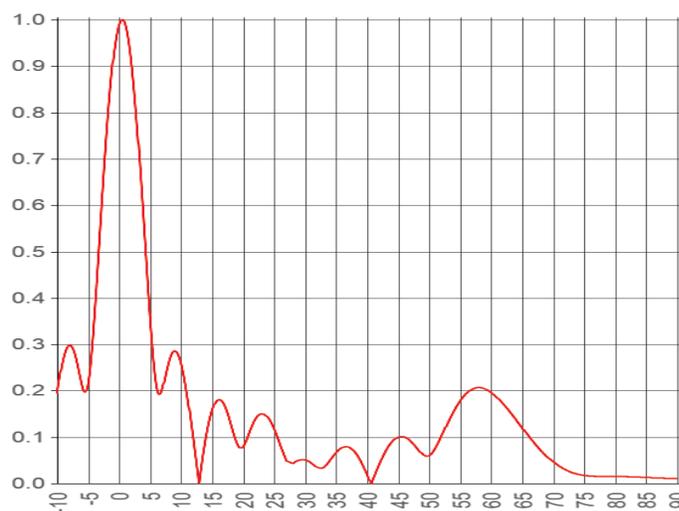
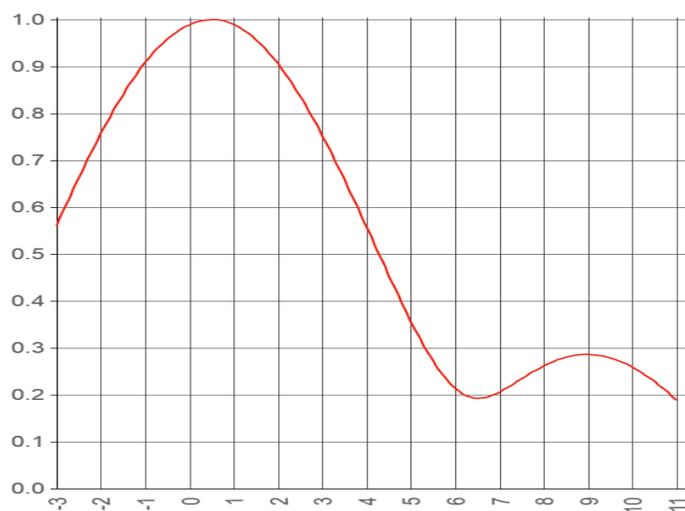
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## ELEVATION PATTERN

Exhibit No. EXHIBIT F  
 Date **21 Dec 2021**  
 Call Letters **WFBD-DT DTS-2**  
 Channel **29**  
 Antenna Type **TUM-C1-04/04M-T**  
 Location **Mobile, AL**  
 Customer

RMS Gain at Main Lobe **8.4 (9.25 dB)**  
 RMS Gain at Horizontal **8.2 (9.16 dB)**  
**Calculated**

Beam Tilt **0.5 Degrees**  
 Drawing # **04U084050**



Degrees below horizontal

Degrees below horizontal

Angle	Field								
-10	0.194	10	0.259	30	0.051	50	0.060	70	0.047
-9	0.269	11	0.188	31	0.044	51	0.076	71	0.037
-8	0.298	12	0.091	32	0.035	52	0.103	72	0.030
-7	0.273	13	0.011	33	0.035	53	0.131	73	0.024
-6	0.214	14	0.099	34	0.050	54	0.157	74	0.020
-5	0.216	15	0.157	35	0.066	55	0.178	75	0.017
-4	0.358	16	0.180	36	0.077	56	0.194	76	0.016
-3	0.560	17	0.168	37	0.078	57	0.204	77	0.015
-2	0.756	18	0.129	38	0.068	58	0.207	78	0.015
-1	0.909	19	0.088	39	0.048	59	0.204	79	0.015
0	0.989	20	0.080	40	0.020	60	0.196	80	0.015
1	0.990	21	0.110	41	0.012	61	0.185	81	0.015
2	0.906	22	0.139	42	0.043	62	0.170	82	0.014
3	0.753	23	0.150	43	0.070	63	0.155	83	0.014
4	0.557	24	0.142	44	0.089	64	0.138	84	0.014
5	0.357	25	0.117	45	0.100	65	0.120	85	0.013
6	0.214	26	0.082	46	0.100	66	0.103	86	0.012
7	0.205	27	0.049	47	0.091	67	0.086	87	0.012
8	0.261	28	0.043	48	0.077	68	0.071	88	0.011
9	0.286	29	0.050	49	0.062	69	0.058	89	0.011

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POWER DENSITY CALCULATION  
PROPOSED WFBD-DT DTS-2 FACILITY  
CHANNEL 29 – DESTIN, FLORIDA  
[MODIFICATION OF LMS-0000182313]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Destin DTS-2 (Mobile) facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 80 kW (H, V), an antenna radiation center 200 meters above ground, and the specific elevation pattern of the proposed Dielectric TUL-C1-6/6M-1-K antenna, maximum power density two meters above ground of  $0.0042 \text{ mW/cm}^2$  is calculated to occur 97 meters west-northwest of the base of the tower. Since this value is only 1.1 percent of the  $0.37 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 29 (560-566 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.

Prattville

Selma

**SMITH AND FISHER, LLC**

**DTS-1 N/L 40.23 DBU  
F(50,90) CONTOUR**

Troy

**DTS-2 N/L 40.23 DBU  
F(50,90) CONTOUR**

Enterprise

Proposed DTS-1 Site

Saraland

Mobile

Proposed DTS-2 Site

Crestview

Tilman's Corner  
Daphne  
Fairhope

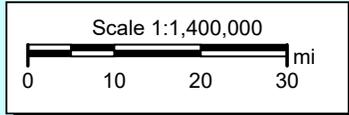
Ferry Pass

Niceville

Pensacola

Fort Walton Beach

Pa



**EXHIBIT H  
CONTOUR COMPARISON  
DTS-1 AND DTS-2  
CHANNEL 29 - DESTIN, FLORIDA  
[MODIFICATION OF LMS-000182313]**

Prattville

Selma

**SMITH AND FISHER, LLC**

LARGEST STATION IN MARKET (WEAR-TV) F(50,90)  
ALLOWABLE COVERAGE AREA ARC (123.4 KM)  
FROM PROPOSED WFBD-DT REFERENCE SITE

Troy

WFBD-DT DTS-1  
N/L F(50,90) CONTOUR

WFBD-DT DTS-2  
N/L F(50,90) CONTOUR

Enterprise

Licensed WFBD-DT Site  
(Proposed DTS-1 Site)

New Reference Point

Crestview

Proposed DTS-2 Site

Saraland

Mobile

Tilmans Corner  
Daphne  
Fairhope

Ferry Pass  
Pensacola

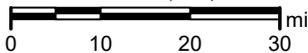
Niceville

Fort Walton Beach

Pa

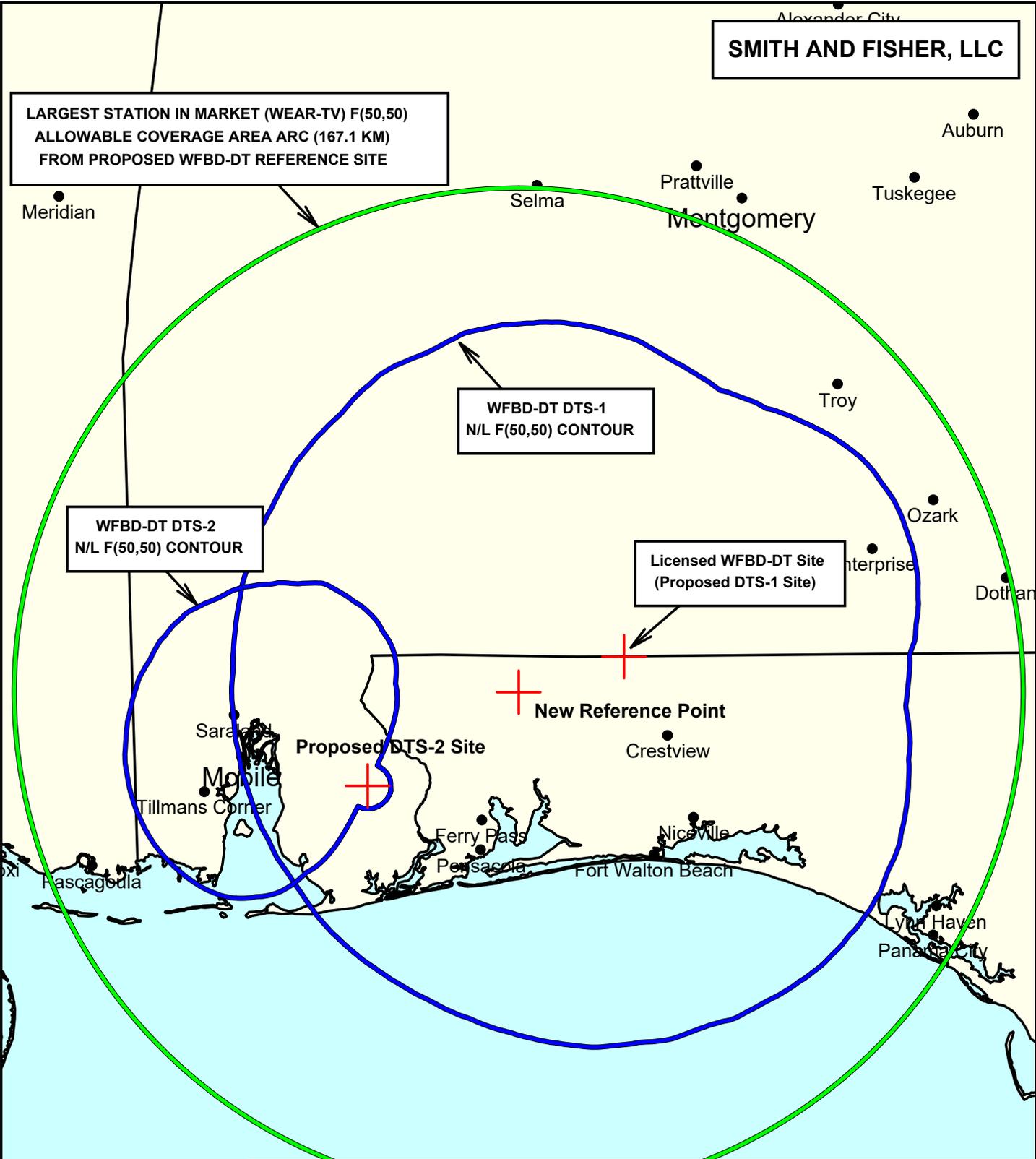
**EXHIBIT I**  
**LOCATION OF DTS-1 AND DTS-2 TRANSMITTER SITES**  
**AND F(50,90) N/L DIPOLE-ADJUSTED SERVICE CONTOURS**  
**WITHIN ALLOWABLE F(50,90) ARC DERIVED FROM WEAR-TV**  
**USING NEW DTS REFERENCE SITE**  
**CHANNEL 29 - DESTIN, FLORIDA**  
**[MODIFICATION OF LMS-0000182313]**

Scale 1:1,350,000



**SMITH AND FISHER, LLC**

**LARGEST STATION IN MARKET (WEAR-TV) F(50,50)  
ALLOWABLE COVERAGE AREA ARC (167.1 KM)  
FROM PROPOSED WFB-DT REFERENCE SITE**



**WFB-DT DTS-2  
N/L F(50,50) CONTOUR**

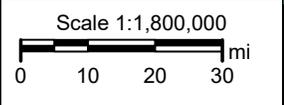
**WFB-DT DTS-1  
N/L F(50,50) CONTOUR**

**Licensed WFB-DT Site  
(Proposed DTS-1 Site)**

**New Reference Point**

**Proposed DTS-2 Site**

**EXHIBIT J  
LOCATION OF DTS-1 AND DTS-2 F(50,50) N/L DIPOLE-ADJUSTED  
SERVICE CONTOURS WITHIN ALLOWABLE F(50,50) ARC  
DERIVED FROM WEAR-TV AND USING NEW DTS REFERENCE SITE  
CHANNEL 29 - DESTIN, FLORIDA  
[MODIFICATION OF LMS-0000182313]**





TVSTUDY INTERFERENCE ANALYSIS RESULTS  
PROPOSED WFBD-DT DTS FACILITY  
CHANNEL 29 – DESTIN, FLORIDA  
[MODIFICATION OF LMS-0000182313]

Study created: 2023.06.08 16:32:36

Study build station data: LMS TV 2023-06-08

Proposal: WFBD D29 DD CP DESTIN, FL

File number: BLANK0000182313

Facility ID: 81669

Station data: User record

Record ID: 154

Country: U.S.

Zone: III

Ref. lat.: 30 53 32.50 N

Ref. long.: 87 05 8.10 W

# DTS sites: 2

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WMCF-TV	D28	DT	LIC	MONTGOMERY, AL	BLANK0000107502	187.8 km
Yes	WFSG	D28	DT	LIC	PANAMA CITY, FL	BLANK0000064507	125.4
No	WMAW-TV	D28	DT	LIC	MERIDIAN, MS	BLANK0000106235	235.3
Yes	WBRC	D29	DT	LIC	BIRMINGHAM, AL	BLANK0000192788	289.8
No	WGFL	D29	DT	LIC	HIGH SPRINGS, FL	BLANK0000100460	455.3
No	WFXL	D29	DT	CP	ALBANY, GA	BLANK0000150485	310.6
No	WFXL	D29	DT	BL	ALBANY, GA	DTVBL70815	310.6
No	WYGA-CD	D29	DC	LIC	ATLANTA, GA	BLANK0000200786	407.5
Yes	WVUE-DT	D29	DT	CP	NEW ORLEANS, LA	BLANK0000127677	293.6
Yes	WVUE-DT	D29	DT	LIC	NEW ORLEANS, LA	BLANK0000203686	293.6
No	WGIQ	D30	DT	LIC	LOUISVILLE, AL	BLANK0000067031	181.7
Yes	WEIQ	D30	DT	LIC	MOBILE, AL	BLANK0000111746	81.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied, DTS site # 1:

Channel: D29  
Latitude: 30 59 52.40 N (NAD83)  
Longitude: 86 43 13.10 W  
Height AMSL: 371.0 m  
HAAT: 312.0 m  
Peak ERP: 704 kW  
Antenna: DIE-TFU-24DSC-R S200 (ID 1007775) 0.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.50

40.2 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	156 kW	308.5 m	83.3 km
45.0	101	305.6	80.1
90.0	60.4	304.6	76.9
135.0	279	317.3	89.0
180.0	515	328.8	95.6
225.0	684	320.2	97.2
270.0	638	303.3	94.7
315.0	458	307.7	92.2

Record parameters as studied, DTS site # 2:

Channel: D29  
Latitude: 30 36 41.00 N (NAD83)  
Longitude: 87 36 26.40 W  
Height AMSL: 232.3 m  
HAAT: 191.6 m  
Peak ERP: 80.0 kW  
Antenna: Dielectric-TUL-C1-6/6M-1-K (ID 1009245) 295.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.75

40.2 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.37 kW	185.7 m	52.1 km
45.0	0.000	195.0	6.9
90.0	0.000	201.4	6.9
135.0	0.000	206.5	6.9

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180.0	0.000	200.9	6.9
225.0	0.916	192.6	47.8
270.0	52.5	185.9	67.3
315.0	61.8	200.1	69.1

Database HAAT does not agree with computed HAAT

Database HAAT: 192 m Computed HAAT: 196 m

\*\*DTS proposal has coverage outside reference facility and distance limit

Distance to Canadian border: 1240.4 km

Distance to Mexican border: 1046.8 km

Conditions at FCC monitoring station: Powder Springs GA

DTS site # 1 Bearing: 29.9 degrees Distance: 369.4 km

DTS site # 2 Bearing: 36.1 degrees Distance: 451.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

DTS site # 1 Bearing: 306.4 degrees Distance: 1950.4 km

DTS site # 2 Bearing: 308.4 degrees Distance: 1909.2 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.