# APPLICATION
# FOR A
# FM AUXILIARY
# CONSTRUCTION PERMIT

## FCC FORM 301

**(MAIN FACILITY - WDBT, Facility Number - 10666)**

**WDBT**

**Headland, Alabama**

**CHANNEL 287C3 – 105.3 MHz**

**ERP: 0.89 kW (H&V)**

**HAAT: 29.0 m**

**APPLICANT: Gulf South Communications, Inc.**

**August, 2006**

**Prepared by:**

REYNOLDS TECHNICAL ASSOCIATES
BROADCAST TECHNICAL CONSULTANTS

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**Engineering Statement**

**In Support of a Application**
**For a FM Auxiliary**

**WDBT, Headland, Alabama, Channel 287C3**

CONTENTS

**ENGINEERING STATEMENT**

**Of**

**Lee S. Reynolds**

**And**

**Virgle Leon Strickland**

**In Support of an**

**Application for a**

**FM Auxiliary**

**Construction Permit**

**WDBT**

**Headland, Alabama**

**Channel 287 – 105.3 MHz**

**ERP: 0.89 kW(H&V)**

**August, 2006**

## General

As broadcast technical consultants doing business as Reynolds Technical Associates (RTA), we have been authorized by Gulf South Communications, Inc. (herein referred to as "The Applicant"), to conduct engineering studies and prepare the engineering portion of an application for a construction permit that seeks to build a new FM auxiliary facility for WDBT. The new facility is to operate on channel 287 with the effective radiated power of 0.89 kilowatts with the HAAT of 29.0 meters.

WDBT's licensee is the same entity filing the instant FM auxiliary application.

The following engineering studies and exhibits support the instant application study results.

**The Proposed Site**
**(Exhibit E, Figure 1 and 2)**

The proposed site is shown in Exhibit E, Figure 1 on a portion of a 7.5 minute U.S.G.S. quadrangle topographic map.

Exhibit E, Figure 2 is a vertical sketch of the existing antenna supporting structure with pertinent proposed elevations. The antenna structure is an existing tower less than 60 meters, therefore the FAA was not notified of the construction.

There are no proposed or authorized FM or TV transmitters that my produce receiver-induced interference within ten (10) kilometers of the proposed.

**Surrounding Terrain and Predicted Contours**
**(Exhibit E, Figures 3 through 5)**

Exhibit E, Figure 3 is a terrain averaging and service contour study showing the FCC F(50/50) 60 dBu contour of the proposed FM auxiliary.

Exhibit E, Figure 4 is a terrain averaging and service contour study showing the FCC F(50/50) 60 dBu contour of the licensed main facilities. The resulting contours for the proposed auxiliary facility and the main facility are shown in map form as Exhibit E, Figure 5.

The distance to the blanketing contour is calculated to be 1.970 kilometer (1.225 mile).

**Human Exposure**
**(No Exhibits)**

The proposed FM facility was evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with the RF Worksheet #1 [FCC 301 Worksheet 7 (Page 4 and 5)].

The panel antenna for The Applicant's proposed FM broadcast station is to be placed on an existing tower. The proposed center of radiation was rounded to 27 meters above ground, with an ERP (both horizontally and vertically) of 0.89 kW. The controlled/occupational limit, as well as the uncontrolled/general public limit is in compliance. Power density two (2) meters above ground is 0.095 $mW/cm^2$, well below the maximum allowable limit of 0.2 $mW/cm^2$ for uncontrolled/general public exposure limits as well as the 1.0 $mW/cm^2$ for controlled/occupational exposure limits

Should anyone be required to climb the tower, a policy is to either reduce power or cease operation, so as to prevent hazardous exposure to radiofrequency radiation.

**Environmental Impact**
**(No Exhibits)**

A grant of the proposed construction would not constitute a major action as defined in the Commission's Rules and Regulations.

During operation, the facility will produce no chemical or significant thermal pollution, and no ionizing radiation will be generated. Areas of high intensity radiofrequency fields will be confined to the immediate area of the transmitting antenna, far above the ground and away from any human and wildlife population.

The area is not officially designated as a wilderness area or wildlife preserve and is not pending consideration. The area has no significant value in American history, architecture, archaeology, or culture, which is listed in the Register of Historic Places, and it is not eligible for listing. It is not recognized either nationally or locally for special scenic or recreational value.

**Conclusion**

This statement/application has been prepared for The Applicant by utilizing the latest available information, cross-checked with the Federal Communications Commission and other sources. Therefore, it is submitted that the engineering data compiled and demonstrated herein for the proposed is in compliance with Commission's Rules and Regulations at the time of this application's filing date. We welcome the opportunity to discuss with the staff of the Federal Communications Commission the engineering data contained in this application. Should any questions arise concerning the information, please contact us.

The following pages are exhibits prepared and assembled in support of the proposed.

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**Statement of the Consultants**

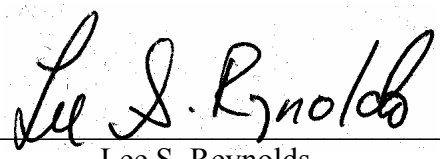
The instant engineering statement was prepared for The Applicant and supports an application for a construction permit for a FM Auxiliary for WDBT, Headland, Alabama. It was developed by RTA and may not be used for purposes other than submission to the Commission by the applicant.

It may not be reproduced in its entirety, or in part, by anyone (other than from the Commission) without the written consent of RTA.

It is prepared for The Applicant under contractual agreement, and its certification by RTA is used accordingly. If The Applicant fails in its contractual obligation, RTA reserves the right to withdraw its certification.

The information in this application is compiled from the most recent Commission and outside data. RTA is not responsible for errors resulting from incorrect data or unpublished rule and procedure changes.

For RTA:



Lee S. Reynolds

August 17th, 2006

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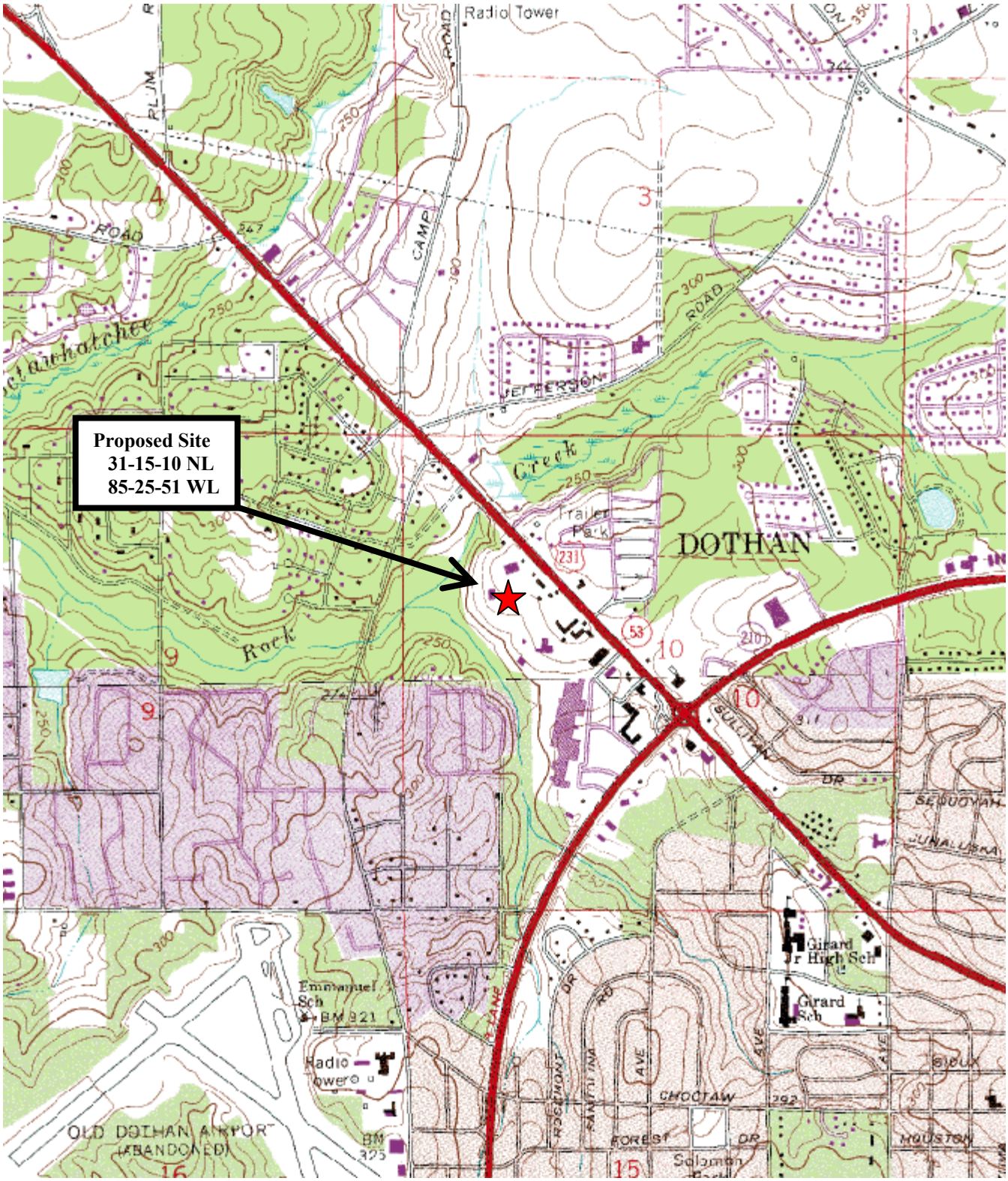
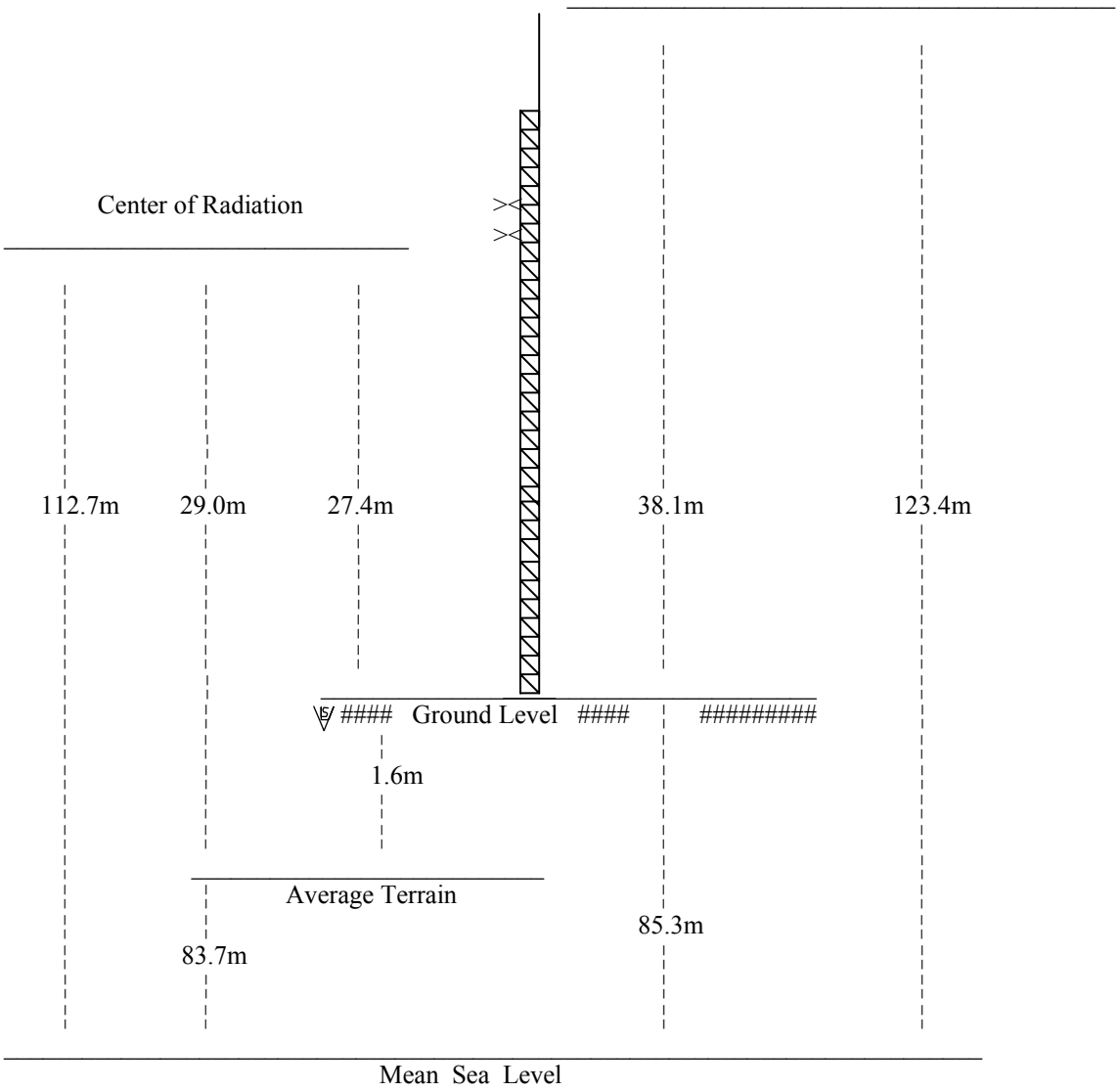
**Engineering Statement**
**Application for a Construction Permit**
**WDBT(FM) Auxiliary, 105.3 MHz., Headland, Alabama**




Copy of a portion of Midland City, AL USGS 7 ½' quadrangle map

**Exhibit E, Figure 1**

**Engineering Statement**
**Application for a Construction Permit**
**WDBT(FM) Auxiliary, 105.3 MHz., Headland, Alabama**




Proposed Location - 31° 15' 10" N. Lat. 85° 25' 51" W. Long. [NAD 27]

NOT DRAWN TO SCALE

Proposed antenna: SWR, 2 element, Model FMEC/2BB.

**Exhibit E, Figure 2**

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BROADCAST TECHNICAL CONSULTANTS

**Engineering Statement**

**In Support of an Application for a Construction Permit**

## WDBT Auxiliary, Headland, Alabama
## Channel 287

### Terrain-Contour Study for Auxiliary Facility

**Reference Coordinates:**
**North Latitude: 31-15-10**
**West Longitude: 85-25-51**

ERP = 0.89 kW FM - 2-6 Tables F(50-50)

| Azimuth °T. | Ave. Elev. 3 to 16 km Meters AMSL | Effective Antenna Height Meters AAT | ERP (dBk) | Distance to 60 dBu Contour km |
|---|---|---|---|---|
| 0 | 96.0 | 16.7 | -0.506 | 9.9 |
| 5 | 89.3 | 23.4 | -0.506 | 9.9 |
| 10 | 91.3 | 21.4 | -0.506 | 9.9 |
| 15 | 91.9 | 20.8 | -0.506 | 9.9 |
| 20 | 92.0 | 20.7 | -0.506 | 9.9 |
| 25 | 92.8 | 19.9 | -0.506 | 9.9 |
| 30 | 94.3 | 18.4 | -0.506 | 9.9 |
| 35 | 95.8 | 16.9 | -0.506 | 9.9 |
| 40 | 92.4 | 20.3 | -0.506 | 9.9 |
| 45 | 89.7 | 23.0 | -0.506 | 9.9 |
| 50 | 86.4 | 26.3 | -0.506 | 9.9 |
| 55 | 80.7 | 32.0 | -0.506 | 10.2 |
| 60 | 77.7 | 35.0 | -0.506 | 10.6 |
| 65 | 76.8 | 35.9 | -0.506 | 10.7 |
| 70 | 74.6 | 38.1 | -0.506 | 11.0 |
| 75 | 75.9 | 36.8 | -0.506 | 10.8 |
| 80 | 74.5 | 38.2 | -0.506 | 11.0 |
| 85 | 76.1 | 36.6 | -0.506 | 10.8 |
| 90 | 76.9 | 35.8 | -0.506 | 10.7 |
| 95 | 78.9 | 33.8 | -0.506 | 10.4 |
| 100 | 79.0 | 33.7 | -0.506 | 10.4 |
| 105 | 79.8 | 32.9 | -0.506 | 10.3 |
| 110 | 81.0 | 31.7 | -0.506 | 10.1 |
| 115 | 81.2 | 31.5 | -0.506 | 10.1 |
| 120 | 79.9 | 32.8 | -0.506 | 10.3 |
| 125 | 81.2 | 31.5 | -0.506 | 10.1 |
| 130 | 81.8 | 30.9 | -0.506 | 10.0 |
| 135 | 83.3 | 29.4 | -0.506 | 9.9 |
| 140 | 87.7 | 25.0 | -0.506 | 9.9 |
| 145 | 86.3 | 26.4 | -0.506 | 9.9 |
| 150 | 81.8 | 30.9 | -0.506 | 10.0 |
| 155 | 81.3 | 31.4 | -0.506 | 10.1 |

**Continued on the next page**

ERP = 0.89 kW FM - 2-6 Tables F(50-50)

| Azimuth °T. | Ave. Elev. 3 to 16 km Meters AMSL | Effective Antenna Height Meters AAT | ERP (dBk) | Distance to 70 dBu Contour km |
|---|---|---|---|---|
| 160 | 83.2 | 29.5 | -0.506 | 9.9 |
| 165 | 82.7 | 30.0 | -0.506 | 9.9 |
| 170 | 79.6 | 33.1 | -0.506 | 10.3 |
| 175 | 75.0 | 37.7 | -0.506 | 11.0 |
| 180 | 77.7 | 35.0 | -0.506 | 10.6 |
| 185 | 79.3 | 33.4 | -0.506 | 10.4 |
| 190 | 81.5 | 31.2 | -0.506 | 10.0 |
| 195 | 83.9 | 28.8 | -0.506 | 9.9 |
| 200 | 85.2 | 27.5 | -0.506 | 9.9 |
| 205 | 87.6 | 25.1 | -0.506 | 9.9 |
| 210 | 84.2 | 28.5 | -0.506 | 9.9 |
| 215 | 83.7 | 29.0 | -0.506 | 9.9 |
| 220 | 84.2 | 28.5 | -0.506 | 9.9 |
| 225 | 82.3 | 30.4 | -0.506 | 9.9 |
| 230 | 77.3 | 35.4 | -0.506 | 10.6 |
| 235 | 73.8 | 38.9 | -0.506 | 11.1 |
| 240 | 75.3 | 37.4 | -0.506 | 10.9 |
| 245 | 76.3 | 36.4 | -0.506 | 10.8 |
| 250 | 74.2 | 38.5 | -0.506 | 11.1 |
| 255 | 75.2 | 37.5 | -0.506 | 10.9 |
| 260 | 75.6 | 37.1 | -0.506 | 10.9 |
| 265 | 73.3 | 39.4 | -0.506 | 11.2 |
| 270 | 71.0 | 41.7 | -0.506 | 11.5 |
| 275 | 72.1 | 40.6 | -0.506 | 11.4 |
| 280 | 83.1 | 29.6 | -0.506 | 9.9 |
| 285 | 87.6 | 25.1 | -0.506 | 9.9 |
| 290 | 92.8 | 19.9 | -0.506 | 9.9 |
| 295 | 94.0 | 18.7 | -0.506 | 9.9 |
| 300 | 96.9 | 15.8 | -0.506 | 9.9 |
| 305 | 99.3 | 13.4 | -0.506 | 9.9 |
| 310 | 94.0 | 18.7 | -0.506 | 9.9 |
| 315 | 92.6 | 20.1 | -0.506 | 9.9 |
| 320 | 88.2 | 24.5 | -0.506 | 9.9 |
| 325 | 92.1 | 20.6 | -0.506 | 9.9 |
| 330 | 92.2 | 20.5 | -0.506 | 9.9 |
| 335 | 93.7 | 19.0 | -0.506 | 9.9 |
| 340 | 96.9 | 15.8 | -0.506 | 9.9 |
| 345 | 98.7 | 14.0 | -0.506 | 9.9 |
| 350 | 95.2 | 17.5 | -0.506 | 9.9 |
| 355 | 95.6 | 17.1 | -0.506 | 9.9 |

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**Engineering Statement**

**In Support of an Application for a Construction Permit**

**WDBT Auxiliary, Headland, Alabama**
**Channel 287**

## Terrain-Contour Study for Main Facility

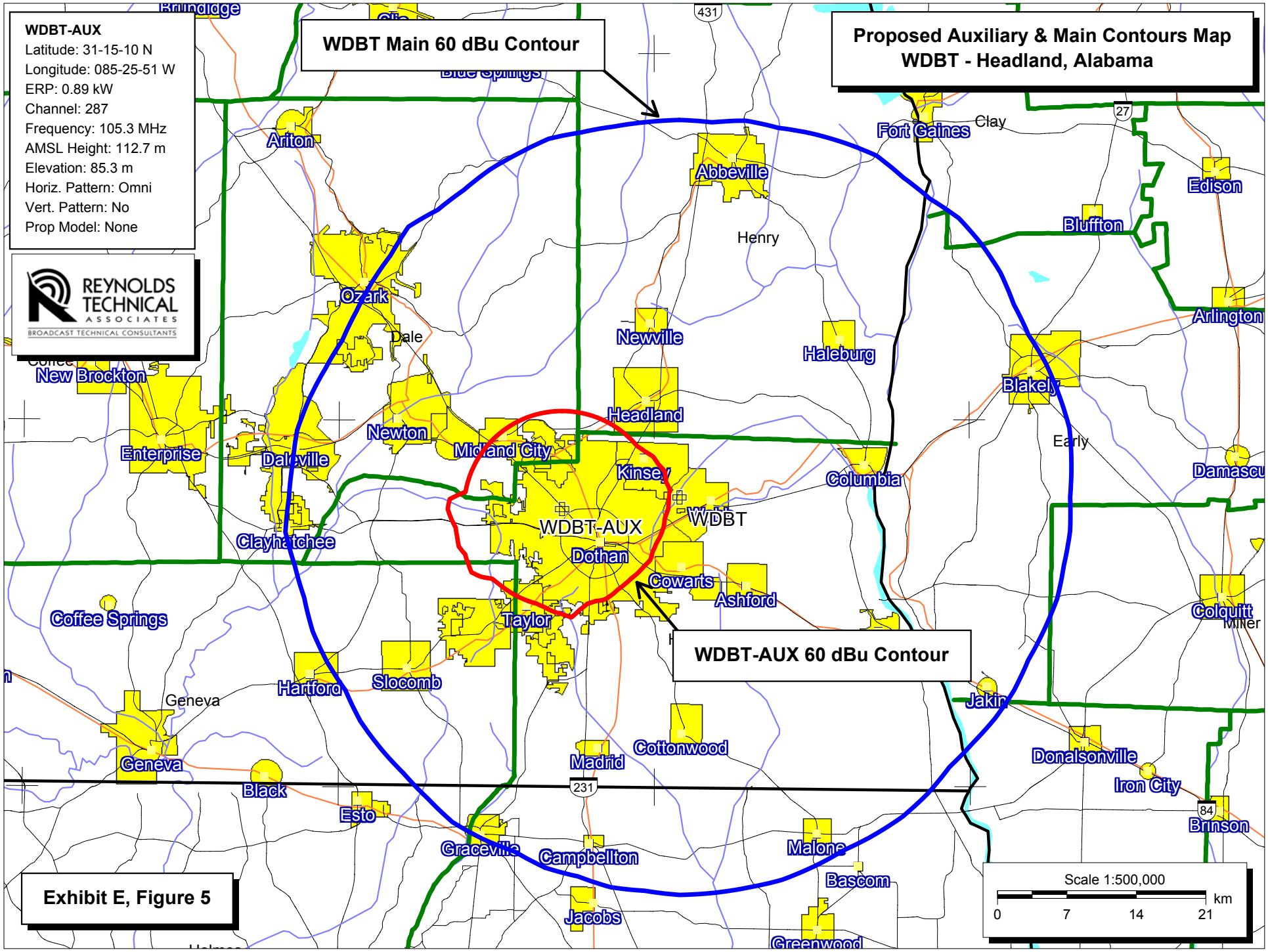
**Reference Coordinates:**
**North Latitude: 31-15-48**
**West Longitude: 85-18-24**

ERP = 11.50 kW FM - 2-6 Tables F(50-50)

| Azimuth °T. | Ave. Elev. 3 to 16 km Meters AMSL | Effective Antenna Height Meters AAT | ERP (dBk) | Distance to 60 dBu Contour km |
|---|---|---|---|---|
| 0 | 90.4 | 138.6 | 10.607 | 38.0 |
| 5 | 91.1 | 137.9 | 10.607 | 37.9 |
| 10 | 86.1 | 142.9 | 10.607 | 38.5 |
| 15 | 86.1 | 142.9 | 10.607 | 38.5 |
| 20 | 82.2 | 146.8 | 10.607 | 39.0 |
| 25 | 79.0 | 150.0 | 10.607 | 39.4 |
| 30 | 76.2 | 152.8 | 10.607 | 39.7 |
| 35 | 79.6 | 149.4 | 10.607 | 39.3 |
| 40 | 80.1 | 148.9 | 10.607 | 39.3 |
| 45 | 75.8 | 153.2 | 10.607 | 39.8 |
| 50 | 76.5 | 152.5 | 10.607 | 39.7 |
| 55 | 78.4 | 150.6 | 10.607 | 39.5 |
| 60 | 83.2 | 145.8 | 10.607 | 38.9 |
| 65 | 84.1 | 144.9 | 10.607 | 38.8 |
| 70 | 79.8 | 149.2 | 10.607 | 39.3 |
| 75 | 77.3 | 151.7 | 10.607 | 39.6 |
| 80 | 74.8 | 154.2 | 10.607 | 39.9 |
| 85 | 77.1 | 151.9 | 10.607 | 39.6 |
| 90 | 79.4 | 149.6 | 10.607 | 39.4 |
| 95 | 78.2 | 150.8 | 10.607 | 39.5 |
| 100 | 79.6 | 149.4 | 10.607 | 39.3 |
| 105 | 79.1 | 149.9 | 10.607 | 39.4 |
| 110 | 81.6 | 147.4 | 10.607 | 39.1 |
| 115 | 84.2 | 144.8 | 10.607 | 38.8 |
| 120 | 83.1 | 145.9 | 10.607 | 38.9 |
| 125 | 83.9 | 145.1 | 10.607 | 38.8 |
| 130 | 86.1 | 142.9 | 10.607 | 38.5 |
| 135 | 86.9 | 142.1 | 10.607 | 38.4 |
| 140 | 82.9 | 146.1 | 10.607 | 38.9 |
| 145 | 80.4 | 148.6 | 10.607 | 39.2 |
| 150 | 80.2 | 148.8 | 10.607 | 39.3 |
| 155 | 80.6 | 148.4 | 10.607 | 39.2 |

**Continued on the next page**

| ERP = 11.50 kW | | FM - 2-6 Tables | | F(50-50) |
|---|---|---|---|---|
| Azimuth °T. | Ave. Elev. 3 to 16 km Meters AMSL | Effective Antenna Height Meters AAT | ERP (dBk) | Distance to 70 dBu Contour km |
| 160 | 77.6 | 151.4 | 10.607 | 39.6 |
| 165 | 75.0 | 154.0 | 10.607 | 39.9 |
| 170 | 74.8 | 154.2 | 10.607 | 39.9 |
| 175 | 74.1 | 154.9 | 10.607 | 40.0 |
| 180 | 73.7 | 155.3 | 10.607 | 40.0 |
| 185 | 75.9 | 153.1 | 10.607 | 39.8 |
| 190 | 75.0 | 154.0 | 10.607 | 39.9 |
| 195 | 77.9 | 151.1 | 10.607 | 39.5 |
| 200 | 76.7 | 152.3 | 10.607 | 39.7 |
| 205 | 79.4 | 149.6 | 10.607 | 39.4 |
| 210 | 76.5 | 152.5 | 10.607 | 39.7 |
| 215 | 74.8 | 154.2 | 10.607 | 39.9 |
| 220 | 78.0 | 151.0 | 10.607 | 39.5 |
| 225 | 79.8 | 149.2 | 10.607 | 39.3 |
| 230 | 79.8 | 149.2 | 10.607 | 39.3 |
| 235 | 80.3 | 148.7 | 10.607 | 39.3 |
| 240 | 83.5 | 145.5 | 10.607 | 38.9 |
| 245 | 80.9 | 148.1 | 10.607 | 39.2 |
| 250 | 79.6 | 149.4 | 10.607 | 39.3 |
| 255 | 81.3 | 147.7 | 10.607 | 39.1 |
| 260 | 79.5 | 149.5 | 10.607 | 39.3 |
| 265 | 75.4 | 153.6 | 10.607 | 39.8 |
| 270 | 79.6 | 149.4 | 10.607 | 39.3 |
| 275 | 81.4 | 147.6 | 10.607 | 39.1 |
| 280 | 81.6 | 147.4 | 10.607 | 39.1 |
| 285 | 85.7 | 143.3 | 10.607 | 38.6 |
| 290 | 90.9 | 138.1 | 10.607 | 38.0 |
| 295 | 94.9 | 134.1 | 10.607 | 37.5 |
| 300 | 94.2 | 134.8 | 10.607 | 37.6 |
| 305 | 92.1 | 136.9 | 10.607 | 37.8 |
| 310 | 90.8 | 138.2 | 10.607 | 38.0 |
| 315 | 85.8 | 143.2 | 10.607 | 38.6 |
| 320 | 91.8 | 137.2 | 10.607 | 37.8 |
| 325 | 91.9 | 137.1 | 10.607 | 37.8 |
| 330 | 89.3 | 139.7 | 10.607 | 38.1 |
| 335 | 88.4 | 140.6 | 10.607 | 38.3 |
| 340 | 86.8 | 142.2 | 10.607 | 38.5 |
| 345 | 89.9 | 139.1 | 10.607 | 38.1 |
| 350 | 91.0 | 138.0 | 10.607 | 37.9 |
| 355 | 90.9 | 138.1 | 10.607 | 38.0 |


WDBT-AUX
Latitude: 31-15-10 N
Longitude: 085-25-51 W
ERP: 0.89 kW
Channel: 287
Frequency: 105.3 MHz
AMSL Height: 112.7 m
Elevation: 85.3 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None
REYNOLDS TECHNICAL ASSOCIATES
BROADCAST TECHNICAL CONSULTANTS
WDBT Main 60 dBu Contour
Proposed Auxiliary & Main Contours Map
WDBT - Headland, Alabama
WDBT-AUX 60 dBu Contour
Exhibit E, Figure 5
Scale 1:500,000
0 7 14 21 km
Ariton
Abbeville
Fort Gaines
Clay
Edison
Bluffton
Henry
Ozark
Dale
Newville
Haleburg
Arlington
New Brockton
Blakely
Headland
Newton
Midland City
Enterprise
Daleville
Early
Columbia
Damascus
Kinsey
WDBT
WDBT-AUX
Clayhatchee
Dothan
Cowarts
Ashford
Coffee Springs
Taylor
Colquitt
Miller
Hartford
Slocomb
Geneva
Jakin
Cottonwood
Madrid
Donalsonville
Iron City
Black
Esto
Graceville
Campbellton
Malone
Bascom
Brinson
Jacobs
Greenwood
431
27
231
84