

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION OF  
FM CONSTRUCTION PERMIT  
RADIO STATION WRHY (FM)  
CENTRE, ALABAMA

MARCH 3, 2003

CH 290A    0.53 KW    332 M

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Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of a radio station WRHY(FM) assigned to Centre, Alabama. WRHY(FM) is presently licensed on Channel 290A for an effective radiated power of 6 kilowatts with an antenna height above average terrain of 100 meters.<sup>1</sup> WRHY(FM) is also authorized on Channel 290A for an effective radiated power of 0.37 kilowatts with an antenna height above average terrain of 385 meters.<sup>2</sup> By this instant application, it is proposed to modify WRHY(FM) to specify a slightly different transmitter site, increase ERP and decrease antenna HAAT.

The proposal would not be subject to environmental processing in accordance with Section 1.1306. The proposed facility will be located on a tower yet to be constructed, but due to its overall height of less than 200 feet and not located near any public airport, no antenna registration number is required. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

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<sup>1</sup> See FCC File Number: BLH-19930414KB.

<sup>2</sup> See FCC File Number: BPH-20020920AAF.

Proposed Transmitter Location

The transmitting facility will be located on a proposed structure to be located atop *Weisner Mountain*. The location is uniquely described by the following geographic coordinates:

34° 01' 44" North Latitude  
85° 40' 18" West Longitude

The proposed site is shown on the map contained in Figure 1. A sketch showing the antenna and proposed supporting structure is shown on Figure 2.

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 0.3 kilometer from the transmitting site. The applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the U.S.G.S. 3-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 3 is a map showing the predicted coverage contours. While the FCC predicted 70 dBu contour does not completely cover all of the principal community of Centre, it does cover 98.2 percent of the population within Centre (2000 U.S. Census). Since this value exceeds 80 percent, it is in compliance with the Commission's policy on city coverage.

#### Allocation Study

Channel 290A at the proposed site will satisfy the Commission's minimum separation distance requirements, specified in Section 73.207(b) of the Rules, to all assignments except to the station WENN(FM), on channel 290A assigned to Trussville, Alabama.

Section 73.215 processing is requested towards WENN(FM). The actual separation distance is 109 kilometers from the proposed WRHY(FM) site; the minimum fully spaced (Section 73.207) separation distance is 115 kilometers; the minimum short-spaced (Section 73.215) separation distance is 92 kilometers. The map in Figure 4 indicates that there will be no predicted prohibited contour overlap between the proposed WRHY(FM) and WENN(FM). The actual WENN(FM) facilities were assumed for determining its protected (60

dBu) and interfering contour (40 dBu) since WENN(FM) operates pursuant to Section 73.215.

### Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.<sup>3</sup> The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized effective radiated power of 1.06 kilowatts was employed with a radiation center of 10.7 meters (35 feet) above ground level. Using a "worst-case" relative field value for a 1-bay antenna, it is calculated that the maximum power density at ground level resulting from this facility is 0.062 mW/cm<sup>2</sup>. This is 31 percent of the maximum Commission guideline value in an uncontrolled environment for a FM radio station.<sup>4</sup> There are no other know facilities at the proposed site.

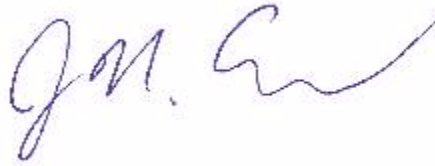
When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that

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<sup>3</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

<sup>4</sup> The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm<sup>2</sup>.

the human exposure to radiofrequency electromagnetic will  
not exceed the FCC guidelines.

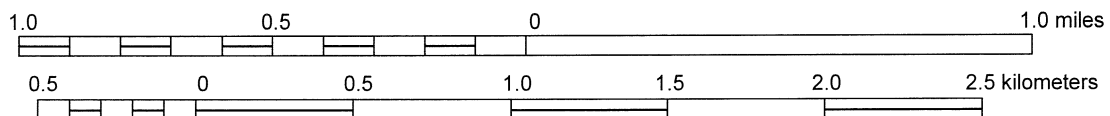
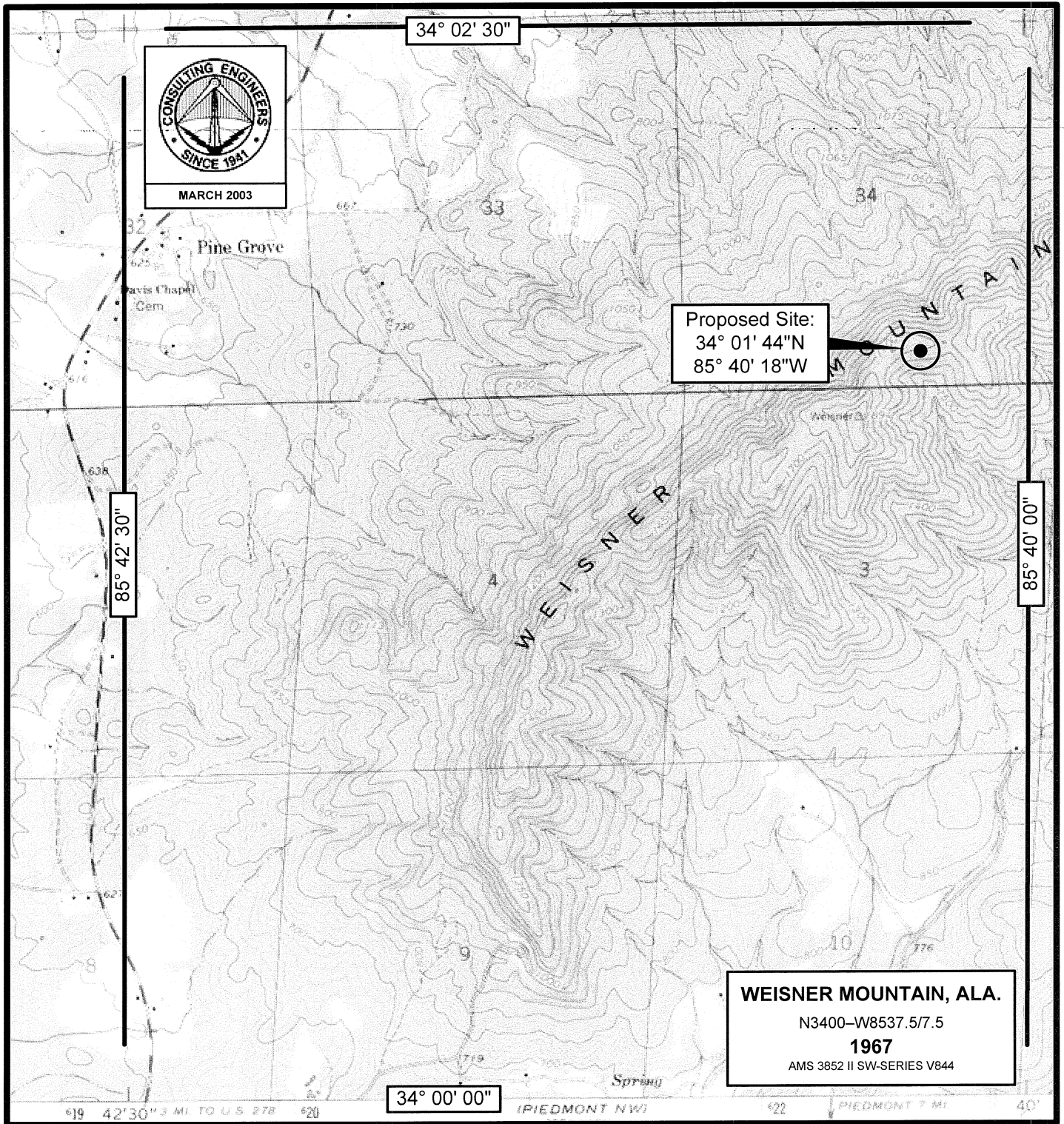


Jonathan N. Edwards

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March 3, 2003

Figure 1



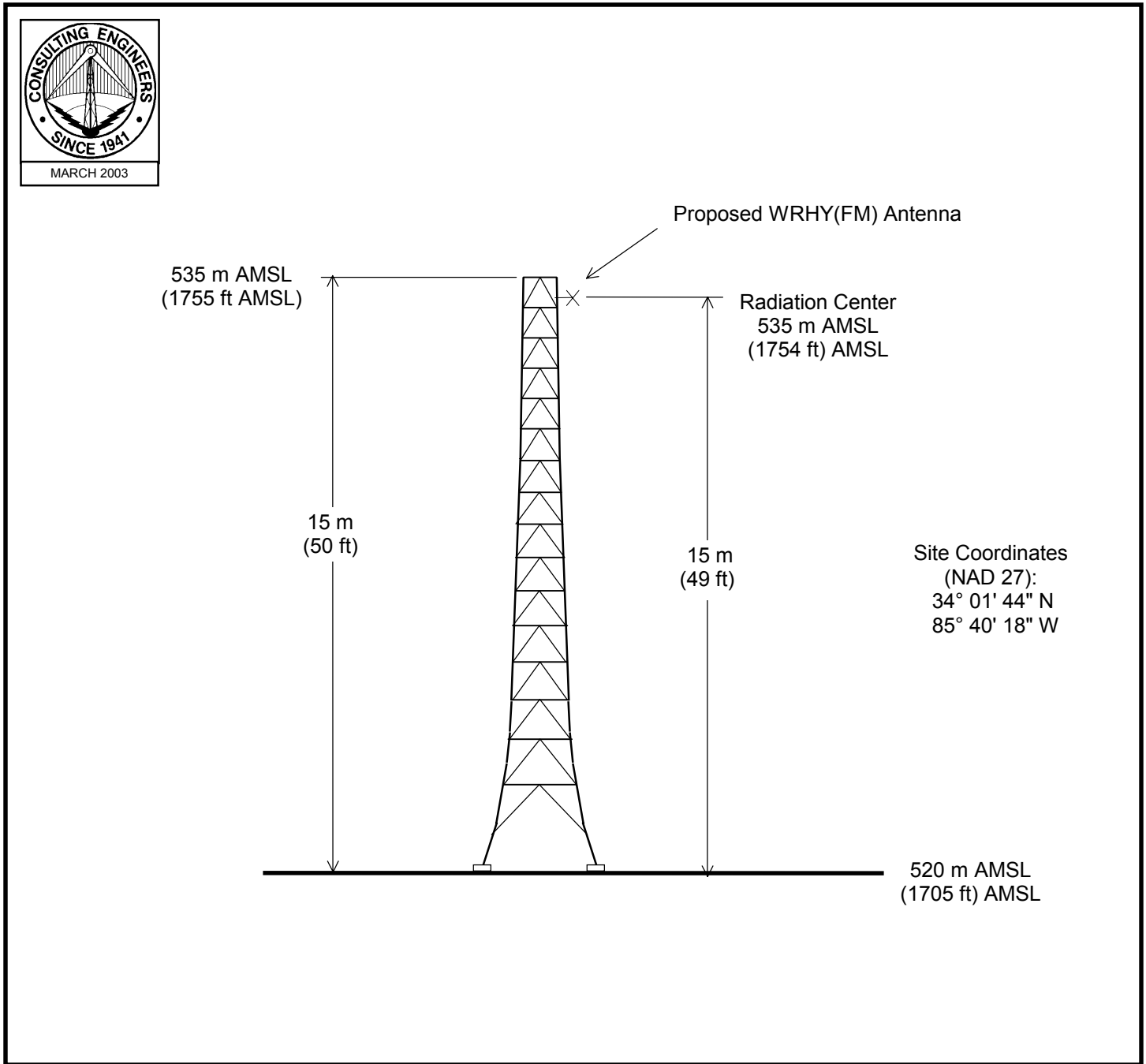
## **PROPOSED TRANSMITTER LOCATION**

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Figure 2



## **PROPOSED ANTENNA AND SUPPORTING STRUCTURE**

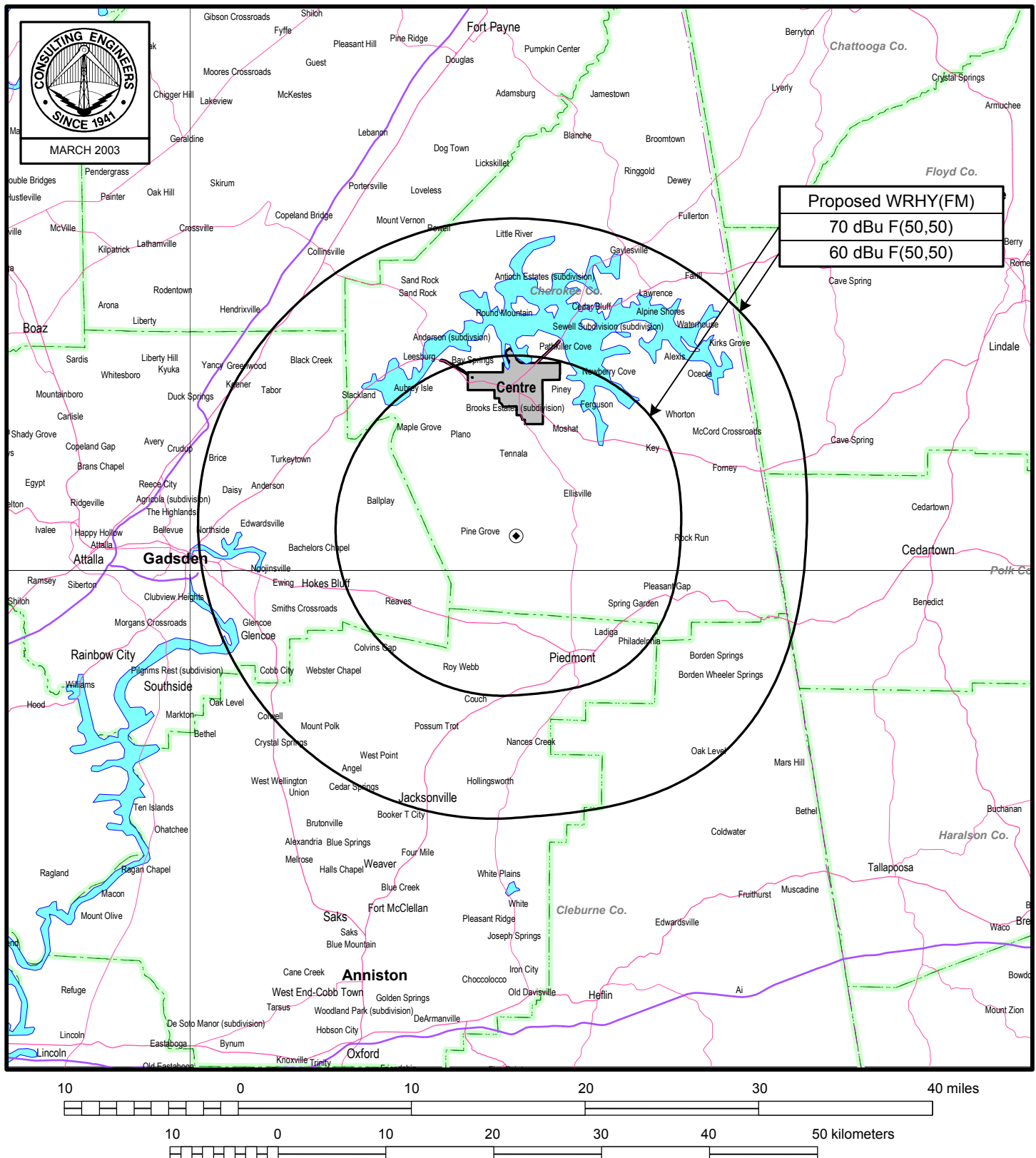
RADIO STATION WRHY(FM)

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### Figure 3



## PREDICTED F(50,50) COVERAGE CONTOURS

STATION WRHY(FM)

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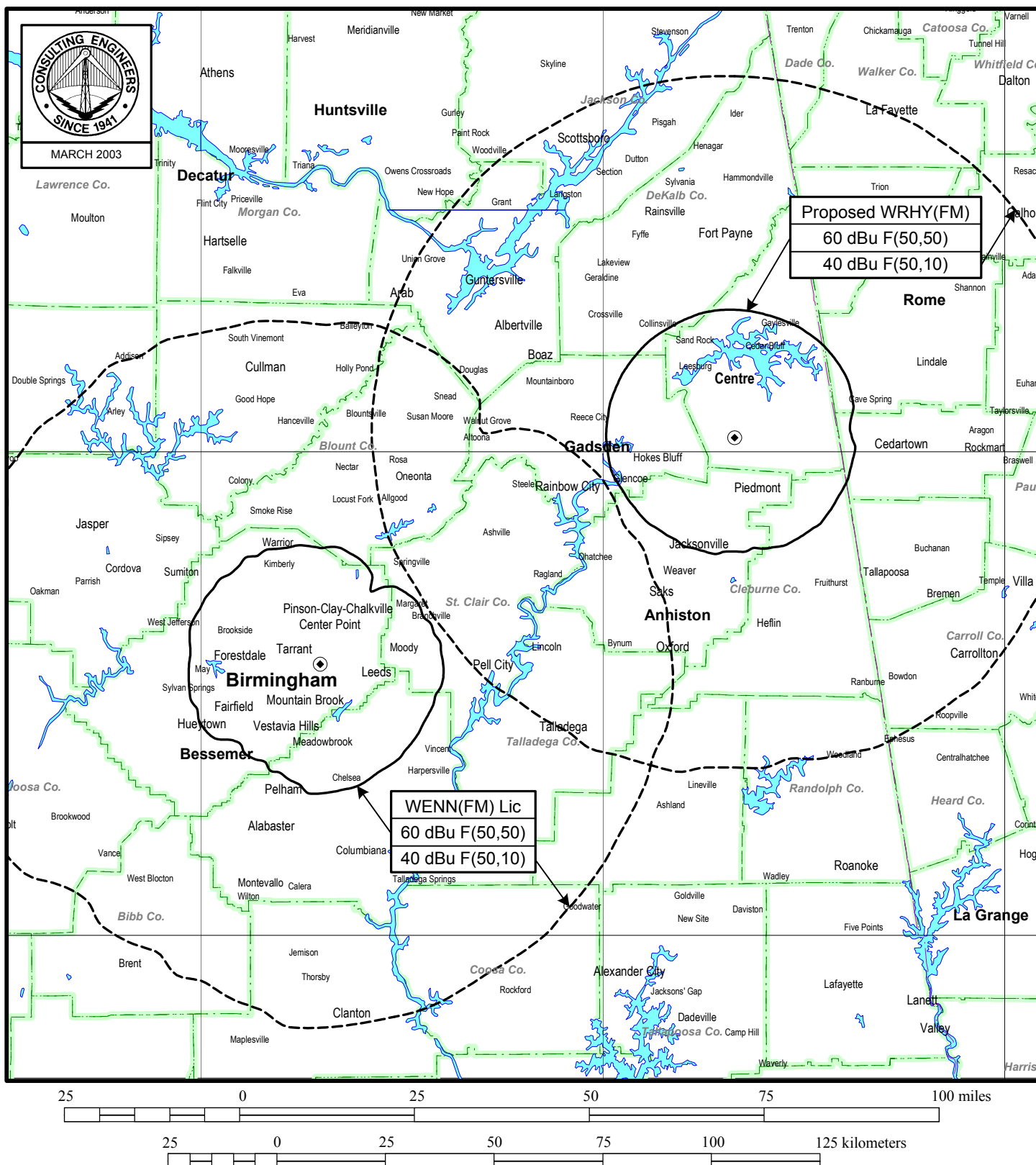
du Treil, Lundin & Rackley, Inc Sarasota, Florida

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Channel 290A Allocation Study

34° 01' 44" North Latitude  
85° 40' 18" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. min
DWSRM 30623	COOSA GA CP	C	BPH 19900226MD	237A 95.3	3.0 100	N	34-11-41 85-20-55	N	58.1	35.03	10.0
WMAX-FM 63406	BOWDON GA LIC	C	BLH 20020220AAB	287C1 105.3	61.0 367	N	33-24-41 84-49-48	Y	131.2	103.81	75.0
WMXV 10698	CANTON GA APP	C	BPH 20030205AAH	289C2 105.7	20.0 238	N	34-03-58 84-27-15	Y	87.5	112.49	106.0
WMXV 10698	CANTON GA LIC	C	BLH 20000418AAV	289C2 105.7	16.5 252	N	34-03-55 84-27-14	Y	87.6	112.52	106.0
WRHY 10701	CENTRE AL CP	C	BPH 20020920AAF	290A 105.9	0.37 385	N	34-01-25 85-40-41	Y	225.1	0.83	115.0
WRHY 10701	CENTRE AL LIC	C	BLH 19930414KB	290A 105.9	6.0 100	N	34-12-14 85-46-20	N	334.6	21.51	115.0
WENN 62278	TRUSSVILLE AL LIC	C	BLH 19930903KB	290A 105.9	1.4 205	N	33-33-38 86-42-11	Y	241.6	108.73	115.0
	TRUSSVILLE AL DEL	C	RM 10053	290A 105.9			33-33-38 86-42-11		241.6	108.73	115.0
<i>Section 73.215 processing is respectfully requested. See text.</i>											
WNRQ 34392	NASHVILLE TN LIC	C	BLH 19831212AN	290C 105.9	100.0 376	N	36-02-08 86-50-56	N	334.7	247.18	226.0
WTAK-FM 25383	HARTSELLE AL LIC	C	BLH 19931026KB	291C3 106.1	5.4 221	N	34-27-45 86-38-36	Y	298.6	101.61	89.0
WSTH-FM 60763	ALEXANDER AL LIC	C	BLH 19950410KB	291C1 106.1	86.0 319	N	32-45-30 85-28-20	N	172.5	142.13	133.0
0	OHATCHEE AL ADD	C	RM DD-94	292A 106.3			33-53-29 85-57-28		240.0	30.53	31.0



## 73.215 INTERFERENCE SHOWING

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