

*du Treil, Lundin & Rackley, Inc.*

Consulting Engineers

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TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WALR-FM  
PALMETTO, GEORGIA

NOVEMBER 2, 2009

CH 281C1 100 KW 177 M

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WALR-FM  
PALMETTO, GEORGIA  
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Table of Contents

- Technical Narrative
- Figure 1 Allotment Site Allocation Study
- Figure 2 Allotment Site Coverage Map
- Figure 3 Proposed Site Sketch of Antenna and Supporting Structure
- Figure 4 Proposed Predicted Coverage Contours
- Figure 5 Proposed Site Allocation Study
- Figure 6 Protected Services Map
- Figure 7 Urbanized Area Analysis

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Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for WALR-FM presently assigned to Greenville, Georgia on Channel 281C0. WALR-FM proposes by this instant continent application pack to change its community of license to Palmetto, Georgia and change station class to Channel 281C1. In a related application, WVFJ-FM proposes to change its community of license from Manchester, Georgia to Greenville, Georgia.

Allocation Considerations - Palmetto, Georgia

Channel 281C1 can be allotted to Palmetto with a proposed allotment reference site at coordinates: 33° 24' 43" North Latitude/084° 50' 03" West Longitude. Figure 1 is a separation study for the proposed allotment reference site for channel 281C1 at Palmetto, Georgia. The proposed reference site is the same site as the existing WALR-FM facility. Figure 2 is a map demonstrating that from the proposed allotment reference site a maximum class C1, 70 dBu reference circle encompasses the entire community of Palmetto.

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 4 kilometers from the transmitting site. No interference is expected. However, 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.

Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors. The average terrain elevations along 36 evenly spaced radials, beginning with 0° True were obtained from the N.G.D.C. 30-second terrain database. The antenna HAAT along each radial was used in combination with the effective radiated power (ERP) to determine the distance to the predicted 70 dBu and 60 dBu contours.

The coverage contours are shown on a map included as Figure 4. As can be seen on the map, the predicted 70 dBu contour encompasses all of Palmetto, Georgia. The Palmetto limits were obtained from the 2000 U.S. Census.

Allocation Study

Figure 5 is an allocation study for Channel 281C1 at the proposed site. The figure contains a tabulation of actual and required separation distances from other pertinent stations and allotments. The proposed site meets the FCC's minimum separation requirements, specified in Section 73.207(b) of the Commission's Rules, to all assignments and stations except to WDDK(FM) on Channel 280A at Greensboro, Georgia, WRBN(FM) on Channel 281A at Clayton, Georgia, WCLE-FM on Channel 281A at Calhoun, Tennessee, WZTR(FM) on Channel 282A at Dahlonega and WFSH-FM on Channel 284C1 at Athens, Georgia. Section 73.215 processing is requested toward all these facilities.

Community of License Change - Section 307(b)

*1. Proposal*

It is proposed to re-allot WALR-FM from Greenville, Georgia on Channel 281C0 to Palmetto, Georgia on Channel 281C1 and WVFJ-FM from Manchester, Georgia to Greenville, Georgia.

*2. City Populations and Local Service*

The city of Greenville, Georgia has a 2000 U.S. Census population of 949 persons. Greenville, Georgia will have one assigned aural transmission service remaining, WVFJ-FM. The city of Manchester, Georgia has a 2000 U.S. Census population of 3,988 persons. Manchester, Georgia will have one assigned aural transmission service remaining, WFDR(AM) on 1370 kHz. The city of Palmetto, Georgia has a U.S. Census population of 3,400 persons and has no local FM or AM transmission service.

*3. Urbanized Area Considerations*

The city of Palmetto, Georgia is not located within an urbanized area. The proposed 70 dBu contour from the proposed site will encompass 34% of the Atlanta urbanized population and 33% of its area. The existing 70 dBu contour for Channel 281C0 at Greenville encompasses 23% of the Atlanta urbanized population and 25% of its area.

*4. 60 dBu Gain and Loss Areas and Available Aural Services*

Using the existing and proposed facilities, the channel 281C0 Greenville loss area contains 318,000 persons over 8,025 square kilometers of land area. The Channel 281C1 Palmetto gain area contains 335,000 persons over 1,040 square kilometers of land area. There are at least two or more other full-time aural services available in any section of the actual loss area.

*5. 70 dBu and 60 dBu Coverage*

The following tabulates the area and population within the 70 dBu and 60 dBu contours depicted in Figure 4.

Contour	Population (2000 Census)	Land Area (sq. km)
70 dBu	1,383,100	5,320
60 dBu	2,951,900	11,920

Contour locations calculated in accordance with the provisions of Section 73.313. Population calculated using a computer program that utilizes the 2000 U.S. Census database of "population centroids".

*6. Protected FM and AM Services Available*

It has been determined that there are 13 protected services available to both the cities of Greenville and Palmetto, Georgia as shown in Figure 6.

Radiofrequency Electromagnetic Field Exposure Analysis

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.<sup>1</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 ERP of 200 kilowatts is employed with a radiation center of 153 meters above ground level. A downward relative field value of 0.5 was assumed. It is calculated that the power density will not exceed 0.07 mW/cm<sup>2</sup> at two meters above ground level. This is 36 percent of the Commission's guideline value for an uncontrolled environment for a FM radio station.<sup>2</sup> Considering the contributions of the other stations at the site, the cumulative ground level contribution will not exceed one hundred percent of the Commission's uncontrolled exposure guideline value.

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<sup>1</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

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

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Consulting Engineers

Page 6

Palmetto, Georgia

Access to the transmitting site will be restricted and appropriately marked with warning signs. 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 the human exposure to radiofrequency radiation will not exceed the FCC guidelines.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

Charles A. Cooper

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November 2, 2009

Figure 1

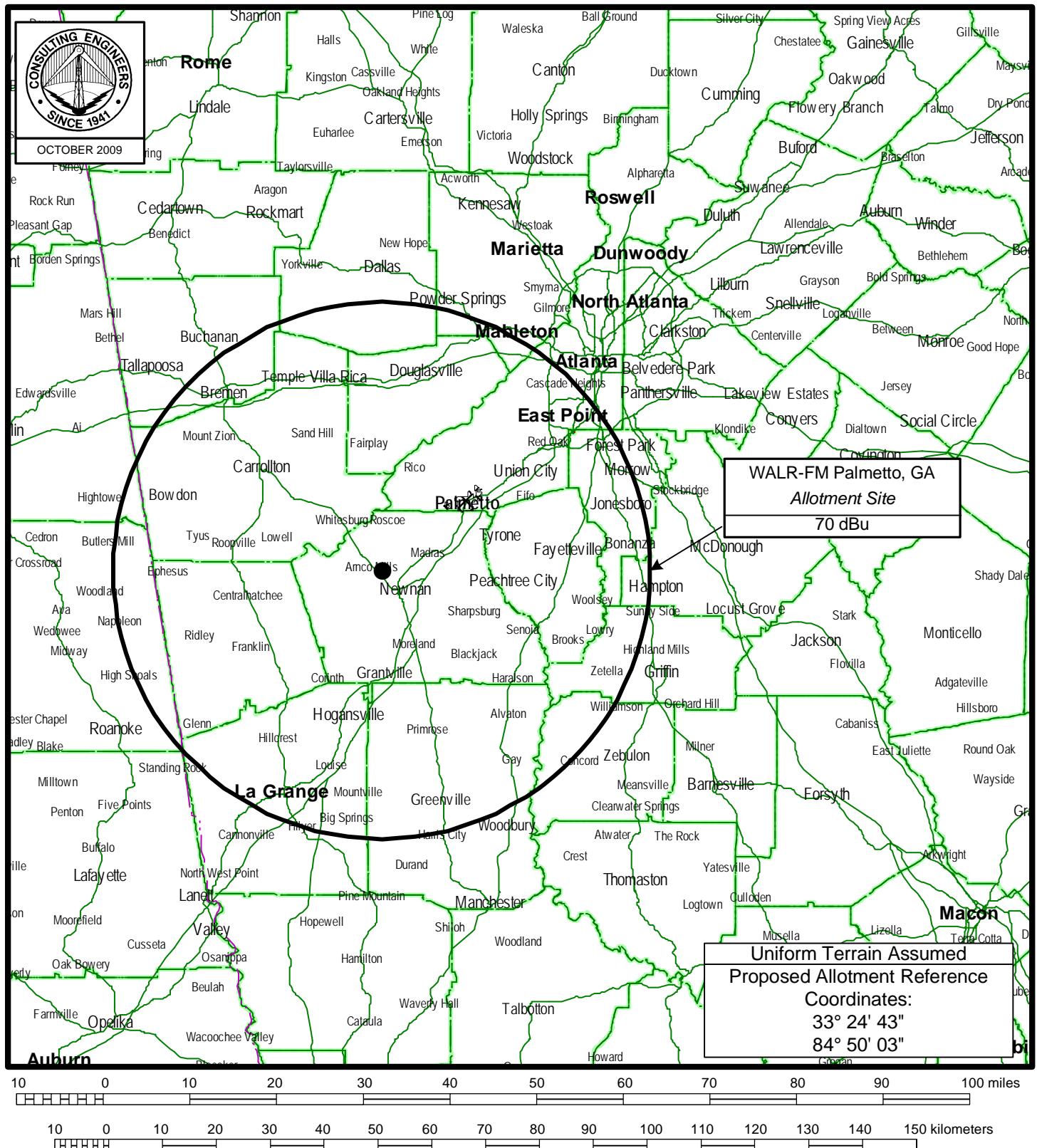
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Channel 281C1 Allotment Allocation Study at Existing Site

33° 24' 43" North Latitude  
 084° 50' 03" West Longitude

Call Id	City St	Status	File Num	Channel Freq	ERP HAAT	DA Id	Latitude	73 215	Bear	Dist. (km)	Req. min
WVFJ-FM 53679	MANCHESTER GA	LIC C	BMLH 20030220AAJ	227C1 93.3	27 491	N	33-05-10 084-46-10		170.6	36.64	34.0
WVFJ-FM 53679	MANCHESTER GA	CP C	BPH 20051031ABT	227C0 93.3	88 468	Y	33-01-56 084-47-27		174.5	42.31	37.0
WBOJ 60372	CUSSETA GA	LIC C	BLH 20080429ABC	279C3 103.7	4.8 227	N	32-27-29 084-53-08		182.6	105.90	76.0
WDDK 6798	GREENSBORO GA	LIC C	BLH 19981127KC	280A 103.9	5.3 100	N	33-28-29 083-14-46		86.9	147.83	133.0
WPPL 21152	BLUE RIDGE GA	LIC C	BLH 20000216AAW	280A 103.9	5.5 104	Y	34-52-03 084-20-02		15.7	167.92	133.0
WQXZ 67693	HAWKINSVILLE GA	LIC C	BLH 19960122KE	280C3 103.9	10.5 151	N	32-10-03 083-37-51		140.6	178.19	144.0
WALR-FM 48728	GREENVILLE GA	LIC C	BLH 20070314ABH	281C0 104.1	100 371	N	33-24-43		90.0	0.00	
(Applicant's presently licensed facility.)											
WCLE-FM 55099	CALHOUN TN	LIC C	BLH 20040709ACQ	281A 104.1	2.3 159	Y	35-15-59 084-50-23		359.8	205.71	200.0
WRBN 56201	CLAYTON GA	LIC C	BMLH 20021011ABP	281A 104.1	0.37 395	N	34-54-24 083-24-56		37.7	211.19	200.0
WZTR 34319	DAHLONEGA GA	LIC C	BLH 20040709ACR	282A 104.3	3.7 127	Y	34-29-56 084-08-32		27.6	136.48	133.0
WHLW 6655	LUVERNE AL	LIC C	BLH 19970731KB	282C1 104.3	13.5 558	N	31-58-28 086-09-44		218.2	202.29	177.0
WZYD 3083	ATHENS AL	LIC C	BMLH 20081022ACH	282C 104.3	100 340	N	34-49-06 086-44-16		312.3	234.91	209.0
WFSH-FM 56390	ATHENS GA	LIC C	BMLH 20060726APQ	284C1 104.7	24 505	N	33-52-02 083-49-44		61.2	106.06	82.0

**Figure 2**



## 70 DBU ALLOTMENT COVERAGE CONTOUR

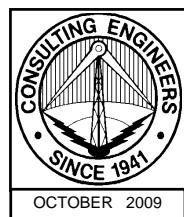
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PALMETTO, GEORGIA

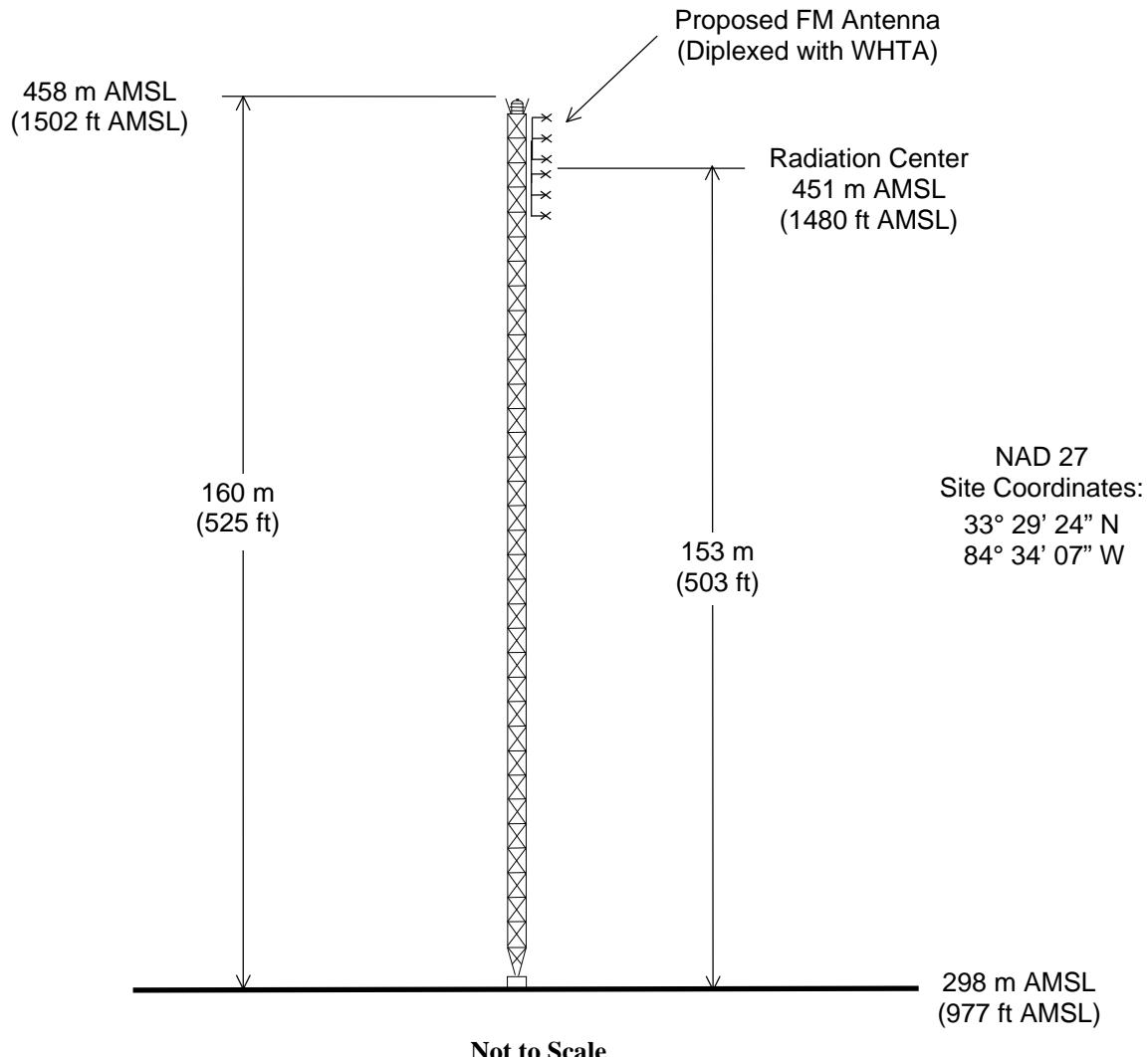
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Figure 3



ASRN: 1018915



## ANTENNA AND SUPPORTING STRUCTURE

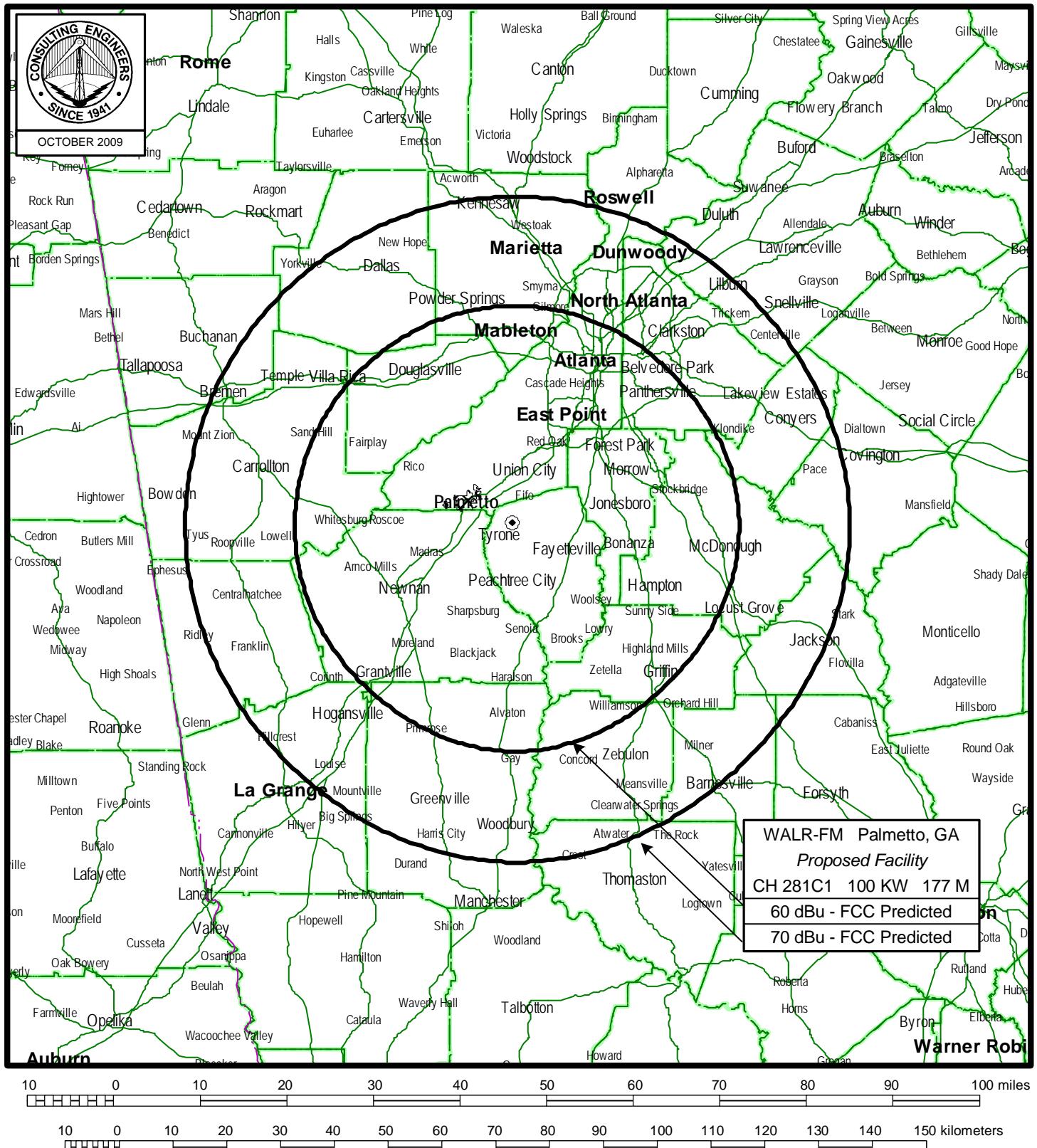
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PALMETTO, GEORGIA

CH 281C1 100 KW 177 M

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Figure 4



## PREDICTED COVERAGE CONTOURS

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PALMETTO, GEORGIA

CH 281C1 100 KW 177 M

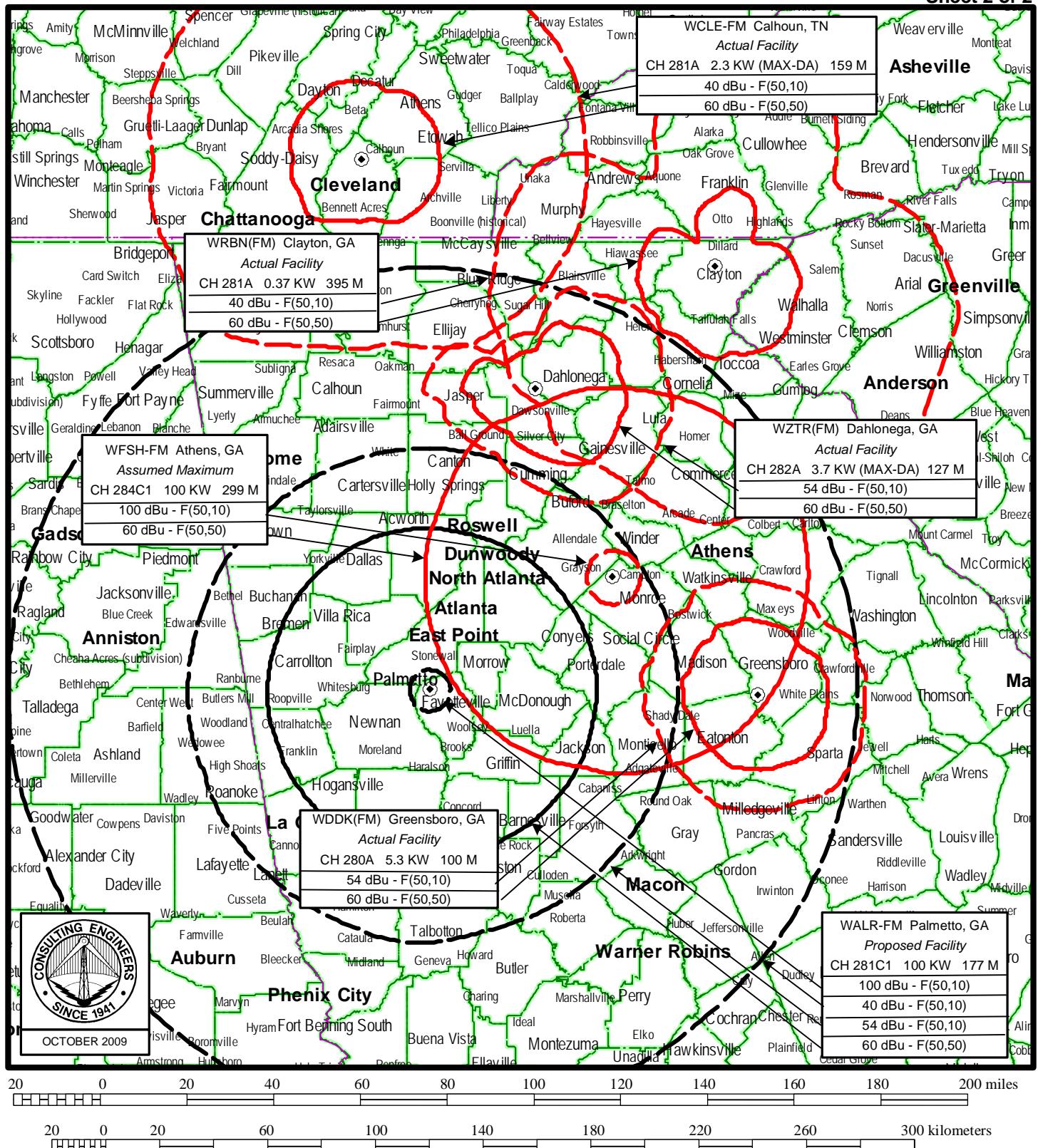
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## Channel 281C1 Allocation Study at Proposed Transmitter Site

33° 29' 24" North Latitude  
084° 34' 07" West Longitude

Figure 5  
Sheet 2 of 2



## PROPOSED SITE ALLOCATION STUDY

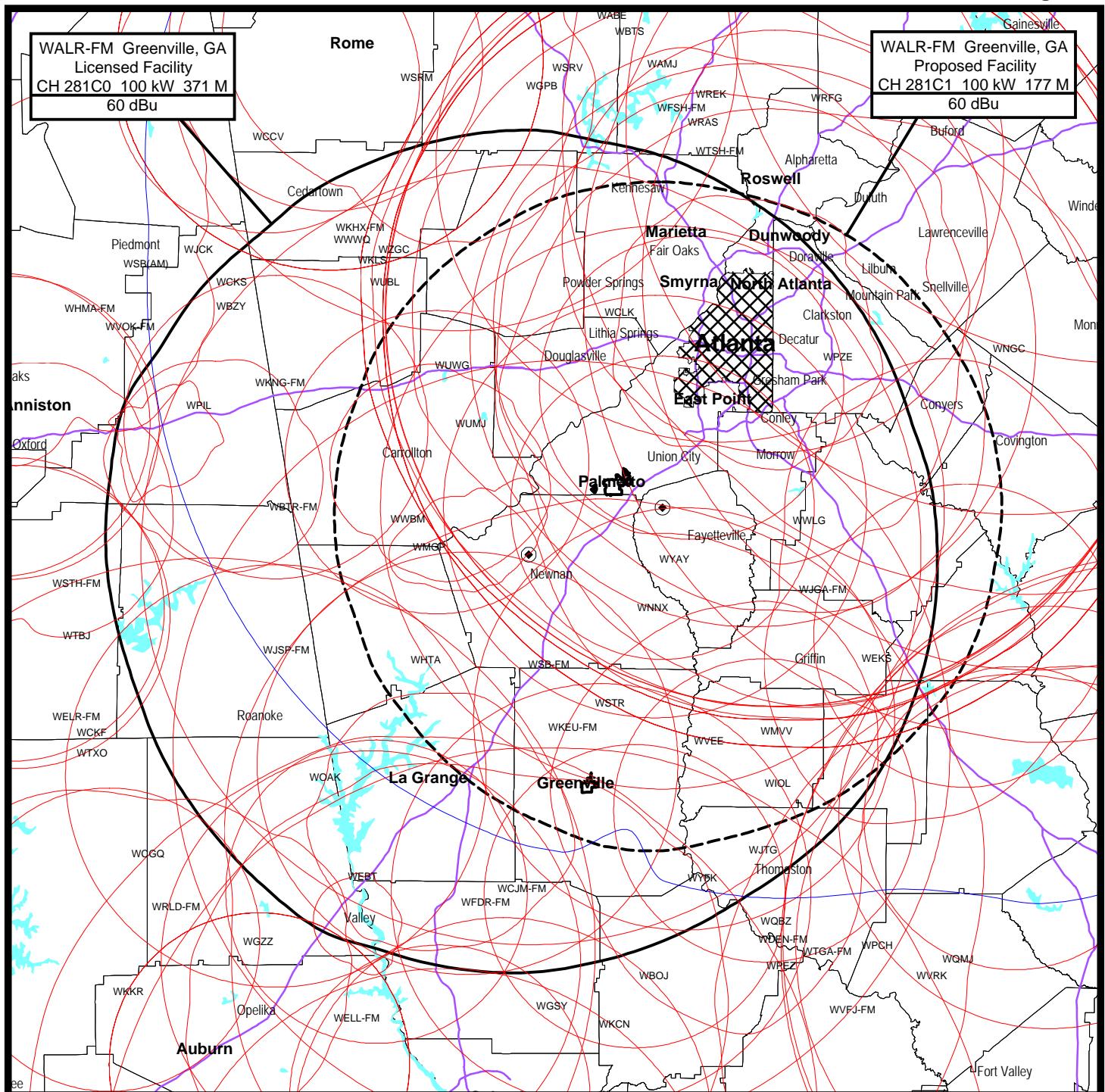
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**Figure 6**



Kilometers

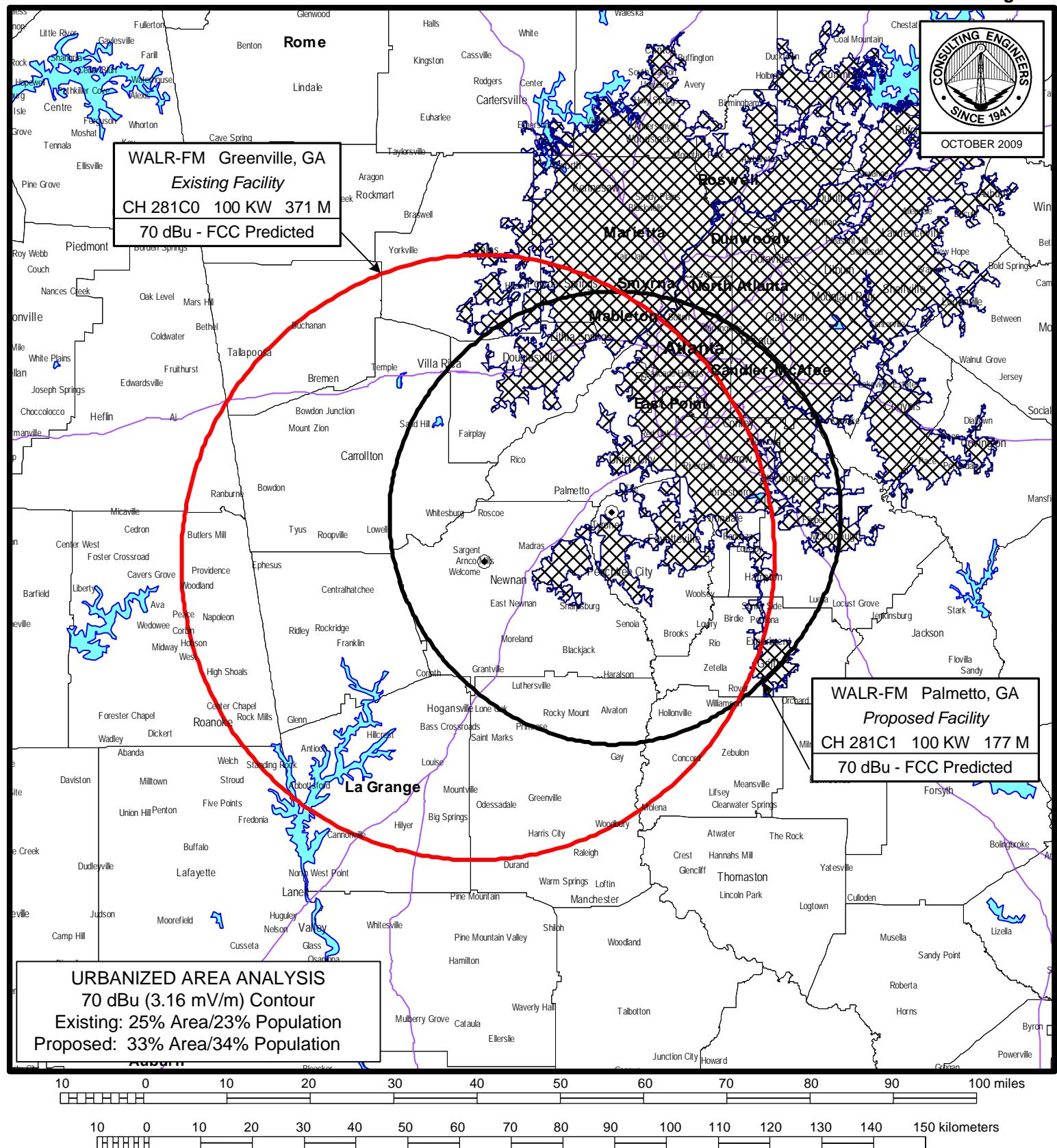
# PREDICTED SERVICES ANALYSIS

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**Figure 7**



## URBANIZED AREA ANALYSIS

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