

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
STATION WABZ-FM  
INDIAN TRAIL, NORTH CAROLINA  
CH 265A 6.0 KW (MAX-DA) 100 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a minor change application for construction permit to modify the facilities of FM station WABZ-FM (FCC Facility ID 52553). Station WABZ-FM currently operates on channel 265A at Albermarle, North Carolina with a nondirectional effective radiated power (ERP) of 3 kW and an antenna height above average terrain (HAAT) of 61 meters (FCC File No. BLH-3002). As a result of the Report and Order in MM Docket No. 99-240 (DA 01-1660), the Commission modified the license of WABZ-FM to specify operation on channel 265A at Indian Trail, North Carolina. The instant application specifies operation on channel 265A at Indian Trail as specified in the Report and Order. The instant application is considered a minor change in facilities pursuant to the Report and Order.

Specifically, it is proposed to relocate transmitter site and operate on channel 265A with a directional antenna maximum ERP of 6 kW and an HAAT of 100 meters. It is proposed to reclassify WROQ on channel 266C at Anderson, South Carolina as a Class C0 pursuant to Note 4 of Section 73.3573. It is also proposed to utilize the contour protection provisions of Section 73.215 with respect to the short-spacing with the reclassified WROQ operation.

Response to Paragraph 14 - Community Coverage

Figure 1 demonstrates that the proposed operation complies with the provisions of Sections 73.315.

Response to Paragraph 16 - Interference

Figure 2, attached, is an FM separation study from WABZ-FM's proposed antenna location for the channel 265A operation based on the Commission's CDBS database. As shown, the proposed antenna location complies with the minimum distance separation requirements of Section 73.207 for Class A operation on channel 265 towards all existing, authorized and proposed stations and

allotments with the exceptions of the licensed operations of WROQ on channel 266C at Anderson, South Carolina and WKXU on channel 266C at Burlington, North Carolina. Each short-spacing is addressed below.

It is proposed to reclassify WROQ on channel 266C at Anderson, South Carolina as a Class C0 station pursuant to Note 4 of 73.3573. It is also proposed to utilize the contour protection provisions of Section 73.215 with respect to the short-spacing with the reclassified WROQ operation.<sup>1</sup> Figure 3, demonstrates that the proposed WABZ-FM operation complies with the contour protection provisions of Section 73.215 with respect to the reclassified WROQ channel 266C0 operation. Maximum Class C0 facilities (ERP 100 kW/HAAT 450 meters) have been presumed for WROQ as specified in Section 73.215.

The short-spacing with WKXU is grandfathered pursuant to Section 73.213(a) as WABZ-FM and WKXU have been short-spaced since November 16, 1964.<sup>2</sup> Figure 4 is a map which demonstrates that the proposed WABZ-FM operation complies with the provisions of Section 73.213(a) as there would be no overlap of the protected and interfering contours the proposed WABZ-FM operation and the licensed WKXU operation.

#### Compliance with Note 4 of Section 73.3573

It is proposed to reclassify station WROQ on channel 266C at Anderson, South Carolina as a Class C0 station pursuant to the provisions of Section Note 4 of Section 73.3573. That Section permits Class C0 reclassification for Class C stations which operate with HAAT values of less than 451 meters. Station WROQ operates with an HAAT of 301 meters. That Section also requires certification that there is no alternative channel available for the proposed service. Figure 5 is a study which demonstrates that there are no alternative channels available for the proposed Class A service from the proposed transmitter site. Finally, that Section permits use of Section 73.215 towards a reclassified station as is proposed herein for WROQ. Therefore, it is believed

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<sup>1</sup> The distance between WABZ-FM's proposed transmitter location and WROQ's transmitter location (150.86 km) complies with the minimum distance separation requirement of Section 73.215(e) (130 km).

<sup>2</sup> See also paragraphs 6 and 7 of the Report and Order in MM Docket 99-240.

that the proposed WABZ-FM channel 265A operation complies with the provisions of Note 4 of Section 73.3573.

Response to Paragraph 17 - Environmental Protection Act

The proposed WABZ-FM facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with OST Bulletin No. 65 (Edition 97-01, August 1997), "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation".

The proposed WABZ-FM antenna will be side-mounted at the 85 meter level on the authorized tower structure. The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. Figure 6 is vertical plane relative field pattern for the proposed ERI 4-bay directional antenna. As shown on Figure 6, the maximum vertical relative field value towards the tower base ( $-60^{\circ}$  to  $-90^{\circ}$  elevation) is less than 0.4. Therefore, using a "worst-case" vertical relative field value of 0.4, the total ERP of 12 kW (H+V) and an antenna center of radiation height above ground level of 85 meters, the calculated power density at 2 meters above ground level at the base of the tower is 0.0093 milliwatt per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 4.7 percent of the Commission's recommended limit applicable to an "uncontrolled" exposure areas ( $0.2 \text{ mW}/\text{cm}^2$  for FM frequencies). Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

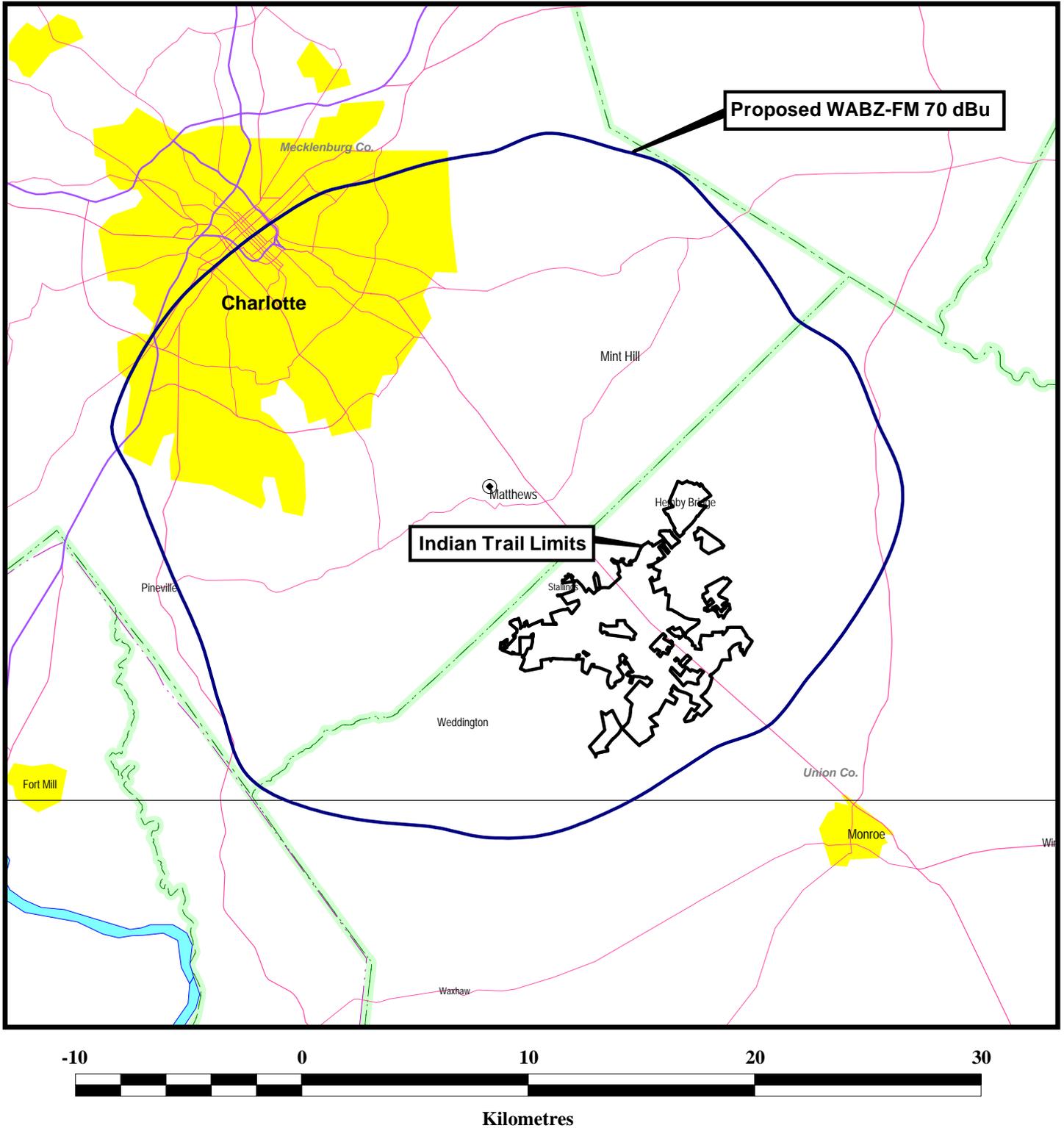
In addition, it appears that the authorized structure is otherwise excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.

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Figure 1



**COMPLIANCE WITH SECTION 73.315  
STATION WABZ-FM  
INDIAN TRAIL, NORTH CAROLINA  
CH 265A 6 KW (MAX-DA) 100 M**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

CDBS FM SEPARATION STUDY

Job Title: Proposed WABZ-FM, Indian Trail, NC  
 Channel: 265 A

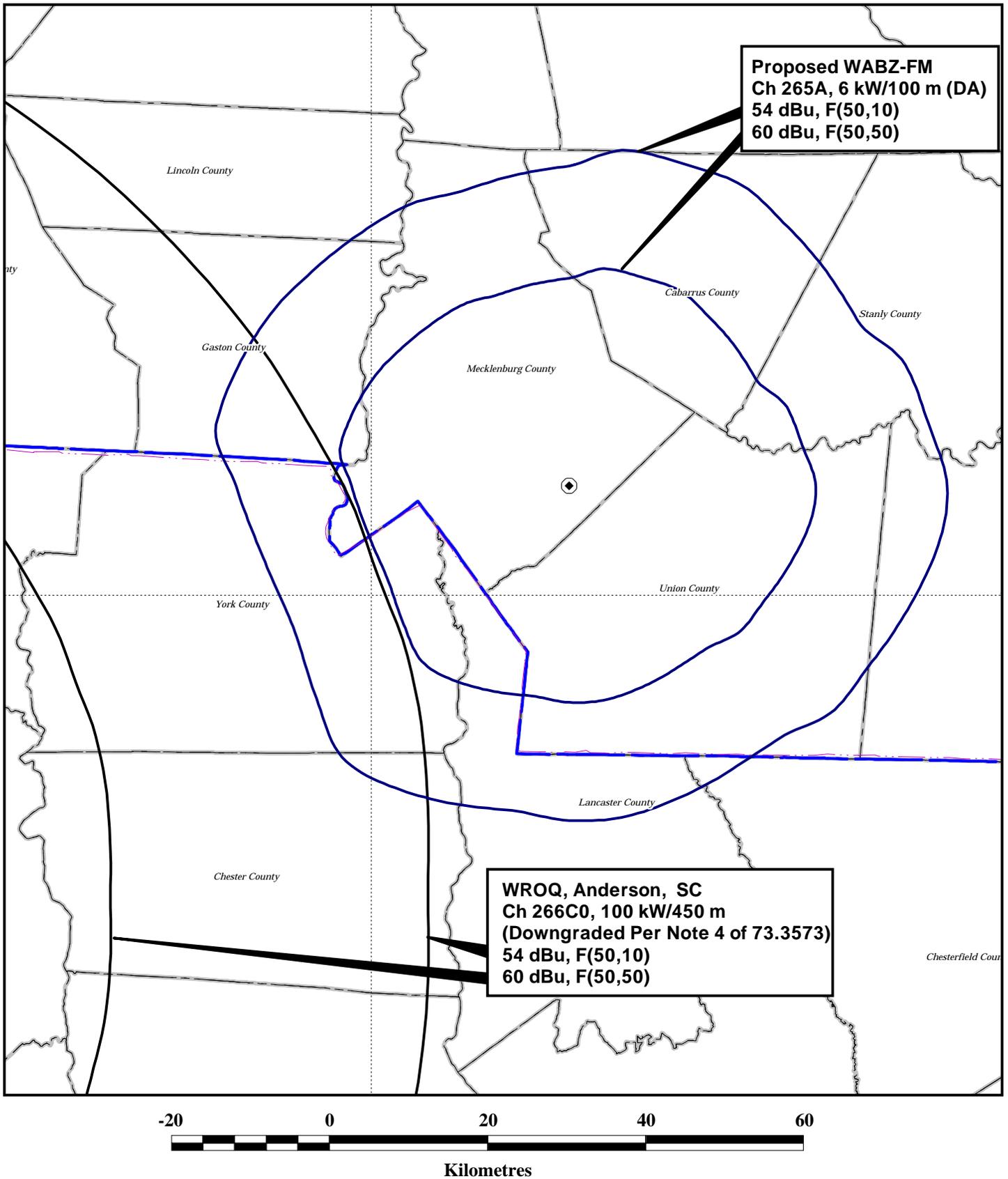
Separation Buffer: 32 km  
 Coordinates: 350729 804330

Call Id	City St	File Status Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
WVBZ 74204	HIGH POINT NC	BLH LIC C	19880805LB	262 C 100.3	100.000 316	N	35-58-09 079-49-29	N 40.7	124.27 29.27	95.0 Clear
0	INDIAN TRAI NC	RM RSV C	9503	265 A 100.9	0.000	N	35-06-53 080-33-44	N 94.2	14.88	
WABZ-F 52553	ALBEMARLE NC	BLH LIC C	3002	265 A 100.9	3.000 61	N	35-22-40 080-11-38	N 59.6	55.90	
WIFM-F 20411	ELKIN NC	BLH LIC C	19910930KA	265 A 100.9	0.600 216	N	36-11-33 080-50-59	N 354.6	119.01 4.01	115.0 Close
WIFM-F 20411	ELKIN NC	BPH CP C	20010703AAZ	265 A 100.9	0.470 215.5	N	36-11-50 080-50-13	Y 355.2	119.42 4.42	115.0 Close
WSTS 53608	FAIRMONT NC	BLH LIC C	19941222KA	265 C2 100.9	50.000 149	N	34-16-17 078-56-24	N 119.7	188.97 22.97	166.0 Clear
WXXU 9080	BURLINGTON NC	BMLH LIC C	19950720KA	266 C 101.1	100.000 363	Y 13773	35-56-31 079-26-33	N 51.6	147.48 -17.52	165.0 <b>Short</b> <sup>1</sup>
WROQ 318	ANDERSON SC	BLH LIC C	19870204LD	266 C 101.1	100.000 301	Y 13749	34-38-51 082-16-13	N 249.8	150.86 -14.14	165.0 <b>Short</b> <sup>2</sup>
WWDM 58398	SUMTER SC	BMLH LIC C	19980925KB	267 C 101.3	100.000 403	Y 13616	34-03-04 080-40-55	N 178.1	119.16 24.16	95.0 Clear

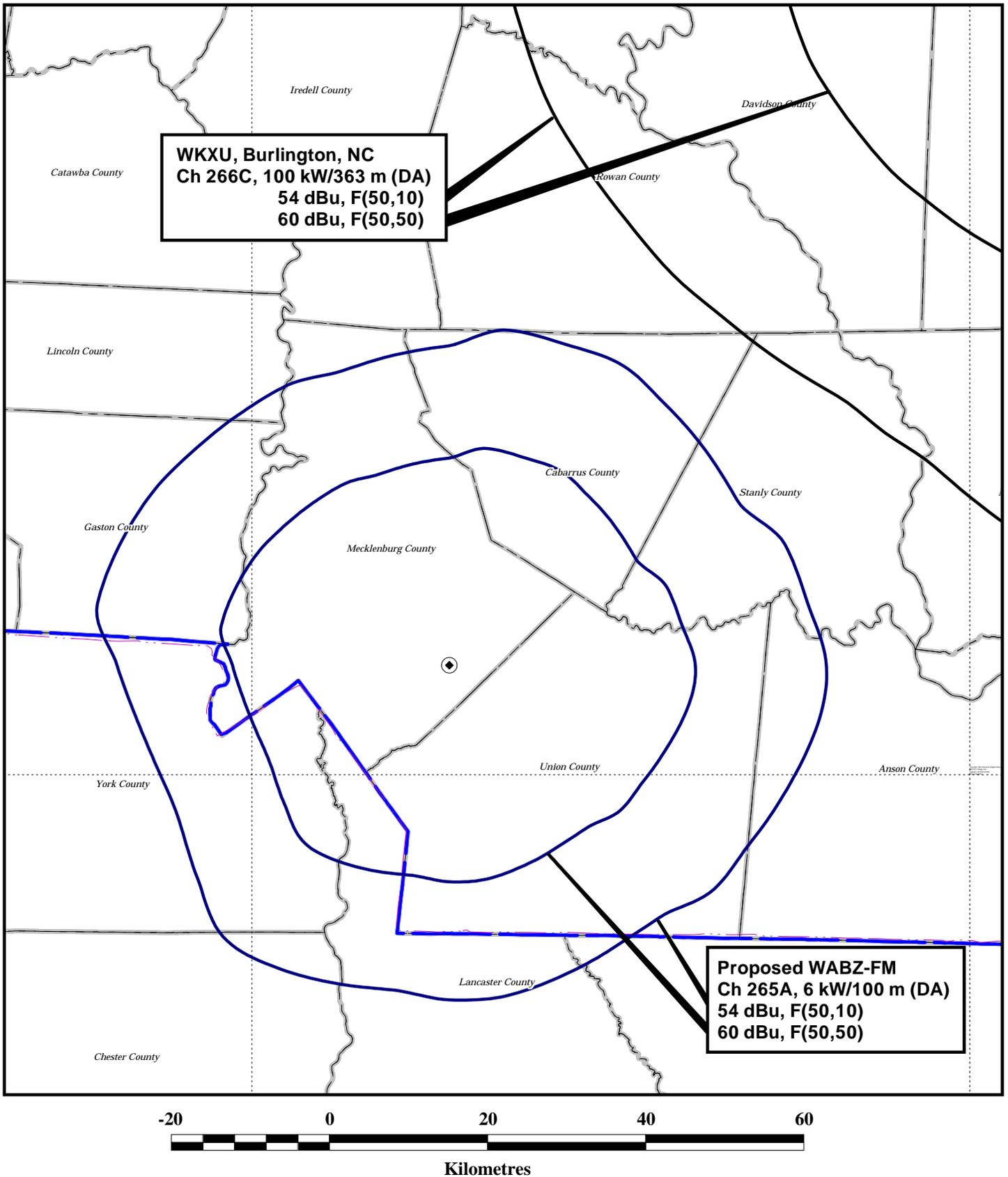
<sup>1</sup> Grandfathered short-spacing pursuant to Section 73.213(a). There is no prohibited contour overlap with WXXU. See Technical Narrative and Figure 4.

<sup>2</sup> It is proposed to downgrade WROQ to Class C0 status and to utilize the contour protection provisions of Section 73.215 with respect to the downgraded WROQ Class C0 operation. The proposal complies with the minimum distance separation requirements of Section 73.215(e) (130 km). See Technical Narrative and Figure 3.

Figure 3



**COMPLIANCE WITH SECTION 73.215**  
**PROPOSED WABZ-FM**  
**INDIAN TRAIL, NORTH CAROLINA**  
**CH 265A 6 KW (MAX-DA) 100 M**  
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**COMPLIANCE WITH SECTION 73.213(a)**  
**PROPOSED WABZ-FM**  
**INDIAN TRAIL, NORTH CAROLINA**  
**CH 265A 6 KW (MAX-DA) 100 M**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Alternative Class A Channel Study

Channel Studied	Primary Assignment Precluding Channel	Channel	Distance (km) <sup>i</sup>
221-223	WKRR, Asheboro, NC	222C	113
224-227	WCHH, Harrisburg, NC	224A	17
228-229	WYFQ, Wadesboro, NC	228C3	39
230-232	WTHZ, Lexington, NC	231C	96
233-237	WNKS, Charlotte, NC	236C	47
238-244	WWMG, Shelby, NC	241C	47
245-247	WKKT, Statesville, NC	245C	46
248-253	WPEG, Concord, NC	250C	47
254-256	WSPA, Spartanburg, SC	255C	143
257-262	WRFX, Kannapolis, NC	259C1	18
263-264	WSSL, Gray Court, SC	263C	141
265	<i>Proposed Channel</i>	--	--
266-268	WWDM, Sumter, SC	267C	119
269-273	WBAV, Gastonia, NC	270C	52
274-278	WLYT, Hickory, NC	275C1	85
279-282	WSOC, Charlotte, NC	279C	15
283-285	WNOK, Columbia, SC	284C	109
286-292	WFMX, Statesville, NC	289C	78
293-296	WEND, Salisbury, NC	293C1	53
297-300	WLNK, Charlotte, NC	300C	50

<sup>i</sup> Distance calculated from proposed site location (N35-07-29/W80-43-30).

Figure 6

