

## **Non-Interference Compliance**

Regarding Facility id 151444

Channel 279

### **Description of Exhibit 13 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Page 4 includes a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

**Note: The building within the zone of predicted interference is less than 20 ft (6.1m) tall. This proposal provides 68.6m (225ft) of ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

## Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1494689	BLH20120403ACE	WBBQ-FM	95.3	95.3
283245	BLH19990326KB	WFXA-FM	100.4	100
999080	BMLH20040618AAT	WBBQ-FM	97.5	95.9
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>95.3</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **95.3 dBμ**, this makes the proposed translator's worst-case interfering contour **135.3 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **16.6 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 6 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **68.6 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

**Note: The building within the zone of predicted interference is less than 20 ft (6.1m) tall. This proposal provides 68.6m (225ft) of ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

Antenna Manufacturer:	NIC
Antenna Model:	BKG77
CORAGL:	76 m
Maximum ERP:	0.19 kW
Interfering Contour:	135.3 dBμ
Max Int. Contour Distance:	16.6 m
Min Ground Clearance:	68.6 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.999	189.6	16.6	16.5	74.6
10	.982	183.2	16.3	16.1	73.2
15	.954	172.9	15.8	15.3	71.9
20	.918	160.1	15.2	14.3	70.8
25	.871	144.1	14.5	13.1	69.9
30	.818	127.1	13.6	11.8	69.2
35	.758	109.2	12.6	10.3	68.8
40	.691	90.7	11.5	8.8	68.6
45	.616	72.1	10.2	7.2	68.8
50	.538	55.0	8.9	5.7	69.2
55	.465	41.1	7.7	4.4	69.7
60	.391	29.0	6.5	3.2	70.4
65	.313	18.6	5.2	2.2	71.3
70	.239	10.9	4.0	1.4	72.3
75	.176	5.9	2.9	0.8	73.2
80	.128	3.1	2.1	0.4	73.9
85	.103	2.0	1.7	0.1	74.3
90	.105	2.1	1.7	0.0	74.3
Minimum Clearance above TGL:					<b>68.6 m</b>



BK077

<b>Vertical</b>	-66	0.297	54	0.479	174	0.468
<b>Values</b>	-63	0.345	57	0.436	177	0.479
-180	0.487	-60	0.391	60	0.391	
-177	0.478	-57	0.436	63	0.345	
-174	0.467	-54	0.479	66	0.297	
-171	0.460	-51	0.523	69	0.253	
-168	0.454	-48	0.568	72	0.211	
-165	0.447	-45	0.616	75	0.176	
-162	0.439	-42	0.661	78	0.145	
-159	0.429	-39	0.706	81	0.120	
-156	0.419	-36	0.745	84	0.105	
-153	0.402	-33	0.783	87	0.100	
-150	0.385	-30	0.818	90	0.105	
-147	0.369	-27	0.852	93	0.118	
-144	0.359	-24	0.881	96	0.134	
-141	0.350	-21	0.910	99	0.151	
-138	0.338	-18	0.934	102	0.168	
-135	0.326	-15	0.954	105	0.185	
-132	0.314	-12	0.972	108	0.202	
-129	0.303	-9	0.987	111	0.219	
-126	0.290	-6	0.999	114	0.236	
-123	0.278	-3	0.999	117	0.252	
-120	0.265	0	1.000	120	0.265	
-117	0.251	3	0.999	123	0.278	
-114	0.236	6	0.999	126	0.290	
-111	0.218	9	0.987	129	0.304	
-108	0.202	12	0.972	132	0.314	
-105	0.185	15	0.954	135	0.327	
-102	0.168	18	0.934	138	0.338	
-99	0.151	21	0.910	141	0.350	
-96	0.134	24	0.881	144	0.360	
-93	0.118	27	0.852	147	0.370	
-90	0.105	30	0.818	150	0.386	
-87	0.100	33	0.783	153	0.403	
-84	0.105	36	0.745	156	0.420	
-81	0.120	39	0.706	159	0.430	
-78	0.145	42	0.661	162	0.440	
-75	0.176	45	0.616	165	0.448	
-72	0.211	48	0.568	168	0.455	
-69	0.253	51	0.523	171	0.461	

Better than SWR

# Adjacent Channel Study

## For Station W279BY, Facility\_id: 151444

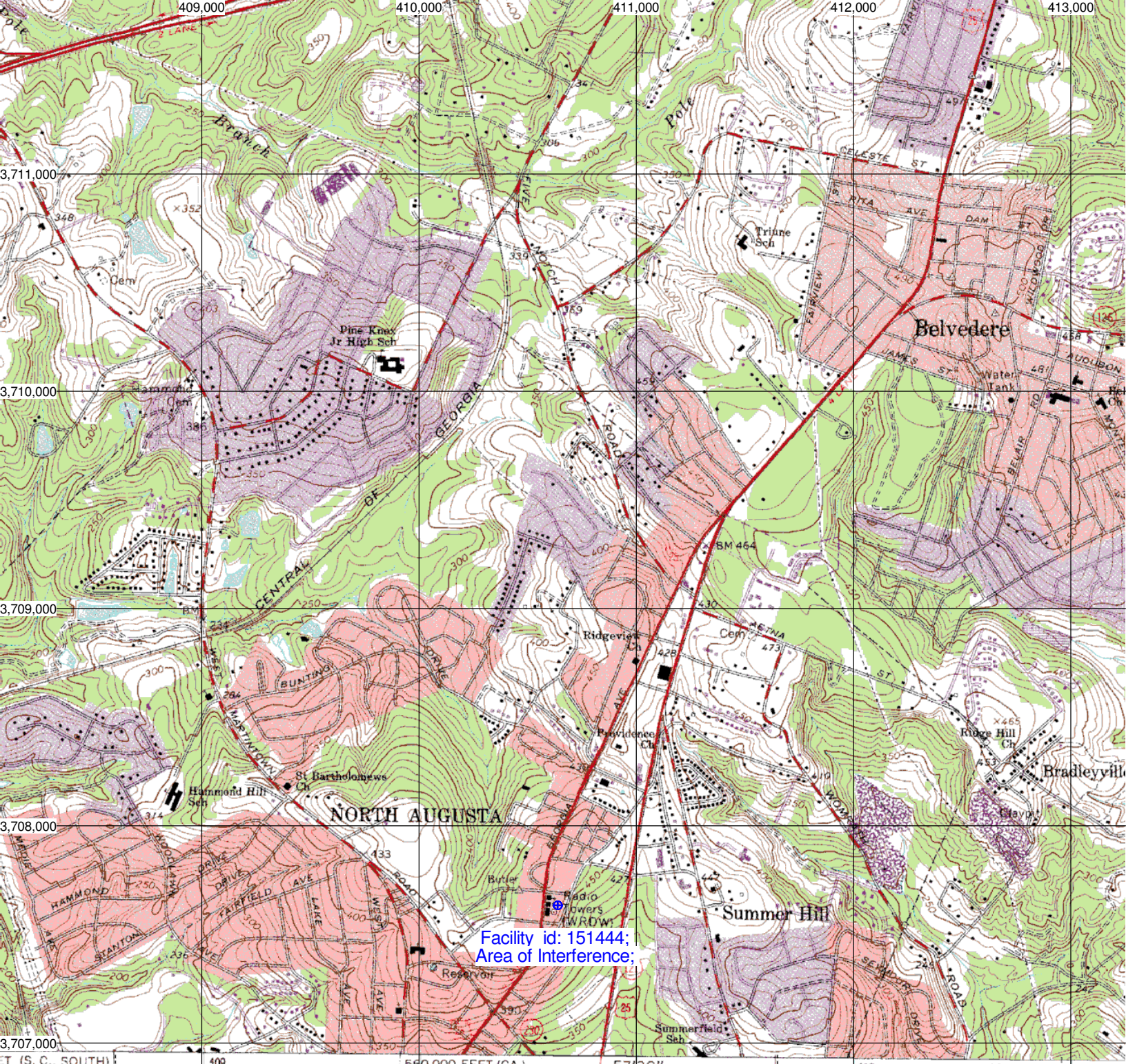
### Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Overlap
294961	15848	Null	Null	WFXA-FM	PERRY BROADCASTING OF AUGUSTA, INC.	A	AUGUSTA	GA	USE	0	0	276	3	2.7	1.4918
283245	15848	BLH	19990326KB	WFXA-FM	PERRY BROADCASTING OF AUGUSTA, INC.	A	AUGUSTA	GA	LIC	6	177	276	3	2.7	1.4918
659472	0	RM	10197	Null		C0	AUGUSTA	GA	USE	0	0	282	3	9.2	1.4918
1494689	59249	BLH	20120403ACE	WBBQ-FM	CAPSTAR TX LLC	C0	AUGUSTA	GA	LIC	78	517	282	3	14.9	1.4918
644574	151491	BNPFT	20030317DDQ	NEW	EDGEWATER BROADCASTING, INC.	D	WRENS	GA	APP	0.027	194.2	280	1	52.8	0
1190017	149344	BLFT	20070606AOI	W277AY	RADIO ASSIST MINISTRY, INC.	D	WADLEY	GA	LIC	0.17	111	277	2	70.3	0
300017	68852	Null	Null	WZSN	BROOMFIELD BROADCASTING, INC.	C3	GREENWOOD	SC	USE	0	0	278	1	74.1	0
179267	68852	BLH	19921130KA	WZSN	BROOMFIELD BROADCASTING, INC.	C3	GREENWOOD	SC	LIC	25	264	278	1	76.1	0
1455171	149344	BPFT	20111026AGV	W277AY	RADIO ASSIST MINISTRY, INC.	D	WADLEY	GA	CP	0.25	89	277	2	80.8	0
1264965	131555	BPL	20080909AAQ	WLXM-LP	LAKE MURRAY BROADCASTING, INC.	L1	LEXINGTON	SC	APP	0	126	278	1	90.8	0
1186157	50522	BMLH	20070719ACG	WHXT	URBAN RADIO II, L.L.C. DEBTOR-IN-POSSESSIC	C3	ORANGEBURG	SC	LIC	9.2	240	280	1	102.5	0
1339091	50522	BXLH	20100326ABS	WHXT	URBAN RADIO II, L.L.C. DEBTOR-IN-POSSESSIC	C3	ORANGEBURG	SC	LIC	9.2	225	280	1	102.5	0
288358	50522	Null	Null	WHXT	URBAN RADIO II, L.L.C. DEBTOR-IN-POSSESSIC	C3	ORANGEBURG	SC	USE	0	0	280	1	104.3	0
295025	49851	Null	Null	NEW00286	NUANCE CORPORATION	A	COLUMBIA	SC	USE	0	0	276	3	107.4	0
282267	54794	BMLH	19990224KF	WLXC	RADIO LICENSE HOLDING CBC, LLC	A	COLUMBIA	SC	LIC	6	174	276	3	107.4	0
295027	21830	Null	Null	WRIX-FM	FM 103, INC.	A	HONEA PATH	SC	USE	0	0	276	3	110.5	0
295249	6798	Null	Null	WDDK	WYCHE SERVICES CORPORATION	A	GREENSBORO	GA	USE	0	0	280	1	112.6	0
185182	21830	BLH	19930405KD	WRIX-FM	FM 103, INC.	A	HONEA PATH	SC	LIC	6	323	276	3	115.3	0

### Intermediate Frequencies (53 and 54 channels difference):

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Clr
1424413	166071	BNPH	20060309ADH	NEW	ACE RADIO CORPORATION	A	WAYNESBORO	GA	CP	5	164	225	54	37.9	27.9
498016	0	RM	9872	Null		A	WAYNESBORO	GA	USE	0	0	225	54	44.6	34.6
251988	17129	BLH	19970811KB	WCHZ-FM	WCHZ LICENSE, LLC	A	WARRENTON	GA	LIC	4.1	268	226	53	60.9	50.9
1166845	12421	BXLH	20070111ABJ	WZMJ	LAKE MURRAY COMMUNICATIONS, LLC	A	BATESBURG	SC	LIC	2.1	308	226	53	67.5	57.5
1151609	12421	BMLH	20061128ADL	WZMJ	LAKE MURRAY COMMUNICATIONS, LLC	A	BATESBURG	SC	LIC	2.1	316	226	53	67.5	57.5
290345	94835	Null	Null	Null		A	BATESBURG	SC	USE	0	0	226	53	67.6	57.6
289982	60101	Null	Null	WZLA-FM	RONALD SHELLEY REID	A	ABBEVILLE	SC	USE	0	0	225	54	81.2	71.2
289537	17129	Null	Null	WCHZ-FM	WCHZ LICENSE, LLC	A	WARRENTON	GA	USE	0	0	226	53	82.4	72.4
187262	60101	BLH	19930615KA	WZLA-FM	RONALD SHELLEY REID	A	ABBEVILLE	SC	LIC	6	235	225	54	82.7	72.7
633734	141998	BNPFT	20030317CCT	NEW	MILLER COMMUNICATIONS, INC.	D	ORANGEBURG	SC	APP	0.12	150	225	54	94.4	84.4

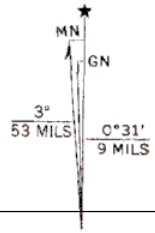




Facility id: 151444;  
Area of Interference;

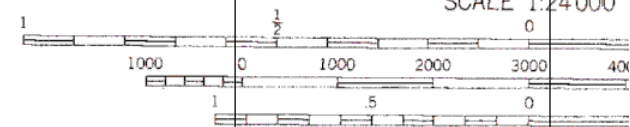
Published by the Geological Survey  
and South Carolina Geodetic Survey  
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graphs. This information is unchecked  
n only landmark buildings are shown

57°30"  
AUGUSTA, GA. 5 MI.  
WAYNESBORO, GA. 30 MI.



UTM GRID AND 1980 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET

Revisions shown in purple compiled by the Geological  
Survey from aerial photographs taken 1977 and other source data  
This information not field checked. Map edited 1980  
Purple tint indicates extension of urban areas



CONTOUR INTERVAL 10  
NATIONAL GEODETIC VERTICAL DAT

THIS MAP COMPLIES WITH NATIONAL MAP A  
FOR SALE BY U. S. GEOLOGICAL SURVEY, I  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYM





Google earth

feet  
meters

