

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A**

**Non-Commercial Allocation Analysis & §73.509 Study**

Due to its operating channel, WZRU could potentially impact other authorized or proposed non-commercial stations operating on co- or adjacent FM channels. The detailed list of stations reviewed as potentially impacted by Channel 211C2 at Garysburg, North Carolina is shown attached as Exhibit A1.<sup>1</sup> The three closest stations/facilities reviewed in detail are WHRO-FM (application), Channel 212B, Norfolk, Virginia; WKNS, Channel 212C2, Kinston, North Carolina; and WMVE, Channel 211C3, Chase City, Virginia. The provisions of §73.509 of the rules will be met by utilizing a directional antenna system for WZRU.

Exhibit A2 specifically demonstrates that there will be no prohibited overlap between the proposed/existing WZRU and WHRO-FM (application), WKNS or WMVE. Attached as Exhibits A3 through A8 are the tabulated distances to the protected and interfering contours, along pertinent arcs, of the proposed WZRU and WHRO-FM (application), WKNS and WMVE. Further, attached as Exhibit A9 are the tabulated and protected contours of the proposed/existing WZRU, in ten degree increments. Again, there is no prohibited overlap between the facilities.

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1) The remaining non-commercial stations listed on Exhibit A1 were reviewed for compliance with §73.509 of the rules. Their respective contours are well removed from the proposed WZRU contour. Since they are in compliance with §73.509, they are not shown on Exhibit A2.

**§73.207 spacing matters (including I.F. Relationship)**

Since WZRU operates well below the commercial non-reserved band, a §73.207 spacing study from the proposed/existing WZRU site was not necessary. The nearest station operating on a frequency either 53 or 54 channels removed from this instant proposal is WRVA-FM, Channel 264C, Rocky Mount, North Carolina. WRVA-FM is located on a bearing of 228.3° at a distance of 68.8 kilometers from the proposed WZRU site. Pursuant to §73.207 of the rules, WZRU must be a minimum of 35.0 kilometers from WRVA-FM. WZRU is located more than 33.0 kilometers farther than the required distance. Therefore, this proposal does not impact any intermediate frequency stations.

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**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A1**

**Interference Review for WZRU, Garysburg, North Carolina**  
**Using Proposed/Licensed Site as Reference**

REFERENCE 36 14 39.0 N. 77 34 40.0 W.		CH# 211C2- 90.1 MHz, Pwr= 11 kW, HAAT= 153.6 M, COR= 181 M Average Protected F(50-50)= 39.5 km						DISPLAY DATES DATA 12-26-07 SEARCH 12-26-07		
CH CITY	CALL	TYPE ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
211C2 WZRU Roanoke Rapids		LIC DCX NC	0.0 0.0	0.00 BLED20050427ABG	36 14 39.0 77 34 40.0	11.000 154	101.5 181	38.3 Roanoke Valley Communications	-139.80*<	-139.80*<
212B WHRO-FM Norfolk		APP CX VA	56.5 237.1	114.80 BPED20030507ABV	36 48 31.0 76 30 13.0	8.800 350	76.4 353	51.7 Hampton Roads Educational	0.22	6.41
212C2 WKNS Kinston		LIC DE NC	193.2 13.1	94.27 BLED19980604KD	35 25 01.0 77 48 57.0	35.000 98	60.5 130	39.5 Craven Community College	0.81	5.27
211C3 WMVE Chase City		LIC DCX VA	310.9 130.5	90.48 BLED20071010ACE	36 46 29.0 78 20 41.0	8.000 113	64.4 232	20.7 Commonwealth Public Broadc	3.58	1.29
212B WHRO-FM Norfolk		LIC CX VA	56.5 237.1	114.80 BLED20030506AAW	36 48 31.0 76 30 13.0	7.300 350	74.1 353	50.0 Hampton Roads Educational	2.55	8.15
211A WZPE Bath		CP CX NC	140.9 321.3	109.79 BPED20070629BXT	35 28 32.0 76 48 44.0	4.500 39	64.4 43	15.6 Educational Information Co	13.05	2.91
211A AP2570 Colonial Heights		APP DVX VA	12.1 192.3	114.28 BNPED20071022AHF	37 15 02.0 77 18 23.0	0.160 90	14.3 118	4.6 Jkj Educational Foundation	59.47	3.40
214A AP0868 Emporia		APP DVX VA	0.6 180.6	45.65 BNPED20071018ADE	36 39 20.0 77 34 22.0	2.000 109	1.5 152	16.5 Allegheny East Conference	5.67	25.38
209C WCPE Raleigh		LIC C NC	247.6 67.1	87.90 BLED20031103AAJ	35 56 25.0 78 28 45.0	100.000 359	10.9 462	76.3 Educational Information Co	45.29	8.67
211A WZPE Bath		LIC CX NC	140.9 321.3	109.79 BLED20040908ABF	35 28 32.0 76 48 44.0	0.675 39	31.5 39	9.3 Educational Information Co	45.94	9.24
06+1C WTVRTV Richmond		LI HN VA	3.5 183.5	147.04 BLCT193	37 34 00.0 8 77 28 36.0	100.000 256		100.5 Elcom Of Virginia License	129.1R	17.9M
264C WRVA-FM Rocky Mount		LIC CN NC	228.3 48.0	68.79 BLH19860924KA	35 49 53.0 78 08 50.0	100.000 600	87.5 664	24.8 Capstar Tx Limited Partner	35.0R	33.8M

Terrain database is NED 30 Meter Distance + R = FCC Required Spacings in KM, Distance + M = Margin in KM  
ERP and HAAT on direct-line with reference station.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E),  
Beamtilt(Y,N,X)  
\*\*\*affixed to 'IN' or 'OUT' values = site inside protected contour.  
"<" = Contour Overlap

**WZRU Garysburg NC**  
Latitude: 36-14-39 N  
Longitude: 077-34-40 W  
ERP: 11.00 kW  
Channel: 211 90.1 MHz  
AMSL Height: 181.0 m

**WMVE Chase City VA**  
Latitude: 36-46-29 N  
Longitude: 078-20-41 W  
ERP: 8.00 kW  
Channel: 211 90.1 MHz  
AMSL Height: 232.0 m

**WHRO-FM.A Norfolk VA**  
Latitude: 36-48-31 N  
Longitude: 076-30-13 W  
ERP: 8.80 kW  
Channel: 212 90.3 MHz  
AMSL Height: 353.3 m

**WKNS Kinston NC**  
Latitude: 35-25-01 N  
Longitude: 077-48-57 W  
ERP: 35.00 kW  
Channel: 212 90.3 MHz  
AMSL Height: 130.0 m

**GRAHAM BROCK, INC.**  
BROADCAST TECHNICAL CONSULTANTS

38-00-00 N

WMVE 60 dBu (50/50)

WMVE 40 dBu (50/10)

WHRO-FM App 54 dBu (50/10)

WHRO-FM App 60 dBu (50/50)

WMVE

WHRO-FM.A

WZRU

WKNS

36-00-00 N

WZRU 60 dBu (50/50)

WZRU 54 dBu (50/10)

WZRU 40 dBu (50/10)

WKNS 54 dBu (50/10)

WKNS 60 dBu (50/50)

Scale 1:2,500,000

0 30 60 90 km

**EXHIBIT A2**  
**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU (FM) RADIO STATION**  
**CHANNEL 211C2 - 90.1 MHz - 11.0 kW**  
**GARYSBURG, NORTH CAROLINA**  
**December 2007**

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A3**

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

WHRO-FM - BPED-20030507ABV  
Channel = 212B  
Max ERP = 8.8 kW  
RCAMSL = 353 M  
N. Lat = 36 48 31  
W. Lng = 76 30 13

Protected  
60 dBu

Interfering  
54 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
037.0	011.0000	0163.7	040.6	247.3	008.8000	0342.5	077.7	53.5
038.0	010.6364	0163.9	040.4	246.7	008.8000	0342.5	077.6	53.6
039.0	010.2789	0164.0	040.1	246.2	008.8000	0342.8	077.5	53.6
040.0	009.9275	0164.2	039.8	245.6	008.8000	0342.8	077.4	53.6
041.0	009.7610	0164.9	039.8	245.1	008.8000	0342.3	077.2	53.7
042.0	009.5959	0165.3	039.7	244.6	008.8000	0342.3	077.0	53.7
043.0	009.4322	0164.8	039.5	244.1	008.8000	0342.6	076.9	53.8
044.0	009.2700	0164.0	039.2	243.6	008.8000	0342.6	076.9	53.8
045.0	009.1091	0163.7	039.0	243.0	008.8000	0342.8	076.9	53.8
046.0	008.9496	0163.3	038.9	242.5	008.8000	0342.9	076.9	53.8
047.0	008.7916	0162.8	038.7	242.0	008.8000	0342.9	076.9	53.8
048.0	008.6350	0163.2	038.5	241.5	008.8000	0342.8	076.8	53.8
049.0	008.4797	0163.4	038.4	241.0	008.8000	0342.8	076.8	53.8
050.0	008.3259	0163.8	038.3	240.4	008.8000	0342.8	076.8	53.8
051.0	008.2877	0163.6	038.3	239.9	008.8000	0342.8	076.7	53.9
052.0	008.2495	0164.0	038.3	239.5	008.8000	0343.1	076.6	53.9
053.0	008.2115	0164.2	038.2	239.0	008.8000	0343.1	076.6	53.9
054.0	008.1735	0164.2	038.2	238.5	008.8000	0343.3	076.6	53.9
055.0	008.1356	0164.3	038.2	238.0	008.8000	0343.3	076.5	53.9
056.0	008.0978	0164.6	038.2	237.5	008.8000	0343.2	076.5	53.9
057.0	008.0601	0164.7	038.1	237.0	008.8000	0343.2	076.6	53.9
058.0	008.0225	0164.3	038.1	236.5	008.8000	0342.9	076.6	53.9
059.0	007.9849	0164.5	038.0	236.0	008.8000	0342.9	076.7	53.9
060.0	007.9475	0164.6	038.0	235.5	008.8000	0342.9	076.8	53.9
061.0	007.9849	0164.8	038.1	235.0	008.8000	0342.9	076.8	53.9
062.0	008.0225	0165.3	038.2	234.5	008.8000	0343.1	076.8	53.9
063.0	008.0601	0165.4	038.2	234.0	008.8000	0343.1	076.8	53.8
064.0	008.0978	0165.7	038.3	233.5	008.8000	0343.4	076.9	53.8
065.0	008.1356	0166.0	038.4	233.0	008.8000	0343.4	076.9	53.8
066.0	008.1735	0166.0	038.4	232.5	008.8000	0343.7	077.0	53.8
067.0	008.2115	0166.2	038.5	232.0	008.8000	0343.7	077.2	53.7
068.0	008.2495	0166.3	038.5	231.5	008.8000	0344.6	077.3	53.7
069.0	008.2877	0166.6	038.6	231.0	008.8000	0344.6	077.4	53.7
070.0	008.3259	0166.6	038.6	230.5	008.8000	0344.6	077.6	53.6
071.0	008.3834	0166.1	038.6	230.1	008.8000	0344.7	077.8	53.5
072.0	008.4411	0165.5	038.6	229.6	008.8000	0344.7	078.1	53.5
073.0	008.4991	0165.2	038.6	229.1	008.8000	0345.7	078.4	53.4
074.0	008.5572	0164.6	038.6	228.7	008.8000	0345.7	078.6	53.3

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**January 2008**

**EXHIBIT A4**

WHRO-FM - BPED-20030507ABV  
Channel = 212B  
Max ERP = 8.8 kW  
RCAMSL = 353 M  
N. Lat = 36 48 31  
W. Lng = 76 30 13

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

Protected  
60 dBu

Interfering  
54 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
216.0	008.8000	0342.8	051.7	072.2	008.4541	0165.5	069.3	49.8
217.0	008.8000	0342.9	051.7	071.6	008.4191	0165.5	068.7	50.0
218.0	008.8000	0343.3	051.7	071.0	008.3836	0166.1	068.2	50.2
219.0	008.8000	0344.0	051.8	070.4	008.3478	0166.6	067.7	50.4
220.0	008.8000	0344.0	051.8	069.7	008.3152	0166.6	067.2	50.5
221.0	008.8000	0344.8	051.8	069.1	008.2902	0166.6	066.7	50.7
222.0	008.8000	0345.4	051.9	068.4	008.2643	0166.3	066.3	50.8
223.0	008.8000	0345.6	051.9	067.7	008.2375	0166.3	065.8	50.9
224.0	008.8000	0346.0	051.9	067.0	008.2104	0166.2	065.4	51.0
225.0	008.8000	0346.2	051.9	066.2	008.1826	0166.0	065.1	51.1
226.0	008.8000	0346.6	051.9	065.5	008.1544	0166.0	064.7	51.2
227.0	008.8000	0346.3	051.9	064.7	008.1254	0166.0	064.5	51.3
228.0	008.8000	0346.3	051.9	064.0	008.0962	0165.7	064.2	51.4
229.0	008.8000	0345.7	051.9	063.2	008.0663	0165.4	064.0	51.4
230.0	008.8000	0344.7	051.8	062.4	008.0361	0165.3	063.8	51.4
231.0	008.8000	0344.6	051.8	061.6	008.0061	0165.3	063.6	51.5
232.0	008.8000	0343.7	051.8	060.7	007.9756	0164.8	063.5	51.5
233.0	008.8000	0343.4	051.7	059.9	007.9498	0164.6	063.4	51.5
234.0	008.8000	0343.1	051.7	059.1	007.9803	0164.5	063.3	51.5
235.0	008.8000	0342.9	051.7	058.3	008.0110	0164.3	063.3	51.5
236.0	008.8000	0342.9	051.7	057.5	008.0417	0164.7	063.2	51.6
237.0	008.8000	0343.2	051.7	056.7	008.0726	0164.7	063.2	51.6
238.0	008.8000	0343.3	051.7	055.8	008.1035	0164.6	063.2	51.6
239.0	008.8000	0343.1	051.7	055.0	008.1344	0164.3	063.3	51.6
240.0	008.8000	0342.8	051.7	054.2	008.1653	0164.2	063.4	51.6
241.0	008.8000	0342.8	051.7	053.4	008.1961	0164.2	063.4	51.6
242.0	008.8000	0342.9	051.7	052.6	008.2269	0164.2	063.6	51.6
243.0	008.8000	0342.8	051.7	051.8	008.2574	0164.0	063.7	51.5
244.0	008.8000	0342.6	051.7	051.0	008.2876	0163.6	063.9	51.4
245.0	008.8000	0342.3	051.7	050.2	008.3175	0163.8	064.2	51.4
246.0	008.8000	0342.8	051.7	049.4	008.4127	0163.4	064.4	51.4
247.0	008.8000	0342.5	051.7	048.7	008.5307	0163.4	064.6	51.3
248.0	008.8000	0342.3	051.7	047.9	008.6476	0163.2	064.9	51.3
249.0	008.8000	0341.7	051.6	047.2	008.7625	0162.8	065.3	51.2
250.0	008.8000	0340.7	051.6	046.5	008.8741	0163.3	065.7	51.1
251.0	008.8000	0340.1	051.5	045.8	008.9856	0163.3	066.1	51.1
252.0	008.8000	0339.5	051.5	045.1	009.0952	0163.7	066.5	51.0

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**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A5**

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

WKNS - BLED-19980604KD  
Channel = 212C2  
Max ERP = 35 kW  
RCAMSL = 130 M  
N. Lat = 35 25 01  
W. Lng = 77 48 57

Protected  
60 dBu

Interfering  
54 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
176.0	004.3937	0156.4	032.3	021.6	028.1250	0104.8	064.2	53.5
177.0	004.3521	0156.5	032.2	021.1	028.0051	0105.1	064.0	53.5
178.0	004.3106	0156.6	032.1	020.6	027.8846	0105.1	063.8	53.6
179.0	004.2694	0156.9	032.1	020.2	027.7656	0105.5	063.7	53.6
180.0	004.2284	0157.3	032.1	019.7	027.5785	0105.5	063.5	53.7
181.0	004.2284	0157.3	032.1	019.2	027.3577	0105.9	063.3	53.7
182.0	004.2284	0157.3	032.1	018.7	027.1357	0105.9	063.1	53.7
183.0	004.2284	0157.3	032.1	018.3	026.9120	0106.3	063.0	53.8
184.0	004.2284	0157.2	032.0	017.8	026.6852	0106.3	062.9	53.8
185.0	004.2284	0157.1	032.0	017.3	026.4593	0106.8	062.7	53.8
186.0	004.2284	0157.2	032.0	016.8	026.2334	0106.8	062.6	53.8
187.0	004.2284	0157.0	032.0	016.3	026.0047	0106.8	062.5	53.8
188.0	004.2284	0156.5	032.0	015.8	025.7751	0106.8	062.5	53.8
189.0	004.2284	0156.3	031.9	015.2	025.5473	0105.7	062.5	53.7
190.0	004.2284	0156.2	031.9	014.7	025.3211	0105.7	062.4	53.6
191.0	004.3937	0156.1	032.2	014.3	025.1022	0104.6	062.1	53.7
192.0	004.5621	0156.1	032.5	013.7	024.8779	0104.6	061.7	53.7
193.0	004.7337	0156.3	032.9	013.2	024.6478	0103.0	061.4	53.7
194.0	004.9085	0156.0	033.1	012.7	024.4125	0103.0	061.2	53.7
195.0	005.0864	0156.2	033.4	012.1	024.1715	0101.8	060.9	53.7
196.0	005.2675	0156.4	033.7	011.6	023.9256	0101.8	060.6	53.8
197.0	005.4518	0156.4	034.0	011.0	023.6755	0101.0	060.4	53.8
198.0	005.6392	0156.3	034.3	010.4	023.4226	0100.5	060.2	53.7
199.0	005.8298	0156.1	034.5	009.8	023.1403	0100.5	060.0	53.7
200.0	006.0236	0155.8	034.8	009.2	022.7987	0100.3	059.9	53.7
201.0	006.3119	0155.3	035.1	008.6	022.4441	0100.3	059.7	53.7
202.0	006.6069	0155.1	035.4	007.9	022.0817	0100.4	059.5	53.7
203.0	006.9086	0155.1	035.8	007.3	021.7141	0100.5	059.3	53.7
204.0	007.2171	0155.0	036.2	006.6	021.3460	0100.5	059.2	53.7
205.0	007.5323	0154.5	036.5	005.9	020.9820	0100.6	059.1	53.7
206.0	007.8543	0154.6	036.8	005.2	020.6073	0100.2	059.0	53.6
207.0	008.1830	0154.1	037.1	004.6	020.2455	0100.2	058.9	53.5
208.0	008.5184	0153.4	037.3	003.9	019.8901	0099.2	059.0	53.4
209.0	008.8606	0153.3	037.6	003.2	019.5217	0099.0	058.9	53.3
210.0	009.2095	0153.6	038.0	002.5	019.1480	0098.8	058.9	53.2
211.0	009.6422	0153.1	038.3	001.7	018.7786	0098.8	059.0	53.1
212.0	010.0849	0153.2	038.7	001.0	018.4006	0099.3	059.0	53.0
213.0	010.5375	0153.2	039.1	000.3	018.0243	0099.7	059.0	53.0

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**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A6**

WKNS - BLED-19980604KD  
Channel = 212C2  
Max ERP = 35 kW  
RCAMSL = 130 M  
N. Lat = 35 25 01  
W. Lng = 77 48 57

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

Protected  
60 dBu

Interfering  
54 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
000.0	017.8929	0099.7	036.4	201.2	006.3591	0155.3	059.4	51.5
001.0	018.3969	0099.3	036.5	200.6	006.2064	0155.3	059.1	51.5
002.0	018.9079	0098.8	036.7	200.1	006.0494	0155.8	058.7	51.5
003.0	019.4259	0099.0	036.9	199.6	005.9382	0155.8	058.3	51.6
004.0	019.9509	0099.2	037.1	199.0	005.8320	0156.1	057.9	51.7
005.0	020.4829	0100.2	037.5	198.5	005.7295	0156.3	057.4	51.8
006.0	021.0219	0100.6	037.8	197.9	005.6188	0156.3	057.0	51.9
007.0	021.5679	0100.5	038.0	197.3	005.5026	0156.4	056.6	51.9
008.0	022.1209	0100.4	038.2	196.6	005.3850	0156.4	056.3	51.9
009.0	022.6809	0100.3	038.3	196.0	005.2657	0156.4	056.1	51.9
010.0	023.2479	0100.5	038.6	195.3	005.1461	0156.2	055.8	51.9
011.0	023.6777	0101.0	038.8	194.7	005.0251	0156.2	055.5	51.9
012.0	024.1115	0101.8	039.1	194.0	004.9030	0156.0	055.2	51.9
013.0	024.5492	0103.0	039.4	193.3	004.7793	0156.3	054.8	52.0
014.0	024.9909	0104.6	039.8	192.5	004.6533	0156.3	054.4	52.0
015.0	025.4365	0105.7	040.1	191.8	004.5256	0156.1	054.2	52.0
016.0	025.8860	0106.8	040.4	191.0	004.3967	0156.1	053.9	52.0
017.0	026.3395	0106.8	040.6	190.3	004.2705	0156.2	053.8	51.9
018.0	026.7969	0106.3	040.6	189.5	004.2284	0156.2	053.9	51.8
019.0	027.2582	0105.9	040.7	188.7	004.2284	0156.3	053.9	51.8
020.0	027.7235	0105.5	040.8	188.0	004.2284	0156.5	054.0	51.8
021.0	027.9733	0105.1	040.8	187.3	004.2284	0157.0	054.1	51.7
022.0	028.2241	0104.8	040.8	186.5	004.2284	0157.0	054.3	51.7
023.0	028.4761	0104.8	040.9	185.8	004.2284	0157.2	054.4	51.7
024.0	028.7293	0104.4	040.9	185.1	004.2284	0157.1	054.6	51.6
025.0	028.9835	0103.3	040.8	184.4	004.2284	0157.2	055.0	51.4
026.0	029.2389	0103.1	040.8	183.7	004.2284	0157.2	055.2	51.4
027.0	029.4953	0103.1	040.9	183.0	004.2284	0157.3	055.4	51.3
028.0	029.7529	0102.8	040.9	182.3	004.2284	0157.3	055.7	51.2
029.0	030.0117	0103.0	041.0	181.6	004.2284	0157.3	055.9	51.1
030.0	030.2715	0103.3	041.2	180.9	004.2284	0157.3	056.2	51.0
031.0	030.7289	0103.7	041.3	180.2	004.2284	0157.3	056.3	50.9
032.0	031.1898	0103.9	041.5	179.5	004.2501	0156.9	056.6	50.8
033.0	031.6540	0103.8	041.6	178.8	004.2774	0156.9	056.9	50.7
034.0	032.1217	0103.3	041.6	178.2	004.3031	0156.6	057.3	50.6
035.0	032.5929	0102.4	041.6	177.6	004.3262	0156.6	057.8	50.5
036.0	033.0674	0102.2	041.7	177.0	004.3517	0156.5	058.1	50.3
037.0	033.5454	0102.3	041.8	176.4	004.3780	0156.4	058.5	50.2

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A7**

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

WMVE - BLED-20071010ACE  
Channel = 211C3  
Max ERP = 8 kW  
RCAMSL = 232 M  
N. Lat = 36 46 29  
W. Lng = 78 20 41

Protected  
60 dBu

Interfering  
40 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
255.0	003.2973	0148.8	029.4	148.7	002.4052	0126.0	077.8	39.8
256.0	003.1485	0148.6	029.1	148.4	002.3704	0124.4	077.4	39.8
257.0	003.0031	0148.6	028.8	148.1	002.3369	0124.4	077.0	39.8
258.0	002.8611	0148.0	028.4	147.7	002.2992	0124.4	076.6	39.9
259.0	002.7226	0147.9	028.1	147.3	002.2636	0122.2	076.3	39.8
260.0	002.5875	0147.4	027.7	146.9	002.2256	0122.2	076.0	39.8
261.0	002.4871	0147.1	027.5	146.6	002.1933	0122.2	075.6	39.8
262.0	002.3887	0147.6	027.2	146.3	002.1647	0122.3	075.3	39.9
263.0	002.2923	0147.5	027.0	146.0	002.1326	0122.3	075.0	39.9
264.0	002.1979	0147.4	026.7	145.6	002.1003	0122.3	074.7	39.9
265.0	002.1055	0146.9	026.4	145.3	002.0652	0122.7	074.4	40.0
266.0	002.0150	0146.2	026.1	144.9	002.0290	0122.7	074.2	40.0
267.0	001.9266	0145.6	025.8	144.5	001.9935	0121.8	074.0	39.9
268.0	001.8401	0145.1	025.5	144.1	001.9579	0121.8	073.7	39.9
269.0	001.7556	0145.2	025.3	143.8	001.9250	0121.8	073.5	39.9
270.0	001.6731	0145.2	025.0	143.4	001.8914	0121.2	073.3	39.8
271.0	001.6305	0145.1	024.8	143.1	001.8649	0121.2	073.1	39.9
272.0	001.5884	0144.9	024.7	142.8	001.8373	0121.2	072.8	39.9
273.0	001.5469	0145.1	024.6	142.5	001.8111	0122.9	072.6	40.0
274.0	001.5059	0145.4	024.4	142.2	001.7850	0122.9	072.3	40.0
275.0	001.4655	0145.1	024.3	141.9	001.7566	0122.9	072.1	40.0
276.0	001.4256	0144.6	024.1	141.5	001.7270	0122.9	072.0	39.9
277.0	001.3863	0144.3	023.9	141.2	001.6985	0123.1	071.8	39.9
278.0	001.3475	0144.4	023.8	140.9	001.6713	0123.1	071.6	39.9
279.0	001.3093	0143.8	023.6	140.5	001.6417	0123.1	071.5	39.9
280.0	001.2716	0143.3	023.4	140.2	001.6125	0122.3	071.4	39.8
281.0	001.2530	0143.4	023.3	139.9	001.5907	0122.3	071.1	39.8
282.0	001.2345	0143.3	023.2	139.6	001.5712	0122.3	071.0	39.8
283.0	001.2161	0143.8	023.2	139.3	001.5527	0122.4	070.8	39.8
284.0	001.1979	0145.3	023.2	139.0	001.5364	0122.4	070.5	39.9
285.0	001.1798	0145.6	023.1	138.8	001.5174	0122.4	070.3	39.9
286.0	001.1619	0144.6	023.0	138.4	001.4956	0122.2	070.2	39.8
287.0	001.1441	0143.8	022.9	138.1	001.4742	0122.2	070.1	39.8
288.0	001.1264	0143.3	022.7	137.7	001.4534	0122.2	070.0	39.8
289.0	001.1089	0142.1	022.6	137.4	001.4316	0122.0	070.0	39.7
290.0	001.0915	0142.0	022.5	137.1	001.4117	0122.0	069.9	39.7
291.0	001.0639	0141.3	022.3	136.7	001.3900	0122.0	069.9	39.6

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A8**

WMVE - BLED-20071010ACE  
Channel = 211C3  
Max ERP = 8 kW  
RCAMSL = 232 M  
N. Lat = 36 46 29  
W. Lng = 78 20 41

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

Protected  
60 dBu

Interfering  
40 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
092.0	002.3311	0101.4	023.0	322.1	001.4921	0142.7	073.9	39.7
093.0	002.2320	0102.9	023.0	321.8	001.4795	0142.7	073.6	39.8
094.0	002.1350	0104.4	022.9	321.6	001.4664	0142.7	073.4	39.8
095.0	002.0402	0105.8	022.8	321.3	001.4526	0143.5	073.2	39.9
096.0	001.9475	0107.0	022.7	321.0	001.4380	0143.5	073.0	39.9
097.0	001.8571	0107.2	022.4	320.7	001.4204	0143.5	072.9	39.9
098.0	001.7687	0107.1	022.2	320.3	001.4019	0143.9	072.8	39.8
099.0	001.6825	0107.3	021.9	320.0	001.3846	0143.9	072.7	39.8
100.0	001.5985	0107.0	021.6	319.6	001.3699	0143.9	072.7	39.8
101.0	001.5334	0107.9	021.5	319.3	001.3584	0143.6	072.6	39.8
102.0	001.4696	0108.2	021.3	319.0	001.3460	0143.6	072.5	39.7
103.0	001.4072	0108.4	021.1	318.6	001.3333	0143.6	072.4	39.7
104.0	001.3461	0108.7	020.9	318.3	001.3208	0143.7	072.4	39.7
105.0	001.2864	0109.2	020.7	318.0	001.3087	0143.7	072.3	39.7
106.0	001.2281	0109.7	020.6	317.7	001.2966	0143.7	072.3	39.6
107.0	001.1711	0108.9	020.2	317.3	001.2827	0144.2	072.4	39.6
108.0	001.1154	0108.8	020.0	317.0	001.2700	0144.2	072.4	39.5
109.0	001.0611	0110.4	019.9	316.7	001.2595	0144.2	072.4	39.5
110.0	001.0082	0111.8	019.8	316.4	001.2488	0144.2	072.3	39.5
111.0	000.9862	0112.8	019.7	316.1	001.2394	0144.2	072.2	39.5
112.0	000.9644	0112.5	019.6	315.8	001.2286	0144.2	072.2	39.5
113.0	000.9428	0114.5	019.7	315.6	001.2200	0144.2	072.0	39.5
114.0	000.9215	0115.9	019.7	315.4	001.2108	0144.3	071.9	39.5
115.0	000.9005	0114.6	019.5	315.0	001.1993	0144.3	072.0	39.4
116.0	000.8797	0115.8	019.4	314.8	001.1899	0144.3	071.9	39.4
117.0	000.8591	0115.7	019.3	314.5	001.1796	0144.6	071.9	39.4
118.0	000.8388	0116.4	019.2	314.2	001.1698	0144.6	071.8	39.4
119.0	000.8187	0115.9	019.1	313.9	001.1594	0144.6	071.9	39.3
120.0	000.7988	0116.0	019.0	313.7	001.1495	0144.6	071.9	39.3
121.0	000.8187	0116.8	019.2	313.4	001.1414	0144.5	071.7	39.3
122.0	000.8388	0117.9	019.4	313.2	001.1332	0144.5	071.4	39.4
123.0	000.8591	0117.6	019.5	312.9	001.1242	0144.5	071.3	39.4
124.0	000.8797	0118.1	019.6	312.7	001.1154	0144.5	071.1	39.4
125.0	000.9005	0118.8	019.8	312.4	001.1064	0144.0	070.8	39.4
126.0	000.9215	0118.1	019.9	312.2	001.0969	0144.0	070.7	39.4
127.0	000.9428	0119.9	020.1	311.9	001.0878	0144.0	070.5	39.5
128.0	000.9644	0121.1	020.3	311.6	001.0782	0144.0	070.2	39.5
129.0	000.9862	0121.8	020.5	311.3	001.0684	0144.4	070.1	39.6

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A8 (continued)**

WMVE - BLED-20071010ACE  
Channel = 211C3  
Max ERP = 8 kW  
RCAMSL = 232 M  
N. Lat = 36 46 29  
W. Lng = 78 20 41

WZRU - Proposed  
Channel = 211C2  
Max ERP = 11 kW  
RCAMSL = 181 M  
N. Lat = 36 14 39  
W. Lng = 77 34 40

Protected  
60 dBu

Interfering  
40 dBu

***NED 30 meter terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
130.0	001.0082	0121.2	020.5	311.0	001.0584	0144.4	070.0	39.5
131.0	001.0611	0122.0	020.9	310.7	001.0483	0144.4	069.7	39.6
132.0	001.1154	0121.5	021.1	310.4	001.0380	0144.5	069.5	39.6
133.0	001.1711	0122.4	021.4	310.1	001.0272	0144.5	069.2	39.7
134.0	001.2281	0121.9	021.6	309.8	001.0192	0144.5	069.0	39.7
135.0	001.2864	0122.0	021.8	309.5	001.0125	0144.4	068.8	39.7
136.0	001.3461	0122.3	022.1	309.1	001.0056	0144.4	068.6	39.8
137.0	001.4072	0122.0	022.3	308.8	000.9987	0144.4	068.4	39.8
138.0	001.4696	0122.2	022.5	308.4	000.9916	0143.9	068.2	39.8
139.0	001.5334	0122.4	022.8	308.1	000.9845	0143.9	068.1	39.8
140.0	001.5985	0122.3	023.0	307.7	000.9772	0143.9	068.0	39.8
141.0	001.6825	0123.1	023.3	307.3	000.9694	0143.5	067.7	39.8
142.0	001.7687	0122.9	023.6	306.9	000.9618	0143.5	067.6	39.8
143.0	001.8571	0121.2	023.7	306.5	000.9546	0143.5	067.6	39.8
144.0	001.9475	0121.8	024.0	306.1	000.9466	0143.7	067.4	39.8
145.0	002.0402	0122.7	024.3	305.7	000.9383	0143.7	067.3	39.9
146.0	002.1350	0122.3	024.5	305.3	000.9305	0143.5	067.2	39.8
147.0	002.2320	0122.2	024.8	304.9	000.9225	0143.5	067.1	39.8
148.0	002.3311	0124.4	025.2	304.4	000.9132	0143.4	066.9	39.8
149.0	002.4323	0126.0	025.6	303.9	000.9041	0143.4	066.8	39.8
150.0	002.5358	0127.6	025.9	303.4	000.8949	0143.2	066.6	39.8
151.0	002.6681	0129.1	026.4	302.9	000.8852	0143.2	066.5	39.8
152.0	002.8037	0128.0	026.6	302.5	000.8771	0143.5	066.5	39.8
153.0	002.9427	0126.9	026.8	302.0	000.8692	0143.5	066.6	39.7
154.0	003.0851	0128.0	027.1	301.5	000.8596	0143.5	066.5	39.7
155.0	003.2309	0129.8	027.6	301.0	000.8495	0143.1	066.4	39.7
156.0	003.3800	0130.8	027.9	300.4	000.8399	0142.8	066.4	39.6
157.0	003.5325	0130.0	028.1	300.0	000.8320	0142.8	066.6	39.5
158.0	003.6883	0129.0	028.3	299.6	000.8425	0142.8	066.7	39.5
159.0	003.8475	0129.0	028.6	299.1	000.8541	0141.9	066.8	39.5
160.0	004.0101	0130.1	029.0	298.6	000.8672	0141.9	066.9	39.5
161.0	004.2201	0132.9	029.6	297.9	000.8840	0140.7	066.8	39.6
162.0	004.4354	0135.5	030.2	297.2	000.9010	0139.9	066.7	39.7
163.0	004.6561	0136.6	030.6	296.6	000.9162	0139.9	066.8	39.7
164.0	004.8822	0138.4	031.2	295.9	000.9328	0139.7	066.8	39.8
165.0	005.1136	0139.9	031.7	295.3	000.9492	0139.4	066.9	39.8
166.0	005.3504	0139.3	031.9	294.8	000.9620	0139.4	067.2	39.8

**MINOR CHANGE APPLICATION**  
**ROANOKE VALLEY COMMUNICATIONS, INC.**  
**WZRU RADIO STATION**  
**CH 211C2 - 90.1 MHZ - 11.0 KW (DA)**  
**GARYSBURG, NORTH CAROLINA**  
**January 2008**

**EXHIBIT A9**

N. Lat. = 36 14 39 - Tabulated Protected and Interfering Contours Data  
W. Lng. = 77 34 40 - WZRU Radio Station, Garysburg, North Carolina

HAAT and Distance to Contour - FCC Method - NED 30 Meter								
Azi.	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1
000	163.4	8.3642	9.22	0.872	38.31	101.49	56.87	3.74
010	164.2	11.0000	10.41	1.000	40.68	106.50	60.21	4.07
020	163.8	11.0000	10.41	1.000	40.65	106.45	60.17	4.07
030	163.9	11.0000	10.41	1.000	40.66	106.46	60.18	4.07
040	164.2	9.9275	9.97	0.950	39.83	104.61	58.99	3.95
050	163.8	8.3259	9.20	0.870	38.31	101.46	56.87	3.74
060	164.6	7.9475	9.00	0.850	38.02	100.79	56.44	3.69
070	166.6	8.3259	9.20	0.870	38.61	101.84	57.24	3.77
080	161.1	8.9100	9.50	0.900	38.59	102.26	57.30	3.79
090	159.0	8.3259	9.20	0.870	37.78	100.80	56.22	3.68
100	156.7	7.7616	8.90	0.840	36.95	99.31	55.11	3.58
110	152.9	6.8651	8.37	0.790	35.51	96.79	53.19	3.40
120	146.0	6.3536	8.03	0.760	34.09	94.61	51.39	3.26
130	145.7	5.8619	7.68	0.730	33.41	93.32	50.45	3.17
140	146.8	5.0864	7.06	0.680	32.39	91.30	49.01	3.04
150	148.0	4.9379	6.94	0.670	32.29	91.02	48.84	3.02
160	149.8	4.7916	6.80	0.660	32.24	90.81	48.74	3.01
170	155.4	4.6475	6.67	0.650	32.62	91.13	49.15	3.03
180	157.3	4.2284	6.26	0.620	32.06	89.98	48.34	2.96
190	156.2	4.2284	6.26	0.620	31.94	89.84	48.19	2.95
200	155.8	6.0236	7.80	0.740	34.77	95.13	52.10	3.30
210	153.6	9.2095	9.64	0.915	37.99	101.77	56.64	3.74
220	151.0	11.0000	10.41	1.000	39.16	104.58	58.35	3.91
230	147.8	10.1376	10.06	0.960	38.10	102.63	56.94	3.77
240	149.1	6.4375	8.09	0.765	34.55	95.25	51.95	3.30
250	147.7	4.0931	6.12	0.610	30.81	88.17	46.73	2.85
260	147.4	2.5875	4.13	0.485	27.72	81.45	42.00	2.47
270	145.2	1.6731	2.24	0.390	24.99	74.95	37.64	2.13
280	143.3	1.2716	1.04	0.340	23.37	70.86	34.96	1.92
290	142.0	1.0915	0.38	0.315	22.47	68.57	33.47	1.82
300	142.8	0.8319	-0.80	0.275	21.15	65.07	31.28	1.64
310	144.5	1.0233	0.10	0.305	22.33	68.12	33.23	1.78
320	143.9	1.3863	1.42	0.355	23.87	72.14	35.79	1.98
330	141.7	2.1103	3.24	0.438	26.04	77.68	39.37	2.28
340	144.8	3.3396	5.24	0.551	29.12	84.75	44.22	2.66
350	148.0	5.2827	7.23	0.693	32.83	92.05	49.60	3.09

AMSL= 181 M