WWBB Facility ID No.: 54568
Minor Modification for Change of Class and Transmitter Location
July 2014

This application is one of three applications of a coordinated contingent group of minor change applications involving stations WCIB, Falmouth, MA, Facility ID 2683, WBWL, Lynn, MA, Facility ID 40824, and WWBB, Providence, RI, Facility ID 54568.

By this application, WWWB seeks to downgrade channel class from B to A, change transmitter location, specify use of a directional antenna, and specify use of Section 73.215, to accommodate a facilities modification by WBWL.

Presently WWBB as a Class B facility is short spaced with WBWL Class A pursuant to Section 73.213(a); a short spacing which has been continuous since prior to November 1964. This coordinated contingent group of minor change applications will eliminate that short spacing.

Attached as **Figure 1** is a spacing study conducted at the proposed Class A, WWBB antenna location[1], which includes all known facilities, applications and allocations, as well as the planned modified facilities and reference coordinate locations of WBWL and WCIB. This Figure confirms that the WWBB antenna location will be fully spaced in accordance with Section 73.207 with all known facilities, except with the contingent modified facilities of WBWL and WCIB. Section 73.215 compliance with these facilities will be demonstrated. Attached as **Figure 2** is the proposed antenna directional pattern, which was used to produce **Figure 3**, a map of predicted principal community signal, demonstrating that the entire WWBB principal community will receive the required level of signal.

Attached as **Figure 4** is a determination of the Height Above average Terrain ("HAAT") of the proposed antenna, mounted as proposed 122 meters above ground level, which was used to determine the equivalent maximum Class A Effective Radiated Power ("ERP") at this HAAT in **Figure 5**.

As the proposed WWBB facility is short of the required Section 73.207 spacing distance to the proposed contingent WBWL Class A non-directional facility, which will itself use Section 73.215, it is proposed to use Section 73.215 for this proposed WWBB Class A facility to demonstrate compliance with regard to the proposed WBWL Class A facility. As shown in **Figure 6**, no prohibited contour overlap is predicted to be created by this proposal.

As the proposed WWBB facility is short of the required Section 73.207 spacing distance to the proposed contingent WCIB Class B directional facility, which will itself use Section 73.215, it is proposed to use Section 73.215 for this proposed WWBB Class A facility to demonstrate compliance with regard to the proposed WCIB Class A facility. As shown in **Figure 7**, no prohibited contour overlap is predicted to be created by this proposal.

[1] 41-46-52.6 N 71-19-54.8 W (NAD 27), Antenna Structure Registration Number 1022391. This is an element in the antenna array of standard band station WHJJ.

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, “Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation.”

The proposed 2-bay, half-wave-spaced antenna system is to be mounted 122 meters above ground upon an element in standard band station WHJJ. The FM Model program was set to calculate values for an array of 2 “Ring Stub” type of antenna elements mounted with half-wave spacing, operated with an effective radiated power of 4.9 Kilowatts in both the horizontal and vertical planes. At 2 meters above the surface, at 32 meters from the base of the tower, this proposal will contribute worst case, 2.7 microwatts per square centimeter, or 0.3 percent of the allowable ANSI limit for controlled exposure, and 1.5 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

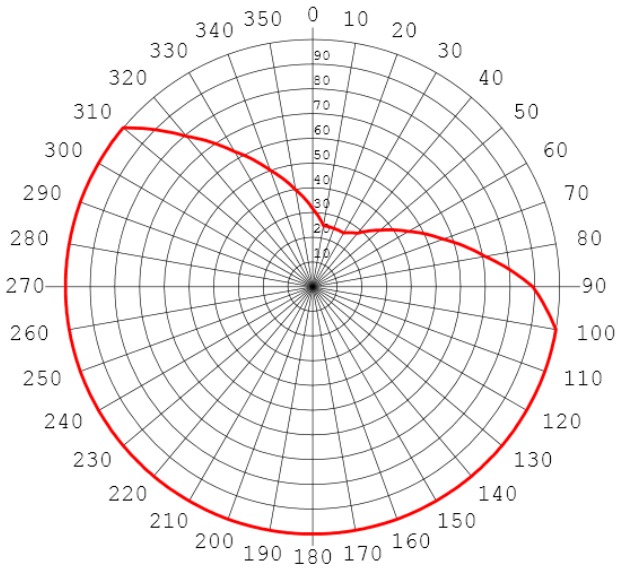
Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1. WWBB Proposed Antenna Location Spacing Study

Fac_id	Callsign	Chanl	ERP_w	Licensee	ARN	Cls	Status	Dist_km	Reqd' Sep	Clr	Comments
54568	WWBB	268	13500	CLEAR CHANNEL BROADCASTING LICENSES, INC.	BLH-19841227KZ	B	LIC	10.32	178	-167.7	Present Facility
40824	WBWL_NonD	269	1700	AMFM RADIO LICENSES, LLC	Proposed	A	LIC	67.38	72	-4.6	Contingent Proposal *73.215*
40824	WBWL	269	1700	AMFM RADIO LICENSES, LLC	BLH-20060307AAE	A	LIC	67.38	72	-4.6	Present Facility *73.215*
2683	WCIB	270	50000	QANTUM OF CAPE COD LICENSE COMPANY, LLC	BLH-19911028KA	B	LIC	66.08	69	-2.9	Present Facility
2683	WCIB_B_Ant	270	13000	QANTUM OF CAPE COD LICENSE COMPANY, LLC	Proposed	B	LIC	66.08	69	-2.9	Contingent Proposal *73.215*
53078	WJHD	214	360	PORTSMOUTH ABBEY SCHOOL	BLED-19851106KB	A	LIC	20.56	10	10.6	
11930	WKCI-FM	267	12000	CC LICENSES, LLC	BLH-20021011ABD	B	LIC	139.97	113	27	
11930	WKCI-FM	267	9000	CC LICENSES, LLC	BXLH-20040723ADM	B	LIC	139.97	113	27	
11930	WKCI-FM	267	15000	CC LICENSES, LLC	BXLH-19981222KB	B	LIC	140.78	113	27.8	
11930	WKCI-FM	267	0	CC LICENSES, LLC	FM ALLOTMENT	B	USE	140.78	113	27.8	
58551	WAQY	271	30000	SAGA COMMUNICATIONS OF NEW ENGLAND, LLC	BXLH-20041202ACU	B	LIC	104.11	69	35.1	

Figure 2. WWBB Directional Antenna Pattern

WWBB at WHJJ



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	0.316	-2.84	0.52	-10.00	180	1.000	7.16	5.20	0.00
10	0.251	-4.84	0.33	-12.00	190	1.000	7.16	5.20	0.00
20	0.251	-4.84	0.33	-12.00	200	1.000	7.16	5.20	0.00
30	0.251	-4.84	0.33	-12.00	210	1.000	7.16	5.20	0.00
40	0.282	-3.84	0.41	-11.00	220	1.000	7.16	5.20	0.00
50	0.355	-1.84	0.65	-9.00	230	1.000	7.16	5.20	0.00
60	0.447	0.16	1.04	-7.00	240	1.000	7.16	5.20	0.00
70	0.562	2.16	1.64	-5.00	250	1.000	7.16	5.20	0.00
80	0.708	4.16	2.61	-3.00	260	1.000	7.16	5.20	0.00
90	0.891	6.16	4.13	-1.00	270	1.000	7.16	5.20	0.00
100	1.000	7.16	5.20	0.00	280	1.000	7.16	5.20	0.00
110	1.000	7.16	5.20	0.00	290	1.000	7.16	5.20	0.00
120	1.000	7.16	5.20	0.00	300	1.000	7.16	5.20	0.00
130	1.000	7.16	5.20	0.00	310	1.000	7.16	5.20	0.00
140	1.000	7.16	5.20	0.00	320	0.794	5.16	3.28	-2.00
150	1.000	7.16	5.20	0.00	330	0.631	3.16	2.07	-4.00
160	1.000	7.16	5.20	0.00	340	0.501	1.16	1.31	-6.00
170	1.000	7.16	5.20	0.00	350	0.398	-0.84	0.82	-8.00

Rotation Angle = 0

WWBB at WHJJ

Page 1 7/15/14 Id: 10001

Figure 3. Map of Principal Community Coverage

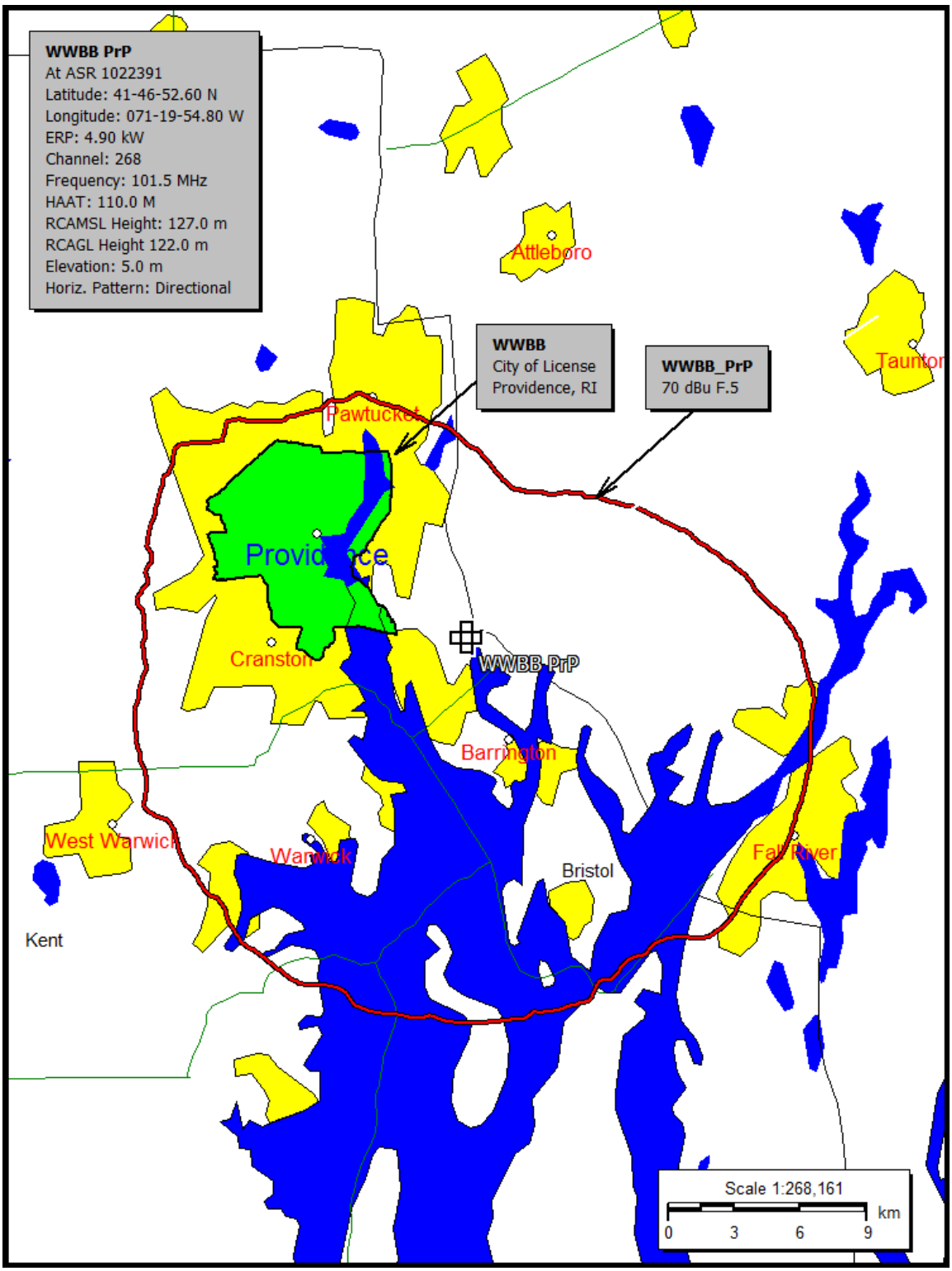


Figure 4. HAAT Determination

Antenna Height Above Average Terrain Calculations -- Input

Latitude **41 46 52.6 North**
Longitude **71 19 54.8 West** (NAD 27)

Corresponding NAD 83 coordinates --- Latitude: 41° 46' 53.0° Longitude: 71° 19' 53.0°

Height of antenna radiation center above mean sea level [RCAMSL] = **127.0** meters

Number of Evenly Spaced Radials = 8 0° is referenced to True North

Results:

Calculated HAAT= 110. meters

(Antenna Height Above Average Terrain)
using the 30 second FCC/NGDC terrain data)

Antenna Radiation Center Heights Above Individual Radials:

0.0°	105.8 meters
45.0°	100.4 meters
90.0°	109.5 meters
135.0°	126.0 meters
180.0°	124.9 meters
225.0°	118.7 meters
270.0°	94.1 meters
315.0°	97.7 meters

New Antenna Height Above Average Terrain (HAAT) calculation?

Federal Communications Commission
445 12th Street SW
Washington, DC 20554
More FCC Contact Information...

Phone: 1-888-CALL-FCC (1-888-225-5322)
TTY: 1-888-TELL-FCC (1-888-835-5322)
Fax: 1-866-418-0232

Figure 5. Class A ERP Equivalency Determination

FMpower Results

6 kW ERP Class A facilities for Equivalency Determination:

Reference ERP = 6.000 kW
Reference HAAT = 100.0 meters
F(50,50) 60 dBu protected contour at 28.3 km distance

Equivalent ERP (rounded per 47 CFR 73.212) **= 4.900 kW**

. . at . **110.0 meters HAAT**

Unrounded ERP = 4.941 kW for 110.0 meters HAAT

Class A stations are authorized throughout the United States.

Enter New Data in FMpower?

Related items: FM and TV Propagation Curves.
This document may be accessed at http://www.fcc.gov/mb/audio/bickel/fmpower.html

Federal Communications Commission
445 12th Street SW
Washington, DC 20554
More FCC Contact Information...

Phone: 1-888-CALL-FCC (1-888-225-5322)
TTY: 1-888-TELL-FCC (1-888-835-5322)
Fax: 1-866-418-0232

Figure 6. Map of Predicted WBWL and WWBB Protected and Interfering Contours

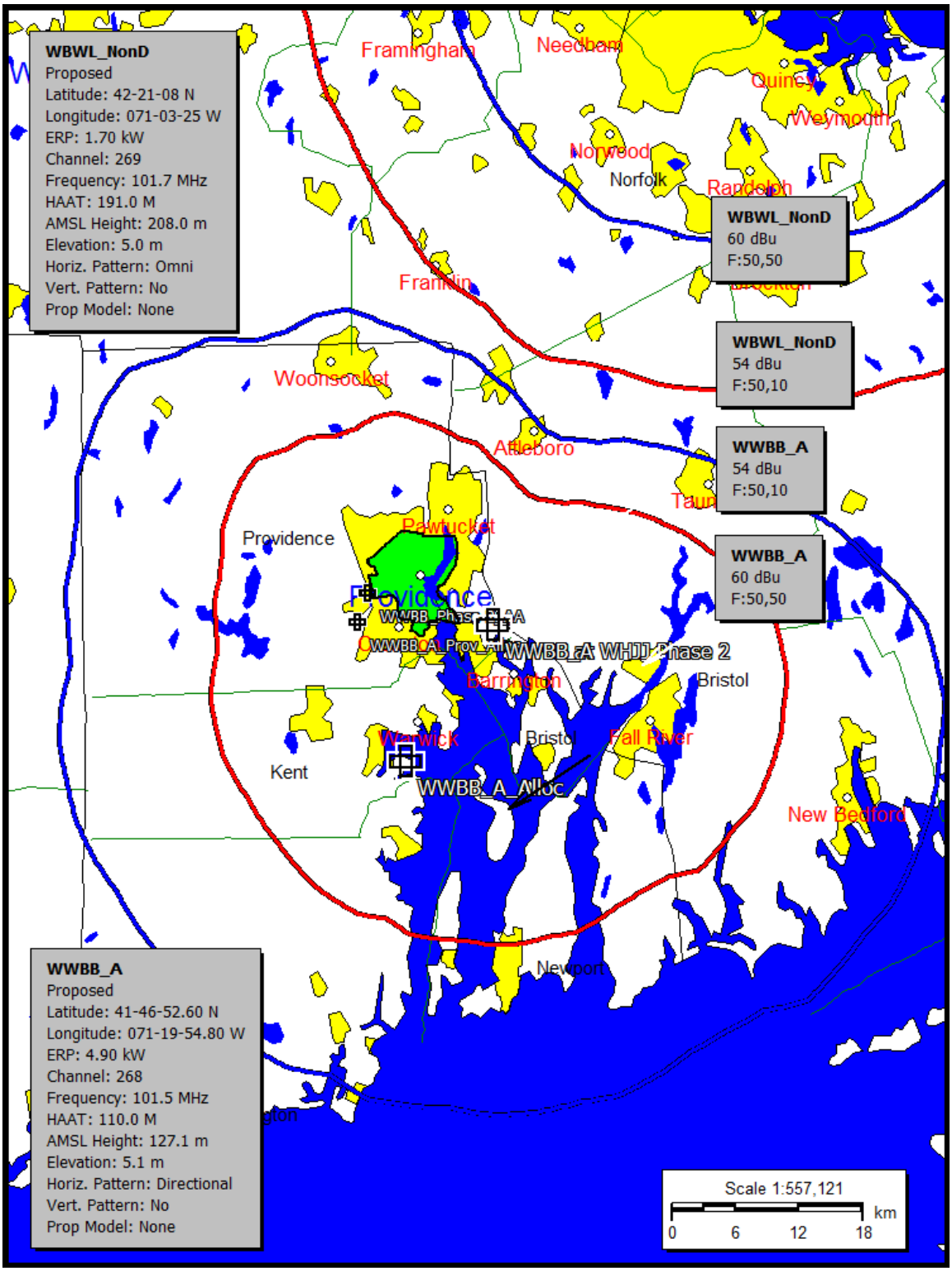


Figure 7. Map of Predicted WCIB and WWBB Protected and Interfering Contours