

**BNPL-20131114AKJ****Comprehensive Technical Statement****In Support of****Brown Student Radio****Application for Minor Modification of Construction Permit****Second Adjacent Interference Waiver Requested – WWBB****Time Share Facility****Introduction**

The applicant proposes to relocate to an existing nearby tower and change the antenna height. No change in frequency is proposed.

The proposed location is 0.48 km from the Construction Permit location. Therefore, the proposal is for a minor change under §73.870.

**Time Share**

The applicant is one of three holding time-shared construction permits (Facility ID #s 195178, 196244, and 196448).

**Data Sources**

Distances were calculated using the FCC method defined in 73.208 of the Commission's Rules.

Dates shown on maps are the CDBS last change date in the data used to generate the maps.

---

**Skywaves Consulting LLC**

PO Box 4, Millbury, MA 01527

Main Number: 401-354-2400

Washington: 202-370-6357

<http://www.skywaves.com>[consultants@skywaves.com](mailto:consultants@skywaves.com)

Copyright © 2017 Skywaves Consulting LLC.

**Allocation Study [73.807]<sup>1</sup>**

facid	adj	chan	lpclass	rrs	status	call	st	city	kW	da	haat	brg	km	req	Δ
54568	2	268A	A		LIC	WWBB	RI	PROVIDENCE	6.0	Y	91	33	3.95	29	-25.05
196448	0	266L1	L1		CP	NEW	RI	PROVIDENCE	0.1	N	12	321	0.48	24	-23.52
196244	0	266L1	L1		CP	WBRU-LP	RI	PROVIDENCE	0.1	N	12	321	0.48	24	-23.52
195178	0	266L1	L1		CP	WFOO-LP	RI	PROVIDENCE	0.1	N	12	321	0.48	24	-23.52
13806	2	264B	B		LIC	WZLX	MA	BOSTON	21.5	N	235	25	67.92	67	0.92
200512	0	266D	D		APP	NEW	RI	NEWPORT	0.0	Y	0	162	34.00	24	10.00
140627	0	266D	T1		CP	W247CB	MA	BROCKTON	0.0	Y	0	47	42.05	32	10.05
140722	1	267D	T0		LIC	W267CD	MA	MILFORD	0.0	Y	0	347	41.04	28	13.04
48547	1	265A	A		LIC	WKNL	CT	NEW LONDON	6.0	Y	99	236	70.73	56	14.73
35240	0	266B	B		LIC	WGIR-FM	NH	MANCHESTER	11.5	N	313	355	132.38	112	20.38
29571	0	266A	A		LIC	WHYA	MA	MASHPEE	2.9	N	141	97	91.39	67	24.39

The table includes all CDBS records whose distance does not exceed required separations by more than 25 km.

The proposal is short-spaced to 2<sup>nd</sup> adjacent WWBB, Facility ID # 54568. A complete showing is provided below.

The next three records show the three-way time share for this facility.

All other records are fully-spaced.

---

<sup>1</sup> The columns in the table include "lpclass," which is the class of the record as determined in accordance with the note to paragraphs a, b, and c in 73.807; "rrs," which indicates whether the station was listed as carrying a radio reading service on a subcarrier in 2000; "req," which is the separation required by 73.807; and "Δ" which is the margin over that required separation (a negative number here indicates a short spacing).

---

**Skywaves Consulting LLC**

PO Box 4, Millbury, MA 01527

Main Number: 401-354-2400

<http://www.skywaves.com>

Washington: 202-370-6357

[consultants@skywaves.com](mailto:consultants@skywaves.com)

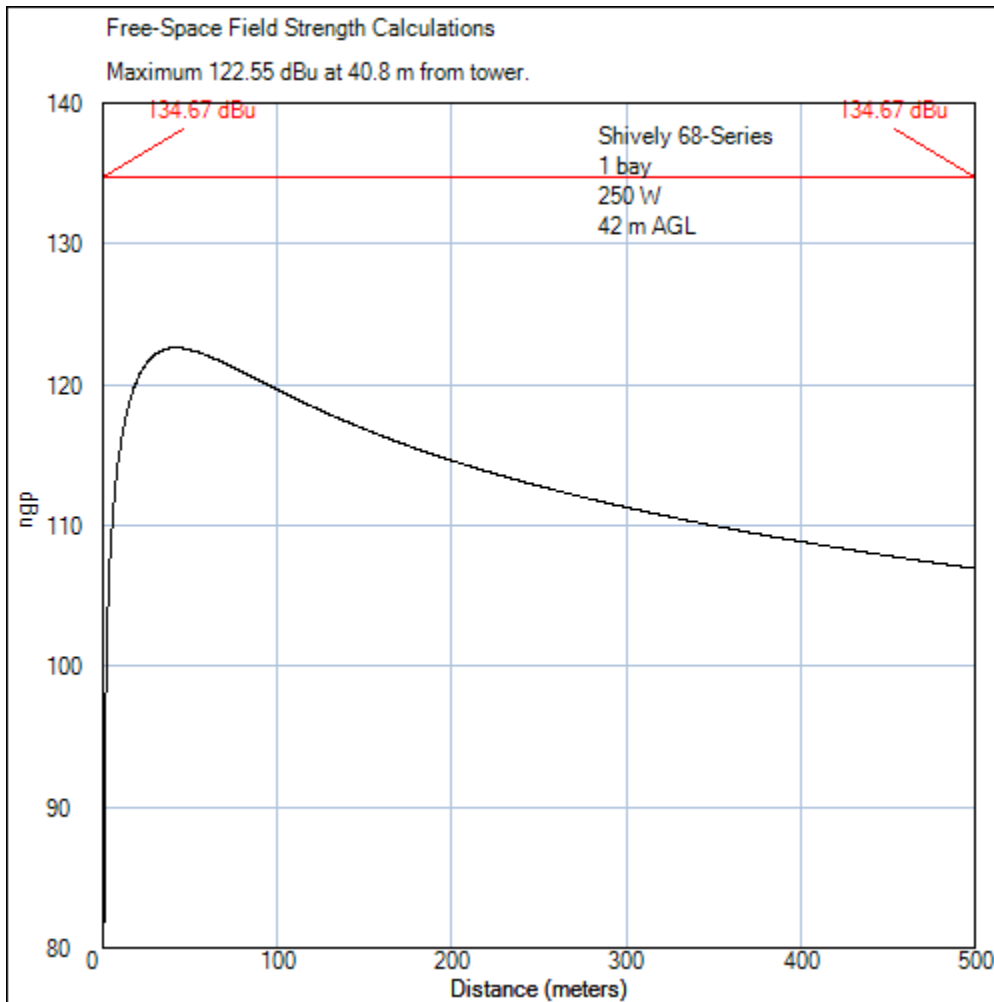
Copyright © 2017 Skywaves Consulting LLC.

## Second Adjacent Channel Interference Waiver Request

The height above average terrain is 8 meters, and the ERP is 100 Watts.

As noted above, the proposal is short-spaced to 2<sup>nd</sup> adjacent station WWBB. The WWBB f(50,50) signal at the site is 94.67 dBu, and the interfering signal is 134.67 dBu.

The proposed antenna is a one-bay Shively 6812B, mounted 44 m above ground level. The free-space distance to the 134.67 dBu interference level is 13 m. It is self-evident that the interfering signal will not reach the ground.



This plot shows free-space signal strength 2 m above ground level (44 m actual height, less 2 m). The interfering signal is more than 12 dB below the limit.

---

**Skywaves Consulting LLC**

PO Box 4, Millbury, MA 01527

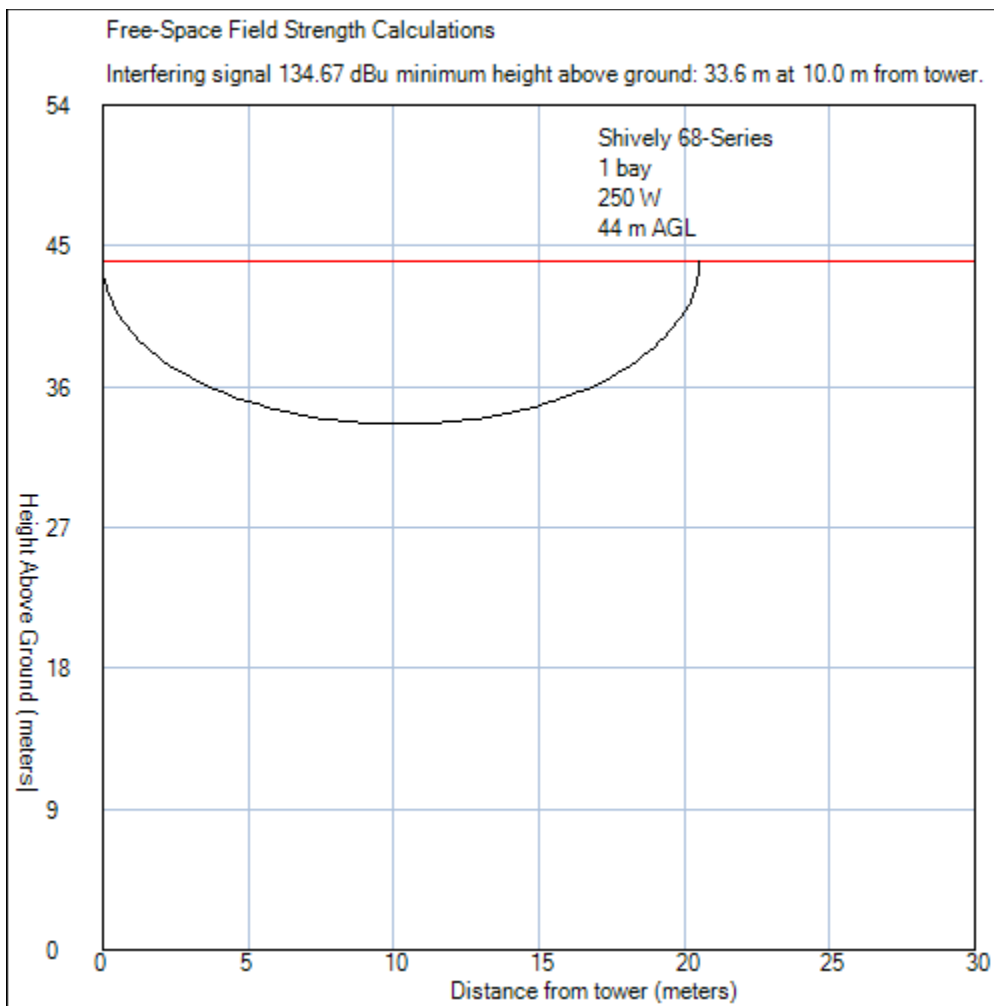
Main Number: 401-354-2400

<http://www.skywaves.com>

Washington: 202-370-6357

[consultants@skywaves.com](mailto:consultants@skywaves.com)

Copyright © 2017 Skywaves Consulting LLC.



This plot shows the height of the 134.67 dBu free-space interfering signal above ground. It is at least 33 m above the ground. The maximum distance to the interfering signal is 50.0 m. No tall buildings exist in the vicinity.

Therefore, it is submitted that the proposal qualifies for a second-adjacent interference waiver, and such waiver is respectfully requested.

---

**Skywaves Consulting LLC**

PO Box 4, Millbury, MA 01527

Main Number: 401-354-2400

Washington: 202-370-6357

<http://www.skywaves.com>

[consultants@skywaves.com](mailto:consultants@skywaves.com)

Copyright © 2017 Skywaves Consulting LLC.

## Translator/ Booster Input Interference

There are no FM boosters within 50 km of the proposed site.

The following translator records are located within 20 km of the proposed site:

facid	km	brg	call	chan	st	city	status	primary station	primary chan	feed method
140739	3.3	351	W267AT	224D	RI	WARWICK	CP MOD	WARV	AM	Other
156672	4.4	155	W284BA	284D	RI	WARWICK	LIC	WTKL	216	Direct off-air
156667	5.1	68	W229AN	229D	RI	PROVIDENCE	CP	WSTL	AM	Other
156667	5.2	68	W229AN	229D	RI	PROVIDENCE	LIC	WSTL	AM	Other
41191	6.7	67	W300AC	235D	RI	PROVIDENCE	CP	WSTL	AM	Other
71534	6.7	67	W271CR	271D	RI	PROVIDENCE	LIC	WPMZ	AM	Other

The only translator with a direct off-air feed is W284BA. Its primary station is on channel 216, which is not adjacent to the proposed channel 266.

## International

The FM Agreements with Canada and Mexico require evaluation and potential coordination of any proposal within 320 km of the border.

The distance to the nearest point along the US/Canada border is 358 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 2,931 km. Coordination with Mexico is not required.

## Quiet Zones

The proposed site is outside the National Radio Quiet Zone (National Radio Astronomy Observatory Notification Area) in West Virginia.

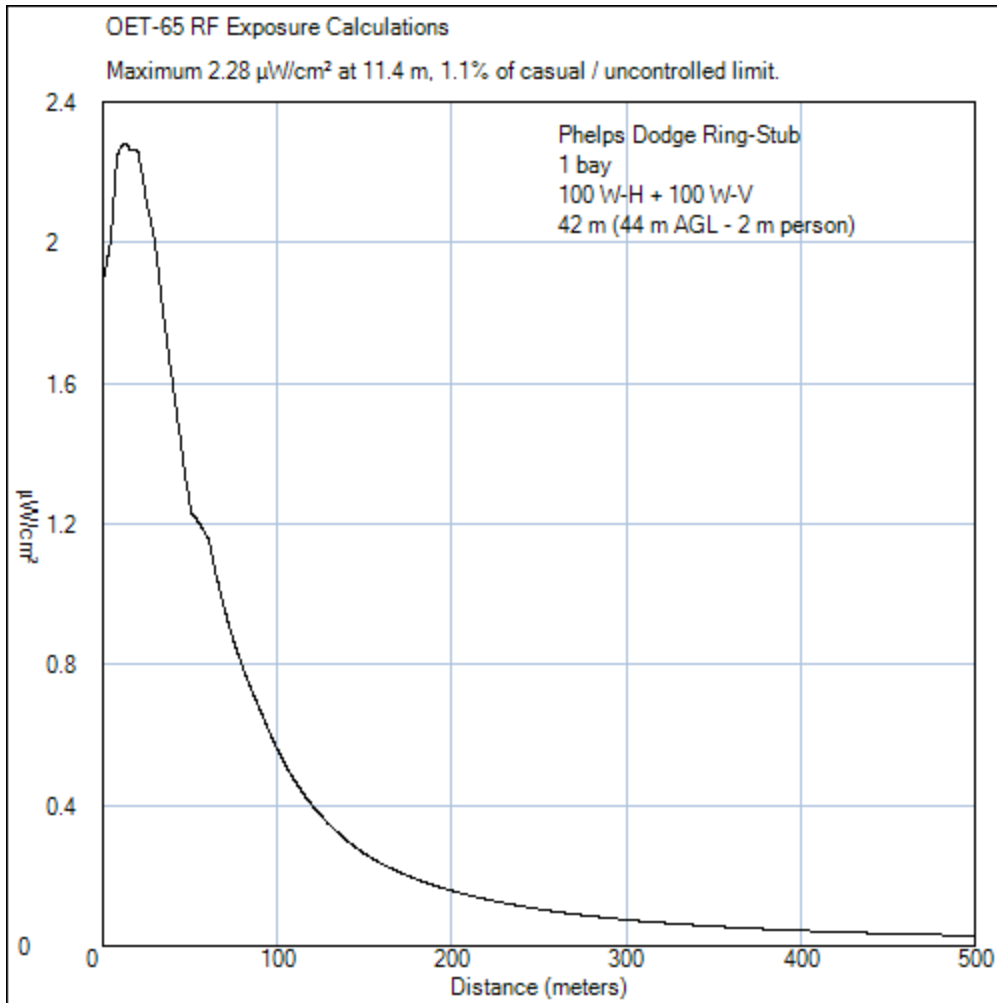
The proposed site is outside the Arecibo Observatory notification area in Puerto Rico.

The proposed site is not within a 100 km extension of the Table Mountain Radio Receiving Zone in Colorado.

## Protected Monitoring Stations

The nearest Protected Monitoring Station is 352 km distant, in Belfast, ME. This is well beyond any potential 80 dBu contour.

## Environmental



Assuming one bay of the worst-case antenna (OET Type 1 Ring-Stub), the maximum exposure would be about 1% of the limit for casual / uncontrolled exposure.

Appropriate access controls and safety signage will be provided.

The applicant commits to reducing power or suspending operations in order to protect workers on the tower.

---

**Skywaves Consulting LLC**

PO Box 4, Millbury, MA 01527

Main Number: 401-354-2400

Washington: 202-370-6357

<http://www.skywaves.com>

[consultants@skywaves.com](mailto:consultants@skywaves.com)

Copyright © 2017 Skywaves Consulting LLC.

**Form 318 Tech Box Data**

Class	LP100
Channel	266
Coordinates (NAD-27)	41 47 43 N Lat 71 26 10 W Lon
ASR	none, not required
Site Elevation AMSL	16 m
Overall Tower Height AGL	46 m
Radiation Center AGL	44 m
Power/height certification	YES
Separations	NO
Short Space	WWBB – Waiver Requested
Environmental	YES - Exhibit 11 (This document)

**Additional Info**

Coordinates (NAD-83)	41 47 43.6 N Lat 71 26 08.7 W Lon
Effective Radiated Power	100 W-H + 100 W-V
Antenna type	Omnidirectional
Manufacturer / Model	SHI 6812B-1

-0-