

## **EXHIBIT #1**

### **Purpose of Application and Grid Preclusion Showing**

Concerning the Application of  
Vermont Public Radio  
For a New FM Translator  
(Fill-In for WVPS, Burlington, 300, HD-2)  
To Serve Montpelier, Vermont

Long Form – BNPFT20030317HKH

March 26, 2013

**Channel 258D**

**0.25 kW ERP Omni**

This Exhibit supports a long form Auction 83 construction permit application for an FM translator on Channel 258 in Montpelier, Vermont, CDBS Application ID# 631037, FCC file number BNPF-T20030331HKH. The tech box proposal (short form application) was filed in a filing window for Auction 83. This Exhibit provides a preclusion showing required in Public Notice<sup>1</sup> of a window to file long form applications for further processing.

#### **Purpose of Application**

This application proposes a minor modification from the original short form application. Specifically, the site coordinates are changed slightly, a first adjacent channel is proposed, the height (AGL) is slightly reduced, and the input and status are changed to a fill-in translator for WVPS FM (300-HD-2) Burlington. WVPS, BLED20061018ABW, is licensed as a non-commercial, educational facility to Vermont Public Radio. The effective radiated power is not changed. The minor modification creates no conflicts with any pending Auction 83 tech box proposals, or any other prohibited overlaps as shown in **Section III-A, Question 12, Exhibit #12, Allocation Study.**

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<sup>1</sup> *Public Notice Media Bureau Announces FM Translator Auction 83 Filing Window and Filing Procedures*, DA 13-283, released February 26, 2013. (Singleton PN)

### Required Showings

This facility is located in the Montpelier-Barre-St. Johnsbury (Vermont) market, which is not an Appendix A or Appendix B market. It is not within 39 kilometers of any Appendix A, Spectrum Limited Market grid, nor any out-of-grid Top 50 Spectrum Limited market.

This facility is located within the 39 kilometer 'grid buffer zone' of the Burlington-Plattsburgh (Vermont/New York) market. The Burlington-Plattsburgh market is listed in the Fourth Report and Order<sup>2</sup> as an Appendix B, Spectrum Available Market, using a 30 minute grid. The required showing is identified as Test C, in Attachment B to the Singleton Window PN.

The Burlington-Plattsburgh market protected channel/point combinations were generated using the Commissions LPFM grid tool (LPFM6.201206). A portion of the printout from the LPFM grid tool follows.

The preliminary section confirms the parameters studied and provides a summary of the channels. There are no protected points on Channel 258, as proposed in this application. There are also no protected points on other channels + or – 2 channels (1<sup>st</sup> and 2<sup>nd</sup> adjacent) from 258. No I.F. channel protection is required.

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<sup>2</sup> *In the Matter of Creation of a Low Power Radio Service, Amendment of Service and Eligibility Rules for FM Broadcast Translator Station, Fourth Report and Order and Third Order on Reconsideration*, FCC 12-19, released March 19, 2012.

# LPFM Grid Study Parameters and Overall Results

Burlington VT  
 Latitude 44-28-33  
 Longitude 073-12-45  
 Grid Size 31 x 31  
 Micro FM 100 watts at 30m HAAT  
 Co-Channel and 1st Adjacent Protected  
 2nd Adjacent Channel Protected  
 3rd Adjacent Channel Not Protected  
 I.F. Not Protected  
 TV Channel 6 Protected  
 CP Records Protected  
 APP Records Protected  
 FM Translators Protected  
 TV Channel 6 Translators/LP Protected  
 Auc83 FX App Records Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	0	280	94
201	0	221	0	241	0	261	0	281	0
202	0	222	150	242	0	262	0	282	0
203	0	223	0	243	0	263	85	283	0
204	0	224	0	244	0	264	0	284	0
205	0	225	0	245	0	265	0	285	0
206	0	226	0	246	0	266	0	286	0
207	0	227	0	247	0	267	0	287	0
208	0	228	0	248	0	268	0	288	97
209	0	229	0	249	0	269	0	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	0	271	0	291	0
212	0	232	1	252	11	272	0	292	0
213	0	233	5	253	0	273	23	293	0
214	0	234	17	254	0	274	46	294	0
215	0	235	22	255	0	275	0	295	0
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	0	297	59
218	0	238	0	258	0	278	0	298	0
219	0	239	0	259	0	279	17	299	0
								300	0

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 Total 627

Total allotments, least preclusive spacing: 21  
 Total allotments, most preclusive spacing: 14

Note: Co-channel through second adjacent channel points are shown highlighted above. There are no LPFM channel points available on the proposed channel 258 or +/- 2 channels (1<sup>st</sup> and 2<sup>nd</sup> adjacent) within the grid of the Burlington-Plattsburg Market which would be precluded.

### Translator Height Above Average Terrain and Distance to Contour

The proposed translator facility's Height Above Average Terrain for the 12 radials used for translators is -120.7 meters. The corresponding distance to the 60dBu F(50-50) contour is 7.09 kilometers (using Probe 4 'Distance to Contour' report, and correlated with the FM Curves utility on the Audio Division website for the highest HAAT of 1.7 meters).

This translator falls in the smallest classification for separation requirements in 47 CFR §73.807(d)(1) [*7.3 kilometers or less*]. The maximum required separation for co-channel operation is 26 kilometers. For 1<sup>st</sup> and 2<sup>nd</sup> adjacent operation, the minimum required separations are 15 kilometers and 8 kilometers, respectively. As noted, the LPFM6 study shows there are no available LPFM channel points within the grid for Burlington-Plattsburg on channel 258, or any 1<sup>st</sup> or 2<sup>nd</sup> adjacent channels (+/- 2).

### Preclusion Study Description

Figure 1 shows the relationship of the proposed facilities to the Burlington-Plattsburgh market. The facility as proposed in the short form filing is plotted as 'Short Form 631037'. The 60 dBu F(50-50) contour is shown as a dashed Blue Line. The proposed modified facility is identified as 'Modified 631037'. The proposed 60dBu F(50-50) contour is shown as a solid Red line.

It may be noted that the modified facility is located less than 2 seconds from the originally proposed location, at a slightly lower AGL and HAAT, and at the same power as the original facility. Thus, the 60dBu contour of the proposed facility falls entirely within the radius of the 60dBu contour of the original facility, designated as a Singleton, and except for this minor modification, exempt from providing a non-preclusion showing.

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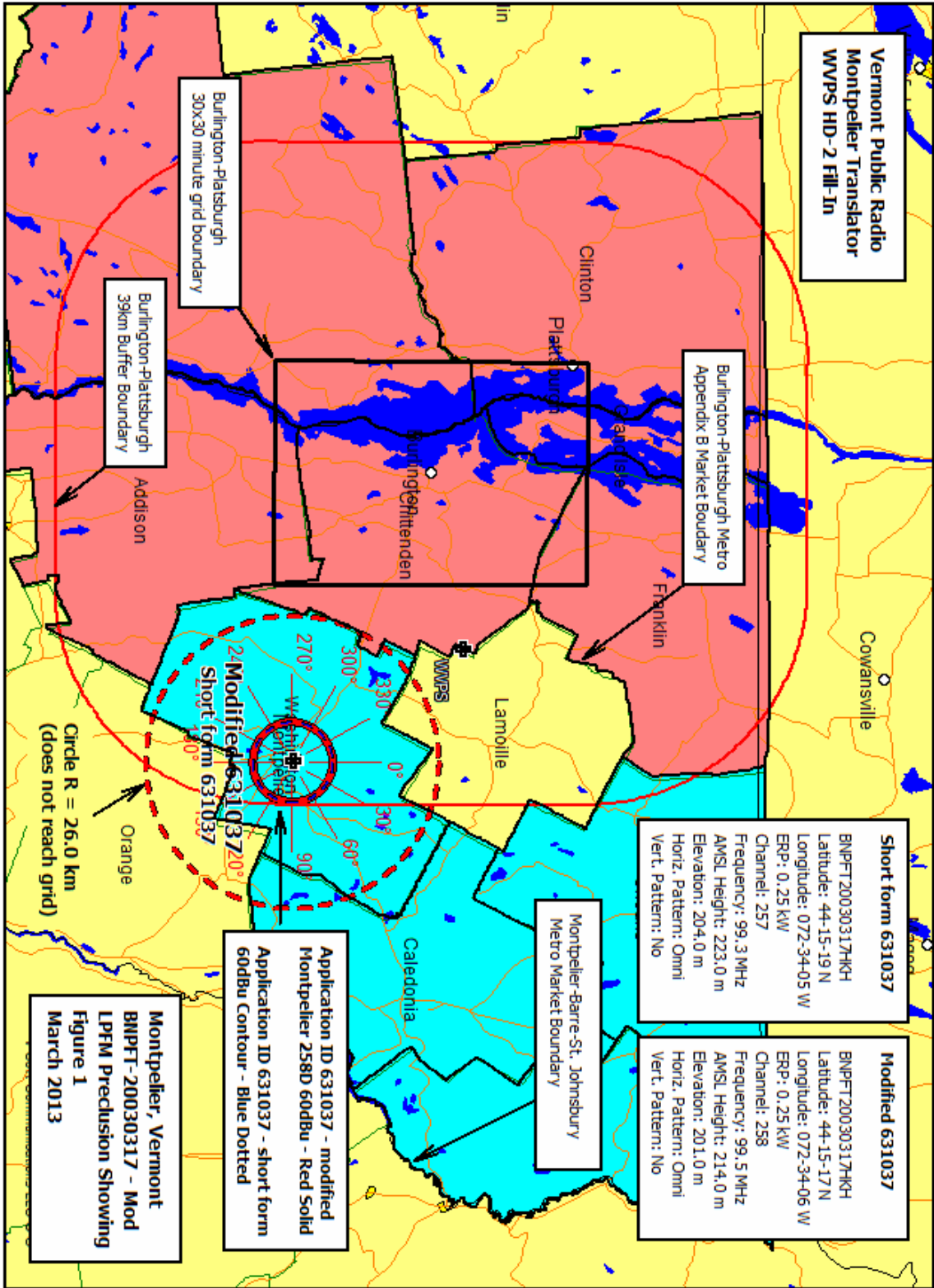
The map shows the 30x30 grid, the boundary for the 39 kilometer buffer zone around the grid, the boundaries of the Burlington-Plattsburg Appendix B, Spectrum Available Market (Pink), and the boundaries of the Montpelier-Barre-St. Johnsbury Market (Blue), which is not identified as either an appendix A or B market, nor as a Top 50 Market. A dotted red line with a 26.0 kilometer radius from the proposed translator facility shows no grids or identified channel/point combinations within the 26 kilometer co-channel distance, nor any 1<sup>st</sup> or 2<sup>nd</sup> adjacent LPFM preclusion possibilities.

### Source of Data

Transmitter location, effective radiated power, directional antenna patterns (if any), and elevation data are extracted from the Commission's CDBS database. All contours for existing and proposed facilities are calculated using height above average terrain calculated using the recommended FCC matching method (option 0) which is described as follows – "This setting uses the exact terrain elevation database used by the FCC as well as the FCC's exact distance and bearing routines and a total of 51 data point sampling as well as defining the HAAT radials from 2 to 10 miles (rather than 3 to 16 km)". (It is recommended by V-Soft that this setting should be used in order to provide results which most closely conform to the data and methodology used by the FCC.)


The elevation (AMSL) of the proposed facility was determined by scaling a USGS 7.5x7.5 2012 topographical map – this figure was further correlated by the use of Google Earth on-line elevation data.

The contours were evaluated using terrain data extracted from the V-Soft Communications 'FCC 30 Second' terrain database. The V-soft 'FCC 30 Second' database is derived from the FCC's own 30 Second FCC US NGDC database.



Declaration

I declare, that I am the Senior Broadcast Strategist and Engineer for Vermont Public Radio, that I have over 25 years of experience as a broadcast engineer, that I am familiar with the Federal Communications Rules found in the Code of Federal Regulations Title 47, that I have participated in training sessions under Doug Vernier and Kate English (V-Soft Communications) related to the use of V-Soft Tools for analysis and preparation of data supporting FCC applications, that I am a member of the Society of Broadcast Engineers, and that I have prepared the attached Exhibit 1, Purpose of Application and Grid Preclusion Showing, Exhibit 2, Engineering Statement, and other related Exhibits for Vermont Public Radio. I hereby certify under penalty of perjury, that the statements herein are true and correct of my own knowledge, except such statements made on information and belief, and as to these statements I believe them to be true and correct.

By: 

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