

File Number BNPFT-20030317FTC

Greensboro, North Carolina

Application for New FM Translator

On Channel 228

by

Wake Forest University

Exhibit 1

Grid Preclusion Showing

March 2013

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Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 1, Grid Preclusion Showing, for Wake Forest University, and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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Narrative

This Exhibit supports a long form Auction 83 construction permit application for an FM translator on Channel 228 in Greensboro, North Carolina, file number BNPFT-20030317FTC. The tech box proposal (short form application) was filed in a filing window for Auction 83. This Exhibit provides a preclusion showing required in a Public Notice¹ of a window to file long form applications for further processing.

This application proposes a minor modification from the original short form application. Specific changes are a change to fill-in, a change of site, a change of antenna, a decrease in height, and an increase in Effective Radiated Power. The minor modification creates no conflicts with any other Auction 83 tech box proposals, as shown in the Allocations Exhibit.

Required Showings

This facility is located inside the Market Grid of the Greensboro-Winston-Salem-High Point (North Carolina) market, and inside the Greensboro-Winston-Salem-High Point market. The Greensboro-Winston-Salem-High Point market is listed as a Spectrum Available Market using a 30 minute grid in Appendix B of the Fourth Report and Order.² The required showing is identified as Test C, in Attachment B to the Singleton Window PN.

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

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

This facility is in the Greensboro-Winston-Salem-High Point (North Carolina) market, and within 39 kilometers of the Greensboro-Winston-Salem-High Point (North Carolina) Appendix A Market grid. It is not within 39 kilometers of any other Appendix A Market grid. It is not within any out-of-grid Top 50 Spectrum Limited Market.

The Greensboro-Winston-Salem-High Point market protected channel/point combinations were generated using the Commissions LPFM grid tool. 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 228, proposed in this application. There are no other points on any channels + or - 2 channels. No I.F. channel protection is required.

LPFM Grid Study Parameters and Overall Results

Greensboro, NC
 Latitude 36-04-21
 Longitude 079-47-32
 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	0
201	0	221	0	241	21	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	91	263	0	283	2
204	0	224	0	244	0	264	0	284	75
205	0	225	0	245	0	265	0	285	170
206	0	226	0	246	0	266	0	286	148
207	0	227	0	247	0	267	0	287	1
208	0	228	0	248	0	268	0	288	0
209	0	229	0	249	10	269	0	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	0	271	0	291	30
212	0	232	0	252	0	272	0	292	81
213	0	233	0	253	0	273	0	293	0
214	0	234	0	254	0	274	8	294	0
215	0	235	0	255	0	275	0	295	24
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	0	297	0
218	0	238	0	258	0	278	0	298	0
219	0	239	0	259	0	279	0	299	0
								300	0

Total	661								

Total allotments, least preclusive spacing: 22
 Total allotments, most preclusive spacing: 19

Note: Co-channel through second adjacent channel points shown highlighted above.

Translator Height Above Average Terrain and Distance to Contour

The proposed translator facilities Height Above Average Terrain for the 12 radials used for translators is 96.9 meters. The corresponding distance to the 60 dBu F(50,50) contour is 12.004 kilometers, using the FM Curves utility on the Audio Division website. This translator falls in the middle classification for separation requirements in 47 C.F.R. §73.807(d)(1). The required separation for co-channel operation is 32 kilometers. For first adjacent channel, the required separation is 21 kilometers. For second adjacent channel, the required separation is 14 kilometers.

Preclusion Study Description

Figure 1 shows the relationship of the proposed facilities to the Greensboro-Winston-Salem-High Point market. This facility as proposed in the short form filing is plotted with its Application ID, 634884. The 60 dBu F(50,50) contour (dashed colored line) is shown. The proposed modified facilities are identified as 634884m. The proposed 60 dBu F(50,50) contour is shown as a solid colored line. The primary station is also shown. There are no protected channel/points on co-channel through second adjacent channel to plot. The proposed facilities cause no preclusion in the Greensboro-Winston-Salem-High Point market grid.

Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDDBS. All contours for existing and

proposed facilities are calculated using height above average terrain calculated at one degree horizontal increments.

The contours were evaluated using terrain extracted from the V-Soft Communications NED 03 terrain database. The NED 03 database is derived from the USGS National Elevation Data 30 meter terrain database.

