

CircuitWerkes, Inc.

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Exhibit EE-1: Engineering Statement in support of
FCC FORM 349

APPLICATION FOR AUTHORITY TO CONSTRUCT OR MAKE CHANGES IN AN FM TRANSLATOR OR FM BOOSTER
STATION

(For a New FM Translator)

This Exhibit supports a long form application, with minor modifications, to an existing application by Circuitwerkes, Inc. (the Applicant) for a new FM Translator serving the community of West Palm Beach, FL. The facility ID is 158103 and the file number is currently BNPFT-20030317MWC

The tower that had been originally proposed is no longer available. Accordingly, permission was obtained to locate the proposed facility at a new location. The power will be increased to 99W and the height will decrease to 26m AGL. The antenna will be non-directional.

The proposed facility is in compliance with 47 C.F.R. Section 1.1306 with regards to radio-frequency electromagnetic exposure in that the contribution to the rf environment is less than 5% of the maximum public exposure.

This application was prepared using FCC 30-arc-second terrain data.

This translator is a non-fill in for WXXL (facility ID 29569). This application is below the class height for all radials, so power is not limited by height, however this application proposes only 99W. IF translator application BNPFT-20030314ADY specified a change to the IF channel after the close of the last filing window, therefore this application should have cutoff protection from BNPFT-20030314ADY.

Figure 1 is a color coded map showing the protected contours and interfering contours of all relevant FM facilities. No prohibited overlap exists between this proposed facility and any other facility.

Figure 2 demonstrates that there is overlap of the 60dBu contours between the original location and this proposal.

The proposal is sufficiently distant from all facilities mentioned in 73.1030(a), (b) & (c) so that notification under 73.1030 is not required.

West Palm Beach is a so-called "Spectrum Limited Market". As previously submitted in the required April filing window, the LPFM grid tool shows no LPFM availability on the co-channel or either first adjacent channel.

Kyle Magrill, President/applicant
PG-7T-6155
28 September 2013

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Background:

Translator application BNPFT-20030317MWC is inside the West Palm Beach radio market and is not within 39km of any other market. West Palm Beach is a spectrum limited market.

BNPFT-20030317MWC is listed as a singleton. This application changes the antenna height, ERP and location of the proposal. A preclusion study is attached demonstrating that no LPFM grid locations are displaced as a result of this application. The applicant will accept any interference caused as a result of operations on channel 225.

Figure 1: Contour analysis of Ch225, West Palm Beach, FL. Colors are referenced to application BNPFT-20030317MWC. Other facilities' colors should not overlap the same colors from BNPFT-20030317MWC
 Key: Orange = Interfering 40dBu vs Protected (Co-chan)
 Cyan = Interfering 54dBu vs Protected (1st Adj)
 Violet = Interfering 100dBu vs Protected (2nd/3rd adj)
 Red = 20030317MWC protected

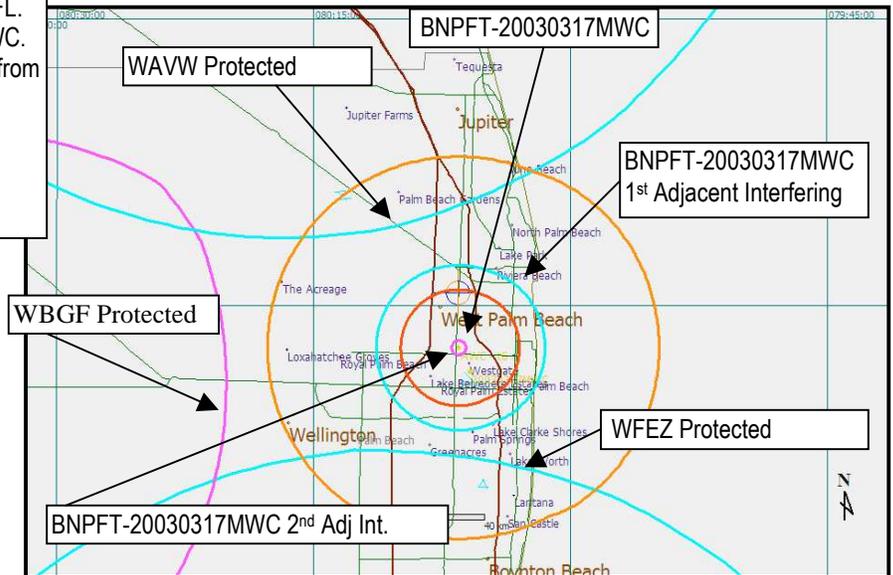
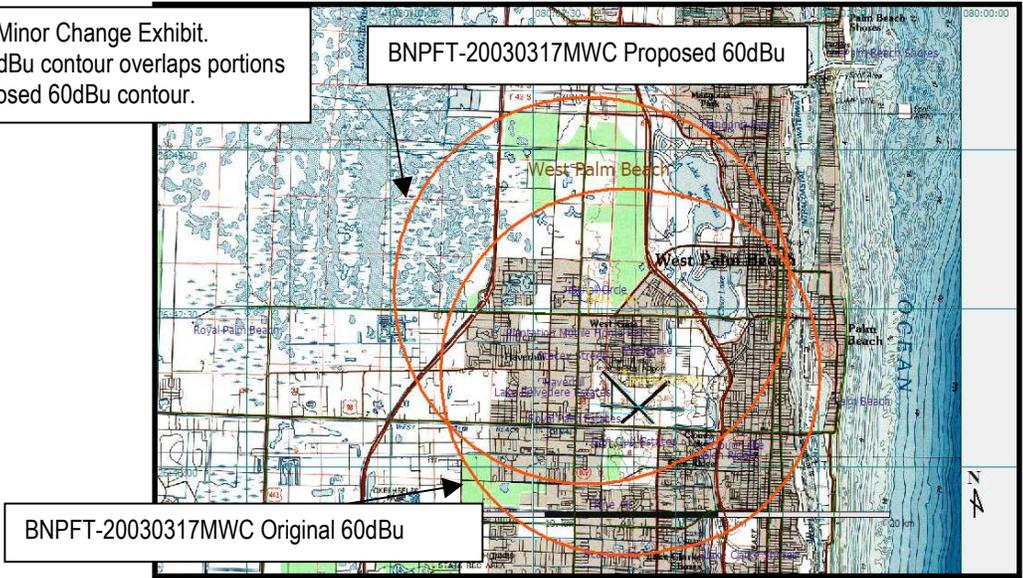


Figure 2: Minor Change Exhibit. Original 60dBu contour overlaps portions of the proposed 60dBu contour.



LPFM Preclusion:

West Palm Beach is a spectrum limited market. There are no available LPFM grid points on Channels 224, 225, or 226 so this application has no preclusive effect upon any LPFM grid points.

West Palm Beach, FL
 Latitude 26-42-54
 Longitude 082-03-13
 Grid Size 31 x 31
 Micro FM 100 Watts at 30m HAAT
 Co-Channel and 1st Adjacent Protected
 2nd Adjacent Channel Not 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 Not Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	0	280	0
201	0	221	4	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	171
203	0	223	0	243	344	263	173	283	26
204	0	224	0	244	0	264	186	284	0
205	0	225	0	245	0	265	0	285	0
206	0	226	0	246	0	266	3	286	0
207	0	227	186	247	336	267	0	287	0
208	0	228	0	248	0	268	186	288	0
209	1	229	0	249	0	269	0	289	0
210	0	230	0	250	0	270	0	290	1
211	0	231	46	251	242	271	0	291	0
212	0	232	0	252	1	272	0	292	0
213	386	233	0	253	0	273	0	293	0
214	0	234	0	254	0	274	0	294	270
215	0	235	186	255	0	275	0	295	14
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	336	297	0
218	0	238	0	258	0	278	264	298	268
219	0	239	473	259	499	279	0	299	21
								300	0

Total	4623								

In addition to not precluding any grid points, the procedures adopted for this filing window do not afford protection from displacement by LPFM applicants, except to the extent that they were protected prior to the current filing window. Since no protection is afforded to applications that displace previously protected grid points, new preclusion studies submitted as part of the FCC's requirements for this filing seem overly restrictive and unnecessary.

Section VII Engineering Data:

Tech Box Data:

1. Channel: **229**

Primary Station: **FID:** 29569

WXXL
Tavares, FL
106.7mHz

2. Delivery Method: **Off the Air**

3. Antenna Location Coordinates: (NAD27):

26° 42' 46" N

80° 06' 33" W

4. Antenna Structure Registration: **not required**

5. Antenna Location Site Elevation Above Mean Sea Level: **5.2 meters**

6. Overall Tower Height Above Ground Level: **46 meters**

7. Height of Radiation Center Above Ground Level: **26 meters (V+H) AGL**

8. ERP:

0.099 kW (H)

0.099 kW (V)

9. Transmitting Antenna: **SWR FM-1/1**

10. Fill-in Translator: **No**

11. Interference: **Yes**

a)Section 74.1204, **Checked**. See EE-1, Figure 1, Stations and Authorizations requiring investigation.

b)Section 74.1205, **Not Checked**.

12. Unattended operation: **Yes**

13. Multiple Translators: **Yes**

14. NEPA: **Yes**. This proposal is excluded from environmental processing: The modeled rf at the base of the tower is under 5uW/cm2 which is less than 5% of the maximum public exposure level. No changes to structure, lighting, land or water are proposed. Applicant will cease radiating if workers are near the antenna.

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