

LPFM PRECLUSION STUDY BNPFT-20030317EFE

Coordinates: 29-39-20.2 N. ~ 98-07-56 W.
Antenna Structure Registration Number: 1061465
RC-AMSL: 296 m
ERP: 0.19 kW (directional antenna)
HAAT: 84 m

This LPFM preclusion study is conducted on behalf of Frank G. McCoy, applicant of 2003 FM translator application BNPFT-20030317EFE at New Braunfels, TX.

The amendment site is located inside the 39 km buffer zone of the San Antonio, TX market, a Top 50 Spectrum Limited Market.

The maps are provided to demonstrate compliance with the LPFM preclusion showing requirements. All maps also show the Austin, TX 31 x 31 Grid and 39 km buffer zone. The proposed amendment site is just outside the 39 km buffer zone for Austin. All maps also show the 21 x 21 Grid for San Antonio as well as the 39 km buffer zone.

A copy of the relevant portions of the San Antonio LPFM Preclusion Study generated by the FCC's LPFM6 software program is attached. The channels impacted by this proposal are highlighted in yellow. Those channels are 233 and 234.

A screenshot of the FCC's HAAT program using the proposed facility's coordinates and height above mean sea level is provided. The HAAT is calculated to be 84 meters. Another screenshot of the FCC's FM and TV Propagation Curves Calculations program calculated that the proposed BNPFT-20030317EFE facility FCC F(50,50) 60 dBu contour operating with 190 watts ERP at 84 meters HAAT is 11.087 km. This contour is greater than 7.3 km but less than 13.3 km. Therefore the hypothetical circles used to show no overlap with identified LPFM grid points are as follows;

Co-Channel - 32 km.
First adjacent channels - 21 km.
Second adjacent channels - 14 km.

Map One shows compliance with the LPFM Preclusion Study on co-channel Channel 232 (94.3 MHz). The maps shows the proposed translator application modification site is located outside the Austin LPFM 39 km. LPFM buffer zone and inside the San Antonio LPFM 39 km. buffer zones. No LPFM grid points were identified on Channel 232 in the FCC's LPFM6 program as having LPFM grid points in the San Antonio 21 x 21 grid.

Map Two shows compliance with the LPFM Preclusion Study on first adjacent channel 233 (94.5 MHz). The preclusion zone for Channel 233 is clearly identified on the map. The 21 km. circle does not overlap with any LPFM grid points in the San Antonio 21 x 21 grid.

Map Three shows compliance with the LPFM Preclusion Study on second adjacent channel 234 (94.7). The preclusion zone for Channel 234 is clearly identified on the map. The 14 km. circle does not overlap with any LPFM grid points in the San Antonio 21 x 21 grid.

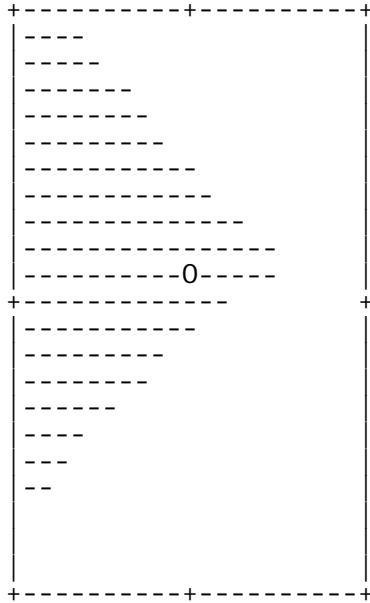
Therefore it is believed that the proposed amendment for BNPFT-20030317EFE is in compliance with the requirements of the LPFM Preclusion Study as described in *"Creation of a Low Power Radio Service, Fourth Report and order and Third Order on Reconsideration, 27, FCC Rcd 3364, 3382-88 (2012)" ("Fourth Report and Order")*.

San ANTONIO, TX
 Latitude 29-27-06
 Longitude 098-30-46
 Grid Size 21 x 21
 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

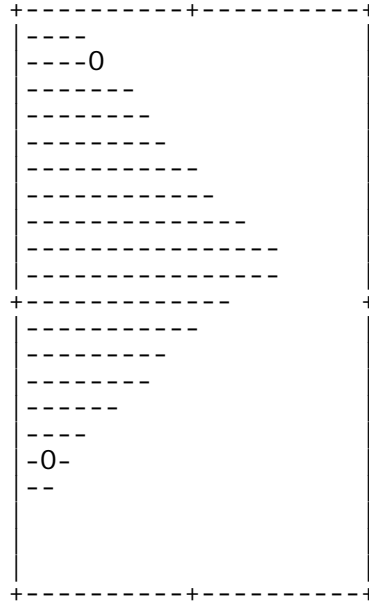
Chan	Avai l	Chan	Avai l	Chan	Avai l	Chan	Avai l	Chan	Avai l
200	0	220	0	240	0	260	440	280	0
201	0	221	12	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	42	243	415	263	0	283	0
204	0	224	0	244	331	264	175	284	0
205	0	225	0	245	310	265	0	285	0
206	0	226	0	246	0	266	0	286	0
207	0	227	17	247	0	267	0	287	0
208	0	228	183	248	0	268	0	288	0
209	0	229	67	249	0	269	0	289	0
210	0	230	0	250	9	270	0	290	0
211	0	231	0	251	332	271	0	291	1
212	0	232	0	252	0	272	0	292	1
213	0	233	158	253	0	273	0	293	0
214	0	234	140	254	0	274	0	294	0
215	0	235	0	255	21	275	0	295	0
216	0	236	0	256	132	276	15	296	295
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	291

Total	3387								

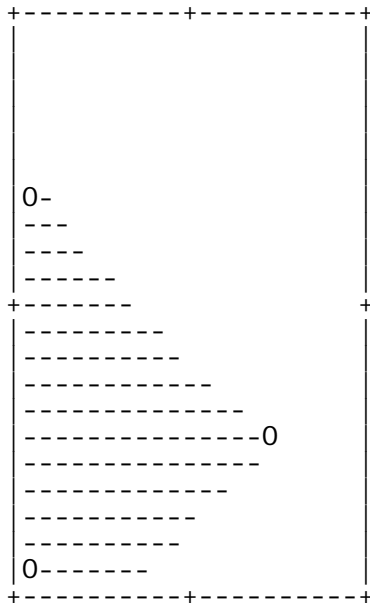
Point #429 at 29-25-06 098-40-46
 Point #148 at 29-17-06 098-27-46
 San ANTONIO, TX
 Latitude 29-27-06
 Longitude 098-30-46
 Least preclusive siting
 Availability of Channel 233 (X)



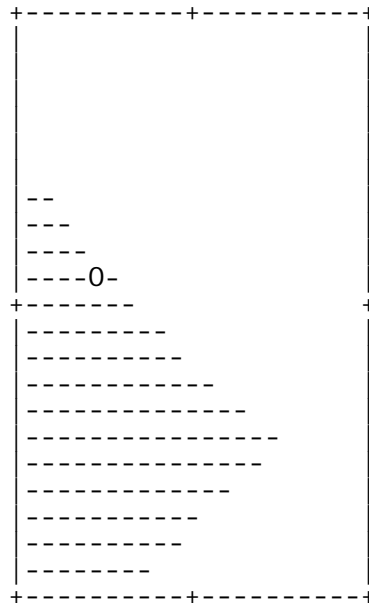
Point #364 at 29-23-06 098-37-46
 San ANTONIO, TX
 Latitude 29-27-06
 Longitude 098-30-46
 Most preclusive siting
 Availability of Channel 233 (X)



Point #222 at 29-28-06 098-30-46
 San ANTONIO, TX
 Latitude 29-27-06
 Longitude 098-30-46
 Least preclusive siting
 Availability of Channel 234 (X)



Point #356 at 29-36-06 098-36-46
 Point #404 at 29-21-06 098-39-46
 San ANTONIO, TX
 Latitude 29-27-06
 Longitude 098-30-46
 Most preclusive siting
 Availability of Channel 234 (X)



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Antenna Height Above Average Terrain (HAAT) / Contour Calculations[FCC](#) > [MB](#) > [Audio Division](#) > [HAAT/Contour Calculations](#)[FCC site map](#)**Antenna Height Above Average Terrain Calculations -- Input**

Latitude **29 39 20.2 North**
Longitude **98 7 56.0 West** (NAD 27)

Height of antenna radiation center above mean sea level [RCAMSL] = **296.0** meters

Number of Evenly Spaced Radials = 12 0° is referenced to True North

Results:**Calculated HAAT= 84. meters**

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

Antenna Radiation Center Heights Above Individual Radials:

0.0°	76.4 meters
30.0°	96.6 meters
60.0°	101.6 meters
90.0°	117.2 meters
120.0°	122.2 meters
150.0°	108.9 meters
180.0°	102.8 meters
210.0°	86.9 meters
240.0°	53.0 meters
270.0°	70.4 meters
300.0°	42.2 meters
330.0°	34.2 meters

[New Antenna Height Above Average Terrain \(HAAT\) calculation?](#)

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FM and TV Propagations Curves Calculations

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Results -- FM and TV Propagation Curves Calculations

Results of Calculation

Distance to Contour = 11.087 km

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[Back to Initial Selections](#)

For input data from Pages 1 and 2:

ERP entered = 0.190 kW

HAAT entered = 84.00 meters

Field Strength entered = 60.000 dBu

Find the Distance to the Contour, Given a Field Strength

F(50,50) curves for service contours

FM and NTSC analog TV Channels 2 through 6

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Comments on this program may be referred to [Dale Bickel](#)

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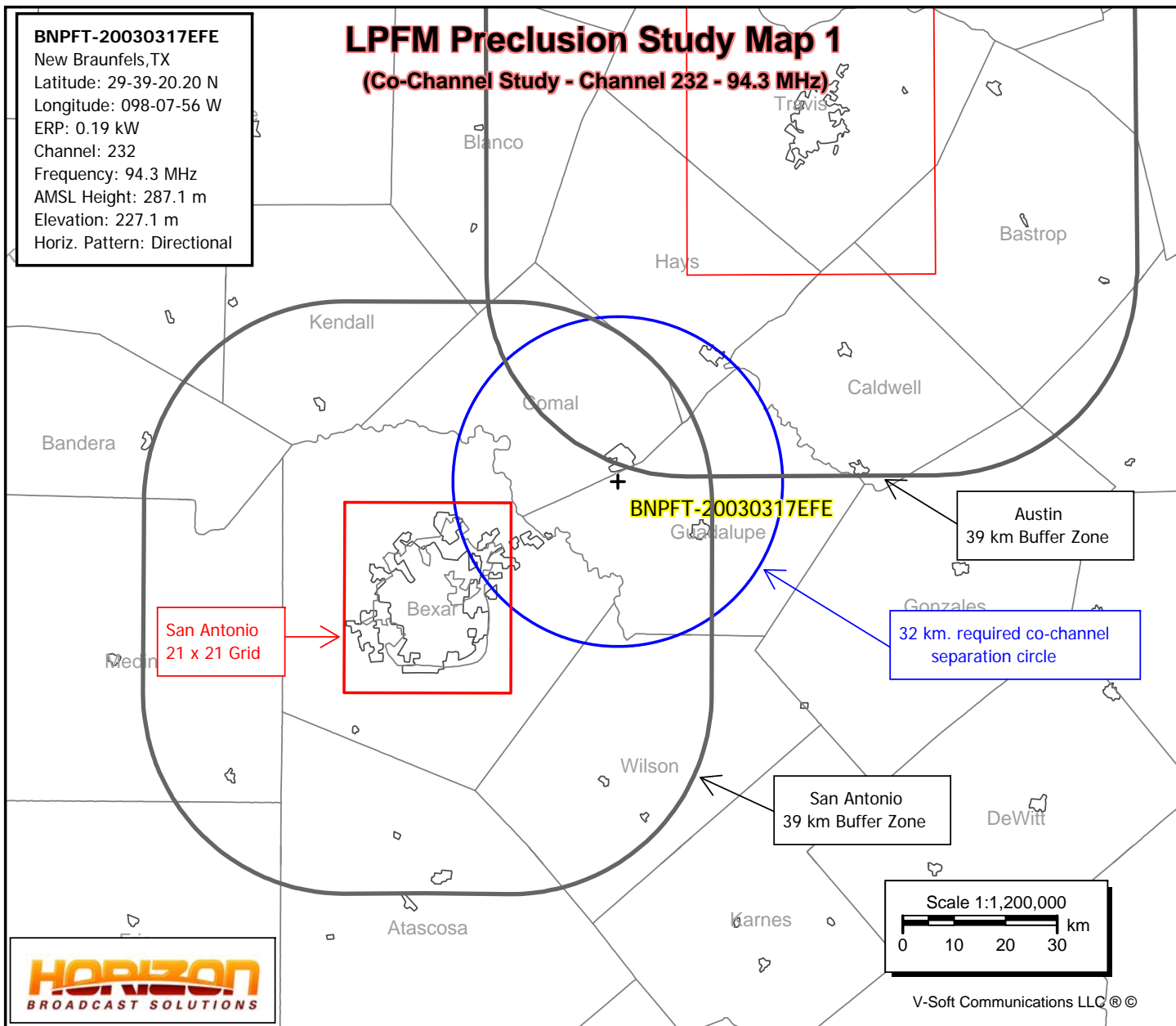
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BNPFT-20030317EFE
New Braunfels, TX
Latitude: 29-39-20.20 N
Longitude: 098-07-56 W
ERP: 0.19 kW
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 287.1 m
Elevation: 227.1 m
Horiz. Pattern: Directional

LPFM Preclusion Study Map 1

(Co-Channel Study - Channel 232 - 94.3 MHz)



BNPFT-20030331EFE

New Braunfels, TX
Latitude: 29-39-20.20 N
Longitude: 098-07-56 W
ERP: 0.19 kW
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 279.3 m
Elevation: 210.3 m
Horiz. Pattern: Omni

LPFM Preclusion Study Map 2

San Antonio Grid Test - 1st Adjacent Channel 233

Hays

Kendall

Comal

Caldwell

BNPFT-20030331EFE

21 km. required 1st adjacent
channel separation circle
(circle does not intersect
any protected LPFM grid points)

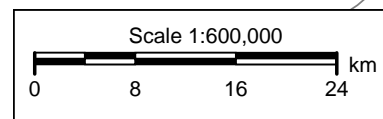
Guadalupe

**CH 233 Grid
Point Area**

Gonzales

Wilson

HORIZON
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BNPFT-20030331EFE

New Braunfels, TX

Latitude: 29-39-20.20 N

Longitude: 098-07-56 W

ERP: 0.19 kW

Channel: 232

Frequency: 94.3 MHz

AMSL Height: 279.3 m

Elevation: 210.3 m

Horiz. Pattern: Omni

LPFM Preclusion Study Map 3

San Antonio Grid Test - 2nd Adjacent Channel 234

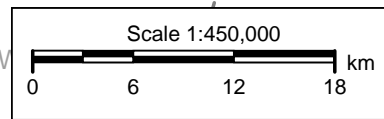
14 km. required 2nd adjacent
channel separation circle
(circle does not intersect
any protected LPFM grid points)

BNPFT-20030331EFE

**San Antonio
21 x 21
LPFM Grid**

**CH 234 Grid
Point Area**

HORIZON
BROADCAST SOLUTIONS



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