

AZURE MEDIA , LLC
New FM Radio Station
Sugarloaf Key, FL
Ch289C3, 105.7 MHz, 12.6 kW, 140m AAT

ENGINEERING STATEMENT

This engineering statement, together with the attached figures, has been prepared on behalf of Azure Media, LLC, in support of an application for construction permit for a new FM radio station to be licensed to Sugarloaf Key, FL. The applicant has on file short-form application BSFH-20120111ADK and has been requested to file a long-form application. Under this filing, the station will operate with 12.6 kW at 141.4m AAT with an 8-bay half-wave spaced Dielectric DCR-M8C 0.50 FM antenna at 140.2m AGL. The NAD-27 coordinates for the antenna site are N 24-40-36 W 81-30-39 and the tower is registered under #1053369.

It is pointed out that WHNJ-CP (Ch239C3, 95.7 MHz) shall operate with the same antenna by use of a combiner with appropriate filters so as to avoid intermodulation products. Station WEOW (Ch224C1, 92.7 MHz) is also located on the tower but above the proposed antenna. Traps for WEOW shall be incorporated into the proposed combiner.

ATTACHED EXHIBITS

Figure 1 is a vertical plan sketch showing the proposed antenna mounted 140.2 meters above ground level and the WEOW antenna mounted 166m above ground level.

Figure 2 is a portion of the Key West USGS topographic map showing the tower location on Cudjoe Key, FL.

Figure 3 is a channel 289C3 spacing study detailing clearance to all pertinent stations.

Figure 4 is a service contour map of the proposed 70 dBu and 60 dBu contours. The 70 dBu contour covers all of Sugarloaf Key, FL.

ENVIRONMENTAL CONSIDERATIONS

This was addressed in OET Bulletin 65, released August 1, 1997. Table B on Page 67 of the document depicts the ANSI/IEEE protection requirements. The maximum permissible exposure for uncontrolled environments in the 30 to 300 MHz spectrum is a power density of 0.2 milliwatts per centimeter squared (mw/cm²).

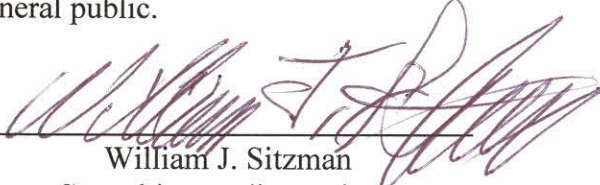
Since the applicant shall employ a Dielectric DCR-M8C 0.50 antenna, the vertical elevation pattern of that antenna has been used in determining the effective radiated power below the horizon toward any area 2 meters above ground level.

For the uncontrolled environment in the FM spectrum, the power density will be 0.00058 mw/cm², or 0.29% of the allowed 0.2 mw/cm² just above the general public. The contribution of WEOW is 0.012 mw/cm², or 6% of the allowed 0.2 mw/cm² just above the general public. The total power density is hence 0.01258 mw/cm² or 6.29% of the allowed maximum..

Since the proposed 95.7 MHz and 105.7 MHz combined with WEOW does not even exceed 7% of the 0.2 mw/cm² for the uncontrolled environment where the general public might traverse, compliance with FCC and ANSI/IEEE requirements are more than met.

Should any maintenance worker require access to the antenna tower, the stations will either reduce power or cease operation until workers are clear. Appropriate RF warning signs already exist on the tower fence and it may be assumed that there will be no significant effect on the human environment with regard to exposure of the general public.

May 21, 2012



William J. Sitzman
Consulting Radio Engineer

FIGURE 1

Antenna Coordinates:

N 24° 40' 36"
W 81° 30' 39" (NAD-27)

ASRN: 1053369

Existing Antenna:

WEOW-Lic. 12-Bay FM
Antenna; SHPX-12AC;
Ch. 224C1 (92.7 MHz.);

Radiation Center:

166m AGL
167m AMSL

185.0m AGL

186.2m AMSL

607 ft. AGL

611 ft. AMSL

Radiation Center	140.2m	(460')	AGL
	141.4m	(464')	AMSL
	141.4m	(464')	AAT

Proposed Antenna:

Dielectric Model DCR-M8C 0.50
Half-Wave Spaced 8-Bay Antenna;

Diplexed Facilities:

Prop. WHNJ-CP: Ch. 239C3 (95.7 MHz.)

Prop. New FM:* Ch. 289C3 (105.7 MHz.)

(* = This proposal)

Uniform cross-section
guyed steel tower
(existing)

For sake of clarity, antenna dimensions
are not precisely to scale.

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Ground Elev: 1.2m = 4 ft. AMSL



[Proprietary Map Used by Permission]

Center: 24° 40' 37.61" N 81° 30' 37.75" W (NAD-83)

Elevation at center: See FIGURE 1

Quad: USGS Key West

Drg Name: f24081e1

Drg Source Scale: 1:100,000

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FIGURE 3

SUGARLOAF KEY, FL CH289C3 SPACING STUDY.txt
 ComStudy 2.2 search of channel 289 (105.7 MHz Class C3) at 24-40-36.0 N, 81-30-39.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
830510AL	FORT LAUDERDALE	FL 290 C0	198.40	163.00	42.3	35.4
WBGG-FM	FORT LAUDERDALE	FL 290 C0	196.52	163.00	42.0	33.5
WBGG-FM	FORT LAUDERDALE	FL 290 C0	198.40	163.00	42.3	35.4
WWWK	ISLAMORADA	FL 288 C2	117.22	117.00	66.6	0.2

As shown, the proposed New FM at Sugarloaf Key, FL utilizing the proposed antenna site coordinates in this application complies with minimum distance separation requirements of Section 73.207 of the Rules when treated as a Class C3 station. Accordingly, authorization of this station as a Class C3 facility is respectfully requested.

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Sugarloaf Key, FL CH289C3 70dBu & 60dBu Service Contours

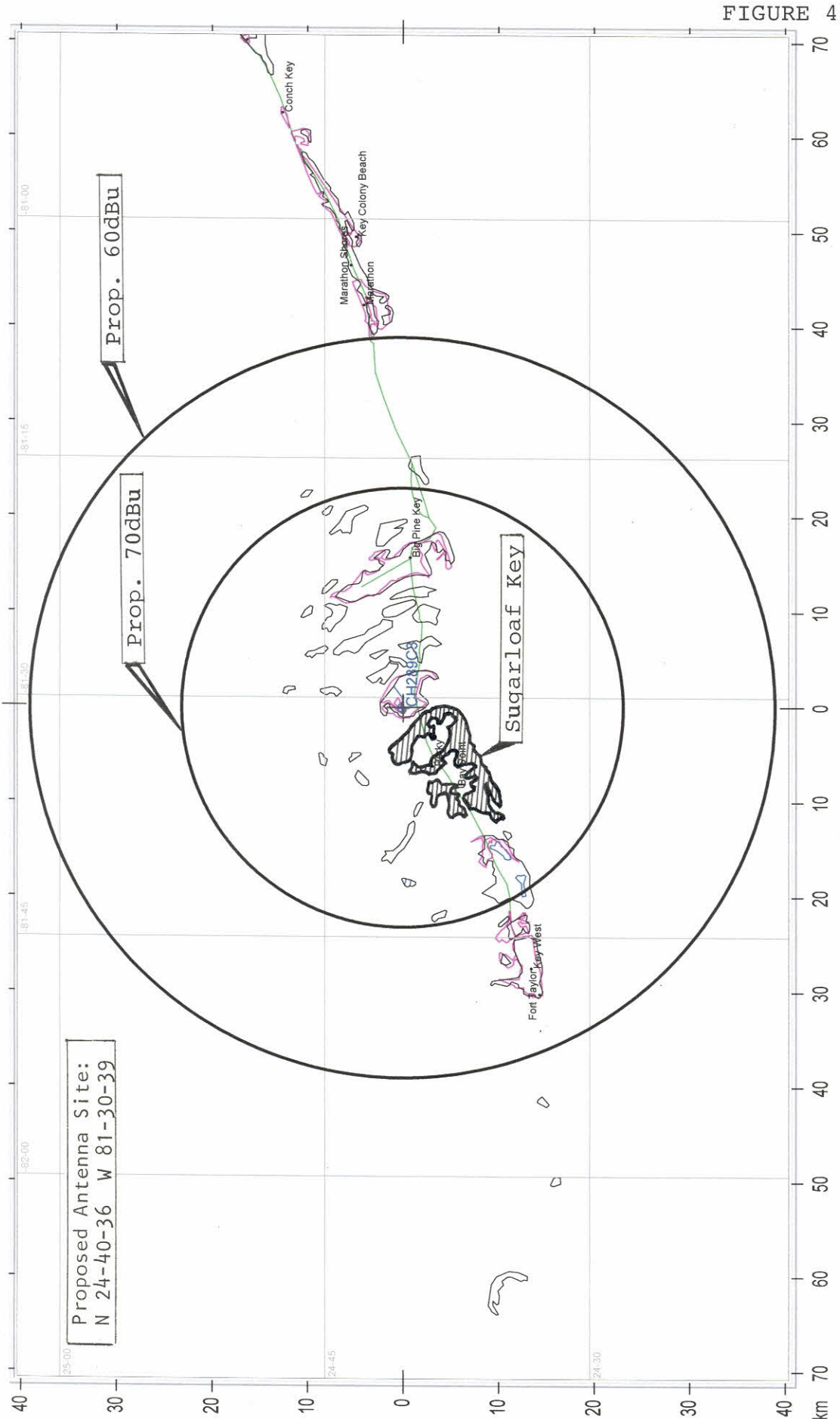


FIGURE 4

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