

W292DT Comprehensive Engineering Exhibit October 2011

W292DT is seeking via this contingent application with the translator W292CO, identified by facility ID number 1013596, an increase power to 250 watts ERP at a location 185 meters above ground level, upon an existing tower identified by ASR No. 1013596, utilizing a directional antenna.

The facility will be utilized as a “fill-in” translator for primary station WEBN (FM). The 54 dBu service contour of the proposed facility is within that of the primary station, as demonstrated in Figure 1, where it can also be seen that the 60 dBu contour of the facility as proposed overlaps the existing licensed, making this application compliant for filing as a minor modification.

Attached as Figure 2 is an allocation spacing report wherein it can be determined that the proposed location is within the protected contour of 2nd adjacent primary facilities of WNKN. The 112.0 dBu F50:10 dBu interfering contour to the WNKN 72.0 contour near the translator location does not reach any habitable area as demonstrated in Figure 3, and observed from the aerial image of Figure 4.

Figure 2 also shows prohibited overlap with the existing facility of co-owned W292CO, which is concurrently filing a contingent application for modification of location and channel which will prevent this instant application from overlapping with the new facility of W292CO. This instant W292DT application while filed contingent should be considered subsequently filed and accepting of overlap from the proposed W292CO facility.

The Proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, “Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation.”

As the proposed antenna is not modeled in “FM Model”, the proposed facility has been evaluated using the antenna element in “FM Model” set as EPA type 1, 1- element, 1.0 wave spaced, “Ring Stub “ antenna, as a “worst case” example, mounted with its center of radiation 185 meters above ground level, and operated with an effective radiated power of 0.250 Kilowatts in both the horizontal and vertical planes. At 2 meters above ground, at 50 meters from the base of the tower, this proposal will contribute worst case, 0.30 microwatts per square centimeter, or 0.03 percent of the allowable ANSI limit for controlled exposure, and 0.15 percent of the allowable limit for uncontrolled exposure. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1.

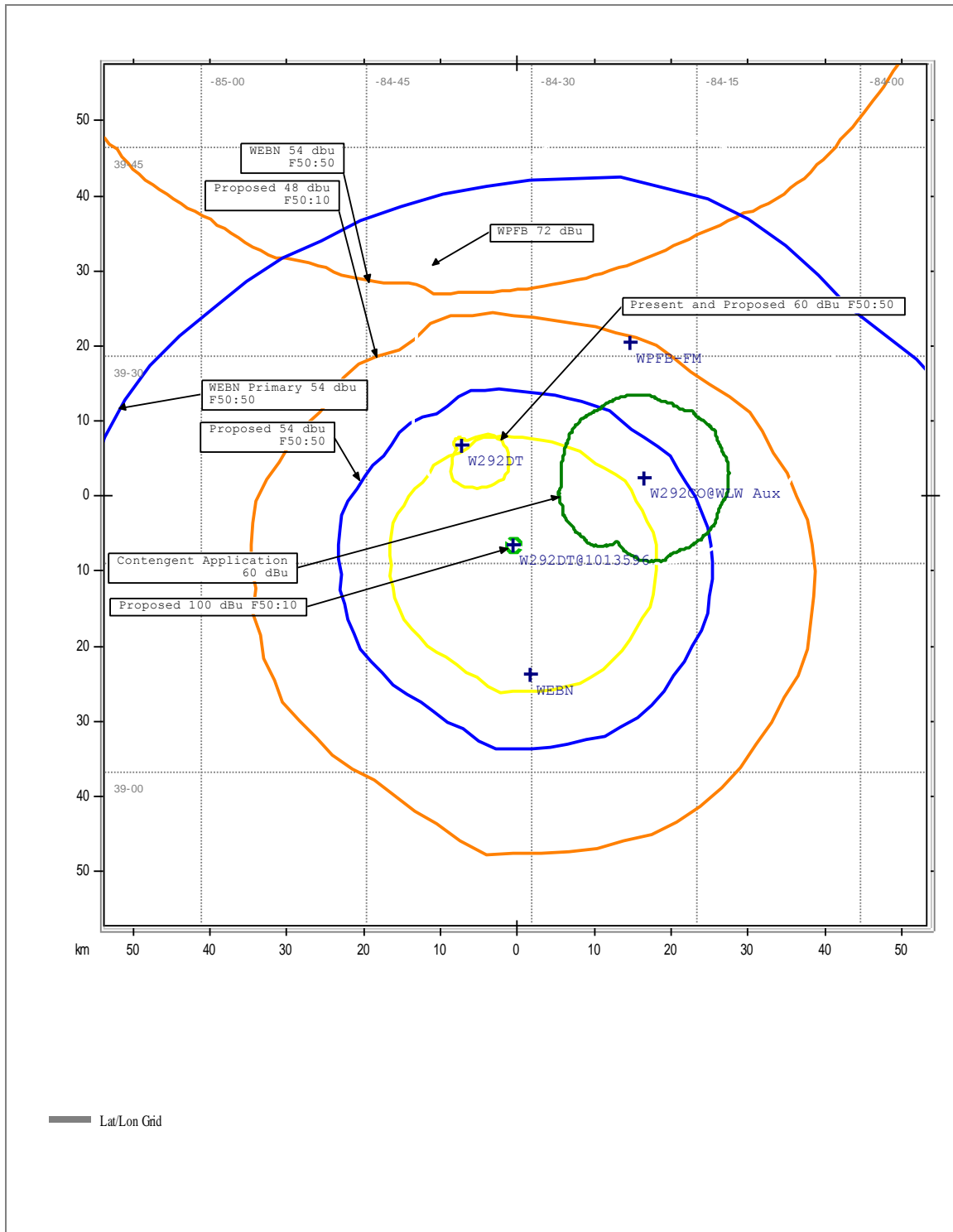


Figure 2. Spacing Study

Search of channel 292 (106.3 MHz Class D) at 39-16-23.8 N, 84-31-37.2 W.							
Callsign	Chanl	ARN	Class	Dist	Sep	Clr	Clr Notes
W292DT	292	BLFT20090407AIN	D	14.97	0	-31.41 dB	This Fac
W292CO	292	BLFT20070320ABY	D	24.21	0	-20.55 dB	Being Modified
WNKN	290	BMLED20110330ACO	B	30.89	0	-19.34 dB	Living Way
W292CO @WLW Aux	292	Contingent Filed Prior	D	19.24	0	-0.98	Incoming Only
WDSJ	293	BLH19901105KD	B	97.26	0	0.45 dB	Clear
WWWY	291	BLH19850905KC	B	104.15	0	1.09 dB	Clear
NEW	239	BNPL20010116ABP	LP100	13.14	7	6.1	Clear
NEW	239	BNPL20010122AHT	LP100	13.83	7	6.8	Clear
WVQC-LP	239	BLL20110323ABK	LP100	16.46	7	9.5	Clear
WXMG	292	BLH19920828KF	A	116.64	0	10.19 dB	Clear
WCDA	292	BLH19990115KB	A	136.09	0	14.79 dB	Clear
890901MD	292		A	116.64	0	17.18 dB	Clear
WFHZ-LP	239	BNPL20010119ADR	LP100	24.87	7	17.9	Clear
WNKR	294	BLH20080424AAY	A	65.1	0	18.76 dB	Clear
WNKN	290		B	30.89	0	18.67 dB	Clear
WNKR	293		A	72.67	0	18.26 dB	Clear
WCDA	292		A	136.76	0	21.11 dB	Clear

Figure 3 Ground Level Signal

XField Calculator V:1.0.5 (C) V-Soft Communications (R) 2011

File Defaults Setup Help About

Test Reference Station Antenna - V1 bay

Call Sign	W292DT@1013596
Channel	292
ERP kW	25
COR AG (m)	185
N. Lat.	39-16-23.8 N
W. Lng	84-31-37.2 W
Review Azimuth	

Antenna #1 V-Field

Browse

IBOC Station Antenna

ERP kW

COR AG (m) 70%

Antenna #2, V-Field Graph

Database in Use

USGS 03 SEC
NAD 27

Station to be Protected by Translator

Protected Station's Call	WNKN
Protected Channel	290
Station ERP (kW)	34 kW
Ant COR AMSL (m)	419 M
N. Lat.	39 30 57.0
W. Lng.	84 21 05.0

Antenna #2 Browse

Translator Protection Parameters

Table Distance Increment Between Points (m) 2

Table Distance to Study (m) 2500

☐ Show Deltas above dB

Show Graph Show Table

Initial Calculations

Distance to Site (km)	30.9	Calc
Azimuth to Site	209.3	
HAAT to translator	204.2	
Signal at translator in dBu	72.00611	

XFIELD

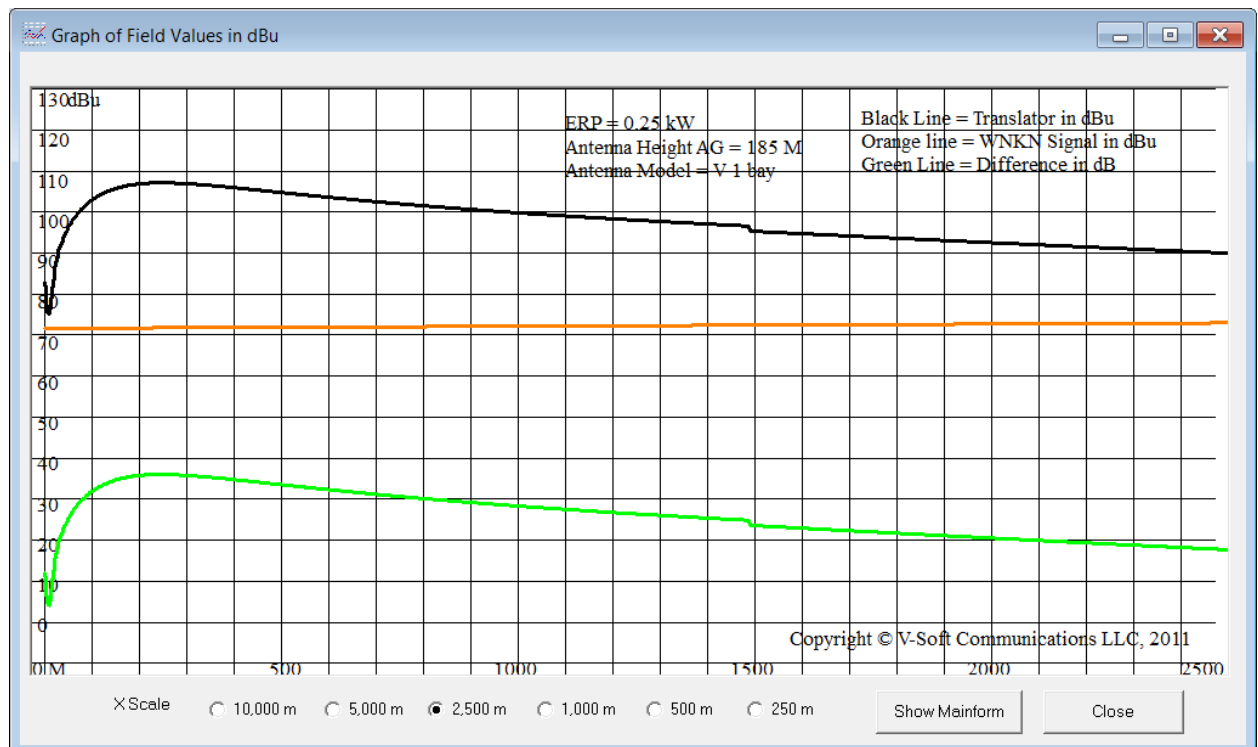


Figure 4 Aerial Image of Proposed Antenna Location

