

Technical Report W290DC Minor Modification

This technical report is submitted for a modification to W290DC, FCC file no. BLFT-20160915ABR. A move to channel 287, with corresponding changes in the antenna and ERP at its current tower site, are submitted for the translator to serve as a fill-in facility to rebroadcast WYCT(FM) 254C1 at Pensacola, FL, FCC facility I.D. no. 539.

W290DC Modification Analysis:

An overlap study in exhibit E-1 shows the W290DC modification to channel 287 is within the WAAZ-FM 284C1 third-adjacent protected contour at Crestview, FL. The F(50-50) contour from WAAZ-FM to the W290DC site is calculated to be 65.448 dBu, adding the +40 dBu = 105.448 dBu F(50-10) (exhibit E-2), and does not reach any population, roads or buildings (exhibit E-3). The modified 60 dBu contour overlaps the current 60 dBu contour at the same site and is contained within the primary WYCT(FM) 60 dBu contour (exhibit E-4).

Antenna System:

W290DC is to remain at its current site on an existing 48 meter tower at coordinates:

30 39 36N 87 03 16W NAD 27.

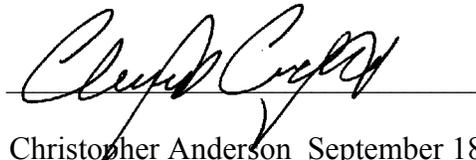
A TOWAIR determination (exhibit E-5) shows the tower does not require registration. A Bext Log-R, single bay, vertically-polarized, directional antenna (exhibit E-6) is mounted at a COR AGL of 39 meters, 83 meters AMSL, rotated at a 30 degree azimuth, and will operate at 0.001 kW ERP.

RF Exposure Calculation:

The RF contribution was calculated using FM Model. The RF is calculated to be 0.023 $\mu\text{W}/\text{cm}^2$ at a distance of 8.6 meters from the base of the tower, which is well below 5% of the 200 $\mu\text{W}/\text{cm}^2$ maximum permissible for uncontrolled exposure, allowing exclusion from consideration.

Conclusion:

It is concluded that the W290DC modification complies with all Commission rules and policies.



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E-1 W290DC Mod. to Ch. 287 Overlap Study

CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY	STATE			<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
284C1	WAAZ-FM	LIC NCX		75.0	46.39	30 46 01.0	100.000	6.9	57.6	36.8	-11.2*(1)
Crestview	FL			255.3	BLH20020903AAP	86 35 07.0	148	189	Crestview Broadcasting Com		
286C3	WPFL	LIC _CX		338.3	54.96	31 07 09.0	8.600	60.8	41.1	-7.7*	11.3
Century	FL			158.2	BLH20040601BB0	87 16 05.0	170	233	Tri-county Broadcasting, I		
290D	W293BA	CP DV_		0.0	0.00	30 39 36.0	0.001	0.1	2.0	-2.1*	-2.1*(2)
Milton	FL			0.0	BPFT20160819ABC	87 03 16.0		83	Adx Communications Of Pens		
288C3	WYZZ	LIC ZCN		123.5	49.88	30 24 42.0	25.000	45.3	28.7	2.8	17.6
Mary Esther	FL			303.7	BLH19940314KC	86 37 14.0	93	99	Cumulus Licensing Lic		
290A	WBZR-FM	LIC NCX		315.0	59.39	31 02 14.0	5.500	2.7	27.5	55.0	31.7
Atmore	AL			134.8	BLH20101012ACQ	87 29 42.0	100	175	Tri-county Broadcasting In		
287C2	WBFB	LIC ZE_		353.9	180.21	32 16 18.0	50.000	140.2	54.5	37.9	119.7
Selma	AL			173.8	BLH20010615AFL	87 15 28.0	150	194	Imani Communications Corpo		
288A	WNXP	LIC _CN		283.6	79.57	30 49 34.0	5.300	39.1	25.5	38.8	51.9
Bay Minette	AL			103.2	BLH19930719KB	87 51 52.0	106	133	Dot Com Plus, Lic		
289A	WCSN-FM	LIC NCN		230.3	63.25	30 17 45.0	5.000	2.3	23.9	59.7	39.2
Orange Beach	AL			50.1	BLH19960819KA	87 33 42.0	75	78	Gulf Coast Broadcasting Co		

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM. In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent. All separation margins (if shown) include rounding. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) ***affixed to 'IN' or 'OUT' values = site inside restricted contour.

- (1) The W290DC modification to channel 287 is within the third-adjacent WAAZ-FM 284C1 protected contour. The 105.47 +40dBu F(50-10) contour tabulation in exhibit E-2 shows no interference signal will be produced to reach any buildings, roads or population.
- (2) The W293BA.CP at channel 290 is the W290DC facility.

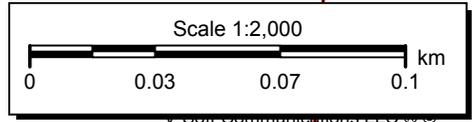
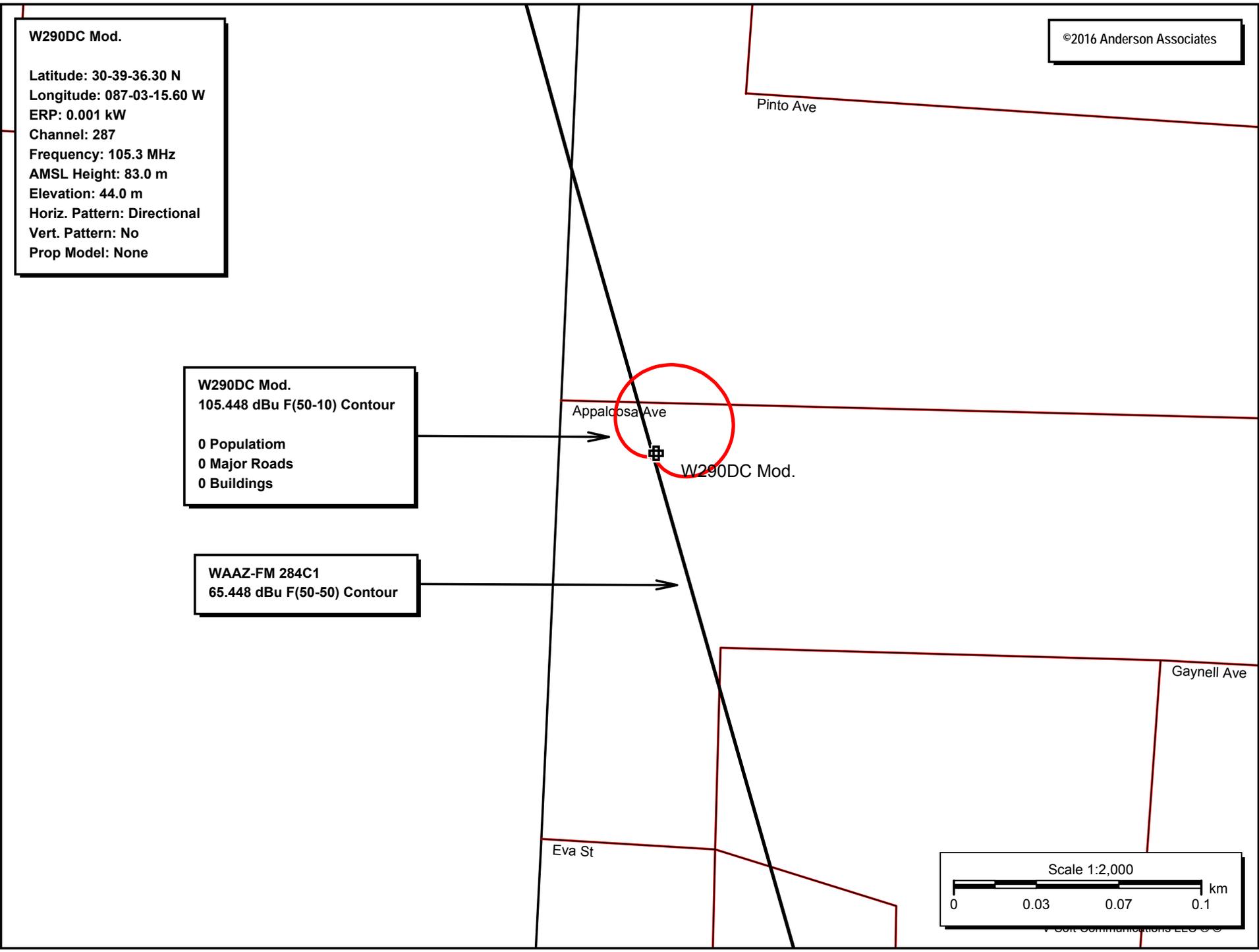
E-2 W290DC Mod. to Ch. 287 +40 dBu Contour Plot within WAAZ-FM 284C1

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W290DC Mod.
Latitude: 30-39-36.30 N
Longitude: 087-03-15.60 W
ERP: 0.001 kW
Channel: 287
Frequency: 105.3 MHz
AMSL Height: 83.0 m
Elevation: 44.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

W290DC Mod.
105.448 dBu F(50-10) Contour
0 Population
0 Major Roads
0 Buildings

WAAZ-FM 284C1
65.448 dBu F(50-50) Contour



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E-3 W290DC Mod. +40 dBu Contour Aerial Photo

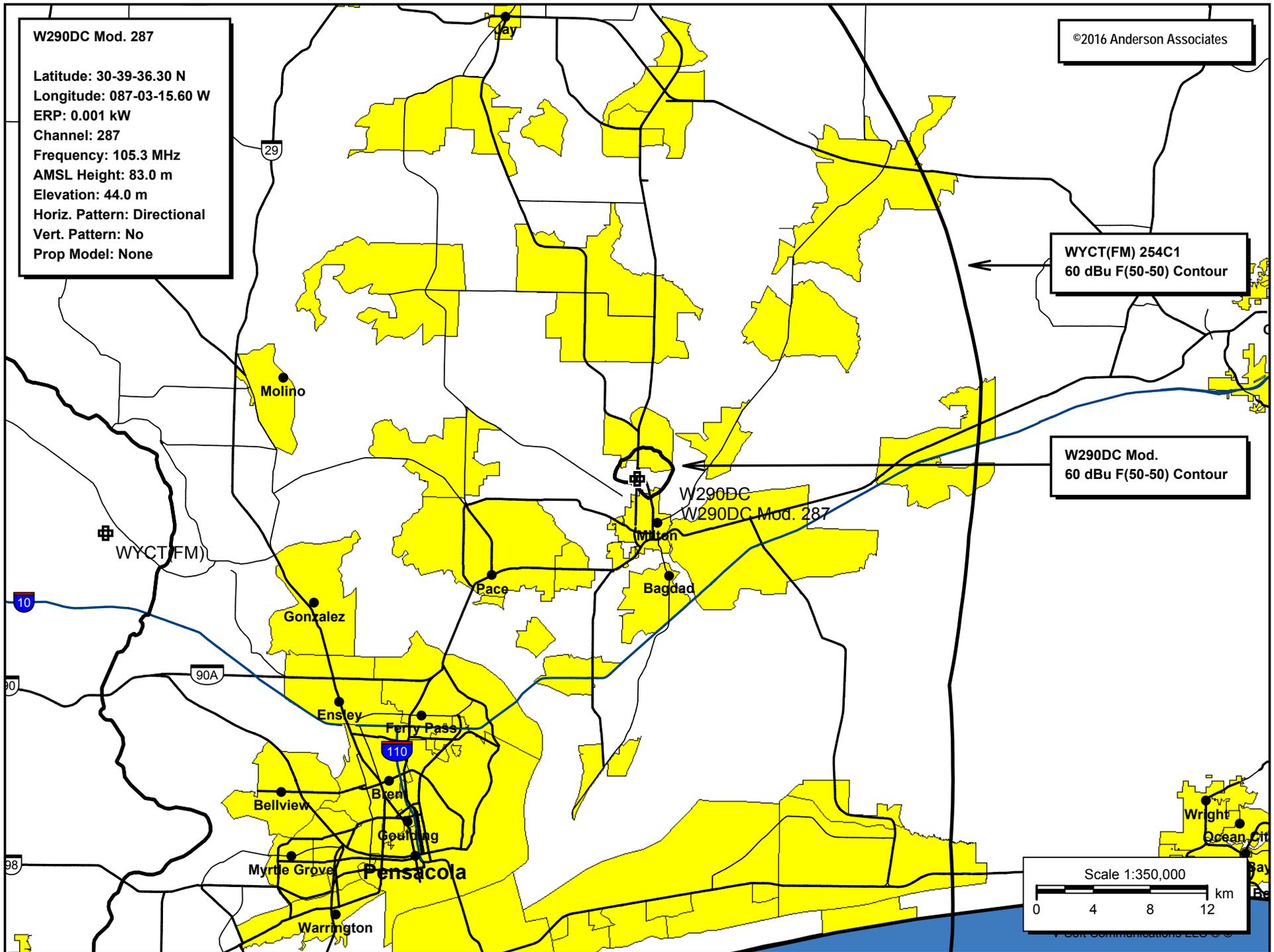


Google earth

feet
meters



E-4 W290DC Mod. to Ch. 287 60 dBu Contour Plot



E-5 W290DC Mod. Towair Determination

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 6135.62 MTRS (6.13560 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	30-38-34.00N	086-59-37.00W	PETER PRINCE FIELD	SANTA ROSA MILTON, FL	24.0	1128.0999999999999

PASS SLOPE(100:1)NO FAA REQ - 5079.0 Meters (16663.1 Feet)away & below slope by 7.0 Meters (22.9699 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	30-41-41.00N	087-01-10.00W	WHITING FIELD NAS SOUTH	SANTA ROSA MILTON, FL	49.0	1829.0999999999999

PASS SLOPE(100:1)NO FAA REQ - 5422.0 Meters (17788.5 Feet)away & below slope by 11.0 Meters (36.0900 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	30-42-11.00N	087-01-23.00W	WHITING FIELD NAS SOUTH	SANTA ROSA MILTON, FL	49.0	1829.0999999999999

E-5 TOWAIR Determination Results, cont.

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 6431.88 MTRS (6.43189 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	30-42-55.00N	087-01-59.00W	WHITING FIELD NAS	SANTA ROSA MILTON, NORTH FL	48.5	1829.4000000000001

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7420.66 MTRS (7.42070 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	30-43-5.00N	087-00-55.00W	WHITING FIELD NAS	SANTA ROSA MILTON, NORTH FL	48.5	1829.4000000000001

Your Specifications

NAD83 Coordinates

Latitude 30-39-36.9 north
 Longitude 087-03-15.7 west

Measurements (Meters)

Overall Structure Height (AGL) 48
 Support Structure Height (AGL) 0
 Site Elevation (AMSL) 44

Structure Type

TANK - Any type of Tank (Water, Gas, etc)

E-6 W290DC Mod. Directional Antenna Pattern

Azimuth (deg)	Relative Field
0.0	0.935
10.0	0.971
20.0	0.992
30.0	1.0
40.0	0.992
50.0	0.971
60.0	0.935
70.0	0.886
80.0	0.823
90.0	0.749
100.0	0.665
110.0	0.575
120.0	0.482
130.0	0.389
140.0	0.302
150.0	0.222
160.0	0.155
170.0	0.104
180.0	0.074
190.0	0.066
200.0	0.068
210.0	0.07
220.0	0.068
230.0	0.066
240.0	0.074
250.0	0.104
260.0	0.155
270.0	0.222
280.0	0.302
290.0	0.389
300.0	0.482
310.0	0.575
320.0	0.665
330.0	0.749
340.0	0.823
350.0	0.886

Rotation Angle = 30

