

# Non-Interference Compliance Study

## Glory Communications, Inc.

### W242CR (Facility ID: 138369)

This exhibit demonstrates compliance with all contour overlap and interference protection requirements and demonstrates full compliance with 47 C.F.R. §74.1204.

Applicant certifies that should any actual interference occur it will promptly cease operation in accordance with 47 C.F.R. §74.1203.

This study uses the NED 3 second terrain dataset.

Below is a listing of area stations whose contours are less than 25 km clear of the proposed translator.

Callsign	State	City	Channel	ERP (kW)	Class	Status	Distance (km)	Clr (km)
<b>WLTY</b>	<b>SC</b>	<b>Cayce</b>	<b>244</b>	<b>9</b>	<b>C3</b>	<b>LIC</b>	<b>0</b>	<b>-31.2</b>
<b>W240AX</b>	<b>SC</b>	<b>Columbia</b>	<b>240</b>	<b>0.25</b>	<b>D</b>	<b>CP</b>	<b>0</b>	<b>-18.1</b>
WKSP	SC	Aiken	242	17.5	C2	LIC	94.6	0.01
W240AX	SC	Columbia	240	0.25	D	LIC	10.21	0.16
W242AH	SC	Sumter	242	0.17	D	LIC	62.01	10.9

The only stations that are of concern are WLTY and W240AX (Channel 240). WLTY is a second adjacent Class C3 that requires that a minimum of 40 dB separation exist between its service contour and W242CR's interference contour. W240AX is a second adjacent Class D that requires that a minimum of 40 dB separation exist between its service contour and W242CR's interference contour. W242CR and W240AX are located on the same tower so it is therefore impossible for W242CR to interfere with W240AX. The following pages demonstrate that W242CR and WLTY are in compliance with these requirements.

## Compliance with 47 C.F.R. §74.1204(d)

All Authorized second adjacent stations with which the proposed translator's contour overlaps their service contour are listed below. The table lists the minimum signal level of the primary station's service contour that reaches the proposed tower site for W242CR.

Facility ID	Call Sign	Contour at Tower F(50,50)
4667	WLTY	93.8 dBu

Minimum protected contour signal level at W242CR's proposed tower site: **93.8 dBu**

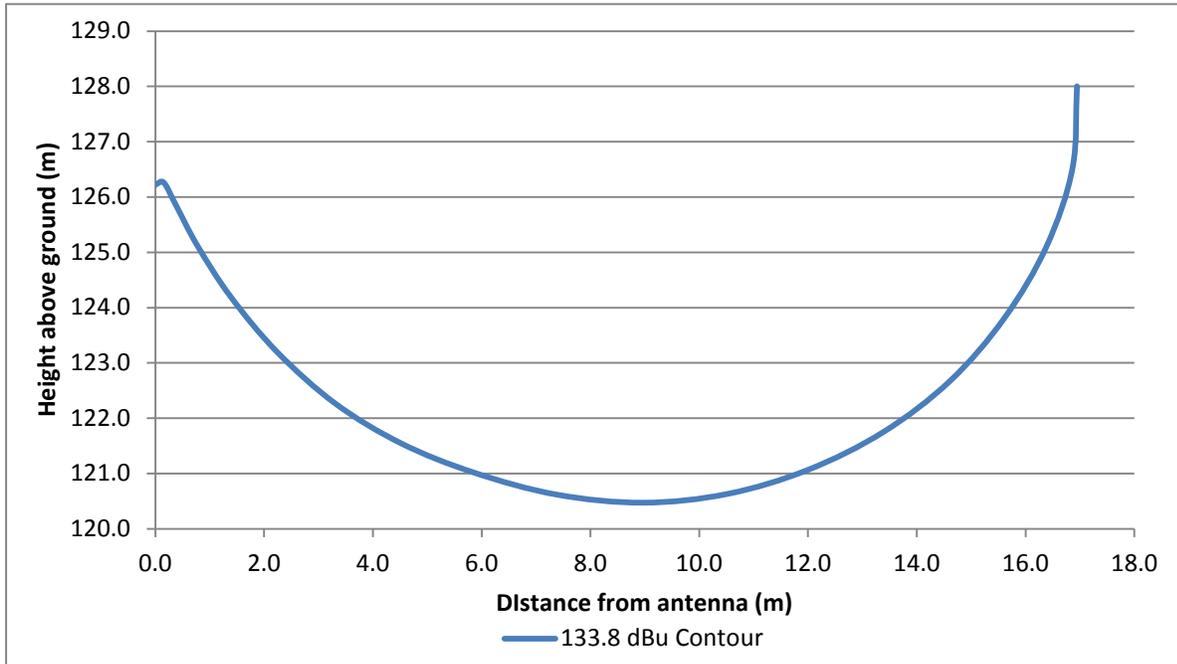
This study will use the minimum contour of 93.8 dBu to represent a worst-case potential interference level. At 40 dB above 93.8 dBu, the translator interference contour is 133.8 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

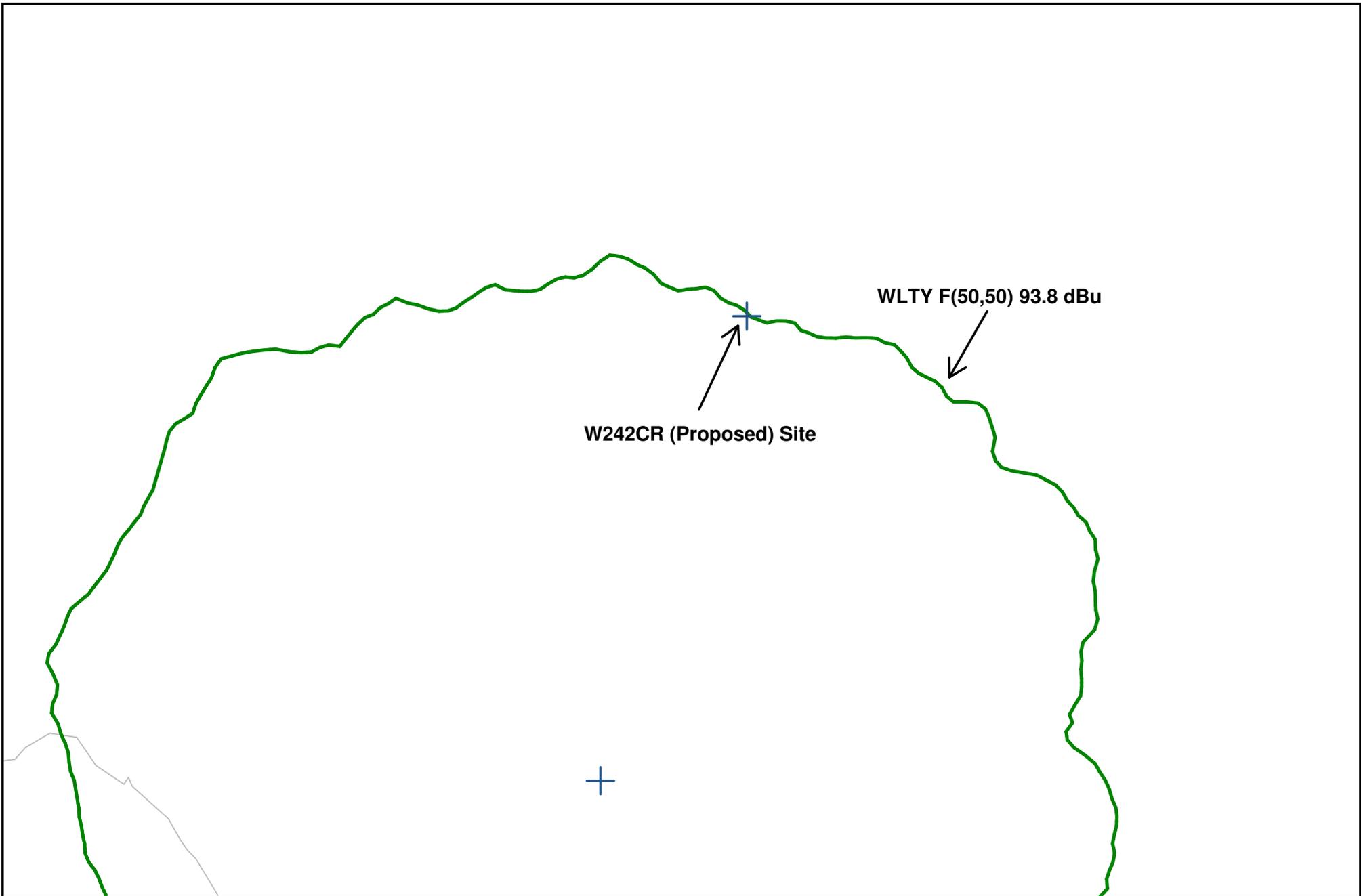
The following table uses the free space formula to calculate the worst-case height above ground level. At 133.8 dBu and 140 watts, the worst-case height is 120.5 meters. Therefore no interference is predicted to reach the ground.

## §74.1204(d) Contour Protection Study W242CR vs. WLTY

Antenna: Nicom BKG 77 - Single Bay ERP (watts): 140  
 Protected Contour at tower - F(50,50): 93.8 dBu RC-AGL (m): 128  
 Interference Ratio: 40 dB Relative field at Azimuth: 1.000  
 Interference Contour - F(50,10): 133.8 dBu ERP (watts) at Azimuth: 140

DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	140.0	-8.54	16.9	16.9	128.0
5	0.999	139.7	-8.55	16.9	16.9	126.5
10	0.982	135.0	-8.70	16.6	16.4	125.1
15	0.954	127.4	-8.95	16.2	15.6	123.8
20	0.918	118.0	-9.28	15.6	14.6	122.7
25	0.872	106.5	-9.73	14.8	13.4	121.8
30	0.818	93.7	-10.28	13.9	12.0	121.1
35	0.758	80.4	-10.95	12.8	10.5	120.6
40	0.691	66.8	-11.75	11.7	9.0	120.5
45	0.616	53.1	-12.75	10.4	7.4	120.6
50	0.538	40.5	-13.92	9.1	5.9	121.0
55	0.465	30.3	-15.19	7.9	4.5	121.5
60	0.391	21.4	-16.70	6.6	3.3	122.3
65	0.313	13.7	-18.63	5.3	2.2	123.2
70	0.239	8.0	-20.97	4.1	1.4	124.2
75	0.176	4.3	-23.63	3.0	0.8	125.1
80	0.129	2.3	-26.33	2.2	0.4	125.8
85	0.103	1.5	-28.28	1.7	0.2	126.3
90	0.105	1.5	-28.11	1.8	0.0	126.2
<b>WORST CASE HEIGHT AGL (m)</b>						<b>120.5</b>





Protected Signal Levels at Proposed Tower Site

