VIRGINIA TECH FOUNDATION, INC.

W209AG

ROANOKE, VIRGINIA

TABLE OF ENGINEERING ATTACHMENTS IN EXHIBIT 10

VIRGINIA TECH FOUNDATION, INC.

ROANOKE, VIRGINIA

ENGINEERING NARRATIVE

This is a minor change application for W209AG to increase power to 0.033 kilowatt and to change the location. This is a "fill-in" translator for third-adjacent station WVTF, channel 206C, Roanoke, Virginia.

The following items are attached to this narrative:

1. Channel Study

2. Map of the present and proposed 60 dBu contours (Figure 1)

3. Map demonstrating that the proposed 60 dBu contour is contained within the primary station (WVTF) 60 dBu contour (Figure 2)

4. Map of the proposed site and the WVTF 97.1 dBu contour (Figure 3)

5. Map of the WRXT 67.4 dBu contour and proposed translator site (Figure 4)

6. Topographic site map of the proposed site and the proposed 107.4 dBu contour (interfering contour to WRXT) (Figure 5)

7. Map of the protected and interfering contours of WFFC, Ferrum, Virginia and the proposed translator (Figure 6).

Figure 1 shows that the proposed 60 dBu contour overlaps the present W209AG 60 dBu contour, meeting the required criteria for a minor change.

Figure 2 shows that the proposed 60 dBu contour is contained within the WVTF 60 dBu contour.

As shown in Figure 3, the WVTF 97.1 dBu contour passes through the proposed site. Based on a third-adjacent channel interference ratio of 40 dB, the interfering translator contour to WVTF is 137.1 dBu. From Media Bureau Short-Cut program FM Curves, the distance to the 137.1 dBu signal will be 11 meters. The proposed antenna will be 35 meters above ground, therefore, there will be no interference at ground level making it acceptable for filing under §74.1204(d). Also, it should be noted that the translator site is outside the WVTF principal Community of Roanoke.

The proposed site is inside the protected contour of third-adjacent channel station WRXT, channel 212C2, Roanoke, Virginia. As shown on the attached map of Figure 4, the WRXT 67.4 dBu contour passes through the proposed site. The third-adjacent

channel interference signal level will be 107.4 dBu. Using the FCC Media Bureau Shortcut tool "FCC Curves", the distance to the proposed 107.4 dBu contour (using 0.033 kilowatt) is 172.2 meters. As shown on the attached topographic site map of Figure 5, there is no house or highway inside the interfering contour.

A waiver for this interference is requested under the provision of §74.1204(d) on the basis that no actual interference will occur due to a lack of population. As can be seen on the attached topographic map, the only buildings inside the contour are used to house communications equipment, and none have personnel in regular attendance. The only vehicular access to the site is through a locked gate and passage through private property.

Further to the above, any person inside the proposed 107.4 dBu contour would be either an electronic technician visiting the communications facility on an irregular basis or a hiker passing by the electronic site on an irregular basis. The road cannot be classified as a highway or a heavily traveled road. Based on the foregoing, if a person were present inside the proposed 107.4 dBu contour, (1) they would not live there, (2) they would not work there on a regular basis, and (3) they would not travel there on a regular basis. Therefore, for purposes of §74.1204(d), there is no population inside the overlap area. (See Living Way Ministries, Inc., 17FCC Rcd 17054 (2002), recondenied FCC 08-242, released October 10, 2008, especially the section "Guidance for Future Applicants to Demonstrate Lack of Population" at paras, 7-13.)

All contours in this application have been calculated at one degree intervals using USGS 30 second terrain data applied from 3 to 16 kilometers.

Virginia Tech Foundation, Inc.
W209AG, Roanoke, Virginia (Channel 209)

REFERENCE CH# 209D - 89.7 MHz, Pwr= 0.033 kW, HAAT= 231.6 M, COR= 694 M DISPLAY DATES
37 20 48.0 N. Average Protected F(50-50)= 11.94 km DATA 09-19-09
80 02 08.0 W. Omni-directional SEARCH 09-19-09

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)	
209D	W209AG	LIC	DHN	184.8	12.7	37 13 56.0	0.020	36.2	10.8	-37.3*	-44.4
Roanoke, Etc.		VA		4.7	BLFT19880209TD	80 02 51.0	140	623	Virginia Tech Foundation,		
206C	WVTF	LIC	_C_	211.8	19.3	37 11 56.0	100.000	16.1	98.9	-10.9<	-80.0*<
Roanoke		VA		31.7	BMLED20020418AAL	80 09 02.0	600	1187	Virginia Tech Foundation,		
212C2	WRXT	LIC	DCN	82.2	32.7	37 23 09.0	5.500	4.1	46.4	14.8	-14.1*<
Roanoke		VA		262.4	BLED19940712KA	79 40 10.0	339	745	Positive Alternative Radio		
209B	1260323	APP	DEX	306.3	104.0	37 53 46.0	6.500	103.2	40.3	-9.8<	29.2
Beckley		WV		125.7	BNPED20071022AHU	80 59 21.0	250	962	The Syner Foundation, Inc.		
210A	WFFC	LIC	DCX	171.2	48.6	36 54 50.0	1.100	38.7	25.7	-5.5<	0.3
Ferrum		VA		351.3	BLED20050511ADV	79 57 07.0	207	573	Virginia Tech Foundation,		
209B	1188455	APP	DEX	301.2	130.6	37 56 50.6	2.000	111.5	43.6	8.5	52.1
Montgomery		WV		120.4	BNPED20071022BAK	81 18 28.6	461	1031	The Saint Thomas More Cath		
209C	WCPE	LIC	_CY	137.9	209.1	35 56 25.0	100.000	177.9	76.0	16.1	82.2
Raleigh		NC		318.9	BLED20031103AAJ	78 28 45.0	359	462	Educational Information Co		
208B	WNRS-FM	CP	DCX	84.5	109.5	37 26 06.0	20.000	72.4	49.1	23.1	39.8
Sweet Briar		VA		265.2	BPED20070907AFD	78 48 15.0	190	396	Sweet Briar College		
209A	WGIW	APP	DVX	207.5	115.4	36 25 23.6	2.000	75.2	24.9	26.0	47.0
Pilot Mountain		NC		27.1	BPED20090901AGM	80 37 52.6	118	466	Church Planters Of America		
210A	WVRU-FM	LIC	_CN	243.6	51.3	37 08 26.0	0.500	12.0	8.5	26.4	27.3
Radford		VA		63.3	BLED19800922AM	80 33 11.0	5	623	Radford University		
209B1	WVLS	LIC	DVN	19.0	117.3	38 20 39.0	0.360	69.9	21.8	35.9	50.9
Monterey		VA		199.3	BLED19970509KA	79 35 47.0	445	1325	Pocahontas Communications		
210A	WNRS-FM	LIC	DCX	71.8	78.4	37 33 50.0	0.030	27.1	17.9	36.9	39.8
Sweet Briar		VA		252.3	BLED20020529AAM	79 11 34.0	592	881	Sweet Briar College		
209A	1213755	APP	ZVX	301.2	130.6	37 56 51.0	0.250	80.2	26.7	39.8	69.4
Kingston		WV		120.4	BNPED20071018BAB	81 18 29.0	437	1019	Pensacola Christian Colleg		
209A	WGIW	LIC	_VX	207.5	115.4	36 25 23.6	0.430	54.7	16.8	46.7	55.8
Pilot Mountain		NC		27.1	BLED20090817ACD	80 37 52.6	114	461	Church Planters Of America		
208D	W208AP	LIC	_C_	89.6	76.9	37 20 56.0	0.010	11.1	7.8	51.8	48.2
Lynchburg		VA		270.1	BLFT20001017ABB	79 10 05.0	190	426	Virginia Tech Foundation,		
210A	WMRL	LIC	_C_	46.8	72.4	37 47 25.0	0.100	8.0	5.6	52.0	49.7
Lexington		VA		227.2	BLED20030801CVZ	79 26 05.0	-81	336	James Madison University B		
208A	1331134	APP	DCX	174.8	93.4	36 30 31.6	2.500	21.8	14.6	55.7	52.0
Mayodan		NC		354.8	BMPED20090826ACS	79 56 24.6	95	347	Church Planters Of America		
208A	NEW	CP	DCX	175.1	92.4	36 31 01.9	4.500	21.8	14.6	55.7	53.2
Mayodan		NC		355.1	BNPED20071012AAO	79 56 47.7	110	314	Church Planters Of America		

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 = 2, Co to 3rd adjacent.
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 protected contour.

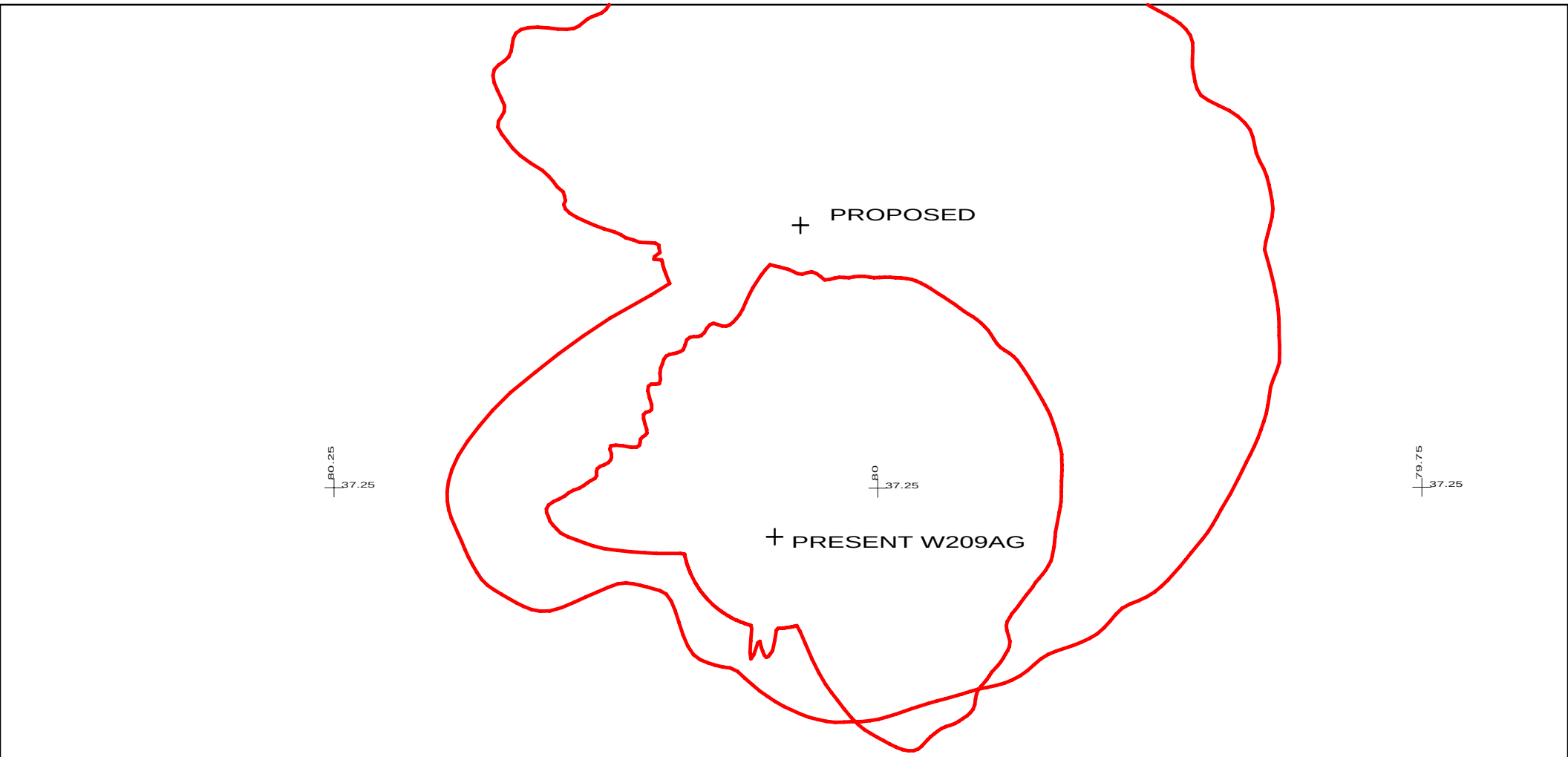


FIGURE 1

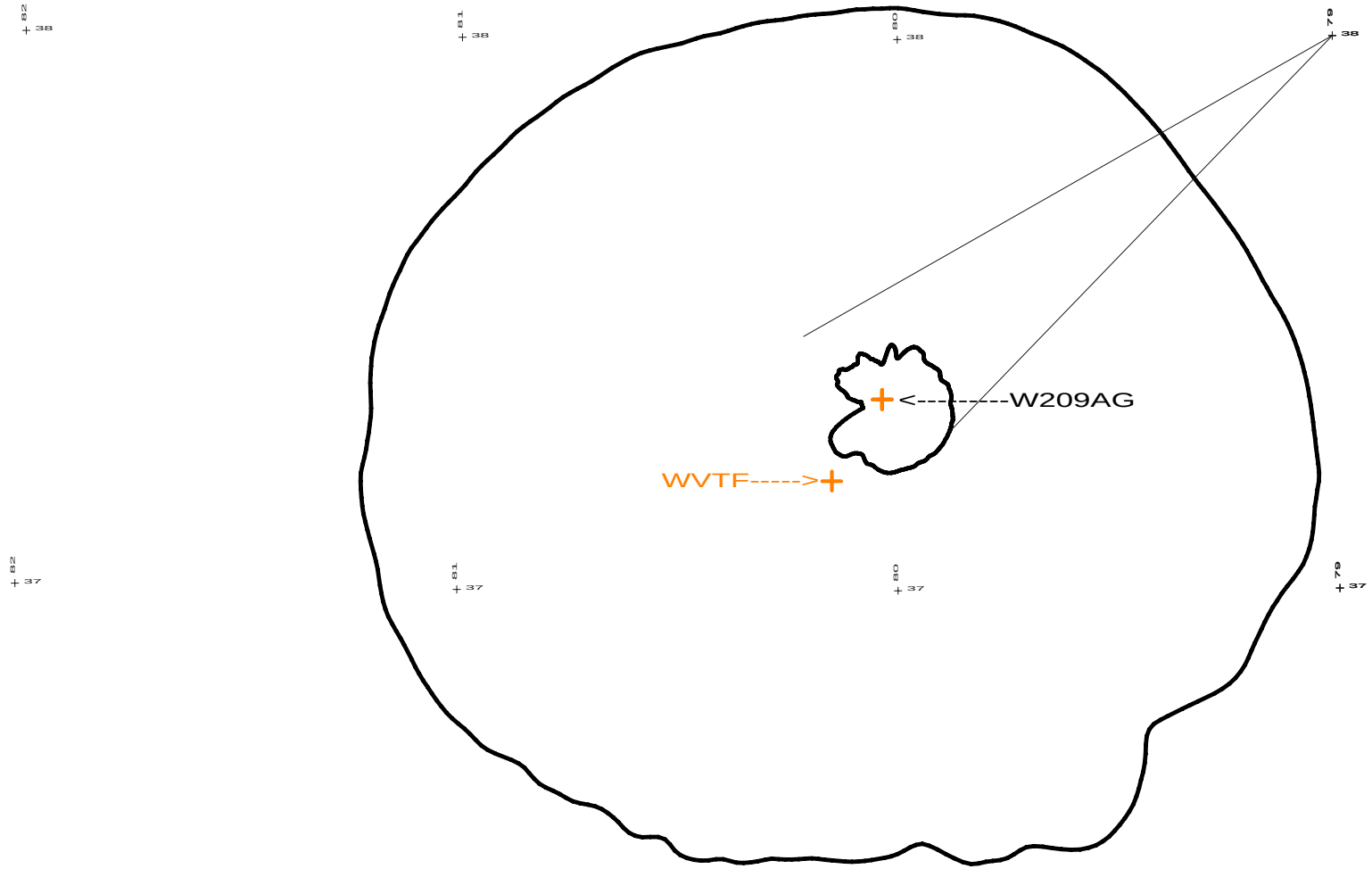
1:250,000

Scale in km

0 10 20

THE 60 dBu CONTOURS OF THE
PRESENT AND PROPOSED TRANSLATORS

VA TECH FOUNDATION
ROANOKE, VA



1:1,484,375

FIGURE 2

Scale in km

0 10 20 30 40 50 60 70 80 90

THE 60 dBu CONTOURS OF WVTF

AND W209AG AS PROPOSED

VA TECH FOUNDATION, INC.

ROANOKE, VA

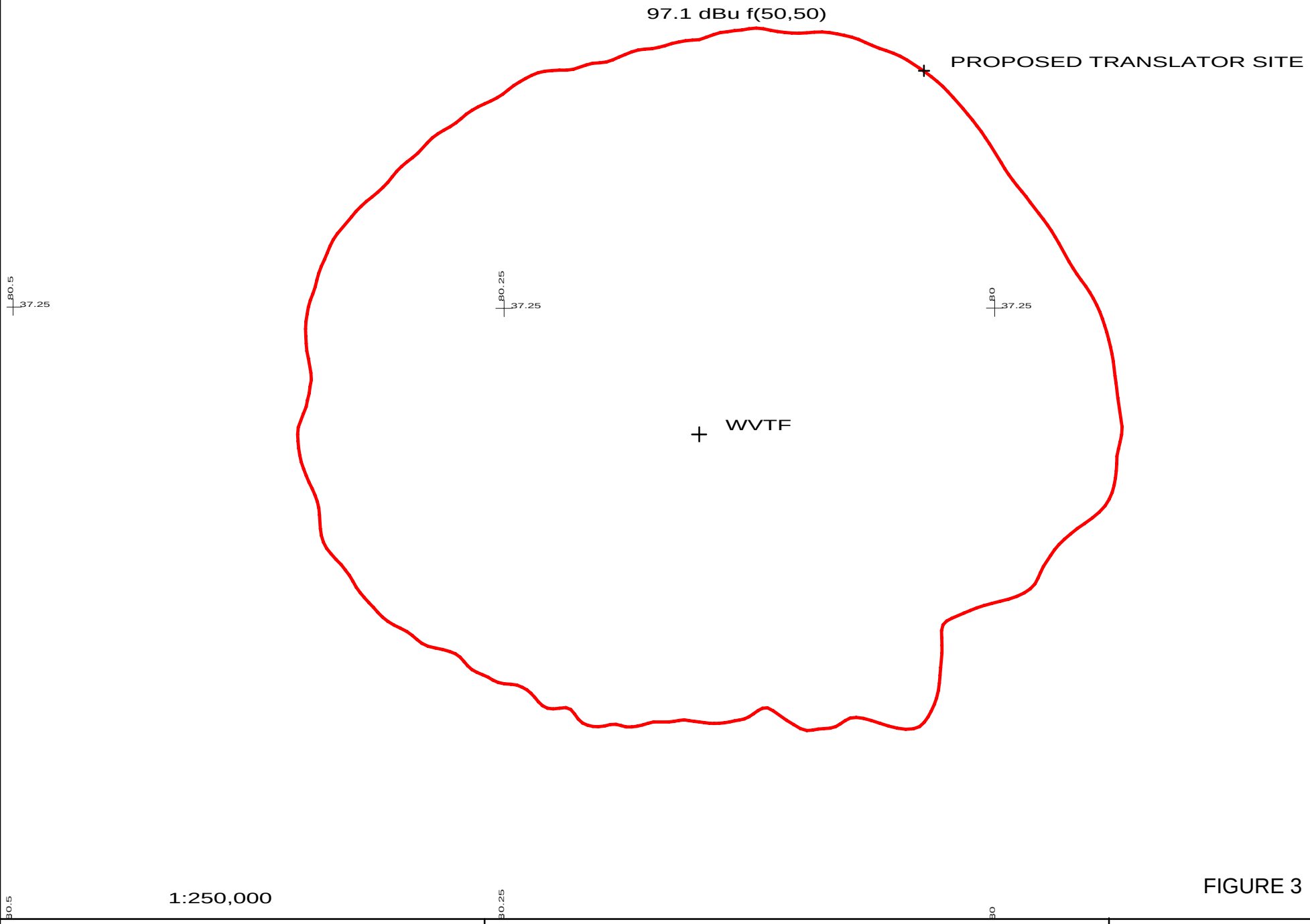


FIGURE 3

1:250,000

Scale in km

0 10 20

THE WVTF 97.1 dBu CONTOUR AND THE PROPOSED TRANSLATOR SITE

VA TECH FOUNDATION
ROANOKE, VA

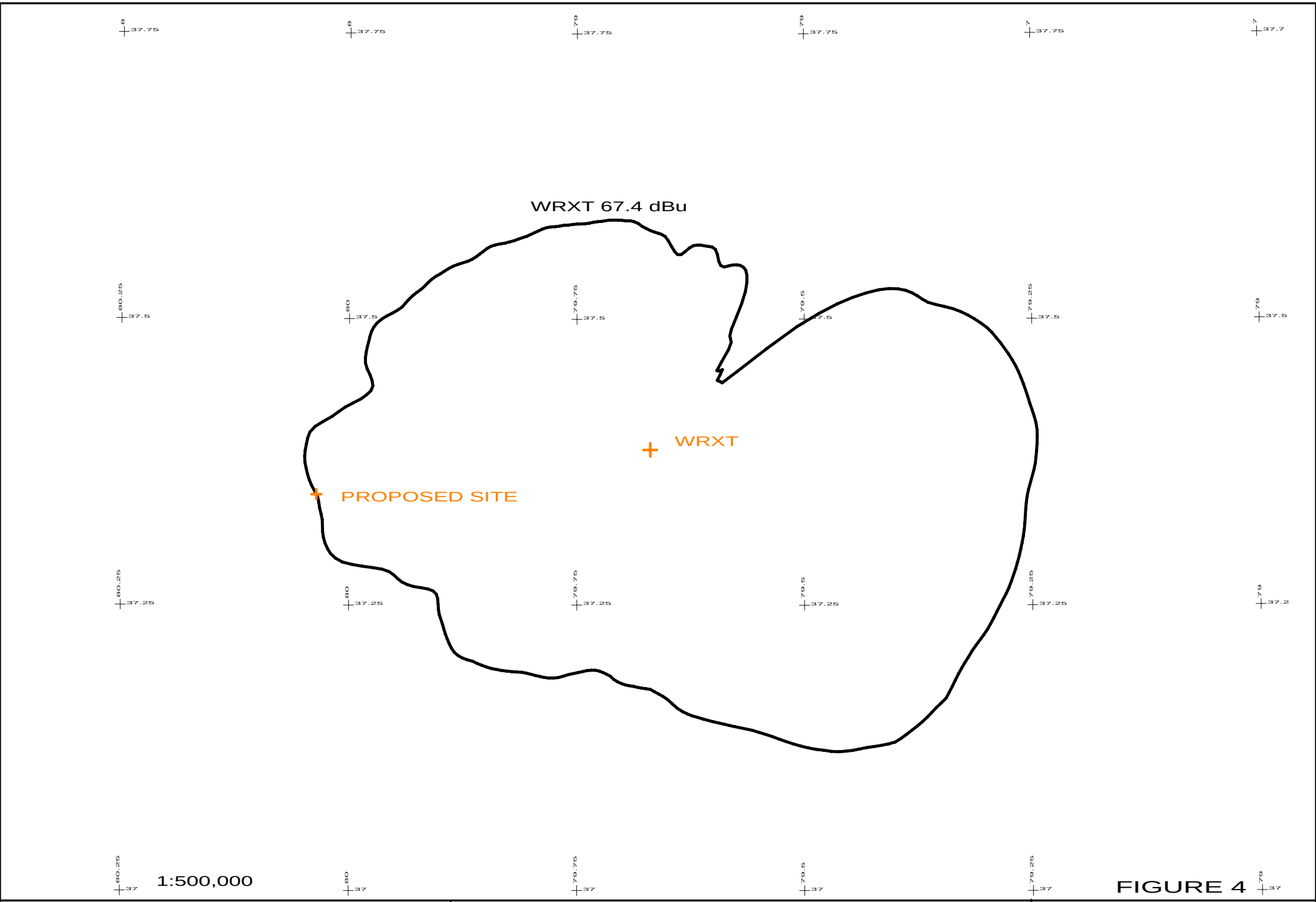


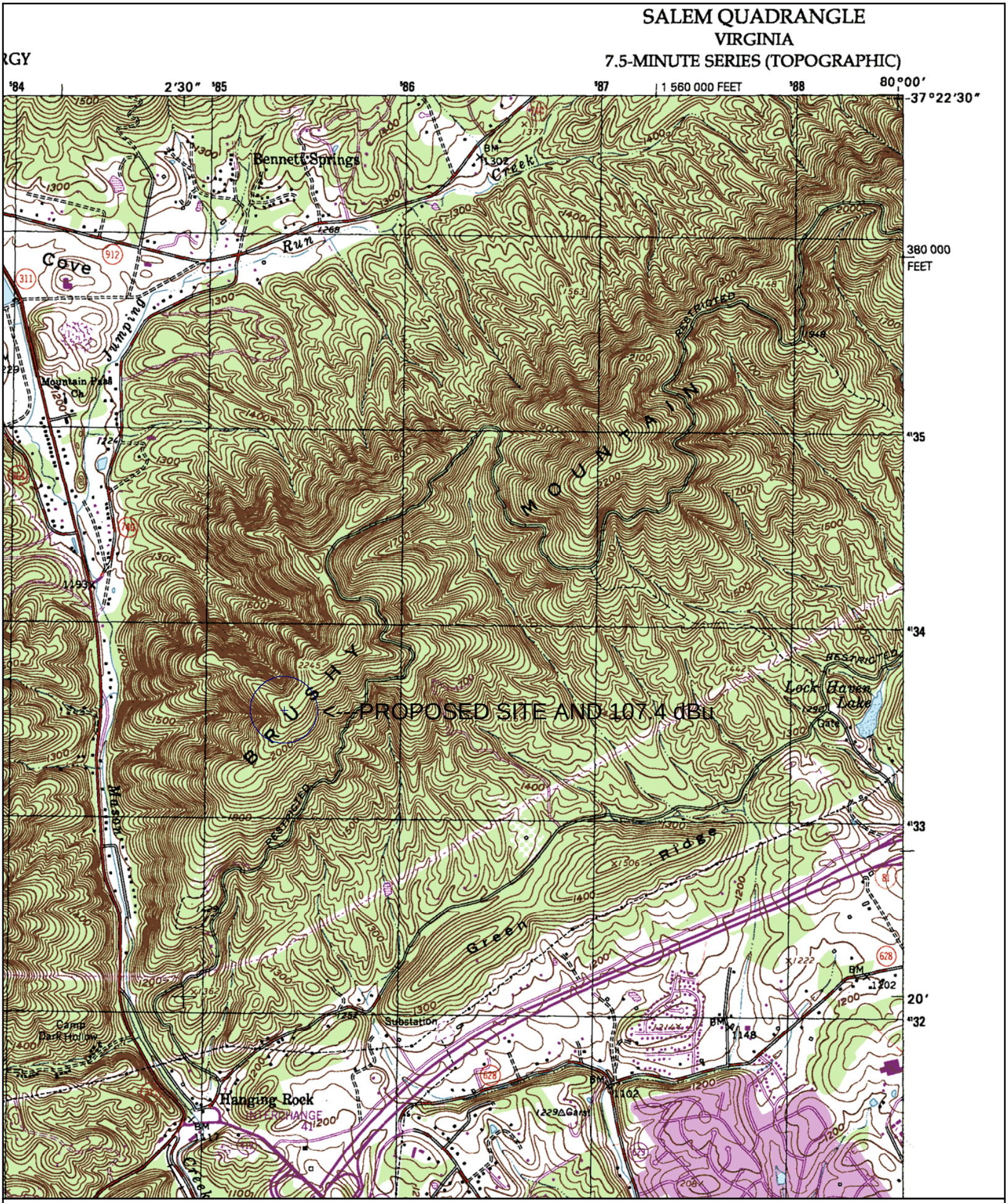
FIGURE 4

Scale in km

0 10 20 30 40

THE WRXT 67.4 dBu CONTOUR AND
THE PROPOSED TRANSLATOR SITE

VA TECH FOUNDATION
ROANOKE, VA



Name: SALEM
Date: 9/20/2009
Scale: 1 inch equals 2000 feet

FIGURE 5

Caption: SITE AT 37-20-48 N; 80-02-08 W. PROPOSED SITE AND 107.4 dBu INTERFERING CONTOUR TO WRXT (172m)

Virginia Tech Foundation, Inc.
Proposed W209AG, Roanoke and WFFC, Ferrum, Virginia

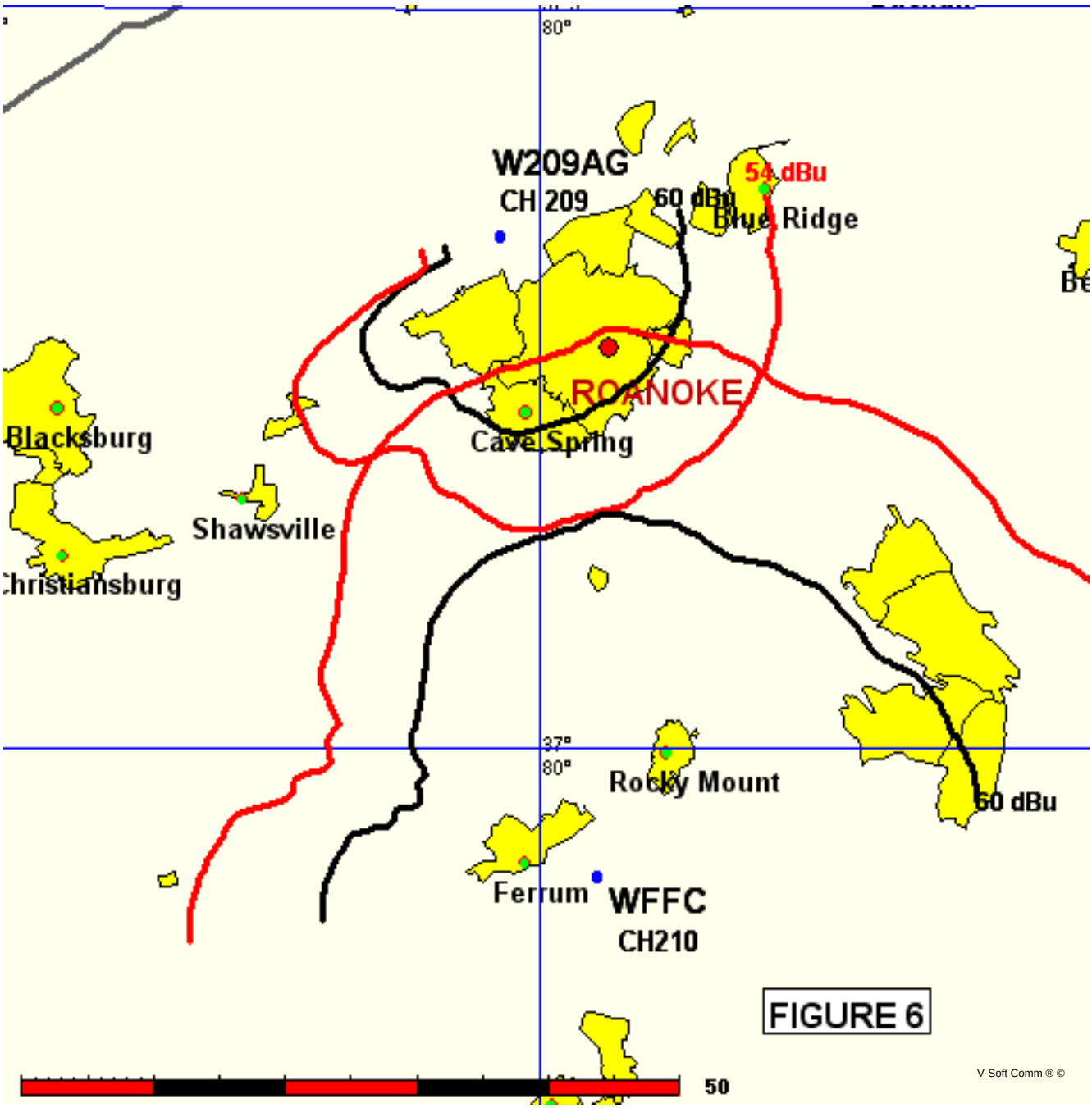


FIGURE 6