

STU-COMM, INC.

W201CN, AFTON, VIRGINIA

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STU-COMM, INC.

AFTON, VIRGINIA

MINOR CHANGE APPLICATION TO W201CN

### NARRATIVE

#### PURPOSE OF APPLICATION

The purpose of this application is to change the orientation of the present directional antenna, to increase the power and to make it a "fill-in" translator for WVTU, channel 207B1, Charlottesville, Virginia. The translator will carry the WVTU HD-2 channel.

The proposed translator antenna will be on the WVTU tower. As demonstrated in Figure 1, the proposed 60 dBu contour will not exceed the 60 dBu contour of WVTU in any azimuth.

#### WAIVER REQUEST FOR INTERFERENCE

The proposed site is inside the protected contour of second-adjacent channel station WVTW, channel 207B1, Charlottesville, Virginia. The WVTW signal strength at the proposed site is 60 dBu as shown on the attached map (Figure 5). Using the FCC sanctioned U/D method of establishing translator interference to full-service FM stations, the interfering signal of the proposed translator to WVTW is 100 dBu. The attached USGS topographic map (Figure 4) shows the location of the proposed translator and its 100 dBu contour.

As shown on the map, the interfering contour covers approximately 200 meters of the Appalachian Trail. The roads inside the 100 dBu contour are privately owned, and they are isolated from The Skyline Drive by locked gates, preventing vehicular access by the general public. There are several unoccupied buildings inside the contour that house communications and broadcast equipment, however, no building is occupied by any person as a dwelling.

The acceptability of this application is premised on a waiver of the Commissions interference rules under §74.1204(d) which states that, "In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to ...lack of population".

Any person inside the proposed 100 dBu contour would generally be either an electronic technician visiting one of the communications or broadcast facilities on an irregular basis, or a hiker passing through on an irregular basis. The general public is precluded from driving to the site by locked gates on the access roads. Based on the foregoing, if a person were present inside the 100 dBu contour, (1) they would not live there, (2) they would not work there on a regular basis, and (3) they would not regularly travel there.

Therefore, for the purpose of §74.1204(d), there is no population inside the overlap area. (See Living Way Ministries, Inc., 17 FCC Rcd 17054 (2002), recon denied FCC 08-242, released October 10, 2008, especially the section “Guidance for Future Applicants to Demonstrate Lack of Population” at paras. 7-13.)

### CONTOUR PROTECTION

In this application, the WPRZ protected contour is the 60 dBu f(50,50), and the proposed interfering contour is the 40 dBu f(50,10) in accordance with §74.1204 (6). While WPRZ is a class B1 station, it is NOT a commercial station.

### RFR

The tower is owned by The Virginia Tech Foundation, Incorporated. There will be four broadcast antennas on the tower as follows:

WVTU, 195 watts, RC 37 m AGL, Power Density 2 meters AGL	7.2 $\mu\text{W}/\text{cm}^2$
W201CN 125 w, RC 28 m AGL, Power Density 2 meters AGL	8.7 $\mu\text{W}/\text{cm}^2$
W243BT, 70 watts, RC 20 m AGL	
W218BZ, 195 watts, RC 15 m AGL, Power Density 2 meters AGL	<u>64.8 <math>\mu\text{W}/\text{cm}^2</math></u>
Total	80.7 $\mu\text{W}/\text{cm}^2$

The power density was calculated at 2 meters AGL using FCC program FM Model. W243BT was excluded in accordance with Table 2, page 71 of OET-65. The antenna used in the calculations was the Phelps Dodge Ring Stub (Dipole) which produces the greatest power density of the available selections. The combined power density is 80.7  $\mu\text{W}/\text{cm}^2$ , which is well below the recommended level of 200  $\mu\text{W}/\text{cm}^2$  for Uncontrolled Spaces.

### QUIET ZONE

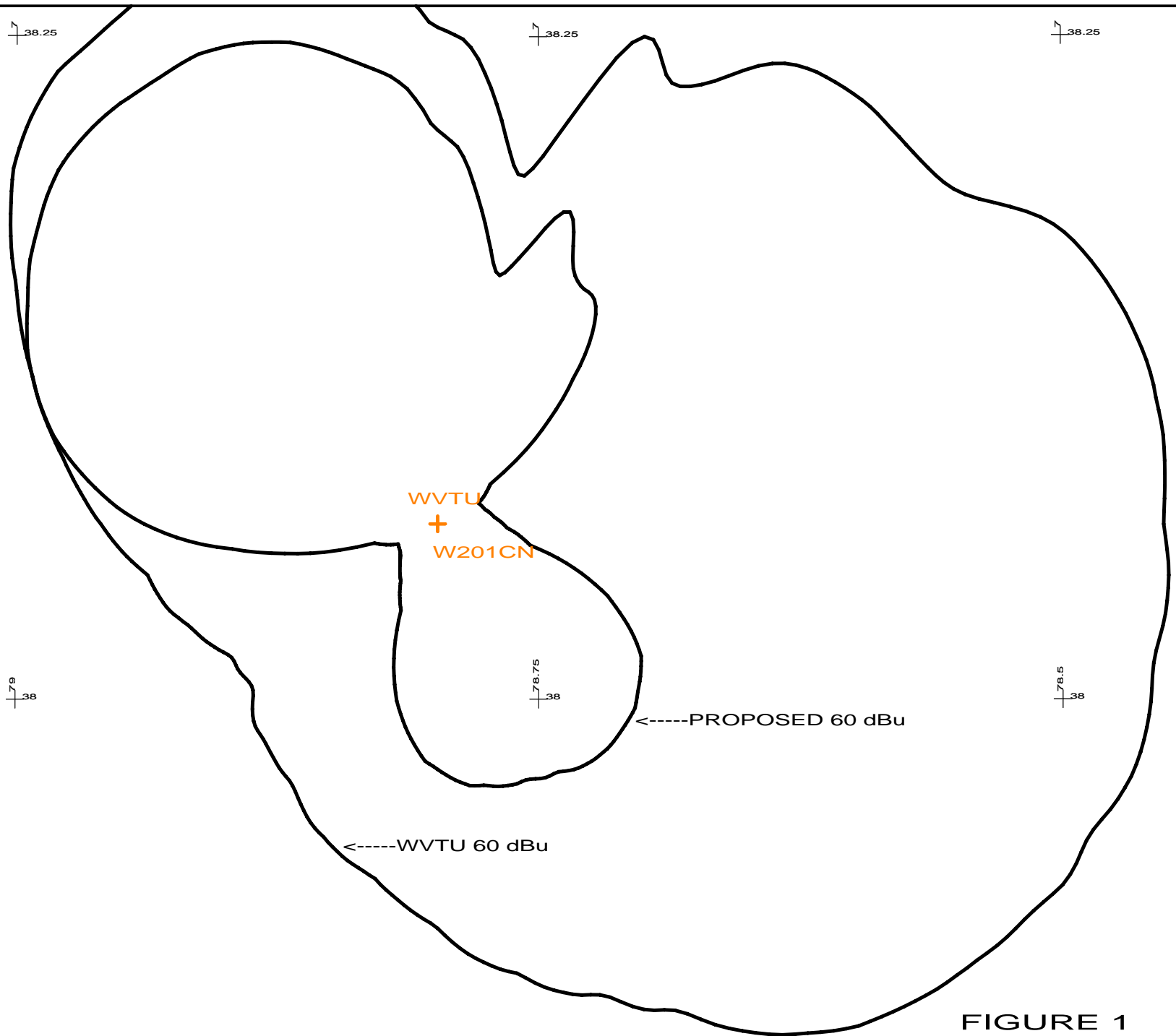
NRAO at Greenbank was notified of this application by eMail on June 28, 2010.

STU-COMM, INC., CHARLOTTESVILLE, VIRGINIA  
CHANNEL STUDY

REFERENCE 38 03 58.0 N. CH# 201D - 88.1 MHz, Pwr= 0.125 kW DA, HAAT= 0.0 M, COR= 900 M DISPLAY DATES  
78 47 54.0 W. Average Protected F(50-50)= 5.96 km DATA 05-07-10  
Standard Directional SEARCH 06-27-10

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT (M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
201D Afton	W201CN	LIC DC_ VA	0.0 0.0	0.0 BLFT20000301ACG	38 03 58.0 78 47 54.0	0.010	4.8 900	0.7 Stu-comm, Inc.	-23.7*<	-60.1*<
201D Afton	W201CN	APP DC_ VA	0.0 0.0	0.0 BPFT20100304AAA	38 03 58.0 78 47 54.0	0.155	62.9 900	20.3 Stu-comm, Inc.	-81.8*<	-79.7*<
201B1 Brandy Station	WPRZ-FM	CP DCX VA	52.4 232.8	81.6 BMPED20100301ABZ	38 30 41.6 78 03 22.0	10.000 137	96.2 277	34.2 Prai se Communi cations, Inc	-29.1*<	0.8
203B1 Charlottesville	WVTW	LIC DVX VA	108.7 288.9	29.1 BLED20071203AKK	37 58 55.0 78 29 03.0	1.000 317	2.0 485	29.5 Virgi nia Tech Foundati on,	23.0	-0.5*<
202C1 Lynchburg	WRVL	LIC DEN VA	206.9 26.6	108.1 BLED19831012AJ	37 11 50.0 79 21 07.0	50.000 330	95.3 565	65.3 Libe rty Uni versi ty, Inc.	1.7	26.7
201D Stanardsville	W201BC	LIC _VN VA	69.4 249.6	37.6 BLFT19951018TC	38 11 03.0 78 23 49.0	0.055 45	20.9 213	5.7 Posi ti ve Al ternati ve Radi o	5.1	13.2
204A Harrisonburg	WXJM	LIC _CN VA	351.2 171.1	41.9 BLED19901010KB	38 26 22.0 78 52 21.0	0.390 19	1.4 445	10.9 James Madi son Uni versi ty B	18.9	30.3
202A Edinburg	WOTC	LIC _CX VA	6.6 186.6	82.4 BMLED20090204AAS	38 48 13.0 78 41 21.0	1.000 123	40.0 545	26.2 Valle y Bapti st Church - Ch	21.9	29.9
202A Edinburg	WOTC	LIC _CX VA	6.6 186.6	82.4 BMLED20100325AAA	38 48 13.0 78 41 21.0	1.000 123	40.0 545	26.2 Valle y Bapti st Church - Ch	21.9	29.9
202A Edinburg	WOTC	CP _CX VA	6.6 186.7	82.5 BPED20100325AAB	38 48 14.2 78 41 20.0	1.000 123	40.0 545	26.2 Valle y Bapti st Church - Ch	22.0	29.9
204A Lexington	WRIQ	CP NCX VA	245.8 65.5	48.1 BNPED20071018AQN	37 53 17.0 79 17 50.0	3.900 67	2.1 600	20.7 Virgi nia Tech Foundati on,	43.7	27.0
201B1 Richmond	WRIH	LIC DVX VA	106.8 287.7	131.9 BLED20091215ACF	37 42 54.0 77 21 55.0	5.000 146	88.0 187	30.1 Ameri can Famili y Associati o	33.7	78.6
201B Clarksburg	WKJL	LIC DEX WV	317.1 136.2	188.8 BLED20090910AAV	39 17 59.0 80 17 30.0	32.000 149	124.0 512	48.7 He's Al ive, Incorporated	42.0	69.7
201D Front Royal	W201BA	LIC _V_ VA	27.7 208.0	109.0 BLFT20060327AHF	38 56 01.0 78 12 45.0	0.250	23.8 183	7.1 Posi ti ve Al ternati ve Radi o	68.0	49.6
201C2 Emporia	NEW	CP DCX VA	146.4 327.1	172.5 BMPED20091027ADS	36 46 04.0 77 43 39.0	30.000 102	109.1 179	38.9 Roanoke Valle y Communi cati	51.1	86.1
204D Madison Heights	W204AZ	LIC _C_ VA	195.5 15.4	68.8 BLFT20050825ABO	37 28 08.0 79 00 26.0	0.010	0.2 401	7.7 Cal vary Chapel Of Costa Me	57.9	60.9
06ZT Mt. Olive	W06CP	CP D_N VA	17.1 197.3	104.6 BNPTVL20000831CKO	38 57 57.0 78 26 32.0	3.000 188	15.1 360	2.7 Word Of God Fellowshi p, In	147.5R	-42.9M

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 = 1, 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.  
Reference station has protected zone issue: WV Quiet Zone



WVTU  
+  
W201CN

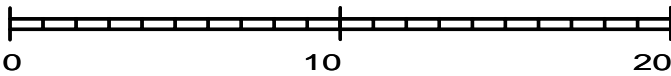
-----PROPOSED 60 dBu

-----WVTU 60 dBu

1:250,000

FIGURE 1

Scale in km



THE PROPOSED 60 dBu CONTOUR AND THE  
60 dBu CONTOUR OF WVTU

STU-COMM, INC.  
CHARLOTTESVILLE, VA

STU-COMM, INC., CHARLOTTESVILLE, VIRGINIA -- FIGURE 2  
W201CN AND WVTW

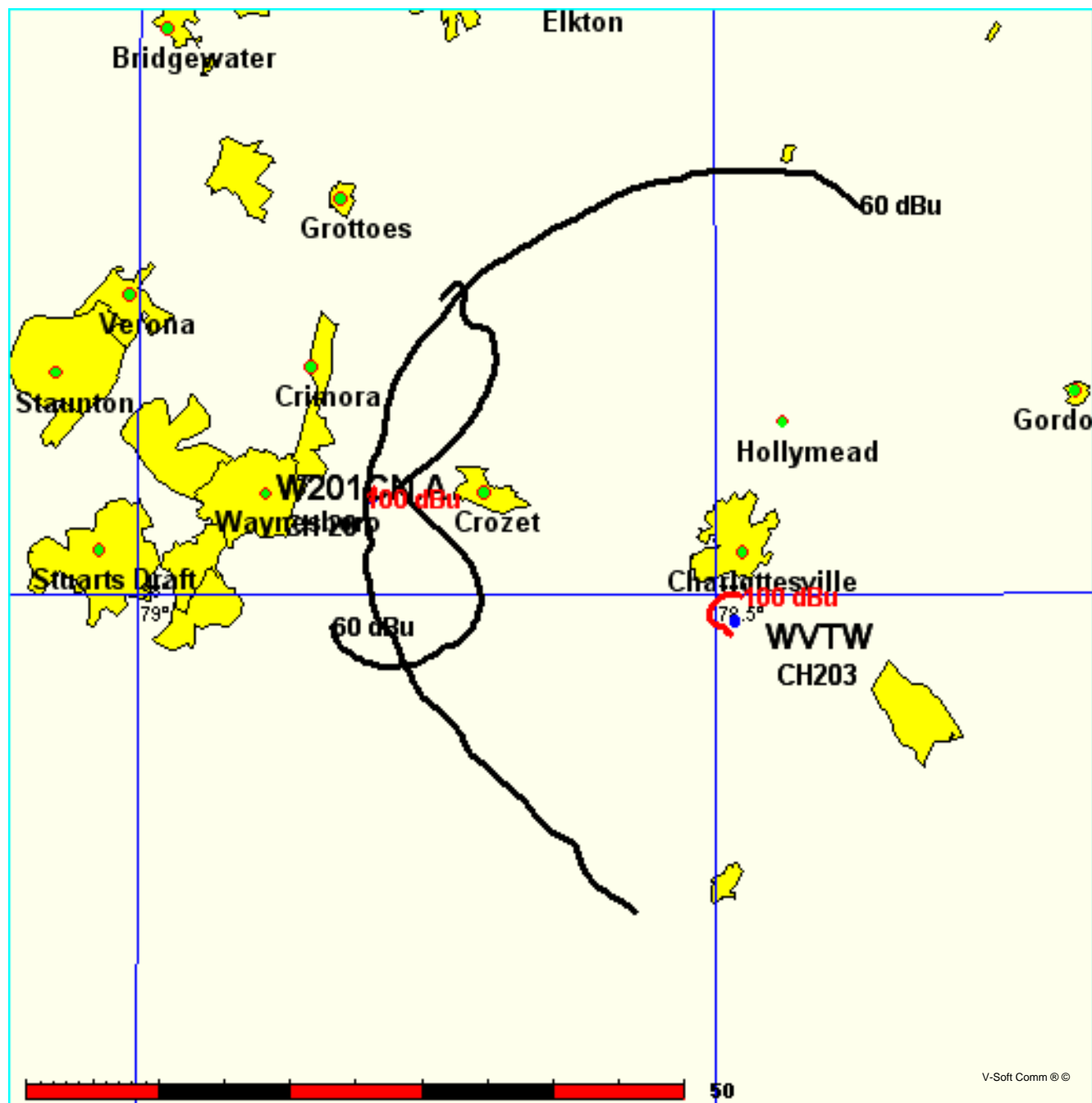
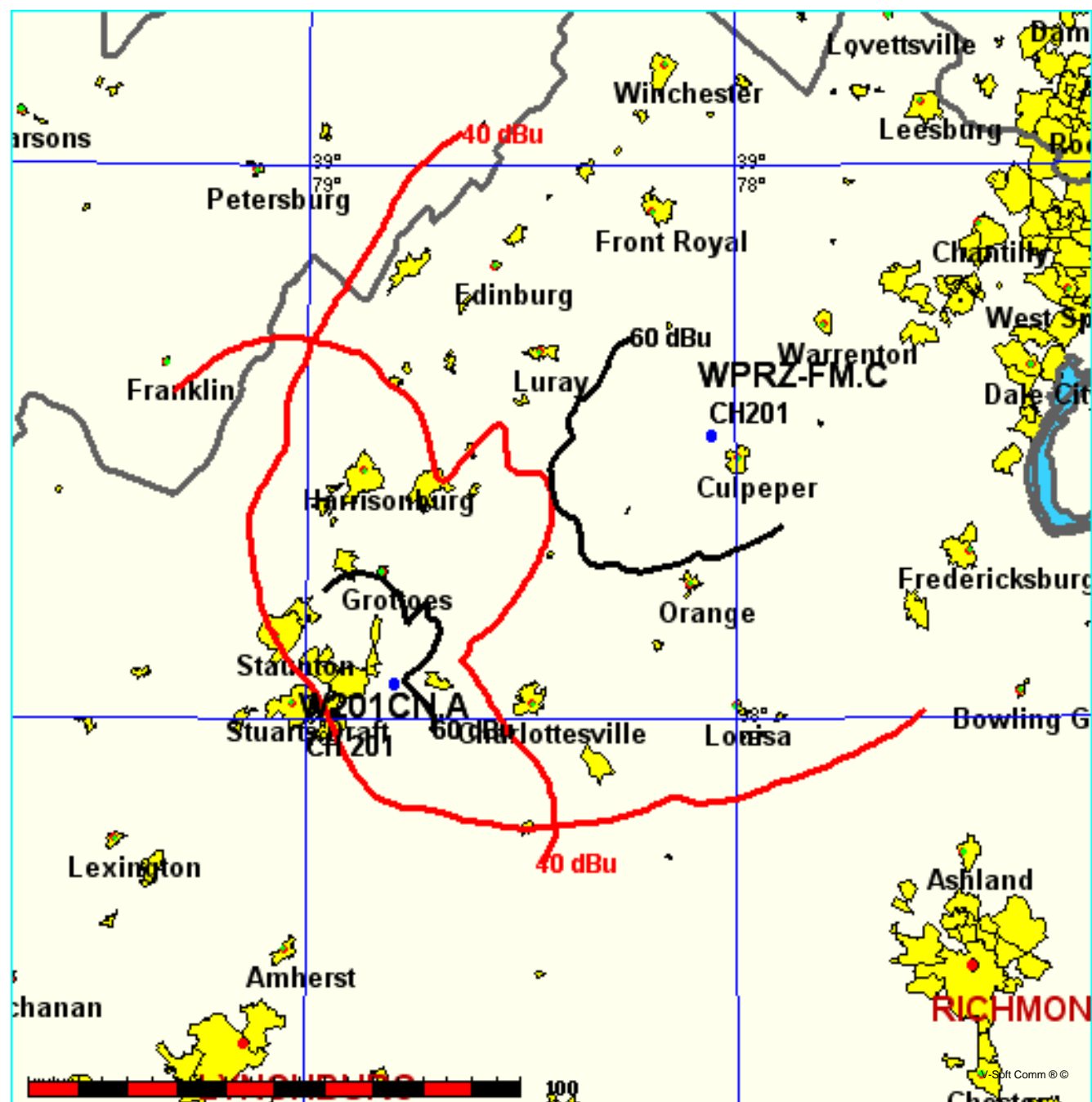
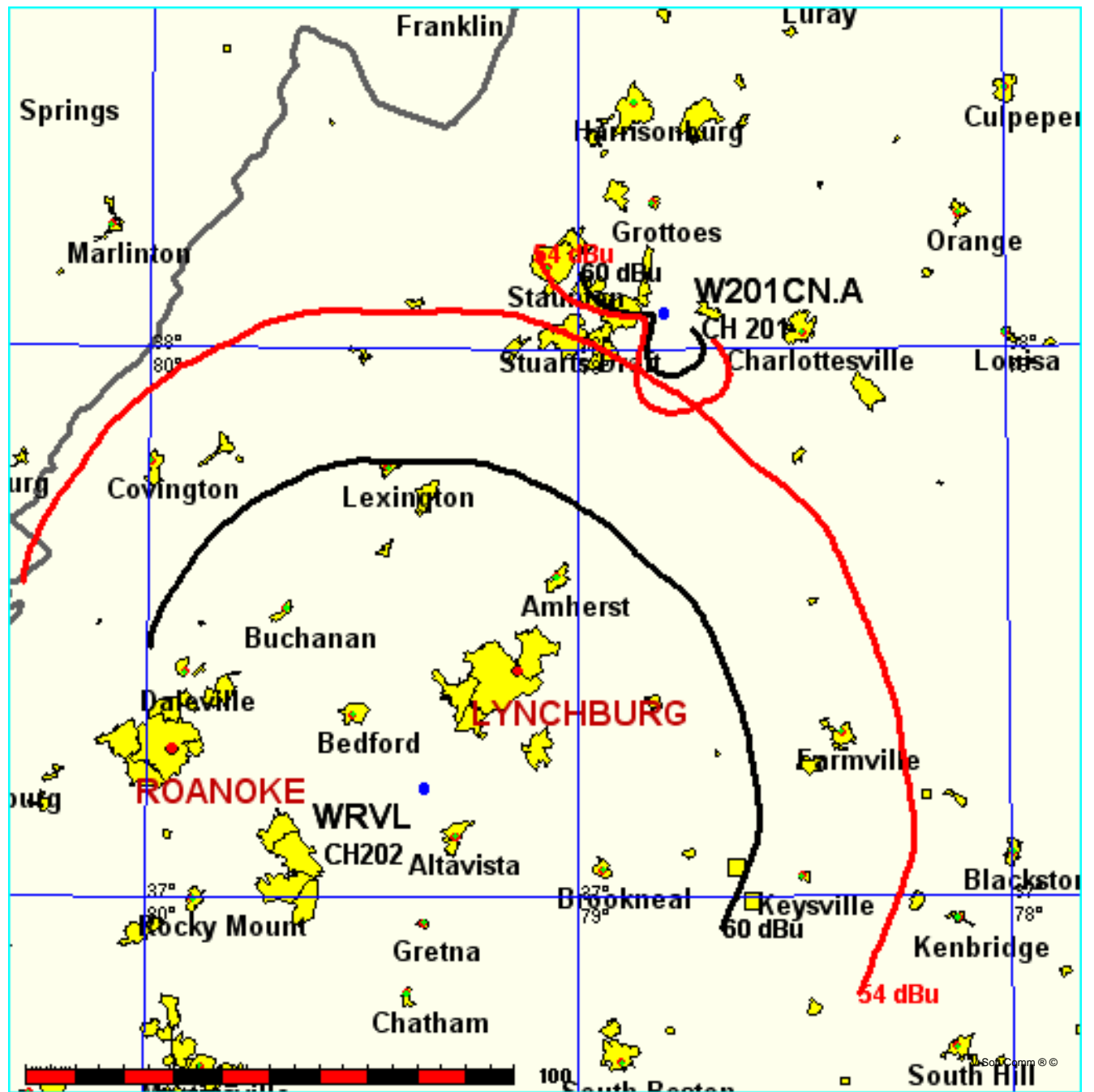


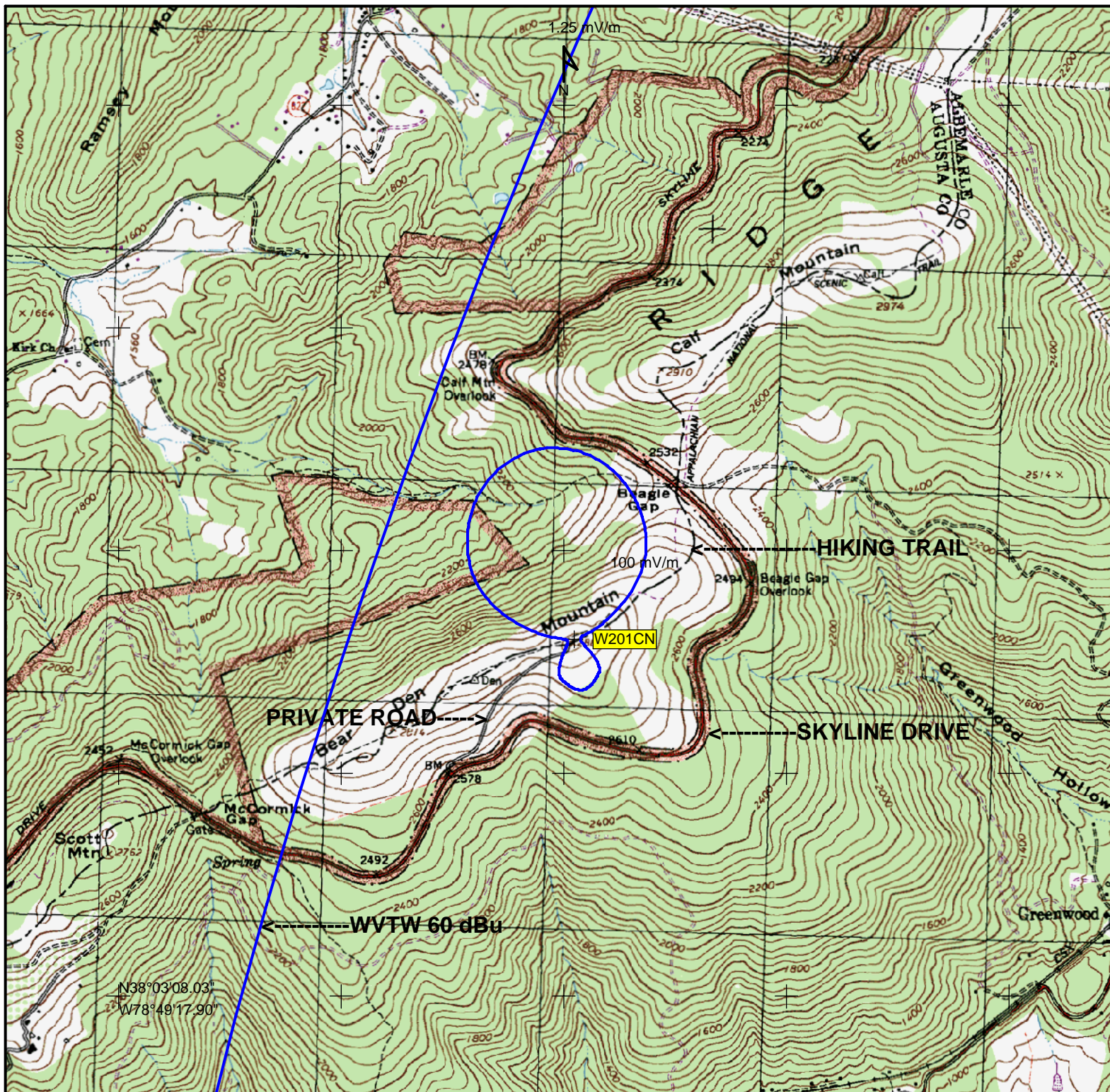
FIGURE 3 -- Stu-comm, Inc., CHARLOTTESVILLE, VA  
W201CN vs WPRZ, BRANDY STATION CH 201B1



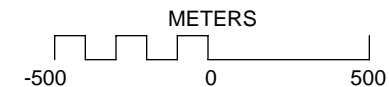
STU-COMM, INC., CHARLOTTESVILLE, VIRGINIA -- FIGURE 4  
W201CN AND WRVL







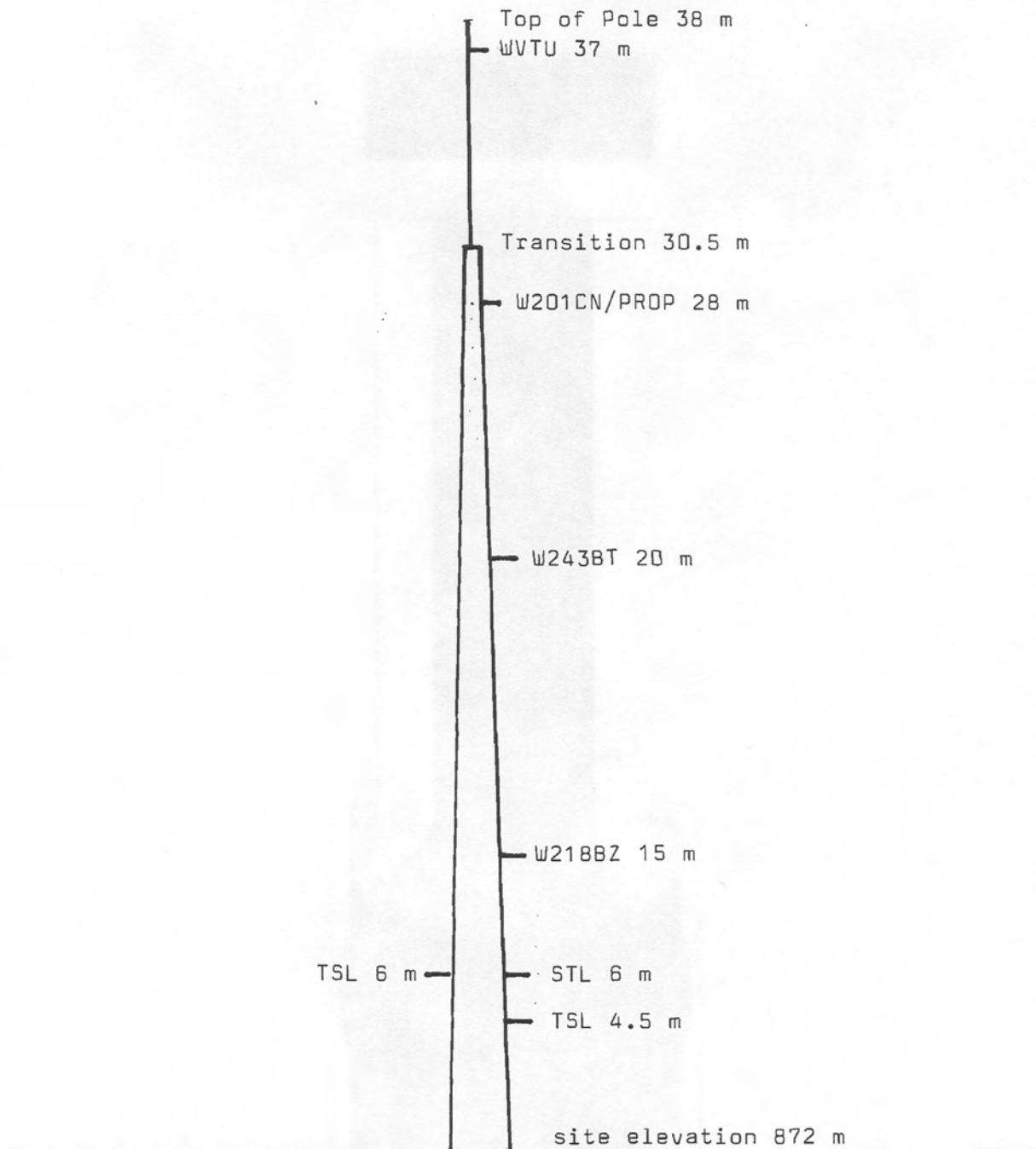
AMW™: W201CN.am



STU-COMM, INC. - W201CN  
SECOND-ADJACENT ALLOCATION STUDY  
SCALE 1:24,000



## VIRGINIA TECH FOUNDATION TOWER



Drawing not to scale

All antennas 88 - 108 MHz are single bay or single boom LP