

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 4). 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 the privately-owned electronic site 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.)

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 155 w, RC 28 m AGL, Power Density 2 meters AGL	11.0 $\mu\text{W}/\text{cm}^2$
W243BT, 70 watts, RC 20 m AGL	
W218BZ, 195 watts, RC 15 m AGL, Power Density 2 meters AGL	<u>64.8 $\mu\text{W}/\text{cm}^2$</u>
Total	83.0 $\mu\text{W}/\text{cm}^2$

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 83.0 $\mu\text{W}/\text{cm}^2$, 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 February 28, 2010.

CHANNEL STUDY FOR W201CN, AFTON, VIRGINIA
STU-COMM, INC., CHARLOTTESVILLE, VIRGINIA
Average Protected F(50-50)= 6.29 km
Standard Directional

REFERENCE
38 03 58.0 N.
78 47 54.0 W.

CH# 201D - 88.1 MHz, Pwr= 0.155 kW DA, HAAT= 0.0 M, COR= 397.8 M
Average Protected F(50-50)= 6.29 km
Standard Directional

DISPLAY DATES
DATA 02-12-10
SEARCH 02-26-10

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
201D Afton	W201CN	LIC	DC_	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.	-11.1*	-21.4*
201B1 Brandy Station	WKYF	CP	DEX	52.4 232.8	81.6 BNPED20071019DGB	38 30 41.6 78 03 22.0	10.000 133	96.0 273	32.8 Praise Communications, Inc	-18.7*<	35.2
203B1 Charlottesville	WVTV	LIC	DVX	108.7 288.9	29.1 BLED20071203AKK	37 58 55.0 78 29 03.0	1.000 317	2.0 485	29.5 Virginia Tech Foundation,	24.3	-0.5*<
202C1 Lynchburg	WRVL	LIC	DEN	206.9 26.6	108.1 BLED19831012AJ	37 11 50.0 79 21 07.0	50.000 330	95.6 565	65.5 Liberty University, Inc.	6.5	35.1
201D Stanardsville	W201BC	LIC	_VN	69.4 249.6	37.6 BLFT19951018TC	38 11 03.0 78 23 49.0	0.055 45	22.9 213	6.8 Positive Alternative Radio	11.0	21.7
204A Lexington	WRIQ	CP	NCX	245.8 65.5	48.1 BNPED20071018AQN	37 53 17.0 79 17 50.0	3.900 67	2.1 600	20.8 Virginia Tech Foundation,	44.4	27.1
204A Harri sonburg	WXJM	LIC	_CN	351.2 171.1	41.9 BLED19901010KB	38 26 22.0 78 52 21.0	0.390 19	1.4 445	10.9 James Madison University B	34.3	30.2
202A Edi nburg	WOTC	LIC	_CX	6.6 186.6	82.4 BMLED20090204AAS	38 48 13.0 78 41 21.0	1.000 123	40.5 545	26.8 Valley Baptist Church - Ch	35.8	46.5
201B1 Ri chmond	WRIH	LIC	DVX	106.8 287.7	131.9 BLED20091215ACF	37 42 54.0 77 21 55.0	5.000 146	88.1 187	30.1 American Family Associatio	38.5	91.3
201C2 Empori a	NEW	CP	DCX	146.4 327.1	172.5 BMPED20091027ADS	36 46 04.0 77 43 39.0	30.000 102	107.8 179	37.1 Roanoke Valley Communicati	58.0	112.8
201B Clarksburg	WKJL	LIC	DEX	317.1 136.2	188.8 BLED20090910AAV	39 17 59.0 80 17 30.0	32.000 149	123.8 512	44.5 He's Alive, Incorporated	59.3	124.0
06ZT Mt. Olive	W06CP	CP	D_N	17.1 197.3	104.6 BNPTVL20000831CK0	38 57 57.0 78 26 32.0	3.000 188	6.3 360	2.7 Word Of God Fellowship, In	147.5R	95.6M

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

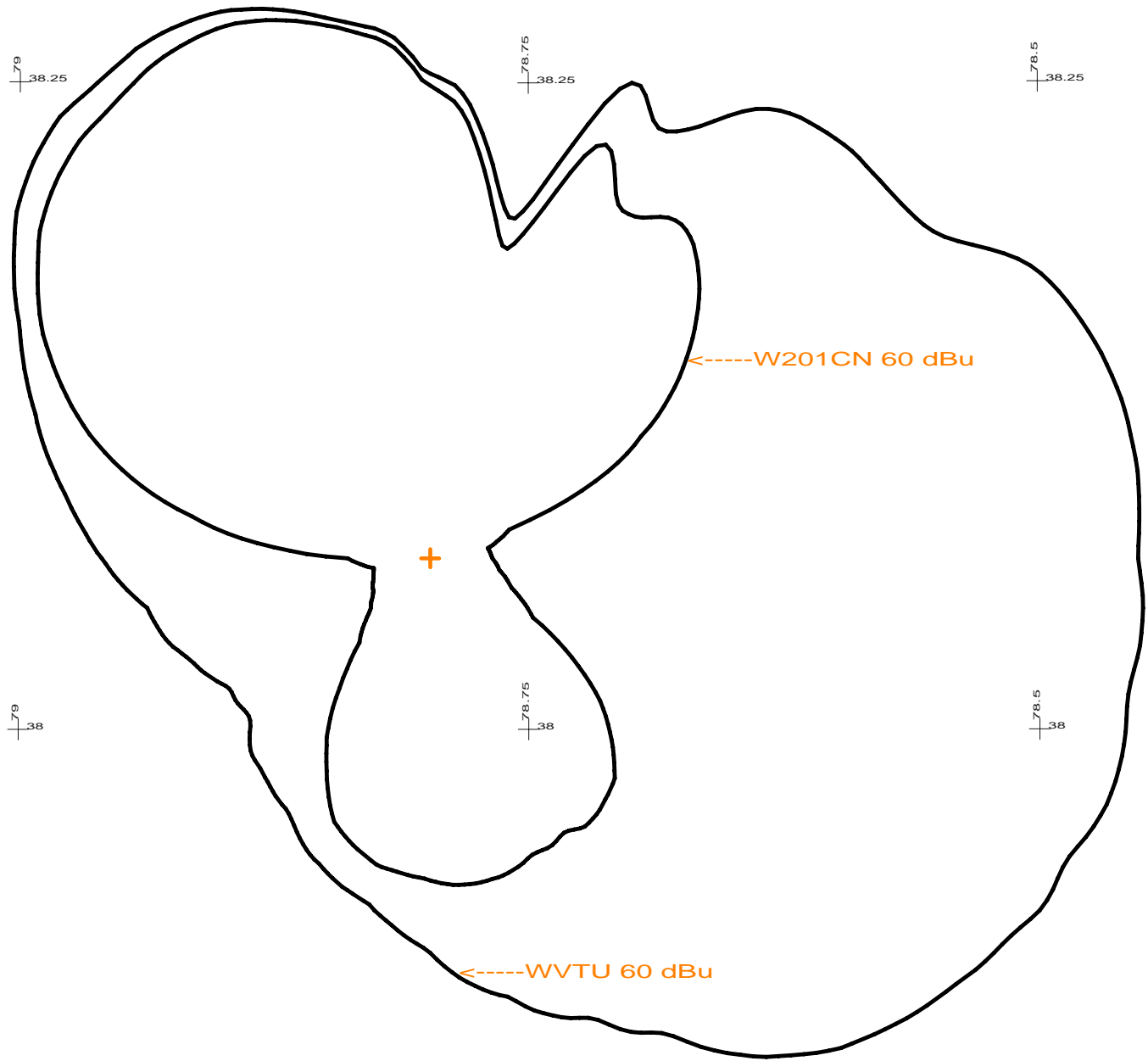
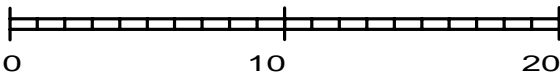


FIGURE 1

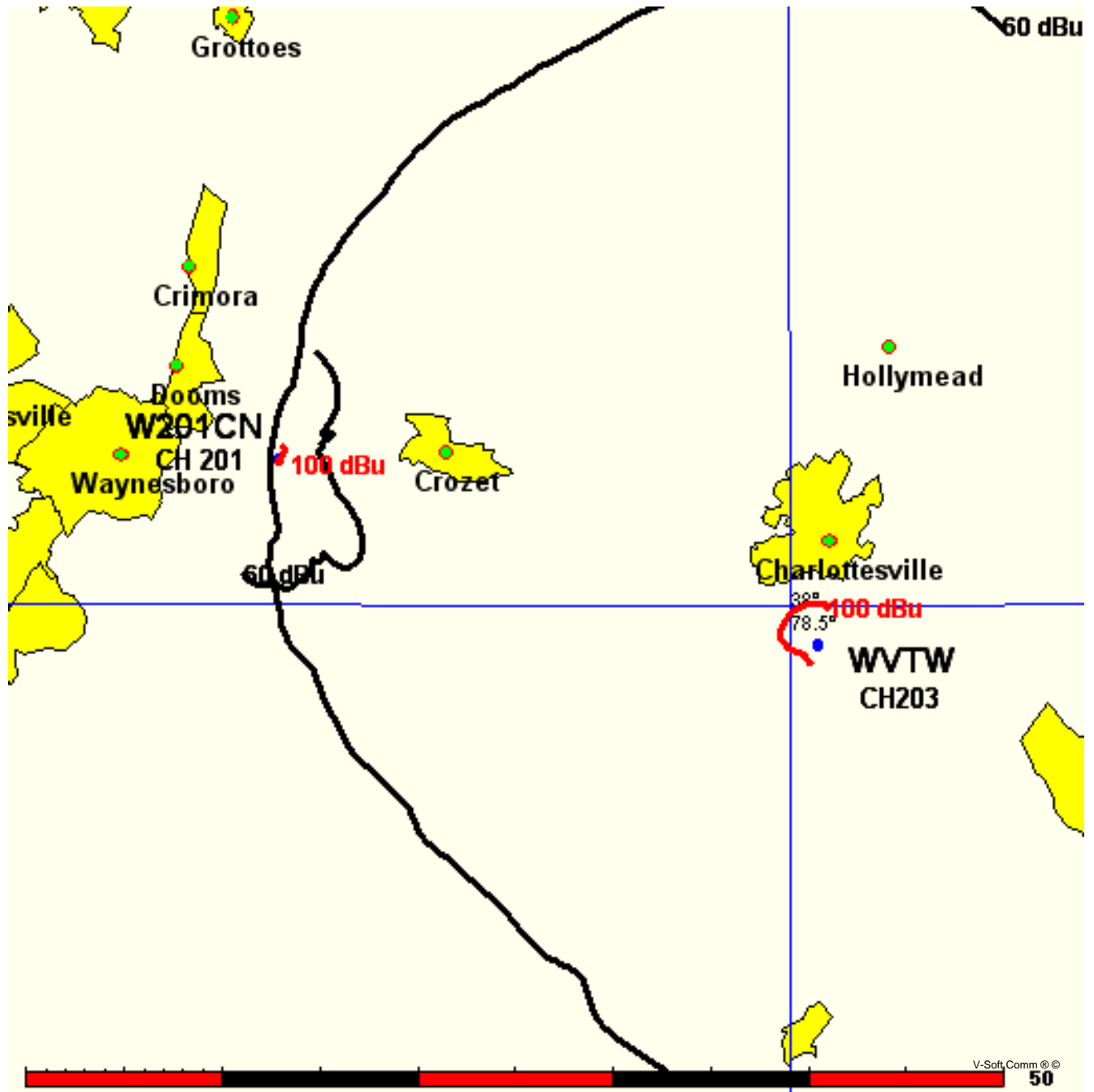
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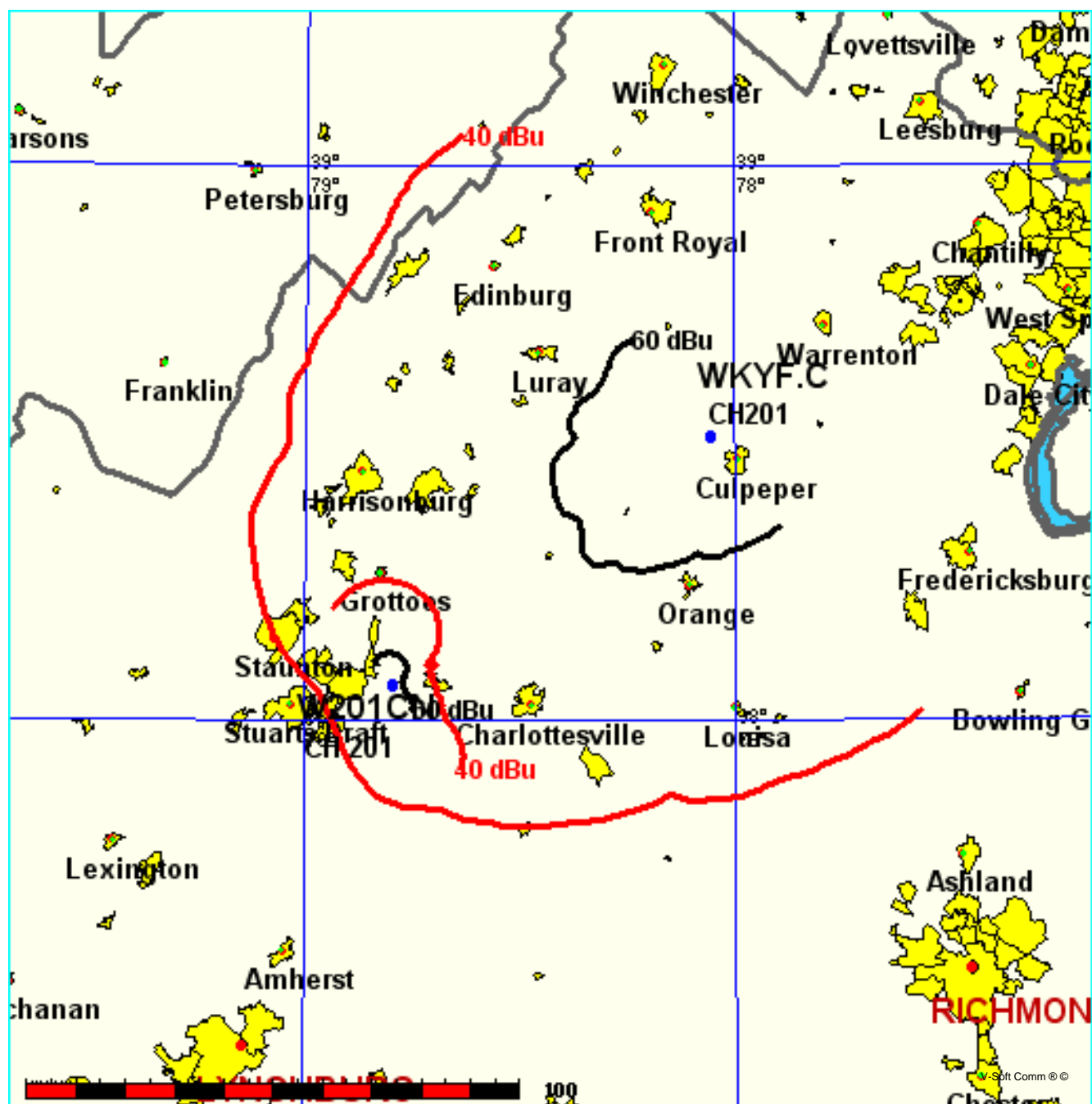
Scale in km



THE WVTU 60 dBu CONTOUR AND THE
PROPOSED W201CN 60 dBu CONTOUR

STU-COMM, INC.
CHARLOTTESVILLE, VA





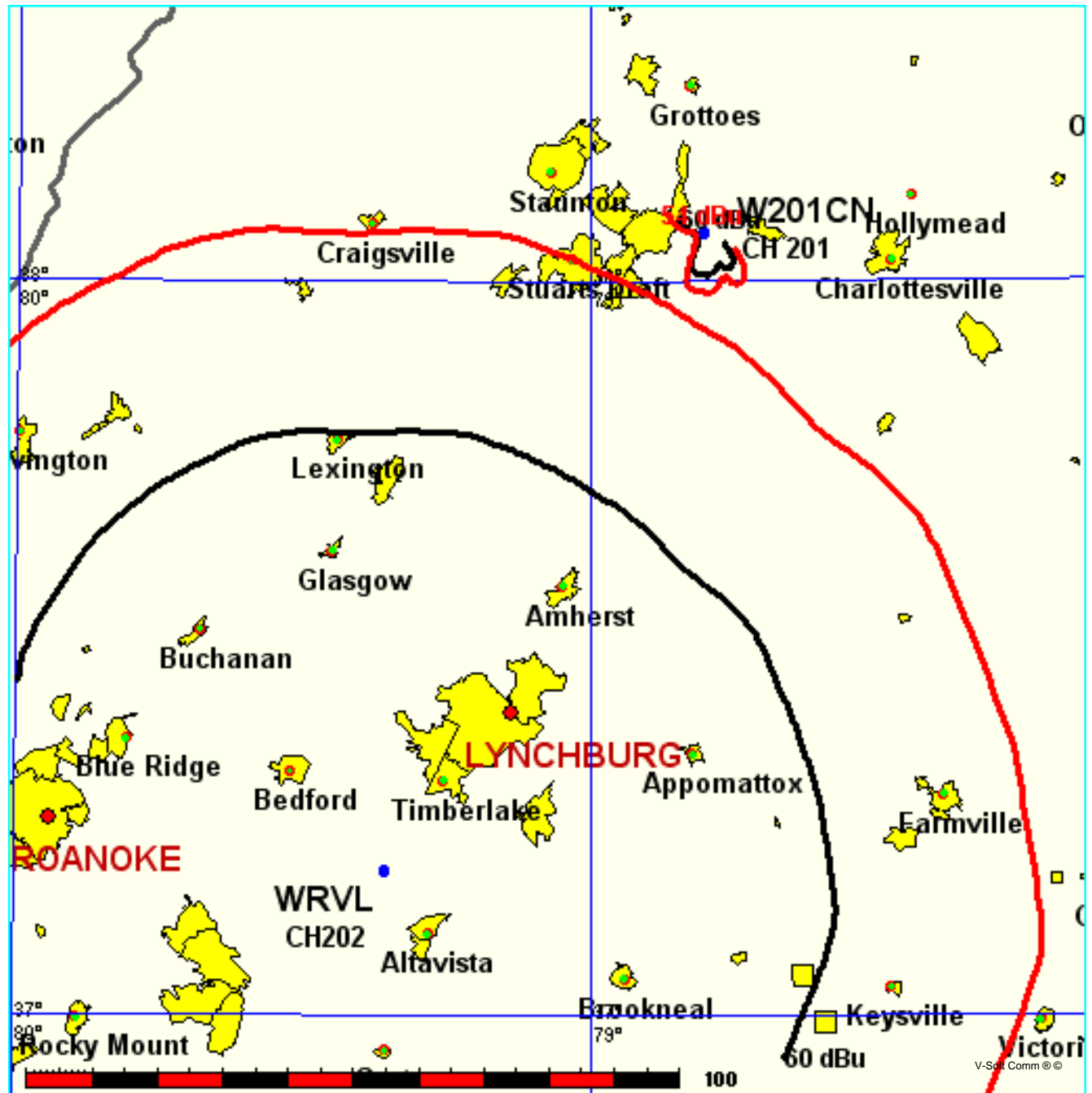
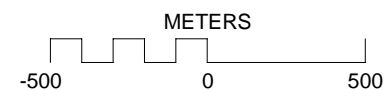


FIGURE 5

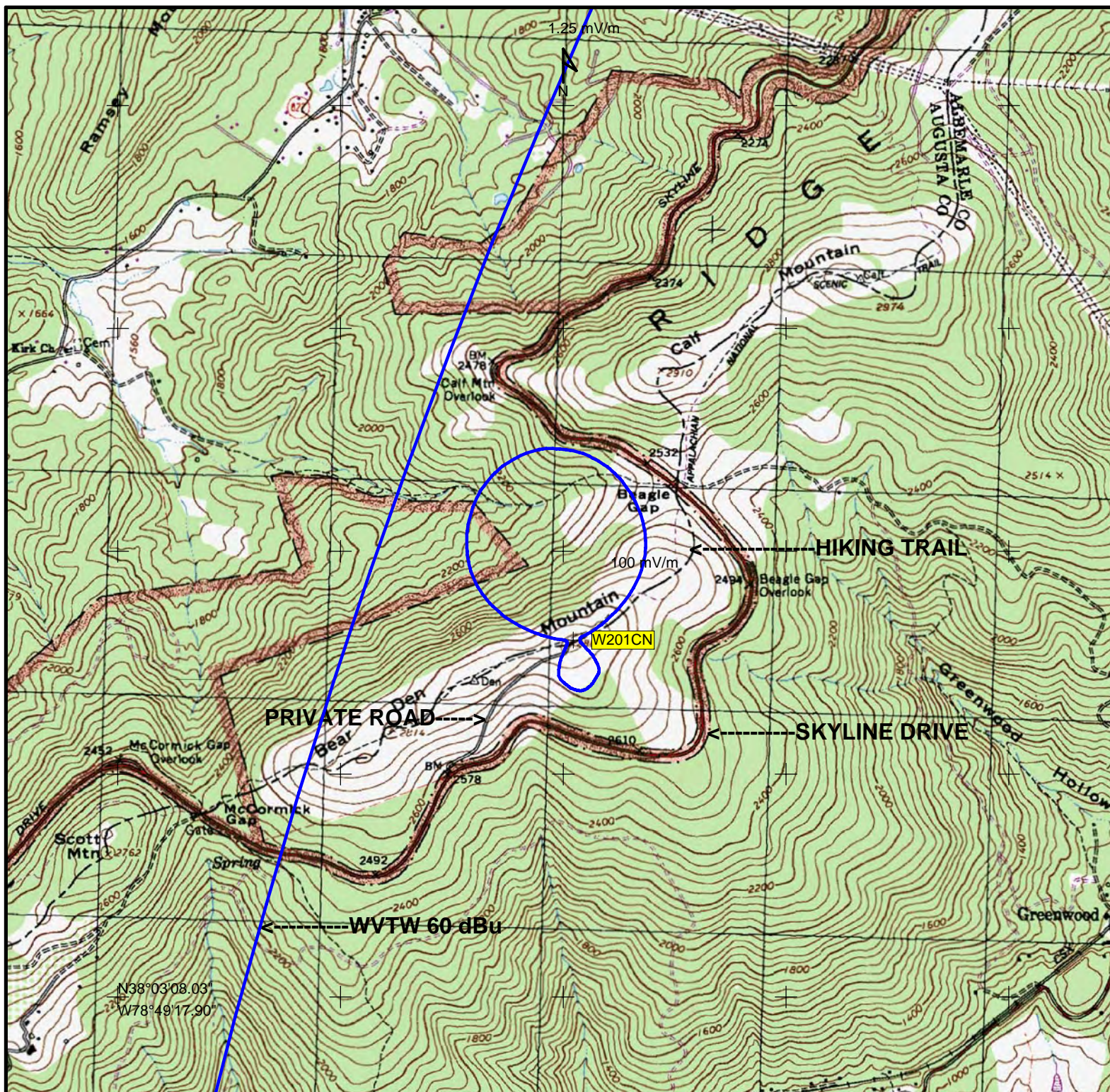


STU-COMM, INC. - W201CN

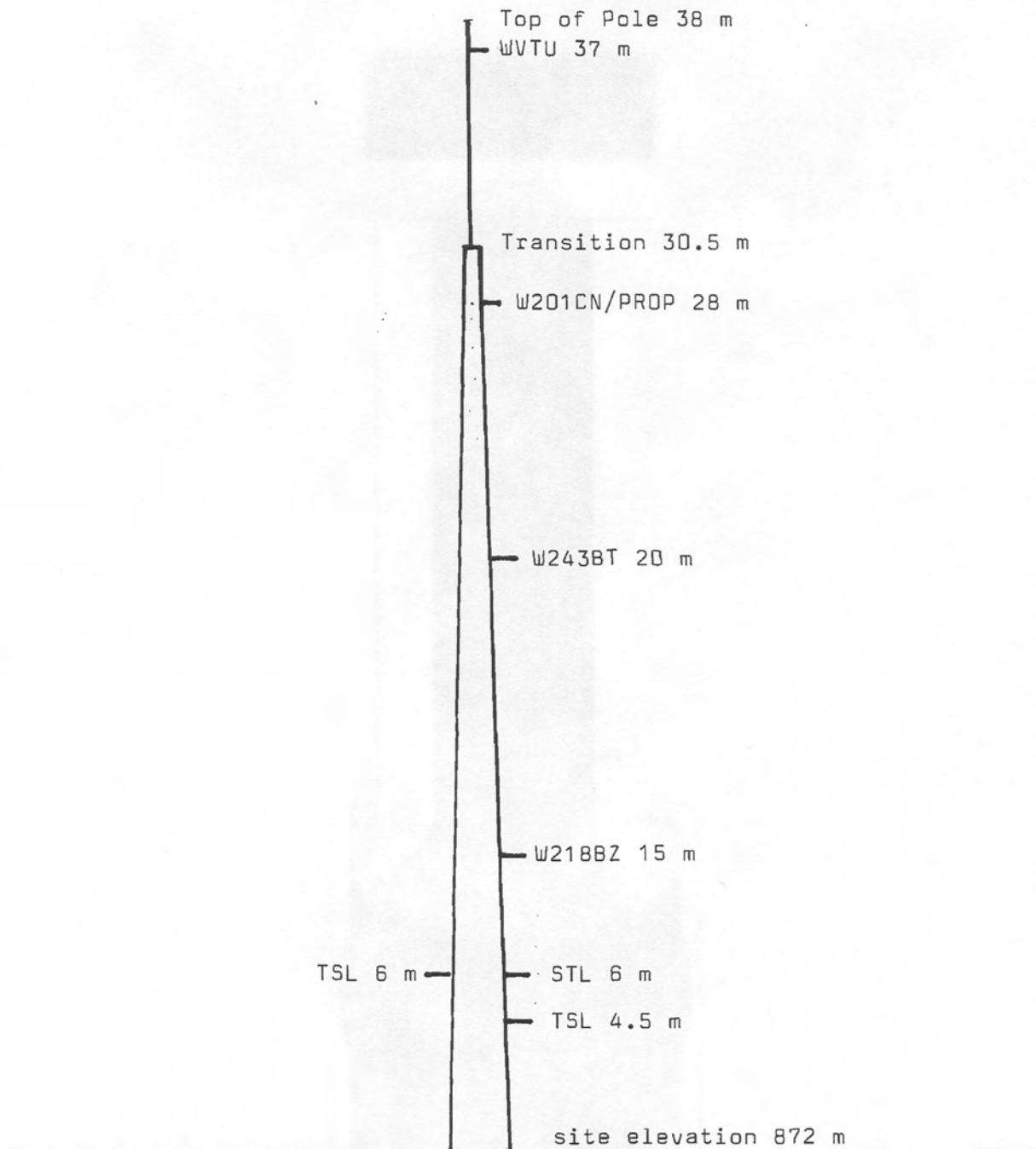
SECOND-ADJACENT ALLOCATION STUDY

SCALE

1:24,000



VIRGINIA TECH FOUNDATION TOWER



Drawing not to scale

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