

Comprehensive Engineering Exhibit
W253BV Poughkeepsie, NY
Facility ID No. 138571

This exhibit is for a minor modification of W253BV, facility ID 138571 which is seeking a change in antenna height, antenna type, and a change in power. The proposed facility will continue to be a fill-in translator for WKIP (AM) Poughkeepsie, NY.

It is proposed to locate the transmit antenna 76.2 meters above ground on a newly registered, ASR#: 1324876, tower in Poughkeepsie NY that will be built soon. This new tower is immediately adjacent to the currently authorized location. It is proposed to utilize a Scala FMVMP-3, 3 bay vertically polarized directional antenna with an ERP of 0.230KW.

Below as Figure 1 is a spacing study from which it can be determined that this proposal is within the protected contour of WGNY-FM which is on a second adjacent channel. With respect to all other authorized facilities this proposal will not create any prohibited contour overlap.

Section 74.1204(d) states that *“The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. 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 intervening terrain, lack of population or such other factors as may be applicable.”*

We will demonstrate that a lack of population and/ or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, as recently described in FCC 08-242 in connection with BPFT-19981001TA, allows for the use of U/D Analysis, also known as “signal strength ratio methodology.” In this instant case the facilities of WGNY-FM and this proposal are second adjacent channels, which are to be afforded protection from signals 40 dB stronger.

Figure 2 is a map showing the predicted signal contour of WGNY-FM at the proposed translator location utilizing the FCC F50:50 curves. WGNY-FM is predicted to present a 66.1dBu signal level at the translator tower location. Also shown in Figure 2 are the contours of this proposal and that of the presently licensed facility, the primary AM station’s 2mV/m contour along with its 25 mile radius.

The 106.1dBu contour (66.1dBu + 40 dB) of this proposal is the lowest value predicted to cause interference to WGNY-FM. Figure 3 depicts the predicted signal strength from the translator both at ground level, and at receiving antenna locations up to 2 meters above ground level of the translator. The 2 meter data is identified in the table as the “artificial plane,” and as can be determined by the columns colored green, at no location from ground level to 2 meters above ground does the predicted signal of the proposed translator exceed that of 40 dB greater than the WGNY-FM 66.1dBu contour. Thus compliance with Section 74.1204(d) has been demonstrated.

Figure 4 is an aerial image showing that only single story buildings are in the vicinity of the tower.

RF Radiation Compliance

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation."

The proposed antenna has been evaluated using "FM Model", as a worst case "Ring Stub" single bay being mounted with its center of radiation 76.0 meters above ground level, with an effective radiated power of 0.230 kilowatts in the vertical plane.

At 2 meters above the surface, at 17 meters from the closest point of approach, this proposal will contribute worst case, 1.33 microwatts per square centimeter, or 0.665% of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit and thus is categorically excluded from environmental processing for purposes of RF compliance, pursuant to Section 1.1307(b)(3)(ii).

The tower is surrounded by a fence with a locked gate restricting access from the general public with appropriate warning signs posted. The applicant will cooperate with other users of the tower site to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1. Spacing Study

iHeartMedia
Troy Langham

W253BV at new co-located Tower 15 June 23
Ihm Licenses, LLC

REFERENCE 41 42 18.00 N. 15.8 M, COR= 121.9 M DISPLAY DATES 06-13-23
73 53 14.70 W. Average Protected F(50-50)= 6.94 km SEARCH 06-14-23
Standard Directional

CH	CALL CITY	TYPE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	=IN= (Overlap in km)	=OUT=
253A	WCTW Catskill	LIC	CN NY	4.4 184.5	55.30 BLH19970616KA	42 12 03.30 73 50 07.50	4.700 114	88.6 190	Ihm Licenses, LLC	31.1	-40.3*
253D	W253BV Poughkeepsie	LIC	DVN NY	0.0 270.0	0.00 BLFT20160620AAW	41 42 18.00 73 53 14.00	0.200	147	---Reference---		
255A	WGNV-FM Rosendale	LIC	ZCN NY	330.7 150.6	17.32 BLH20110203ADB	41 50 26.90 73 59 23.70	1.350 213	1.6 305	Sunrise Broadcasting Corp.	7.7	-8.2*
251A	WKZE-FM Salisbury	LIC	ZCN CT	47.6 227.8	35.32 BLH19920911KD	41 55 08.30 73 34 20.40	1.800 184	2.3 437	Willpower Radio, LLC	27.2	6.3
252A	WDAQ Danbury	LIC	CN CT	134.9 315.2	51.98 BMLH20060420ACO	41 22 27.30 73 26 45.40	1.300 140	30.2 301	The Berkshire Broadcasting	14.9	21.7
254B	WEPN-FM New York	LIC	CN NY	184.5 4.4	106.66 BMLH20100414AAI	40 44 54.40 73 59 08.50	6.000 415	76.2 429	Emmis New York Radio Licen	19.1	19.6
252A	WSUL Monticello	LIC	ZCN NY	266.0 85.5	66.56 BLH20000314ABK	41 39 38.30 74 41 12.60	2.200 163	39.7 579	Bold Gold Media Group, L.P	20.7	30.2
256B	WPLR New Haven	LIC	CN CT	111.6 292.2	83.95 BLH20010628ABF	41 25 22.30 72 57 04.40	15.000 276	4.9 375	Connoisseur Media Licenses	72.5	23.4
253D	W253BQ Meriden	LIC	DCN CT	100.0 280.7	88.15 0000212216	41 33 44.00 72 50 38.00	0.250	57.7 337	18.1	24.1	48.2
250D	W250CH New Milford	LIC	DCN CT	121.5 301.8	44.80 BLFT20170217ABF	41 29 36.30 73 25 43.40	0.250	0.2 309	4.2	37.9	37.9
250B	WSKQ-FM New York	LIC	CN NY	184.5 4.4	106.66 BLH19940204KA	40 44 54.30 73 59 08.50	6.000 415	4.5 429	64.1	90.9	40.8
253B	AL0582 Freeiland	RSV-A	PA	251.4 70.1	170.42 RM10697	41 11 56.30 75 49 04.71	50.000 150	115.0 566	36.1	46.8	95.0
250A	WRIP Windham	LIC	ZCN NY	334.4 154.1	71.60 BLH20000803AAG	42 17 06.30 74 15 50.50	0.580 322	1.0 937	21.8	62.4	48.9
252D	W252DX White Plains	LIC	DCN NY	176.2 356.2	75.70 0000153768	41 01 32.00 73 49 37.00	0.015	11.7 257	7.9	53.5	52.6
254D	W254AU Great Barrington	LIC	CN MA	38.2 218.6	72.21 BLFT20070427ADH	42 12 50.30 73 20 41.30	0.250 -54	10.1 297	7.1	56.2	52.9
250D	WRIP-FM1 Hunter	LIC	DCN NY	333.0 152.8	61.96 BLFTB20030728AER	42 12 04.30 74 13 43.50	0.035	0.0 956	1.4	53.8	54.8
253B	WKRZ Freeiland	LIC	CN PA	251.4 70.1	170.42 BLH20040326AFN	41 11 56.30 75 49 04.70	8.700 357	104.9 770	53.4	56.9	85.0
253A	WBON Westhampton	LIC	ZCN NY	135.0 315.7	132.87 BLH20040401AKC	40 51 18.40 72 46 09.40	0.950 160	68.1 174	22.3	56.9	87.7
252D	W252DY Sussex	CP	DCN NJ	221.2 40.8	82.85 0000195181	41 08 34.00 74 32 23.00	0.150	9.0 406	6.7	62.4	65.6
252D	W252ED Pompton Lakes	LIC	CN NJ	202.5 22.3	87.03 0000113361	40 58 52.50 74 17 04.80	0.050	6.7 99	4.7	68.3	64.6
252A	WKJY Hempstead	LIC	CN NY	168.3 348.5	115.68 BLH19860814KA	40 41 08.30 73 36 35.40	3.000 100	35.0 117	22.2	70.6	79.1
252D	W252BG Lee	LIC	CN MA	40.0 220.4	85.78 BLFT20070427AAT	42 17 39.30 73 13 01.30	0.013 9	6.0 441	4.2	74.0	70.8
256B	WANZ Zarephath	LIC	DCN NJ	205.4 24.9	134.31 BLH20030702AAD	40 36 41.40 74 34 10.60	28.000 200	5.4 265	61.9	116.9	70.8
252D	W252CS Palisades Park	LIC	DCN NJ	184.9 4.9	95.84 0000212236	40 50 45.80 73 59 06.50	0.120	7.7 118	5.5	76.8	73.8
252D	W252AS New Haven	LIC	CN CT	120.5 301.1	88.63 BLFT20040206ABE	41 17 48.30 72 58 23.30	0.019 68	5.3 111	3.7	76.7	74.6

Figure 2. Contour Map

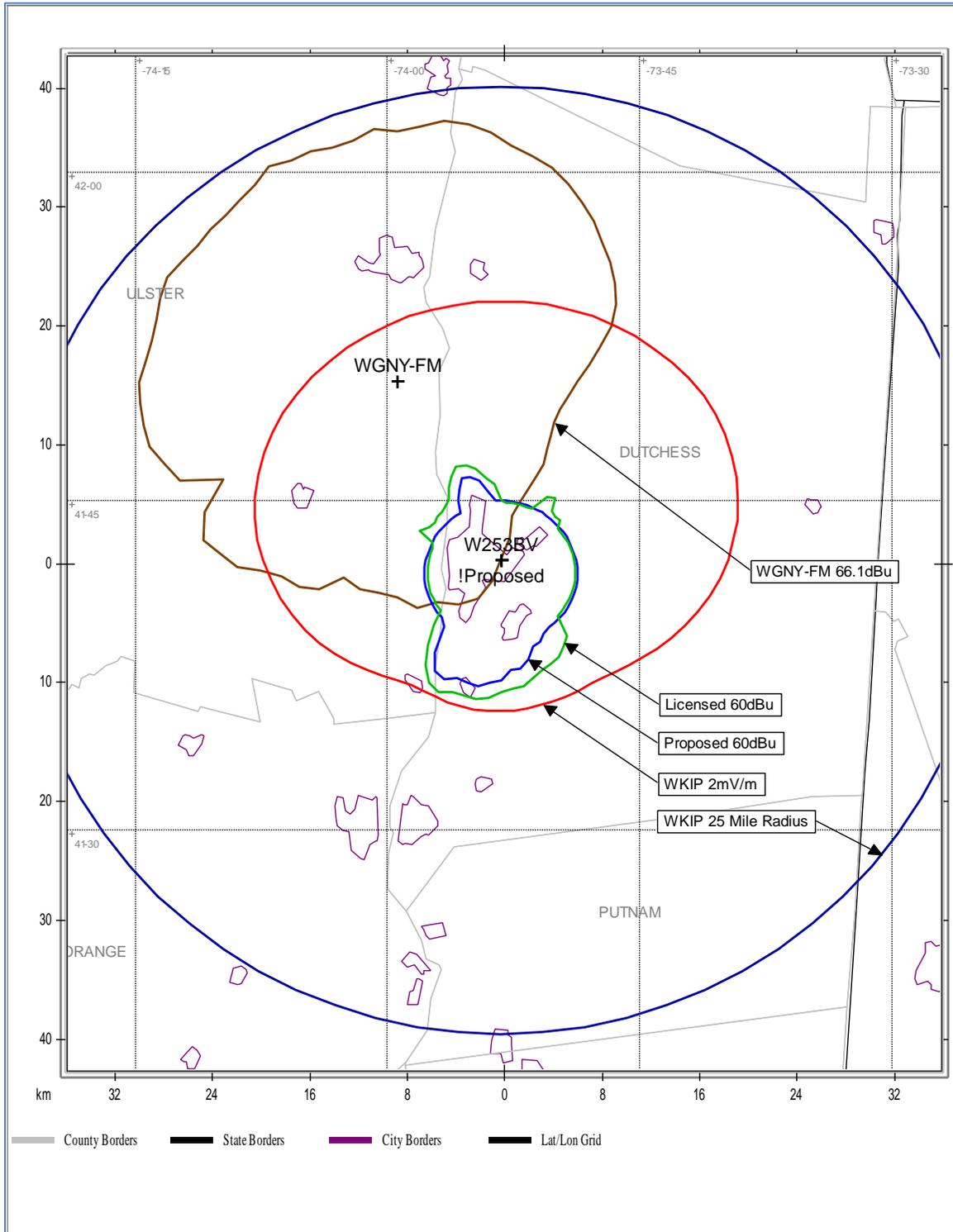


Figure 3. Distance to Interference Contour with Antenna Vertical Pattern

Proposed Antenna: Scala FMVMP-3 Proposed Power: 0.23 kW Antenna Height AGL: 76 meters Interference Contour: 106.1 dBu f(50:10) Artificial Rcv Antenna Height: 2 meters Distance (Free Space) Equation: $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000$ Field Strength (dBu) Equation: $= 106.92 - (20 * (\text{LOG}_{10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$								
Depression				Distance				
Angle	Antenna			from Ant.	Distance	Field Strength	Distance	Field Strength
Below	Relative	ERP	ERP	to Interf	from Ant. to	in dBu @	from Ant.	in dBu @
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	to Ground Level	Ground Level
0°	1.000	0.230	-6.38	527.06 m	infinite	---	infinite	---
-5°	0.921	0.195	-7.10	485.43 m	849.05 m	101.24 dBu	872.00 m	101.01 dBu
-10°	0.708	0.115	-9.38	373.37 m	426.15 m	104.95 dBu	437.67 m	104.72 dBu
-15°	0.418	0.040	-13.97	220.05 m	285.91 m	103.83 dBu	293.64 m	103.59 dBu
-20°	0.126	0.004	-24.38	66.36 m	216.36 m	95.83 dBu	222.21 m	95.60 dBu
-25°	0.100	0.002	-26.35	52.92 m	175.10 m	95.71 dBu	179.83 m	95.47 dBu
-30°	0.224	0.011	-19.40	117.80 m	148.00 m	104.12 dBu	152.00 m	103.89 dBu
-35°	0.242	0.014	-18.69	127.76 m	129.02 m	106.02 dBu	132.50 m	105.78 dBu
-40°	0.186	0.008	-21.01	97.82 m	115.12 m	104.69 dBu	118.24 m	104.45 dBu
-45°	0.093	0.002	-27.03	48.91 m	104.65 m	99.49 dBu	107.48 m	99.26 dBu
-50°	0.001	0.000	-66.38	0.53 m	96.60 m	60.84 dBu	99.21 m	60.61 dBu
-55°	0.069	0.001	-29.58	36.47 m	90.34 m	98.22 dBu	92.78 m	97.99 dBu
-60°	0.108	0.003	-25.72	56.87 m	85.45 m	102.56 dBu	87.76 m	102.33 dBu
-65°	0.118	0.003	-24.92	62.35 m	81.65 m	103.76 dBu	83.86 m	103.53 dBu
-70°	0.107	0.003	-25.79	56.45 m	78.75 m	103.21 dBu	80.88 m	102.98 dBu
-75°	0.082	0.002	-28.07	43.38 m	76.61 m	101.16 dBu	78.68 m	100.93 dBu
-80°	0.050	0.001	-32.40	26.35 m	75.14 m	97.00 dBu	77.17 m	96.77 dBu
-85°	0.015	0.000	-42.86	7.91 m	74.28 m	86.64 dBu	76.29 m	86.41 dBu
-90°	0.020	0.000	-40.32	10.59 m	74.00 m	89.22 dBu	76.00 m	88.98 dBu

Figure 4. Ariel Image of Proposed Location

