

ATTACHMENT: FM Translator Facilities  
and Allocation Considerations

I. FM Translator Facilities

Modification of W266CU Facilities

This application is for modification of the facilities of FM translator W266CU, Middlebury, Vermont, to increase antenna radiation center height above ground. The proposed operation of the translator is for 250 watts effective radiated power, employing a nondirectional antenna. The changes are related to the planned replacement of the present antenna supporting tower with a slightly taller structure at the same location. The translator will continue to operate on Channel 266D, and will rebroadcast AM station WFAD, Middlebury, Vermont.

The geographical coordinates (NAD83) of the proposed FM translator site are as follows:

North latitude 43° 59' 57.4"  
West longitude 73° 09' 33.0".

At this location the ground elevation is 105.2 meters above mean sea level.

The antenna supporting structure for the proposed operation of W266CU is a registered tower, Antenna Structure Registration No. 1266747. The FM translator antenna will be side-mounted on the supporting tower, with the radiation center located 51.8 meters above ground.

Fill-in Service from Proposed FM Translator

This application conforms with the requirements of Section 74.1201(g) of the Commission's Rules. Figure 1 of this Attachment shows that the 60 dBu F(50,50) (1 mV/m) contour for the proposed operation of W266CU falls entirely within the daytime 2 mV/m contour for the licensed operation of WFAD(AM), and also within a 40-kilometer radius centered at the WFAD(AM) transmitter site.

The proposed operation of W266CU complies with the provisions of Section 74.1233(a)(2) of the Rules for a minor modification of facilities, as the proposed site is the same as the site for the licensed operation of the translator.

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Compliance with Environmental Rules

The proposed operation of W266CU will utilize an existing tower as the supporting structure for the translator antenna. The tower is the planned new nondirectional vertical radiator for AM station WFAD, Middlebury, Vermont

The antenna for the proposed FM translator is a Shively Labs Model 6812C FM Antenna, a single-bay radiator of the "ring-and-stub" design. The antenna supporting structure extends to an overall height of 54.9 meters above ground, and the FM translator antenna will be side-mounted on this structure, with the radiation center located 51.8 meters above ground.

A study made using the Commission's "FM Model" computer program shows that for operation at 250 watts effective radiated power, the calculated radiofrequency power density level would not exceed  $0.005 \text{ mW/cm}^2$ , or 2.5% of the Maximum Permissible Exposure value of  $0.20 \text{ mW/cm}^2$  for uncontrolled exposure situations at 101.1 MHz, at any point at a height of 2 meters or less above ground in the vicinity of the base of the antenna supporting structure. As a result, the proposed operation of the FM translator would be excluded from evaluation of total radiofrequency radiation levels at the proposed site. One or more RF hazard warning signs will be posted near the base of the antenna tower.

The applicant will operate the proposed transmitting facilities at reduced power, or temporarily cease operation, as may be required to protect all workers from exposure to hazardous levels of radiofrequency radiation.

II. Allocation Considerations

Allocation Study

The proposed operation of W266CU conforms with the requirements of Section 74.1204 of the Commission's Rules for a Class D station on Channel 266 with respect to overlap of predicted contours with the licensed operation of any FM station, LPFM station or FM translator, and the operation of any such facilities specified in a construction permit or pending application, on the same channel and on the first, second and third adjacent channels, as shown in this Attachment. Additionally, the location of the proposed translator complies with the intermediate frequency distance separation requirements set forth in the Rules. The proposed operation of the translator therefore would not result in objectionable interference to any station.

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The FM stations taken into account in the allocation study for this application are listed in Table A of this Attachment.

The nearest co-channel FM stations, LPFM stations and FM translators are at sufficient distances from the proposed W266CU site so as not to require further studies with respect to overlap of contours with the proposed operation of W266CU.

Figure 2 of this Attachment shows the pertinent predicted contours for the proposed operation of W266CU and first adjacent channel stations WWFY(FM), Berlin, Vermont, on Channel 265C3; and WCPV(FM), Essex, New York, on Channel 267A.

The pertinent predicted contours for the proposed translator and second adjacent channel station WEXP(FM), Brandon, Vermont, on Channel 268A; and third adjacent channel stations WXXX(FM), Lebanon, New Hampshire, on Channel 263C3; and WCVT(FM), Stowe, Vermont, on Channel 269C2, are shown in Figure 3 of this Attachment.

On the frequencies 53 and 54 channels removed from Channel 266, the only FM station or FM translator within 50 kilometers of the proposed translator is WXLQ(FM), Bristol, Vermont, on Channel 213A. WXLQ(FM) is located 25 kilometers from the proposed site, more than the minimum required intermediate frequency spacing of 10 kilometers from an FM translator to a Class A station.

The proposed W266CU site is located within 320 kilometers of the Canadian border. With respect to the requirements of Section 74.1235(d) of the Commission's Rules, the 34 dBu F(50,10) contour for the proposed translator would not extend to more than 60 kilometers in any direction toward the nearby part of the U.S.-Canada border, and the contour would not extend across the U.S.-Canada border.

#### Methods Employed in Determining Contours

The predicted contours shown in this Attachment were determined in accordance with the requirements of Section 73.313 of the Commission's Rules, from computerized calculations based on the NGDC 30-second terrain database, and Figures 1 and 1a of Section 73.333 of the Rules. Distances to the contours were calculated at azimuthal increments of one degree.

July 2020

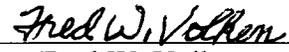
Fred W. Volken  
Engineering Consultant  
Sierra Madre, California

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III. Statement of Engineer

FRED W. VOLKEN, whose place of business is located at 348 W. Sierra Madre Blvd., Sierra Madre, California, hereby states that he is a graduate physicist holding the degree Bachelor of Arts from Occidental College, Los Angeles, California; that his qualifications as an engineering consultant are a matter of record with the Federal Communications Commission; that he has prepared, or supervised the preparation of, the attached document as engineering consultant for Radio Broadcasting Services, Incorporated, licensee of FM Translator W266CU, Middlebury, Vermont; and that all of the information contained in this document is accurate and correct to the best of his knowledge and ability.

I state under penalty of perjury that the foregoing is true and correct. Executed on July 6, 2020.

  
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Fred W. Volken

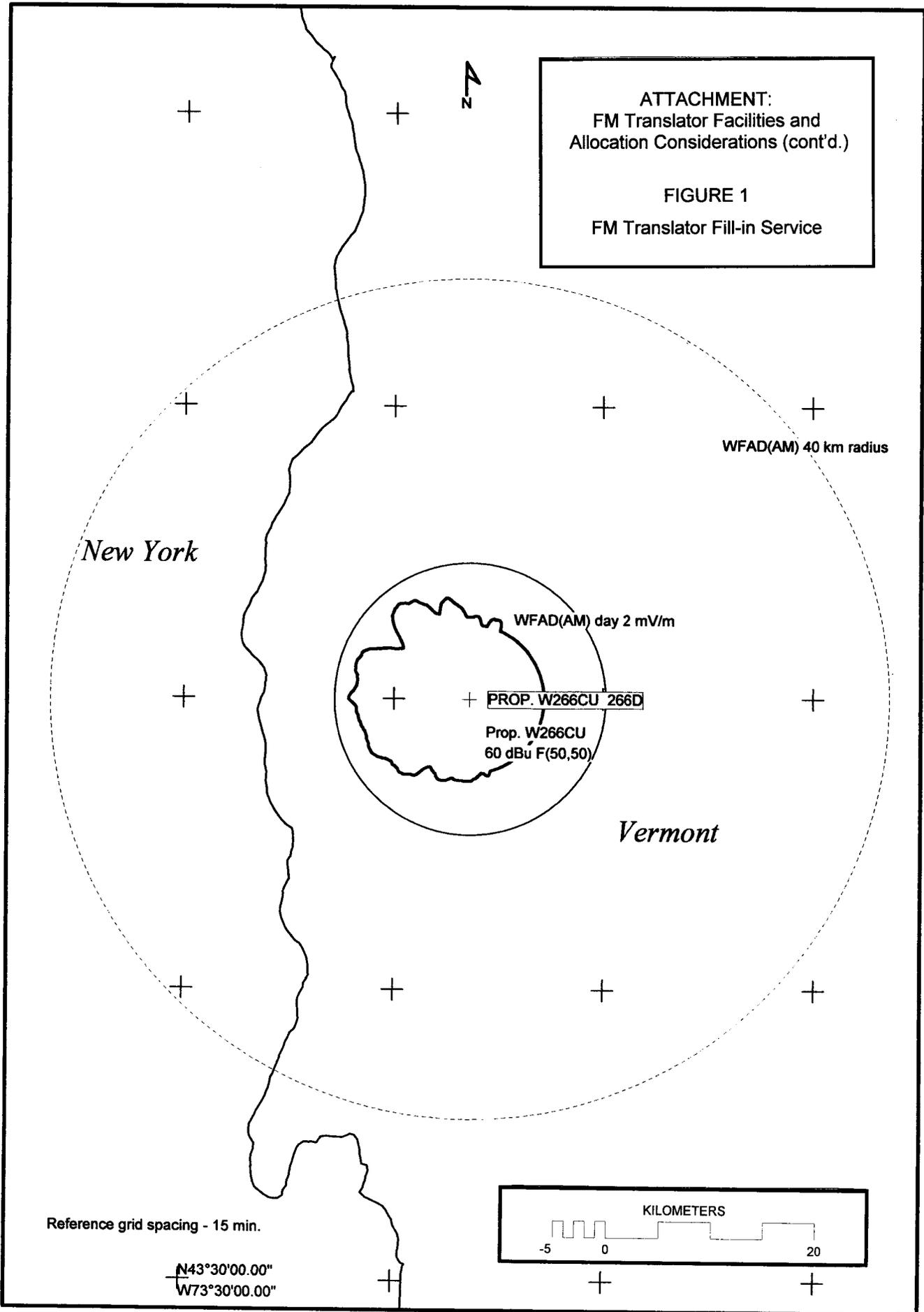
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TABLE A  
Station Facilities

	Channel and Class	Station and Location, Status, File Number	Geographical Coordinates	Facilities	
				Effective Radiated Power and Antenna	Antenna Height Above Average Terrain (meters)
Co-Channel Stations	266D	Proposed W266CU Middlebury, VT	N 43° 59' 57.4" W 73° 09' 33.0"	0.25 kW Nondirectional	-----
	266D	W266CU, Middlebury, VT License BLFT-20161128ADV	N 43° 59' 57.4" W 73° 09' 33.0"	0.25 kW Nondirectional	-----
First Adjacent Channel Stations	265C3	WWFY(FM), Berlin, VT License BLH-20081125AUE	N 44° 07' 30.6" W 72° 28' 26.3"	4.5 kW Nondirectional	237
	267A	WCPV(FM), Essex, NY License BLH-20190211AAY	N 44° 24' 19.1" W 73° 25' 53.4"	1.0 kW Nondirectional	241
Second and Third Adjacent Channel Stations	268A	WEXP(FM), Brandon, VT License BLH-19990412KD	N 43° 39' 31.2" W 73° 06' 24.4"	0.35 kW Directional	398
	263C3	WXXK(FM), Lebanon, NH License BLH-19970307KF	N 43° 39' 18.2" W 72° 17' 40.3"	22.0 kW Nondirectional	99
	269C2	WCVT(FM), Stowe, VT License BLH-20111129DKO	N 44° 31' 32.1" W 72° 48' 52.4"	1.0 kW Directional	811
Intermediate Frequency Station	213A	WXLQ(FM), Bristol, VT License BLED-20090112AAN	N 44° 13' 24.1" W 73° 07' 25.4"	0.16 kW Directional	181

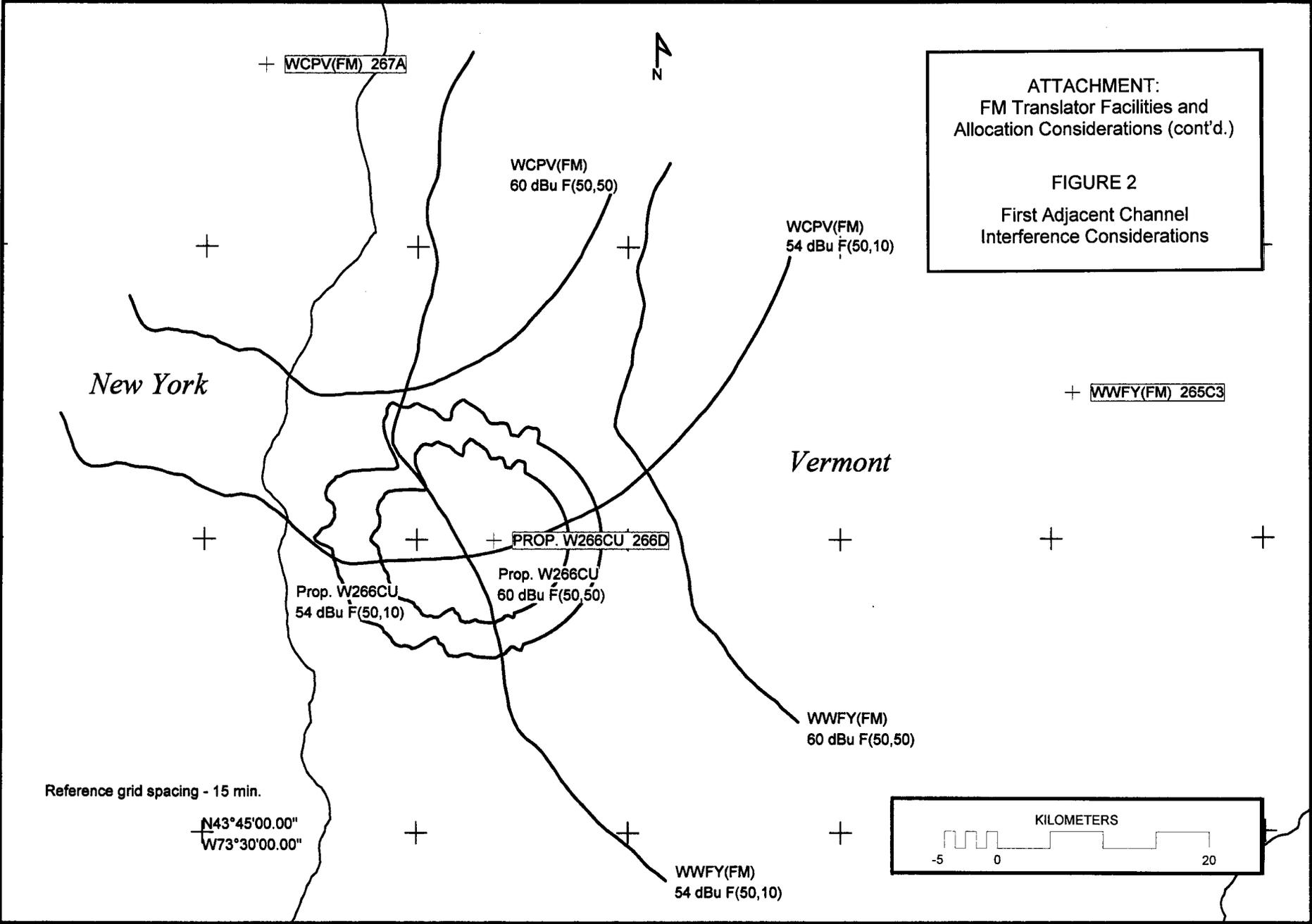
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FIGURE 1  
FM Translator Fill-in Service



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FIGURE 2  
 First Adjacent Channel  
 Interference Considerations



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FIGURE 3  
 Second and Third Adjacent  
 Channel Interference  
 Considerations

