

Proposed Greenwich, Connecticut Translator on Channel 276.

Section 74.1204 Contour Studies to Pertinent Co-Channel and Adjacent Channel Facilities.

All facilities not meeting the spacing requirements of Section 73.207 were studied. These are:

<u>Call Sign</u>	<u>Location</u>	<u>Channel No.</u>
WNEW	New York, NY	274B
WKTU	Lake Success, NY	278B
WBZO	Bayshore, NY	276A
WGNY-FM	Newburgh, NY	276A
WDRC-FM	Hartford, CT	275B
W276AV	Stamford, CT	276D
W276AQ	Ft. Lee, NJ	276D

The attached figures illustrate the absence of prohibited overlap between the proposed translator interfering contour and the pertinent service contours. This amendment revises the applicant's proposal to incorporate a two bay, half-wave spaced Scala 2xCA-2CP directional antenna array in order to eliminate prohibited overlap with W276AV, Stamford, CT, and to prevent interference to WNEW and WKTU, which are co-located in New York, NY.

The proposed translator is situated inside the 54 dBu service contours of WNEW and WKTU, which operate with identical Class B licensed facilities at a site that is 43.629 km. from the proposed translator site. The signal level at the proposed translator site from each of these stations, as determined using the Commission's Propagation Curve Calculator, is 64.1 dBu. Hence, actual interference from the proposed translator would only occur where the ratio of undesired to desired signal exceeds the allowed 40 dB, ie. where the proposed translator F(50,10) interfering signal exceeds 104.1 dBu.

The proposed facility will operate with a maximum ERP of 0.001 kW at an HAAT of 36.1 meters. In the worst case, in front of the directional antenna, the 104.1 dBu F(50,10) interfering contour of the proposed facility will extend 0.044 km. (44 meters) from the antenna based on the Commission's free space equation. As shown in the attached figure obtained from a current USGS topographical map of the area, the proposed facility is located on the roof of a hospital in a commercial and professional office area, with no residences within 44 meters.

The half-wave spaced array specified herein will be employed in order to severely attenuate downward radiation and prevent the proposed translator 104 dBu F(50,10) interfering contour from penetrating into the hospital. The attached exhibit from Kathrein/Scala shows the vertical radiation profile of the proposed 2-bay half-wave spaced CA-2CP antenna array.

The distance to the proposed 104 dBu F(50,10) interfering contour and the distance from the antenna to ground level at downward angles in 10 degree increments from the horizontal are as shown in the following table:

<u>ANGLE FROM HORIZON</u>	<u>RELATIVE FIELD IN dB</u>	<u>WORST CASE DISTANCE TO 104 dBu (F(50,10))</u>	<u>DISTANCE FROM ANTENNA TO GROUND</u>
0	-0.00	44 meters	infinite
10	-0.51	42 meters	201.6 meters
20	-2.04	35 meters	102.9 meters
30	-4.64	26 meters	70.0 meters
40	-8.39	17 meters	54.5 meters
50	-13.77	9 meters	46.0 meters
60	-21.82	3.6 meters	40.4 meters
70	-36.84	<1 meter	37.2 meters
80	-59.36	<1 meter	35.5 meters
90	-113.18	<1 meter	35.0 meters

As can be seen, in front of the major lobe of the antenna array (worst case), at any downward angle, the distance to the proposed 104 dBu F(50,10) interfering contour is considerably less than the distance from the antenna to ground level. The drawing below depicts the hospital roof relative to the antenna location. The major lobe of the directional antenna will be pointed away from the hospital from a corner location on the rooftop such that the interfering contour does not penetrate the hospital or create overlap within the hospital itself. The peak of the back lobe is 11.7 dB below the forward lobe, so the 104 dBu F(50,10) only extends out 11.5 meters horizontally, 6.2 meters at 45 degrees, and so forth. The center of radiation of the antenna array will be 5 meters above the roof, and therefore the interfering signal at the peak of the minor lobe off the back of the array will not penetrate the roof. It is noted that the hospital roof and building structure will further attenuate the translator signal within the hospital. The applicant therefore believes that the instant application meets the requirements of Section 74.1204(d) with respect to "other factors" insuring no actual interference to WNEW or WKTU.

Nevertheless, as required by the Commission's Rules, in the event of any complaints that the proposed translator interferes with reception of either WNEW or WKTU, the applicant will take the required steps to eliminate the interference, including, if necessary, reducing power or cessation of translator operation.

