

WNJU-WNBC Application for 1-WTC Auxiliary Antenna Construction Permit
September 25, 2019

Engineering Exhibit

The purpose of this application is to request authorization to use an existing broadband antenna at 1-WTC as an auxiliary antenna for WNJU, Facility ID 73333, Linden, New Jersey, licensed to NBC Telemundo License LLC. WNJU channel shares with commonly owned WNBC, Facility ID 47535, New York, New York with WNJU as the host/sharer station and WNBC as the sharee station. Because the existing post-auction license to cover CP application (LMS File Number 0000079780) remains pending, this application is being filed using the existing pre-auction repack license and channel. The RF channel on the application needs to be changed to reflect the post-auction channel 35.

The service contour of the proposed auxiliary facility does not exceed that of the pending post-auction license to cover construction permit application in any direction.

Antenna System

The proposed facility uses a RFS PEP40E non-directional broadband panel antenna with 1.0 degrees of electrical beam tilt.

The antenna will be elliptically polarized with a horizontally polarized effective radiated power (ERP) of 450 kW and vertically polarized ERP of 150 kW.

Environmental Statement

The requested facility uses an existing antenna on an existing antenna structure at a site shared with other broadcasters. No new tower construction is proposed.

An RF exposure analysis conducted using the procedures in FCC OET Bulletin 65 demonstrates that at locations including all building roof-tops at or below 470 meters (1,541 feet) AGL in height at any distance from the site or at any location at any height more than 1003 meters from the antenna the calculated RF power density contribution from the horizontal and vertical ERP (600 kW combined) of the facility proposed does not exceed 5 percent of the maximum permissible exposure level at 599 Mhz (Channel 35) of 399 mW/cm² for an uncontrolled environment as specified in FCC Rule §1.1310. There are no structures accessible to the public where the power density is more than 5 percent of the level permitted for an uncontrolled environment.

Power will be reduced or shut off as required to protect workers on this tower from RF exposure above the limits specified in FCC rule §1.1310.

Broadcast Facility

Compliance with 73.616:

A TVStudy 2.2.5 analysis of the proposed facility with the default 2 km cell size and 1 km terrain profile spacing showed the maximum amount of new interference created to any authorized post-auction Class A or full-service post-auction baseline facility in the LMS database dated September 24, 2019 was under 0.5%.

Compliance with 73.622(i):

The proposed facility is an auxiliary antenna facility that will operate on the channel assigned to WNJU with coverage not exceeding that of the WNJU post-auction application for license to cover construction permit (File Number 0000079780).

Compliance with 73.623(e):

Not applicable. This application does not change the assigned channel or location of the authorized station.

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(continued)**

Broadcast Facility

Compliance with 73.625:

The proposed facility will place a 48 dB μ v/m principle community contour over Linden, NJ, the community of license for WNJU and over New York, NY, the community of license for WNBC, which is sharing the channel. See the "WNJU-WNBC Contours" map, attached.

Compliance with 73.1030:

A TVStudy analysis did not show a requirement for notification or coordination with any facility listed in Section 73.1030.

Compliance with 73.1125

The main WNJU and WNBC telephone numbers are not a toll call from each station's community of license.

Prepared by Doug Lung
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(continued)**

