**Comprehensive Engineering Exhibit**
**250-Mile Window Application**
**W254CM Washington, NJ**
**Facility ID No. 144779**

The subject construction permit was applied for during the 2003 FM Translator window (the "Auction 83 FM Translator Window"), and is scheduled to expire on June 6, 2017. The Commission determined in its First Report and Order in Revitalization of the AM Radio Service, FCC 15-242 at n.36 (rel. Oct. 23, 2015), that waivers of Auction 83 FM Translator Window construction permit deadlines for permits to be modified for association with an AM station in the AM station FM translator modification windows are presumptively in the public interest, provided that the AM station licensee commits to prompt FM translator station construction and initiation of broadcast operations. The AM station/FM translator station licensee(s) here are committing to prompt FM translator station construction and initiation of broadcast operations upon the grant of the requested FM translator modification.

This exhibit is for a minor modification of W254CM, facility ID 144779 which is seeking a change in antenna location, change in antenna height, channel, antenna type and a change in power. The proposed facility will be a fill-in translator for WLAN (AM) Lancaster, PA

Figure 1 is a map showing the proposed location is within the 250 mile radius from the presently permitted facility.

It is proposed to locate the transmit antenna 63 meters above ground on a building rooftop in Lancaster PA. It is proposed to utilize a Shively 6020, single bay vertically polarized directional antenna with an ERP of 0.250KW.

Below as Figure 2 is a spacing study from which it can be determined that this proposal is within the protected contour of W233CH. 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 facility of W233CH is a 3rd adjacent channel, which is to be afforded protection from signals 40 dB stronger.

As W233CH is co-located on the same structure as this proposal at a nearly identical height, with the same effective radiated power, there are no areas where either facility will produce a level 40db higher than the other. Thus, compliance with Section 74.1204(d) is met.

Figure 3 is a map showing the contours of this proposal and that of the primary station 2mV/m contour along with its 25 mile radius.

**RF Radiation Compliance**

The proposed location is on a building rooftop. Therefore, the licensee will, upon completion of construction and during the equipment test period, make proper radiofrequency electromagnetic (RF) field strength measurements on the roof and throughout the building to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. Access will be restricted to prevent the exposure to RF fields in excess of the FCC Guidelines (OET Bulletin No. 65, Edition 97-01, August 1997). Any areas found to exceed the recommended guidelines will be clearly marked with appropriate visual warning signs.

The applicant will cooperate with other users of the 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 as necessary for maintenance or inspection.

**Figure 1. 250 Mile Radius**

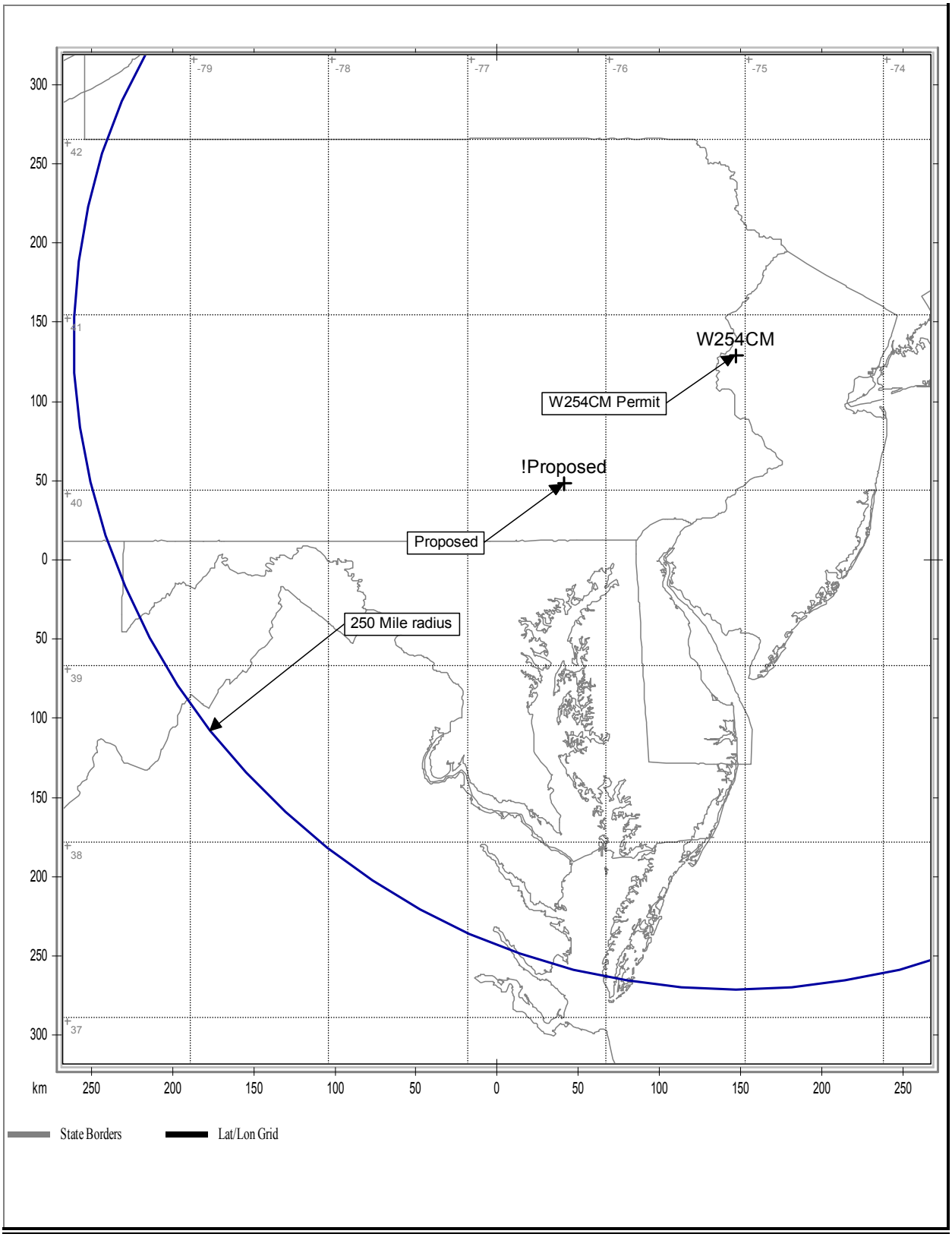

**Figure 2. Spacing Study**

**Comstudy 2.2 Search of Channel 226 (93.1 MHz Class D) at 40-02-17.0 N, 76-18-23.0 W**

| Callsign | State | City | Freq | Channel | ERP_w | Class | Status | Distance_km | Clr |
|---|---|---|---|---|---|---|---|---|---|
| W223CH | PA | LANCASTER | 92.5 | 223 | 250 | D | LIC | 0.03 | -53.83 dB |
| WPOC | MD | BALTIMORE | 93.1 | 226 | 16000 | B | LIC | 91.83 | 1.35 dB |
| WSTW | DE | WILMINGTON | 93.7 | 229 | 47100 | B | LIC | 70.83 | 4.75 dB |
| WMMR | PA | PHILADELPHIA | 93.3 | 227 | 16500 | B | LIC | 97.68 | 5.73 dB |
| WMMR | PA | PHILADELPHIA | 93.3 | 227 | 25000 | B | LIC | 98.3 | 6.50 dB |
| WONN-FM | PA | STARVIEW | 92.7 | 224 | 700 | A | LIC | 42.39 | 6.37 dB |
| WPOC | MD | BALTIMORE | 93.1 | 226 | 19500 | B | LIC | 91.81 | 6.33 dB |
| W225CF | PA | DENVER | 92.9 | 225 | 10 | D | CP | 31.08 | 7.21 dB |
| WPOC | MD | BALTIMORE | 93.1 | 226 | 12000 | B | LIC | 91.81 | 8.44 dB |
| WSTW | DE | WILMINGTON | 93.7 | 229 | 41000 | B | LIC | 70.75 | 8.01 dB |
| WPOC | MD | BALTIMORE | 93.1 | 226 | 12000 | B | LIC | 91.81 | 8.44 dB |
| WWKL | PA | MECHANICSBURG | 93.5 | 228 | 1250 | A | LIC | 51.06 | 10.68 dB |
| WXTU | PA | PHILADELPHIA | 92.5 | 223 | 15000 | B | LIC | 91.25 | 13.46 dB |
| W226AS | PA | SHERMANS DALE | 93.1 | 226 | 55 | D | LIC | 81.76 | 13.56 dB |
| WXTU | PA | PHILADELPHIA | 92.5 | 223 | 2900 | B | LIC | 91.32 | 15.15 dB |
| WXTU | PA | PHILADELPHIA | 92.5 | 223 | 11500 | B | LIC | 91.28 | 19.12 dB |
| WMGS | PA | WILKES-BARRE | 92.9 | 225 | 5300 | B | LIC | 132.25 | 20.25 dB |
| WPAT-FM | NJ | PATERSON | 93.1 | 226 | 5400 | B | LIC | 208.6 | 20.73 dB |
| W226AA | PA | EASTON | 93.1 | 226 | 150 | D | LIC | 118.61 | 20.98 dB |
| WMGS | PA | WILKES-BARRE | 92.9 | 225 | 6200 | B | LIC | 132.28 | 21.83 dB |
| WPAT-FM | NJ | PATERSON | 93.1 | 226 | 7500 | B | LIC | 212.47 | 22.61 dB |
| WPAT-FM | NJ | PATERSON | 93.1 | 226 | 4000 | B | APP | 212.2 | 22.08 dB |
| WPAT-FM | NJ | PATERSON | 93.1 | 226 | 22000 | B | LIC | 201.43 | 24.32 dB |
| WBZD-FM | PA | MUNCY | 93.3 | 227 | 1700 | B1 | LIC | 141.39 | 28.87 dB |
| WQYX | PA | CLEARFIELD | 93.1 | 226 | 1700 | B1 | LIC | 219.53 | 29.56 dB |
| WYPM | PA | CHAMBERSBURG | 93.3 | 227 | 350 | A | LIC | 123.25 | 30.99 dB |
| WBZD-FM | PA | MUNCY | 93.3 | 227 | 420 | B1 | LIC | 141.39 | 31.26 dB |
| WBZD-FM | PA | MUNCY | 93.3 | 227 | 420 | B1 | LIC | 141.39 | 31.26 dB |
| WINC-FM | VA | WINCHESTER | 92.5 | 223 | 21500 | B | LIC | 190.5 | 32.83 dB |
| WINC-FM | VA | WINCHESTER | 92.5 | 223 | 22000 | B | LIC | 190.5 | 32.64 dB |
| WEZW | NJ | WILDWOOD CREST | 93.1 | 226 | 4100 | A | LIC | 173.07 | 32.60 dB |
| WQYX | PA | CLEARFIELD | 93.1 | 226 | 3000 | B1 | LIC | 212.87 | 32.33 dB |
| WQYX | PA | CLEARFIELD | 93.1 | 226 | 3000 | B1 | LIC | 212.99 | 32.26 dB |
| WINC-FM | VA | WINCHESTER | 92.5 | 223 | 22000 | B | LIC | 190.47 | 32.64 dB |
| WFLS-FM | VA | FREDERICKSBURG | 93.3 | 227 | 50000 | B | LIC | 215.09 | 35.06 dB |
| W227BA | PA | BEAR CREEK | 93.3 | 227 | 10 | D | LIC | 132.25 | 36.88 dB |
| WIBF | PA | MEXICO | 92.5 | 223 | 310 | A | LIC | 118.58 | 37.11 dB |
| WRDX | DE | SMYRNA | 92.9 | 225 | 1700 | A | LIC | 112.65 | 37.89 dB |
| W280CP | PA | WAGONTOWN | 103.9 | 280 | 5 | D | LIC | 39.68 | 39.7 |
| WXCY | MD | HAVRE DE GRACE | 103.7 | 279 | 33000 | B | LIC | 54.89 | 39.9 |

**Figure 3. Contour Map**