

TECHNICAL SUMMARY
APPLICATION FOR CONSTRUCTION PERMIT
TELEVISION STATION WPXR-TV
ROANOKE, VIRGINIA
CHANNEL 27 345 KW (MAX-DA) 622 M HAAT

1. The instant application is the initial 90-day application for the reassigned facilities of WPXR-TV, Roanoke, VA (Channel 27). The proposed WPXR-TV facility will employ the existing top-mounted broadband antenna with no physical changes in the installation. The existing antenna is a Dielectric model TUP-SP4-8S-1, which will operate on Channel 27. However, operation of the antenna on Channel 27 will result in an altered azimuth pattern due to the shift in frequency.

2. It is noted that the antenna radiation center height above average (HAAT) was re-calculated considering all changes to the value in agreement with that given by the FCC's *TVStudy* analysis software.

3. As a result of the altered Channel-27 azimuth pattern, the maximum effective radiated power (ERP) was reduced to 345 kW to maintain the predicted service area of the proposed facility within 1% of the WPXR-TV baseline reassignment facility listed in the FCC's Closing and Channel Reassignment (CCR) *Public Notice*.

4. However, due to the pattern change and ERP reduction necessary for compliance with the predicted service area requirement, the proposed WPXR-TV facility is not compliant with the 95% population service requirement relative to the CCR baseline facility as outlined in the CCR. A *TVStudy* Analysis indicates that the proposed facility will result in terrain-limited population service of 93% relative to the terrain-limited service for the reassignment baseline. See attached *TVStudy* Analysis exhibit. Because of the circumstances of the odd pattern shape and the change due to frequency, the 1% extension criteria and the 95% population service criteria are mutually exclusive in that one cannot be achieved while meeting the other.

5. The instant proposal is compliant with the principal city coverage requirements of Roanoke. This is illustrated in the Predicted Coverage Contours exhibit (Figure 1).