



Kessler and Gehman Associates
Consultants • Broadcast • Wireless

**APPLICATION FOR
SPECIAL TEMPORARY
AUTHORITY FOR A
TRANSITIONING
TELEVISION BROADCAST
STATION**

CALL SIGN: WNGH-TV
FACILITY ID: 23942
LOCATION: CHATSWORTH, GA

Prepared For:

Georgia Public
Telecommunications
Commission
260 14th St Nw
Atlanta, GA 30318

Prepared By:

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1.0 PROPOSED SPECIAL TEMPORARY AUTHORITY

Kessler and Gehman Associates, Inc. has been authorized by Georgia Public Telecommunications Commission, licensee of WNGH-TV to prepare an engineering Special Temporary Authority (STA) to operate with an increased antenna height and reduced power relative to its Construction Permitted (“CP”)¹ facilities. Upon the review of the WNGH-TV facility as built in preparation for a license to cover filing, it was discovered that the permitted antenna was installed higher than permitted which also produced an elevated overall structure height. The CP specifies an antenna center of radiation of 88.1m AGL and an overall tower height of 100.9m AGL; however, the facility as built has an antenna center of radiation of 95.1m AGL and the overall tower height of 104.9m. Upon making this discovery, an FAA aeronautical study was immediately filed resulting in study number 2020-ASO-4444-OE and the ASRN will be updated accordingly once the FAA makes a determination. A construction permit modification application to increase the elevations will be filed concurrently or shortly after filing the instant STA. The grant of the instant STA is in the public interest since it will allow WNGH-TV to broadcast uninterrupted while waiting for the FAA, FCC ASRN, and construction permit applications to process.

2.0 § 73.625 PREDICTED CONTOURS

Appendix B illustrates the § 73.625 predicted F(50,90) 28.0 dB μ V/m noise limited protected contour and the F(50,90) 35.0 dB μ V/m principal community coverage contour. As illustrated the 35 dB μ V/m contour completely subsumes the principal community of license as required.

The Appendix B predicted coverage contours were generated using V-Soft Probe-3 software in accordance with § 73.625(b) methodology using F(50,90) propagation curves and clearly illustrates that the proposed STA contour is 100%

¹ FCC File No.: 0000029684

subsumed by the construction permitted contour. The average terrain was extracted from three arc second terrain along eight equally spaced cardinal radials from 3km to 16km. The instant STA facility shall substantially achieve its goal of providing comparable coverage to its viewers while the construction permit is pending approval.

3.0 RADIO FREQUENCY RADIATION COMPLIANCE

A theoretical analysis has been conducted of the human exposure to radio frequency radiation (“RFR”) using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain² extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360-degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

² Terrain extraction is based upon a 3 arc second point spacing terrain database.

The resulting RFR study in Appendix C demonstrates that the peak exposure is 3.73% of the most restrictive permissible exposure threshold. Pursuant to OET Bulletin 65 concerning multiple-user transmitter sites only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is within 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility were not taken into account. The instant application is compliant with the FCC limits for human exposure to RF radiation and is excluded from further environmental processing since no changes are proposed to the tower structure in order to accommodate the proposed antenna.

A chain link fence encloses the support structure and the applicant will cooperate with any other users of the tower by reducing the power to the antenna or if necessary, completely cutting it off to protect maintenance workers on the tower.

4.0 CERTIFICATION

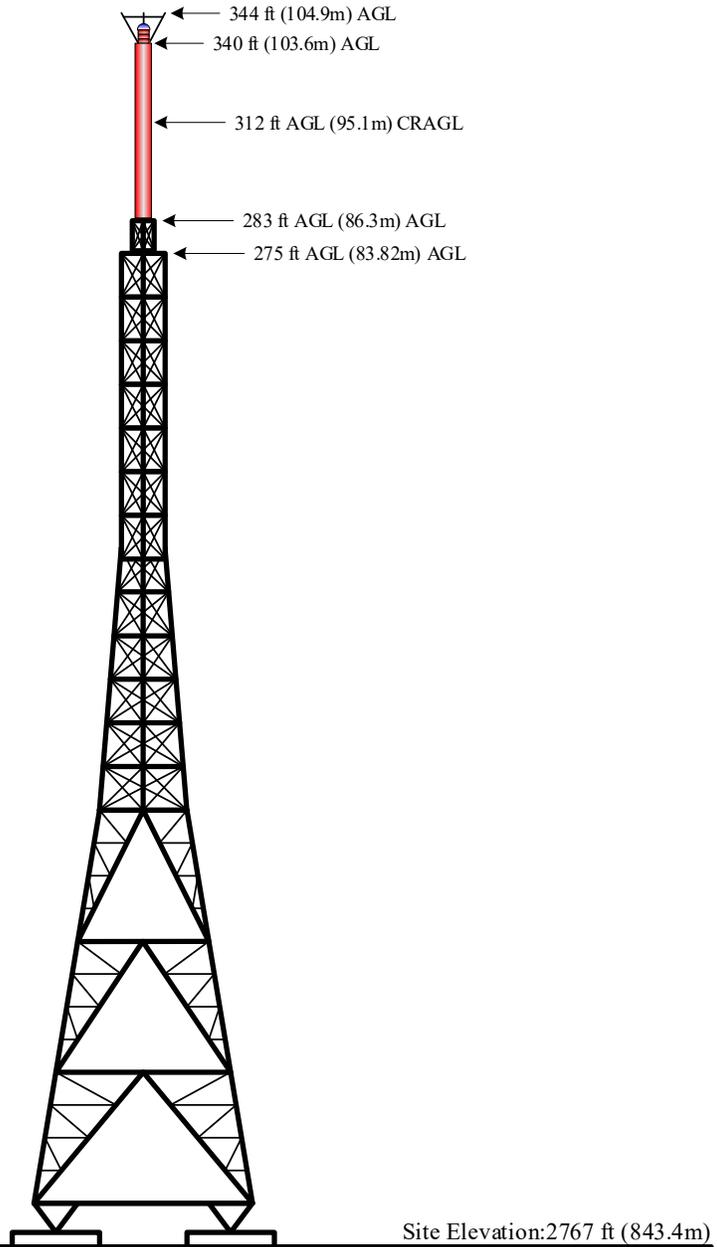
I, Ryan Wilhour, am an engineering associate of Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and have been working in the field of radio and television broadcast consulting since 1996. The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge.

Ryan Wilhour



Consulting Engineer
February 5, 2020

APPENDIX A – Tower Elevation Profile



Overall Height AGL:	104.9 m	NAD 83 Coordinates:	
Overall Height AMSL:	948.3 m	N. Latitude:	34° 45' 02.3"
Radiation Center AGL:	95.1 m	W. Longitude:	84° 42' 52.7"
Radiation Center AMSL:	938.5 m	FAA Study Number:	2020-ASO-4444-OE
Radiation Center HAAT:	573.8 m	FAA ASRN:	1018797

APPENDIX C – Far Field Exposure to RF Emissions

