



Kessler and Gehman Associates
Consultants • Broadcast • Wireless

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY FOR A BROADCAST FM STATION

CALL SIGN: WJWJ-FM
FACILITY ID: 61006
LOCATION: BEAUFORT, SC

Prepared For:

South Carolina Educational
Television Commission
1041 George Rogers Boulevard
Columbia, SC 29201

Prepared By:

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December 10, 2019

1.0 REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Kessler and Gehman Associates, Inc. has been retained by South Carolina Education Television Commission (SCETV), licensee of WJWJ-FM to prepare an engineering Special Temporary Authority (STA) to operate the Licensed¹ facility through an interim antenna mounted below the main antenna at reduced power to help facilitate the WJWJ-TV commissioning of its pre-to-post transition. The WJWJ-TV transition requires the main FM antenna to be temporarily removed so that the television antenna can be replaced.

Grant of this STA request would be in the public interest since it keeps the facility on the air while the main antenna is temporarily removed. Alternatively, without the STA the facility would be forced to go dark until the main antenna can be installed back on the tower.

2.0 PREDICTED COVERAGE CONTOUR

Appendix A demonstrates the predicted 1.0 mV/m 60dB μ V/m noise limited coverage contours in accordance with the method described in 47 CFR Section 73.215 utilizing the appropriate F(50,50) propagate curves. Appendix B clearly illustrates that the proposed STA contour is 100% subsumed by the licensed contour and thus no new interference to surrounding stations shall occur. The STA shall achieve its goal of providing comparable coverage to its viewers while the necessary work to construct the post transition WJWJ-TV facility is in progress.

¹ FCC File No.: BLED-20060221AER

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.

The resulting RFR study in Appendix B demonstrates that the peak exposure is 4.98% 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

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

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

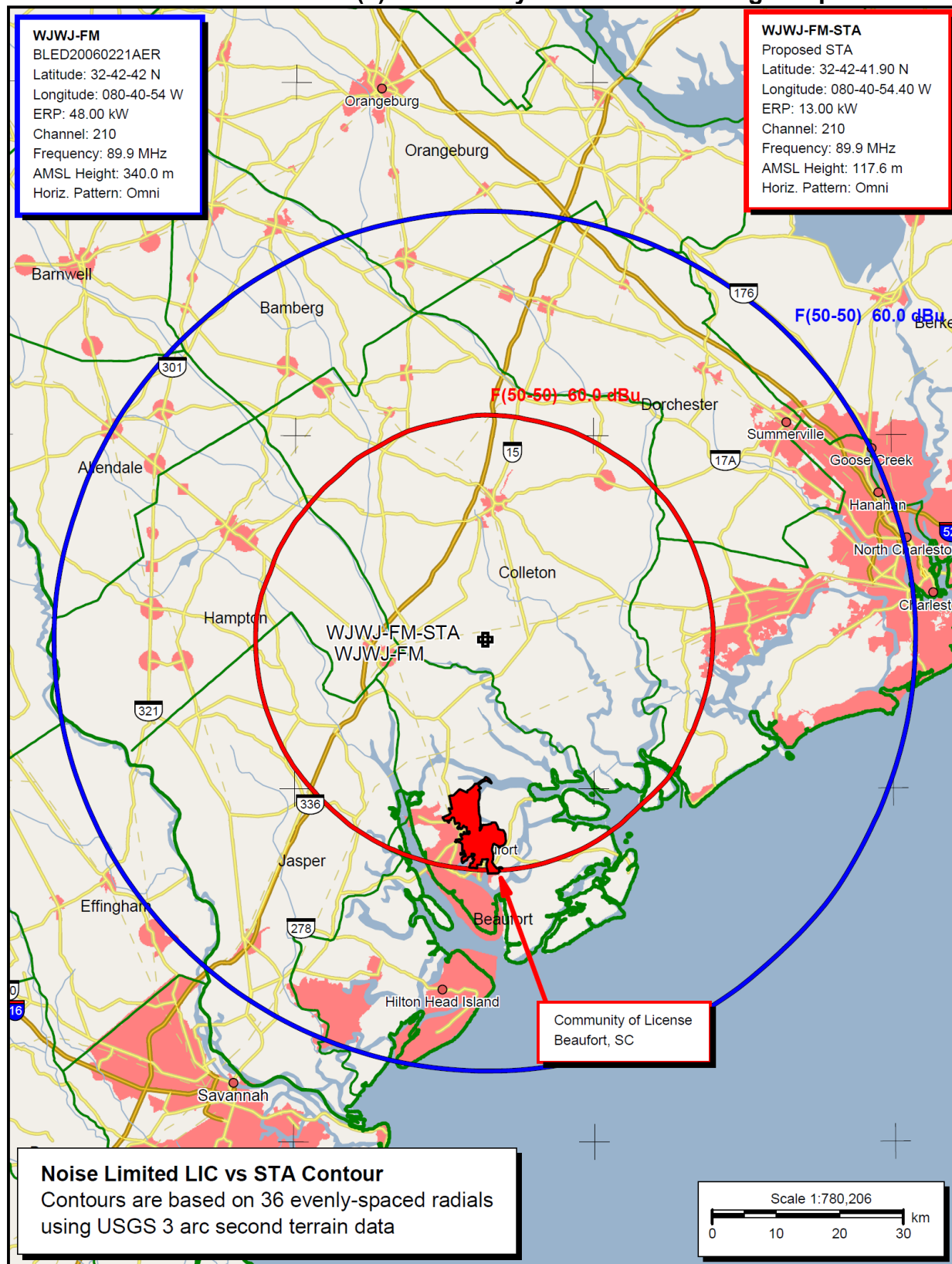
I, Ryan Wilhour, am an engineering associate of Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and have been working in the field of radio and television broadcast consulting since 1996. The foregoing statement and the report regarding the aforementioned engineering work are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

Ryan Wilhour



Consulting Engineer
December 10, 2019

APPENDIX A – Section 73.625(a) Community of License Coverage Map



APPENDIX B – Far Field Exposure to RF Emissions

