



**Kessler and Gehman Associates**  
Consultants • Broadcast • Wireless

**SPECIAL TEMPORARY  
AUTHORITY FOR AN FM  
BROADCAST TRANSLATOR**

**CALL SIGN: W229AD**  
**FACILITY ID: 21802**  
**LOCATION: TALLAHASSEE, FL**

**Prepared For:**

Florida State University  
1600 Red Barber Plaza  
Tallahassee, FL 32310

**Prepared By:**

Ryan Wilhour  
Consulting Engineer  
Kessler and Gehman Associates  
507 NW 60<sup>th</sup> Street, Suite D  
Gainesville, FL 32607-2055  
352-332-3157 Extension 3  
[ryan@kesslerandgehman.com](mailto:ryan@kesslerandgehman.com)  
[www.kesslerandgehman.com](http://www.kesslerandgehman.com)

April 2, 2020

## **1.0 PURPOSE OF SPECIAL TEMPORARY AUTHORITY**

Florida State University (“FSU”) is the licensee of an FM translator station having call sign W229AD which is currently silent<sup>1</sup> since the tower to which it was mounted too was dismantled on May 6, 2019. The station has a construction permit<sup>2</sup> to relocate the antenna at the 18m level of a 19m rooftop tower as shown in Appendix A. Upon inspection of the tower, it was discovered that it would be compromised mounting the antenna at permitted location near the top of the structure due to its despaired condition; however, it could be temporarily mounted at 6.1m without issue. It is herein proposed to operate at the Construction Permitted site with reduced power and height. Adoption of the instant STA shall serve the public interest by allowing W229AD to go back on-the-air until the tower structure is reinforced.

## **2.0 47 CFR SECTION 74.1204 AND 73.1205 ALLOCATION ANALYSIS**

Allocation studies were not prepared since the proposed STA operates at the same transmitter site and with the same antenna as the construction permit facility but with reduced power and height. As such, the interfering contour to other adjacent stations would be reduced in all directions and thus no new interference would be caused.

## **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:

---

<sup>1</sup> FCC File No.: BLSTA-20190513AAS

<sup>2</sup> FCC File No, BPFT-20190918AAW

360 radials are analyzed from the base of the tower out to a quarter mile and in 5' increments. The power density is calculated for each point at 6 feet above roof 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 5' 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 4.9% of the most restrictive permissible exposure threshold for **anyone standing on the highest point of the building which is the elevator shaft roof.**

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 rooftop, 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.

The roof top and support structure is not accessible by the general public 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 rooftop tower.

#### **4.0 CERTIFICATION**

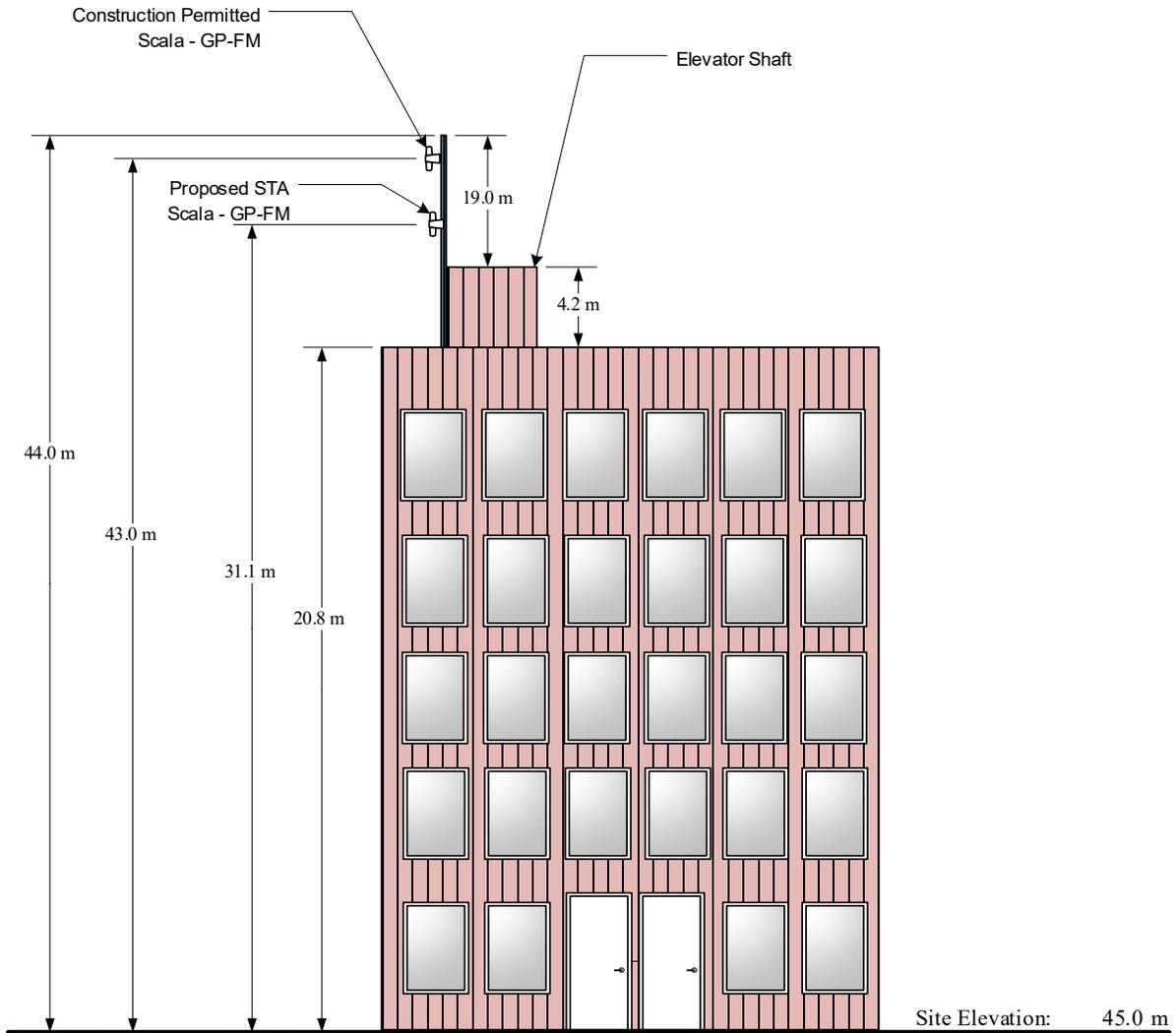
The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on April 2, 2020

Ryan Wilhour



Consulting Engineer

**APPENDIX A – Support Structure Elevation Profile**



|                        |        |                     |               |
|------------------------|--------|---------------------|---------------|
| Overall Height AGL:    | 44.0 m | NAD 27 Coordinates: |               |
| Overall Height AMSL:   | 89.0 m | N. Latitude:        | 30° 26' 22.0" |
| Radiation Center AGL:  | 31.1 m | W. Longitude:       | 84° 17' 29.0" |
| Radiation Center AMSL: | 76.1 m | ASR No.:            | N/A           |
| Radiation Center HAAT: | 48.1 m | FAA Study No.:      | N/A           |

NOTE: NOT TO SCALE

### APPENDIX B – Far Field Exposure to RF Emissions

