



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

# DIGITAL TRANSLATOR CONSTRUCTION PERMIT MINOR MODIFICATION APPLICATION

CALL SIGN: W25FP-D  
FACILITY ID: 23945  
LOCATION: YOUNG HARRIS, GA

## **Prepared For:**

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

## **Prepared By:**

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March 21, 2024

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## **1.0 EXECUTIVE SUMMARY**

Georgia Public Telecommunication Commission is the licensee of a digital low power television broadcast station having call sign W25FP-D, and facility ID 23945. W25FP-D has a construction permit<sup>1</sup> to operate on channel 25 using an directional antenna with an ERP of 15.0kW at a HAAT of 278.8m on antenna structure number 1020228. It is proposed to modify the construction permit to decrease the ERP from 15.0kW to 4.7kW. The proposed modification is considered “minor” pursuant to 74.787(b) since

- there is no change in frequency (output channel),
- there is no change in transmitting antenna location where the protected contour resulting from the change does not overlap some portion of the protected contour of the authorized facilities of the existing station as demonstrated in Appendix B,
- there is no change in transmitting antenna location of greater than 30 miles (48 kilometers) from the reference coordinates of the existing station's antenna location as demonstrated in Appendix B.

## **2.0 STATION TRANSMITTER LOCATION AND TOWER ELEVATION**

It is proposed to keep W25FP-D at its permitted location on an existing tower which has an FCC Antenna Structure Registration Number (“ASRN”) of 1020228. The instant application does not propose to increase or modify the existing support structure or ASRN

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<sup>1</sup> FCC File No.: 0000162659

### **3.0 ALLOCATION ANALYSIS**

Appendix A are the summarized results from TVStudy V2.2.5 which illustrate that there are no interference failures to other facilities.

### **4.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

#### **4.1 General Environmental Requirements**

The proposed modification does not make any changes to the tower, antenna, or transmission line; thus, none of the proposed changes will trigger any of the following bullet points:

- Require high intensity white lighting.
- Is not located in an official designated wilderness area or wildlife preserve.
- Does not threaten the existence or habitat of endangered species.
- Does not affect districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture that are listed in the National Register of Historic Places or are eligible for listing.
- Does not affect Indian religious sites.
- Is not located in a floodplain.
- Does not require construction that involves significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).

#### **4.2 Radio Frequency Radiation (RFR) 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, pursuant to the following methodology:

Terrain<sup>2</sup> extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. In this case flat terrain was used to simulate standing on the top floor of the building. 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 C demonstrates that the peak exposure is 0.25% of the most restrictive permissible exposure threshold. Pursuant to OET Bulletin 65 concerning multiple-user transmitters that produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR and require a cumulative study including all emitters in the proximity of the proposed transmitter site. The proposed facility is well below the 5.0% threshold and is not considered a significant contributor to RFR and thus has no significant effect on human exposure and is thus categorically excluded from environmental processing.

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<sup>2</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

## 5.0 CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed March 21, 2024.

Kessler and Gehman Associates, Inc.



Ryan Wilhour  
Consulting Engineer

## W25FP-D – Minor Modification Application

Young Harris, GA

### APPENDIX A – TVStudy V2.2.5 Allocation Analysis

Study created: 2024.03.21 07:40:10

Study build station data: LMS TV 2024-03-20

Proposal: W25FP-D D25 LD CP YOUNG HARRIS, GA  
File number: BLANK0000162659  
Facility ID: 23945  
Station data: User record  
Record ID: 1702  
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WCTD-LD	N22-	TX	LIC	DUCKTOWN, TN	BLTTL20070622ADD	66.5 km
No	BDWJZC-LP	N22+	TX	APP	SEVIERVILLE, TN	BLTTL19901017JE	104.2
No	WHIQ	D24	DT	LIC	HUNTSVILLE, AL	BLANK0000220387	256.5
No	WKSJ-LD	D24	LD	CP	ROME, GA	BLANK0000224306	152.4
No	WKSJ-LD	D24	LD	LIC	ROME, GA	BLANK0000205681	148.7
No	WVND-LD	D24	LD	LIC	SUWANEE, GA	BLANK0000179560	99.5
Yes	WGTA	D24	DT	LIC	TOCCOA, GA	BLANK0000001315	50.4
No	WCNC-TV	D24	DT	LIC	CHARLOTTE, NC	BLANK0000147158	236.7
No	WDDA-LD	D24	LD	LIC	CHATTANOOGA, TN	BLANK0000185266	147.2
No	WETP-TV	D24	DT	LIC	SNEEDVILLE, TN	BLANK0000120200	166.3
No	WCQT-LD	D25	LD	LIC	CULLMAN, AL	BLANK0000194911	298.0
No	W25FC-D	D25	LD	LIC	JASPER, AL	BLANK0000155760	350.4
No	WAKA	D25	DT	LIC	SELMA, AL	BLANK0000081489	420.5
No	W25ED-D	D25	LD	APP	ALBANY, GA	BLANK0000202058	386.3
Yes	WATL	D25	DT	LIC	ATLANTA, GA	BLCDT20020716AAH	139.1
No	W25FW-D	D25	LD	LIC	COLUMBUS, GA	BLANK0000221308	295.1
No	DW25EG-D	D25	LD	APP	COLUMBUS, GA	BLDTL20121226AAY	292.2
No	WBNM-LD	D25	LD	LIC	LOUISVILLE, KY	BLANK0000092952	423.3
No	WUPX-TV	D25	DT	LIC	RICHMOND, KY	BLANK0000075153	326.3
No	WJZY	D25	DT	LIC	BELMONT, NC	BLANK0000146872	238.4
No	WCIV	D25	DT	LIC	CHARLESTON, SC	BLANK0000184940	434.1
No	WZRB	D25	DT	LIC	COLUMBIA, SC	BLANK0000081456	270.0
No	W25FQ-D	D25	LD	LIC	FLORENCE, SC	BLANK0000221196	405.7
Yes	WYHB-CD	D25	DC	LIC	CHATTANOOGA, TN	BLANK0000102891	143.7
Yes	WYHB-CD	D25	DC	CP	CHATTANOOGA, TN	BLANK0000127542	143.7
No	WJFB	D25	DT	LIC	LEBANON, TN	BLANK0000147261	313.1
Yes	DDWDLE-LP	D25+	LD	APP	PIGEON FORGE, TN	BLANK0000139392	95.6
No	WLFB	D25	DT	LIC	BLUEFIELD, WV	BLANK0000123625	335.9
No	W26EM-D	D26	LD	LIC	ATHENS, GA	BLANK0000179565	109.6
No	WLVO-LD	D26	LD	LIC	CUMMING, GA	BLANK0000008263	139.1
No	WGXA	D26	DT	LIC	MACON, GA	BLANK0000074961	245.5
No	W26FB-D	D26	LD	LIC	CANTON/WAYNESVILLE, NC	BLANK0000080640	101.2
No	W26FA-D	D26	LD	LIC	MARION, NC	BLANK0000074929	216.8
No	WNEH	D26	DT	LIC	GREENWOOD, SC	BLANK0000153952	156.8
No	W26ET-D	D26	LD	LIC	CHATTANOOGA, TN	BLANK0000218896	143.7
Yes	WATE-TV	D26	DT	LIC	KNOXVILLE, TN	BMLCDT20041203AEG	118.3
No	DDWEEE-LP	N32+	TX	APP	KNOXVILLE, TN	BPTTL20120508ADS	117.6
No	DDWEEE-LP	N32+	TX	APP	KNOXVILLE, TN	BLTT19980717JA	115.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D25  
Mask: Full Service  
Latitude: 34 57 13.50 N (NAD83)  
Longitude: 83 43 48.80 W  
Height AMSL: 1025.2 m

## W25FP-D – Minor Modification Application

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Young Harris, GA

HAAT: 278.8 m  
Peak ERP: 4.70 kW  
Antenna: Dielectric-TUM-LP-C3-2/6M-1-K (ID 1008750) 270.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.50

49.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	4.70 kW	356.2 m	53.5 km
45.0	1.09	237.9	39.7
90.0	0.043	223.4	22.2
135.0	1.09	232.1	39.3
180.0	4.37	314.9	51.0
225.0	3.08	81.7	33.8
270.0	4.14	358.2	52.9
315.0	3.09	425.8	53.9

Distance to Canadian border: 752.8 km

Distance to Mexican border: 1607.9 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 217.2 degrees Distance: 151.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 293.3 degrees Distance: 1973.9 km

Study cell size: 1.00 km  
Profile point spacing: 1.00 km

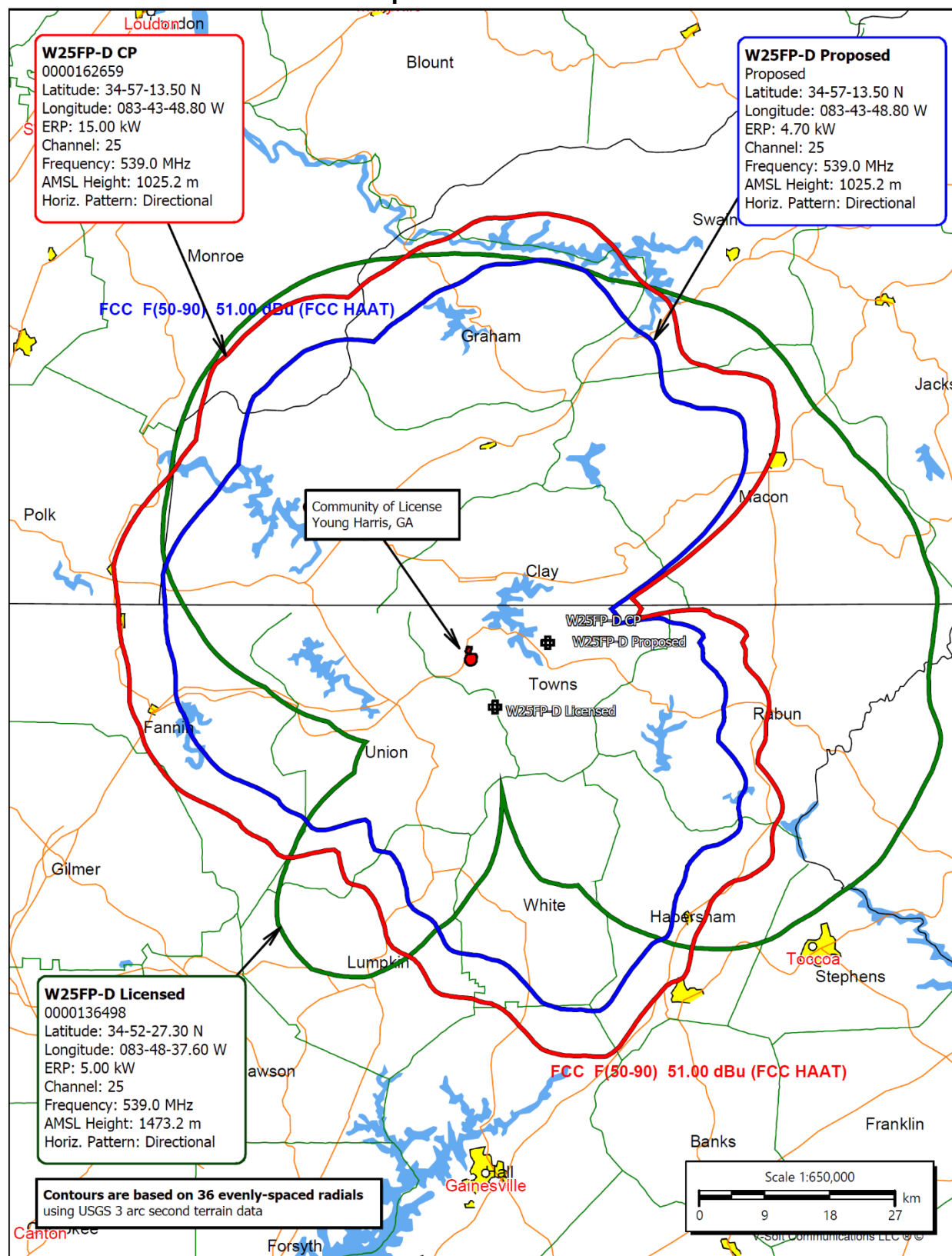
Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

Proposal causes 0.02% interference to BLANK0000001315 LIC scenario 1  
Proposal causes no interference to BLCDT20020716AAH LIC  
Proposal causes 0.00% interference to BLANK0000102891 LIC scenario 1  
Proposal causes 0.01% interference to BLANK0000127542 CP scenario 1  
Proposal causes no interference to BLANK0000139392 APP  
Proposal causes no interference to BMLCDT20041203AEG LIC

---- Below is IX received by proposal BLANK0000162659 ----

Proposal receives 0.53% interference from scenario 1  
No IX check failures found.

## APPENDIX B – Licensed and Proposed Contour



## APPENDIX C – Far Field Exposure to RF Emissions

