



Kessler and Gehman Associates
Consultants • Broadcast • Wireless

**DIGITAL TELEVISION
TRANSLATOR POST
TRANSITION CHANNEL
DISPLACEMENT
RELIEF APPLICATION
FOR W11DD-D
FACILITY ID 23928**

Hartwell & Royston, GA

Prepared For:

Georgia Public Telecommunications
Commission
260 14th St NW
Atlanta, GA 30318-5360

Prepared By:

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1.0 MINOR MODIFICATION CHANNEL DISPLACEMENT RELIEF ELIGIBILITY

Georgia Public Telecommunications Commission (“GPTC”) is the licensee of a digital Low Power Television Station (“LPTV”) having call sign W11DD-D, Facility ID 23928. W11DD-D is licensed¹ to operate on channel 11 with an ERP of 0.15KW through a directional antenna using a simple emission Mask.

Translator or LPTV stations which receive more than 2% new interference in aggregate or causes more than 0.5% new interference to the interference-free population of a full power or Class A station, are eligible for channel displacement relief². Appendix A is a study generated by TVStudy v2.2.5 which demonstrates that the licensed W11DD-D facility causes 1.87% prohibited interference to the post-transition repacked station WSPA-TV. W11DD-D is thus clearly eligible to file for channel displacement relief in the April 10, 2018 through June 1, 2018 post-incentive auction special displacement window and is the purpose of the instant application.

Pursuant to 47 CFR Section 74.787(b) the instant application is considered a “minor” change because:

- The change in frequency is related to displacement relief as outlined above.
- There is no change in transmitting antenna location such that 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 illustrated in Appendix D.
- There is no change in transmitting antenna location greater than 30 miles (48km) from the reference coordinates of the existing station’s antenna location.

¹ FCC File No.: BLDTV-20091008ACI

² See *Incentive Auction Task Force and Media Bureau Announce Post-incentive Auction Special Displacement Window April 10, 2018, Through May 15, 2018, and Make Location and Channel Data Available*, Public Notice, DA/FCC: DA-18-124 Released On: Feb 9, 2018, Section II, Paragraph 9 using a 2x2 km cell.

2.0 STATION TRANSMITTER LOCATION AND ELEVATION

It is proposed to keep W11DD-D at its licensed location on an existing tower which has an FCC Antenna Structure Registration (“ASR”) number of 1018778. The instant application does not propose to increase or modify the existing support structure.

3.0 ALLOCATION ANALYSIS

Appendix C are the summarized results from TVStudy V2.2.5. As indicated the proposed W11DD-D facility is predicted to receive 2.76% aggregate inbound interference which is acceptable to GPTC.

4.0 AM STATION PROXIMITY

No AM Stations are located within 3.2 km of the proposed facility. Pursuant to 47 C.F.R. Section 1.30002(e), the construction or extension of an antenna-supporting structure shall be considered subject to the moment method analysis and prior notification requirement; however, the instant application does not propose to extend the existing structure or build a new structure. Thus, the proposed facility is exempt from further AM analysis consideration.

5.0 INTERNATIONAL COORDINATION

The KJPH-LP transmitter site is 818.8 AND 1630.2 km from the Canadian and Mexican border respectively and will not require coordination with international authorities.

6.0 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:

Terrain³ 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 E demonstrates that the peak exposure is 0.35% 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

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

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.

7.0 CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed May 3, 2018.

Kessler and Gehman Associates, Inc.



Ryan Wilhour
Consulting Engineer

W11DD-D – Post Transition Channel Displacement Relief

Hartwell & Royston, GA

APPENDIX A – TVStudy v2.2.5 Channel Displacement Study

Study created: 2018.05.03 10:28:33

Study build station data: LMS TV 2018-05-03

Proposal: W11DD-D D11 LD LIC HARTWELL & ROYSTON, GA
File number: BLDTV20091008ACI
Facility ID: 23928
Station data: LMS TV 2018-05-03
Record ID: 240f88a32af04a61b892cf6212b6c0ea
Country: U.S.

Build options:

Protect baseline records from LPTV

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WXIA-TV	D10	DT	LIC	ATLANTA, GA	BLCDT20040302AAO	142.5 km
No	W11AU-D	D10	LD	APP	CANTON, ETC., NC	BLANK0000053211	139.6
No	W10AL-D	D10	LD	LIC	CHEROKEE, ETC., NC	BLDTV20120622ABJ	136.4
No	W10AL-D	N10	TX	CP	CHEROKEE, ETC., NC	BPTTV20120306AAG	136.4
No	W15DY-D	N10	TX	LIC	MARION, ETC., NC	BLTTV19800428IN	173.0
No	W10AD-D	D10	LD	LIC	MONTREAT, NC	BLDTV20120622ABR	155.9
No	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	201.6
No	W10AJ	N10	TX	LIC	GREENVILLE, SC	BLTTV3015	84.6
Yes	W10AJ	D10	LD	CP	GREENVILLE, SC	BLANK0000036187	84.6
Yes	W10AJ	D10	LD	LIC	GREENVILLE, SC	BLANK0000053494	84.6
Yes	WBIR-TV	D10	DT	LIC	KNOXVILLE, TN	BLCDT20090619ADG	209.0
No	WTZT-CD	D11	DC	CP	ATHENS, AL	BPDVA20130508AIV	332.6
No	WTZT-CD	D11	DC	LIC	ATHENS, AL	BLDVA20120221ABI	352.3
No	WTVM	D11	DT	LIC	COLUMBUS, GA	BLCDT20131113BGN	280.4
No	WUEO-LD	D11	LD	APP	MACON, GA	BLANK0000051625	140.8
No	WTOC-TV	D11	DT	APP	SAVANNAH, GA	BLANK0000035658	291.2
No	WTOC-TV	D11	DT	LIC	SAVANNAH, GA	BLCDT20090622ABP	291.2
No	W11AX	N11	TX	LIC	BAT CAVE, ETC., NC	BLTTV19800501IB	139.0
Yes	W11AN-D	D11	LD	LIC	BRYSON CITY, NC	BLDTV20120625AAP	126.5
Yes	W11AU-D	D11	LD	LIC	CANTON, ETC., NC	BLDTV20110502ABS	140.0
Yes	W11AJ	D11	LD	CP	FRANKLIN, NC	BDFCDTV20120504AAA	112.0
No	W11AJ	N11	TX	LIC	FRANKLIN, NC	BLTTV19811211IC	112.0
No	W11AQ	N11	TX	LIC	ROBBINSVILLE, ETC., NC	BLTTV19821008IB	131.1
No	W11AH-D	D11	LD	LIC	TRYON & COLUMBUS, NC	BLDTV20101208AAQ	123.5
No	WHMC	D11	DT	BL	CONWAY, SC	DTVBL61004	354.6

W11DD-D – Post Transition Channel Displacement Relief

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Yes	WSPA-TV	D11	DT	CP	SPARTANBURG, SC	BLANK0000034743	112.1
Yes	WSPA-TV	D11	DT	BL	SPARTANBURG, SC	DTVBL66391	112.1
No	WOPI-CD	D11	DC	CP	BRISTOL, VA/KINGSPORT, TN	BLANK0000026128	246.4
No	WOPI-CD	D11	DC	BL	BRISTOL, VA/KINGSPORT, TN	DTVBL27490	246.4
No	W21BZ	D11-	LD	APP	COLLEGEDALE, TN	BLANK0000051723	210.7
No	WJFB-LP	N11z	TX	LIC	LEBANON, TN	BLTVL19870219IA	369.9
No	WETV-CD	D11+	DC	LIC	MURFREESBORO, TN	BLANK0000004987	357.1
No	WJDP-LD	D11	LD	CP	PIGEON FORGE, TN	BPDVL20130826AHY	179.4
No	WJDP-LD	D11	LD	LIC	PIGEON FORGE, TN	BLDVL20110405ABJ	179.4
No	WVNS-TV	D11	DT	CP	LEWISBURG, WV	BLANK0000029985	433.7
No	WDNV-LD	D12	LD	LIC	Atlanta, GA	BLANK0000004309	145.4
Yes	WRDW-TV	D12	DT	LIC	AUGUSTA, GA	BLCDT20090227ABQ	142.3
No	W12DK-D	D12	LD	LIC	YOUNG HARRIS, GA	BLDTV20091208ACF	101.4
No	W12AQ	D12	LD	CP	BLACK MOUNTAIN, NC	BDFCDTV20120622AAG	155.4
No	W12AQ	N12	TX	LIC	BLACK MOUNTAIN, NC	BLTTV1804	155.0
No	W12CI	N12	TX	LIC	HOT SPRINGS, NC	BLTTV19901224JI	179.8
No	W12CI	D12	LD	CP	HOT SPRINGS, NC	BDFCDTV20120622AAC	179.8
No	W12AR	N12	TX	LIC	WAYNESVILLE, ETC., NC	BLTTV4877	130.7
No	W12AR	D12	LD	CP	WAYNESVILLE, ETC., NC	BDFCDTV20120706ABR	130.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D11
Mask: Simple
Latitude: 34 18 45.00 N (NAD83)
Longitude: 82 56 15.00 W
Height AMSL: 365.4 m
HAAT: 0.0 m
Peak ERP: 0.150 kW
Antenna: SCA-DRV-2/3HC (ID 92678) 45.0 deg
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.132 kW	136.7 m	28.8 km
45.0	0.148	158.7	31.5
90.0	0.132	182.5	32.7
135.0	0.148	178.3	33.1
180.0	0.030	155.7	22.3
225.0	0.000	133.7	4.7
270.0	0.030	112.0	19.0
315.0	0.148	118.2	27.9

W11DD-D – Post Transition Channel Displacement Relief

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Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 147 m

Distance to Canadian border: 818.8 km

Distance to Mexican border: 1630.2 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 253.6 degrees Distance: 171.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 294.7 degrees Distance: 2069.1 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

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

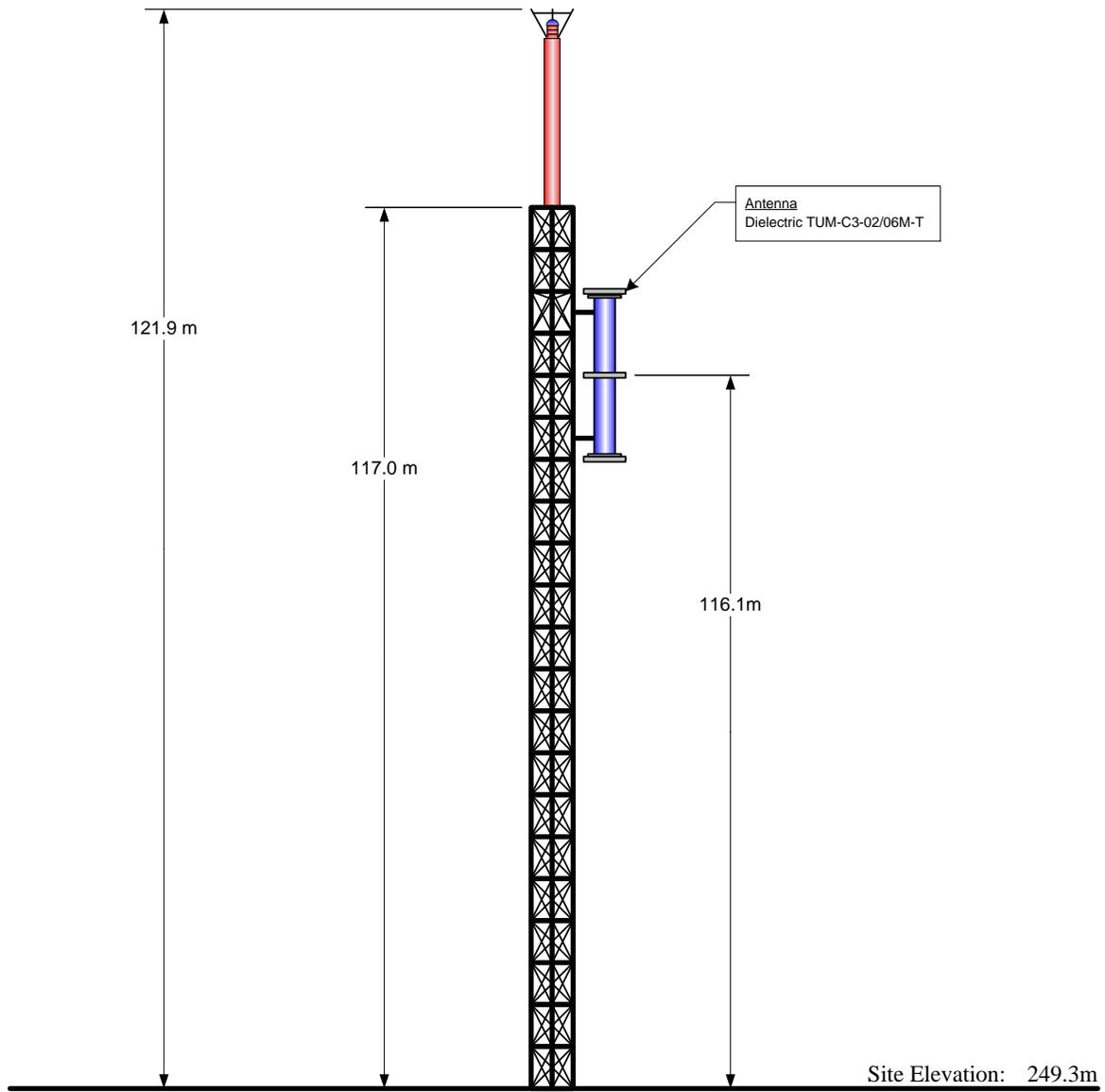
Maximum new IX to LPTV: 2.00%

**IX check failure to BLANK0000034743 CP scenario 1, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 2, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 3, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 4, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 5, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 6, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 7, 1.87% interference caused
**IX check failure to BLANK0000034743 CP scenario 8, 1.87% interference caused
**IX check failure to DTVBL66391 BL scenario 1, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 2, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 3, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 4, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 5, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 6, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 7, 1.86% interference caused
**IX check failure to DTVBL66391 BL scenario 8, 1.86% interference caused

---- Below is IX received by proposal BLDTV20091008ACI ----

Proposal receives 66.38% interference from scenario 1

APPENDIX B – Tower Elevation Diagram



Antenna CRAGL:	116.1 m
Antenna CRMSL:	365.4 m
Antenna HAAT:	147.0 m

NAD 83 Coordinates:	
N. Latitude:	34° 18' 45.0"
W. Longitude:	82° 56' 15.0"

FCC Tower Registration Number:	1018778
FAA Study Number	N/A

NOTE: NOT TO SCALE

W11DD-D – Post Transition Channel Displacement Relief

Hartwell & Royston, GA

APPENDIX C – TVStudy V2.2.5 Allocation Analysis

Study created: 2018.05.03 13:20:55

Study build station data: LMS TV 2018-05-03

Proposal: W11DD-D D32 LD LIC HARTWELL & ROYSTON, GA
File number: W11DD Channel 32
Facility ID: 23928
Station data: User record
Record ID: 390
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel
Protect baseline records from LPTV

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WPCH-TV	D31	DT	CP	ATLANTA, GA	BLANK0000025264	140.8 km
No	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	88.6
No	WPCH-TV	D31	DT	BL	ATLANTA, GA	DTVBL64033	140.8
No	WFXG	D31	DT	LIC	AUGUSTA, GA	BLANK0000013467	142.4
No	WDMA-CD	D31	DC	LIC	MACON, GA	BLDTA20140602AAA	177.1
No	WPXA-TV	D31	DT	LIC	ROME, GA	BLANK0000001920	157.1
No	W31DH-D	D31	LD	LIC	FRANKLIN, ETC, NC	BLDTT20090615AAP	118.6
No	W31AZ-D	D31	LD	LIC	HENDERSONVILLE, NC	BLANK0000011016	113.1
No	W31AZ-D	N31-	TX	LIC	HENDERSONVILLE, NC	BLTTL19940525JJ	113.1
No	W31AN-D	D31	LD	LIC	MURPHY, NC	BLDTT20090615AAV	130.6
No	W31DY-D	D31	LD	CP	PICKENS, SC	BDCDDTT20120614AAI	84.9
No	WKTC	D31	DT	CP	SUMTER, SC	BLANK0000027544	201.0
No	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	201.0
No	WBXX-TV	D31	DT	CP	CROSSVILLE, TN	BLANK0000025087	236.8
No	WBXX-TV	D31	DT	BL	CROSSVILLE, TN	DTVBL72971	236.8
No	WAXC-LD	D32	LD	CP	ALEXANDER CITY, AL	BDISDTL20120831ABQ	316.8
No	WAAY-TV	D32	DT	LIC	HUNTSVILLE, AL	BLCDT20050701ABO	332.6
No	WFOX-TV	D32	DT	LIC	JACKSONVILLE, FL	BLCDT20030328ANQ	466.1
No	WFSU-TV	D32	DT	LIC	TALLAHASSEE, FL	BLEDT20030730ACW	466.7
Yes	WSB-TV	D32	DT	CP	ATLANTA, GA	BLANK0000025134	144.6
Yes	WSB-TV	D32	DT	APP	ATLANTA, GA	BLANK0000034812	144.6
Yes	WSB-TV	D32	DT	BL	ATLANTA, GA	DTVBL23960	144.6
No	W32DU-D	D32	LD	CP	Columbus, GA	BLANK0000009479	276.4
No	W32DU-D	D32	LD	LIC	Columbus, GA	BLDTL20140226AGL	267.6
No	WPGA-TV	D32	DT	LIC	PERRY, GA	BLCDT20071213AAD	182.8
No	WDRN-LD	D32	LD	APP	FAYETTEVILLE, NC	BLANK0000035523	378.2
Yes	WAXN-TV	D32	DT	CP	KANNAPOLIS, NC	BLANK0000034696	227.7
Yes	WAXN-TV	D32	DT	BL	KANNAPOLIS, NC	DTVBL12793	227.7
No	WRPX-TV	D32	DT	CP	ROCKY MOUNT, NC	BLANK0000034408	474.7
No	WRPX-TV	D32	DT	BL	ROCKY MOUNT, NC	DTVBL20590	474.7
Yes	W05AC	D32	LD	CP	TRYON, ETC., NC	BDISDTT20120622AAB	123.5
No	WUNL-TV	D32	DT	LIC	WINSTON-SALEM, NC	BLEDT20091112ABR	326.6
No	WJWJ-TV	D32	DT	CP	BEAUFORT, SC	BLANK0000025030	274.5
No	WJWJ-TV	D32	DT	BL	BEAUFORT, SC	DTVBL61007	274.5
No	W32BJ	N32+	TX	LIC	BEAUFORT, ETC., SC	BLTT19970401JB	294.6
Yes	WDYH-LD	D32	LD	APP	Columbia, SC	BLANK0000051602	141.8
Yes	WRLK-TV	D32	DT	LIC	COLUMBIA, SC	BLEDT20090622ADI	185.1
No	WMBF-TV	D32	DT	LIC	MYRTLE BEACH, SC	BLCDT20091105AAP	361.6
No	WNPX-TV	D32	DT	CP	COOKEVILLE, TN	BLANK0000034404	412.0
No	WNPX-TV	D32	DT	BL	COOKEVILLE, TN	DTVBL28468	412.0
No	WKPT-TV	D32	DT	CP	KINGSPORT, TN	BLANK0000034339	246.4
Yes	WKPT-TV	D32	DT	BL	KINGSPORT, TN	DTVBL27504	246.5
No	WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BPPTL20120508ADS	208.7
No	WEEE-LP	N32+	TX	LIC	KNOXVILLE, TN	BLTT19980717JA	208.3
No	WEEE-LP	D32	LD	CP	KNOXVILLE, TN	BMPDTA20120605AAP	208.7
No	WUEM-LD	D33	LD	APP	ATHENS, GA	BLANK0000053614	59.3

W11DD-D – Post Transition Channel Displacement Relief

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No	WIRE-CD	D33	DC	CP	ATLANTA, GA	BLANK0000025104	145.4
No	WIRE-CD	D33	DC	BL	ATLANTA, GA	DTVBL55108	145.4
No	WNGH-TV	D33	DT	LIC	CHATSWORTH, GA	BLANK0000019162	169.9
No	WGNM	D33	DT	CP	MACON, GA	BLANK0000025320	181.4
No	WGNM	D33	DT	BL	MACON, GA	DTVBL24618	181.5
No	W08BP-D	D33	LD	APP	BEAVER DAM, NC	BLANK0000053643	140.9
No	W19HK-D	D33	LD	APP	BLACK MOUNTAIN, NC	BLANK0000053442	148.4
No	W11AN-D	D33	LD	APP	BRYSON CITY, NC	BDISDTT20090928ACU	126.5
No	W09AF-D	D33	LD	APP	SYLVA, NC	BDISDTT20090928ACA	120.1
No	WEBA-TV	D33	DT	LIC	ALLENDALE, SC	BLEDT20050915AAY	189.5
No	WRLK-TV	D33	DT	CP	COLUMBIA, SC	BLANK0000025032	185.1
No	WRLK-TV	D33	DT	BL	COLUMBIA, SC	DTVBL61013	185.2
No	WNGS-LD	D33	LD	LIC	GREENVILLE, SC	BLANK0000024363	67.5
No	WNGS-LD	D33	LD	CP	GREENVILLE, SC	BLANK0000036167	84.8
No	WPDF-CD	D33-	DC	CP	CLEVELAND, TN	BLANK0000029921	179.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32
Mask: Full Service
Latitude: 34 18 45.00 N (NAD83)
Longitude: 82 56 15.00 W
Height AMSL: 365.4 m
HAAT: 147.0 m
Peak ERP: 15.0 kW
Antenna: TUM-C3-02/06M-T 65.0 deg
Elev Pattn: Generic
Elec Tilt: 0.50

50.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	5.68 kW	136.7 m	41.5 km
45.0	8.33	158.7	44.9
90.0	7.03	182.5	45.5
135.0	7.91	178.3	45.9
180.0	8.57	155.7	44.8
225.0	0.282	133.7	25.8
270.0	0.207	112.0	22.5
315.0	10.2	118.2	43.2

Distance to Canadian border: 818.8 km

Distance to Mexican border: 1630.2 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 253.6 degrees Distance: 171.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 294.7 degrees Distance: 2069.1 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%

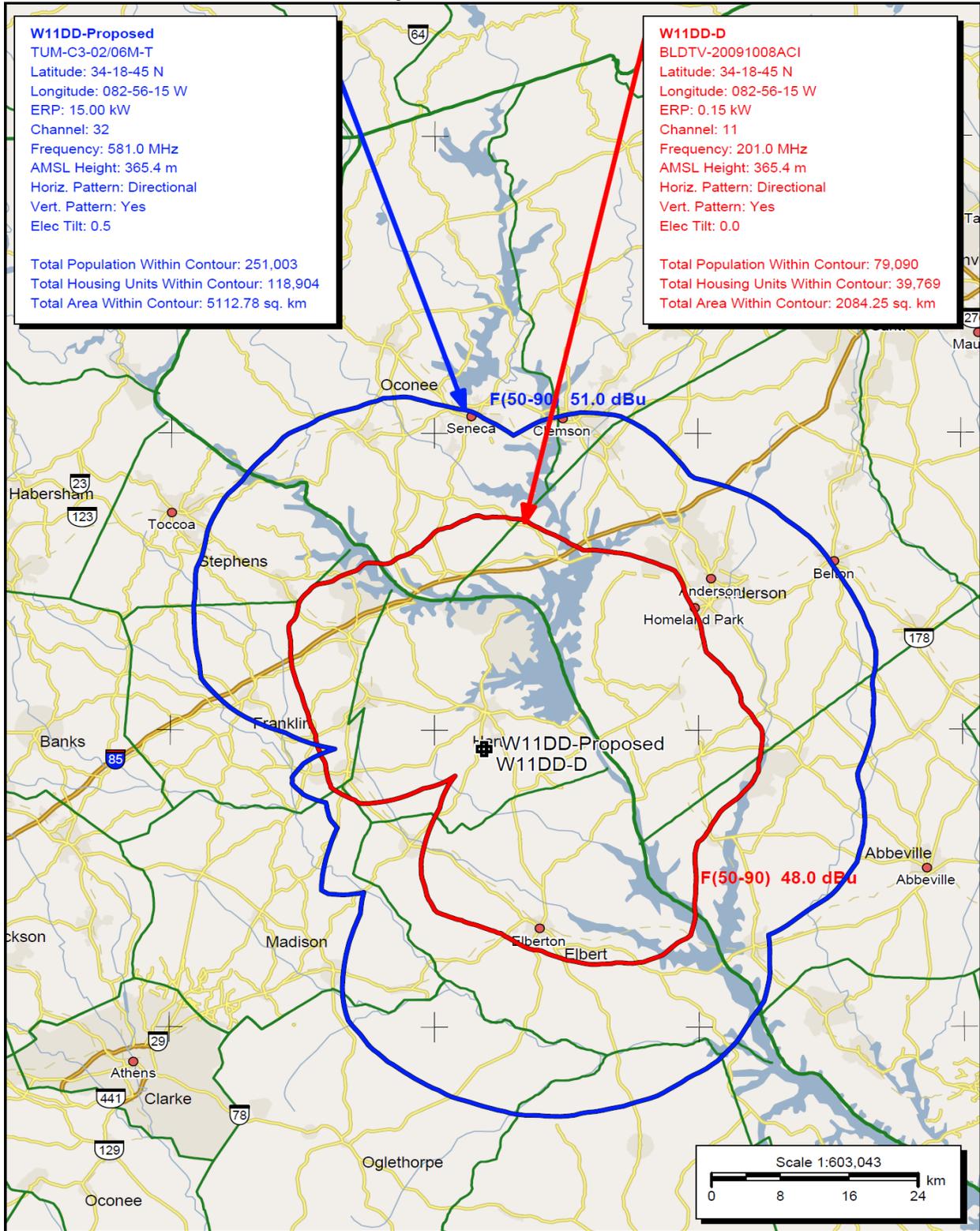
---- Below is IX received by proposal W11DD Channel 32 ----

Proposal receives 2.76% interference from scenario 1
**MX with BLANK0000034812 APP scenario 2, 2.76% interference received

W11DD-D – Post Transition Channel Displacement Relief

Hartwell & Royston, GA

APPENDIX D – Licensed and Proposed Contour



APPENDIX E – Far Field Exposure to RF Emissions

