



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

**DIGITAL TELEVISION  
TRANSLATOR POST  
TRANSITION CHANNEL  
DISPLACEMENT  
RELIEF APPLICATION  
FOR WFUN-LD  
FACILITY ID 60542**

Miami, FL

**Prepared For:**

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**Prepared On:**

April 10, 2018

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## **1.0 MINOR MODIFICATION CHANNEL DISPLACEMENT RELIEF ELIGIBILITY**

Caribevision Holdings, Inc. (“Caribevision”) is the licensee of a digital Low Power Television Translator Station having call sign WFUN-LD, Facility ID 60542. WFUN-LD is licensed to operate on channel 48 with an ERP of 15KW through a directional antenna using a stringent Emission Mask. LPTV/translator stations that currently broadcast on channels (38-51) are automatically displaced because they are in the new 600 MHz band for mobile broadband service and thus WFUN-LD is clearly eligible to file for channel displacement relief in the April 10, 2018 through May 15, 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 C.
- There is no change in transmitting antenna location greater than 30 miles (48km) from the reference coordinates of the existing station’s antenna location.

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

It is proposed to keep WFUN-LD at its licensed location on an existing tower which has an FCC Antenna Structure Registration (“ASR”) number of 1224225. The instant application does not propose to increase or modify the existing support structure and thus modification of the ASR is not necessary.

### **3.0 ALLOCATION ANALYSIS AND WAIVER REQUEST**

Appendix B are the summarized results from TVStudy V2.2.5. As indicated the proposed facility is predicted to receive 34.08% aggregate inbound interference, which is acceptable to Caribevision. Appendix B also demonstrates that the proposed facility is predicted to cause 1.84% interference to pre-transition station WLRN(TV) Facility ID 66358, FCC File No.: BLEDT-20090611ABR.

Using TVStudy V2.2.5, all UHF channels were studied in detail far beyond the Channel Study data provided by the Commission released in Public Notice DA 18-124. It was determined that there are no channels available which could replicate the licensed WFUN-LD facility and comply with the provisions of 47 CFR Section 73.3700(g). TVStudy analysis has indicated that Channel 20 allows the best replication of the Channel 48 WFUN-LD licensed facility in the post transition period, even though much coverage area is lost as illustrated in Appendix C.

It is therefore respectfully requested to waive 47 CFR Section 73.3700(g)(2)(i) requiring protection to pre-auction channel 20 WLRN(TV). Caribevision understands and agrees to a condition that it will not begin transmitting on channel 20 prior to the discontinuation of WLRN(TV) from using channel 20. Caribevision also understands that if a conditionally granted WFUN-LD facility is to remain silent for a consecutive 12-month period prior to discontinuation of operation by WLRN(TV), the Commission will consider a request for extension or reinstatement pursuant to Section 312(g) of the Act and a request for waiver of the applicable Commission rule.

### **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 1670.6km from the Mexican border and 1755.7 km from the Canadian border and this is not required to coordinate any any foreign entities.

## **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:

Terrain<sup>1</sup> 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

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<sup>1</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

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 D demonstrates that the peak exposure is 0.01% 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.

## **7.0 CERTIFICATION**

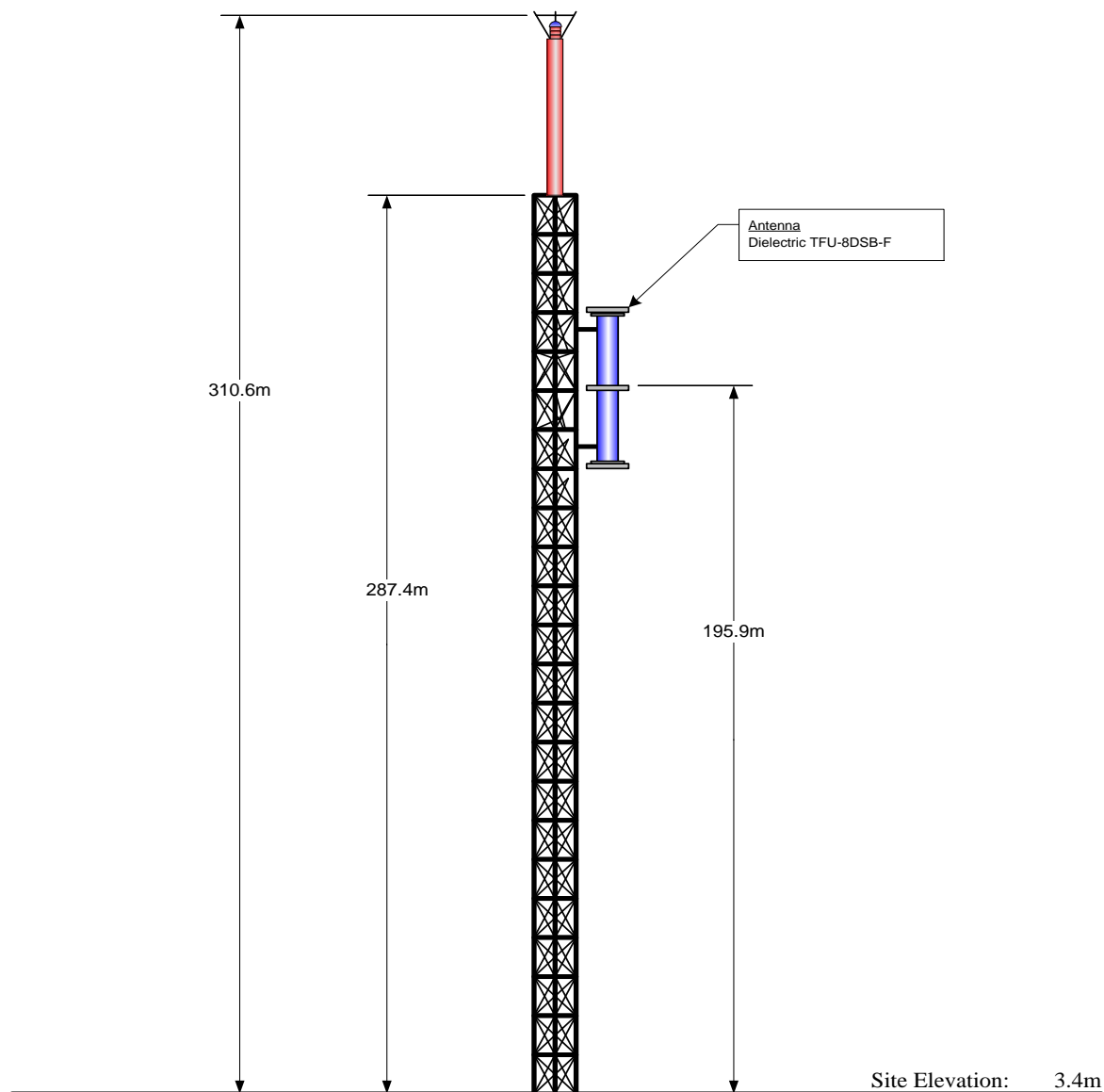
The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed April 10, 2018.

Kessler and Gehman Associates, Inc.



Ryan Wilhour  
Consulting Engineer

## APPENDIX A – Tower Elevation Diagram



Antenna CRAGL:	195.9 m
Antenna CRAMSL:	199.3 m
Antenna HAAT:	198.0 m

NAD 83 Coordinates:	
N. Latitude:	25° 59' 10.0 "
W. Longitude:	80° 11' 36.3 "

FCC Tower Registration Number: 1224225

NOTE: NOT TO SCALE

FAA Study Number 2013-ASO-4030-OE

## WFUN-LD – Post Transition Channel Displacement Relief

Miami, FL

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

Study created: 2018.04.10 16:03:24

Study build station data: LMS TV 2018-04-09

Proposal: WFUN-LD D20 LD LIC MIAMI, FL  
File number: WFUN Ch 20 TFU-8DSB-F at 195 2.21kW  
Facility ID: 60542  
Station data: User record  
Record ID: 2940  
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	WSFL-TV	D19	DT	LIC	MIAMI, FL	BLCDT20070124ABF	3.4 km
No	WSBS-CD	D19	DC	CP	MIAMI, ETC., FL	BLANK0000034105	0.0
No	WSBS-CD	D19	DC	BL	MIAMI, ETC., FL	DTVBL29547	0.0
No	NEW	D20	LD	APP	DUNNELLON, FL	BNPDTL20090825BFT	416.5
No	WLZE-LD	D20	LD	LIC	FORT MYERS, FL	BLANK0000019273	182.7
Yes	WTVX	D20	DT	CP	FORT PIERCE, FL	BLANK0000033779	127.8
Yes	WTVX	D20	DT	BL	FORT PIERCE, FL	DTVBL35575	127.8
No	WSCF-LD	D20	LD	LIC	MELBOURNE, FL	BLANK0000022690	245.3
Yes	WLRN-TV	D20	DT	LIC	MIAMI, FL	BLEDT20090611ABR	0.8
No	WFTV	D20	LD	LIC	ORLANDO, FL	BLCDT20140116ACS	330.1
No	WZXZ-CD	D20	DC	CP	ORLANDO, ETC., FL	BLANK0000034824	302.1
No	WZXZ-CD	D20	DC	BL	ORLANDO, ETC., FL	DTVBL70415	304.8
No	W20DM-D	D20	LD	CP	SEBASTIAN, FL	BNPDTL20090825BZC	196.2
No	WVEA-TV	D20	DT	CP	TAMPA, FL	BLANK0000034006	291.4
No	WVEA-TV	D20	DT	BL	TAMPA, FL	DTVBL60559	291.4
No	WARP-CD	D20	DC	LIC	TAMPA-ST. PETERSBURG, FL	BLDTA20091029ABJ	318.9
No	NEW	D20	LD	APP	WILLISTON, FL	BNPDTL20090825BUO	425.5
No	NEW	D21	LD	APP	KEY WEST, FL	BNPDTL20090825AFV	226.7
No	W21CL-D	D21-	LD	LIC	MARATHON, FL	BLANK0000048661	155.0
No	W21CL-D	N21-	TX	LIC	MARATHON, FL	BLTT20080324ADL	155.0
No	WPXM-TV	D21	DT	CP	MIAMI, FL	BLANK0000034917	3.6
No	WPXM-TV	D21	DT	BL	MIAMI, FL	DTVBL48608	0.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D20  
Mask: Full Service  
Latitude: 25 59 10.00 N (NAD83)  
Longitude: 80 11 36.30 W  
Height AMSL: 199.3 m  
HAAT: 198.0 m  
Peak ERP: 2.21 kW  
Antenna: DIE TFU-8DSB-F 195.0 deg  
Elev Pattn: Generic  
Elec Tilt: 1.00

49.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.007 kW	197.6 m	13.3 km
45.0	0.002	198.3	9.6
90.0	0.047	198.7	22.1
135.0	0.609	198.8	35.1



## WFUN-LD – Post Transition Channel Displacement Relief

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Miami, FL

180.0	2.03	197.4	41.3
225.0	1.60	197.7	40.0
270.0	0.271	197.9	30.9
315.0	0.005	197.7	12.6

Distance to Canadian border: 1755.7 km

Distance to Mexican border: 1670.6 km

Conditions at FCC monitoring station: Vero Beach FL

Bearing: 346.4 degrees Distance: 185.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 310.4 degrees Distance: 2795.8 km

No land mobile station failures found

Study cell size: 1.00 km

Profile point spacing: 1.00 km

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

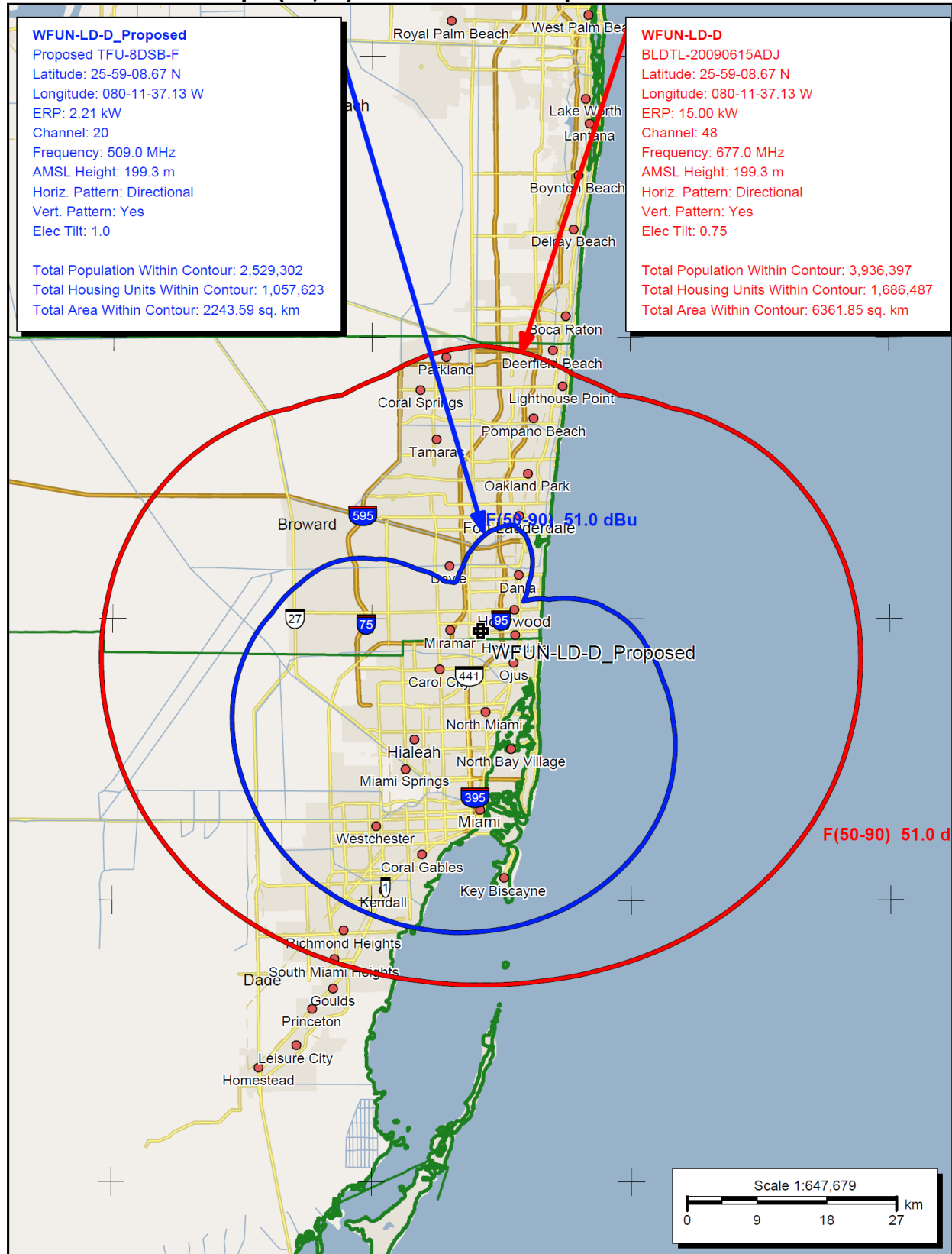
Maximum new IX to LPTV: 2.00%

\*\*IX check failure to BLEDT20090611ABR LIC scenario 1, 1.84% interference caused

---- Below is IX received by proposal WFUN Ch 20 TFU-8DSB-F ----

Proposal receives 34.08% interference from scenario 1

**APPENDIX C – 51dBμ F(50,90) Licensed and Proposed Contour**



## APPENDIX D – Far Field Exposure to RF Emissions

