

APPLICATION FOR CONSTRUCTION PERMIT

W291BT - JASPER, ALABAMA
FACILITY ID: 140355
106.1 MHz / 0.038 kW ERP ND

GLEN IRIS BAPTIST SCHOOL

APRIL, 2018

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4.3.2018

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APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **Glen Iris Baptist School** ("Glen Iris"), licensee of FM translator station W291BT at Jasper, Alabama, and are in support of their application for construction permit.¹ This application proposes a minor change to the licensed facility, by relocating it to a proposed nearby site. As a result of the relocation, certain elevation data associated with the facility will also change.

The current facility is licensed to operate on FM channel 291 with an effective radiated power of 55 Watts at a center of elevation of 186 meters above mean sea level. The proposed facility would be relocated approximately 1.02 kilometers. The proposed facility would also operate on FM channel 298, but with a lower effective radiated power of 38 Watts due to the average terrain in the vicinity of the site. The proposed center of elevation is 193.0 meters above mean sea level, or 36.0 meters above ground level.

Exhibit E-1 provides a comparison between the licensed and proposed 60 dBu service contours for W291BT. This map demonstrates the small distance over which the translator is relocated. Additionally, this map demonstrates a large are of overlap between the licensed and proposed contours.

The primary facility for the translator is FM station WGIB at Birmingham, Alabama, and licensed to Glen Iris.² Due to the location of the translator and primary station contours in relation to each other, the proposed facility would not operate as a fill-in translator. Exhibit E-2 provides a

¹ The Facility ID for W291BT at Jasper, Alabama is 140355.

² The Facility ID for WGIB at Birmingham, Alabama is 24256.

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comparison between the WGIB service contour, and the proposed W291BT service contour. The proposed ERP at the specified height above average terrain complies with the provisions of Section 74.1235 of the Commission's Rules as the following table demonstrates.

Azimuth	Average Terrain (m)	COR HAAT (m)
0	27.2	165.8
30	28.7	164.3
60	39.9	153.1
90	67.6	125.4
120	80.0	113.0
150	72.6	124.0
180	65.0	128.0
210	71.4	121.6
240	60.3	132.7
270	58.6	134.4
300	38.8	154.2
330	35.7	157.3

The proposed facility complies with the provisions of Section 74.1204 of the Commission's Rules. Due to the channel of operation, Section 74.1205 is not applicable. Exhibit E-3 is a tabular interference study for the proposed facility. This study demonstrates that the Section 74.1204 contour overlap provisions would be met to all relevant authorizations. This tabular interference study is graphically depicted in the contour map that is Exhibit E-4.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. When installed, the translator antenna would utilize a tower that does not require registration with the Commission. The tower would not involve a site location specified in Section 1.1307(a)(1)-(7) of the Commission's Rules, and would not require obstruction lighting.

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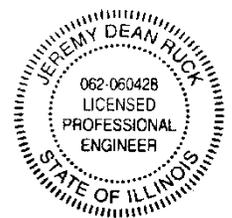
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Additionally, the proposed facility would not constitute a radiofrequency radiation hazard to persons at the site. The Commission's online *FM Model* utility returns a calculated maximum power density of $1.32 \mu\text{W}/\text{cm}^2$ at a distance of 9 meters from the tower. This value complies with the uncontrolled environment of the Commission's safety standard. The Dielectric DCR-L1 antenna is considered a "type-1" antenna, and was analyzed as such. The antenna is comprised of a single bay, and is non-directional.

Glen Iris certifies that it will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2019

Jeremy D. Ruck, PE
April 3, 2018

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W291BT.X

BLFT20050428ABS
Latitude: 33-51-01.20 N
Longitude: 087-18-49.60 W
ERP: 0.038 kW
Channel: 291
Frequency: 106.1 MHz
AMSL Height: 193.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

W291BT

BLFT20050428ABS
Latitude: 33-50-29 N
Longitude: 087-18-40 W
ERP: 0.055 kW
Channel: 291
Frequency: 106.1 MHz
AMSL Height: 186.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

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- Proposed W291BT 60 dBu Service Contour
- Licensed W291BT 60 dBu Service Contour
- Contour Overlap

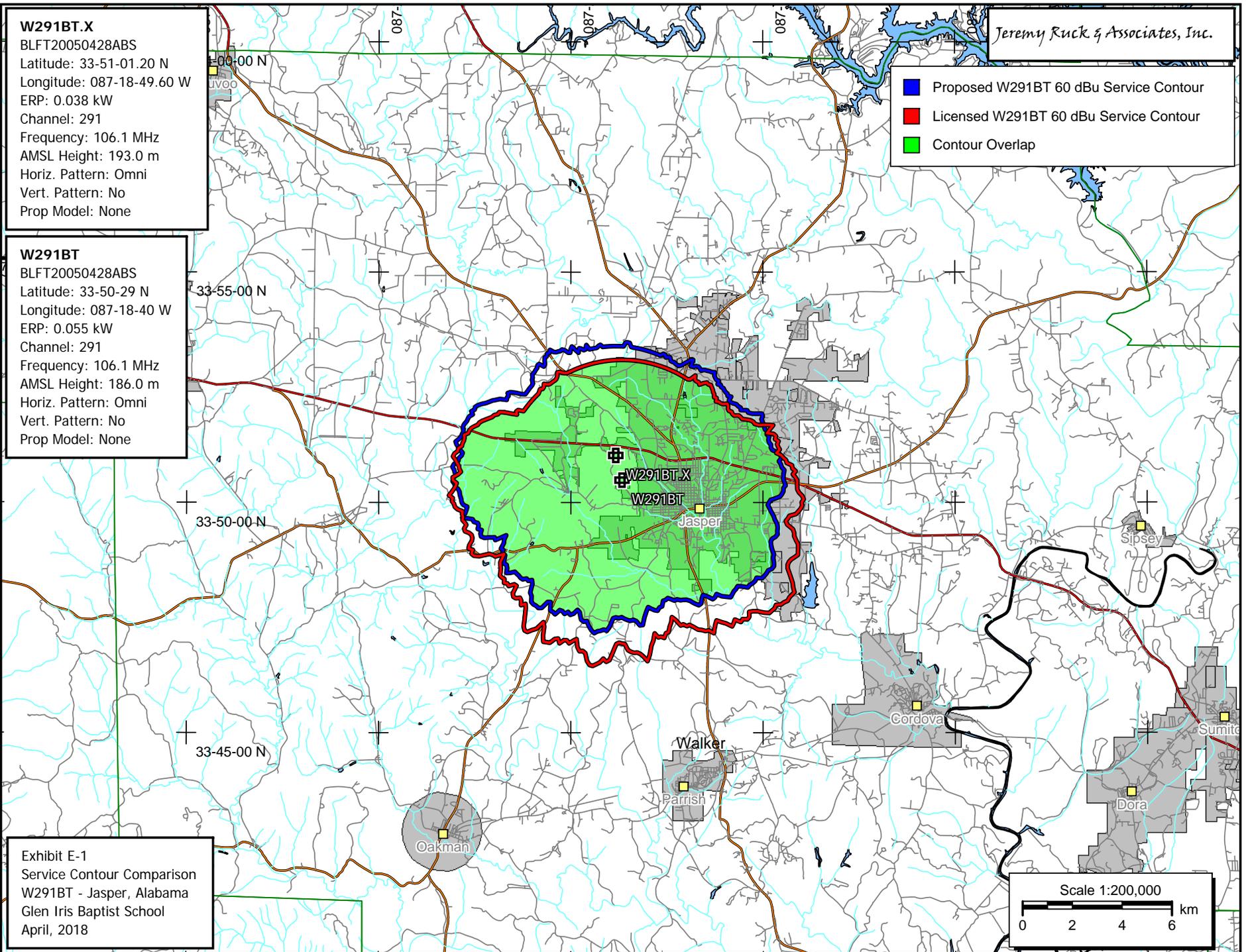
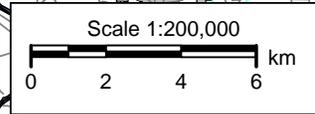


Exhibit E-1
Service Contour Comparison
W291BT - Jasper, Alabama
Glen Iris Baptist School
April, 2018



W291BT.X
 BLFT20050428ABS
 Latitude: 33-51-01.20 N
 Longitude: 087-18-49.60 W
 ERP: 0.055 kW
 Channel: 291
 Frequency: 106.1 MHz
 AMSL Height: 193.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

WGIB
 BLED20030115ABE
 Latitude: 33-24-59 N
 Longitude: 086-36-28 W
 ERP: 3.50 kW
 Channel: 220
 Frequency: 91.9 MHz
 AMSL Height: 476.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: No
 Prop Model: None

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■ Proposed W291BT 60 dBu Service Contour
 ■ WGIB 60 dBu Service Contour

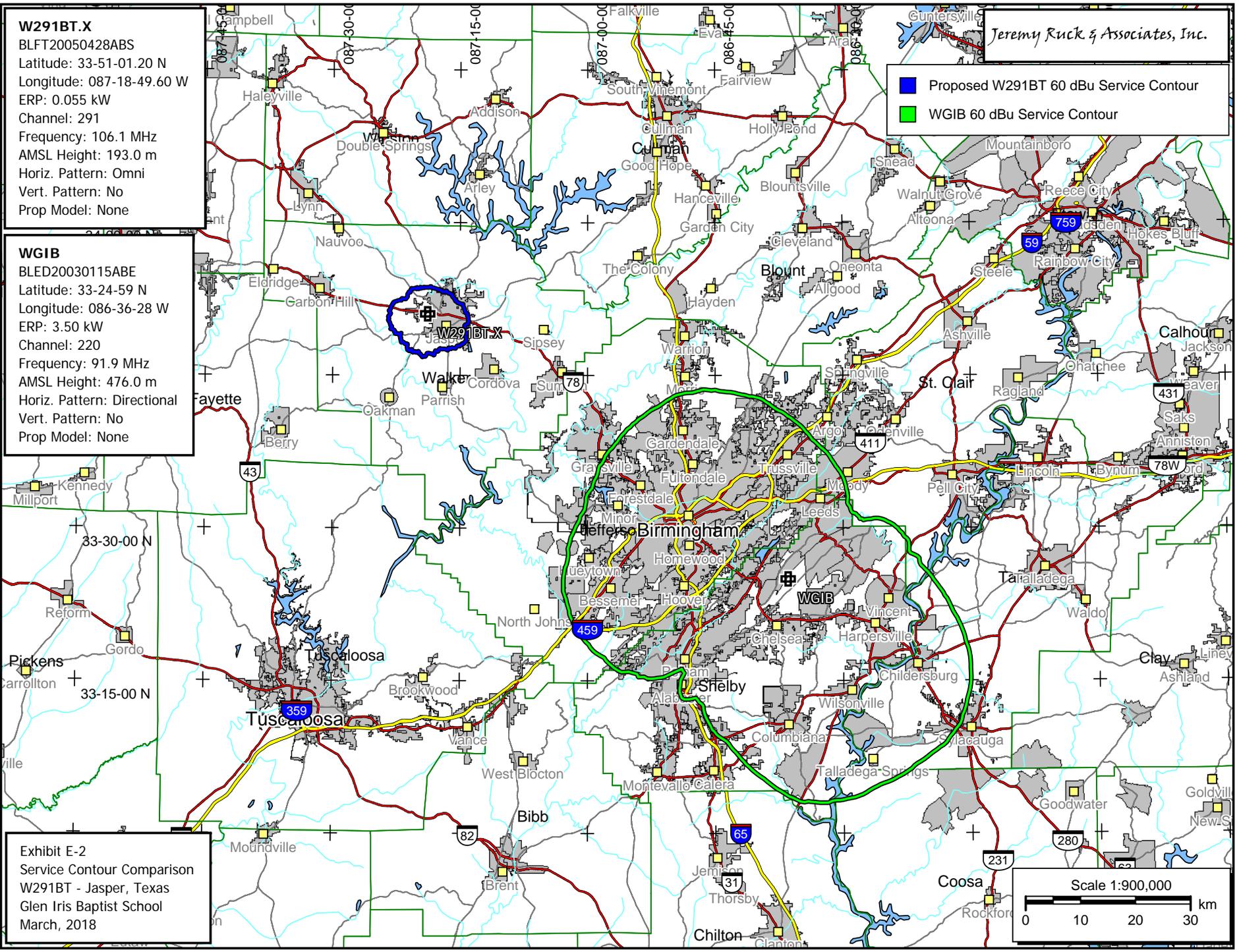
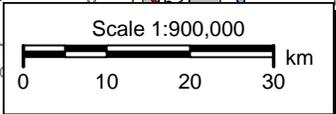


Exhibit E-2
 Service Contour Comparison
 W291BT - Jasper, Texas
 Glen Iris Baptist School
 March, 2018



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 Consulting Engineers - Canton, Illinois

Exhibit E-3 - Tabular Interference
 W291BT - Jasper, Alabama
 Average Protected F(50-50) = 5.94 km
 Omni-directional

REFERENCE
 33 51 01.2 N.
 87 18 49.6 W.

CH# 291D - 106.1 MHz, Pwr= 0.038 kW, HAAT= 53.8 M, COR= 193 M

DISPLAY DATES
 DATA 04-03-18
 SEARCH 04-03-18

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
291D Jasper	W291BT	LIC _C_ AL		166.1 346.1	1.02 BLFT20050428ABS	33 50 29.0 87 18 40.0	0.055 53	1.02 186	1.02 Glen Iris Baptist School	64.5R	-63.5M
291C3 Hartselle	WTAK-FM	LIC NCN AL		42.0 222.4	91.85 BLH19931026KB	34 27 45.0 86 38 36.0	5.400 221	100.3 460	37.1 Capstar Tx, Lic	-12.8*	37.0
291C2 Starkville	WMXU	LIC _CN MS		243.9 63.2	138.99 BLH19890131KA	33 17 38.0 88 39 27.0	40.000 153	132.7 227	50.0 Cumulus Licensing Lic	-0.3	66.2
290C3 Brookwood	WRTR	LIC ZC_ AL		193.0 12.9	72.55 BLH20150813AAJ	33 12 51.8 87 29 22.2	25.000 82	52.3 173	31.8 Capstar Tx, Lic	13.5	30.2
288C2 Hoover	WERC-FM	LIC ZCX AL		130.8 311.1	62.08 BLH20050829ACX	33 29 04.0 86 48 25.0	29.500 190	4.1 383	42.1 Capstar Tx, Lic	50.2	17.3
291D Birmingh	W291DC	LIC DC_ AL		130.1 310.3	62.30 BLFT20170130ABI	33 29 19.0 86 47 58.0	0.099	30.2 554	8.7 Board Of Trustees Of Univ	24.4	27.1
289A Addison	WQAH-FM	LIC _CX AL		23.5 203.6	55.34 BLH20140129AAJ	34 18 24.0 87 04 25.0	4.500 115	2.6 356	27.7 Abercrombie Broadcasting F	48.0	27.0
291C1 Alexander City	WSTH-FM	LIC _CN AL		124.8 305.9	209.80 BLH19950410KB	32 45 30.0 85 28 20.0	86.000 319	170.2 544	72.2 Cc Licenses, Lic	31.8	111.5
293A Vernon	WJEC	LIC _C_ AL		270.6 90.2	66.31 BMLH20001026AAB	33 51 15.0 88 01 55.0	6.000 100	2.7 240	28.1 Lamar County Broadcasting	57.0	37.8
292C3 Sheffield	WBTG-FM	LIC _CN AL		334.8 154.5	103.65 BLH19931202KF	34 41 34.0 87 47 49.0	6.000 208	54.3 386	36.7 Slatton & Associates Broad	44.3	60.2
293D Graysville	W293CM	LIC _C_ AL		138.2 318.5	60.47 BLFT20150430ADQ	33 26 37.6 86 52 47.0	0.065	0.6 448	15.0 Educational Media Foundati	52.3	44.9
292D Warrior	W292EI	LIC DC_ AL		97.0 277.4	66.20 BLFT20160119AAA	33 46 31.0 86 36 10.0	0.250	13.5 523	9.5 Way Media, Inc.	45.8	46.2
292D Tuscaloosa	W292DU	CP DC_ AL		193.7 13.6	78.98 BPFT20170410ABB	33 09 36.0 87 30 54.0	0.250	24.2 267	16.2 Tti, Inc.	47.6	53.2
292D Tuscaloosa	W292DU	LIC DC_ AL		193.7 13.6	78.98 BLFT20140529AGY	33 09 36.0 87 30 54.0	0.200 174	23.1 248	15.4 Tti, Inc.	48.7	53.7

Terrain database is FCC 30 meter, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

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BLFT20050428ABS
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AMSL Height: 193.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

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- 60 dBu F(50,50) Service Contour
- 40 dBu F(50,10) Interference Contour
- 54 dBu F(50,10) Interference Contour
- 100 dBu F(50,10) Interference Contour

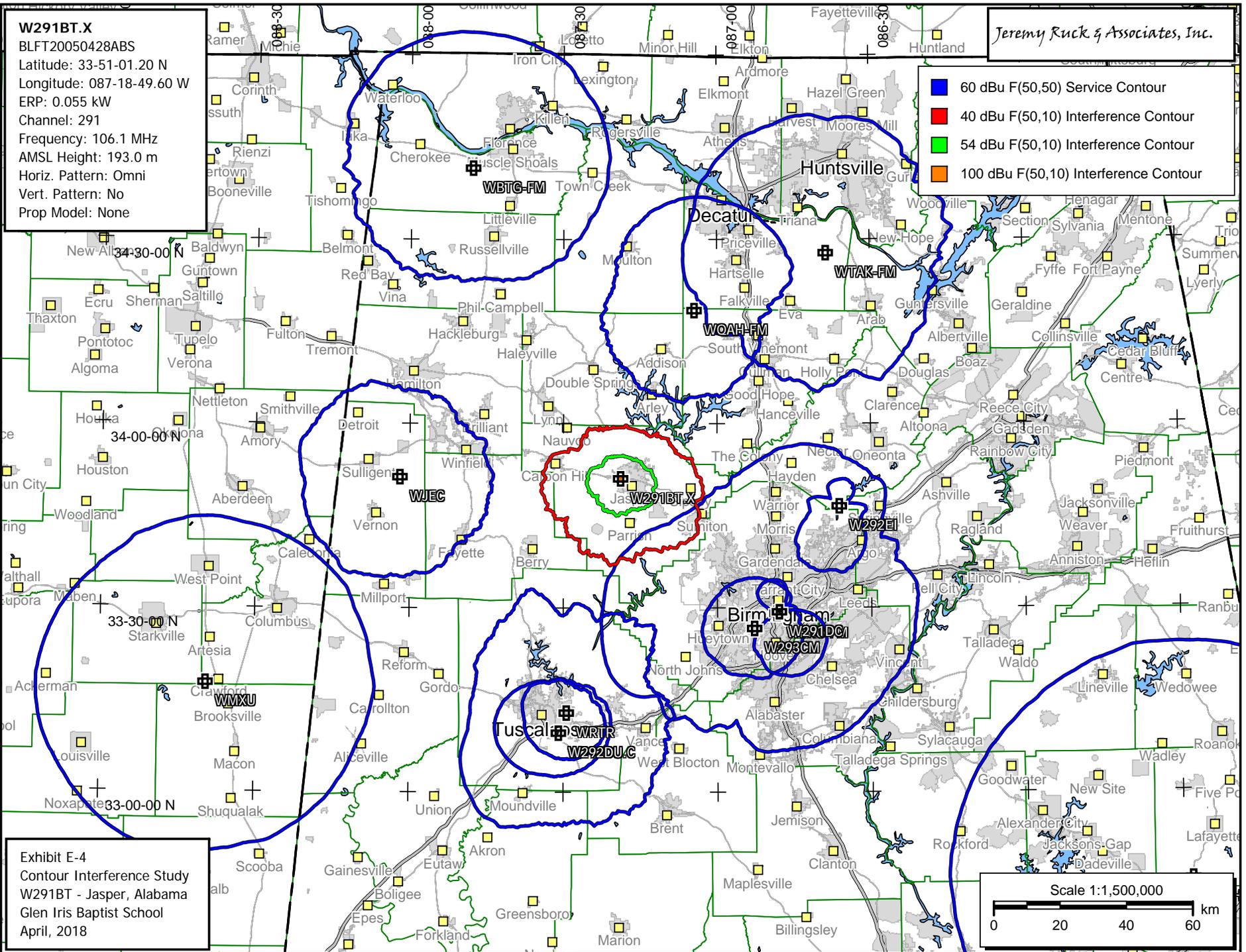


Exhibit E-4
Contour Interference Study
W291BT - Jasper, Alabama
Glen Iris Baptist School
April, 2018

