

**ENGINEERING PACKET IN SUPPORT OF AN APPLICATION  
FOR A MODIFICATION OF CONSTRUCTION PERMIT**

**WJBC-FM CH 219C3 ORANGE PARK, FL  
91.7 MHZ – 19.5 kW ERP – 113m HAAT - DIRECTIONAL**

Facility ID: 47425  
Applicant: THE RIVER EDUCATIONAL MEDIA, INC  
March 2010



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FCC Form 340 – Section VII

Statement of Carl E. Gluck

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Applicant: THE RIVER EDUCATIONAL MEDIA, INC

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I am an engineering consultant at Carl T. Jones Corporation in Springfield, VA. I am a Certified Professional Broadcast Engineer (#50261) with the Society of Broadcast Engineers. I have been authorized by the River Educational Media, Inc., to prepare this engineering statement, FCC Form 340 (Section VII), and the attached exhibits in support of an application for amendment to Construction Permit.

In this application the applicant proposes relocating its main transmitter site and utilizing a directional antenna. The applicant also proposes changing the WJBC-FM City of License from Fernandina Beach, Florida, to Orange Park, Florida. The instant application changes WJBC-FM from a Class C2 to a Class C3 NCE station.

WJBC-FM is presently licensed to serve Fernandina Beach on 91.7 MHz with 32.0 kW and a non-directional antenna (FCC File No. BLED19980626KD). With this application WJBC-FM proposes to change its community of license to Orange Park, Florida, using a directional, 2-bay, full-wave spaced panel antenna with a center of radiation 117.0 meters AMSL at an ERP of 19.5 kW (113 meters Height Above Average Terrain). The proposal is considered to be a minor change under 47 CFR 73.3571(b) of the FCC Rules (Exhibit 1 of the 307(b) showing elsewhere in this application shows overlap of the licensed F(50,50) 60 dBu contour and the proposed F(50,50) contour).

**TRANSMITTER SITE**

The proposed antenna site is an existing tower presently used by WOKV-FM (FCC File No. BMLH20030908ABP).

The proposed transmitter site is located at NAD 27 geographical coordinates:

30' 16" 35° North Latitude  
81' 33" 58° West Longitude



## **FCC TOWER REGISTRATION**

The existing tower is registered under antenna structure registration (ASR) number is 1016457. According to ASR data, the tower has an overall height of 313.2 meters above mean sea level and the site elevation is 7.9 meters above mean sea level.

## **ANTENNA SYSTEM**

The proposed antenna system will consist of a directional, 2- bay, full-wave spaced, panel antenna with a horizontal plane envelope pattern as shown in Exhibit 1. The proposed antenna satisfies the requirements of 47 CFR 73.510 & 73.316.

## **BLANKETING INTERFERENCE AND STATION INTERACTION**

In response to all complaints of blanketing interference the applicant will work to mitigate the interference in accordance with 47 CFR 73.508 and 73.318 of the Rules. The only other broadcast facility licensed on the proposed tower is WOKV-FM 293A Ponte Vedra Beach, FL (BMLH20030908AB). There are several FM and TV Broadcast facilities within 1 km of the proposed site. There are no AM Broadcast stations within 3.2 km of the proposed site (47 CFR 73.1692 is therefore satisfied). The applicant will work with the other facilities as necessary to resolve detrimental interaction of these facilities by the proposed facility, if any should occur.

## **COVERAGE CONTOURS**

Exhibit 2 is a coverage plot showing the proposed F(50,50) 60 dBu (1.0 mV/m) contour of the instant operation. The plot also shows the community of license, Orange Park, FL and the proposed studio location. This exhibit demonstrates compliance with 47 CFR 73.515 and 73.1125.

## **COMPLETE ALLOCATION STUDY**

Exhibit 3 is a tabulation of a Section 73.509 overlap study showing there is no prohibited contour overlap between WJBC-FM as proposed and other broadcast stations. The Exhibit was created using a 30 arc-second data set from the USGS National Elevation Dataset USGS 30 meter data and based upon 360 radials.

Because second adjacent channel class A station WJXR MacClenny, FL is licensed to operate in the non-reserved band the proposed WJBC-FM facility must satisfy the spacing requirements of section 73.207 spacings with respect to WJXR. Because the proposed WJBC-FM facility is more than 43 kilometers from the WJXR tower site, the instant proposal satisfies section 73.207 spacings with respect to WJXR.

Each station with less than 10 kilometers of protection is plotted in Exhibits 3A through 3F

to demonstrate the absence of section 73.509 contour overlap. In every case the requirements of 47 CFR 73.509 are satisfied.

**ENVIRONMENTAL PROTECTION ACT**

The proposed site is at an existing tower and is excluded from environmental processing under 47 CFR 1.1306.

There is one other FM Broadcast antenna on the proposed tower. Counting that station there are 9 broadcast antennae, both FM and (D)TV transmitting antennae, within 315 meters of the proposed WJBC antenna on 4 different towers. Therefore the applicant will conduct on-site radio frequency measurements to ensure the proposed facility complies with the FCC Guideline Values for RFR environments, both occupational and public.

The applicant is committed to reducing power or ceasing operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic fields in excess of the FCC's Occupational Guidelines.

**SUMMARY**

It is submitted that the proposal described herein complies fully with the rules and regulations of the Federal Communications Commission. This statement, FCC Form 340 Section VII, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

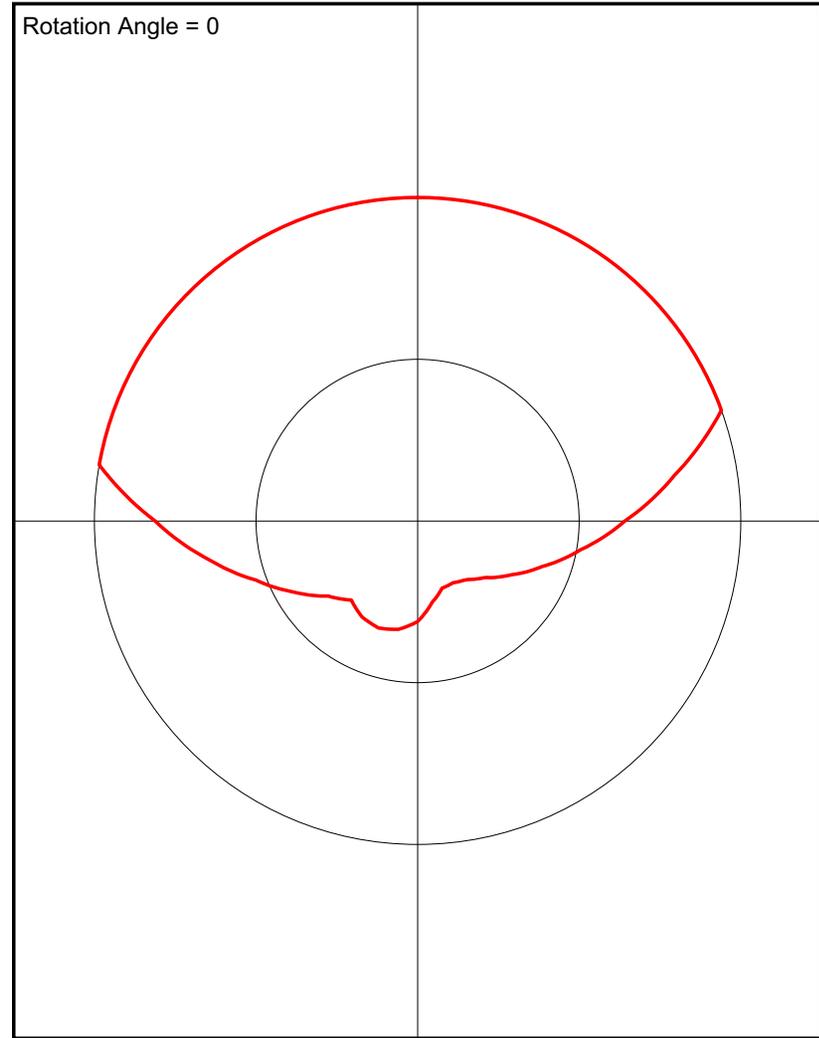


Carl E. Gluck  
Dated March 8, 2010

WJBC FM Proposed Antenna Pattern

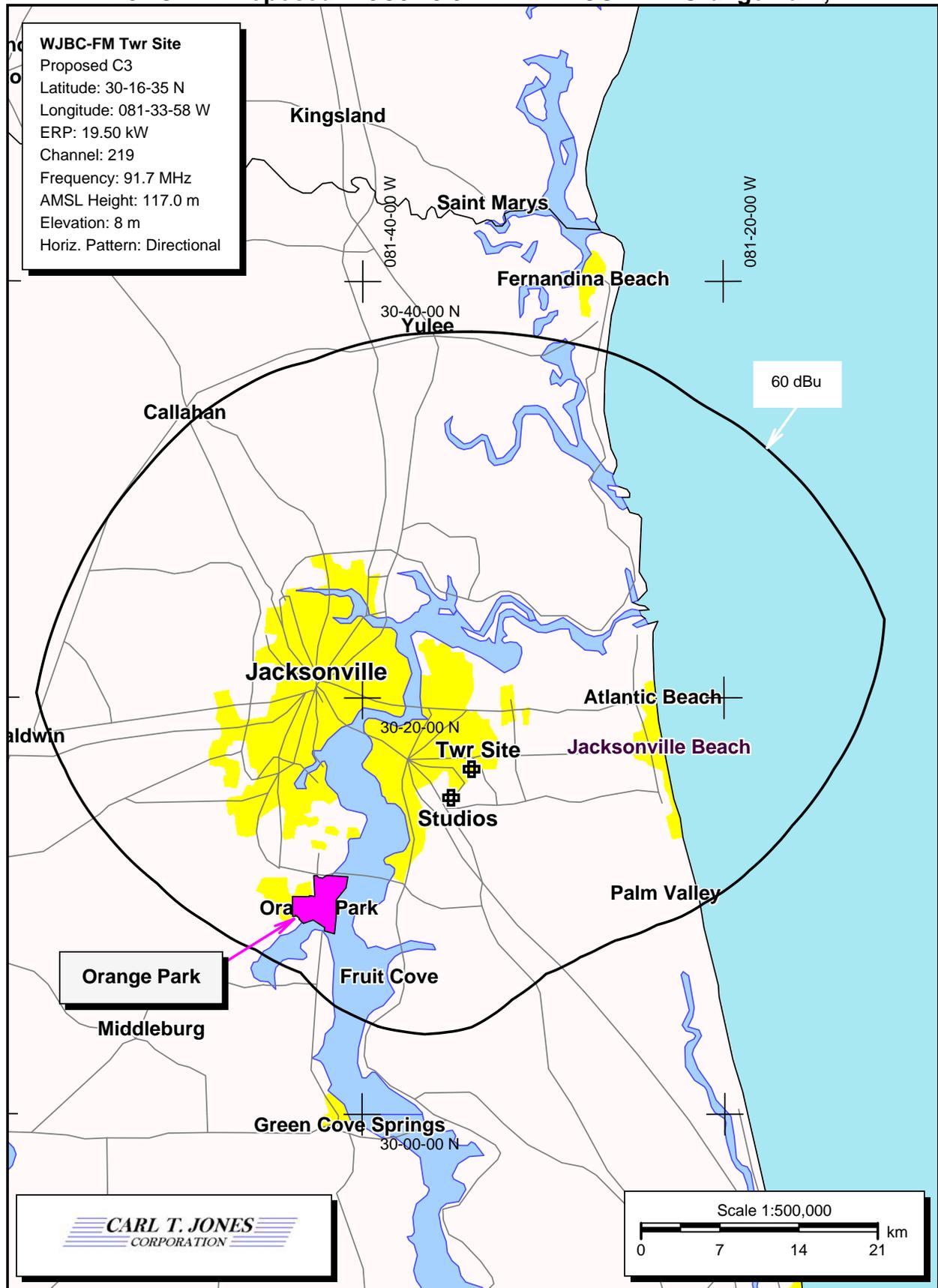
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.000
10.0	1.000
20.0	1.000
30.0	1.000
40.0	1.000
50.0	1.000
60.0	1.000
70.0	1.000
80.0	0.806
90.0	0.641
100.0	0.512
110.0	0.411
120.0	0.333
130.0	0.272
140.0	0.236
150.0	0.220
160.0	0.221
170.0	0.256
180.0	0.311
190.0	0.340
200.0	0.352
210.0	0.343
220.0	0.319
230.0	0.361
240.0	0.440
250.0	0.533
260.0	0.663
270.0	0.812
280.0	1.000
290.0	1.000
300.0	1.000
310.0	1.000
320.0	1.000
330.0	1.000
340.0	1.000
350.0	1.000



WJBC FM Orange Park, Florida  
 Proposed Antenna Pattern  
 Exhibit 1            March 2010  
 Carl T. Jones Corporation

### WJBC-FM Proposed 219C3 19.5 kW 117m COR DA Orange Park, FL



**EXHIBIT 3, WJBC FM MARCH 2010**

**WJBC Orange Park, Florida**

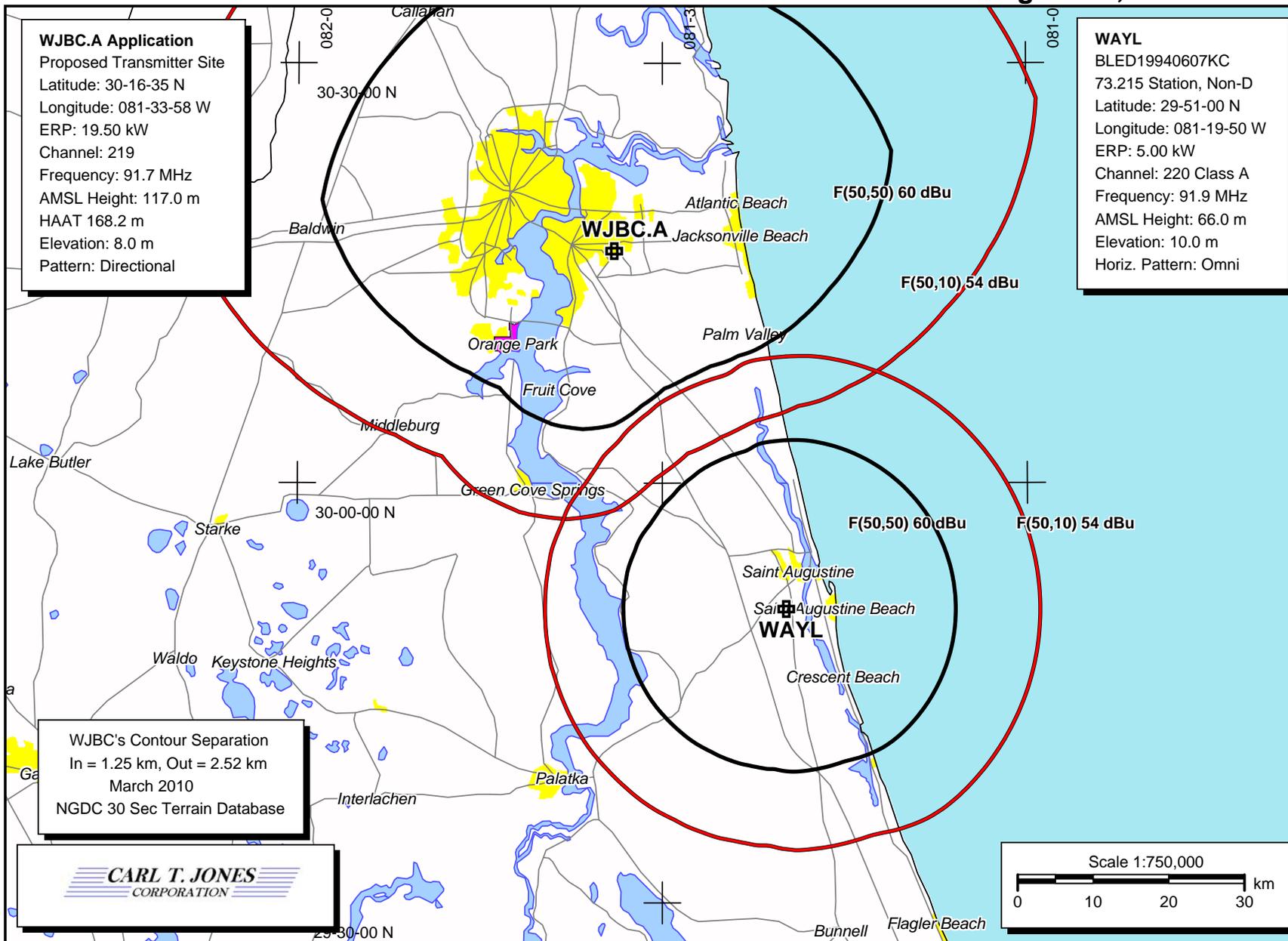
REFERENCE CH# 219C3- 91.7 MHz, Pwr= 19.5 kW DA, HAAT= 113.0 M, COR= 117 M DISPLAY DATES  
 30 16 35.0 N. Average Protected F(50-50)= 39.1 km DATA 03-06-10  
 81 33 58.0 W. Standard Directional SEARCH 03-08-10

CH CITY	CALL	TYPE ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
221C3 Macclenny	WJXR«	LIC CN FL	273.4 93.1	43.3 BLH19930218KB	30 17 54.0 82 00 55.0	25.000 100	0.4 126	7.1 Wjxr, Inc.	43.0R	0.3M
220A St. Augustine	WAYL	LIC NCN FL	154.4 334.5	52.4 BLED19940607KC	29 51 00.0 81 19 50.0	5.000 63	31.9 66	21.5 The River Educational Medi	1.1	2.5
218A Penney Farms	WFPP	CP DCX FL	217.1 36.9	58.4 BNPED20071012ATB	29 51 23.0 81 55 56.0	1.700 88	30.6 125	20.8 Calvary Chapel Of Orange P	2.5	1.3
219C3 Crescent City	1220661	APP DVX FL	176.9 356.9	101.3 BNPED20071022BLX	29 21 49.0 81 30 31.0	12.000 70	76.8 74	22.4 Westminster Academy	1.6	7.9
219A Pierson	1214347	APP DVX FL	178.4 358.4	92.8 BNPED20071022AZP	29 26 23.0 81 32 23.0	6.000 90	50.4 96	14.7 Central Florida Educationa	19.0	7.0
219A Gainesville	WJLF	LIC DCN FL	229.6 49.2	108.3 BLED19900816KA	29 38 34.0 82 25 13.0	2.000 122	71.2 151	22.8 Radio Training Network, In	10.1	8.2
219A Crescent City	990526MA	APP VX FL	176.8 356.8	95.3 BPED20071015DMF	29 25 04.0 81 30 39.0	0.550 103	54.5 109	16.4 Community Public Radio, In	17.8	8.7

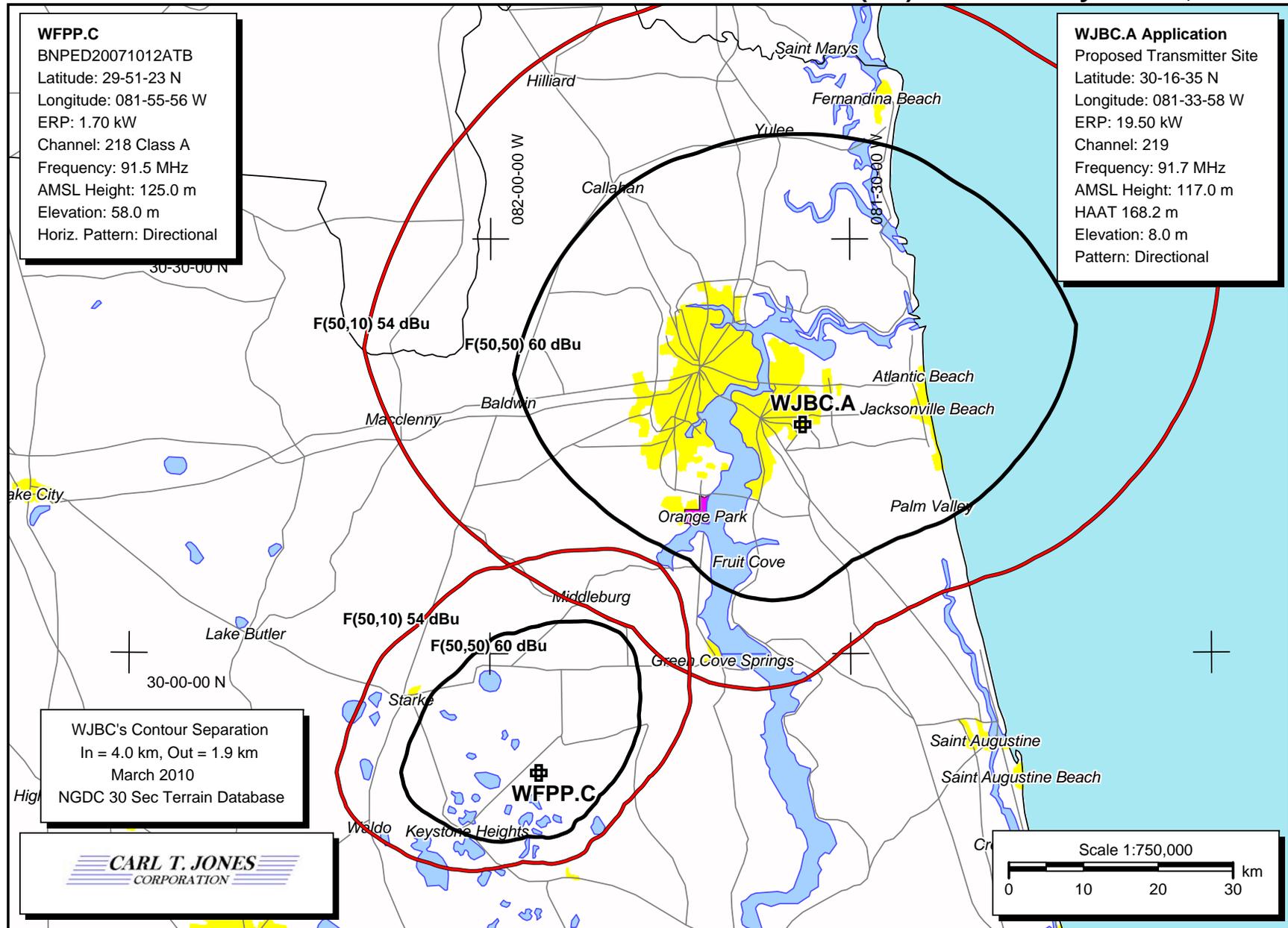
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
 In & Out distances between contours are shown at closest points. Reference Zone = 2, Co to 3rd adjacent.  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
 "\*"affixed to 'IN' or 'OUT' values = site inside protected contour.  
 « = Station meets FCC minimum distance spacing for its class.



# Exhibit 3A - Section 73.509 Contour Protection to WAYL 220A Saint Augustine, FL



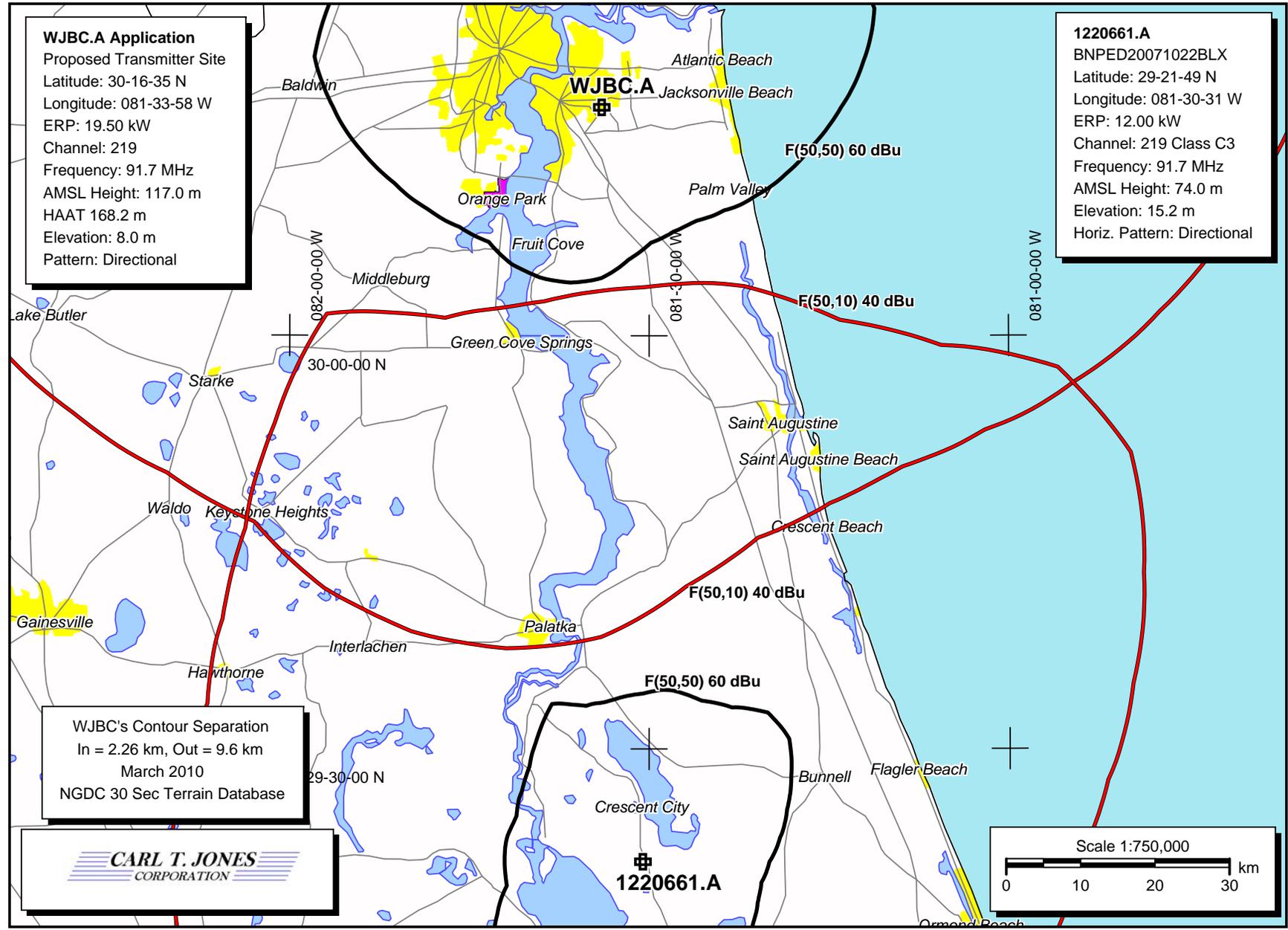
# Exhibit 3B - Section 73.509 Contour Protection to WFPP.C (CP) 218A Penney Farms, FL



# Exhibit 3C-Section 73.509 Contour Protection to App ID 1220661.A CH 219C3 Crescent City,FL

**WJBC.A Application**  
 Proposed Transmitter Site  
 Latitude: 30-16-35 N  
 Longitude: 081-33-58 W  
 ERP: 19.50 kW  
 Channel: 219  
 Frequency: 91.7 MHz  
 AMSL Height: 117.0 m  
 HAAT 168.2 m  
 Elevation: 8.0 m  
 Pattern: Directional

**1220661.A**  
 BNPED20071022BLX  
 Latitude: 29-21-49 N  
 Longitude: 081-30-31 W  
 ERP: 12.00 kW  
 Channel: 219 Class C3  
 Frequency: 91.7 MHz  
 AMSL Height: 74.0 m  
 Elevation: 15.2 m  
 Horiz. Pattern: Directional



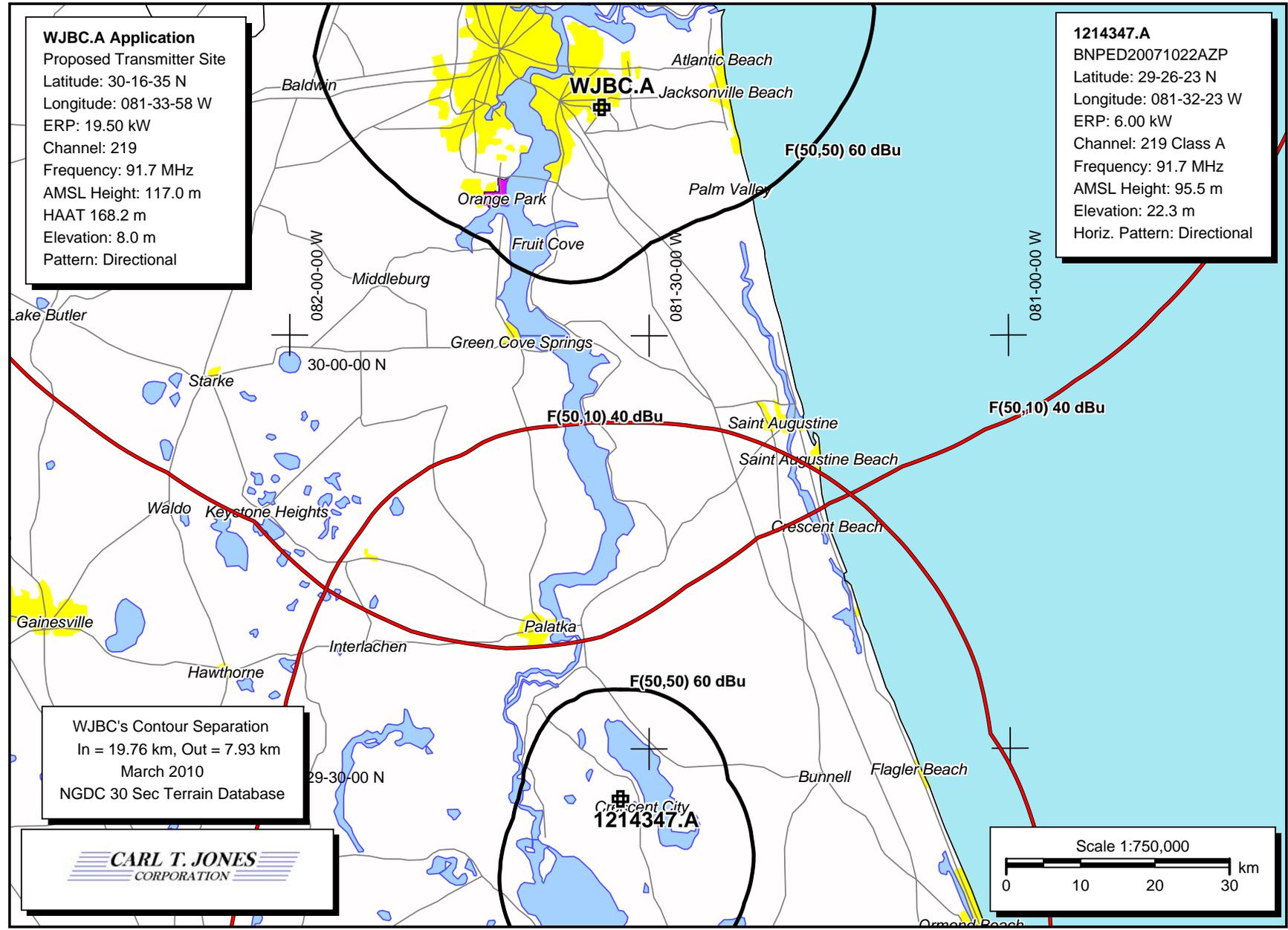
WJBC's Contour Separation  
 In = 2.26 km, Out = 9.6 km  
 March 2010  
 NGDC 30 Sec Terrain Database



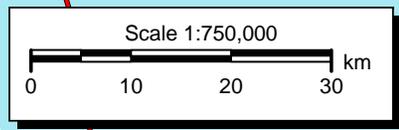
# Exhibit 3D-Section 73.509 Contour Protection to App ID 1214347.A CH 219 A Pierson, FL

**WJBC.A Application**  
 Proposed Transmitter Site  
 Latitude: 30-16-35 N  
 Longitude: 081-33-58 W  
 ERP: 19.50 kW  
 Channel: 219  
 Frequency: 91.7 MHz  
 AMSL Height: 117.0 m  
 HAAT 168.2 m  
 Elevation: 8.0 m  
 Pattern: Directional

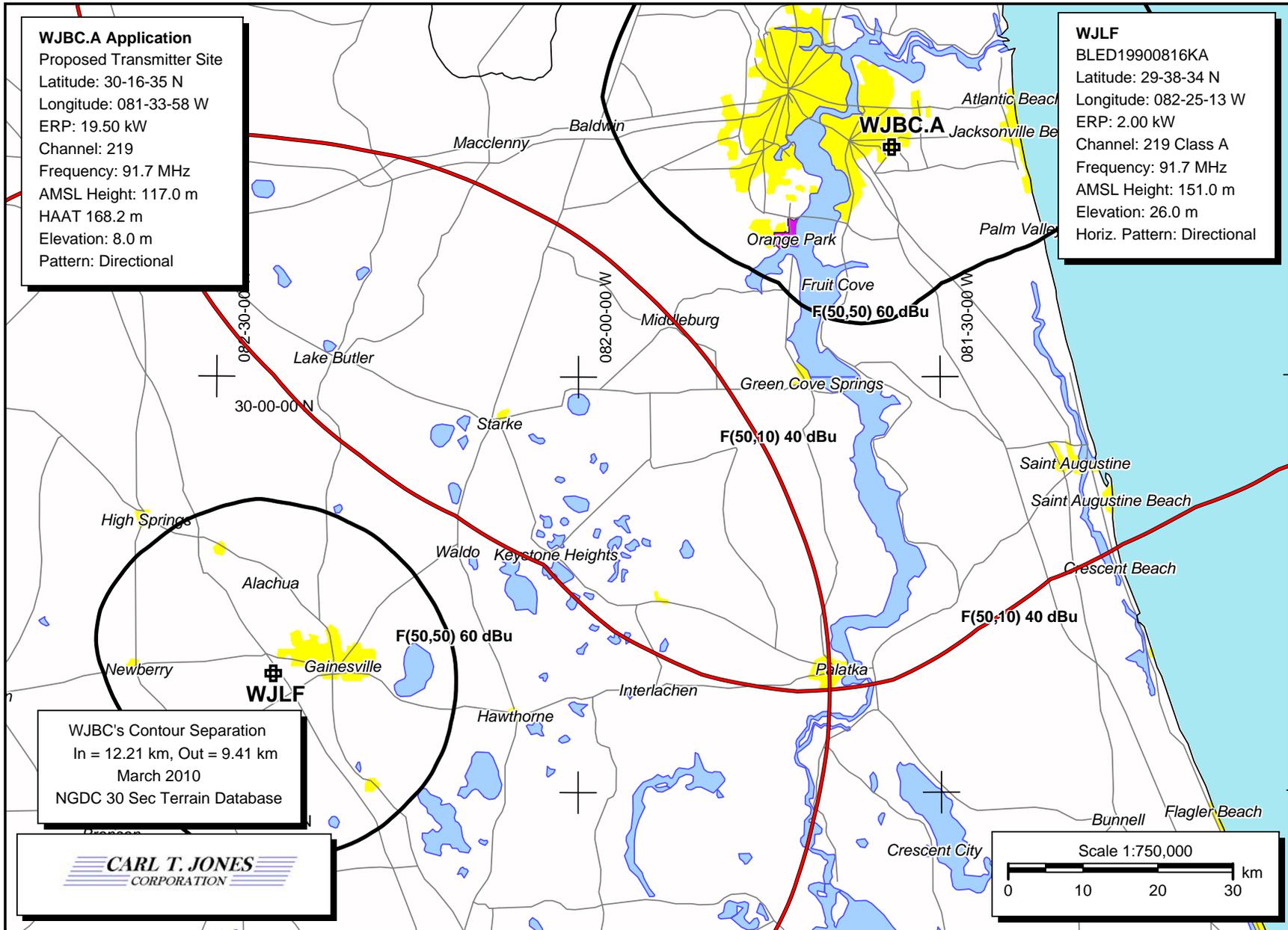
**1214347.A**  
 BNPED20071022AZP  
 Latitude: 29-26-23 N  
 Longitude: 081-32-23 W  
 ERP: 6.00 kW  
 Channel: 219 Class A  
 Frequency: 91.7 MHz  
 AMSL Height: 95.5 m  
 Elevation: 22.3 m  
 Horiz. Pattern: Directional



WJBC's Contour Separation  
 In = 19.76 km, Out = 7.93 km  
 March 2010  
 NGDC 30 Sec Terrain Database



# Exhibit 3E - Section 73.509 Contour Protection to WJLF CH 219 A Gainesville, FL



# Exhibit 3F -Section 73.509 Contour Protection to App ID 990526MA CH219A Crescent City, FL

**WJBC.A Application**  
 Proposed Transmitter Site  
 Latitude: 30-16-35 N  
 Longitude: 081-33-58 W  
 ERP: 19.50 kW  
 Channel: 219  
 Frequency: 91.7 MHz  
 AMSL Height: 117.0 m  
 HAAT 168.2 m  
 Elevation: 8.0 m  
 Pattern: Directional

**990526MA.A**  
 BPED20071015DMF  
 Latitude: 29-25-04 N  
 Longitude: 081-30-39 W  
 ERP: 0.55 kW  
 Channel: 219 Class A  
 Frequency: 91.7 MHz  
 AMSL Height: 109.0 m  
 Elevation: 7.0 m  
 Horiz. Pattern: Omni

WJBC's Contour Separation  
 In = 18.57 km, Out = 9.6 km  
 March 2010  
 NGDC 30 Sec Terrain Database

