

**CONSOLIDATED ENGINEERING STATEMENT**  
**PREPARED IN SUPPORT OF APPLICATION**  
**FOR CONSTRUCTION PERMIT**  
**JAMES CRYSTAL LICENSES, L.L.C.**  
**1.0 kW ND-U 1400 kHz**  
**FORT LAUDERDALE, FLORIDA**

**JUNE 2013**

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**TABLE OF CONTENTS**

**FORMS:**

FCC Form 301, Section III-A - E-filing

**ENGINEERING STATEMENT**

**EXHIBITS:**

- I. Details of antenna system physical configuration.
- II. RSS night limit tabulation for pertinent stations in the 1400 kHz Fort Lauderdale night limit computation.

**FIGURES:**

- 1. 1400 kHz co-channel daytime allocation mapping.
- 2. First adjacent channel daytime allocation mapping.
- 3. Second adjacent channel daytime allocation mapping.
- 4. Predicted daytime 5, 2, and 0.5 mV/m service contours.
- 5. Predicted daytime proposed 5 mV/m service contour over community of license.
- 6. Predicted nighttime proposed 21.0 mV/m nighttime interference-free contour.
- 7. Predicted 1 V/m blanketing contour.

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**SUMMARY**

The following consolidated engineering statement has been prepared in support of an Application for Construction Permit by **James Crystal Licenses, L.L.C. (“JCL”)**, which proposes to construct full-time, standard broadcast facilities for WFLR Radio, 1400 kHz at Fort Lauderdale, Florida as a duplex operation at the site of WEXY(AM), Facility ID 9730, Wilton Manors, Florida. The WEXY facility was most recently licensed under BMML-20100317ABW. This application is complete with the Forms, Exhibits and Figures found in the Table of Contents and is believed to comply with all applicable FCC Rules, Regulations and Policies unless stated herein.

It is noted that all daytime allocation contours for the licensed and proposed WFLR facilities are based on a power of 0.25 kilowatts. All co-channel other facilities in the allocation have been treated as operating with the licensed power for 0.5 mV/m contour calculation and 0.25 kilowatts for 0.025 mV/m interfering contour calculations unless otherwise stated. All distance to contour calculations employ Figure M3 conductivity with the exception of the WFLR licensed and proposed facilities which employ measured conductivity at a 0 degree azimuth bearing taken from the WEXY application for CP, BP-20040109ABM. That measured conductivity is 4 to 21.6 kilometers, 3 to 34.7 kilometers and 2 to 63.3 kilometers. Coverage and blanketing contours found on Figures 4 – 7 are based on the proposed 1 kilowatt power level.

### **FCC FORM 301, SECTION III-A**

FCC Form 301, Section III-A has been completed. Questions requiring a narrative response are addressed below:

Questions 4d, 5d, 6d      The overall structure height does not exceed 200' (61 meters). Two identical towers are existing on the site and carry FCC tower registration numbers 1060086 and 1060087. FAA No Hazard Determinations have been procured and both tower registrations have no marking and lighting requirements. It is noted that both towers are used by WEXY(AM) for nighttime operation and the north tower for daytime operation. WFLC will operate on the south tower carrying ASR Number 1060087. However, WFLC does plan to install a tuning unit on the north tower for temporary ND operation in the event of maintenance work on the south tower. Critical hours operation is not proposed.

*Section 73.24(g)* compliance is achieved due to the nature of the site. The 1,000 mV/m contour radius is only 0.287 kilometers. Population in the proposed 1 V/m contour, day and night, is 0 persons. The applicant pledges to comply fully with *Rule Section 73.88*.

Question 8      *Figure 5* depicts the proposed daytime 5 mV/m contour. The contour covers over 100% of the community of license of Fort Lauderdale, Florida. *Figure 6* depicts the proposed nighttime 21.0 mV/m nighttime interference-free contour. The proposed nighttime interference-free contour envelops in excess of 78.15% of the land area of the community of Fort Lauderdale, Florida. A waiver of 73.24(i) is respectfully requested due to the unusually high RSS night limits found on Class C channels and the fact that the shortfall is not significant (see Exhibit 14 in Section III-A, Question 8). The area inside the community boundary was digitized as

well as the area within the NIF contour inside the community boundary using the DeLorme measurement digitizing tool. The city boundary data was obtained from <http://gis.fortlauderdale.gov/PDFs>.

The 1400 kHz 50% RSS night limit is computed on Exhibit II.

Question 10(a)

Figures 1 – 3 depict the proposed daytime allocation. There are no third adjacent channel stations sufficiently close to warrant mapping. WFLI is involved in grandfathered overlap with co-channel station WIRA, Fort Pierce, Florida. Overlap both to and from WIRA is reduced by this proposal as seen below:

WIRA lic. 0.025 mV/m to WFLI lic. 0.5 mV/m	= 7,731.5 sq. km
WIRA lic. 0.025 mV/m to WFLI prop. 0.5 mV/m	= 7,531.1 sq. km
Reduction	= 200.4 sq. km

WFLI lic. 0.025 mV/m to WIRA lic. 0.5 mV/m	= 9,919.5 sq. km
WFLI prop. 0.025 mV/m to WIRA lic. 0.5 mV/m	= 9,812.2 sq. km
Reduction	= 107.3 sq. km

Question 11

*Supplement A, Edition 97-01 to OET Bulletin No. 65*, has been referenced concerning appropriate fencing distances.

A 5.5 m by 5.5 m square fence is placed around the south tower based on digitizing Google Earth Professional satellite data. These dimensions exceed the *Supplement A, Edition 97-01, Section 1, Table 2* requirements for both 1 and 5 kilowatt operation. Since the combined power in both towers at night for WEXY is 0.8 kilowatts it is clear that at even 1.8 kilowatts total power into the south tower that the facility will meet OET-65 guidelines. Power will be reduced or transmission ceased when workers are on or near the towers.

**DIPLEX OPERATION**

Diplex operation with WEXY 1520 kHz is proposed. Sufficient analysis has been undertaken to confirm that compatible diplex operation is feasible while meeting all required FCC standards for spurious emission.

**MULTIPLE OWNERSHIP**

Please see Section II, Exhibit 5.

**CONCLUSION**

The foregoing was prepared on behalf of **James Crystal Licenses, L.L.C.**, by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By \_\_\_\_\_

**Clarence M. Beverage**  
*for Communications Technologies, Inc.*  
Marlton, New Jersey

June 20, 2013

**EXHIBIT I**

**PHYSICAL DESCRIPTION OF  
NON-DIRECTIONAL ANTENNA SYSTEM  
JAMES CRYSTAL LICENSES, L.L.C.  
PROPOSED 1400 kHz 1 kW LS ND-4  
FORT LAUDERDALE, FLORIDA**

**JUNE 2013**

TRANSMITTER SITE:  
ARRAY CENTER (NAD27)

North Latitude: 26° 10' 25.0"  
West Longitude: 80° 09' 28.0"

TOWER 1  
(Total of one)

Electrical 79.9° FCC Registration 1060087  
47.55 meters above base (156') tower steel  
48.16 meters AGL (158') overall height

RADIATOR TYPE:

Base insulated self supporting tower.

PATTERN ASSUMPTION:

Sinusoidal current distribution in all towers

GROUND SYSTEM:

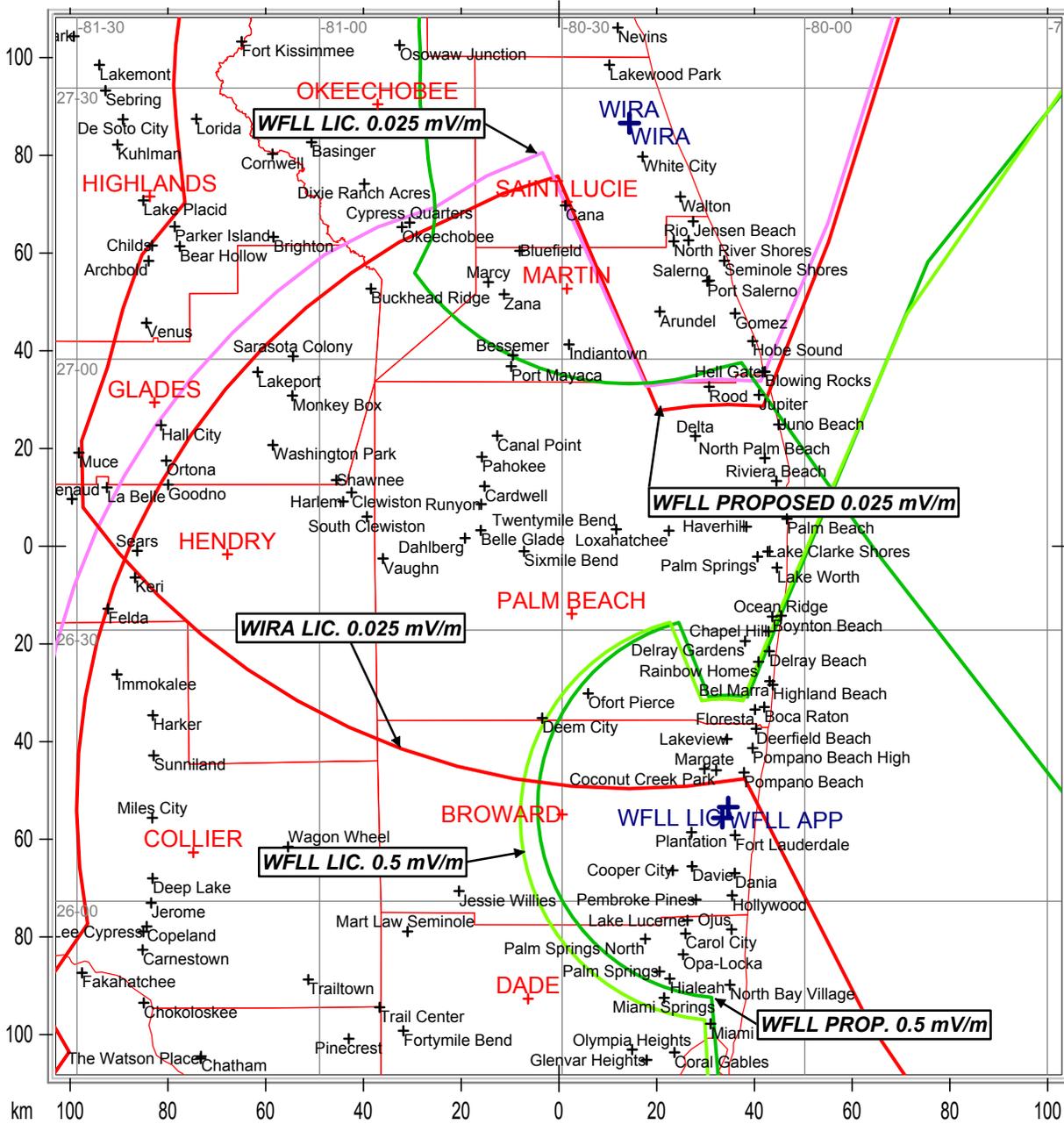
No change to the existing WEXY ground system is proposed. WFL will employ the south tower of a two tower directional antenna system whose radial lengths vary by distance to the property boundaries and are calculated to have a typical length of 43.8 meters.

**EXHIBIT II**  
**WFL(AM) NIGHTTIME RSS COMPUTATIONS**  
**JAMES CRYSTAL LICENSES, L.L.C.**  
**PROPOSED 1400 kHz 1 kW LS ND-U**  
**FORT LAUDERDALE, FLORIDA**

**JUNE 2013**

<u>CALL</u>	<u>FREQ.</u> <u>kHz</u>	<u>DISTANCE</u> <u>km</u>	<u>MAX.</u> <u>RADIATION</u>	<u>RSS</u>	<u>50% RSS</u>
WIRA	1400	141.7	188.3	13.515	13.515
WSDO	1400	311.4	274.6	11.441	17.707
WZHR	1400	309.9	269.7	11.343	21.029 mV/m

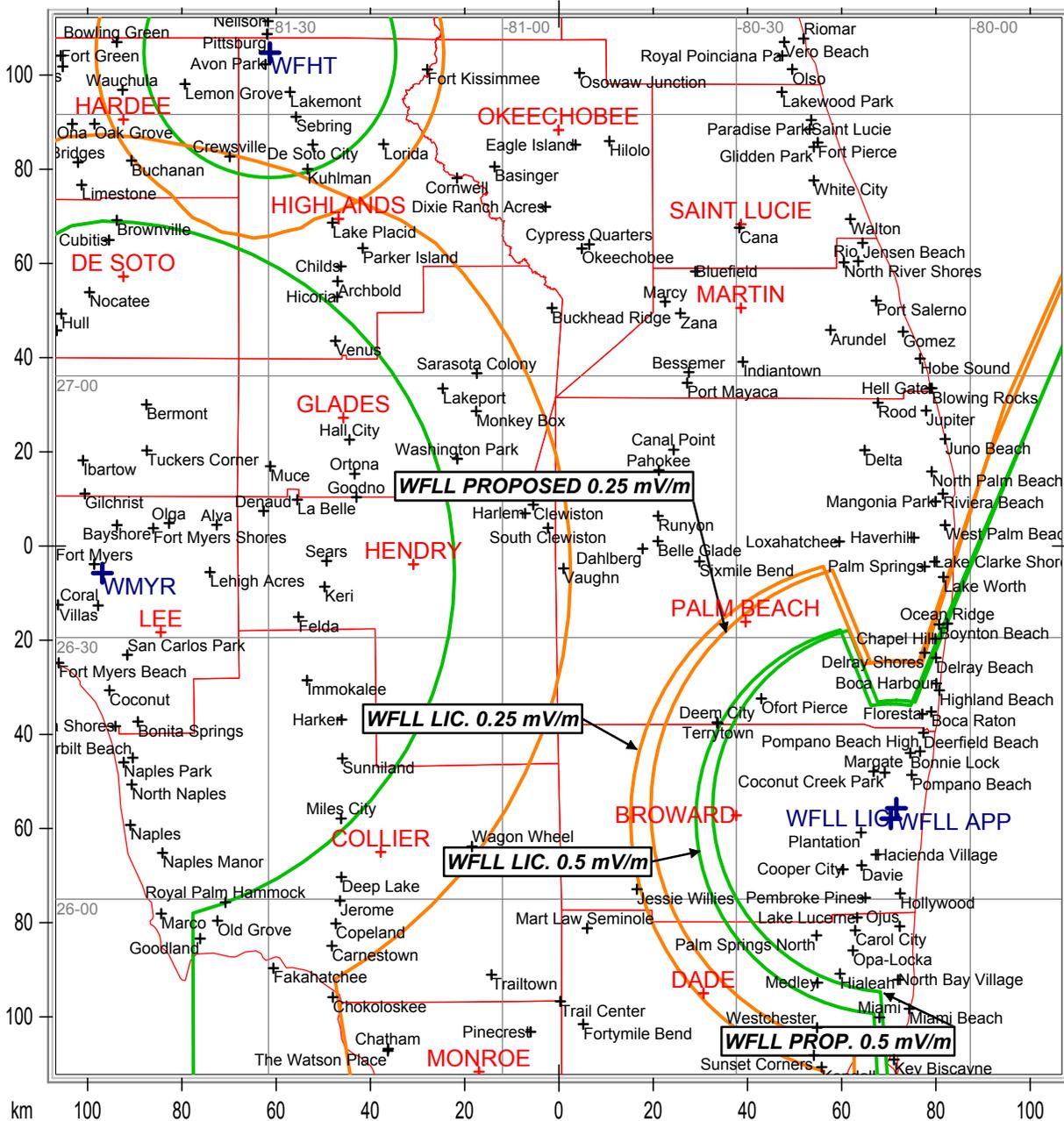
WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



Communications Technologies, Inc. Marlton, New Jersey

County Borders    Lat/Lon Grid

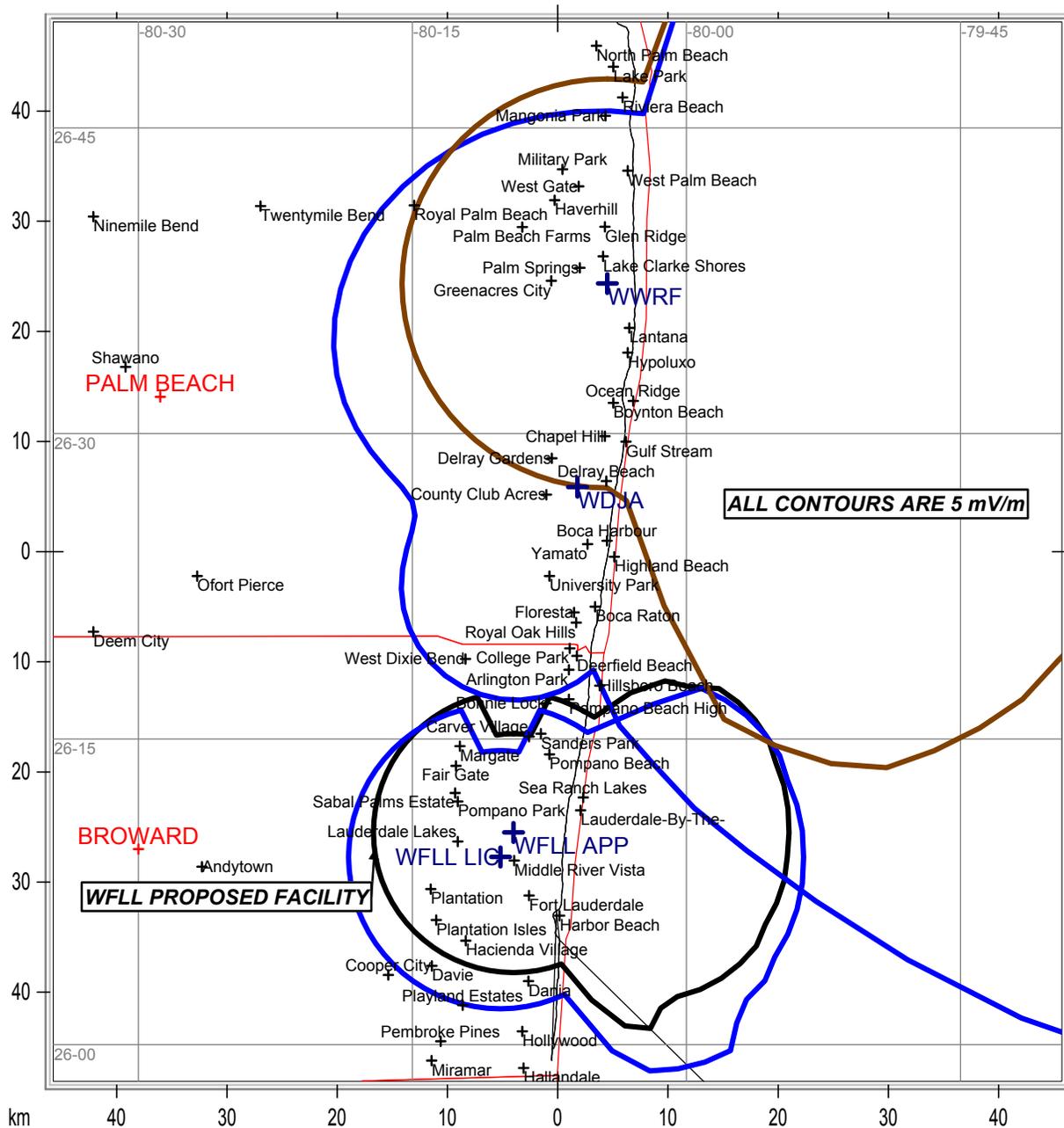
WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



Communications Technologies, Inc. Marlton, New Jersey

County Borders    Lat/Lon Grid

WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



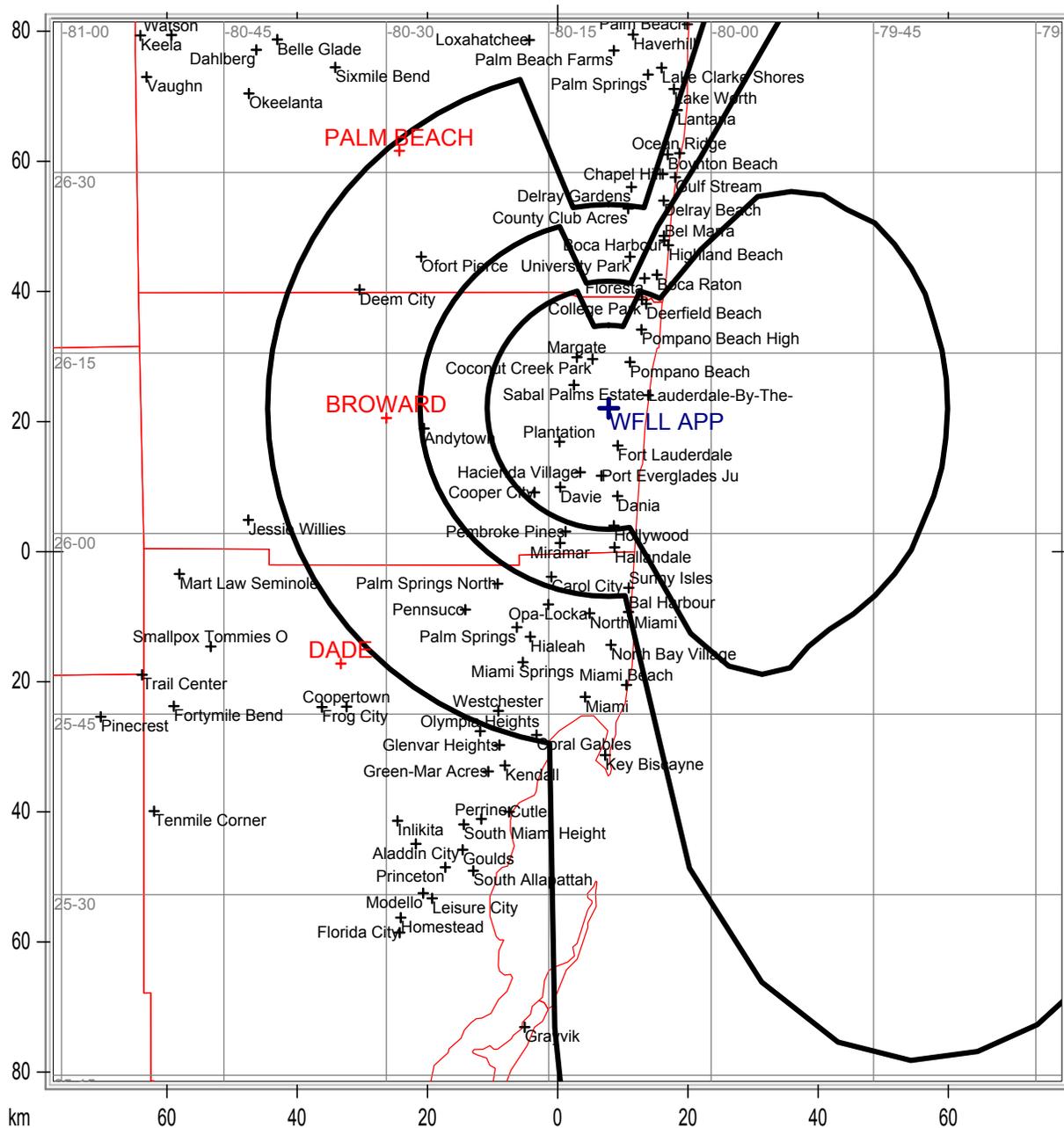
Communications Technologies, Inc. Marlton, New Jersey

County Borders State Borders Lat/Lon Grid

Map Scale: 1:600000 1 cm = 6.00 km V/H Size: 96.18 x 91.48 km

FIGURE 3

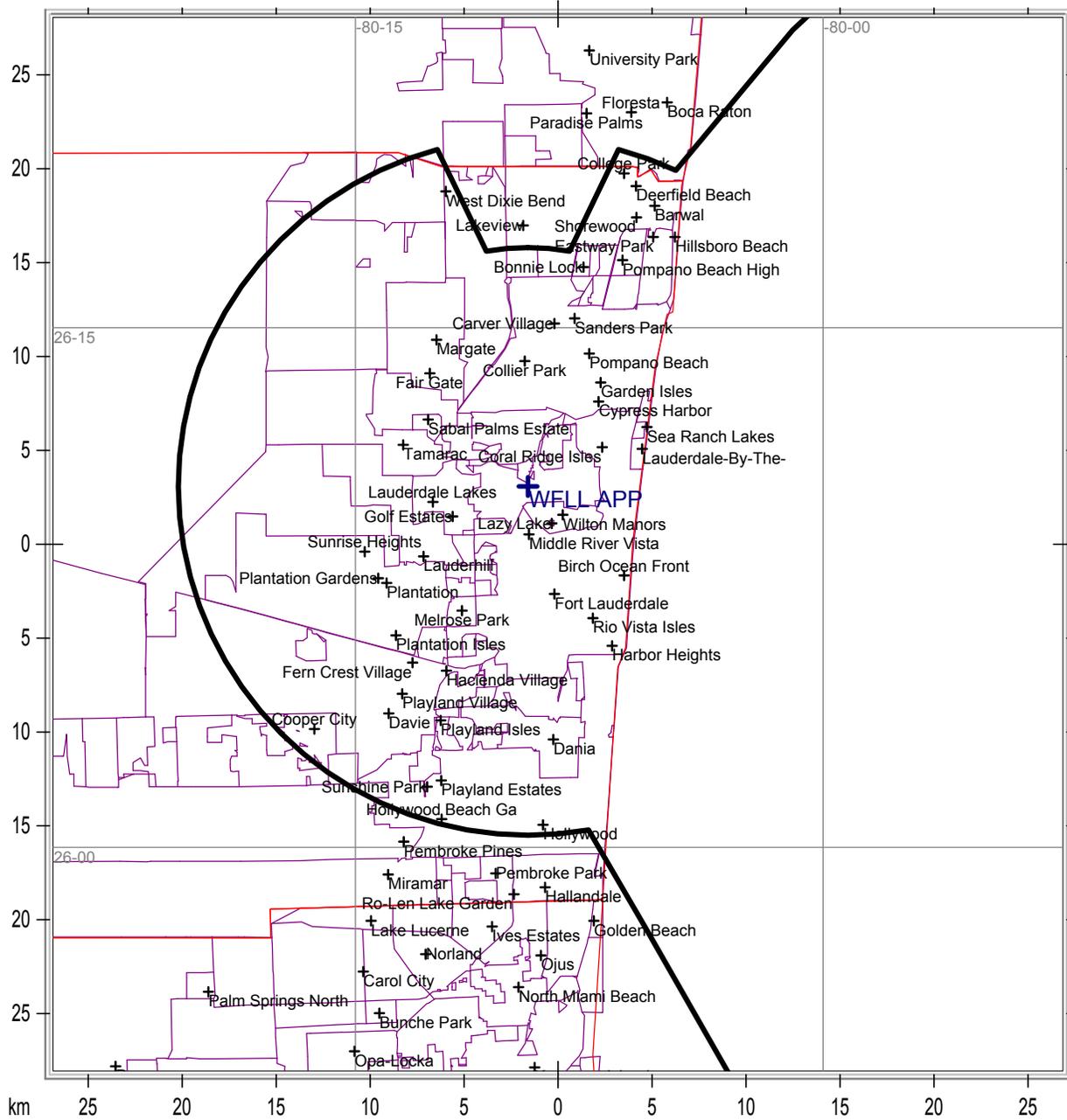
WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



Communications Technologies, Inc. Marlton, New Jersey

County Borders Lat/Lon Grid

WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



Communications Technologies, Inc. Marlton, New Jersey

County Borders City Borders Lat/Lon Grid

Map Scale: 1:350000 1 cm = 3.50 km V/H Size: 56.11 x 53.73 km

FIGURE 5

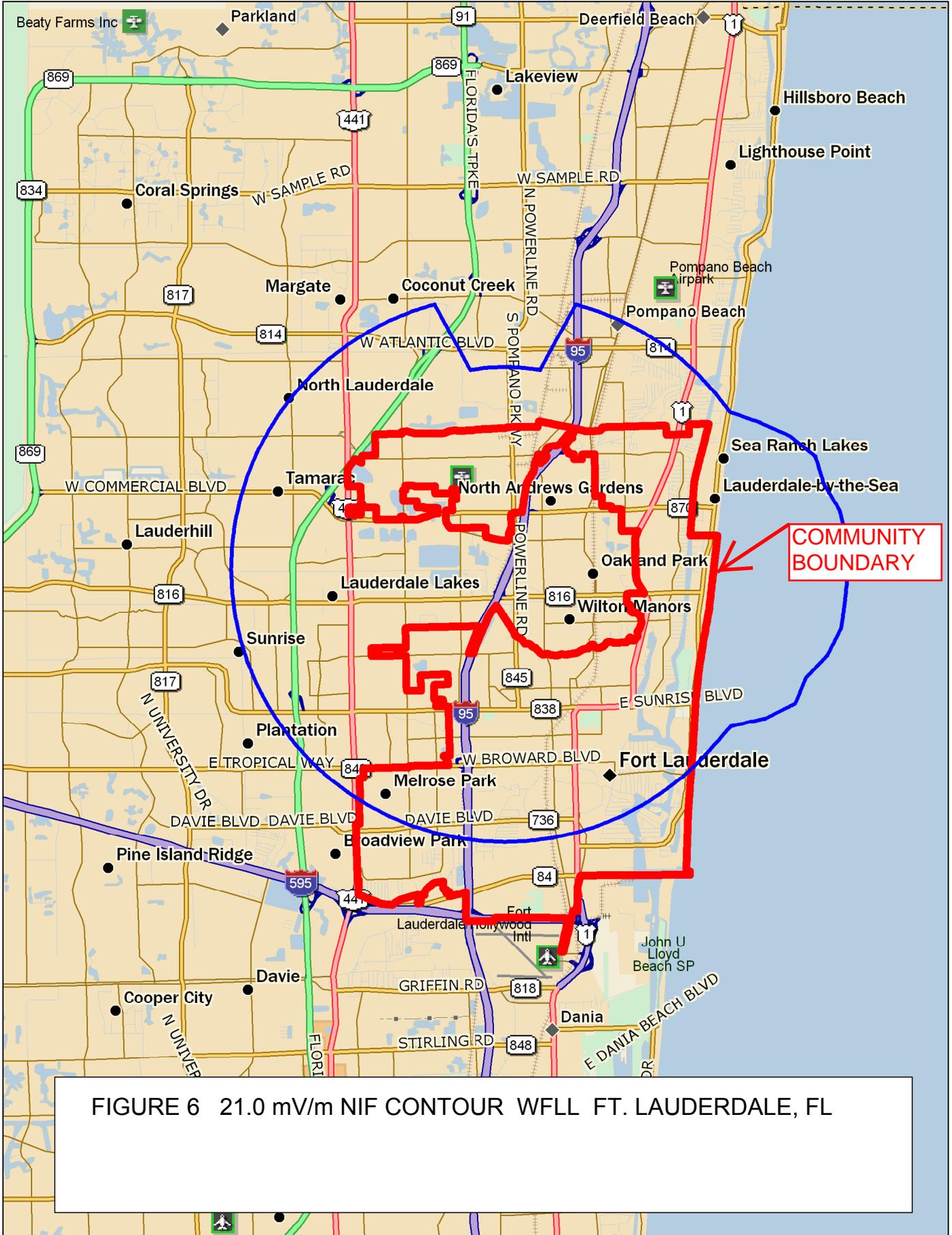
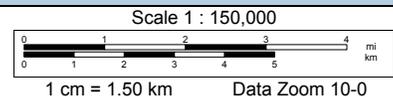
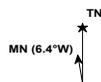
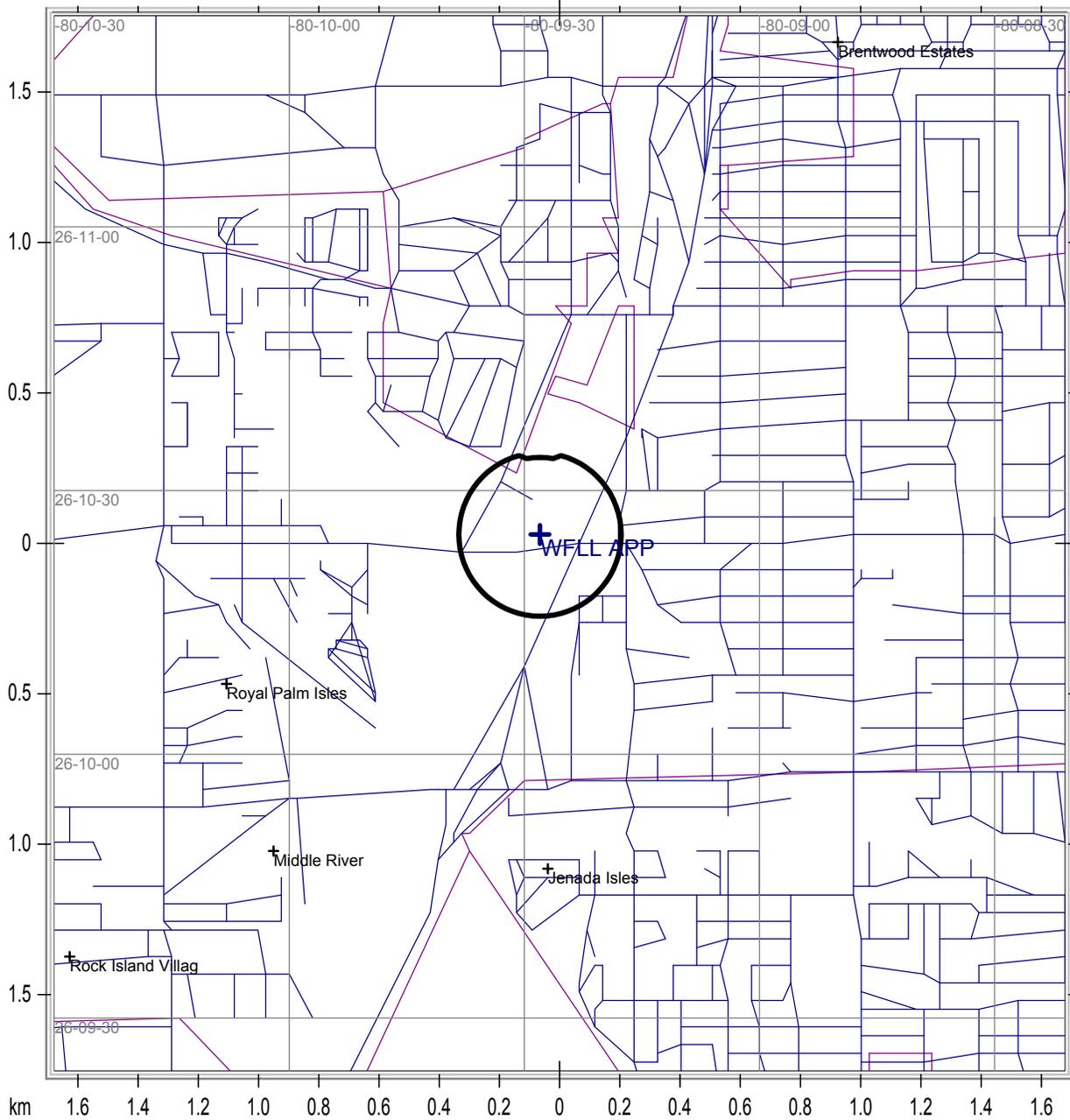


FIGURE 6 21.0 mV/m NIF CONTOUR WFL FT. LAUDERDALE, FL



WFL(AM) APPLICATION FOR CP 1400 kHz 1 kW ND-U FORT LAUDERDALE, FLORIDA



Communications Technologies, Inc. Marlton, New Jersey

County Borders    City Borders    Streets    Lat/Lon Grid