Anderson Associates

Broadcast Engineering Consultants

STA REQUEST

WNDO
1520 kHz

#1185

WNDO has lost its transmitter site and implementation of its construction permit to be combined with station WRSO on its existing two tower array has been delayed by the accidental collapse of one of the towers. Therefore, an STA is requested for establishment of a temporary 1 kW non-directional operation using the remaining tower (#1247871) until the second tower is replaced and the WNDO directional CP can be built.

Applicant:

Orlando Radio Marketing, Inc.
Suite 103
3113 Stirling Road
FT. Lauderdale, FL 33313

202-747-1694

swoodworth@edingerlaw.net

WNDO
Apopka, FL

Facility #1185

1520 kHz

1 kW-Day/ 0.010 kW Night non-directional

FRN = 0028948990

Anderson Associates

Broadcast Engineering Consultants

Certification:

The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to §5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. §862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under §1.2002(c) of the rules, 47 CFR . See §1.2002(b) of the rules, 47 CFR §1.2002(b), for the definition of "party to the application" as used in this certification §1.2002(c). The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.

Sam Rogatinsky, President

Date Oct 7, 2022

STA
TECHNICAL PARAMETERS

This Technical Report is provided in support of an application for an STA for station WNDO on 1520 kHz at Apopka, FL (FCC facility #1185) to operate a temporary facility while awaiting the reconstruction of a second tower required to implement the construction permit (BP-20191114AAX) at Fairview Shores, FL combined with station WRSO on 810 kHz.

An STA is requested to operate at the proposed location at 1 kW Day and 0.01 kW Night combined into tower #1247871. This tower has an efficiency of 367.4 mV.m.km/kW with an electrical height of 168.84° at 1520 kHz. The existing 810 kHz ground system exceeds 90° at 1520 kHz.

The following exhibits are provided:

E1 Vertical sketch
E2 Site plat
E3 0.5 mV/m contours demonstrating compliance with STA rules
E4 Night allocations
E5 Antenna efficiency
E6 ASR

Since WRSO on 810 kHz is operating an STA at 1 kW into the same tower, necessary filtering will be utilized to meet FCC spurious emission rules.

Site:

The proposed site is tower #1247871 at: **N 28-34-11.0 W 81-26-01 (NAD 27)**

RF determination:

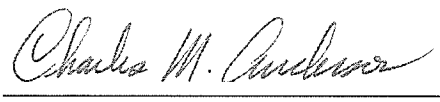
RF at 3.0 meters (fence) OET 65 Figure 1 for 0.25λ Figure 2 for 0.5λ

Station	Electrical (V/m)	Magnetic (A/m)
WNDO at 1 kW	105	0.058
WRSO 1 kW	21	0.260
Total	126 (20.5% max)	0.318 (19.5% max)

614 V/m public max 1.63 A/m public max

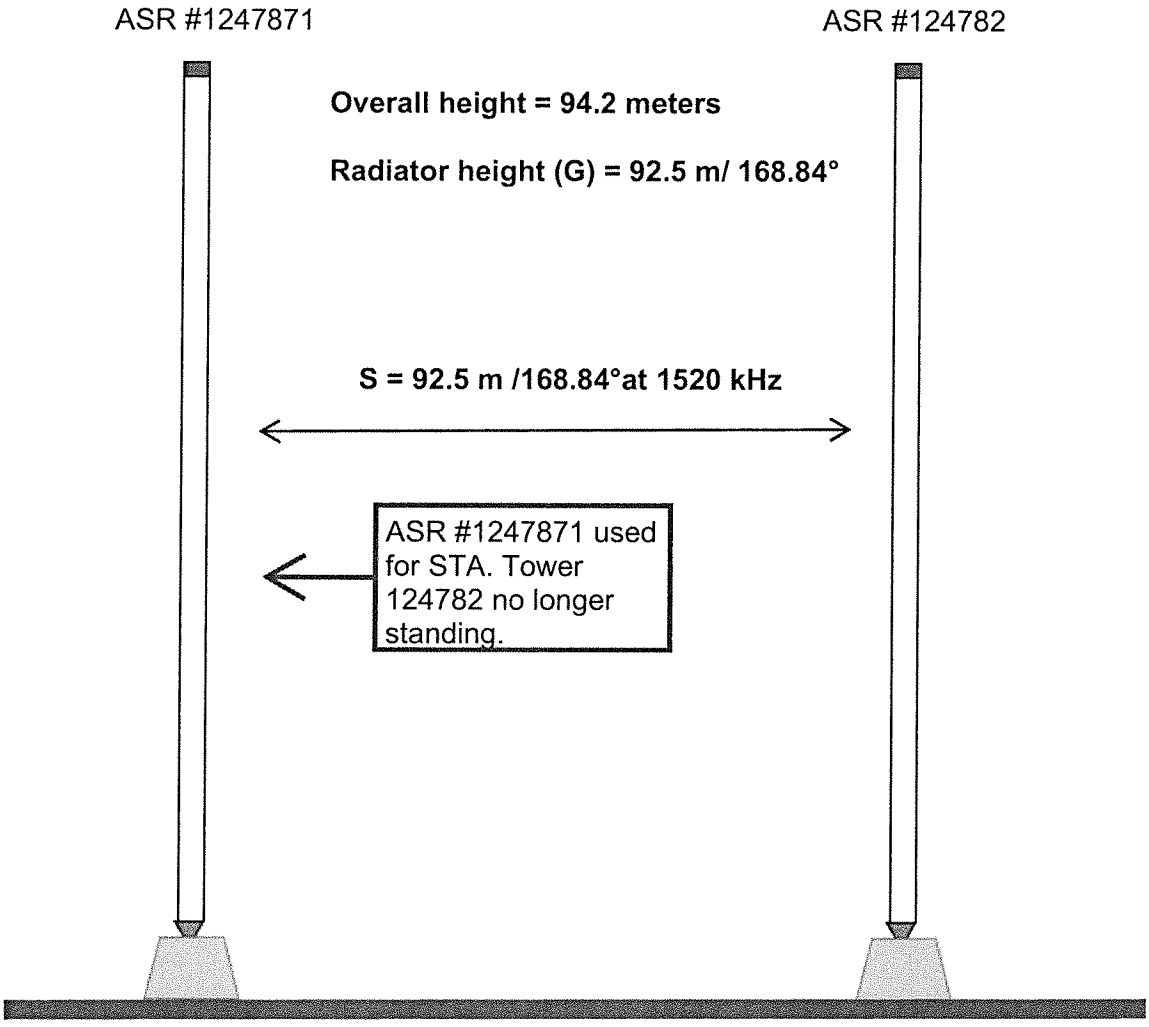
Clearly, the proposed operation meets the maximum permissible values at4 meters above ground.

It is concluded that the WNDO STA request complies with Commission rules and policies.



Charles M. Anderson 10-6-2022
1519 Euclid Avenue
Bowling Green, KY 42103
270-535-4432
cmanderson43@yahoo.com

E1 VERTICAL SKETCH



WBZW 1520 kHz to be diplexed with WRSO(AM) on 810 kHz. Existing ground system is equivalent to a full 90 degree system at 1520 kHz.

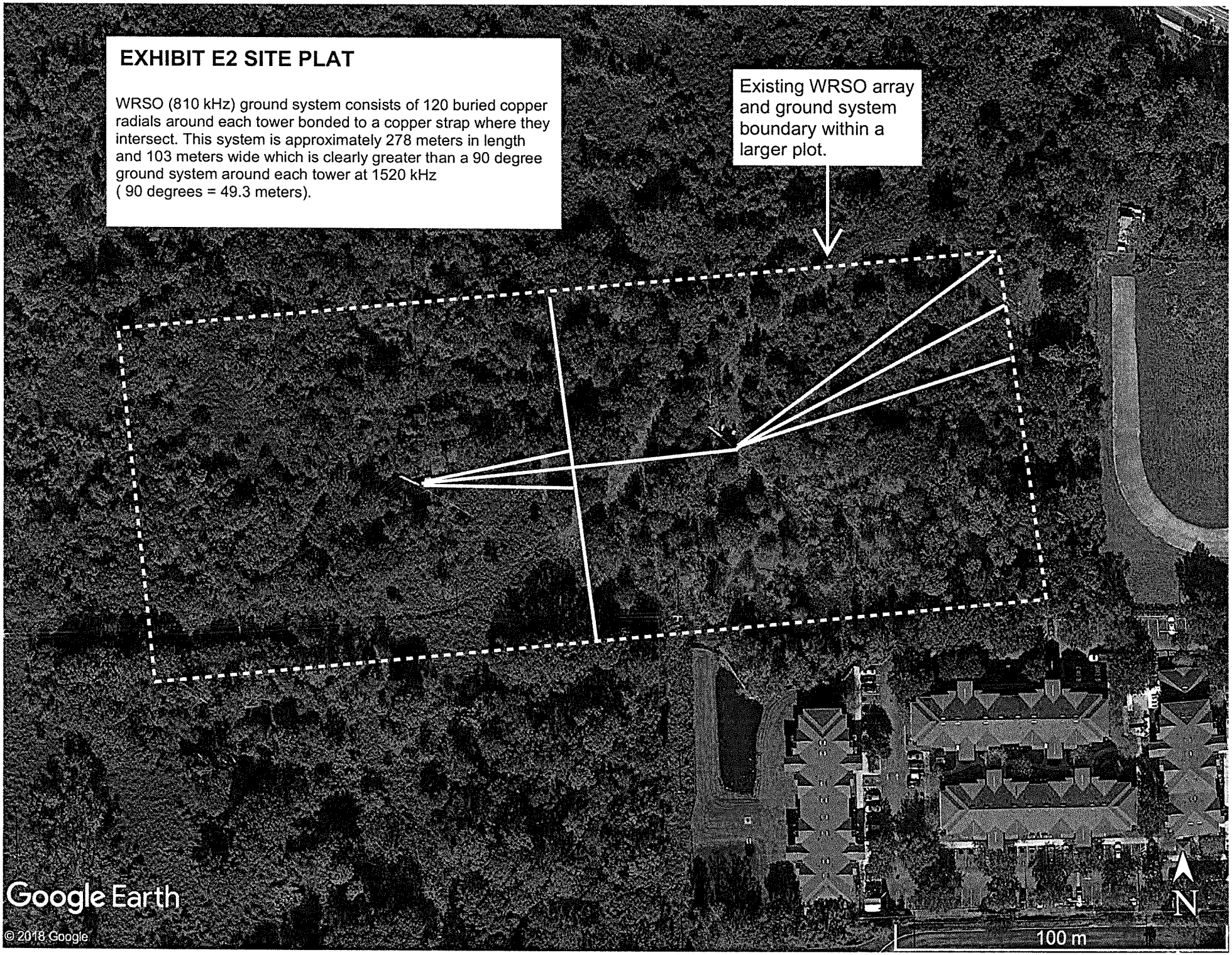
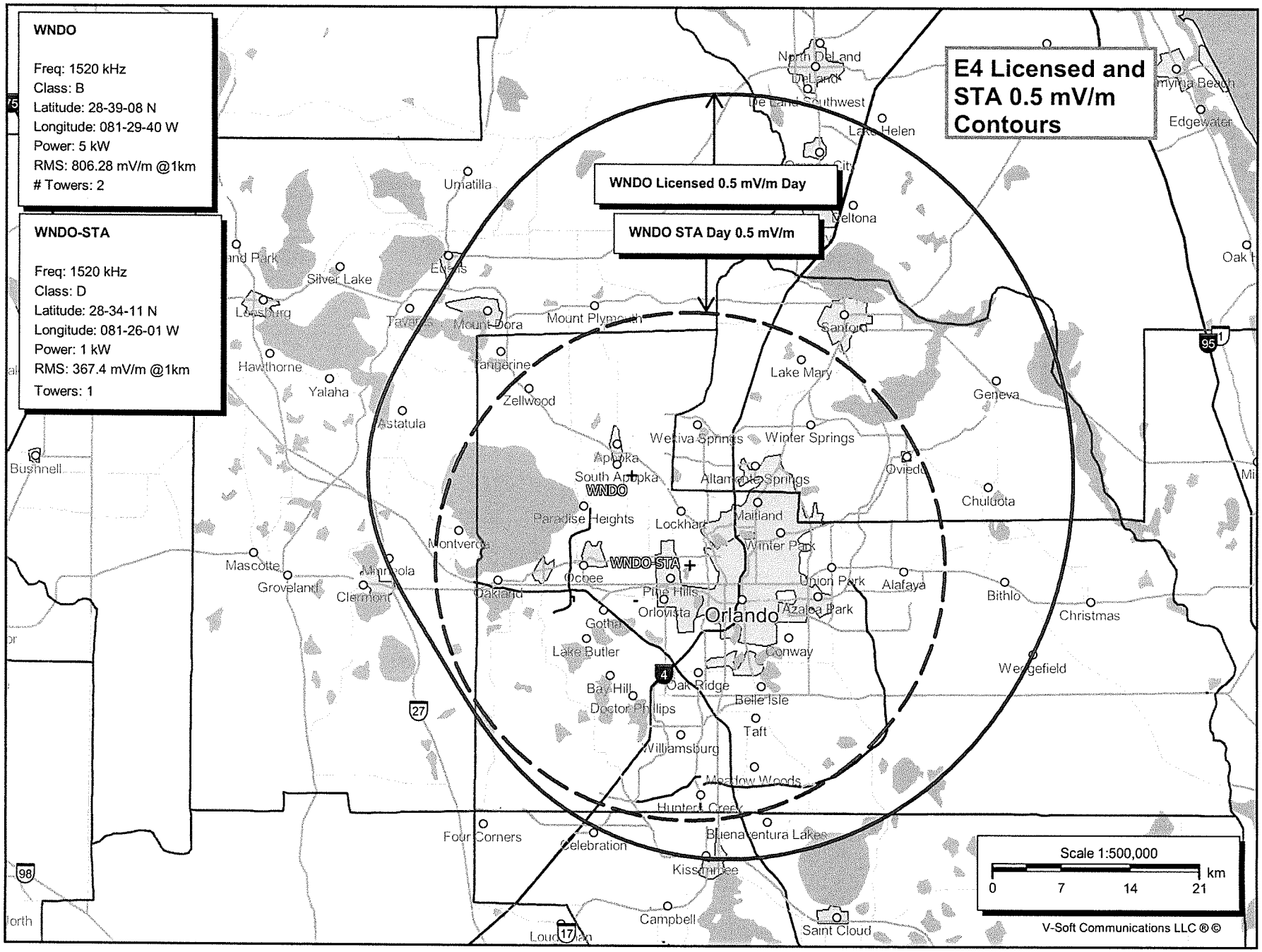


EXHIBIT E2 SITE PLAT
WRSO (810 kHz) ground system consists of 120 buried copper radials around each tower bonded to a copper strap where they intersect. This system is approximately 278 meters in length and 103 meters wide which is clearly greater than a 90 degree ground system around each tower at 1520 kHz
(90 degrees = 49.3 meters).
Existing WRSO array and ground system boundary within a larger plot.
Google Earth
© 2018 Google
N
100 m


WNDO
Freq: 1520 kHz
Class: B
Latitude: 28-39-08 N
Longitude: 081-29-40 W
Power: 5 kW
RMS: 806.28 mV/m @1km
Towers: 2
WNDO-STA
Freq: 1520 kHz
Class: D
Latitude: 28-34-11 N
Longitude: 081-26-01 W
Power: 1 kW
RMS: 367.4 mV/m @1km
Towers: 1
E4 Licensed and STA 0.5 mV/m Contours
WNDO Licensed 0.5 mV/m Day
WNDO STA Day 0.5 mV/m
WNDO
WNDO-STA
Orlando
Scale 1:500,000
0 7 14 21 km
V-Soft Communications LLC ® ©

E4 Night Allocation Protection Report

Call: WNDO-STA
Freq: 1520 kHz
FAIRVIEW SHORES, FL, US
Hours: D
Lat: 28-34-11 N [NAD27]
Lng: 081-26-01 W
Power: 0.01 kW
Theo RMS: 367.4 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	168.8	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
WWKB (167)	US	NY	BUFFALO	62.61	0.500	39.96E	35.46	4.50
WEXY	US	FL	WILTON MANORS	219.69	1.697	38.63	26.32	12.31
50% = 6.27, 25% = 6.79; WWKB=5.10 YNRU-A=3.65 WLAC=1.88 HRBN-A=1.80								
KOKC (126)	US	OK	OKLAHOMA CITY	21.03	0.500	118.90S	36.67	82.23
KOKC (126)	US	OK	OKLAHOMA CITY	20.85	0.500	119.90S	36.68	83.23
KFXZ	US	LA	LAFAYETTE	44.17	1.485	168.12	36.14	131.98
50% = 5.193, 25% = 5.941; WLAC=5.19 YNRU-A=2.44 KOKC=1.55								
KRHW	US	MO	SIKESTON	34.29	1.430	208.53	36.38	172.15
50% = 5.465, 25% = 5.72; WLAC=5.46 KOKC=1.69								
WLAC (138)	US	TN	NASHVILLE	54.54	0.500	458.38G	35.77	422.61
CMJU-A	CU		PALMA SORIAN	22.32	2.079	465.64	35.64	430.01
50% = 3.417, 25% = 4.037; WEXY=2.97 YNRU-A=1.70 HJLQ-A=1.47 WWKB=1.12 HJML-A=1.10								
WRSJ	US	PR	SAN JUAN	19.16	2.070	540.15	36.71	503.44
50% = 6.998, 25% = 8.281; WWKB=5.34 YVJC-A=4.52 HJLQ-A=2.81 YNRU-A=2.49 HJML-A=2.35								
WRSJ	US	PR	SAN JUAN	19.16	2.070	540.17	36.71	503.46
50% = 6.998, 25% = 8.281; WWKB=5.34 YVJC-A=4.52 HJLQ-A=2.81 YNRU-A=2.49 HJML-A=2.35								
WCKY (174)	US	OH	CINCINNATI	40.13	0.500	622.97G	36.20	586.76

E5 FIGURE 8 calculates the Inverse Distance Field for AM broadcast stations with frequencies between 530 and 1700 kHz. This calculator is a computer version of Figure 8 of Section 73.190 of the FCC Rules.

The Inverse Distance Fields calculated here are in mV/m at 1 kilometer.

Ground system correction factors may be incorporated into the following results.

Input Parameters

Frequency:	1520 kHz
Number of Ground Radials:	120
Correction for number of radials:	0.0000 mV/m @ 1 kilometer
Average Length of Ground Radials:	50.000 meters 164.042 feet 91.263 degrees 0.2535 wavelengths
Correction factor for length:	0.0000 mV/m @ 1 kilometer
One Wavelength at 1520 kHz is:	197.232 meters 647.086 feet
Tower Height:	92.600 meters 303.806 feet 169.02 degrees 0.4695 wavelengths

Predicted Field Strength from Figure 8, Section 73.190

(Metric units)

	Theoretical Field	Corrected Field
At 1.00 kW:	367.348	367.348 mV/m @ 1 KM

ASR Registration Search

Registration 1247871

E6

Map Registration

Registration Detail

Reg Number	1247871	Status	Constructed
File Number	A0939966	Constructed	06/27/2005
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type

Location (in NAD83 Coordinates)

Lat/Long	28-34-12.0 N 081-26-00.3 W	Address	WEST SIDE OF PRINCETON ST, STATE RT 438
City, State	ORLANDO , FL		
Zip	32808	County	ORANGE
Center of AM Array	28-34-19.0 N 081-26-01.3 W	Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
27.4	94.2
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
121.6	93.0

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	2005-ASO-629-OE	FAA Issue Date	03/16/2005

Owner & Contact Information

FRN	0008681124	Owner Entity Type	Corporation

Owner

Star Over Orlando, Inc.
Attention To: Carl Tutera, President
357 Ocean Shore Blvd
Ormond , FL 32176-9046

P: (386)566-4299
F:
E: carlcomo@aol.com

Contact

Hardy , Nathaniel Esq
1420 Spring Hill Road
Suite 401
McLean , VA 22102

P: (703)714-1322
F:
E: njh@commlawgroup.com

Last Action Status

Status	Constructed	Received	04/03/2015
Purpose	Notification	Entered	04/03/2015
Mode	Interactive		

Related Applications