

GENESIS COMMUNICATIONS OF
TAMPA BAY, INC..
FCC FORM 301 – FEBRUARY 2022

MULTIPLE OWNERSHIP RULE COMPLIANCE

Genesis Communications of Tampa Bay, Inc. is licensee of two AM broadcast stations in the Nielsen-defined Tampa-St. Petersburg-Clearwater, Florida radio metro market: WHBO (AM), Pinellas Park, Florida and WWBA (AM), Largo, Florida.

The FCC CDBS database shows that four AM stations are licensed to Tampa, Florida:

Call Sign	Facility Id	Service	Licensee	Status
WAMA	19055	AM	Q BROADCASTING CORPORATION	LICENSED
WFLA	29729	AM	IHM LICENSES, LLC	LICENSED
WHNZ	23077	AM	IHM LICENSES, LLC	LICENSED
WTIS	74088	AM	Q-BROADCASTING CORPORATION, INC.	LICENSED

The FCC CDBS database shows that three AM stations are licensed to St. Petersburg, Florida:

Call Sign	Facility Id	Service	Licensee	Status
WDAE	74198	AM	IHM LICENSES, LLC	LICENSED
WGES	74558	AM	VISION COMMUNICATIONS NETWORK, INC.	LICENSED
WWMI	11954	AM	RELEVANT RADIO, INC.	LICENSED

The FCC CDBS database shows that one AM station is licensed to Clearwater, Florida:

Call Sign	Facility Id	Service	Licensee	Status
WTAN	17574	AM	RADIO WORLD INC.	LICENSED

Therefore, as Genesis is licensee of only two aural broadcast stations in the relevant market, and there are at least eight other AM stations in the market (as well as many FM stations), it complies with the Commission's multiple ownership rule, 47 CFR §73.3555(a).

ENGINEERING EXHIBIT
IN SUPPORT OF AN
APPLICATION FOR CONSTRUCTION PERMIT
WHBO – Pinellas Park, FL
(Requesting) 1040KHz – Class B, 3.6KW DAY/ 430W NIGHT – DA-N
CDBS FACILITY ID: 41383

Applicant: Genesis Communications of Tampa Bay, Inc.

February, 2022

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GENERAL

Goldman Engineering has been authorized by Genesis Communications of Tampa Bay, Inc.. (“Genesis”), licensee of Standard Broadcast Station, WHBO, Pinellas Park, FL, to prepare this Engineering Statement, FCC Form 301 (Section III), and the attached figures in support of an application for Construction Permit due to the removal of nighttime tower one as specified in the current license. The change will delete nighttime tower #1 and relicense the nighttime operation at 430 watts using the two remaining towers. There is no change requested for the non-directional daytime 3.6kW facility other than a minor correction of coordinates.

TOWERS AND REGISTRATION

This application proposes to retain the existing daytime licensed operation and will delete tower #1 used for nighttime operation.

The currently licensed Center of the Array (NAD27) is:

27° 50’ 52.4” N, 82° 46’ 21” W- These coordinates will change (NAD27) 1.1 degrees Latitude and 2 degrees Longitude as shown below due to the array reconfiguration:

Tower locations:

Tower #1 (ND Tower + Tower #1 Night) ASR 1060088, 104.8m AGL

ASR 1060088 NAD 83 Coordinates: 27° 50’ 44” N, 82° 46’ 22” W (See Figure #1)

Night Tower #2- (NAD83) 27° 50’ 53.6” N, 82° 46’ 23” W, 50m AGL. Because the tower is under 199ft AGL, the tower does not require an ASR.

Updated Center of Array (NAD 83) 27° 50’ 52.4” N, 82° 46’ 22.4” W

Updated Center of Array (NAD 27) 27° 50’ 51.3” N, 82° 46’ 23” W

ANTENNA SYSTEM AND DIRECTIONAL PATTERNS

WHBO will continue to use the same tower for daytime non-directional use. That tower is a series fed base insulated tower 104.8m AGL. Radiator is 102.4m AGL (127.7deg @ 1040kHz). The towers to be used by WHBO at night are two of the three towers from the currently licensed facility. Nighttime tower #1 is the same as the Day ND tower. A sketch of that tower is shown in Figure 2. Nighttime tower #2 (previously tower #3 as currently licensed), only used at night, is also a series fed, base insulated tower. Tower two is self-supporting. The Overall AGL Height is 48.7m, the radiator height 48m (60deg). A tower sketch for tower #2 is shown in Figure 3.

The proposed Nighttime horizontal plane standard radiation pattern is shown on the polar graph of Figure 4. WHBO will continue to operate at 3.6kW ND Daytime and will operate with 430 watts DA Nighttime.

DAYTIME THEORETICAL PARAMETERS (NO CHANGE)					
TOWER	FIELD	PHASE	SPACING	ORIENT.	HEIGHT
1	1	0	0	0	127.7

- Theoretical RMS for the proposed daytime facility is 332.5 mV/m per kW@1km

PROPOSED NIGHTTIME THEORETICAL PARAMETERS					
TOWER	FIELD	PHASE	SPACING	ORIENT.	HEIGHT
1	1	0	0	0	127.7
2	1.1	78.7	97.3	332.8	60

- Theoretical RMS for the proposed nighttime array is 201.35mV/m@1km
- Standard Pattern RMS for the proposed nighttime array is 211.67mV/m@1km

SAMPLE SYSTEM

The proposed sampling system will continue to consist of equal lengths of ½” foam coaxial cable from the antenna monitor to each tower. Each sample line and current sampling transformer will be verified for accuracy of phase and current ratios in accordance with 47CFR § 73.68 and 73.151.

GROUND SYSTEM

The ground system will continue to consist of 150 copper radials 18.3m around each tower submerged in a saltwater moat; plus 7.3m x 7.3m copper ground screen above water on land of each tower. The tower grounds are bonded together by four 3-inch copper straps between towers. A drawing of the ground system is attached as Figure 5.

BLANKETING INTERFERENCE AND STATION INTERACTION

WHBO daytimes will be transmitting from the same tower site as currently licensed. As shown in Figure 6, the 1,000mV/m blanketing daytime contour as a ratio of population coverage within the 25mV/m contour will be 0.31%. The proposed WHBO facility will remain compliant and within one percent defined in 73.24(g).

In response to all complaints of blanketing interference, the applicant will undertake steps to mitigate the interference in accordance with the requirements of section 73.88 of the Commission's Rules and Regulations.

There are no other constructed AM facilities within 3km of the proposed site.

COVERAGE CONTOURS

The proposed daytime and nighttime service contours are shown on Figure 7. The proposed (and current) day 5mV/m contour completely encompasses the community of Pinellas Park, Florida. The nighttime interference free (NIF) contour of WHBO is 10.5mV/m. Figure 8 shows the WHBO nighttime NIF contour covers 96.2% of the Pinellas Park area and 99.9% of the Pinellas Park population.

DAY ALLOCATION

Because there is no change requested for the WHBO Daytime facility, there is no need for a new allocation evaluation.

CRITICAL HOURS

The frequency 1040kHz is allocated WHO, Des Moines, IA. As shown in figure 9, WHBO daytime operation will continue to be compliant with critical hours protection to WHO.

NIGHTTIME ALLOCATION

The results of the nighttime allocation study are shown in figures 10-13. Figure 10 is a Standard Night Radiation report of the proposed antenna system for Theta 0 to 60 degrees. Figure 11 is a nighttime Allocation Protections report which includes RSS calculations for co-channel and first adjacent channel stations that may be affected by this proposal. Figure 12 is a Nighttime Radiation Limit Report. As shown in the Licensed Vs Proposed RSS report in Figure 13, the proposed nighttime facility of WHBO will not raise the 25% or 50% RSS limit of any domestic station or the 50% RSS limit of any foreign station.

ENVIRONMENTAL IMPACT

This application for minor change to the WHBO transmission facility proposes to remove the current Tower 1 from the array and continue to use the remaining two existing towers. Because the environmental impact will be decreased rather than increased and other than Section 1.1307(b) with respect to RF radiation, the proposed installation by WHBO is categorically excluded from environmental processing by note 3 of Section 1.1306 of the Commission's rules.

COMPLIANCE WITH RF RADIATION REGULATIONS

Access to the property where the towers are located is not restricted, however, each of the towers are surrounded by a six-foot fence. Fence gates are locked at all times except when station personnel are performing maintenance within the restricted access area. Appropriate warning signs are posted at regular intervals warning of high radio frequency energy levels within the fenced areas.

Table 2 and three of Supplement A (Edition 97-01) to OET Bulletin 65 (Edition 97-01) was used to provide compliance distances. The proposed tower height is 0.35 wavelength, which is mid-way between table 2 and Table 3. Both tables specify specifies worst-case 2m fence distance for 5kW. Therefore, at 3.6kW, 2 meter spacing should be appropriate for tower #1. With respect to nighttime operation, tower 2 is 0.17 wavelength, halfway between 0.1 (Table 1) Table 2 (0.25). Table 1 specifies 3m at 0.1 Wavelength spacing and Table 2, 1m. At 430 watts, it is considered that 2m spacing should be adequate.

As stated above access to the area surrounding the base of each of the WHBO towers will be restricted to authorized maintenance personnel only. The licensee will institute procedures to ensure protection of station personnel and tower contractors working on or in the immediate vicinity of the towers.

CERTIFICATION

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direct supervision, and that they are true and correct to the best of his knowledge and belief.



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Figure 1- Antenna Structure Registration

Registration 1060088

 [Map Registration](#)

Registration Detail			
Reg Number	1060088	Status	Granted
File Number	A0904743	Constructed	01/01/1960
EMI	No	Dismantled	
NEPA			
Antenna Structure			
Structure Type	GTOWER - Guyed Structure Used for Communication Purposes		
Location (in NAD83 Coordinates)			
Lat/Long	27-50-51.0 N 082-46-21.0 W	Address	North Tower - 9700 82ND AVE. NORTH
City, State	PINELLAS PARK , FL		
Zip	33777	County	PINELLAS
Center of AM Array	27-50-44.0 N 082-46-22.0 W	Position of Tower in Array	
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
1.8		104.8	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
106.6		104.8	
Painting and Lighting Specifications			
FAA Chapters 4, 6, 12			
Paint and Light in Accordance with FAA Circular Number 70/7460-1K			
FAA Notification			
FAA Study	2014-ASO-4472-OE	FAA Issue Date	06/23/2014
Owner & Contact Information			
FRN	0007783525	Owner Entity Type	Corporation
Owner			
Johnson Towers Corp. Attention To: Dan L. Johnson 4950 Gulf Blvd., Unit 1008 St. Petersburg Beach , FL 33706		P: (727)420-3060 F: E: dan@danjohnson.tv	
Contact			
Attention To: Dan L. Johnson 4950 Gulf Blvd., Unit 1008 St. Petersburg Beach , FL 33706		P: (727)420-3060 F: E: dan@danjohnson.tv	
Last Action Status			
Status	Granted	Received	07/09/2014
Purpose	Amendment	Entered	07/09/2014
Mode	Interactive		

Figure 2 WHBO- Tower Drawing (ND & Night Twr #1)

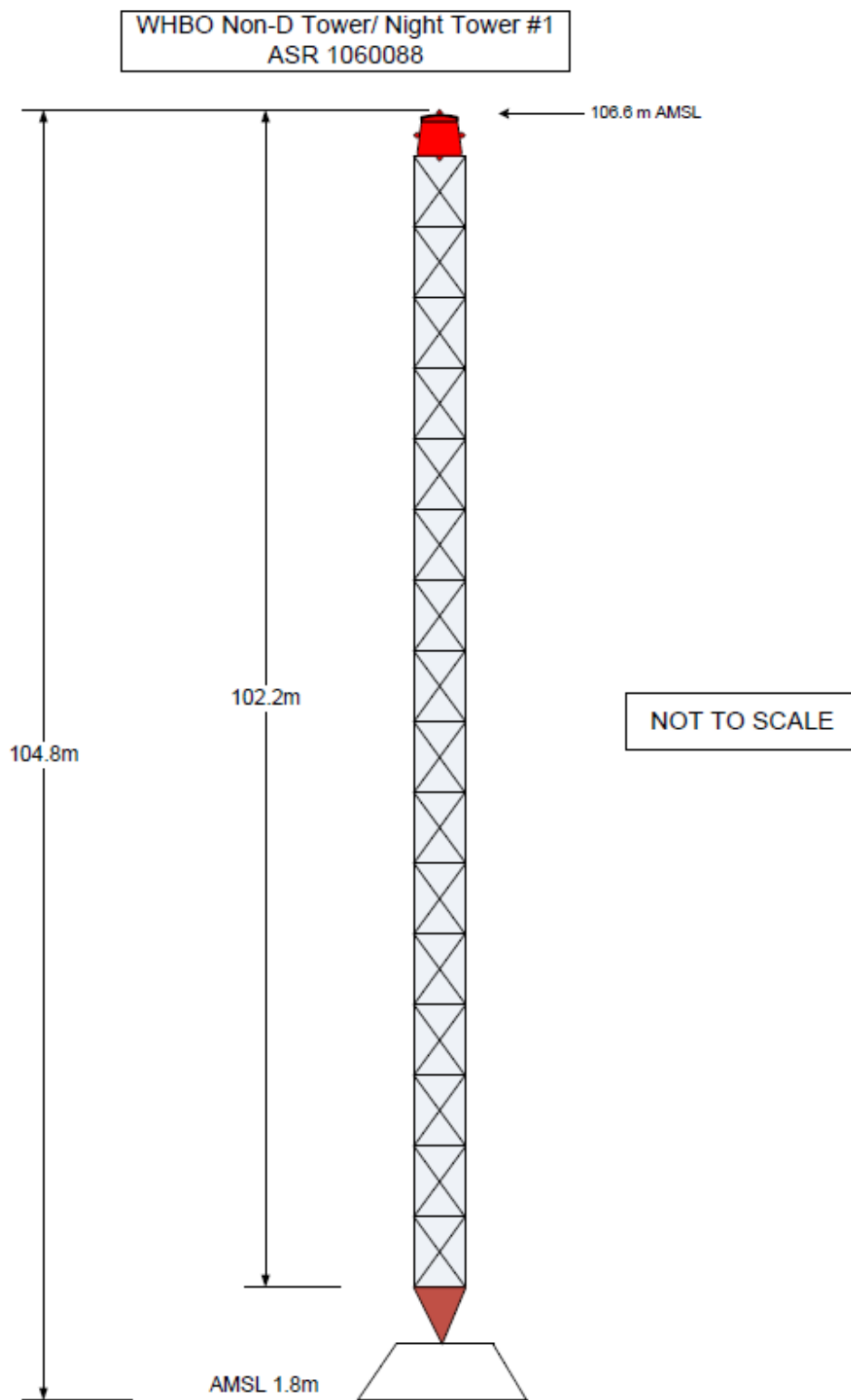


Figure 3 WHBO- Tower Drawing (Night Twr #2)

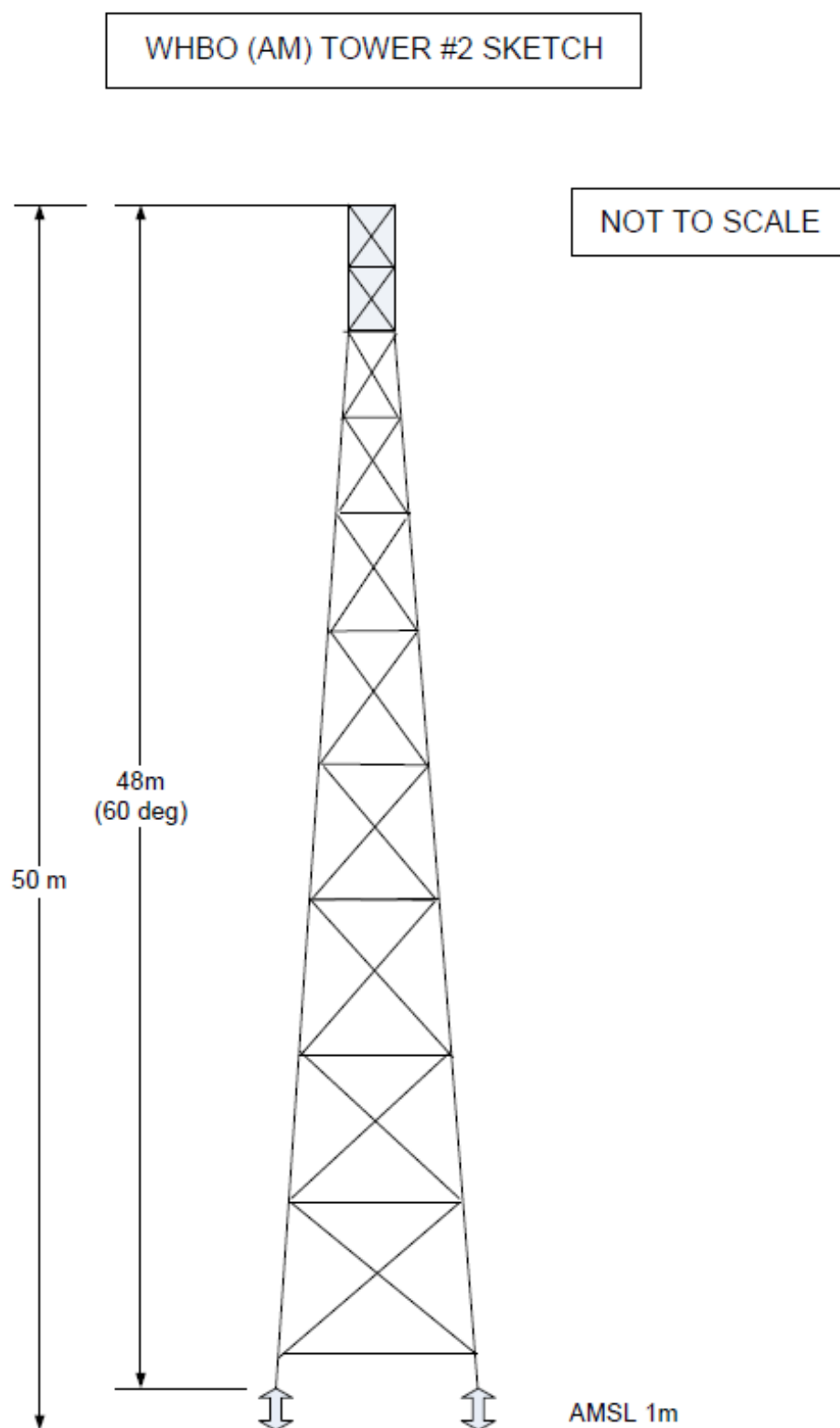


Figure 4 Nighttime Horizontal Plane Pattern

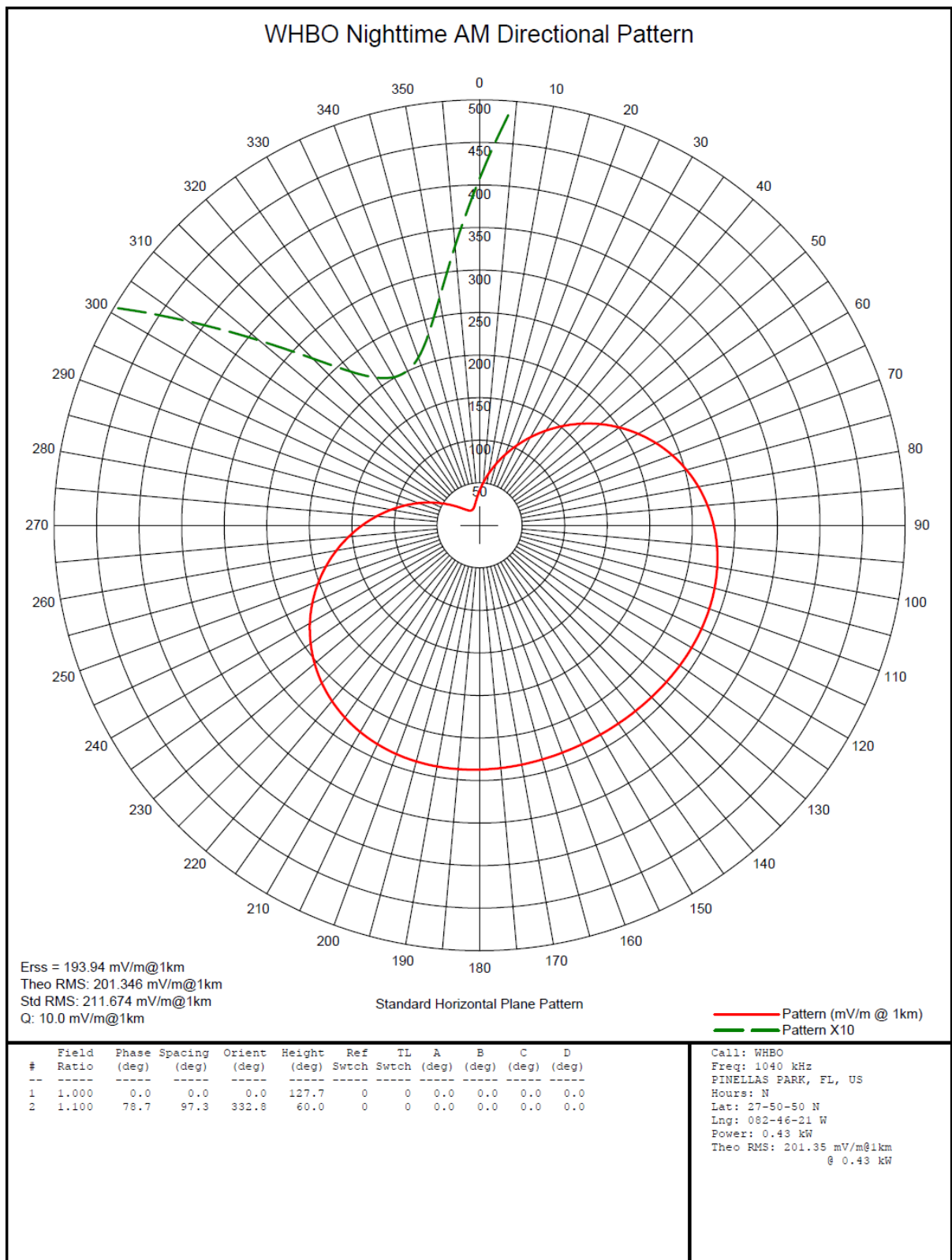


Figure 5- Ground System

WHBO Tower Layout and Ground System

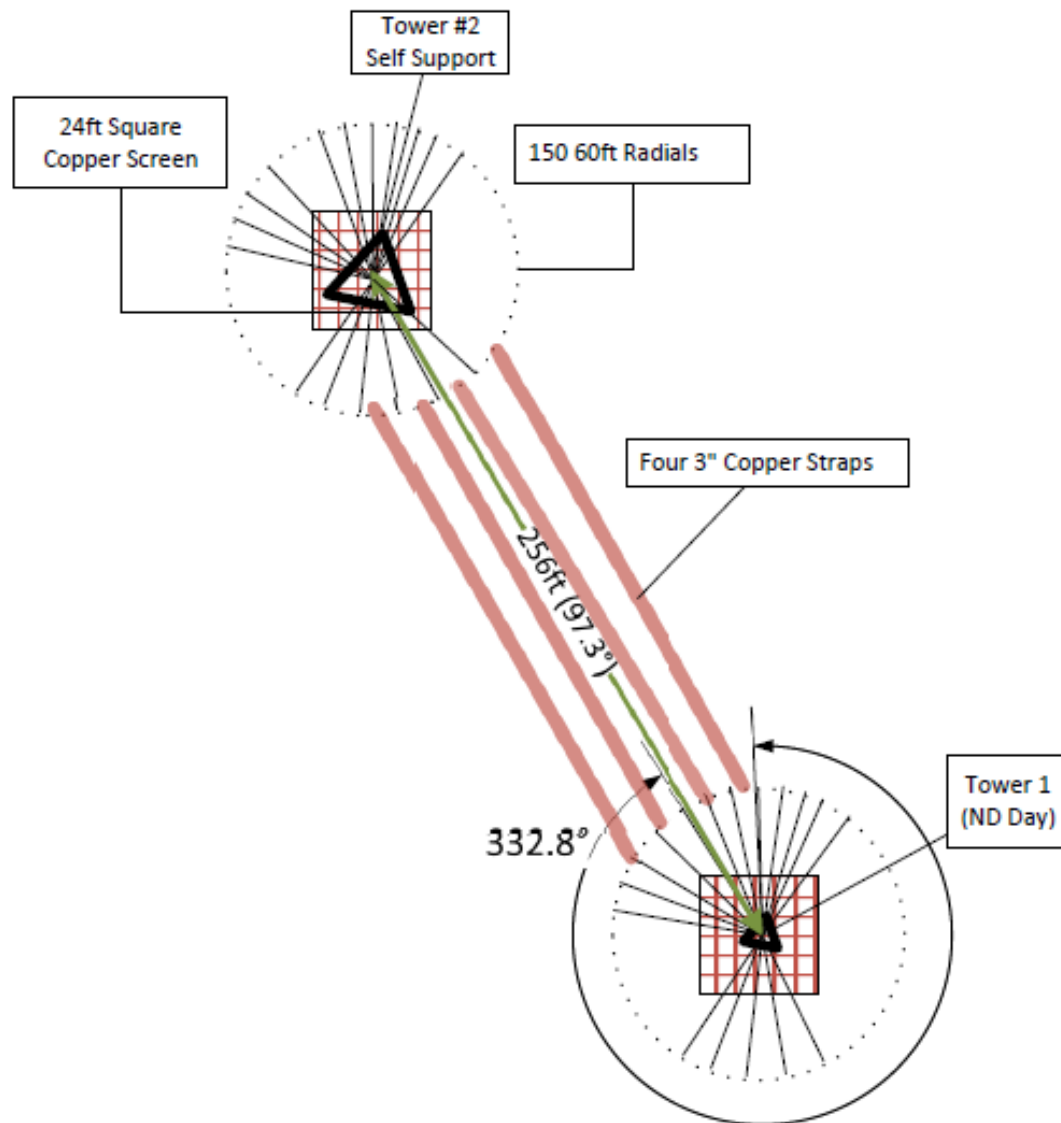


Figure 6 Daytime Blanketing Contour

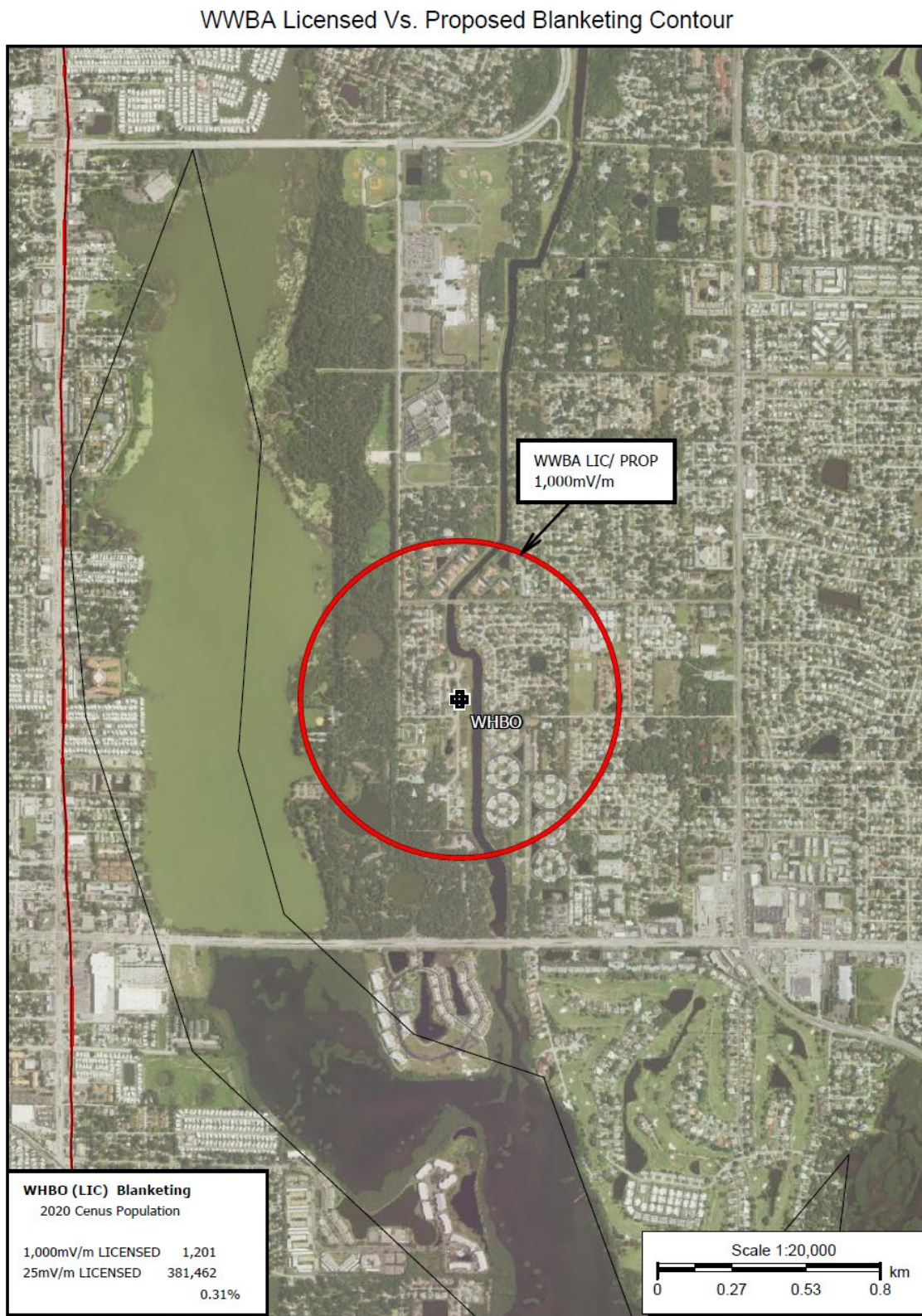


Figure 7 Licensed Vs. Proposed WHBO Service Contours

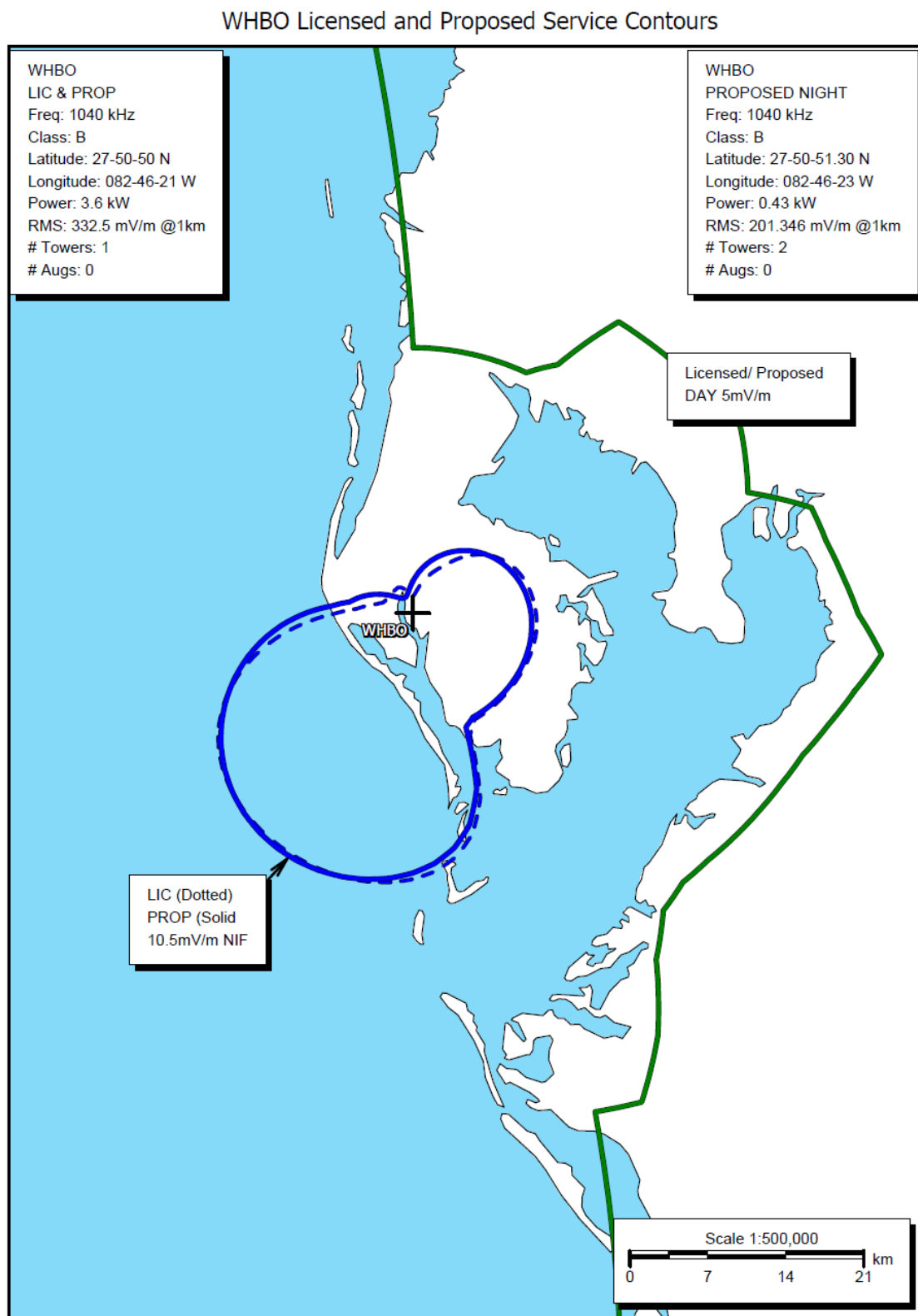


Figure 8- Community Coverage, Pinellas Park, Florida

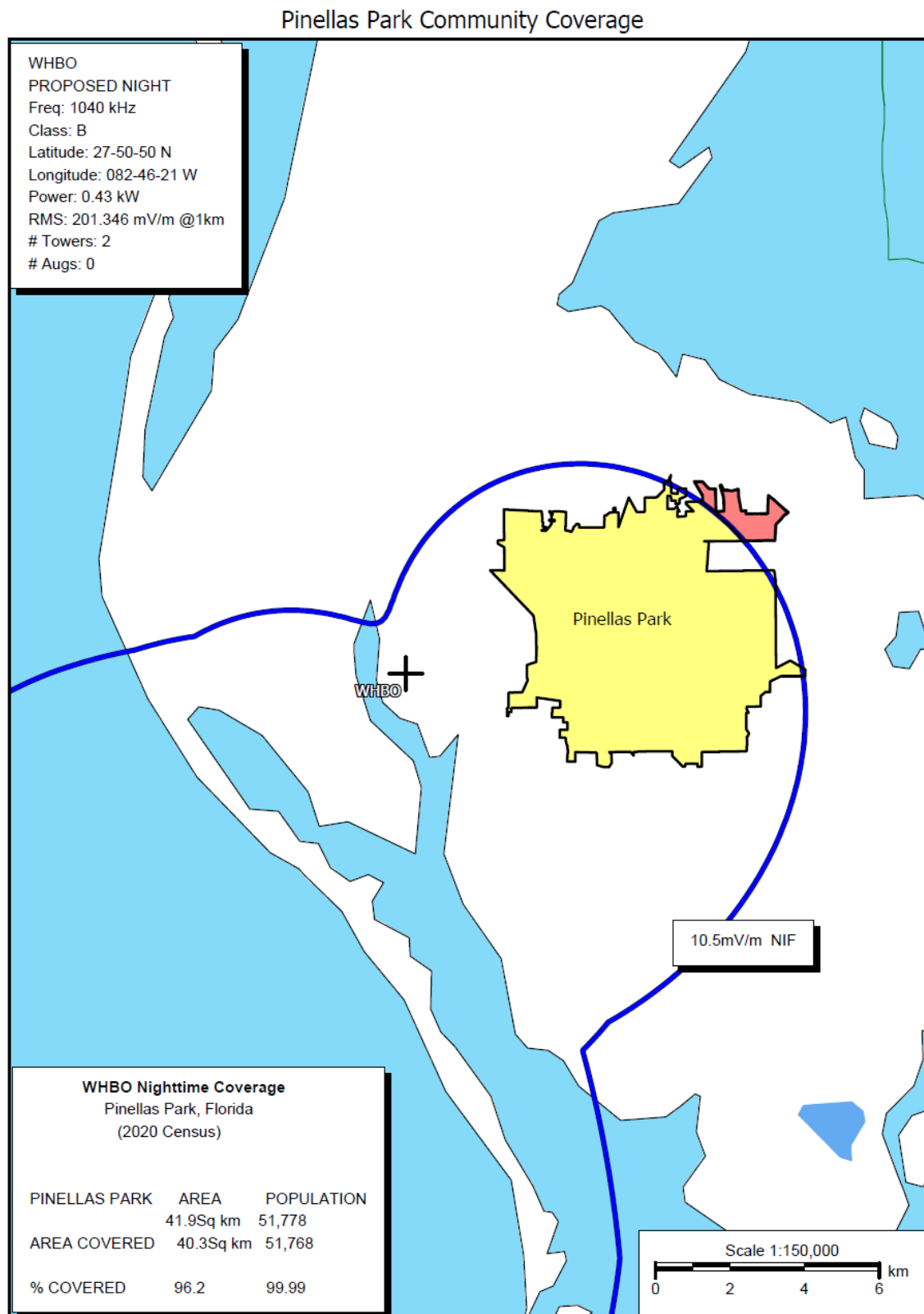


Figure 9- Critical Hours Study

Critical Hours Radiation Report

Call: WHBO
Freq: 1040 kHz
PINELLAS PARK, FL, US
Hours: D
Lat: 27-50-50 N
Lng: 082-46-21 W
Power: 3.6 kW
Theo RMS: 332.50 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0

Interpolation factors for 1040 kHz:

K(500) = 0.000
K(1000) = 0.933
K(1600) = 0.067

Call: WHO
Freq: 1040 kHz
DES MOINES, IA, US
Hours: D
Lat: 41-39-10 N
Lng: 093-21-01 W
Power: 50.0 kW
Theo RMS: 471.54 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	0.0	0	7	120.0	300.0	1.0	1.0

Permissible radiation calculated using FCC 73.190 curves.

Calculations performed using distance to the class A station's 0.1 mV/m contour.

Class A Azimuth (deg) (mV/m@1km)	Reference Azimuth (deg) (mV/m@1km)	Distance to 0.1 mV (km) / (mi)	Max Vert Angle (deg)	Max Rad Below Ang (mV/m@1km)	Permiss Radiation	Margin
-----	-----	-----	-----	-----	-----	-----
-						
217.68	318.00	1735.3 / 1078.3	3.9	630.87	2174.3	1543.4
206.89	319.00	1667.6 / 1036.2	4.4	630.87	1991.5	1360.6
195.61	320.00	1599.8 / 994.0	4.9	630.87	1826.6	1195.7
187.94	321.00	1557.7 / 967.9	5.2	630.87	1745.2	1114.3
181.70	322.00	1527.0 / 948.8	5.4	630.87	1694.7	1063.8
176.39	323.00	1504.3 / 934.8	5.6	630.87	1663.9	1033.1
171.67	324.00	1487.8 / 924.5	5.8	630.87	1647.2	1016.4
167.22	325.00	1474.6 / 916.3	5.9	630.87	1638.1	1007.2
162.95	326.00	1464.2 / 909.8	6.0	630.87	1635.1	1004.3
158.84	327.00	1456.6 / 905.1	6.0	630.87	1639.3	1008.5
154.83	328.00	1451.8 / 902.1	6.1	630.87	1650.4	1019.6
150.87	329.00	1449.4 / 900.6	6.1	630.87	1668.3	1037.4
146.89	330.00	1448.5 / 900.1	6.1	630.87	1691.0	1060.1
142.91	331.00	1448.3 / 900.0	6.1	630.87	1716.2	1085.3
138.92	332.00	1449.6 / 900.7	6.1	630.87	1746.3	1115.4
134.95	333.00	1451.8 / 902.1	6.1	630.87	1780.1	1149.2
130.92	334.00	1456.5 / 905.0	6.0	630.87	1822.6	1191.7
126.72	335.00	1465.2 / 910.5	6.0	630.87	1878.7	1247.8
122.14	336.00	1479.6 / 919.4	5.8	630.87	1954.9	1324.0
114.52	337.00	1525.7 / 948.0	5.5	630.87	2142.7	1511.9
108.00	338.00	1553.3 / 965.2	5.2	630.87	2281.1	1650.3
100.66	339.00	1586.1 / 985.6	5.0	630.87	2452.1	1821.2
91.66	340.00	1630.0 / 1012.8	4.7	630.87	2688.6	2057.8
78.55	341.00	1700.0 / 1056.3	4.2	630.87	3081.1	2450.3

Figure 10- Nighttime Radiation Report

AM Radiation Report

Call: WHBO
Freq: 1040 kHz
PINELLAS PARK, FL, US
Hours: N
Lat: 27-50-51.30 N
Lng: 082-46-23 W
Power: 0.43 kW
Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	40.74	5.0	50.39	10.0	61.71
15.0	74.50	20.0	88.56	25.0	103.63
30.0	119.48	35.0	135.82	40.0	152.38
45.0	168.87	50.0	185.01	55.0	200.51
60.0	215.14	65.0	228.66	70.0	240.91
75.0	251.73	80.0	261.06	85.0	268.86
90.0	275.16	95.0	280.01	100.0	283.55
105.0	285.91	110.0	287.27	115.0	287.82
120.0	287.75	125.0	287.26	130.0	286.53
135.0	285.73	140.0	285.00	145.0	284.44
150.0	284.13	155.0	284.11	160.0	284.39
165.0	284.92	170.0	285.64	175.0	286.44
180.0	287.18	185.0	287.71	190.0	287.84
195.0	287.37	200.0	286.12	205.0	283.89
210.0	280.51	215.0	275.81	220.0	269.70
225.0	262.08	230.0	252.93	235.0	242.28
240.0	230.20	245.0	216.82	250.0	202.32
255.0	186.91	260.0	170.83	265.0	154.37
270.0	137.80	275.0	121.42	280.0	105.50
285.0	90.32	290.0	76.13	295.0	63.17
300.0	51.66	305.0	41.81	310.0	33.78
315.0	27.72	320.0	23.59	325.0	21.18
330.0	20.11	335.0	20.05	340.0	20.99
345.0	23.22	350.0	27.12	355.0	32.95

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern					
Calculated at 5.0 Degrees Elevation					
Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	41.40	5.0	50.93	10.0	62.12
15.0	74.77	20.0	88.67	25.0	103.58
30.0	119.24	35.0	135.40	40.0	151.78
45.0	168.09	50.0	184.05	55.0	199.39
60.0	213.86	65.0	227.25	70.0	239.37
75.0	250.10	80.0	259.35	85.0	267.09
90.0	273.35	95.0	278.18	100.0	281.71
105.0	284.08	110.0	285.46	115.0	286.04
120.0	286.00	125.0	285.55	130.0	284.85
135.0	284.08	140.0	283.37	145.0	282.83
150.0	282.53	155.0	282.52	160.0	282.78
165.0	283.30	170.0	283.99	175.0	284.76
180.0	285.47	185.0	285.97	190.0	286.06
195.0	285.57	200.0	284.30	205.0	282.06
210.0	278.67	215.0	274.00	220.0	267.92
225.0	260.36	230.0	251.29	235.0	240.74
240.0	228.77	245.0	215.53	250.0	201.18
255.0	185.93	260.0	170.03	265.0	153.75
270.0	137.36	275.0	121.16	280.0	105.42
285.0	90.41	290.0	76.38	295.0	63.57
300.0	52.19	305.0	42.45	310.0	34.50
315.0	28.48	320.0	24.35	325.0	21.91
330.0	20.80	335.0	20.75	340.0	21.72
345.0	23.98	350.0	27.89	355.0	33.68

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	43.29	5.0	52.52	10.0	63.33
15.0	75.55	20.0	88.98	25.0	103.39
30.0	118.53	35.0	134.16	40.0	149.99
45.0	165.77	50.0	181.21	55.0	196.07
60.0	210.09	65.0	223.07	70.0	234.84
75.0	245.27	80.0	254.29	85.0	261.85
90.0	267.99	95.0	272.76	100.0	276.28
105.0	278.67	110.0	280.11	115.0	280.76
120.0	280.82	125.0	280.47	130.0	279.87
135.0	279.19	140.0	278.55	145.0	278.06
150.0	277.78	155.0	277.77	160.0	278.01
165.0	278.48	170.0	279.10	175.0	279.79
180.0	280.40	185.0	280.80	190.0	280.80
195.0	280.22	200.0	278.89	205.0	276.62
210.0	273.25	215.0	268.63	220.0	262.66
225.0	255.27	230.0	246.43	235.0	236.16
240.0	224.55	245.0	211.70	250.0	197.80
255.0	183.03	260.0	167.65	265.0	151.89
270.0	136.05	275.0	120.38	280.0	105.17
285.0	90.66	290.0	77.11	295.0	64.73
300.0	53.73	305.0	44.31	310.0	36.61
315.0	30.71	320.0	26.60	325.0	24.10
330.0	22.93	335.0	22.87	340.0	23.90
345.0	26.22	350.0	30.13	355.0	35.80

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	46.26	5.0	54.98	10.0	65.20
15.0	76.73	20.0	89.41	25.0	103.01
30.0	117.32	35.0	132.08	40.0	147.05
45.0	161.97	50.0	176.59	55.0	190.66
60.0	203.95	65.0	216.28	70.0	227.49
75.0	237.44	80.0	246.07	85.0	253.35
90.0	259.30	95.0	263.96	100.0	267.44
105.0	269.87	110.0	271.39	115.0	272.16
120.0	272.36	125.0	272.16	130.0	271.71
135.0	271.17	140.0	270.64	145.0	270.22
150.0	269.99	155.0	269.98	160.0	270.19
165.0	270.58	170.0	271.10	175.0	271.65
180.0	272.12	185.0	272.36	190.0	272.21
195.0	271.52	200.0	270.10	205.0	267.79
210.0	264.44	215.0	259.92	220.0	254.14
225.0	247.02	230.0	238.55	235.0	228.75
240.0	217.69	245.0	205.49	250.0	192.30
255.0	178.31	260.0	163.75	265.0	148.85
270.0	133.87	275.0	119.07	280.0	104.69
285.0	90.99	290.0	78.20	295.0	66.51
300.0	56.13	305.0	47.22	310.0	39.91
315.0	34.25	320.0	30.23	325.0	27.70
330.0	26.48	335.0	26.41	340.0	27.49
345.0	29.85	350.0	33.69	355.0	39.14

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern					
Calculated at 20.0 Degrees Elevation					
Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	50.01	5.0	58.07	10.0	67.49
15.0	78.13	20.0	89.81	25.0	102.36
30.0	115.55	35.0	129.18	40.0	143.01
45.0	156.80	50.0	170.32	55.0	183.35
60.0	195.69	65.0	207.16	70.0	217.60
75.0	226.92	80.0	235.04	85.0	241.93
90.0	247.60	95.0	252.10	100.0	255.53
105.0	257.98	110.0	259.59	115.0	260.51
120.0	260.89	125.0	260.87	130.0	260.61
135.0	260.23	140.0	259.84	145.0	259.53
150.0	259.35	155.0	259.34	160.0	259.50
165.0	259.80	170.0	260.18	175.0	260.57
180.0	260.85	185.0	260.90	190.0	260.58
195.0	259.73	200.0	258.21	205.0	255.87
210.0	252.57	215.0	248.20	220.0	242.67
225.0	235.93	230.0	227.96	235.0	218.78
240.0	208.47	245.0	197.12	250.0	184.87
255.0	171.92	260.0	158.44	265.0	144.67
270.0	130.84	275.0	117.17	280.0	103.91
285.0	91.27	290.0	79.48	295.0	68.71
300.0	59.13	305.0	50.90	310.0	44.11
315.0	38.80	320.0	34.96	325.0	32.49
330.0	31.26	335.0	31.19	340.0	32.28
345.0	34.59	350.0	38.26	355.0	43.39

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	54.15	5.0	61.43	10.0	69.92
15.0	79.49	20.0	90.00	25.0	101.30
30.0	113.18	35.0	125.46	40.0	137.93
45.0	150.37	50.0	162.59	55.0	174.39
60.0	185.58	65.0	196.01	70.0	205.55
75.0	214.10	80.0	221.59	85.0	227.99
90.0	233.32	95.0	237.62	100.0	240.94
105.0	243.40	110.0	245.10	115.0	246.16
120.0	246.73	125.0	246.92	130.0	246.86
135.0	246.66	140.0	246.43	145.0	246.22
150.0	246.10	155.0	246.09	160.0	246.20
165.0	246.40	170.0	246.63	175.0	246.84
180.0	246.92	185.0	246.77	190.0	246.25
195.0	245.26	200.0	243.64	205.0	241.28
210.0	238.06	215.0	233.89	220.0	228.69
225.0	222.41	230.0	215.05	235.0	206.63
240.0	197.21	245.0	186.88	250.0	175.77
255.0	164.03	260.0	151.86	265.0	139.42
270.0	126.95	275.0	114.64	280.0	102.69
285.0	91.32	290.0	80.71	295.0	71.01
300.0	62.39	305.0	54.96	310.0	48.80
315.0	43.94	320.0	40.37	325.0	38.04
330.0	36.86	335.0	36.80	340.0	37.84
345.0	40.03	350.0	43.44	355.0	48.14

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	58.25	5.0	64.68	10.0	72.14
15.0	80.54	20.0	89.77	25.0	99.68
30.0	110.11	35.0	120.90	40.0	131.87
45.0	142.83	50.0	153.60	55.0	164.03
60.0	173.95	65.0	183.22	70.0	191.74
75.0	199.41	80.0	206.19	85.0	212.03
90.0	216.95	95.0	220.98	100.0	224.17
105.0	226.59	110.0	228.35	115.0	229.55
120.0	230.28	125.0	230.67	130.0	230.81
135.0	230.80	140.0	230.71	145.0	230.62
150.0	230.56	155.0	230.56	160.0	230.61
165.0	230.70	170.0	230.79	175.0	230.81
180.0	230.70	185.0	230.34	190.0	229.66
195.0	228.52	200.0	226.84	205.0	224.50
210.0	221.40	215.0	217.48	220.0	212.67
225.0	206.94	230.0	200.28	235.0	192.71
240.0	184.29	245.0	175.10	250.0	165.25
255.0	154.88	260.0	144.13	265.0	133.18
270.0	122.21	275.0	111.39	280.0	100.91
285.0	90.92	290.0	81.61	295.0	73.10
300.0	65.52	305.0	58.97	310.0	53.51
315.0	49.17	320.0	45.96	325.0	43.83
330.0	42.74	335.0	42.68	340.0	43.64
345.0	45.64	350.0	48.73	355.0	52.93

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	61.86	5.0	67.38	10.0	73.78
15.0	80.97	20.0	88.86	25.0	97.33
30.0	106.26	35.0	115.49	40.0	124.88
45.0	134.29	50.0	143.55	55.0	152.54
60.0	161.11	65.0	169.17	70.0	176.60
75.0	183.33	80.0	189.32	85.0	194.55
90.0	199.00	95.0	202.70	100.0	205.70
105.0	208.05	110.0	209.83	115.0	211.12
120.0	211.99	125.0	212.55	130.0	212.87
135.0	213.02	140.0	213.08	145.0	213.08
150.0	213.08	155.0	213.08	160.0	213.08
165.0	213.08	170.0	213.03	175.0	212.89
180.0	212.60	185.0	212.08	190.0	211.24
195.0	210.01	200.0	208.30	205.0	206.02
210.0	203.10	215.0	199.48	220.0	195.12
225.0	189.99	230.0	184.09	235.0	177.44
240.0	170.09	245.0	162.11	250.0	153.59
255.0	144.65	260.0	135.41	265.0	126.02
270.0	116.61	275.0	107.35	280.0	98.38
285.0	89.85	290.0	81.88	295.0	74.60
300.0	68.10	305.0	62.47	310.0	57.76
315.0	53.99	320.0	51.17	325.0	49.29
330.0	48.33	335.0	48.28	340.0	49.13
345.0	50.90	350.0	53.60	355.0	57.26

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern					
Calculated at 40.0 Degrees Elevation					
Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	64.54	5.0	69.17	10.0	74.50
15.0	80.49	20.0	87.06	25.0	94.10
30.0	101.53	35.0	109.21	40.0	117.04
45.0	124.89	50.0	132.64	55.0	140.17
60.0	147.39	65.0	154.20	70.0	160.52
75.0	166.29	80.0	171.47	85.0	176.03
90.0	179.97	95.0	183.30	100.0	186.06
105.0	188.28	110.0	190.03	115.0	191.35
120.0	192.32	125.0	193.00	130.0	193.46
135.0	193.75	140.0	193.92	145.0	194.01
150.0	194.05	155.0	194.05	160.0	194.02
165.0	193.93	170.0	193.77	175.0	193.50
180.0	193.07	185.0	192.42	190.0	191.48
195.0	190.21	200.0	188.52	205.0	186.36
210.0	183.67	215.0	180.40	220.0	176.54
225.0	172.05	230.0	166.95	235.0	161.25
240.0	154.99	245.0	148.24	250.0	141.06
255.0	133.55	260.0	125.82	265.0	117.98
270.0	110.14	275.0	102.44	280.0	94.98
285.0	87.88	290.0	81.25	295.0	75.19
300.0	69.77	305.0	65.06	310.0	61.10
315.0	57.91	320.0	55.52	325.0	53.91
330.0	53.09	335.0	53.04	340.0	53.77
345.0	55.28	350.0	57.58	355.0	60.67

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern					
Calculated at 45.0 Degrees Elevation					
Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	65.94	5.0	69.69	10.0	74.02
15.0	78.86	20.0	84.16	25.0	89.85
30.0	95.84	35.0	102.04	40.0	108.37
45.0	114.73	50.0	121.02	55.0	127.16
60.0	133.07	65.0	138.67	70.0	143.89
75.0	148.70	80.0	153.06	85.0	156.93
90.0	160.33	95.0	163.25	100.0	165.72
105.0	167.76	110.0	169.41	115.0	170.72
120.0	171.72	125.0	172.47	130.0	173.02
135.0	173.40	140.0	173.65	145.0	173.81
150.0	173.88	155.0	173.89	160.0	173.82
165.0	173.68	170.0	173.44	175.0	173.07
180.0	172.55	185.0	171.82	190.0	170.85
195.0	169.59	200.0	167.98	205.0	165.99
210.0	163.57	215.0	160.71	220.0	157.37
225.0	153.55	230.0	149.25	235.0	144.49
240.0	139.31	245.0	133.76	250.0	127.88
255.0	121.77	260.0	115.49	265.0	109.13
270.0	102.80	275.0	96.57	280.0	90.55
285.0	84.82	290.0	79.47	295.0	74.57
300.0	70.18	305.0	66.36	310.0	63.13
315.0	60.52	320.0	58.55	325.0	57.22
330.0	56.54	335.0	56.50	340.0	57.11
345.0	58.36	350.0	60.25	355.0	62.78

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	65.76	5.0	68.71	10.0	72.10
15.0	75.89	20.0	80.03	25.0	84.46
30.0	89.14	35.0	93.98	40.0	98.93
45.0	103.91	50.0	108.85	55.0	113.69
60.0	118.37	65.0	122.82	70.0	127.01
75.0	130.90	80.0	134.45	85.0	137.65
90.0	140.49	95.0	142.97	100.0	145.11
105.0	146.92	110.0	148.42	115.0	149.65
120.0	150.63	125.0	151.39	130.0	151.98
135.0	152.40	140.0	152.70	145.0	152.89
150.0	152.99	155.0	152.99	160.0	152.91
165.0	152.73	170.0	152.45	175.0	152.03
180.0	151.47	185.0	150.73	190.0	149.78
195.0	148.58	200.0	147.11	205.0	145.34
210.0	143.25	215.0	140.81	220.0	138.01
225.0	134.85	230.0	131.34	235.0	127.50
240.0	123.34	245.0	118.92	250.0	114.26
255.0	109.44	260.0	104.50	265.0	99.52
270.0	94.57	275.0	89.71	280.0	85.01
285.0	80.54	290.0	76.37	295.0	72.54
300.0	69.10	305.0	66.09	310.0	63.55
315.0	61.49	320.0	59.92	325.0	58.87
330.0	58.32	335.0	58.29	340.0	58.77
345.0	59.77	350.0	61.27	355.0	63.27

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	63.83	5.0	66.05	10.0	68.61
15.0	71.45	20.0	74.56	25.0	77.89
30.0	81.39	35.0	85.03	40.0	88.75
45.0	92.50	50.0	96.24	55.0	99.91
60.0	103.48	65.0	106.90	70.0	110.13
75.0	113.16	80.0	115.95	85.0	118.50
90.0	120.79	95.0	122.82	100.0	124.60
105.0	126.13	110.0	127.44	115.0	128.53
120.0	129.43	125.0	130.15	130.0	130.72
135.0	131.15	140.0	131.47	145.0	131.67
150.0	131.77	155.0	131.77	160.0	131.68
165.0	131.49	170.0	131.20	175.0	130.78
180.0	130.23	185.0	129.53	190.0	128.65
195.0	127.58	200.0	126.30	205.0	124.79
210.0	123.04	215.0	121.04	220.0	118.78
225.0	116.27	230.0	113.51	235.0	110.51
240.0	107.30	245.0	103.90	250.0	100.35
255.0	96.69	260.0	92.95	265.0	89.20
270.0	85.47	275.0	81.82	280.0	78.30
285.0	74.95	290.0	71.81	295.0	68.93
300.0	66.34	305.0	64.08	310.0	62.15
315.0	60.59	320.0	59.40	325.0	58.59
330.0	58.18	335.0	58.15	340.0	58.52
345.0	59.28	350.0	60.42	355.0	61.94

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	60.03	5.0	61.63	10.0	63.46
15.0	65.50	20.0	67.72	25.0	70.10
30.0	72.61	35.0	75.22	40.0	77.88
45.0	80.58	50.0	83.28	55.0	85.94
60.0	88.54	65.0	91.04	70.0	93.43
75.0	95.68	80.0	97.78	85.0	99.71
90.0	101.47	95.0	103.06	100.0	104.47
105.0	105.71	110.0	106.79	115.0	107.70
120.0	108.48	125.0	109.11	130.0	109.62
135.0	110.02	140.0	110.31	145.0	110.50
150.0	110.59	155.0	110.60	160.0	110.51
165.0	110.33	170.0	110.06	175.0	109.67
180.0	109.18	185.0	108.56	190.0	107.80
195.0	106.90	200.0	105.85	205.0	104.63
210.0	103.24	215.0	101.67	220.0	99.93
225.0	98.02	230.0	95.94	235.0	93.71
240.0	91.33	245.0	88.84	250.0	86.26
255.0	83.60	260.0	80.91	265.0	78.21
270.0	75.53	275.0	72.92	280.0	70.40
285.0	68.00	290.0	65.76	295.0	63.69
300.0	61.84	305.0	60.21	310.0	58.82
315.0	57.70	320.0	56.84	325.0	56.25
330.0	55.95	335.0	55.94	340.0	56.20
345.0	56.75	350.0	57.58	355.0	58.67

Figure 11- Nighttime Allocation Protection Report

Night Allocation Protection Report

Call: WHBO
 Freq: 1040 kHz
 PINELLAS PARK, FL, US
 Hours: N
 Lat: 27-50-51.30 N
 Lng: 082-46-23 W
 Power: 0.43 kW
 Theo RMS: 201.35 mV/m @ 1km @ 0.43 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	127.7	0	0	0.0	0.0	0.0	0.0
2	1.100	78.7	97.3	332.8	60.0	0	0	0.0	0.0	0.0	0.0

Call Margin Letters (mV/m)	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)
WHO (171) 1.39	US	IA	DES MOINES	48.29	0.500	51.77S	50.38
CMAO-D 2.68	CU		SAN CRISTOBA	45.66	2.468	270.31	267.63
50% = 3.88, 25% = 4.017; WHBO=2.47 TIAC-A=2.37 WHO=1.83 WURN=1.04							
WURN 4.48	US	FL	MIAMI	203.54	10.427	256.13	251.66
50% = 13.152, 25% = 13.993; WHBO=10.43 WHO=8.02 TIAC-A=4.78							
CMLQ-D 111.64	CU		PUERTO PADRE	26.94	2.110	391.58	279.94
50% = 4.523, 25% = 4.779; WURN=4.00 TIAC-A=2.11 WHBO=1.54							
WONQ 339.81	US	FL	OVIEDO	310.64	3.057	492.00	152.19
50% = 12.227, 25% = 12.227; WBZ=12.23							
WNVI 496.50	US	PR	MOCA	19.49	3.057	784.22	287.72
50% = 10.347, 25% = 12.227; HION-C=6.65 HJCJ-A=5.82 HJFM-A=5.38 TIAC-A=4.19 ZYK537-A=3.93 WHO=3.07							
XEGR1/O 496.75	MX	VC	COATEPEC	17.06	2.477	725.78	229.04
50% = 4.954, 25% = 5.265; WHO=3.84 TIAC-A=3.13 XEKM/A=1.78							
XEGR/O 497.77	MX	VC	COATEPEC	17.03	2.477	727.20	229.43
50% = 4.955, 25% = 5.267; WHO=3.82 TIAC-A=3.15 XEKM/A=1.79							

XEKM/A	MX VE MINATITLAN	20.23	3.280	810.65	252.04
558.61					
50% = 6.598, 25% = 6.598; TIAC-A=5.72 WHO=3.28					
XEJAQ1/O	MX QE JALPAN	13.53	2.236	826.42	201.99
624.43					
50% = 4.473, 25% = 5.227; WHO=4.47 TIAC-A=1.84 XESAG/A=1.48 XEKM/A=1.31					
WCHR	US NJ FLEMINGTON	20.36	3.462	850.31	103.26
747.05					
50% = 13.85, 25% = 13.85; WHO=10.36 WBZ=9.20					
XETLX/O	MX OA TLAXIACO	11.68	2.315	990.82	241.02
749.80					
50% = 4.629, 25% = 4.936; TIAC-A=3.55 WHO=2.97 XEKM/A=1.71					
XESAG/A	MX GT RANCHO GODOY	10.01	1.984	990.65	201.18
789.46					
50% = 3.968, 25% = 4.435; WHO=3.97 TIAC-A=1.61 XEKM/A=1.15					
XESAG/O	MX GT RANCHO GODOY	10.01	1.984	990.65	201.18
789.46					
50% = 3.968, 25% = 4.435; WHO=3.97 TIAC-A=1.61 XEKM/A=1.15					
XESAG/O	MX GT RANCHO GODOY	10.01	1.984	990.65	201.18
789.46					
50% = 3.968, 25% = 4.435; WHO=3.97 TIAC-A=1.61 XEKM/A=1.15					
XESAG/O	MX GT SALAMANCA	9.90	1.984	1002.11	200.50
801.60					
50% = 3.969, 25% = 4.424; WHO=3.97 TIAC-A=1.59 XEKM/A=1.13					
XENVA2/O	MX TA RIO BRAVO	24.86	4.847	974.90	151.71
823.19					
50% = 9.693, 25% = 9.693; WHO=9.69					
XE/O	MX CS VILLA FLORES	18.10	4.313	1191.11	266.27
924.84					
50% = 8.625, 25% = 9.054; TIAC-A=8.63 WHO=2.75					
XEVE/O	MX CL COLIMA	6.75	1.574	1165.27	201.22
964.05					
50% = 3.148, 25% = 3.65; WHO=3.15 XESAG/A=1.31 TIAC-A=1.30					

Figure 12- Proposed Nighttime Radiation Limits Report

Night Radiation Limit Report for WHBO

Frequency: 1040 kHz

Latitude: 27-50-51.30 N Longitude: 082-46-23 W

Radiation limits above 1000.0 mV/m@1km are not shown.

	Ct St City	Azimuth (Deg)	Min Theta (Deg)	Max Theta (Deg)	Limit (mV/m @ 1km)
----	--- --	-----	-----	-----	-----
25:					
WCHR	US NJ FLEMINGTON	24.9	1.7	5.1	850.3
59:					
WONQ	US FL OVIEDO	59.3	37.9	52.3	492.0
120:					
WNVI	US PR MOCA	120.4	0.0	2.8	784.2
133:					
WURN	US FL MIAMI	133.1	23.3	35.8	256.1
139:					
CMLQ-D	CU PUERTO PADRE	138.6	9.0	9.0	391.6
183:					
CMAO-D	CU SAN CRISTOBA	182.7	17.2	17.2	270.3
230:					
XEKM/A	MX VE MINATITLAN	230.2	3.0	3.0	810.6
236:					
XETLX/O	MX OA TLAXIACO	235.5	1.3	1.3	990.8
240:					
XEGR1/O	MX VC COATEPEC	240.3	2.5	2.5	725.8
XEGR/O	MX VC COATEPEC	240.2	2.5	2.5	727.2
250:					
XEJAQ1/O	MX QE JALPAN	250.1	1.8	1.8	826.4
XESAG/A	MX GT RANCHO GODOY	250.4	0.8	0.8	990.6
XESAG/O	MX GT RANCHO GODOY	250.4	0.8	0.8	990.6
XESAG/O	MX GT RANCHO GODOY	250.4	0.8	0.8	990.6
266:					
XENVA2/O	MX TA RIO BRAVO	265.7	3.7	3.7	974.9
294:					
WHO (195)	US IA DES MOINES	294.5	2.8	6.6	89.9
WHO (196)	US IA DES MOINES	294.4	2.7	6.5	91.9
WHO (197)	US IA DES MOINES	294.4	2.5	6.3	94.0
WHO (198)	US IA DES MOINES	294.4	2.4	6.1	96.0
WHO (199)	US IA DES MOINES	294.5	2.3	6.0	98.1
WHO (200)	US IA DES MOINES	294.5	2.2	5.8	100.2
295:					
WHO (187)	US IA DES MOINES	295.4	3.8	8.1	75.0
WHO (188)	US IA DES MOINES	295.2	3.7	7.9	76.8
WHO (189)	US IA DES MOINES	295.0	3.5	7.7	78.6
WHO (190)	US IA DES MOINES	294.9	3.4	7.5	80.4
WHO (191)	US IA DES MOINES	294.8	3.3	7.3	82.2
WHO (192)	US IA DES MOINES	294.7	3.1	7.1	84.1
WHO (193)	US IA DES MOINES	294.6	3.0	7.0	86.0

WHO (194)	US IA DES MOINES	294.5	2.9	6.8	88.0
WHO (201)	US IA DES MOINES	294.5	2.1	5.7	102.3
WHO (202)	US IA DES MOINES	294.6	2.0	5.5	104.5
WHO (203)	US IA DES MOINES	294.6	1.9	5.4	106.7
WHO (204)	US IA DES MOINES	294.7	1.8	5.2	108.9
WHO (205)	US IA DES MOINES	294.8	1.7	5.1	111.1
WHO (206)	US IA DES MOINES	294.9	1.6	4.9	113.4
WHO (207)	US IA DES MOINES	295.0	1.5	4.8	115.7
WHO (208)	US IA DES MOINES	295.1	1.4	4.7	118.0
WHO (209)	US IA DES MOINES	295.2	1.3	4.5	120.3
WHO (210)	US IA DES MOINES	295.4	1.2	4.4	122.6
296:					
WHO (183)	US IA DES MOINES	296.4	4.4	8.9	68.3
WHO (184)	US IA DES MOINES	296.1	4.2	8.7	69.9
WHO (185)	US IA DES MOINES	295.8	4.1	8.5	71.6
WHO (186)	US IA DES MOINES	295.6	3.9	8.3	73.3
WHO (211)	US IA DES MOINES	295.5	1.1	4.3	125.0
WHO (212)	US IA DES MOINES	295.7	1.0	4.2	127.4
WHO (213)	US IA DES MOINES	295.9	0.9	4.1	129.8
WHO (214)	US IA DES MOINES	296.0	0.8	3.9	132.2
WHO (215)	US IA DES MOINES	296.2	0.8	3.8	134.6
WHO (216)	US IA DES MOINES	296.4	0.7	3.7	137.1
297:					
WHO (180)	US IA DES MOINES	297.4	4.8	9.5	63.7
WHO (181)	US IA DES MOINES	297.0	4.6	9.3	65.2
WHO (182)	US IA DES MOINES	296.7	4.5	9.1	66.7
WHO (217)	US IA DES MOINES	296.6	0.6	3.6	139.6
WHO (218)	US IA DES MOINES	296.8	0.5	3.5	142.1
WHO (219)	US IA DES MOINES	297.0	0.4	3.4	144.6
WHO (220)	US IA DES MOINES	297.2	0.3	3.3	147.1
298:					
WHO (178)	US IA DES MOINES	298.2	5.1	9.9	60.7
WHO (179)	US IA DES MOINES	297.7	4.9	9.7	62.2
WHO (221)	US IA DES MOINES	297.5	0.3	3.2	149.6
WHO (222)	US IA DES MOINES	297.7	0.2	3.1	152.2
WHO (223)	US IA DES MOINES	298.0	0.1	3.0	154.8
WHO (224)	US IA DES MOINES	298.2	0.0	2.9	157.4
WHO (225)	US IA DES MOINES	298.4	0.0	2.8	160.0
299:					
WHO (176)	US IA DES MOINES	299.2	5.4	10.4	58.0
WHO (177)	US IA DES MOINES	298.7	5.2	10.1	59.4
WHO (226)	US IA DES MOINES	298.7	0.0	2.7	162.6
WHO (227)	US IA DES MOINES	299.0	0.0	2.6	165.2
WHO (228)	US IA DES MOINES	299.2	0.0	2.5	167.9
WHO (229)	US IA DES MOINES	299.5	0.0	2.4	170.5
300:					
WHO (174)	US IA DES MOINES	300.2	5.7	10.8	55.4
WHO (175)	US IA DES MOINES	299.7	5.5	10.6	56.7
WHO (230)	US IA DES MOINES	299.8	0.0	2.3	173.1
WHO (231)	US IA DES MOINES	300.1	0.0	2.2	175.8
WHO (232)	US IA DES MOINES	300.3	0.0	2.2	178.5
301:					
WHO (172)	US IA DES MOINES	301.4	6.0	11.3	52.9
WHO (173)	US IA DES MOINES	300.8	5.8	11.0	54.1
WHO (233)	US IA DES MOINES	300.6	0.0	2.1	181.2
WHO (234)	US IA DES MOINES	300.9	0.0	2.0	183.9
WHO (235)	US IA DES MOINES	301.2	0.0	1.9	186.6

WHO (236)	US IA DES MOINES	301.5	0.0	1.8	189.4
302:					
WHO (171)	US IA DES MOINES	302.0	6.1	11.5	51.8
WHO (237)	US IA DES MOINES	301.8	0.0	1.8	192.0
WHO (238)	US IA DES MOINES	302.1	0.0	1.7	194.8
WHO (239)	US IA DES MOINES	302.4	0.0	1.6	197.5
303:					
WHO (169)	US IA DES MOINES	303.4	6.5	11.9	49.6
WHO (170)	US IA DES MOINES	302.7	6.3	11.7	50.6
WHO (240)	US IA DES MOINES	302.7	0.0	1.6	200.2
WHO (241)	US IA DES MOINES	303.0	0.0	1.5	203.0
WHO (242)	US IA DES MOINES	303.3	0.0	1.4	205.8
304:					
WHO (168)	US IA DES MOINES	304.2	6.6	12.2	48.5
WHO (243)	US IA DES MOINES	303.7	0.0	1.4	208.4
WHO (244)	US IA DES MOINES	304.0	0.0	1.3	211.2
WHO (245)	US IA DES MOINES	304.3	0.0	1.2	214.0
305:					
WHO (167)	US IA DES MOINES	305.0	6.8	12.4	47.5
WHO (246)	US IA DES MOINES	304.6	0.0	1.2	216.7
WHO (247)	US IA DES MOINES	304.9	0.0	1.1	219.5
WHO (248)	US IA DES MOINES	305.3	0.0	1.0	222.3
306:					
WHO (166)	US IA DES MOINES	305.9	6.9	12.6	46.6
WHO (249)	US IA DES MOINES	305.6	0.0	1.0	224.9
WHO (250)	US IA DES MOINES	305.9	0.0	0.9	227.7
WHO (251)	US IA DES MOINES	306.3	0.0	0.9	230.4
307:					
WHO (165)	US IA DES MOINES	306.7	7.0	12.8	45.7
WHO (252)	US IA DES MOINES	306.6	0.0	0.8	233.2
WHO (253)	US IA DES MOINES	306.9	0.0	0.8	236.0
WHO (254)	US IA DES MOINES	307.3	0.0	0.7	238.6
308:					
WHO (164)	US IA DES MOINES	307.6	7.2	13.0	44.9
WHO (255)	US IA DES MOINES	307.6	0.0	0.7	241.4
WHO (256)	US IA DES MOINES	308.0	0.0	0.6	244.0
WHO (257)	US IA DES MOINES	308.3	0.0	0.6	246.8
309:					
WHO (163)	US IA DES MOINES	308.6	7.3	13.2	44.1
WHO (258)	US IA DES MOINES	308.6	0.0	0.5	249.5
WHO (259)	US IA DES MOINES	309.0	0.0	0.5	252.1
WHO (260)	US IA DES MOINES	309.3	0.0	0.4	254.9
310:					
WHO (162)	US IA DES MOINES	309.6	7.5	13.4	43.3
WHO (261)	US IA DES MOINES	309.7	0.0	0.4	257.4
WHO (262)	US IA DES MOINES	310.0	0.0	0.4	260.1
WHO (263)	US IA DES MOINES	310.3	0.0	0.3	262.9
311:					
WHO (161)	US IA DES MOINES	310.6	7.6	13.6	42.6
WHO (264)	US IA DES MOINES	310.7	0.0	0.3	265.4
WHO (265)	US IA DES MOINES	311.0	0.0	0.2	268.1
WHO (266)	US IA DES MOINES	311.4	0.0	0.2	270.5
312:					
WHO (160)	US IA DES MOINES	311.7	7.7	13.8	42.0
WHO (267)	US IA DES MOINES	311.7	0.0	0.2	273.2
WHO (268)	US IA DES MOINES	312.1	0.0	0.1	275.6
WHO (269)	US IA DES MOINES	312.4	0.0	0.1	278.3

313:								
WHO (159)	US	IA	DES	MOINES	312.7	7.8	14.0	41.4
WHO (270)	US	IA	DES	MOINES	312.8	0.0	0.1	280.7
WHO (271)	US	IA	DES	MOINES	313.1	0.0	0.0	283.3
WHO (272)	US	IA	DES	MOINES	313.4	0.0	0.0	285.6
314:								
WHO (158)	US	IA	DES	MOINES	313.8	7.9	14.1	40.8
WHO (273)	US	IA	DES	MOINES	313.8	0.0	0.0	288.2
WHO (274)	US	IA	DES	MOINES	314.1	0.0	0.0	290.8
WHO (275)	US	IA	DES	MOINES	314.5	0.0	0.0	293.0
315:								
WHO (157)	US	IA	DES	MOINES	315.0	8.0	14.3	40.3
WHO (276)	US	IA	DES	MOINES	314.8	0.0	0.0	295.5
WHO (277)	US	IA	DES	MOINES	315.2	0.0	0.0	297.7
WHO (278)	US	IA	DES	MOINES	315.5	0.0	0.0	300.2
316:								
WHO (156)	US	IA	DES	MOINES	316.2	8.1	14.4	39.8
WHO (279)	US	IA	DES	MOINES	315.9	0.0	0.0	302.3
WHO (280)	US	IA	DES	MOINES	316.2	0.0	0.0	304.7
317:								
WHO (155)	US	IA	DES	MOINES	317.4	8.2	14.5	39.5
WHO (281)	US	IA	DES	MOINES	316.5	0.0	0.0	306.8
WHO (282)	US	IA	DES	MOINES	316.9	0.0	0.0	309.2
WHO (283)	US	IA	DES	MOINES	317.2	0.0	0.0	311.1
318:								
WHO (284)	US	IA	DES	MOINES	317.6	0.0	0.0	313.4
WHO (285)	US	IA	DES	MOINES	317.9	0.0	0.0	315.4
WHO (286)	US	IA	DES	MOINES	318.2	0.0	0.0	317.6
319:								
WHO (154)	US	IA	DES	MOINES	318.6	8.3	14.6	39.1
WHO (287)	US	IA	DES	MOINES	318.6	0.0	0.0	319.4
WHO (288)	US	IA	DES	MOINES	318.9	0.0	0.0	321.6
WHO (289)	US	IA	DES	MOINES	319.3	0.0	0.0	323.4
320:								
WHO (153)	US	IA	DES	MOINES	319.8	8.3	14.7	38.8
WHO (290)	US	IA	DES	MOINES	319.6	0.0	0.0	325.5
WHO (291)	US	IA	DES	MOINES	319.9	0.0	0.0	327.1
WHO (292)	US	IA	DES	MOINES	320.3	0.0	0.0	329.1
321:								
WHO (152)	US	IA	DES	MOINES	321.1	8.4	14.8	38.5
WHO (293)	US	IA	DES	MOINES	320.6	0.0	0.0	330.7
WHO (294)	US	IA	DES	MOINES	321.0	0.0	0.0	332.7
WHO (295)	US	IA	DES	MOINES	321.3	0.0	0.0	334.1
322:								
WHO (151)	US	IA	DES	MOINES	322.4	8.5	14.9	38.3
WHO (296)	US	IA	DES	MOINES	321.6	0.0	0.0	336.0
WHO (297)	US	IA	DES	MOINES	322.0	0.0	0.0	337.4
WHO (298)	US	IA	DES	MOINES	322.3	0.0	0.0	339.2
323:								
WHO (299)	US	IA	DES	MOINES	322.6	0.0	0.0	340.4
WHO (300)	US	IA	DES	MOINES	322.9	0.0	0.0	342.1
WHO (301)	US	IA	DES	MOINES	323.3	0.0	0.0	343.8
324:								
WHO (150)	US	IA	DES	MOINES	323.7	8.5	14.9	38.2
WHO (302)	US	IA	DES	MOINES	323.6	0.0	0.0	344.9
WHO (303)	US	IA	DES	MOINES	323.9	0.0	0.0	346.5
WHO (304)	US	IA	DES	MOINES	324.3	0.0	0.0	347.5

325:								
WHO (149)	US	IA	DES	MOINES	324.9	8.5	15.0	38.1
WHO (305)	US	IA	DES	MOINES	324.6	0.0	0.0	348.4
WHO (306)	US	IA	DES	MOINES	324.9	0.0	0.0	349.8
WHO (307)	US	IA	DES	MOINES	325.2	0.0	0.0	351.2
326:								
WHO (148)	US	IA	DES	MOINES	326.2	8.5	15.0	38.0
WHO (308)	US	IA	DES	MOINES	325.6	0.0	0.0	352.0
WHO (309)	US	IA	DES	MOINES	325.9	0.0	0.0	353.2
WHO (310)	US	IA	DES	MOINES	326.2	0.0	0.0	353.9
327:								
WHO (311)	US	IA	DES	MOINES	326.5	0.0	0.0	355.0
WHO (312)	US	IA	DES	MOINES	326.8	0.0	0.0	356.1
WHO (313)	US	IA	DES	MOINES	327.1	0.0	0.0	356.6
WHO (314)	US	IA	DES	MOINES	327.5	0.0	0.0	357.1
328:								
WHO (147)	US	IA	DES	MOINES	327.5	8.5	15.0	38.0
WHO (315)	US	IA	DES	MOINES	327.8	0.0	0.0	358.0
WHO (316)	US	IA	DES	MOINES	328.1	0.0	0.0	358.8
WHO (317)	US	IA	DES	MOINES	328.4	0.0	0.0	359.1
329:								
WHO (146)	US	IA	DES	MOINES	328.8	8.5	15.0	38.1
WHO (318)	US	IA	DES	MOINES	328.7	0.0	0.0	359.8
WHO (319)	US	IA	DES	MOINES	329.0	0.0	0.0	360.0
WHO (320)	US	IA	DES	MOINES	329.3	0.0	0.0	360.6
330:								
WHO (145)	US	IA	DES	MOINES	330.1	8.5	14.9	38.2
WHO (322)	US	IA	DES	MOINES	329.9	0.0	0.0	361.1
WHO (321)	US	IA	DES	MOINES	329.6	0.0	0.0	361.2
WHO (323)	US	IA	DES	MOINES	330.2	0.0	0.0	361.6
331:								
WHO (144)	US	IA	DES	MOINES	331.4	8.4	14.9	38.4
WHO (324)	US	IA	DES	MOINES	330.6	0.0	0.0	361.4
WHO (327)	US	IA	DES	MOINES	331.5	0.0	0.0	361.7
WHO (325)	US	IA	DES	MOINES	330.9	0.0	0.0	361.8
WHO (326)	US	IA	DES	MOINES	331.2	0.0	0.0	362.0
332:								
WHO (329)	US	IA	DES	MOINES	332.1	0.0	0.0	361.4
WHO (330)	US	IA	DES	MOINES	332.4	0.0	0.0	361.4
WHO (328)	US	IA	DES	MOINES	331.8	0.0	0.0	361.8
333:								
WHO (143)	US	IA	DES	MOINES	332.6	8.4	14.8	38.7
WHO (333)	US	IA	DES	MOINES	333.2	0.0	0.0	360.6
WHO (332)	US	IA	DES	MOINES	333.0	0.0	0.0	361.3
WHO (331)	US	IA	DES	MOINES	332.7	0.0	0.0	361.4
334:								
WHO (142)	US	IA	DES	MOINES	333.9	8.3	14.7	38.9
WHO (337)	US	IA	DES	MOINES	334.4	0.0	0.0	358.9
WHO (336)	US	IA	DES	MOINES	334.1	0.0	0.0	359.2
WHO (335)	US	IA	DES	MOINES	333.8	0.0	0.0	360.1
WHO (334)	US	IA	DES	MOINES	333.5	0.0	0.0	360.4
335:								
WHO (141)	US	IA	DES	MOINES	335.1	8.3	14.6	39.2
WHO (340)	US	IA	DES	MOINES	335.3	0.0	0.0	356.8
WHO (339)	US	IA	DES	MOINES	335.0	0.0	0.0	357.9
WHO (338)	US	IA	DES	MOINES	334.7	0.0	0.0	358.4

336:								
WHO (140)	US	IA	DES	MOINES	336.3	8.2	14.6	39.5
WHO (344)	US	IA	DES	MOINES	336.4	0.0	0.0	353.5
WHO (343)	US	IA	DES	MOINES	336.1	0.0	0.0	354.8
WHO (342)	US	IA	DES	MOINES	335.9	0.0	0.0	355.5
WHO (341)	US	IA	DES	MOINES	335.6	0.0	0.0	356.2
337:								
WHO (139)	US	IA	DES	MOINES	337.4	8.1	14.4	40.1
WHO (347)	US	IA	DES	MOINES	337.3	0.0	0.0	350.2
WHO (346)	US	IA	DES	MOINES	337.0	0.0	0.0	351.7
WHO (345)	US	IA	DES	MOINES	336.7	0.0	0.0	352.6
338:								
WHO (351)	US	IA	DES	MOINES	338.4	0.0	0.0	345.9
WHO (350)	US	IA	DES	MOINES	338.1	0.0	0.0	347.1
WHO (349)	US	IA	DES	MOINES	337.8	0.0	0.0	348.2
WHO (348)	US	IA	DES	MOINES	337.5	0.0	0.0	349.2
339:								
WHO (138)	US	IA	DES	MOINES	338.6	8.0	14.3	40.5
WHO (355)	US	IA	DES	MOINES	339.5	0.0	0.0	340.2
WHO (354)	US	IA	DES	MOINES	339.2	0.0	0.0	342.1
WHO (353)	US	IA	DES	MOINES	338.9	0.0	0.0	343.4
WHO (352)	US	IA	DES	MOINES	338.7	0.0	0.0	344.7
340:								
WHO (137)	US	IA	DES	MOINES	339.7	7.9	14.1	41.0
WHO (358)	US	IA	DES	MOINES	340.3	0.0	0.1	335.8
WHO (357)	US	IA	DES	MOINES	340.0	0.0	0.0	337.3
WHO (356)	US	IA	DES	MOINES	339.7	0.0	0.0	338.7
341:								
WHO (136)	US	IA	DES	MOINES	340.8	7.8	14.0	41.6
WHO (2)	US	IA	DES	MOINES	341.4	0.0	0.2	329.2
WHO (1)	US	IA	DES	MOINES	341.1	0.0	0.1	330.9
WHO (0)	US	IA	DES	MOINES	340.8	0.0	0.1	332.6
WHO (359)	US	IA	DES	MOINES	340.6	0.0	0.1	334.2
342:								
WHO (135)	US	IA	DES	MOINES	341.8	7.7	13.8	42.2
WHO (6)	US	IA	DES	MOINES	342.4	0.0	0.3	321.9
WHO (5)	US	IA	DES	MOINES	342.2	0.0	0.2	323.8
WHO (4)	US	IA	DES	MOINES	341.9	0.0	0.2	325.6
WHO (3)	US	IA	DES	MOINES	341.6	0.0	0.2	327.4
343:								
WHO (134)	US	IA	DES	MOINES	342.9	7.6	13.7	42.8
WHO (10)	US	IA	DES	MOINES	343.5	0.0	0.4	314.0
WHO (9)	US	IA	DES	MOINES	343.2	0.0	0.4	316.0
WHO (8)	US	IA	DES	MOINES	343.0	0.0	0.3	318.0
WHO (7)	US	IA	DES	MOINES	342.7	0.0	0.3	320.0
344:								
WHO (133)	US	IA	DES	MOINES	343.8	7.5	13.5	43.6
WHO (13)	US	IA	DES	MOINES	344.3	0.0	0.5	307.6
WHO (12)	US	IA	DES	MOINES	344.0	0.0	0.5	309.8
WHO (11)	US	IA	DES	MOINES	343.7	0.0	0.4	311.9
345:								
WHO (132)	US	IA	DES	MOINES	344.8	7.4	13.3	44.3
WHO (17)	US	IA	DES	MOINES	345.3	0.0	0.6	298.6
WHO (16)	US	IA	DES	MOINES	345.0	0.0	0.6	300.9
WHO (15)	US	IA	DES	MOINES	344.8	0.0	0.6	303.2
WHO (14)	US	IA	DES	MOINES	344.5	0.0	0.5	305.4

346:								
WHO (131)	US	IA	DES	MOINES	345.7	7.2	13.1	45.1
WHO (21)	US	IA	DES	MOINES	346.3	0.0	0.8	289.5
WHO (20)	US	IA	DES	MOINES	346.0	0.0	0.7	291.6
WHO (19)	US	IA	DES	MOINES	345.8	0.0	0.7	293.9
WHO (18)	US	IA	DES	MOINES	345.5	0.0	0.7	296.3
347:								
WHO (130)	US	IA	DES	MOINES	346.6	7.1	12.9	45.9
WHO (129)	US	IA	DES	MOINES	347.4	7.0	12.7	46.9
WHO (25)	US	IA	DES	MOINES	347.3	0.0	0.9	279.6
WHO (24)	US	IA	DES	MOINES	347.0	0.0	0.9	282.1
WHO (23)	US	IA	DES	MOINES	346.8	0.0	0.9	284.6
WHO (22)	US	IA	DES	MOINES	346.6	0.0	0.8	287.1
348:								
WHO (128)	US	IA	DES	MOINES	348.2	6.8	12.5	47.8
WHO (29)	US	IA	DES	MOINES	348.3	0.0	1.1	269.7
WHO (28)	US	IA	DES	MOINES	348.0	0.0	1.1	271.9
WHO (27)	US	IA	DES	MOINES	347.8	0.0	1.0	274.5
WHO (26)	US	IA	DES	MOINES	347.5	0.0	1.0	277.1
349:								
WHO (127)	US	IA	DES	MOINES	349.0	6.7	12.3	48.8
WHO (34)	US	IA	DES	MOINES	349.5	0.0	1.3	256.6
WHO (33)	US	IA	DES	MOINES	349.2	0.0	1.3	259.3
WHO (32)	US	IA	DES	MOINES	349.0	0.0	1.2	262.0
WHO (31)	US	IA	DES	MOINES	348.8	0.0	1.2	264.4
WHO (30)	US	IA	DES	MOINES	348.5	0.0	1.2	267.0
350:								
WHO (126)	US	IA	DES	MOINES	349.7	6.6	12.1	49.8
WHO (125)	US	IA	DES	MOINES	350.4	6.4	11.9	50.8
WHO (38)	US	IA	DES	MOINES	350.4	0.0	1.5	246.0
WHO (37)	US	IA	DES	MOINES	350.2	0.0	1.5	248.7
WHO (36)	US	IA	DES	MOINES	350.0	0.0	1.4	251.5
WHO (35)	US	IA	DES	MOINES	349.7	0.0	1.4	253.9
351:								
WHO (124)	US	IA	DES	MOINES	351.1	6.3	11.7	52.0
WHO (42)	US	IA	DES	MOINES	351.3	0.0	1.7	235.2
WHO (41)	US	IA	DES	MOINES	351.1	0.0	1.7	237.9
WHO (40)	US	IA	DES	MOINES	350.9	0.0	1.6	240.7
WHO (39)	US	IA	DES	MOINES	350.6	0.0	1.6	243.2
352:								
WHO (123)	US	IA	DES	MOINES	351.7	6.1	11.5	53.1
WHO (122)	US	IA	DES	MOINES	352.3	6.0	11.2	54.3
WHO (47)	US	IA	DES	MOINES	352.5	0.0	2.0	221.6
WHO (46)	US	IA	DES	MOINES	352.2	0.0	2.0	224.2
WHO (45)	US	IA	DES	MOINES	352.0	0.0	1.9	227.0
WHO (44)	US	IA	DES	MOINES	351.8	0.0	1.9	229.8
WHO (43)	US	IA	DES	MOINES	351.6	0.0	1.8	232.6
353:								
WHO (121)	US	IA	DES	MOINES	352.9	5.8	11.0	55.5
WHO (120)	US	IA	DES	MOINES	353.4	5.7	10.8	56.7
WHO (51)	US	IA	DES	MOINES	353.3	0.0	2.3	210.5
WHO (50)	US	IA	DES	MOINES	353.1	0.0	2.2	213.3
WHO (49)	US	IA	DES	MOINES	352.9	0.0	2.1	216.1
WHO (48)	US	IA	DES	MOINES	352.7	0.0	2.1	218.7
354:								
WHO (119)	US	IA	DES	MOINES	353.9	5.6	10.6	58.1
WHO (118)	US	IA	DES	MOINES	354.4	5.4	10.4	59.4

WHO (56)	US IA DES MOINES	354.4	0.0	2.6	196.8
WHO (55)	US IA DES MOINES	354.2	0.0	2.5	199.6
WHO (54)	US IA DES MOINES	354.0	0.0	2.5	202.4
WHO (53)	US IA DES MOINES	353.8	0.0	2.4	205.0
WHO (52)	US IA DES MOINES	353.6	0.0	2.3	207.8
355:					
WHO (117)	US IA DES MOINES	354.8	5.3	10.2	60.8
WHO (116)	US IA DES MOINES	355.2	5.1	10.0	62.2
WHO (61)	US IA DES MOINES	355.4	0.1	3.0	183.1
WHO (60)	US IA DES MOINES	355.2	0.0	2.9	185.9
WHO (59)	US IA DES MOINES	355.0	0.0	2.8	188.6
WHO (58)	US IA DES MOINES	354.8	0.0	2.7	191.3
WHO (57)	US IA DES MOINES	354.6	0.0	2.7	194.1
356:					
WHO (115)	US IA DES MOINES	355.6	5.0	9.8	63.7
WHO (114)	US IA DES MOINES	356.0	4.9	9.6	65.1
WHO (113)	US IA DES MOINES	356.4	4.7	9.4	66.6
WHO (67)	US IA DES MOINES	356.5	0.5	3.4	167.0
WHO (66)	US IA DES MOINES	356.3	0.4	3.3	169.7
WHO (65)	US IA DES MOINES	356.1	0.3	3.3	172.3
WHO (64)	US IA DES MOINES	356.0	0.3	3.2	175.1
WHO (63)	US IA DES MOINES	355.8	0.2	3.1	177.8
WHO (62)	US IA DES MOINES	355.6	0.2	3.0	180.5
357:					
WHO (112)	US IA DES MOINES	356.6	4.6	9.2	68.2
WHO (111)	US IA DES MOINES	357.0	4.5	9.1	69.8
WHO (110)	US IA DES MOINES	357.2	4.4	8.9	71.4
WHO (109)	US IA DES MOINES	357.5	4.2	8.7	73.1
WHO (73)	US IA DES MOINES	357.4	0.9	4.0	151.3
WHO (72)	US IA DES MOINES	357.3	0.8	3.9	153.9
WHO (71)	US IA DES MOINES	357.1	0.7	3.8	156.5
WHO (70)	US IA DES MOINES	356.9	0.7	3.7	159.1
WHO (69)	US IA DES MOINES	356.8	0.6	3.6	161.7
WHO (68)	US IA DES MOINES	356.7	0.5	3.5	164.4
358:					
WHO (108)	US IA DES MOINES	357.7	4.1	8.5	74.7
WHO (107)	US IA DES MOINES	357.9	4.0	8.3	76.5
WHO (106)	US IA DES MOINES	358.1	3.9	8.2	78.2
WHO (105)	US IA DES MOINES	358.3	3.8	8.0	80.0
WHO (104)	US IA DES MOINES	358.4	3.6	7.8	81.8
WHO (81)	US IA DES MOINES	358.5	1.4	4.7	131.3
WHO (80)	US IA DES MOINES	358.3	1.4	4.6	133.7
WHO (79)	US IA DES MOINES	358.2	1.3	4.5	136.2
WHO (78)	US IA DES MOINES	358.1	1.2	4.4	138.6
WHO (77)	US IA DES MOINES	358.0	1.1	4.3	141.2
WHO (76)	US IA DES MOINES	357.8	1.1	4.2	143.7
WHO (75)	US IA DES MOINES	357.7	1.0	4.1	146.2
WHO (74)	US IA DES MOINES	357.6	0.9	4.0	148.8
359:					
WHO (103)	US IA DES MOINES	358.5	3.5	7.7	83.7
WHO (102)	US IA DES MOINES	358.7	3.4	7.5	85.5
WHO (101)	US IA DES MOINES	358.8	3.3	7.4	87.5
WHO (100)	US IA DES MOINES	358.9	3.2	7.2	89.4
WHO (99)	US IA DES MOINES	358.9	3.1	7.0	91.4
WHO (98)	US IA DES MOINES	359.0	3.0	6.9	93.3
WHO (97)	US IA DES MOINES	359.0	2.9	6.8	95.4
WHO (96)	US IA DES MOINES	359.1	2.8	6.6	97.4

WHO (95)	US IA DES MOINES	359.1	2.7	6.5	99.5
WHO (94)	US IA DES MOINES	359.1	2.6	6.3	101.6
WHO (93)	US IA DES MOINES	359.1	2.5	6.2	103.8
WHO (92)	US IA DES MOINES	359.1	2.4	6.1	105.9
WHO (91)	US IA DES MOINES	359.1	2.3	5.9	108.1
WHO (90)	US IA DES MOINES	359.1	2.2	5.8	110.3
WHO (89)	US IA DES MOINES	359.1	2.1	5.7	112.5
WHO (88)	US IA DES MOINES	359.0	2.0	5.6	114.8
WHO (87)	US IA DES MOINES	359.0	1.9	5.4	117.1
WHO (86)	US IA DES MOINES	358.9	1.8	5.3	119.4
WHO (85)	US IA DES MOINES	358.8	1.8	5.2	121.7
WHO (84)	US IA DES MOINES	358.7	1.7	5.1	124.1
WHO (83)	US IA DES MOINES	358.7	1.6	5.0	126.5
WHO (82)	US IA DES MOINES	358.5	1.5	4.9	128.9

Figure 13- Licensed Vs. Proposed Nighttime RSS Report

Protected Station: CMAO-D, 1040 kHz - SAN CRISTOBA, , CU

Coordinates: 22-42-00 N, 083-02-00 W

Standard: Region 2 [50%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
*WHBO	1040	2.468	100.0
TIAC-A	1040	2.367	95.8
WHO	1040	1.834	53.6
----- 50% -----			
WURN	1040	1.040	26.7
----- 25% -----			
HJFM-A	1040	0.648	16.1
HJCJ-A	1040	0.599	14.7

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
*WHBO-PRO	1040	2.444	100.0
TIAC-A	1040	2.367	96.8
WHO	1040	1.834	53.9
----- 50% -----			
WURN	1040	1.040	26.9
----- 25% -----			
HJFM-A	1040	0.648	16.1
HJCJ-A	1040	0.599	14.7

Protected Station: WURN, 1040 kHz - MIAMI, FL, US

Coordinates: 25-50-34 N, 080-25-12 W

Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
*WHBO	1040	10.427	100.0
WHO	1040	8.016	76.8
----- 50% -----			
TIAC-A	1040	4.777	36.3
----- 25% -----			
HJFM-A	1040	3.125	22.3
HJCJ-A	1040	3.050	21.2
WONQ	1030	2.391	16.3
ZYK537-A	1040	2.377	16.0
WCHR	1040	1.560	10.3

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
*WHBO-PRO	1040	10.245	100.0
WHO	1040	8.016	78.2
----- 50% -----			
TIAC-A	1040	4.777	36.7
----- 25% -----			
HJFM-A	1040	3.125	22.5
HJCJ-A	1040	3.050	21.4
WONQ	1030	2.391	16.4
ZYK537-A	1040	2.377	16.1
WCHR	1040	1.560	10.4

Protected Station: CMLQ-D, 1040 kHz - PUERTO PADRE, , CU

Coordinates: 21-12-00 N, 076-37-00 W

Standard: Region 2 [50%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WURN	1040	4.000	100.0
TIAC-A	1040	2.110	52.7
-----	50%	-----	
*WHBO	1040	1.544	34.1
-----	25%	-----	
WHO	1040	1.166	24.4
HION-C	1040	1.075	21.8
HJFM-A	1040	1.031	20.4
HJCJ-A	1040	1.014	19.7

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WURN	1040	4.000	100.0
TIAC-A	1040	2.110	52.7
-----	50%	-----	
*WHBO-PRO	1040	1.508	33.3
-----	25%	-----	
WHO	1040	1.166	24.4
HION-C	1040	1.075	21.9
HJFM-A	1040	1.031	20.5
HJCJ-A	1040	1.014	19.7

Protected Station: XEGR1/O, 1040 kHz - COATEPEC, VC, MX

Coordinates: 19-31-08 N, 096-56-15 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	3.841	100.0
TIAC-A	1040	3.128	81.4
-----	50%	-----	
XEKM/A	1040	1.783	35.9
-----	25%	-----	
XESAG/A	1040	1.148	21.8
HJFM-A	1040	0.798	14.8
*WHBO	1040	0.795	14.5
WURN	1040	0.729	13.2
HJCJ-A	1040	0.712	12.8

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	3.841	100.0
TIAC-A	1040	3.128	81.4
-----	50%	-----	
XEKM/A	1040	1.783	35.9
-----	25%	-----	
XESAG/A	1040	1.148	21.8
HJFM-A	1040	0.798	14.8
*WHBO-PRO	1040	0.782	14.3
WURN	1040	0.729	13.2
HJCJ-A	1040	0.712	12.8

Protected Station: XEGR/O, 1040 kHz - COATEPEC, VC, MX

Coordinates: 19-28-50 N, 096-55-09 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	3.822	100.0
TIAC-A	1040	3.152	82.4
-----	50%	-----	
XEKM/A	1040	1.788	36.0
-----	25%	-----	
XESAG/A	1040	1.144	21.7
HJFM-A	1040	0.801	14.8
*WHBO	1040	0.795	14.5
WURN	1040	0.734	13.3
HJCJ-A	1040	0.714	12.8

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	3.822	100.0
TIAC-A	1040	3.152	82.4
-----	50%	-----	
XEKM/A	1040	1.788	36.0
-----	25%	-----	
XESAG/A	1040	1.144	21.7
HJFM-A	1040	0.801	14.8
*WHBO-PRO	1040	0.782	14.3
WURN	1040	0.734	13.3
HJCJ-A	1040	0.714	12.8

Protected Station: XEKM/A, 1040 kHz - MINATITLAN, VE, MX

Coordinates: 17-59-11 N, 094-32-36 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
TIAC-A	1040	5.725	100.0
WHO	1040	3.280	57.2
-----	50%	-----	
-----	25%	-----	
WURN	1040	1.143	17.3
HJFM-A	1040	1.063	15.8
*WHBO	1040	1.031	15.2
HJCJ-A	1040	0.926	13.5
XESAG/A	1040	0.866	12.5

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
TIAC-A	1040	5.725	100.0
WHO	1040	3.280	57.2
-----	50%	-----	
-----	25%	-----	
WURN	1040	1.143	17.3
HJFM-A	1040	1.063	15.8
*WHBO-PRO	1040	1.020	15.0
HJCJ-A	1040	0.926	13.5
XESAG/A	1040	0.866	12.5

Protected Station: XEJAQ1/O, 1040 kHz - JALPAN, QE, MX

Coordinates: 21-12-54 N, 099-27-58 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	4.473	100.0
-----	50%	-----	
TIAC-A	1040	1.843	41.1
XESAG/A	1040	1.484	30.6
XEKM/A	1040	1.310	25.8
-----	25%	-----	
HJFM-A	1040	0.619	11.8
HJCJ-A	1040	0.562	10.6
*WHBO	1040	0.544	10.2

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WHO	1040	4.473	100.0
-----	50%	-----	
TIAC-A	1040	1.843	41.1
XESAG/A	1040	1.484	30.6
XEKM/A	1040	1.310	25.8
-----	25%	-----	
HJFM-A	1040	0.619	11.8
HJCJ-A	1040	0.562	10.6
*WHBO-PRO	1040	0.547	10.3

Protected Station: XETLX/O, 1040 kHz - TLAXIACO, OA, MX

Coordinates: 17-15-47 N, 097-40-12 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
TIAC-A	1040	3.553	100.0
WHO	1040	2.967	83.5
-----	50%	-----	
XEKM/A	1040	1.713	37.0
-----	25%	-----	
XESAG/A	1040	1.088	22.0
HJFM-A	1040	0.842	16.6
HJCJ-A	1040	0.742	14.4
WURN	1040	0.635	12.2
*WHBO	1040	0.572	10.9

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
TIAC-A	1040	3.553	100.0
WHO	1040	2.967	83.5
-----	50%	-----	
XEKM/A	1040	1.713	37.0
-----	25%	-----	
XESAG/A	1040	1.088	22.0
HJFM-A	1040	0.842	16.6
HJCJ-A	1040	0.742	14.4
WURN	1040	0.635	12.2
*WHBO-PRO	1040	0.563	10.7

Protected Station: XE/O, 1040 kHz - VILLA FLORES, CS, MX

Coordinates: 16-14-02 N, 093-15-29 W

Standard: Mexican [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
TIAC-A	1040	8.625	100.0
-----	50%	-----	-----
WHO	1040	2.755	31.9
-----	25%	-----	-----
XEKM/A	1040	1.910	21.0
HJFM-A	1040	1.346	14.5
HJCJ-A	1040	1.163	12.4
WURN	1040	1.002	10.6
*WHBO	1040	0.963	10.1

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
TIAC-A	1040	8.625	100.0
-----	50%	-----	-----
WHO	1040	2.755	31.9
-----	25%	-----	-----
XEKM/A	1040	1.910	21.0
HJFM-A	1040	1.346	14.5
HJCJ-A	1040	1.163	12.4
WURN	1040	1.002	10.6
*WHBO-PRO	1040	0.964	10.1