

AMENDMENT

Davidzon Radio, Inc., licensee of WSNR (AM), FI 61643, Jersey City, NJ, hereby amends its pending application, File No. BP-20230406AAB, with the attached material.



Gregory Davidzon
President

07/07/2023

DATE

ENGINEERING REPORT COVERING
AMENDMENT TO REQUEST FOR CONSTRUCTION PERMIT
DAVIDZON RADIO, INC.
FOR WSNR 620 KILOHERTZ
JERSEY CITY, NEW JERSEY

JULY 2023

ENGINEERING REPORT COVERING
AMENDMENT TO REQUEST FOR CONSTRUCTION PERMIT
DAVIDZON RADIO, INC.
FOR WSNR 620 KILOHERTZ
JERSEY CITY, NEW JERSEY

SUMMARY

The engineering exhibit of which this statement is part was prepared on behalf of Davidzon Radio, Inc., hereinafter referred to as "Davidzon", in support of an amendment to construction permit application BP-20230406AAB for AM station WSNR Jersey City, New Jersey. Davidzon is the licensee of WSNR. WSNR is licensed to operate as a Class B station on a frequency of 620 kilohertz on an unlimited time basis utilizing a dual mode directional antenna system with power of 3 kilowatts daytime and 7.6 kilowatts nighttime. The purpose of this application is to request to relocate the transmitter site to the WPAT(AM) site and triplex with WPAT and WNSW. WSNR proposes to operate on an unlimited time basis utilizing a dual mode directional antenna system with power of 7 kilowatts daytime and 1.69 kilowatts nighttime. The purpose of the amendment is to correct typographical errors in the field measurement summary and slightly modify the nighttime directional antenna pattern. No other changes are proposed.

DAYTIME ALLOCATION CONSIDERATIONS

An allocation study was conducted for the proposed WSNR 7 kilowatt directional daytime operation. Figures 1-3 are allocation mappings of the co, first, second and third adjacent channels. The licensed WSNR daytime operation receives and causes prohibited contour overlap with first adjacent channel station WTEL Philadelphia, Pennsylvania and receives prohibited contour overlap from WEJL Scranton, Pennsylvania. The proposed WSNR operation will significantly reduce caused and received overlap with WTEL and eliminate the overlap with WEJL. Due to a long salt water conductivity path, a narrow strip of coastal overlap will be created with first adjacent channel station WPRO Providence, Rhode Island. The Commission has traditionally waived overlap of this nature, and if necessary, Davidzon requests a similar waiver.

NIGHTTIME ALLOCATION CONSIDERATIONS

An allocation study was conducted for the proposed WSNR directional nighttime operation and a minor modification of the proposed design was made to provide 25% RMS protection to WVMT Burlington, Vermont due to a reduction of the WVMT night limit attributable to the recent licensing of newly licensed facilities for WZON, Bangor, Maine. The results of the study are provided in Table 1. As shown in Table 1, the proposed WSNR 1.69 kilowatt nighttime operation will not increase the 25 or 50% RSS limits of any station or enter the 25 or 50% limit of any station.

TECHNICAL DATA AND EXHIBITS

WSNR is licensed to Jersey City, New Jersey. Figure 4 shows the 5 mV/m contour for the proposed WSNR daytime operation covers 100% of the area of Jersey City and the nighttime interference free (NIF) 19.9 mV/n contour covers more than 90% of Jersey City. Therefore, the proposal is compliant with Section 73.24(i) of the rules.

Figure 5 plots the 1000 mV/m contour. The population within the 1000 mV/m contour is 1,665 persons. The population in the 25 mV/m contour is 1,551,844. The population within the proposed 1000 mV/m contour is 0.011 % of the 25 mV/m population. Therefore, this proposal is compliant with Section 73.24(g) of the blanketing interference rules, as the population ratio of the contours is less than 1%.

Figures 6 and 7 are polar plots of the proposed WSNR daytime and nighttime directional antenna horizontal plane patterns with radiation tabulations.

FIELD STRENGTH MEASUREMENTS

All distance to contour calculations used in plotting the allocation maps were based on M-3 soil conductivity data except measured field data was extracted from the FCC files for WNSW, WHEN and WSNR. In addition, new measured field strength data was obtained from co-located station WPAT. The measurement tabulations are graphed on Figures 8 and 9 and the reference curve graph is shown on Figure 10. Tabulations of the new field measurements are provided in Tables 2 and 3. The field strength meter used for the measurements was a Potomac Instruments FIM-41, serial number 131. This meter was compared to a similar meter of recent calibration and found to be in substantial agreement on all pertinent measurement scales. The measurements were taken by WSNR Chief Engineer William J. Stack, who has considerable experience taking field measurements for FCC projects, under the direction of the undersigned. A summary of the measured conductivity data is as follows:

WNSW

17°	2.2-3, 3.2-1.5, 9.8-3, 23.1-1.5, 40.7-0.5
35°	8.0-4, 15.7-3, 25.0-2
55°	7.2-3, 15.2-2, 44.2-0.5
75°	11.1-2, 21.4-1, 38.9-1.5
95°	2.7-1.5-, 10.7-2, 20.3-1.5, 30.7-1
115°	12.6-3, 19.2-1.5, 30.9-0.5
135°	2.7-1, 4.7-1.5, 15.1-2, 22.2-0.5, 33.0-0.1
155°	2.6-1, 6.1-1.5, 15.2-2, 34.3-3
175°	12.8-1, 27.5-3, 47.6-2, 64.0-0.1

195° 9.0-1, 24.0-2, 45.6-0.5, 65.1-0.1, 68.9-0.5

215° 1.9-1.5, 4.1-1, 10.8-0.5, 36.5-0.1, 54.7-1, 70.0-0.5

235° 3.1-1, 5.3-0.5, 73.4-0.1

335° 2.0-1.5, 10.2-2

Source: BP20151113AFY, WJDM Construction Permit Application

WSNR

5° 20.0-10, 33.6-4

22° 32.5-10

37° 18.0-10, 37.4-5

58.5° 16.0-15, 32.4-4

71° 19.5-15, 28.7-4

90° 25.0-10, 36.2-3

129° 30.0-10

187.5° 29.3-10

200° 35.0-10

207.5° 32.3-20

219.5° 27.0-10, 40.1-5

252.5° 3.6-3, 18.0-20, 36.9-4

273.5° 34.4-3

280.5° 36.1-3

309° 31.4-4

338.5° 3.2-2, 18.0-10, 30.0-3, 36.2-1.5

348.5° 3.2-2, 21.0-10, 36.2-4

Source: BL19980427KB, WSNR Application for License

WHEN

122° 29.5-4

135° 0.5-0.5, 2.1-1.5, 50.1-3, 99.9-2, 300-1

146.9° 12.1-5, 28.0-4, 42.0-3, 120.1-2, 135-1.5, 140.8-1

166.9° 6.9-2, 46.0-3, 127.9-2, 148.9-1.5

186.9° 40.1-4, 70.0-3, 115.1-2

201° 12.1-4, 29.9-3

223° 31.1-4

**Source: BMP19990713AG, WEJL Application for Construction Permit and
BMP20011203AAM, WSNR Application for Construction Permit**

WPAT

145° 1-7.0, 3-20.0

255° 1.6-4, 2.6-3, 25.0-2, 59.0-1.5

Source: New measurement data (See Figures 8 and 9)

ANSI RADIATION GUIDELINES

A study of the proposed WSNR facility was conducted with respect to standards set forth in FCC Bulletin OST Number 65, Edition 97-01, regarding human exposure to radiofrequency radiation. The contribution of co-located stations, including WPAT 5 kilowatts and WNSW 10 kilowatts, was included in the study in addition to the 7 kilowatt WSNR power using data provided in Tables 2, 3 and 4 of Supplement A, "Predicted Distances for Compliance with FCC Limits". Based on this data, and assuming full power from each station would be present at a single tower, a worst case distance of 6 meters from the tower would have to be observed to achieve ANSI radiofrequency compliance.

When it is necessary for workers to be within the hazard area near the towers, an appropriate power reduction or temporary cessation of broadcasting will be implemented. Access to the towers and the transmitter site is prevented by fences with locked gates. Signs, warning of an RF hazard, are conspicuously posted at the site.

DECLARATION

The foregoing was prepared by or under the immediate supervision of Charles A. Hecht of Charles A. Hecht & Associates, Inc., Freehold, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. All statements herein are true and correct of his knowledge except such statements made on information and belief, and as to those statements, he believes them to be true and correct under the penalty of perjury.

Respectfully submitted,

Charles A. Hecht

Charles A. Hecht
Charles A. Hecht & Associates, Inc.
19 Mackenzie Court
Freehold, New Jersey 07728
732 577-0711
July 3, 2023

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
Charles A. Hecht	Technical Consultant	
Signature	Date	
	7/3/23	
Mailing Address		
Charles A Hecht & Associates, Inc. 19 Mackenzie Court		
City	State or Country (if foreign address)	ZIP Code
Freehold	New Jersey	07728
Telephone Number (include area code)	E-Mail Address (if available)	
732 577-0711	hechtassoc@sprintmail.com	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III - A AM Engineering

TECHNICAL SPECIFICATIONS Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Frequency: 620 kHz
2. Class: ☐ A ☒ B ☐ C ☐ D
3. Hours of Operation: ☒ Unlimited ☐ Limited ☐ Daytime ☐ Share Time ☐ Specified Hours: _____
4. Daytime Operation: ☒ Yes ☐ No
- a. Power: 7.0 kW
- b. Antenna Location Coordinates: (NAD 27)
- 40 ° 50 ' 59 " ☒ N ☐ S Latitude
- 74 ° 10 ' 59 " ☐ E ☒ W Longitude
- c. Nondirectional: ☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical _____ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div>Number</div> <div><input type="checkbox"/> Notification filed with FAA</div> <div><input type="checkbox"/> Not applicable</div>
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

TECH BOX - DAYTIME OPERATION

d. Directional:

☒ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical 829.4 mV/m at 1 km

Standard RMS: 871.8 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	108.2	108.2	108.2	108.2
Antenna structure registration	<u>1241949</u> <input type="checkbox"/> Number Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241952</u> <input type="checkbox"/> Number Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241951</u> <input type="checkbox"/> Number Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241950</u> <input type="checkbox"/> Number Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	105.7	105.7	105.7	105.7
Electrical height of radiator (degrees)				
Field ratio	.964	1.000	.830	.742
Phase (degrees)	129.6	0.0	134.0	258.0
Spacing (degrees)	0.0	60.1	89.4	59.4
Tower orientation (degrees)	0.0	83.7	38.3	352.9
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A	78.7	78.7	78.7	78.7
B	19.0	19.0	19.0	19.0
C				
D				

Augmented:

☐ Yes ☒ No

If "Yes," complete the following:

Augmented RMS: _____ mV/m at 1 km

Azimuth

Span

Augmentation radiation
(mV/m at 1 km)

TECH BOX - NIGHTTIME OPERATION

5. Nighttime Operation:

☒ Yes ☐ No

a. Power: 1.69 kW

b. Antenna Location Coordinates: (NAD 27)

40 ° 50 ' 59 " ☒ N ☐ S Latitude
74 ° 10 ' 59 " ☐ E ☒ W Longitude

c. Nondirectional:

☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical _____ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<p>_____ Number</p> <p><input type="checkbox"/> Notification filed with FAA</p> <p><input type="checkbox"/> Not applicable</p>
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

TECH BOX - NIGHTTIME OPERATION

d. Directional:

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

☒ Yes ☐ No

Exhibit No.

Theoretical 402.9 mV/m at 1 km

Standard RMS: 423.5 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	108.2	108.2	108.2	108.2
Antenna structure registration	<u>1241949</u> <input type="checkbox"/> Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241952</u> <input type="checkbox"/> Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241951</u> <input type="checkbox"/> Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<u>1241950</u> <input type="checkbox"/> Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	105.7	105.7	105.7	105.7
Electrical height of radiator (degrees)				
Field ratio	1.374	1.026	1.173	1.1578
Phase (degrees)	72.6	304.2	90.7	217.1
Spacing (degrees)	0	60.1	89.4	59.4
Tower orientation (degrees)	0	83.7	38.3	352.9
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A	78.7	78.7	78.7	78.7
B	19.0	19.0	19.0	19.0
C				
D				

Augmented:

☐ Yes ☒ No

If "Yes," complete the following:

Augmented RMS: _____ mV/m at 1 km

Azimuth _____ Span _____ Augmentation radiation _____

TECH BOX - CRITICAL HOURS OPERATION

6. Critical Hours Operation:

☐ Yes ☒ No

a. Power: _____ kW

b. Antenna Location Coordinates: (NAD 27)

_____ ° _____ ' _____ " ☐ N ☐ S Latitude
 _____ ° _____ ' _____ " ☐ E ☐ W Longitude

c. Nondirectional:

☐ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical _____ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div style="text-align: center;">_____</div> <div style="text-align: center;">Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (meters)	
A	
B	
C	
D	

TECH BOX - CRITICAL HOURS OPERATION

d. Directional:

☐ Yes ☐ No

if "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical mV/m at 1 km

Standard RMS: mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	<div style="border-bottom: 1px solid black; text-align: center;">Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div style="border-bottom: 1px solid black; text-align: center;">Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div style="border-bottom: 1px solid black; text-align: center;">Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div style="border-bottom: 1px solid black; text-align: center;">Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

Augmented:

☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: mV/m at 1 km

Azimuth

Span

Augmentation radiation

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

CERTIFICATION

7. **Broadcast Facility.** The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33, 73.45, 73.150, 73.152, 73.160, 73.182(a)-(i), 73.186, 73.189, 73.1650. **Exhibit Required.** ☒ Yes ☐ No

Exhibit No. _____
Comp. Eng. _____

See Explanation in Exhibit No. _____
8. **Community Coverage.** The proposed facility complies with community coverage requirements of 47 C.F.R. Section 73.24(i). ☒ Yes ☐ No

Exhibit No. _____
Comp. Eng. _____

See Explanation in Exhibit No. _____
9. **Main Studio Location.** The proposed main studio location complies with requirements of 47 C.F.R. Section 73.1125. ☒ Yes ☐ No

Exhibit No. _____
Comp. Eng. _____

See Explanation in Exhibit No. _____
10. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. An exhibit is required for each applicable section.
- Groundwave.**
- a. ☒ 47 C.F.R. Section 73.37

Exhibit No. _____
Comp. Eng. _____
- Skywave.**
- b. ☒ 47 C.F.R. Section 73.182.

Exhibit No. _____
Comp. Eng. _____
- Critical Hours.**
- c. ☐ 47 C.F.R. Section 73.187.

Exhibit No. _____
11. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radio frequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.** ☒ Yes ☐ No

Exhibit No. _____
Comp. Eng. _____

See Explanation in Exhibit No. _____
- By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.
12. **Community of License Change - Section 307(b).** If the application is being submitted to change the facility's community of license, then the applicant certifies that it has attached an exhibit containing information demonstrating that the proposed community of license change constitutes a preferential arrangement of assignments under Section 307(b) of the Communications Act of 1934, as amended (47 U.S.C. Section 307(b)). ☐ Yes ☐ No ☒ N/A

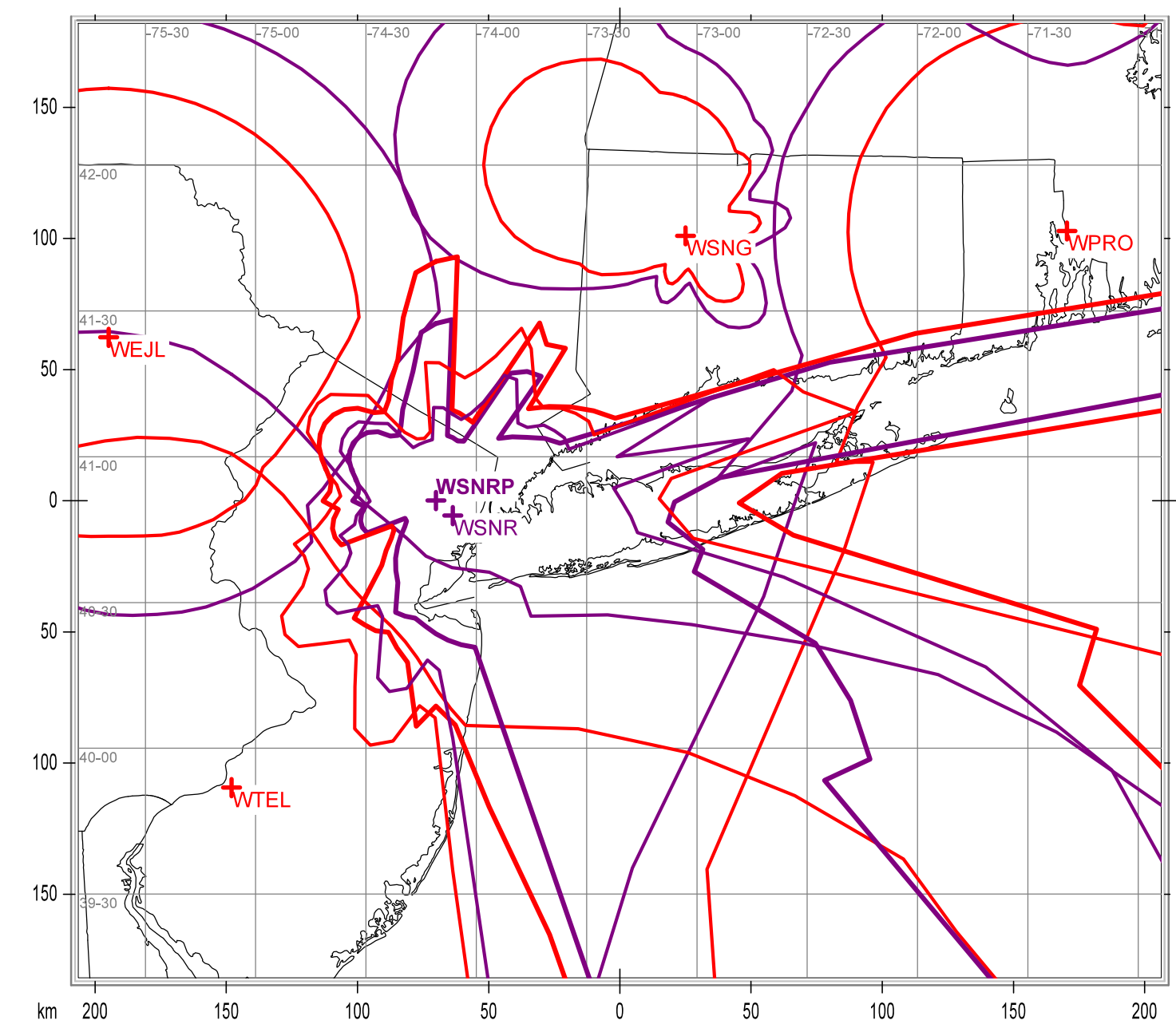
Exhibit No. _____
- An exhibit is required unless this question is not applicable.**
13. **Dispositive Section 307(b) Preference**
- a. Was the AM facility that is the subject of this application awarded on the basis of a dispositive Section 307(b) preference? ☐ Yes ☒ No
- b. If yes to 13(a), applicant certifies that: (i) the community of license proposed in the subject application is the same as that on which the Section 307(b) preference was based, or (ii) as shown in the attached Exhibit, the service area proposed in the subject application is substantially equivalent to the service area on which the Section 307(b) preference was based. ☐ Yes ☐ No ☒ N/A

Exhibit No. _____
- c. If yes to 13(a) and no to 13(b), applicant certifies that, although in the subject application it proposes to: (i) change the community of license, or (ii) modify service to the area on which the Section 307(b) preference was based, it has for a period of four years of on-air operations: (1) served the community of license, or (2) provided full service to the area on which the Section 307(b) preference was based. ☐ Yes ☐ No

Exhibit No. _____

FIGURE 2 - DAY ADJACENT CHANNEL ALLOCATION STUDY

SHOWING .5 AND .25 MV/M CONTOURS, PROPOSED WSNR IN BOLDFACE



WSNR 620 KILOHERTZ 7 KW DA JERSEY CITY, NEW JERSEY

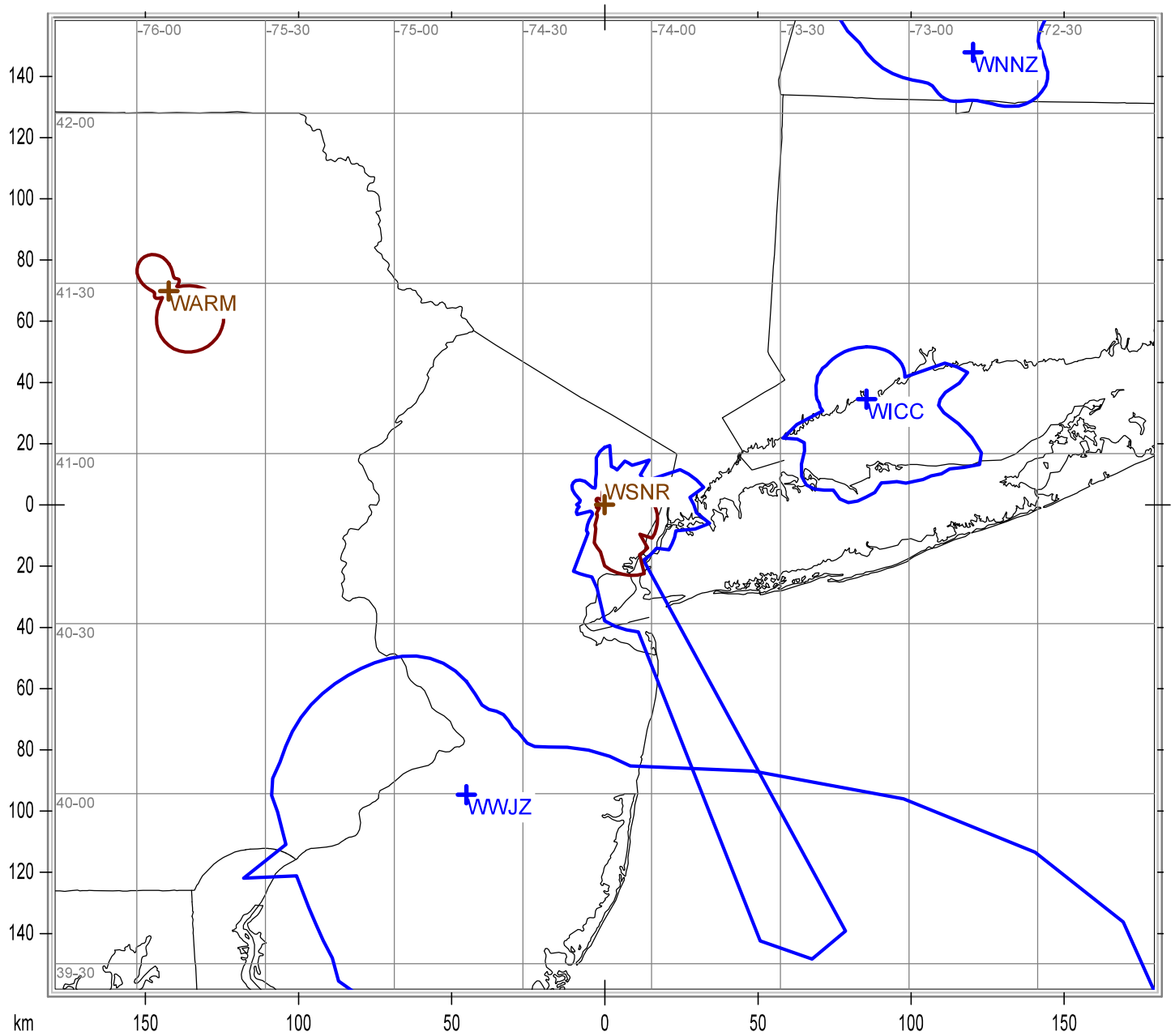
State Borders Lat/Lon Grid

Map Scale: 1:2300000 1 cm = 23.00 km V/H Size: 363.83 x 412.70 km

CHARLES A. HECHT & ASSOCIATES, INC. - MARCH 2023

FIG 3 - 2ND AND 3RD ADJ CHANNEL ALLOCATION STUDY

SHOWING 5 AND 25 MV/M CONTOURS

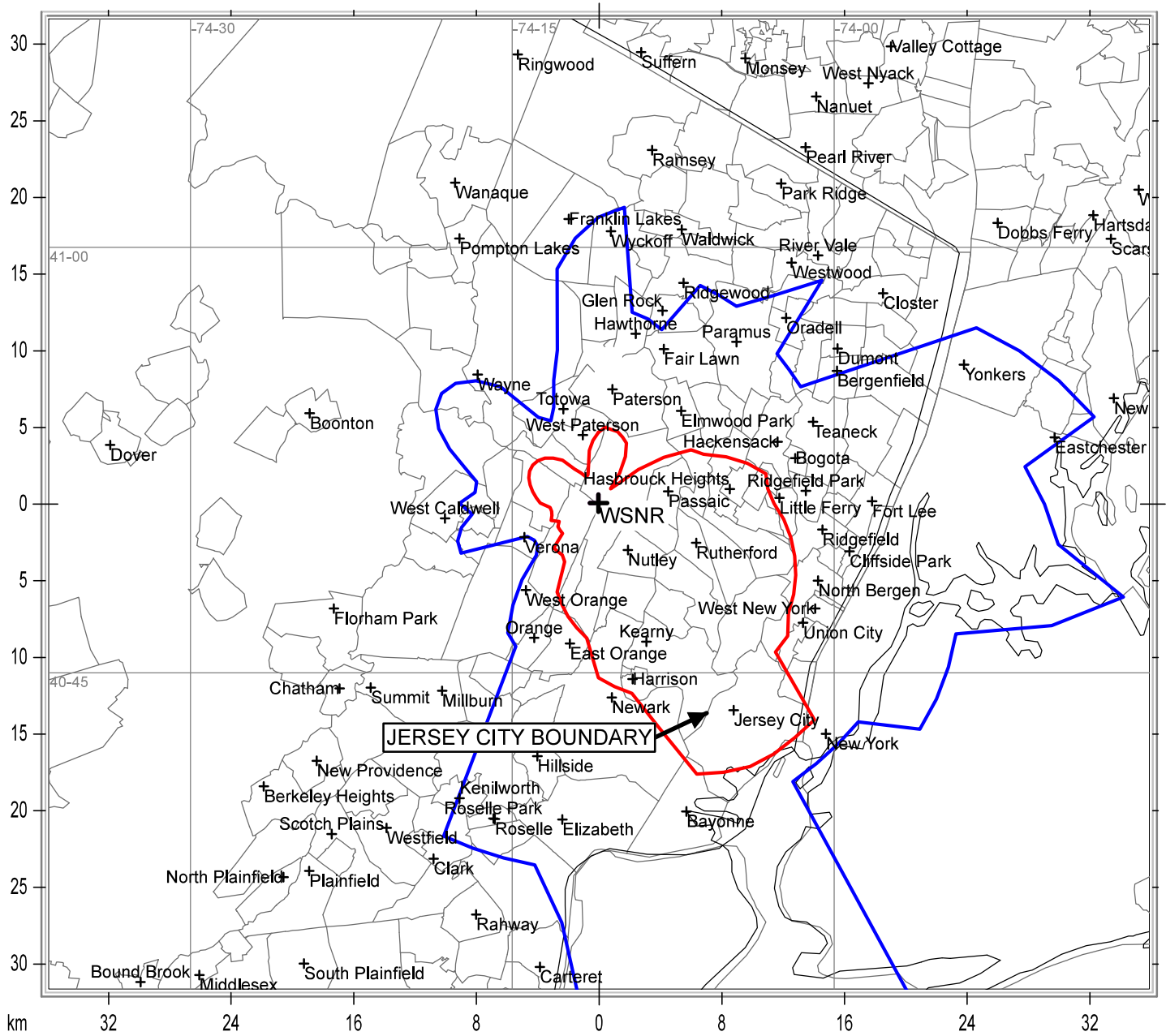


WSNR 620 KILOHERTZ 7 KW DA JERSEY CITY, NEW JERSEY

State Borders Lat/Lon Grid

FIGURE 4 - CITY GRADE SERVICE MAP

SHOWING DAY 5 MV/M CONTOUR IN BLUE AND NIGHT 19.9 MV/M CONTOUR IN RED



WSNR 620 KILOHERTZ 7 KW D 1.7 KW N DA-2 JERSEY CITY, NEW JERSEY

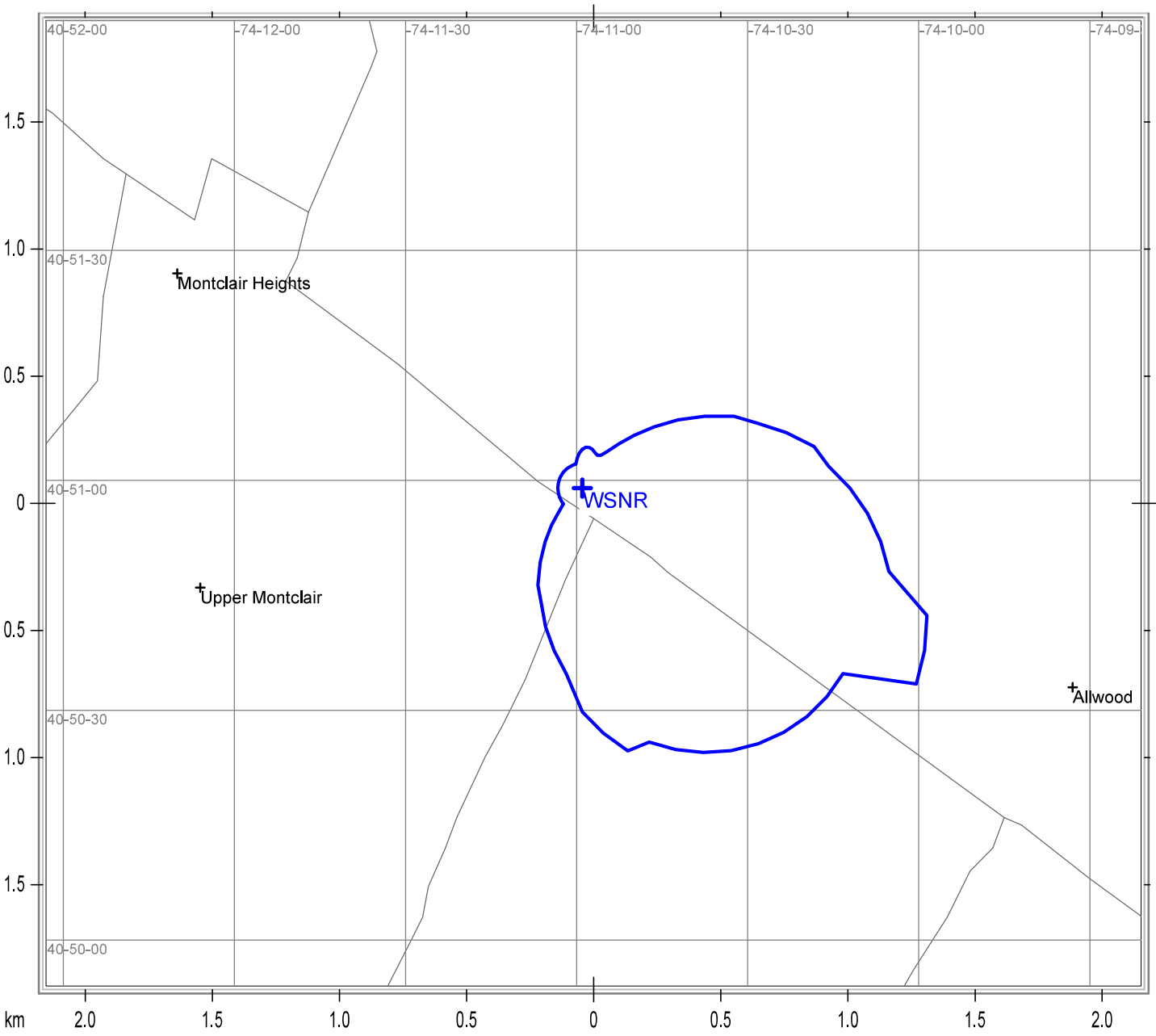
State Borders City Borders Lat/Lon Grid

Map Scale: 1:400000 1 cm = 4.00 km V/H Size: 63.27 x 71.77 km

CHARLES A. HECHT & ASSOCIATES, INC. - MARCH 2023

FIGURE 5 - 1000 MV/M MAP

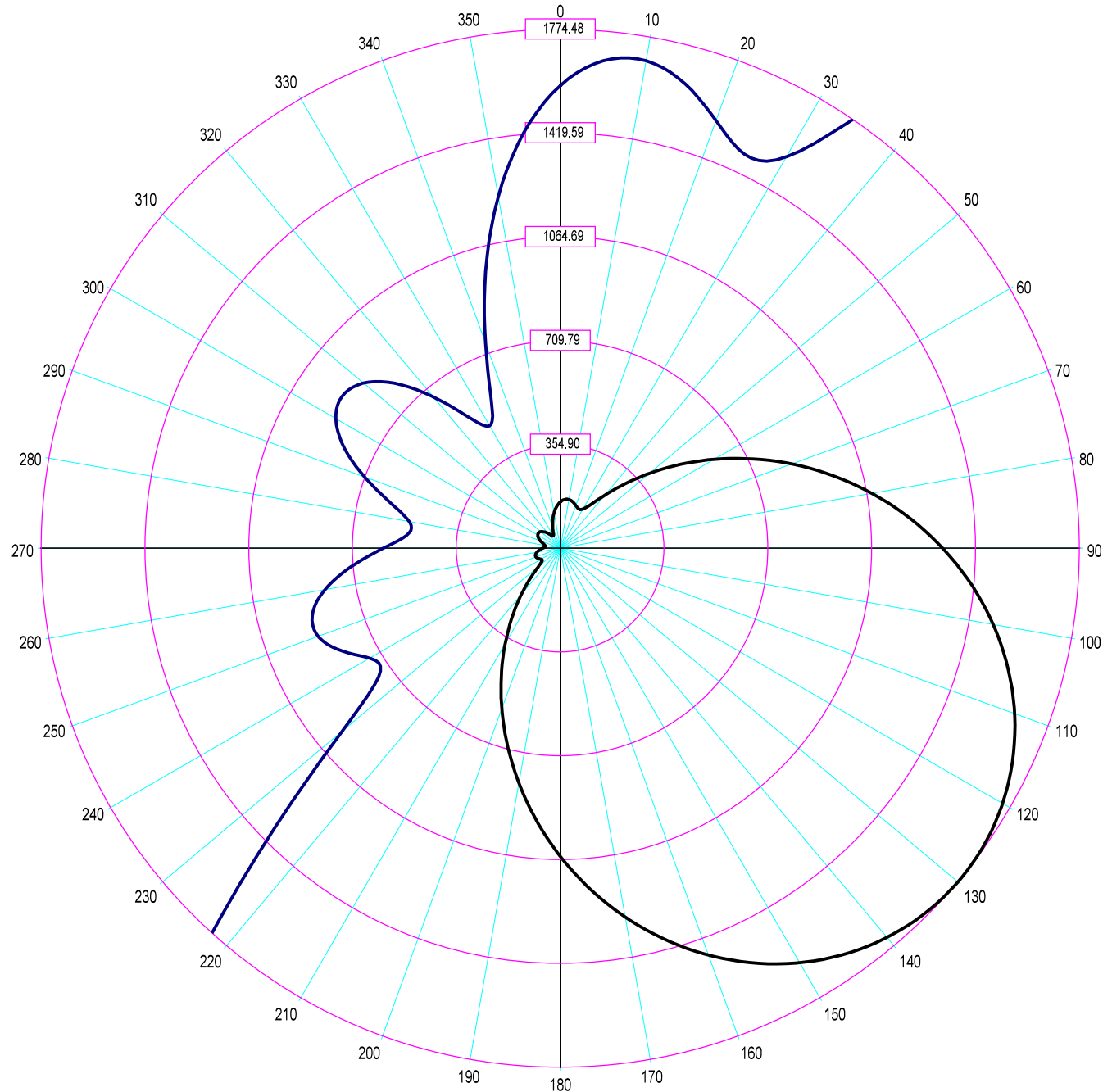
POPULATION IN CONTOUR IS 1,655



WSNR 620 KILOHERTZ 7 KW D DA JERSEY CITY, NEW JERSEY

State Borders City Borders Lat/Lon Grid

FIGURE 6 - DAY PATTERN



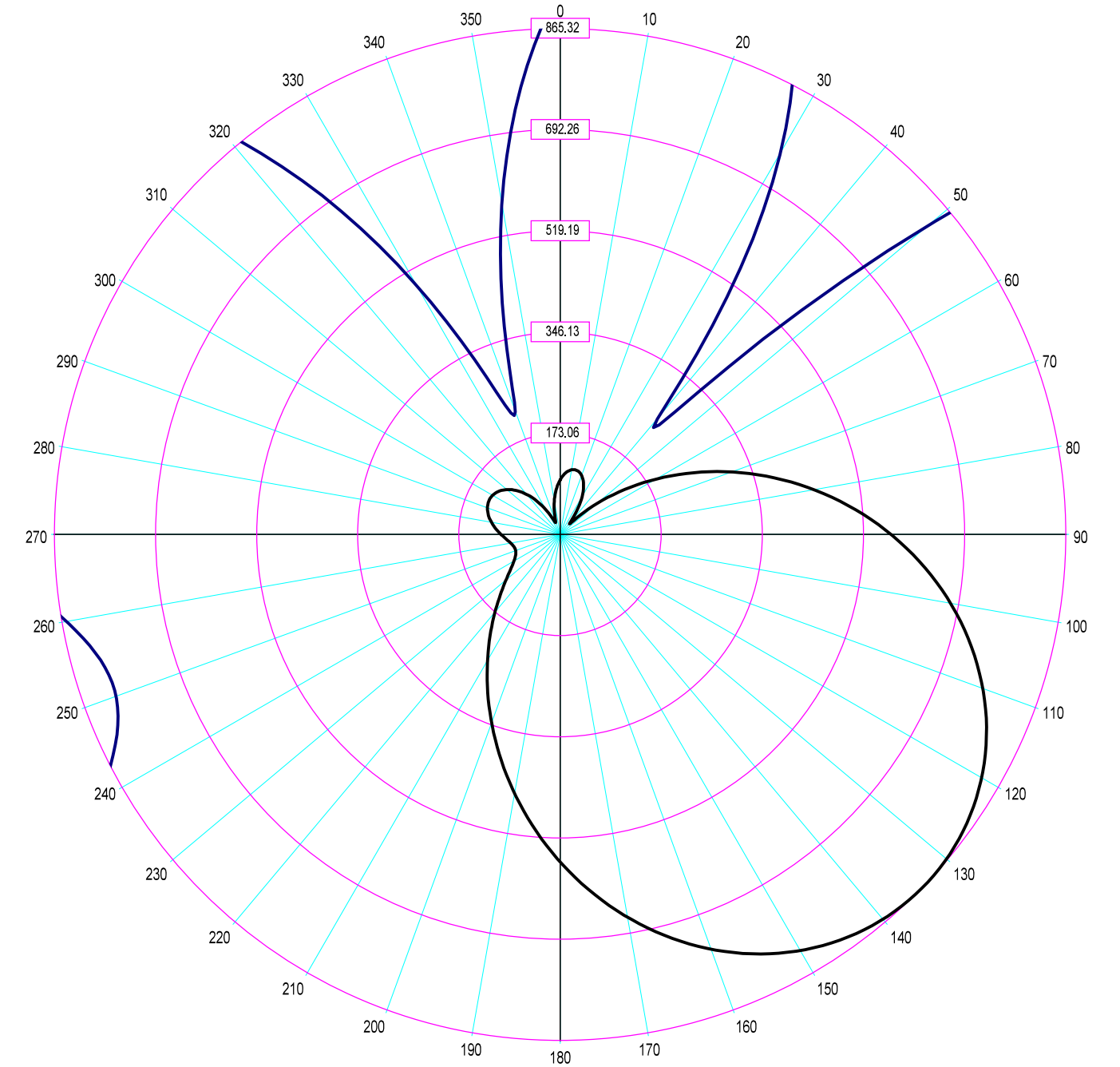
CHARLES A HECHT & ASSOCIATES, INC. - MARCH 2023

Callsign	: WSNR	T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
Frequency	: 620 kHz	1	0.964	129.6	0.0	0.0	78.7	19.0	0
Power	: 7.000 kw	2	1.000	0.0	60.1	83.7	78.7	19.0	0
ERSS	: 1576 mV/m/km	3	0.830	134.0	89.4	38.3	78.7	19.0	0
Theoret. Pattern RMS	: 829.4 mV/m/km	4	0.742	258.0	59.4	352.9	78.7	19.0	0
Standard Pattern RMS	: 871.8 mV/m/km								
Modified Pattern RMS	:								
Latitude	: 40-50-59.0 N								
Longitude	: 74-10-59.0 W								
Number Augmentations	: 0								

Azim	Field [mV/m]
0.0	158.165
5.0	167.255
10.0	169.199
15.0	164.474
20.0	155.601
25.0	148.733
30.0	154.491
35.0	183.034
40.0	236.206
45.0	309.632
50.0	398.469
55.0	498.974
60.0	608.167
65.0	723.440
70.0	842.340
75.0	962.486
80.0	1081.546
85.0	1197.242
90.0	1307.371
95.0	1409.839
100.0	1502.689
105.0	1584.140
110.0	1652.621
115.0	1706.801
120.0	1745.626
125.0	1768.334
130.0	1774.484
135.0	1763.959
140.0	1736.977
145.0	1694.079
150.0	1636.120
155.0	1564.246
160.0	1479.870
165.0	1384.636
170.0	1280.386
175.0	1169.117
180.0	1052.943
185.0	934.054
190.0	814.666
195.0	696.987

Azim	Field [mV/m]
200.0	583.172
205.0	475.296
210.0	375.334
215.0	285.203
220.0	206.895
225.0	142.915
230.0	97.278
235.0	75.410
240.0	75.159
245.0	82.752
250.0	88.036
255.0	87.692
260.0	81.694
265.0	71.632
270.0	60.427
275.0	52.507
280.0	52.376
285.0	60.051
290.0	71.151
295.0	81.510
300.0	88.545
305.0	90.835
310.0	87.796
315.0	79.639
320.0	67.605
325.0	54.860
330.0	48.295
335.0	55.634
340.0	74.689
345.0	98.382
350.0	121.995
355.0	142.606

FIGURE 7 - REVISED NIGHT PATTERN

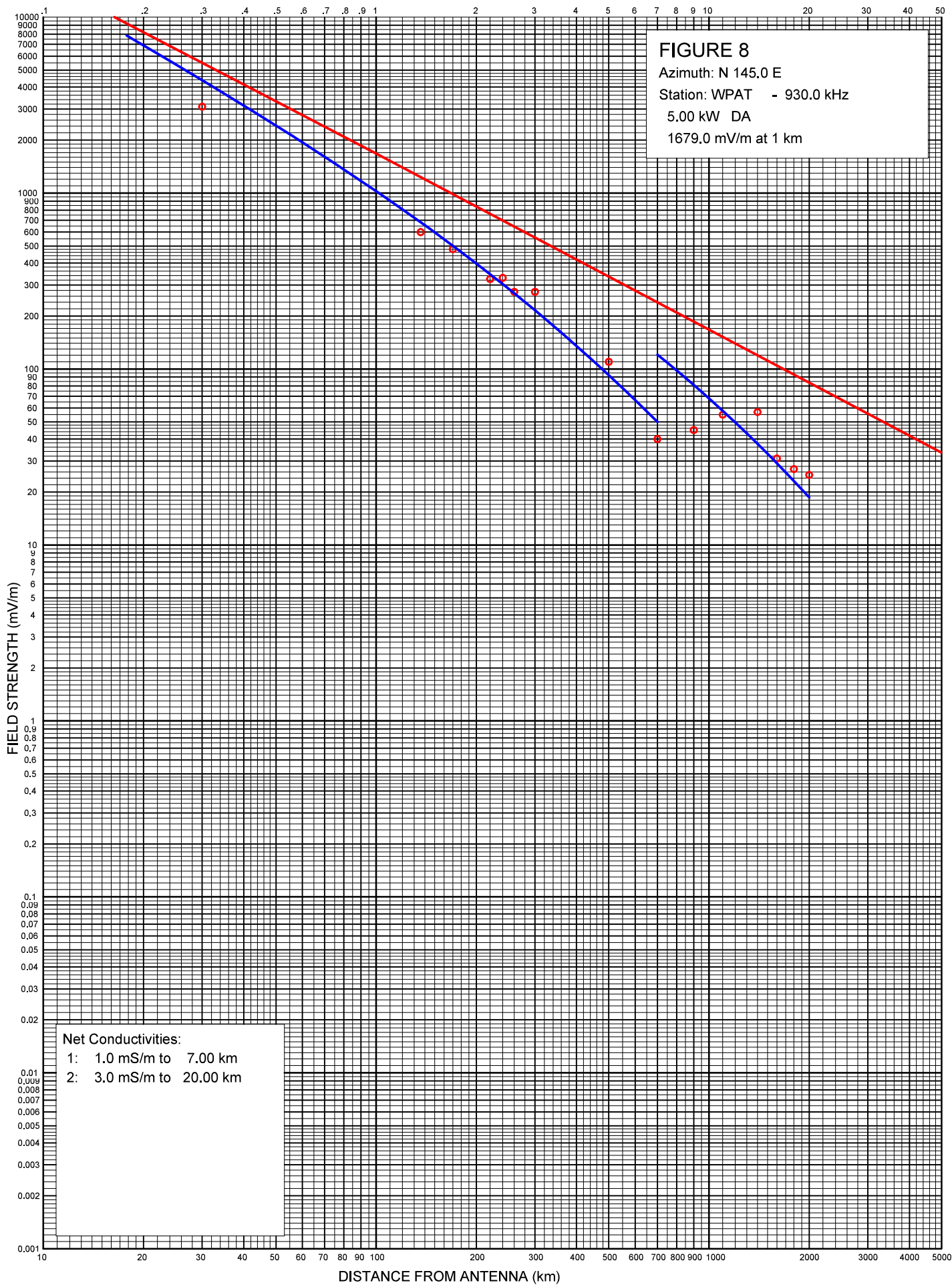


CHARLES A HECHT & ASSOCIATES, INC. - JULY 2023

Callsign	: WSNR	T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
Frequency	: 620 kHz	1	1.374	72.6	0.0	0.0	78.7	19.0	0
Power	: 1.690 kw	2	1.026	304.2	60.1	83.7	78.7	19.0	0
ERSS	: 821.7 mV/m/km	3	1.173	90.7	89.4	38.3	78.7	19.0	0
Theoret. Pattern RMS	: 402.9 mV/m/km	4	1.157	217.1	59.4	352.9	78.7	19.0	0
Standard Pattern RMS	: 423.5 mV/m/km								
Modified Pattern RMS	:								
Latitude	: 40-50-59.0 N								
Longitude	: 74-10-59.0 W								
Number Augmentations	: 0								

Azim	Field [mV/m]
0.0	93.318
5.0	105.439
10.0	112.277
15.0	113.091
20.0	107.350
25.0	94.770
30.0	75.415
35.0	50.230
40.0	26.085
45.0	39.776
50.0	82.266
55.0	133.265
60.0	189.522
65.0	249.610
70.0	312.335
75.0	376.528
80.0	441.009
85.0	504.594
90.0	566.107
95.0	624.405
100.0	678.397
105.0	727.066
110.0	769.494
115.0	804.882
120.0	832.571
125.0	852.062
130.0	863.027
135.0	865.319
140.0	858.981
145.0	844.242
150.0	821.513
155.0	791.378
160.0	754.575
165.0	711.981
170.0	664.585
175.0	613.469
180.0	559.776
185.0	504.687
190.0	449.386
195.0	395.038

Azim	Field [mV/m]
200.0	342.757
205.0	293.573
210.0	248.410
215.0	208.047
220.0	173.088
225.0	143.923
230.0	120.685
235.0	103.223
240.0	91.129
245.0	83.852
250.0	80.848
255.0	81.645
260.0	85.745
265.0	92.487
270.0	100.999
275.0	110.266
280.0	119.226
285.0	126.864
290.0	132.271
295.0	134.693
300.0	133.561
305.0	128.517
310.0	119.433
315.0	106.424
320.0	89.866
325.0	70.439
330.0	49.341
335.0	29.511
340.0	22.417
345.0	36.982
350.0	57.384
355.0	76.876



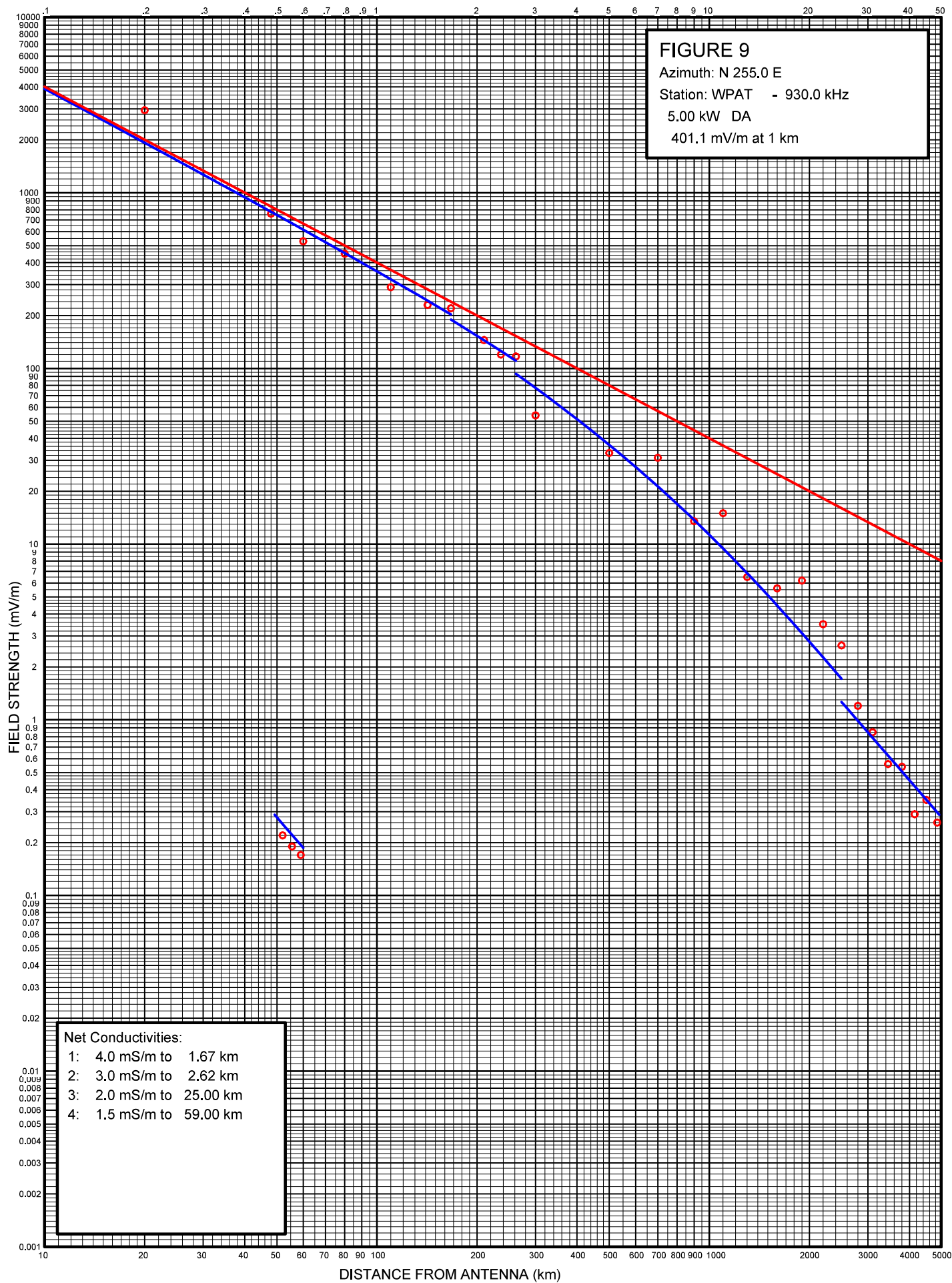


FIGURE 10

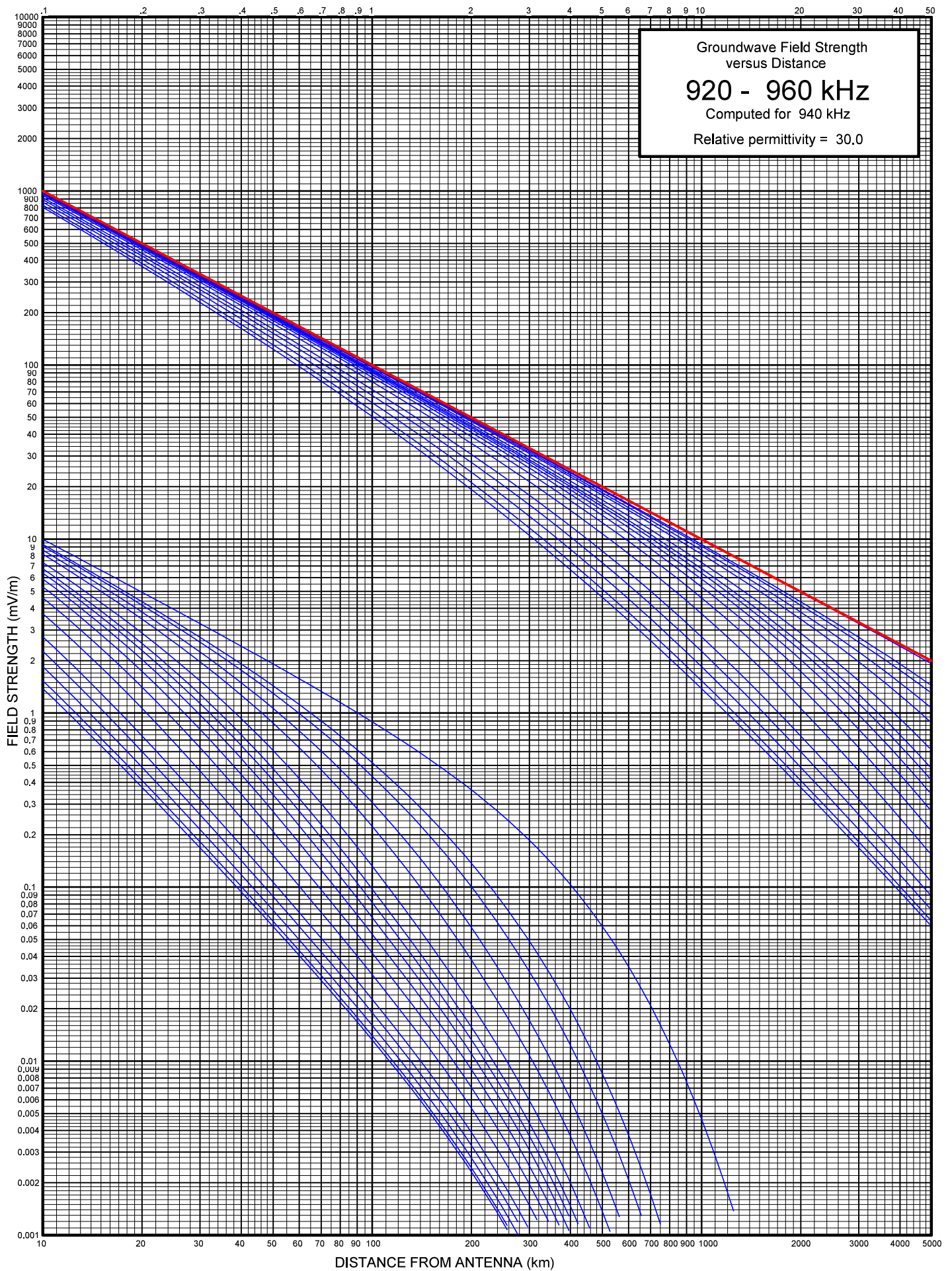


TABLE 1 - REVISED NIGHTTIME ALLOCATION STUDY

Protected Station: WHEN, 620 kHz - SYRACUSE, NY, US

Coordinates: 43-05-34 N, 076-11-17 W

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

Current:

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WRJZ	0620	3.348	100.0
WZON	0620	3.223	96.2
WTEL	0610	3.087	66.4
WTMJ	0620	2.930	52.5
-----	50%	-----	
*WSNR	0620	2.691	42.7
-----	25%	-----	
WPRO	0630	1.442	21.0
YVNO-A	0620	1.434	20.4
WSNG	0610	1.269	17.7
WDAE	0620	1.263	17.4
WVMT	0620	1.230	16.6
WAKY	0620	1.154	15.4
JBC-A	0620	1.067	14.1
ABS-A	0620	0.821	10.7
HJEL-A	0620	0.821	10.6

Call	Freq (kHz)	Limit (mV/m)	(%)
WRJZ	0620	3.348	100.0
WZON	0620	3.223	96.2
WTEL	0610	3.087	66.4
WTMJ	0620	2.930	52.5
-----	50%	-----	
*WSNR-PRO	0620	2.688	42.6
-----	25%	-----	
WPRO	0630	1.442	21.0
YVNO-A	0620	1.434	20.4
WSNG	0610	1.269	17.7
WDAE	0620	1.263	17.4
WVMT	0620	1.230	16.6
WAKY	0620	1.154	15.4
JBC-A	0620	1.067	14.1
ABS-A	0620	0.821	10.7
HJEL-A	0620	0.821	10.6

Protected Station: WVMT, 620 kHz - BURLINGTON, VT, US

Coordinates: 44-32-04 N, 073-13-15 W

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

Current:

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WZON	0620	6.579	100.0
WHEN	0620	3.574	54.3
-----	50%	-----	
WPRO	0630	3.402	45.4
-----	25%	-----	
WTMJ	0620	1.990	24.1
*WSNR	0620	1.970	23.2
CHLT/A	0630	1.771	20.3
WRJZ	0620	1.672	18.8
CKOY/A	0620	1.294	14.3
YVNO-A	0620	1.284	14.0
WDAE	0620	1.100	11.9
WSNG	0610	0.927	10.0

Call	Freq (kHz)	Limit (mV/m)	(%)
WZON	0620	6.579	100.0
WHEN	0620	3.574	54.3
-----	50%	-----	
WPRO	0630	3.402	45.4
-----	25%	-----	
*WSNR-PRO	0620	2.054	24.9
WTMJ	0620	1.990	23.4
CHLT/A	0630	1.771	20.3
WRJZ	0620	1.672	18.8
CKOY/A	0620	1.294	14.3
YVNO-A	0620	1.284	14.0
WDAE	0620	1.100	11.9

Protected Station: WPRO, 630 kHz - PROVIDENCE, RI, US
 Coordinates: 41-46-28 N, 071-19-23 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WVMT	0620	2.053	100.0
CFCY/A	0630	1.536	74.8
CHLT/A	0630	1.450	56.5
-----	50%	-----	
WMFD	0630	1.402	47.5
WUNO	0630	1.400	42.9
CJET/A	0630	1.354	38.1
CFCO/A	0630	1.336	35.1
WSBN	0630	1.289	31.9
WNNZ	0640	1.127	26.6
-----	25%	-----	
OAX1T-A	0630	0.959	21.9
WLAP	0630	0.938	20.9
CFBK/	0630	0.870	19.0
YVJA-A	0630	0.731	15.6
ZYH422-A	0630	0.671	14.2
WZON	0620	0.608	12.7
UNK-A	0630	0.595	12.3
CKRC/A	0630	0.581	11.9

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WVMT	0620	2.053	100.0
CFCY/A	0630	1.536	74.8
CHLT/A	0630	1.450	56.5
-----	50%	-----	
WMFD	0630	1.402	47.5
WUNO	0630	1.400	42.9
CJET/A	0630	1.354	38.1
CFCO/A	0630	1.336	35.1
WSBN	0630	1.289	31.9
WNNZ	0640	1.127	26.6
-----	25%	-----	
*WSNR-PRO	0620	1.092	24.9
OAX1T-A	0630	0.959	21.2
WLAP	0630	0.938	20.3
CFBK/	0630	0.870	18.4
YVJA-A	0630	0.731	15.2
ZYH422-A	0630	0.671	13.8
WZON	0620	0.608	12.4
UNK-A	0630	0.595	12.0
CKRC/A	0630	0.581	11.7

Protected Station: WTEL, 610 kHz - PHILADELPHIA, PA, US
 Coordinates: 39-51-55 N, 075-06-34 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
UNK-A	0610	2.601	100.0
KCSP	0610	2.016	77.5
WGIR	0610	1.984	60.2
-----	50%	-----	
WIOD	0610	1.891	49.2
WCAO	0600	1.870	43.6
WXVA	0610	1.477	31.6
WHEN	0620	1.467	29.9
CKTB/A	0610	1.433	28.0
-----	25%	-----	
WAGG	0610	1.284	24.1
WSNG	0610	1.275	23.3
ZYL-268-A	0610	1.043	18.5

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
UNK-A	0610	2.601	100.0
KCSP	0610	2.016	77.5
WGIR	0610	1.984	60.2
-----	50%	-----	
WIOD	0610	1.891	49.2
WCAO	0600	1.870	43.6
WXVA	0610	1.477	31.6
WHEN	0620	1.467	29.9
CKTB/A	0610	1.433	28.0
-----	25%	-----	
*WSNR-PRO	0620	1.314	24.7
WAGG	0610	1.284	23.4
WSNG	0610	1.275	22.6

WFNZ	0610	0.988	17.3	ZYL-268-A	0610	1.043	18.0
WTVN	0610	0.981	16.9	WFNZ	0610	0.988	16.8
CHNC/A	0610	0.891	15.1	WTVN	0610	0.981	16.5
WVMT	0620	0.870	14.6	CHNC/A	0610	0.891	14.8
WPLY	0610	0.849	14.1	WVMT	0620	0.870	14.2
KARV	0610	0.841	13.8	WPLY	0610	0.849	13.8
CX4-A	0610	0.838	13.6	KARV	0610	0.841	13.5
HIJR-C	0610	0.698	11.2	CX4-A	0610	0.838	13.3
UNK-A	0610	0.686	11.0	HIJR-C	0610	0.698	11.0
WRJZ	0620	0.647	10.3	UNK-A	0610	0.686	10.7
				WRJZ	0620	0.647	10.1

Protected Station: WTMJ, 620 kHz - MILWAUKEE, WI, US
 Coordinates: 42-42-28 N, 088-03-57 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)	Call	Freq (kHz)	Limit (mV/m)	(%)
CFCO/A	0630	1.378	100.0	CFCO/A	0630	1.378	100.0
YVNO-A	0620	1.246	90.3	YVNO-A	0620	1.246	90.3
JBC-A	0620	0.986	53.0	JBC-A	0620	0.986	53.0
-----	50%	-----		-----	50%	-----	
XENK/A	0620	0.974	46.3	XENK/A	0620	0.974	46.3
KTAR	0620	0.938	40.4	KTAR	0620	0.938	40.4
KCSP	0610	0.930	37.2	KCSP	0610	0.930	37.2
KYFI	0630	0.837	31.3	KYFI	0630	0.837	31.3
WRJZ	0620	0.801	28.6	WRJZ	0620	0.801	28.6
HJEL-A	0620	0.792	27.2	HJEL-A	0620	0.792	27.2
-----	25%	-----		-----	25%	-----	
WJDX	0620	0.740	24.5	WJDX	0620	0.740	24.5
WDAE	0620	0.732	23.5	WDAE	0620	0.732	23.5
WVMT	0620	0.685	21.4	WVMT	0620	0.685	21.4
WLAP	0630	0.664	20.3	WLAP	0630	0.664	20.3
CKCK/A	0620	0.643	19.3	*WSNR-PRO	0620	0.650	19.5
WZON	0620	0.584	17.2	CKCK/A	0620	0.643	18.9
WAKY	0620	0.580	16.8	WZON	0620	0.584	16.9
KTNO	0620	0.573	16.4	WAKY	0620	0.580	16.5
ABS-A	0620	0.572	16.1	KTNO	0620	0.573	16.1
HISD-C	0620	0.572	15.9	ABS-A	0620	0.572	15.9
WHEN	0620	0.549	15.1	HISD-C	0620	0.572	15.7
WTEL	0610	0.546	14.8	WHEN	0620	0.549	14.9
UNK-A	0620	0.521	14.0	WTEL	0610	0.546	14.6
KMNS	0620	0.505	13.4	UNK-A	0620	0.521	13.8
WTVN	0610	0.452	11.9	KMNS	0620	0.505	13.2
*WSNR	0620	0.433	11.3	WTVN	0610	0.452	11.7
XEHGR/A	0620	0.409	10.6	XEHGR/A	0620	0.409	10.6
RSL-A	0620	0.387	10.0				

Protected Station: WZON, 620 kHz - BANGOR, ME, US
 Coordinates: 44-49-47 N, 068-47-02 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
YVNO-A	0620	1.247	100.0
WRJZ	0620	1.209	96.9
*WSNR	0620	1.150	66.2
WTMJ	0620	1.141	54.7
-----	50%	-----	
CHLT/A	0630	1.106	46.5
WDAE	0620	1.077	41.0
WVMT	0620	1.049	37.0
CFCY/A	0630	0.989	32.7
WPRO	0630	0.972	30.5
WHEN	0620	0.950	28.5
-----	25%	-----	
CFRP/	0620	0.847	24.5
JBC-A	0620	0.839	23.5
ABS-A	0620	0.824	22.5
HJEL-A	0620	0.699	18.6
HISD-C	0620	0.658	17.2
UNK-A	0620	0.580	14.9
RSL-A	0620	0.531	13.5
CKCM/	0620	0.501	12.6
CHNC/A	0610	0.493	12.3
ZYH-590-A	0620	0.448	11.1
WAKY	0620	0.431	10.6
XENK/A	0620	0.421	10.3

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
YVNO-A	0620	1.247	100.0
WRJZ	0620	1.209	96.9
WTMJ	0620	1.141	65.6
CHLT/A	0630	1.106	53.2
-----	50%	-----	
WDAE	0620	1.077	45.7
WVMT	0620	1.049	40.5
CFCY/A	0630	0.989	35.4
WPRO	0630	0.972	32.7
WHEN	0620	0.950	30.4
CFRP/	0620	0.847	25.9
-----	25%	-----	
JBC-A	0620	0.839	24.9
ABS-A	0620	0.824	23.7
HJEL-A	0620	0.699	19.5
*WSNR-PRO	0620	0.679	18.6
HISD-C	0620	0.658	17.7
UNK-A	0620	0.580	15.4
RSL-A	0620	0.531	13.9
CKCM/	0620	0.501	13.0
CHNC/A	0610	0.493	12.7
ZYH-590-A	0620	0.448	11.4
WAKY	0620	0.431	10.9
XENK/A	0620	0.421	10.6

Protected Station: WRJZ, 620 kHz - KNOXVILLE, TN, US
 Coordinates: 35-59-24 N, 083-50-15 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Call	Freq (kHz)	Limit (mV/m)	(%)
WAKY	0620	3.364	100.0
YVNO-A	0620	2.293	68.1
WDAE	0620	2.243	55.0
-----	50%	-----	
WJDX	0620	2.167	46.6
JBC-A	0620	2.060	40.1
KTNO	0620	1.681	30.4
WTMJ	0620	1.632	28.2

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
WAKY	0620	3.364	100.0
YVNO-A	0620	2.293	68.1
WDAE	0620	2.243	55.0
-----	50%	-----	
WJDX	0620	2.167	46.6
JBC-A	0620	2.060	40.1
KTNO	0620	1.681	30.4
WTMJ	0620	1.632	28.2

-----	25%	-----	
XENK/A	0620	1.473	24.5
HJEL-A	0620	1.327	21.4
KMNS	0620	1.159	18.3
HISD-C	0620	1.137	17.6
ABS-A	0620	1.042	15.9
*WSNR	0620	0.859	13.0
UNK-A	0620	0.827	12.4
WHEN	0620	0.813	12.1
WTVN	0610	0.801	11.8
WZON	0620	0.716	10.5
XEHGR/A	0620	0.716	10.4
RSL-A	0620	0.700	10.1

-----	25%	-----	
XENK/A	0620	1.473	24.5
HJEL-A	0620	1.327	21.4
KMNS	0620	1.159	18.3
HISD-C	0620	1.137	17.6
ABS-A	0620	1.042	15.9
UNK-A	0620	0.827	12.5
WHEN	0620	0.813	12.2
WTVN	0610	0.801	11.9
*WSNR-PRO	0620	0.755	11.1
WZON	0620	0.716	10.5
XEHGR/A	0620	0.716	10.4
RSL-A	0620	0.700	10.1

Protected Station: WSNB, 630 kHz - WASHINGTON, DC, US
 Coordinates: 39-08-02 N, 077-18-14 W
 Standard: FCC Rules (1992 Skywave Propagation Model) [10%]

Current:

Proposed:

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
WPRO	0630	2.193	100.0
WUNO	0630	1.278	58.2
-----	50%	-----	-----
OAX1T-A	0630	1.149	45.2
WLAP	0630	1.081	38.7
KYFI	0630	1.020	34.1
CFBK/	0630	1.016	32.1
WWJZ	0640	0.947	28.5
WRJZ	0620	0.870	25.2
-----	25%	-----	-----
YVJA-A	0630	0.846	23.7
WHEN	0620	0.831	22.7
KSLR	0630	0.799	21.3
WHLO	0640	0.785	20.4
CHLT/A	0630	0.781	19.9
WMFD	0630	0.740	18.5
WFNC	0640	0.694	17.0
ZYH422-A	0630	0.689	16.7
UNK-A	0630	0.679	16.2
WXSM	0640	0.677	16.0
CFCO/A	0630	0.652	15.2
CFCY/A	0630	0.645	14.8
CJET/A	0630	0.551	12.5

Call	Freq (kHz)	Limit (mV/m)	(%)
-----	-----	-----	-----
WPRO	0630	2.193	100.0
WUNO	0630	1.278	58.2
-----	50%	-----	-----
OAX1T-A	0630	1.149	45.2
WLAP	0630	1.081	38.7
KYFI	0630	1.020	34.1
CFBK/	0630	1.016	32.1
WWJZ	0640	0.947	28.5
WRJZ	0620	0.870	25.2
-----	25%	-----	-----
YVJA-A	0630	0.846	23.7
WHEN	0620	0.831	22.7
KSLR	0630	0.799	21.3
WHLO	0640	0.785	20.4
CHLT/A	0630	0.781	19.9
WMFD	0630	0.740	18.5
WFNC	0640	0.694	17.0
ZYH422-A	0630	0.689	16.7
UNK-A	0630	0.679	16.2
WXSM	0640	0.677	16.0
CFCO/A	0630	0.652	15.2
CFCY/A	0630	0.645	14.8
CJET/A	0630	0.551	12.5
*WSNR-PRO	0620	0.493	11.1

TABLE 2

FIELD STRENGTH MEASUREMENTS

5 KW DAYTIME DIRECTIONAL

WPAT 930 KILOHERTZ

PATERSON, NEW JERSEY

MARCH 2023

145 DEGREES TRUE RADIAL

<u>Point Number</u>	<u>Distance km</u>	<u>Date/Time (local)</u> 3/16/2023	<u>Field mV/m</u>
1	0.30	1224	3100
2	1.36	1236	600
3	1.70	1245	480
4	1.95	1252	360
5	2.20	1258	325
6	2.40	1305	330
7	2.60	1310	275
8	3.00	1325	275
9	5.00	1340	110
10	7.00	1352	40.0
11	9.00	1405	45.0
12	14.00	1425	57.0
13	16.00	1448	31.0
14	18.00	1506	27.0
15	20.00	1524	25.0

TABLE 3

FIELD STRENGTH MEASUREMENTS

5 KW DAYTIME DIRECTIONAL

WPAT 930 KILOHERTZ

PATERSON, NEW JERSEY

MARCH 2023

255 DEGREES TRUE RADIAL

<u>Point Number</u>	<u>Distance km</u>	<u>Date/Time (local)</u>	<u>Field mV/m</u>
		3/23/2023	
1	0.20	1341	2950
2	0.48	1351	760
3	0.60	1358	530
4	0.80	1404	450
5	1.10	1409	290
6	1.42	1421	230
7	1.67	1427	220
8	2.10	1442	145
9	2.36	1452	120
10	2.62	1502	117
11	3.00	1511	54.0
12	5.00	1524	33.0
		3/26/2023	
13	7.00	1116	31.0
14	9.00	1132	13.5
15	11.00	1142	15.0
16	13.00	1154	6.50
17	16.00	1212	5.60
18	19.00	1225	6.20
19	22.00	1237	3.50
20	25.00	1247	2.65

255 DEGREES TRUE RADIAL

<u>Point Number</u>	<u>Distance km</u>	<u>Date/Time (local)</u> 3/26/2023	<u>Field mV/m</u>
21	28.00	1306	1.20
22	31.00	1317	0.85
23	34.50	1335	0.56
24	38.00	1349	0.54
25	41.50	1402	0.29
26	45.00	1417	0.35
27	48.50	1438	0.26
28	52.00	1452	0.22
29	55.50	1503	0.19
30	59.00	1517	0.17