

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
MULTICULTURAL RADIO BROADCASTING LICENSEE, LLC
RADIO STATION WWRU
JERSEY CITY, NEW JERSEY

May 30, 2006

1660 KHZ 10 KW U DA-2

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Table of Contents

	Technical Narrative
Figure 1	Antenna Site Plat
Figure 2	Sketch of Antenna Elements
Figure 3	Specifications for Daytime Directional Antenna System
Figure 4	Proposed Daytime Horizontal Plane Standard Radiation Pattern
Figure 5	Tabulation of Daytime Standard Radiation Pattern
Figure 6	Proposed Daytime Field Strength Contours
Figure 7	Existing Daytime Field Strength Contours
Figure 8	Daytime Allocation Study

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Technical Narrative

The technical exhibit of which this narrative is part has been prepared on behalf of Multicultural Radio Broadcasting Licensee, LLC, licensee of AM broadcast station WWRU, Jersey City, New Jersey. WWRU is licensed as a Class B station for operation on 1660 kilohertz with daytime and nighttime power of 10 kilowatts, operating with different directional antenna patterns during daytime and nighttime hours. By means of this present application, the licensee proposes very minor changes to the daytime directional pattern. The daytime power will remain at 10 kilowatts. The nighttime service will remain unchanged.

The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class B station operating on one of the channels listed in 73.26, the proposal satisfies 47 CFR 73.21(a)(2) which permits operation with a nominal power of not less than 0.25 kilowatt nor more than 50 kilowatts at any time. The Federal Aviation Administration has not been notified of the proposal, as one of the two towers is presently in existence and the construction of the other tower has already been approved.

Proposed Transmitter Location

The location of the proposed WWRU facility will not change and will continue to be at NAD27 coordinates:

40-49-13 North

74-04-04 West

The antenna site plat is shown on Figure 1. On it are shown the towers of both WKDM, on 1380 kilohertz, and WWRU. The present WWRU daytime directional antenna system uses two towers of the existing three towers of the WKDM directional antenna system. WKDM tower 4 is being constructed to serve in the new 1380 kilohertz nighttime directional antenna system, and this proposal is to change the WWRU daytime directional antenna to use it and the present WKDM tower 3.

Daytime Directional Antenna System

The WWRU daytime directional antenna pattern proposed herein was designed to use towers 3 and 4 of the new WKDM nighttime directional antenna system, which is soon to be constructed, instead of the two towers of the existing fulltime WKDM directional antenna system. The purpose of the change is to improve the bandwidth performance of the diplexing filter circuitry for both WWRU in the daytime and WKDM fulltime, after careful evaluation using whole-system nodal modeling of the antenna system equipment that has been designed to implement the WKDM nighttime construction permit.

No change in the present WWRU daytime directional antenna pattern was desired, but it was necessary to develop a new design having slightly different radiation characteristics because the spacing specified in the WKDM construction permit between towers 3 and 4 is larger than the spacing between the existing WKDM

tower pairs. The proposed WWRU daytime directional antenna pattern matches the radiation characteristics of the licensed pattern very closely and there are no significant differences in terms of coverage or allocation matters.

A total of two towers will be employed for the daytime directional antenna pattern. As indicated on Figure 2, the radiating elements for towers 1 and 2 are 69.4 meters (228 feet) in height and have an overall height of 72.2 meters (237 feet) and 72.3 meters (237 feet) above ground level respectively. A summary of specifications for the daytime directional antenna array is included herein as Figure 3.

The daytime directional antenna pattern has been calculated in accordance with 47 CFR 73.150 assuming a one-ohm lumped loss resistance at the current loop of each tower in the array. The daytime standard radiation pattern is shown herein as Figure 4 and is tabulated in Figure 5.

Section 73.24(g)

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 300 persons. At the proposed location, during daytime hours, the proposed 1,000 mV/m contour encompasses 1 person. The requirement of 73.24(g) is met.

Daytime Coverage

The proposed WWRU daytime field strength contours are depicted on Figure 6 and the existing daytime field strength contours are shown on Figure 7. As indicated on Figure 6, the proposed daytime 5 mV/m contour will completely encompass the city limits of Jersey City. The Jersey City city limits depicted were obtained from a map contained in the TIGER 2000 U.S. census files.

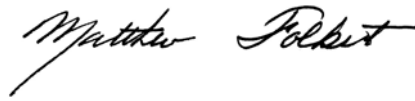
Daytime Allocation Study

The daytime allocation study is summarized on the tabulation of Figure 8, which compares the proposed radiation pattern with a composite pattern consisting of the nondirectional pattern that is assumed for allocation purposes in the expanded band where it exceeds the licensed directional pattern radiation and the licensed pattern radiation where it is greater than the nondirectional assumed radiation. It can be seen from figure 8 that the proposed WWRU daytime directional antenna pattern closely resembles the licensed pattern and that, to the extent that there are differences, the proposed pattern will not extend beyond the envelope of the composite pattern at any azimuth. The proposal, therefore, will have no impact on the allocation of frequencies within the expanded band in the United States or any foreign country.

Environmental Considerations

The proposed WWRU operation was evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 1 through 4 of Supplement A to OET Bulletin 65, the worst case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is 2 meters. The existing towers are elevated approximately 10 feet above ground level and are accessible by catwalk. The catwalk is inaccessible to the general public. The property is swampy and not conducive to egress by the general public. Based on measurements, the area about each tower will be marked on the catwalk to identify the region where the electromagnetic fields approach the value for a “controlled” environment.

This statement addresses only human exposure to radiofrequency radiation and not to other non-radiofrequency radiation matters listed in the National Environmental Policy Act of 1969.

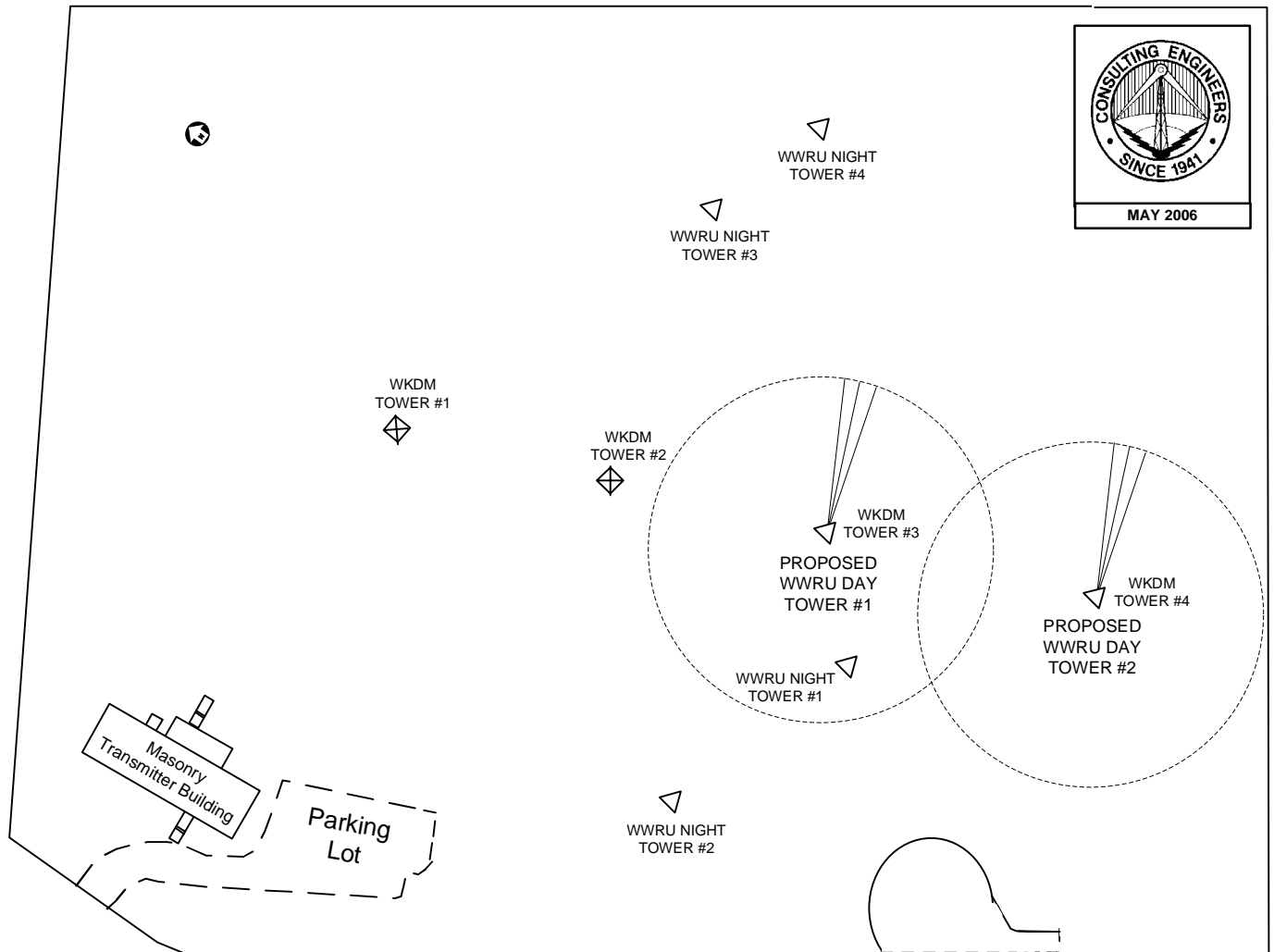
A handwritten signature in black ink, reading "Matthew Folkert". The signature is written in a cursive style with a large, stylized 'M' and 'F'.

Matthew Folkert
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237

(941) 329-6000

May 30, 2006

Figure 1

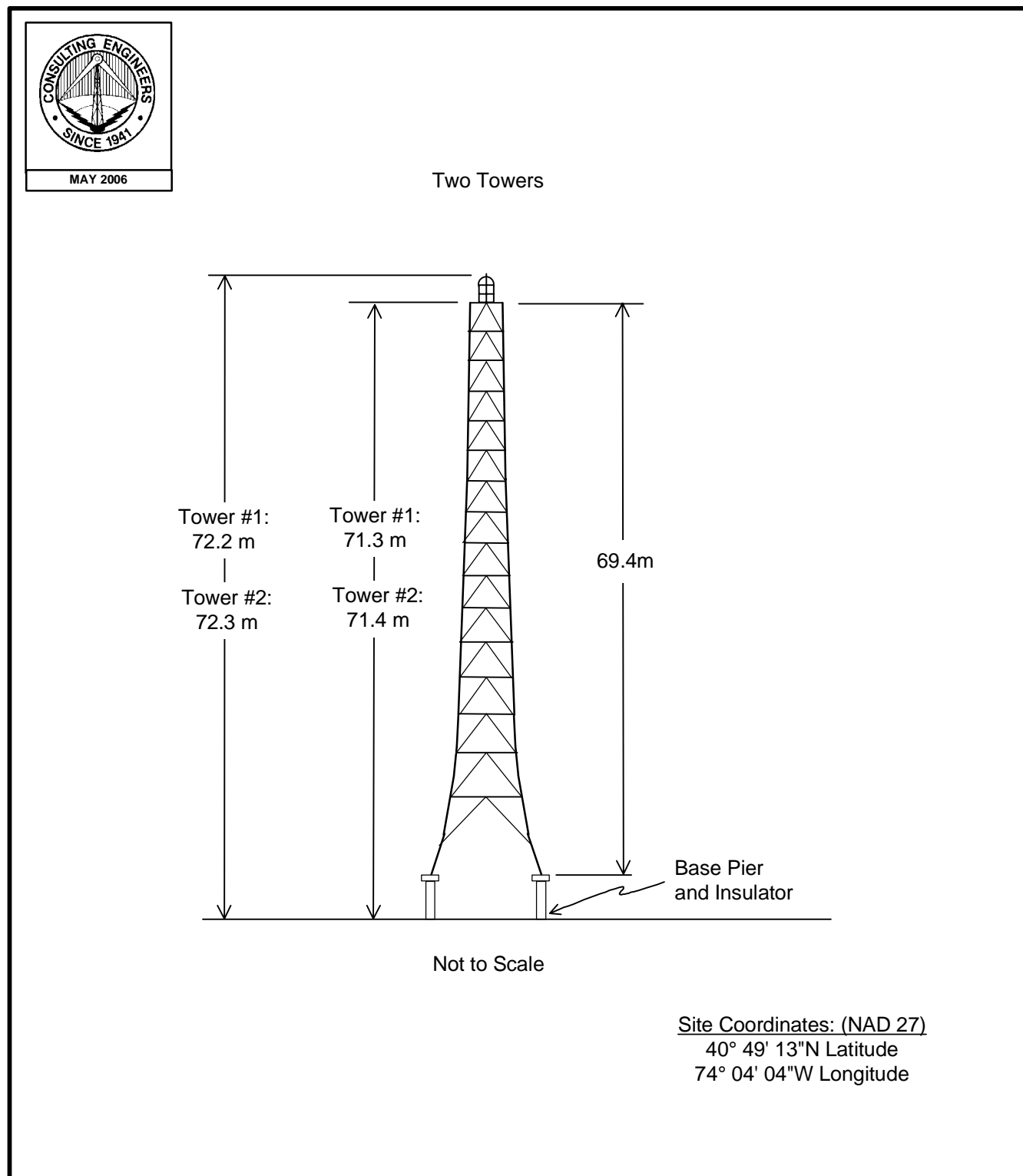


PLAT OF TRANSMITTER LOCATION

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Figure 2



SKETCH OF ANTENNA ELEMENTS

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Specifications for Daytime
Directional Antenna System

Frequency:	1660 kHz
Hours of Operation:	Unlimited
Power:	10 kW
Number of Towers:	2
Tower Registration Numbers:	1(W): 1040103 2(E): 1242401
Type of Tower:	Guyed, Uniform Cross-section, base-insulated
Tower #1 - height above base insulator	69.4 m (234 ft)
Tower #1 - overall height	72.2 m (237 ft)
Tower #2 - height above base insulator	69.4 m (234 ft)
Tower #2 - overall height	72.3 m (237 ft)

Tower Arrangement:

Tower No.	Spacing (deg.)/(m)	Orientation (deg. True)
1	0.0	0.0
2	93.5/46.9	131.5

Daytime Element Field Parameters:

<u>Tower No.</u>	<u>Field Ratio</u>	<u>Phase (degrees)</u>
1	1.000	0.0
2	0.534	-135.0

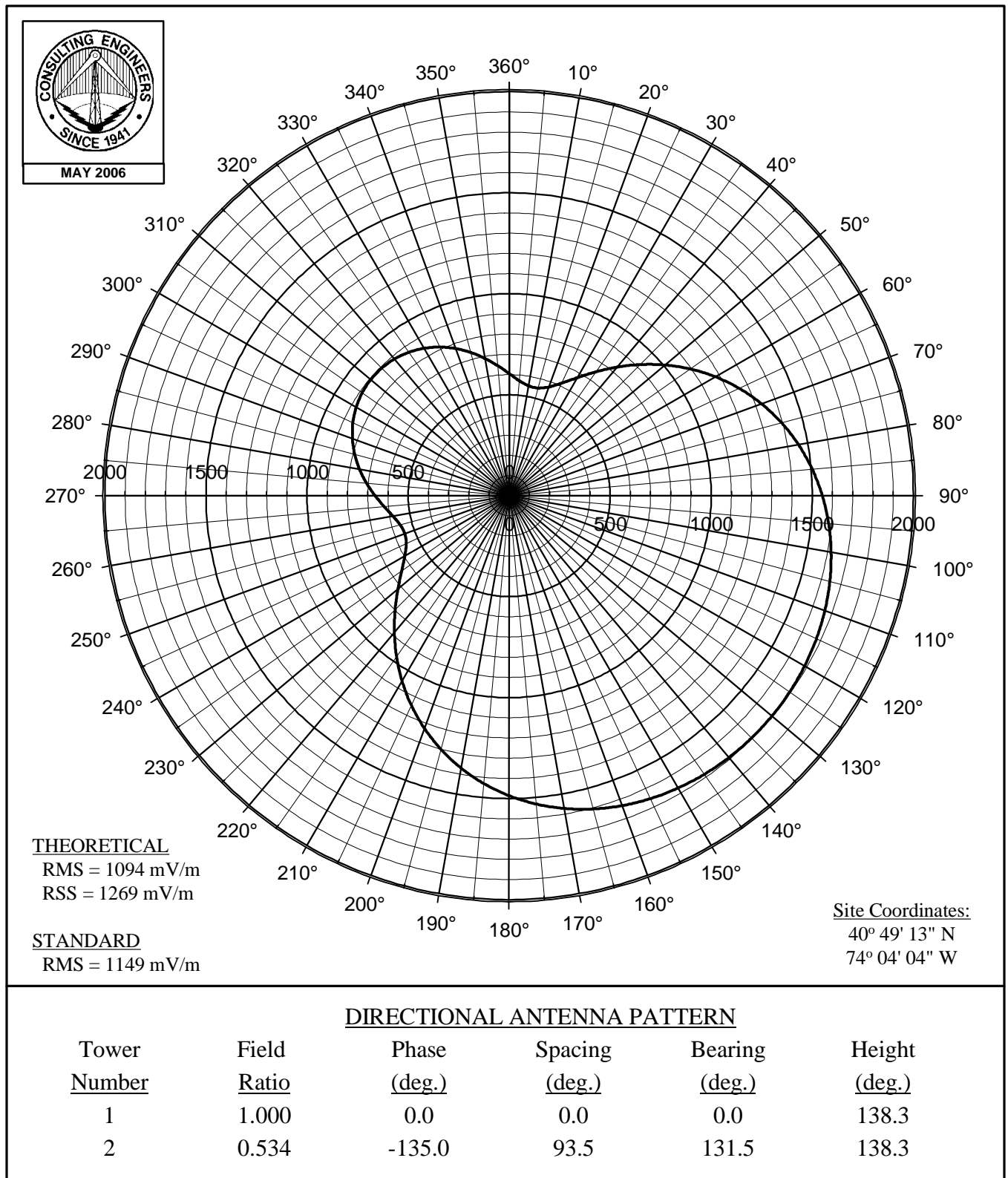
Ground System:

Installed about the base of each tower are 120 evenly spaced, buried copper wire radials (#10 AWG), extending 54.3 meters (178 ft) from all towers except where shortened and bonded to transverse copper strap between towers. In addition, copper strap runs from the transmitter and down the line of towers and is bonded to ground at the base of each tower.

Geographic Coordinates of
Center of Antenna Array:

40° 49' 13" North Latitude
74° 04' 04" West Longitude

Figure 4



PROPOSED DAYTIME HORIZONTAL PLANE STANDARD RADIATION PATTERN

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1660 KHZ 10 KW U DA-2

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Figure 5

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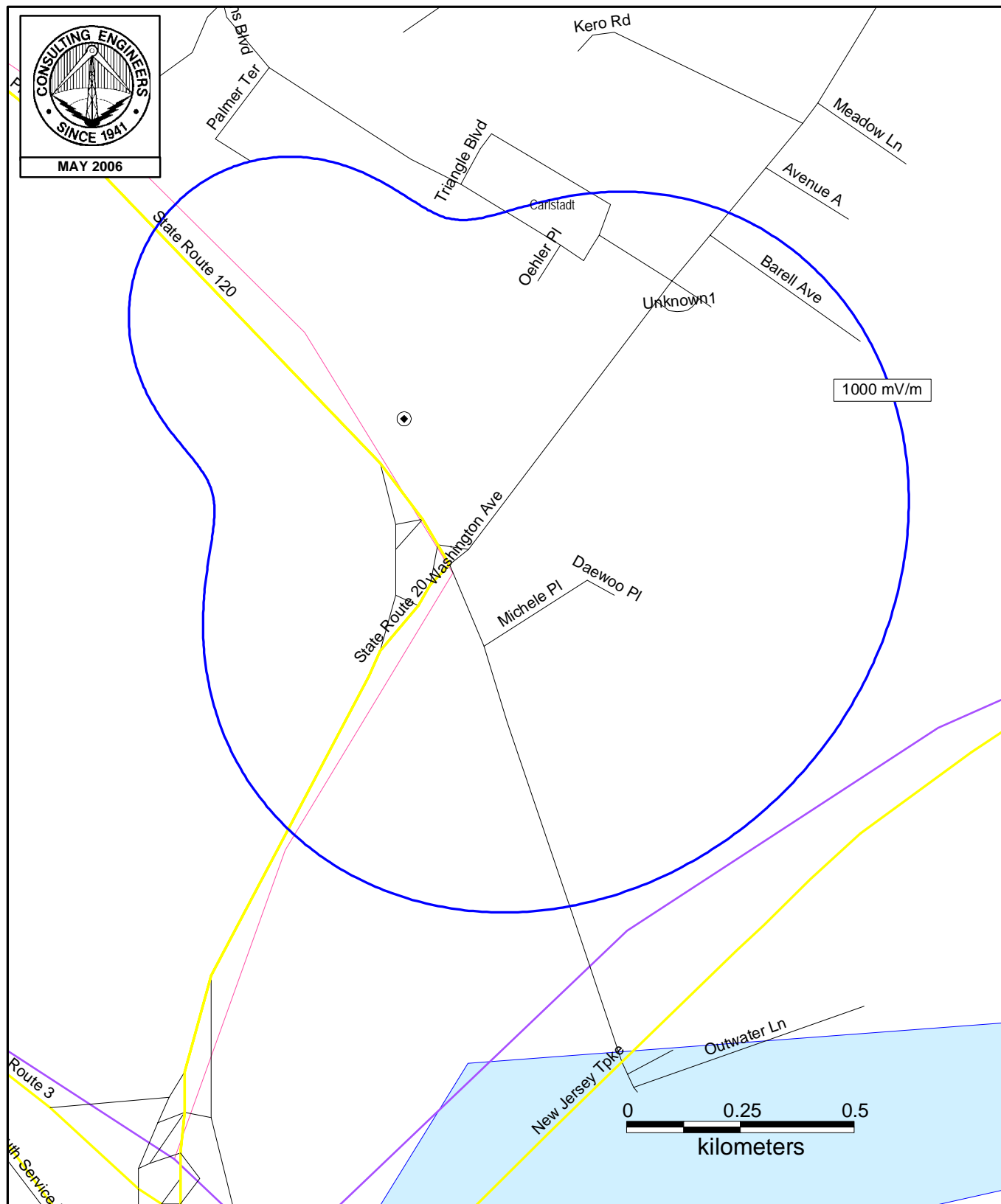
1660 KHZ 10 KW U DA-2

DAYTIME RADIATION PATTERN
(Radiation Values at One Kilometer)

Tower		Field	Phase	Spacing	Bearing	Height	
<u>Number</u>		<u>Ratio</u>	<u>(deg.)</u>	<u>(deg.)</u>	<u>(deg.)</u>	<u>(deg.)</u>	
1		1.000	0.0	0.0	0.0	138.3	
2		0.534	-135.0	93.5	131.5	138.3	

Input	Loop	Theo.	Theo.	Q	Standard	
Power	Loss	RMS	RSS	Factor	RMS	
<u>(kW)</u>	<u>(ohms)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	
10	1.0	1094	1269	31.7	1149	

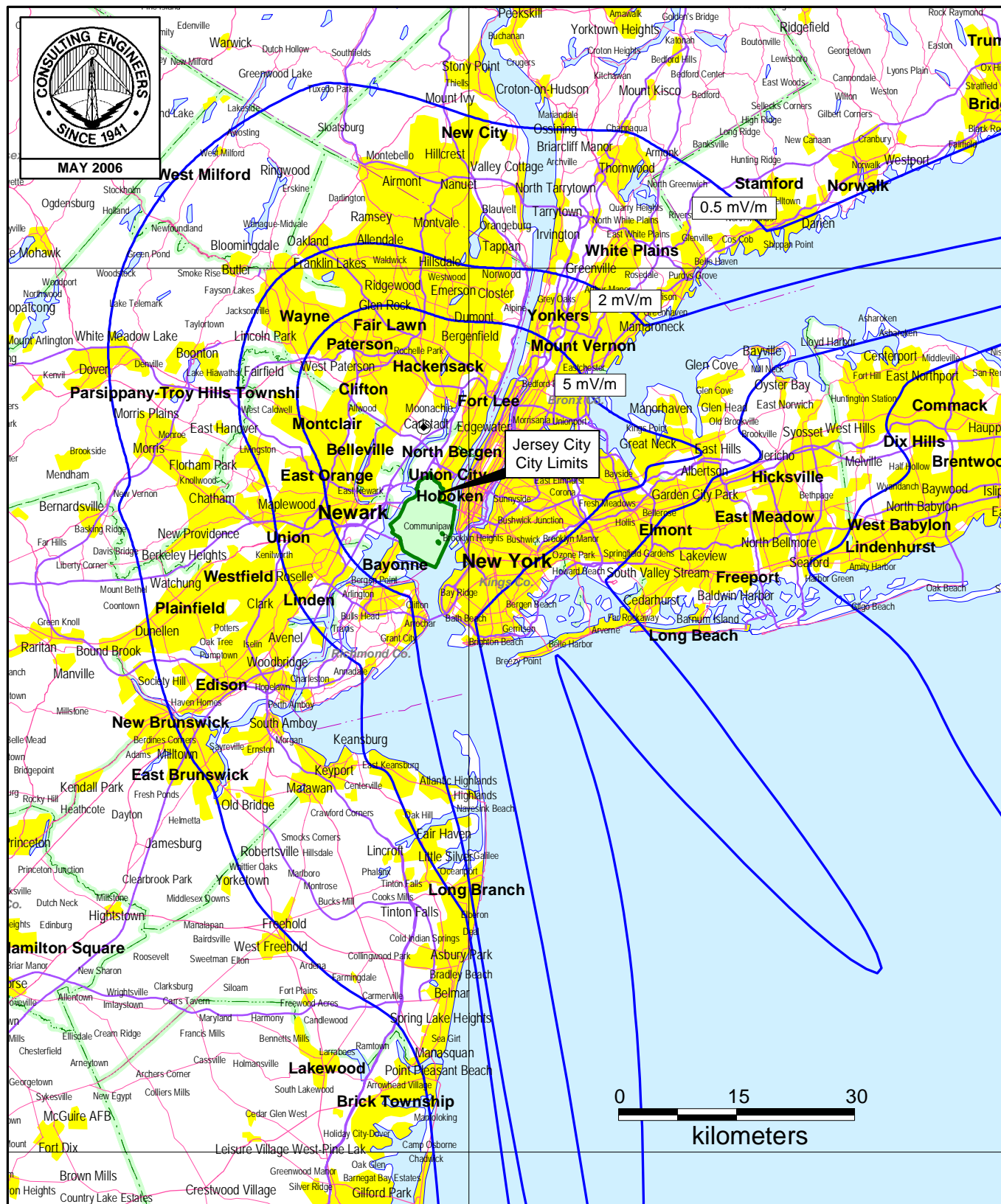
Azimuth	Field	Azimuth	Field	Azimuth	Field	Azimuth	Field
<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>
0	604	90	1549	180	1485	270	663
5	571	95	1586	185	1431	275	708
10	552	100	1617	190	1369	280	751
15	551	105	1642	195	1300	285	790
20	572	110	1662	200	1225	290	824
25	614	115	1677	205	1144	295	852
30	674	120	1687	210	1059	300	873
35	748	125	1694	215	971	305	887
40	830	130	1697	220	882	310	893
45	917	135	1696	225	796	315	892
50	1006	140	1692	230	717	320	883
55	1093	145	1684	235	648	325	866
60	1177	150	1672	240	595	330	842
65	1256	155	1655	245	561	335	811
70	1329	160	1633	250	549	340	775
75	1395	165	1606	255	557	345	734
80	1453	170	1572	260	583	350	690
85	1505	175	1532	265	620	355	645



PROPOSED DAYTIME FIELD STRENGTH CONTOURS

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1660 KHZ 10 KW U DA-2

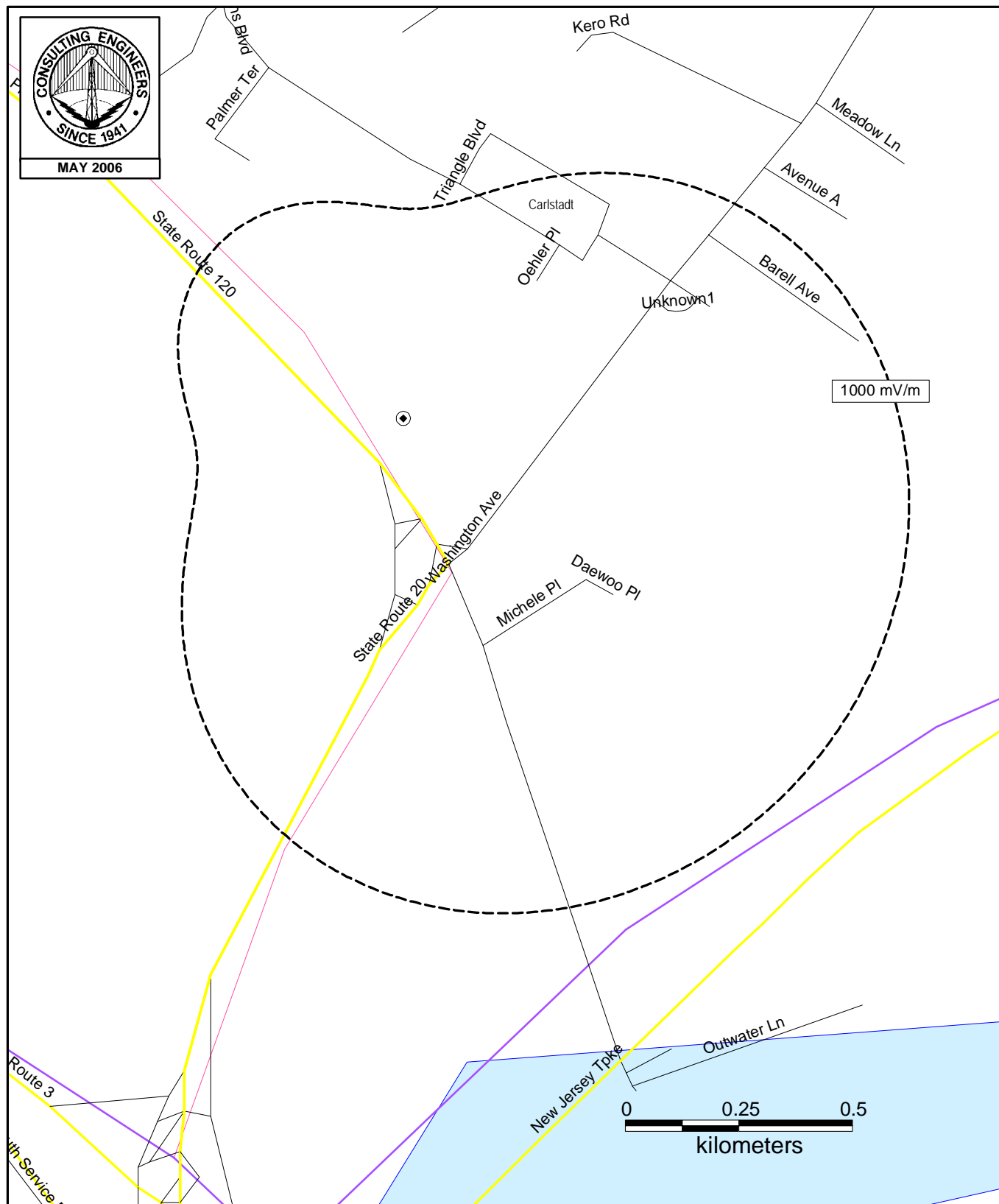
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PROPOSED DAYTIME FIELD STRENGTH CONTOURS

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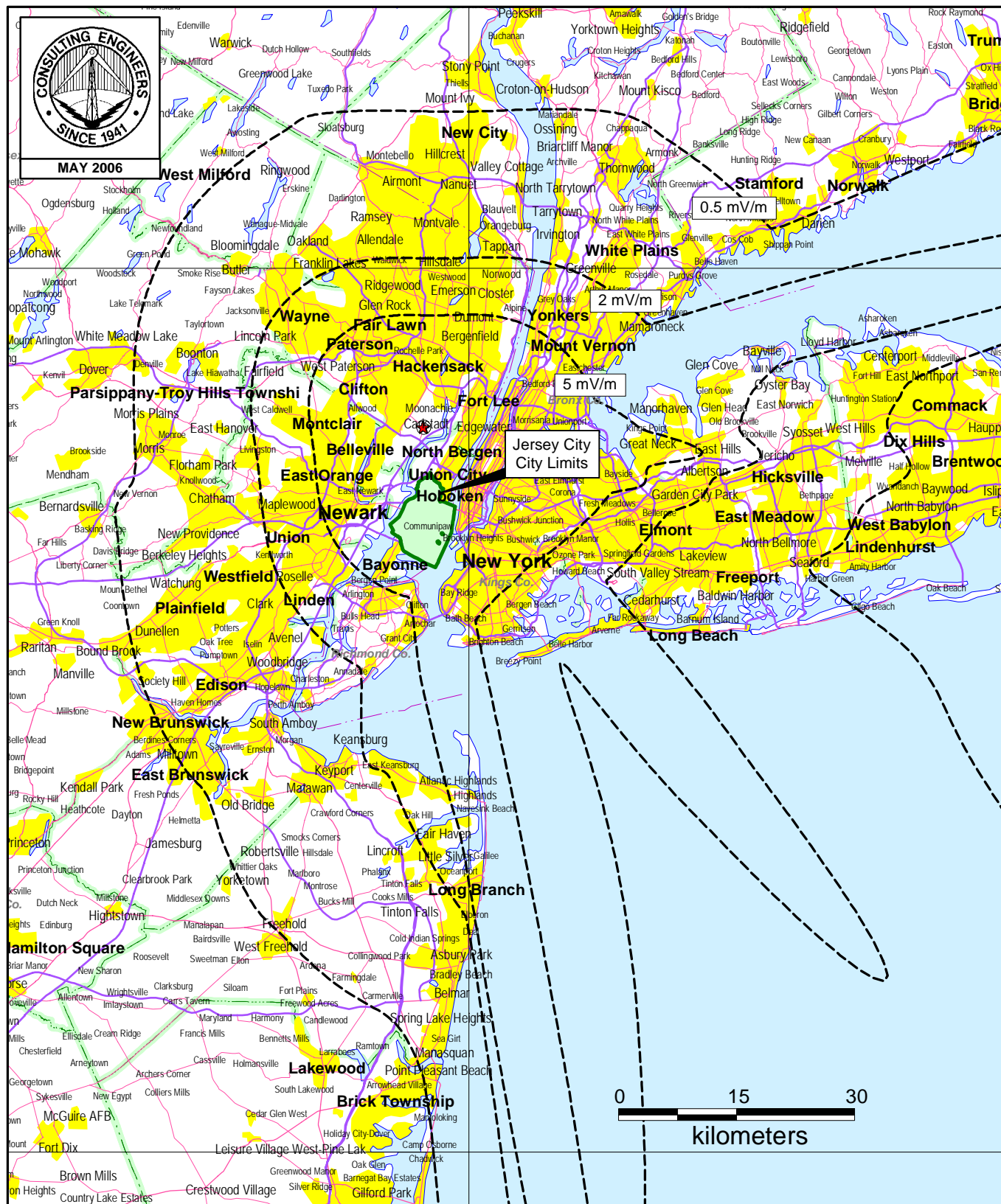
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EXISTING DAYTIME FIELD STRENGTH CONTOURS

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Figure 8

Daytime Allocation Study

Comparison of Radiated Fields at 1 kilometer

AZIMUTH	LIC	ND	LIC OR ND	PROPOSED	AZIMUTH	LIC	ND	LIC OR ND	PROPOSED
0	560	1069	1069	604	180	1488	1069	1488	1485
5	563	1069	1069	571	185	1438	1069	1438	1431
10	579	1069	1069	552	190	1382	1069	1382	1369
15	609	1069	1069	551	195	1320	1069	1320	1300
20	651	1069	1069	572	200	1254	1069	1254	1225
25	705	1069	1069	614	205	1183	1069	1183	1144
30	768	1069	1069	674	210	1110	1069	1110	1059
35	838	1069	1069	748	215	1034	1069	1069	971
40	912	1069	1069	830	220	958	1069	1069	882
45	988	1069	1069	917	225	882	1069	1069	796
50	1064	1069	1069	1006	230	810	1069	1069	717
55	1140	1069	1140	1093	235	742	1069	1069	648
60	1212	1069	1212	1177	240	683	1069	1069	595
65	1281	1069	1281	1256	245	633	1069	1069	561
70	1345	1069	1345	1329	250	595	1069	1069	549
75	1405	1069	1405	1395	255	571	1069	1069	557
80	1459	1069	1459	1453	260	560	1069	1069	583
85	1507	1069	1507	1505	265	562	1069	1069	620
90	1549	1069	1549	1549	270	572	1069	1069	663
95	1586	1069	1586	1586	275	589	1069	1069	708
100	1618	1069	1618	1617	280	610	1069	1069	751
105	1644	1069	1644	1642	285	631	1069	1069	790
110	1665	1069	1665	1662	290	651	1069	1069	824
115	1681	1069	1681	1677	295	669	1069	1069	852
120	1693	1069	1693	1687	300	683	1069	1069	873
125	1701	1069	1701	1694	305	692	1069	1069	887
130	1704	1069	1704	1697	310	696	1069	1069	893
135	1703	1069	1703	1696	315	695	1069	1069	892
140	1698	1069	1698	1692	320	689	1069	1069	883
145	1689	1069	1689	1684	325	678	1069	1069	866
150	1675	1069	1675	1672	330	662	1069	1069	842
155	1657	1069	1657	1655	335	643	1069	1069	811
160	1634	1069	1634	1633	340	622	1069	1069	775
165	1606	1069	1606	1606	345	601	1069	1069	734
170	1572	1069	1572	1572	350	582	1069	1069	690
175	1533	1069	1533	1532	355	567	1069	1069	645