

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
WQAM LICENSE LIMITED PARTNERSHIP
RADIO STATION WQAM
MIAMI, FLORIDA

June 17, 2010

560 KHZ 30 KW-D 25 KW-N U DA-2

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
WQAM LICENSE LIMITED PARTNERSHIP
RADIO STATION WQAM
MIAMI, FLORIDA

560 KHZ 30 KW-D 25 KW-N U DA-2

Table of Contents

Technical Narrative

Figure 1	Specifications for Directional Antenna Systems
Figure 2	Proposed Daytime Horizontal Plane Standard Radiation Pattern
Figure 3	Tabulation of Daytime Standard Radiation Pattern
Figure 4	Proposed Daytime Field Strength Contours
Figure 5	Existing Daytime Field Strength Contours
Figure 6	Daytime Allocation Study
Figure 7	Tabulation of Data Employed in Calculation of Groundwave Contours
Figure 8	Nighttime Horizontal Plane Radiation Pattern With Revised Tower Numbering

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
WQAM LICENSE LIMITED PARTNERSHIP
RADIO STATION WQAM
MIAMI, FLORIDA

560 KHZ 30 KW-D 25 KW-N U DA-2

Technical Narrative

The technical exhibit of which this narrative is part has been prepared on behalf of WQAM License Limited Partnership, licensee of AM broadcast station WQAM at Miami, Florida. WQAM is licensed as a Class B station for operation on 560 kilohertz with daytime power of 5 kilowatts and nighttime power of 1 kilowatt, operating with the same non-directional antenna pattern during daytime and nighttime hours. A construction permit, BP-20091023ABJ, has been granted to WQAM to increase daytime power to 50 kilowatts and nighttime power to 25 kilowatts to be diplexed with WAXY utilizing existing towers. By means of this present modification of construction permit application, the licensee proposes to decrease daytime power to 30 kilowatts with modified operating parameters. The authorized nighttime pattern remains unchanged. WQAM continues to propose co-location with existing AM station WAXY, operating on 790 kilohertz. The proposed tower numbering scheme is also modified to correspond with the tower numbers of the host station.

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(a), 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 new tower construction is not proposed.

Proposed Transmitter Location

The proposed WQAM facility will be co-located with existing station WAXY at NAD27 coordinates:

25-45-25 North

80-38-13 West

Directional Antenna Systems

A total of five existing towers will be employed for the daytime and nighttime directional antenna patterns. As shown in BP-20091023ABJ, the radiating elements for all towers are 76.2 meters (250 feet) in height and have an overall height of 78.9 meters (259 feet) above ground level. All towers have top loading. A summary of specifications for each of the directional antenna arrays is included herein as Figure 1.

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 2 and is tabulated in Figure 3.

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 or nighttime hours, the proposed 1,000 mV/m contour encompasses 0 persons thus the provisions of 47 CFR 73.24(g) are met.

Daytime Coverage

The proposed WQAM daytime field strength contours are depicted on Figure 4 and the existing daytime field strength contours are shown on Figure 5. As indicated on Figure 4, the proposed daytime 5 mV/m contour will completely encompass the city limits of Miami. The Miami city limits depicted were obtained from a map contained in the TIGER 2000 U.S. census files.

Daytime Allocation Study

A daytime allocation study was made utilizing FCC Figure M-3 and the conductivity map included in the Region II Agreement as shown on Figure 6. Daytime field strength contours were calculated in accordance with 47 CFR 73.183. Figure 7 is a tabulation of the data employed in the calculation of daytime contours.

Sheet 1 of Figure 6 shows a reduction in interference to domestic co-channel stations WVOC and WGAI while sheet 2 shows interference reduction to first adjacent station WTNB. Sheet 3 of Figure 6 shows a reduction in interference to foreign stations, XEQAA and JBC and that the proposed 0.025 mV/m contour is completely within the existing 0.025 mV/m contour toward the 0.5 mV/m contour of Cuban station CMIA. Station HIAA, in the Dominican Republic, is fully protected per the requirements of the Region II Agreement for Noise Zone 2 stations as shown on Sheet 4. Sheet 5 shows a reduction in interference toward two first adjacent

channel Cuban stations, CMEA and CMBV, as the respective proposed 0.5 mV/m contours are within the existing 0.5 mV/m protected contours.

Tower Numbering

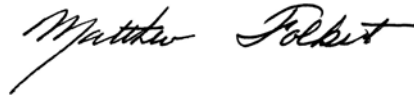
The tower numbering scheme as given in BP-20091023ABJ requires modification to correspond with the tower numbers currently assigned at the host station, WAXY. The following changes are proposed:

Tower Numbering	
CP-20091023ABJ	Proposed
1	1
2	5
3	2
4	4
5	3

The proposed daytime pattern uses this tower numbering scheme. Although no changes are proposed to the CP nighttime directional antenna pattern parameters, a new standard radiation plot bearing the proposed tower numbers is included as Figure 8.

Environmental Considerations

The areas surrounding the tower bases will be appropriately restricted with fences of sufficient dimensions to prevent exposure above the ANSI guidelines with both stations operating. In addition, warning signs will be posted.

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

June 17, 2010

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
RADIO STATION WQAM
MIAMI, FLORIDA

560 KHZ 30 KW-D 25 KW-N U DA-2

Specifications for
Directional Antenna Systems

Frequency:	560 kHz
Hours of Operation:	Unlimited
Power:	30 kW(Day) 25 W(Night)
Number of Towers:	5
Type of Tower:	Guyed, Uniform Cross-section, Base-insulated
All Towers - height above base insulator	76.2 m (250 ft)
All Towers - overall height	78.9 m (259 ft)

Tower Arrangement:

Tower <u>No.</u>	Spacing <u>(deg.)/(m)</u>	Orientation <u>(deg. True)</u>
1	70.9/105.4	226.0
2	132.2/196.6	325.0
3	159.6/237.3	351.0
4	0.0	0.0
5	140.0/208.2	294.9

Daytime Element Field Parameters:

<u>Tower</u> <u>No.</u>	<u>Field</u> <u>Ratio</u>	<u>Phase</u> <u>(degrees)</u>
1	0.456	+56.1
2	1.000	0.0
3	0.510	-148.2
4	0.584	-87.8
5	0.436	+132.9

Nighttime Element Field Parameters:

<u>Tower</u> <u>No.</u>	<u>Field</u> <u>Ratio</u>	<u>Phase</u> <u>(degrees)</u>
1	0.528	+3.1
2	1.000	0.0
3	0.616	-154.4
4	0.605	-148.2
5	0.405	+171.0

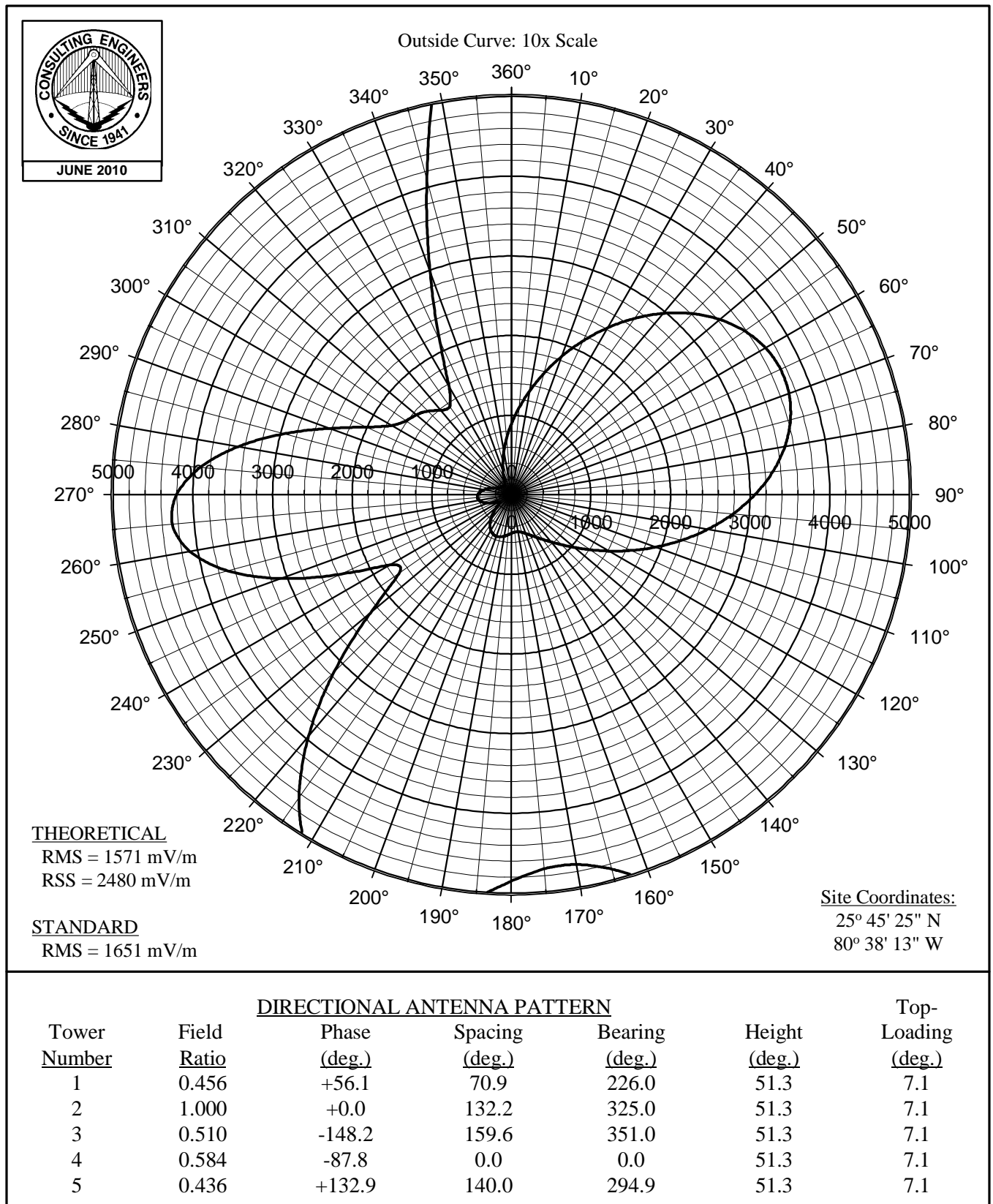
Ground System:

Installed about the base of each tower are 120 evenly spaced, buried copper wire radials (#10 AWG), extending 94.9 meters (311 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:

25° 45' 25" North Latitude
80° 38' 13" West Longitude

Figure 2



PROPOSED DAYTIME HORIZONTAL PLANE STANDARD RADIATION PATTERN

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

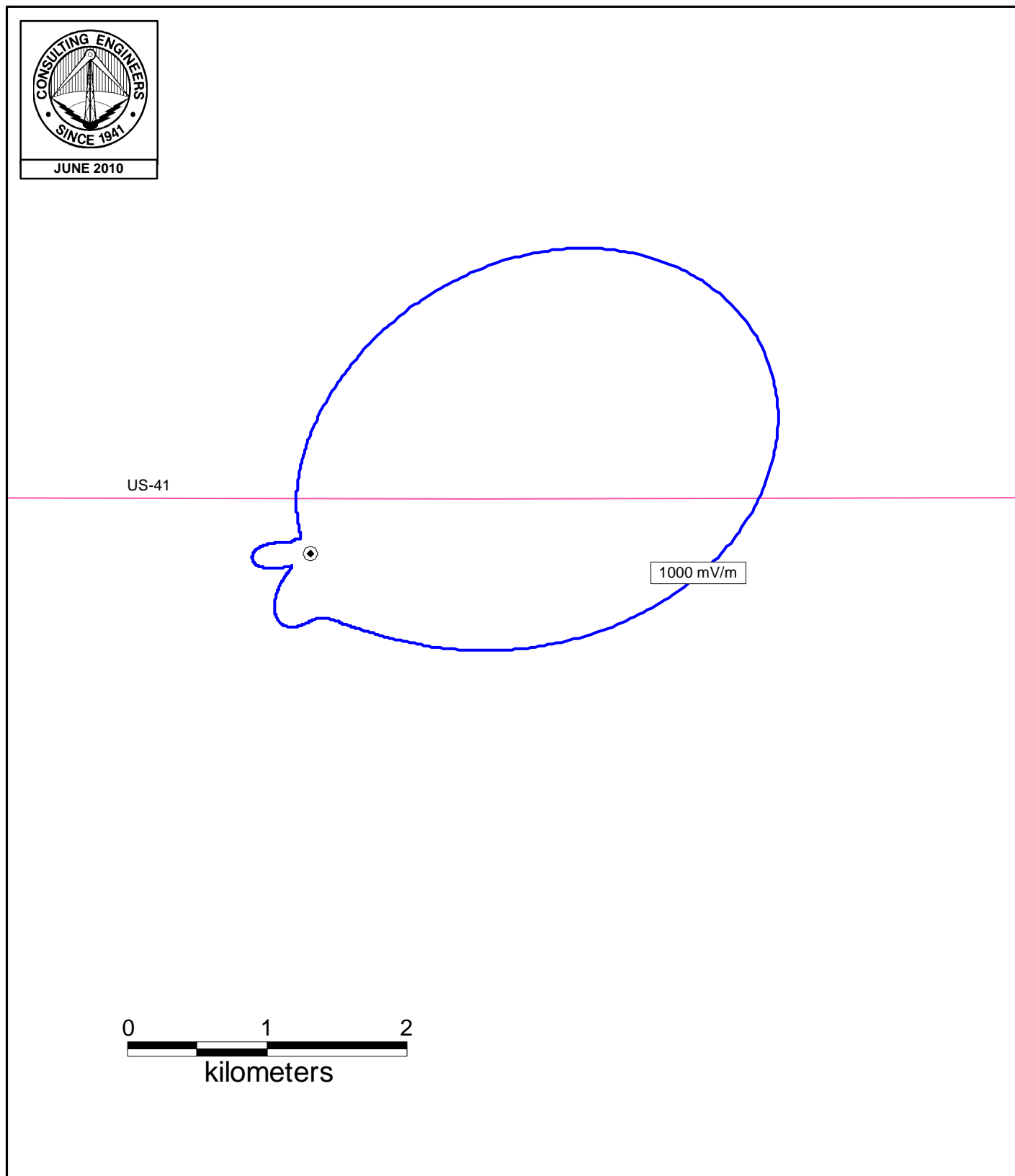
Figure 3

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
RADIO STATION WQAM
MIAMI, FLORIDA

560 KHZ 30 KW-D 25 KW-N U DA-2

DAYTIME RADIATION PATTERN
(Radiation Values at One Kilometer)

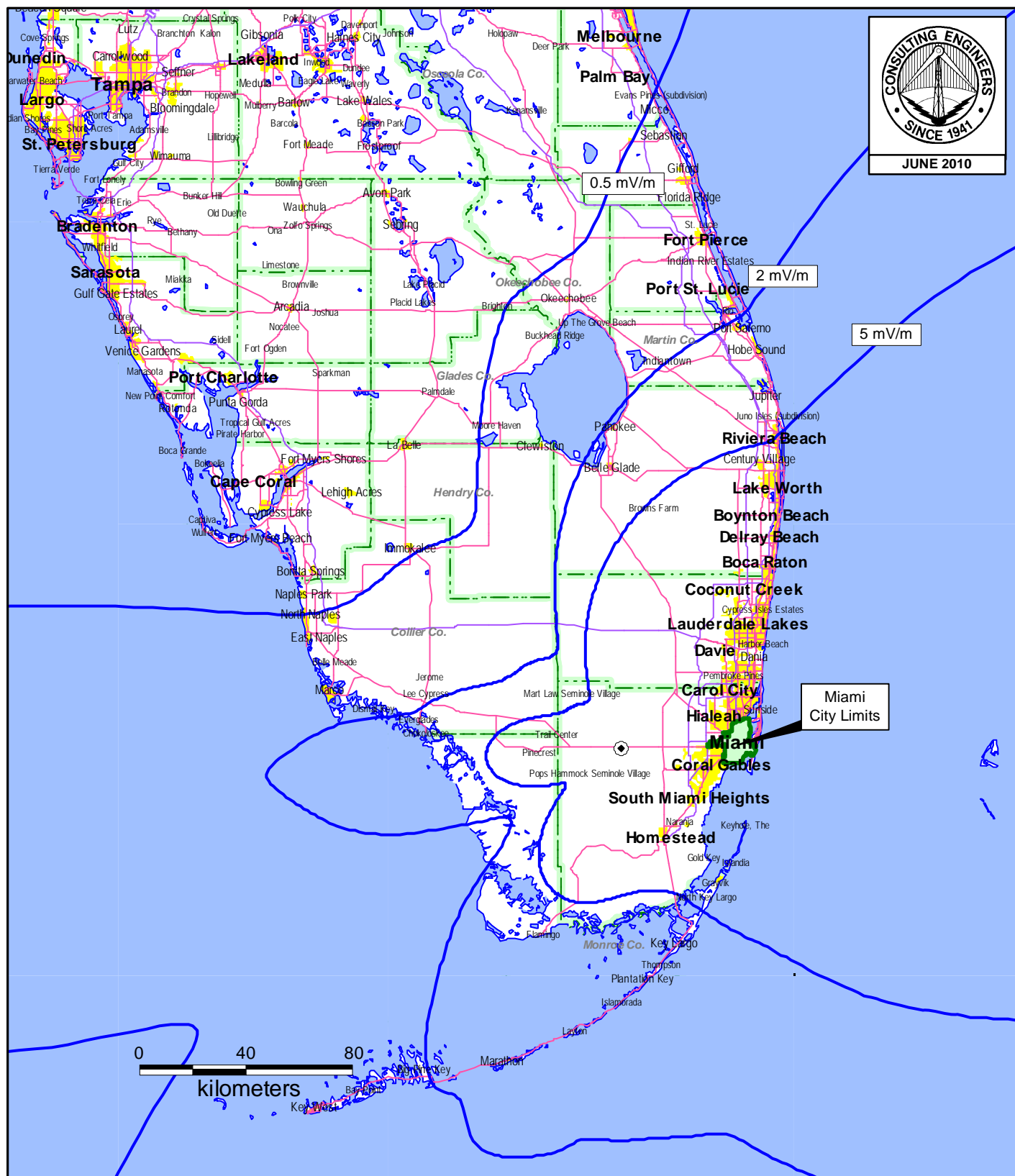
							Top-
							Loading
<u>Tower</u>	<u>Field</u>	<u>Phase</u>	<u>Spacing</u>	<u>Bearing</u>	<u>Height</u>		<u>(deg.)</u>
<u>Number</u>	<u>Ratio</u>	<u>(deg.)</u>	<u>(deg.)</u>	<u>(deg.)</u>	<u>(deg.)</u>		
1	0.456	+56.1	70.9	226.0	51.3		7.1
2	1.000	+0.0	132.2	325.0	51.3		7.1
3	0.510	-148.2	159.6	351.0	51.3		7.1
4	0.584	-87.8	0.0	0.0	51.3		7.1
5	0.436	132.9	140.0	294.9	51.3		7.1
<u>Input</u>	<u>Loop</u>	<u>Theo.</u>	<u>Theo.</u>	<u>Q</u>	<u>Standard</u>		
<u>Power</u>	<u>Loss</u>	<u>RMS</u>	<u>RSS</u>	<u>Factor</u>	<u>RMS</u>		
<u>(kW)</u>	<u>(ohms)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>	<u>(mV/m)</u>		
30	1.0	1571	2480	62.0	1651		
<u>Azimuth</u>	<u>Field</u>	<u>Azimuth</u>	<u>Field</u>	<u>Azimuth</u>	<u>Field</u>	<u>Azimuth</u>	<u>Field</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>	<u>(mV/m)</u>
0	882	90	3059	180	485	270	420
5	1089	95	2791	185	507	275	392
10	1319	100	2504	190	531	280	348
15	1573	105	2212	195	549	285	295
20	1845	110	1926	200	555	290	243
25	2129	115	1657	205	545	295	200
30	2418	120	1414	210	515	300	174
35	2702	125	1203	215	464	305	162
40	2972	130	1027	220	396	310	156
45	3215	135	884	225	314	315	148
50	3421	140	772	230	231	320	138
55	3581	145	684	235	172	325	135
60	3686	150	614	240	176	330	156
65	3730	155	559	245	236	335	212
70	3711	160	516	250	307	340	298
75	3630	165	486	255	369	345	409
80	3489	170	471	260	410	350	543
85	3295	175	471	265	427	355	701



PROPOSED DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



PROPOSED DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

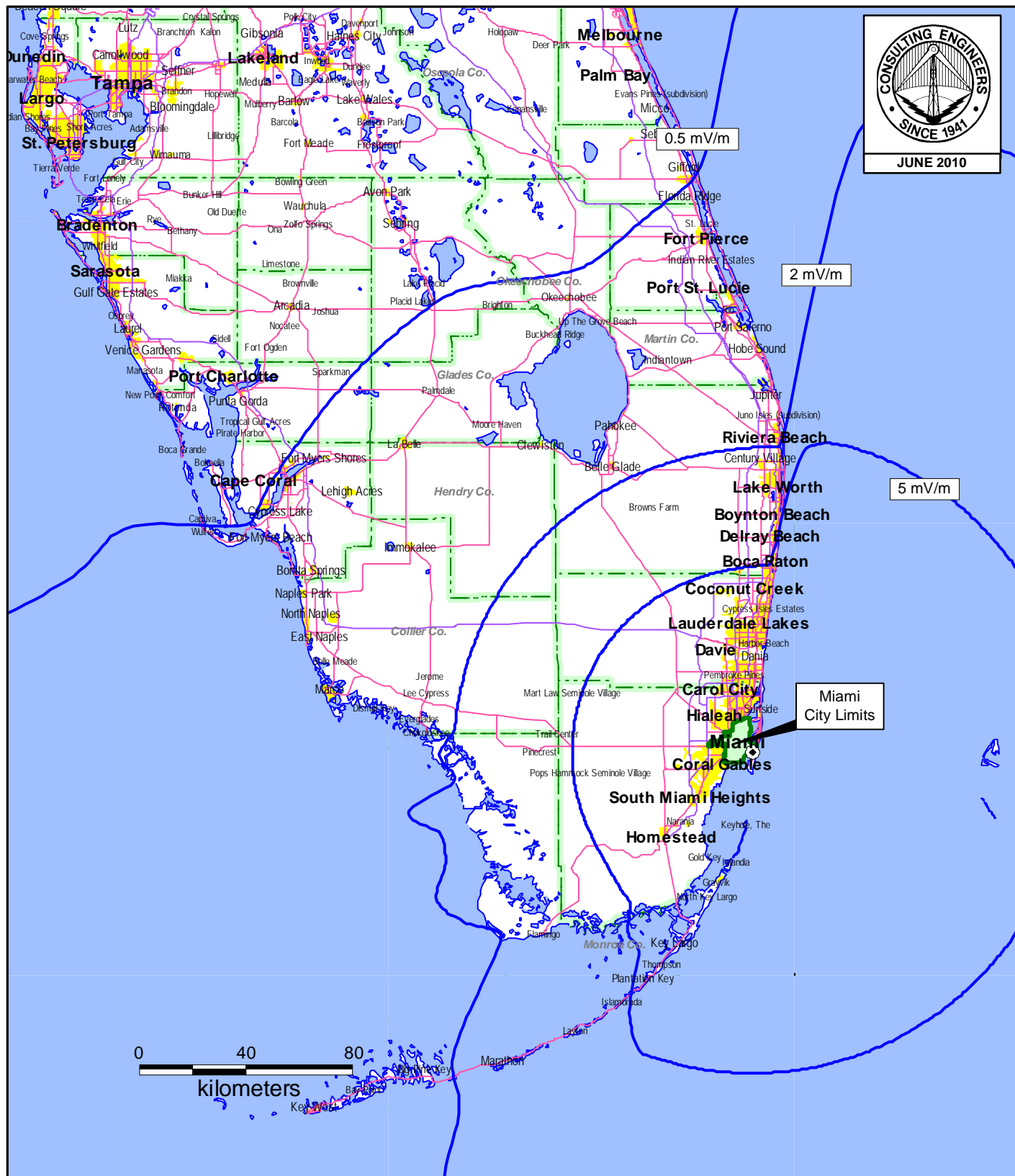
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



EXISTING DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

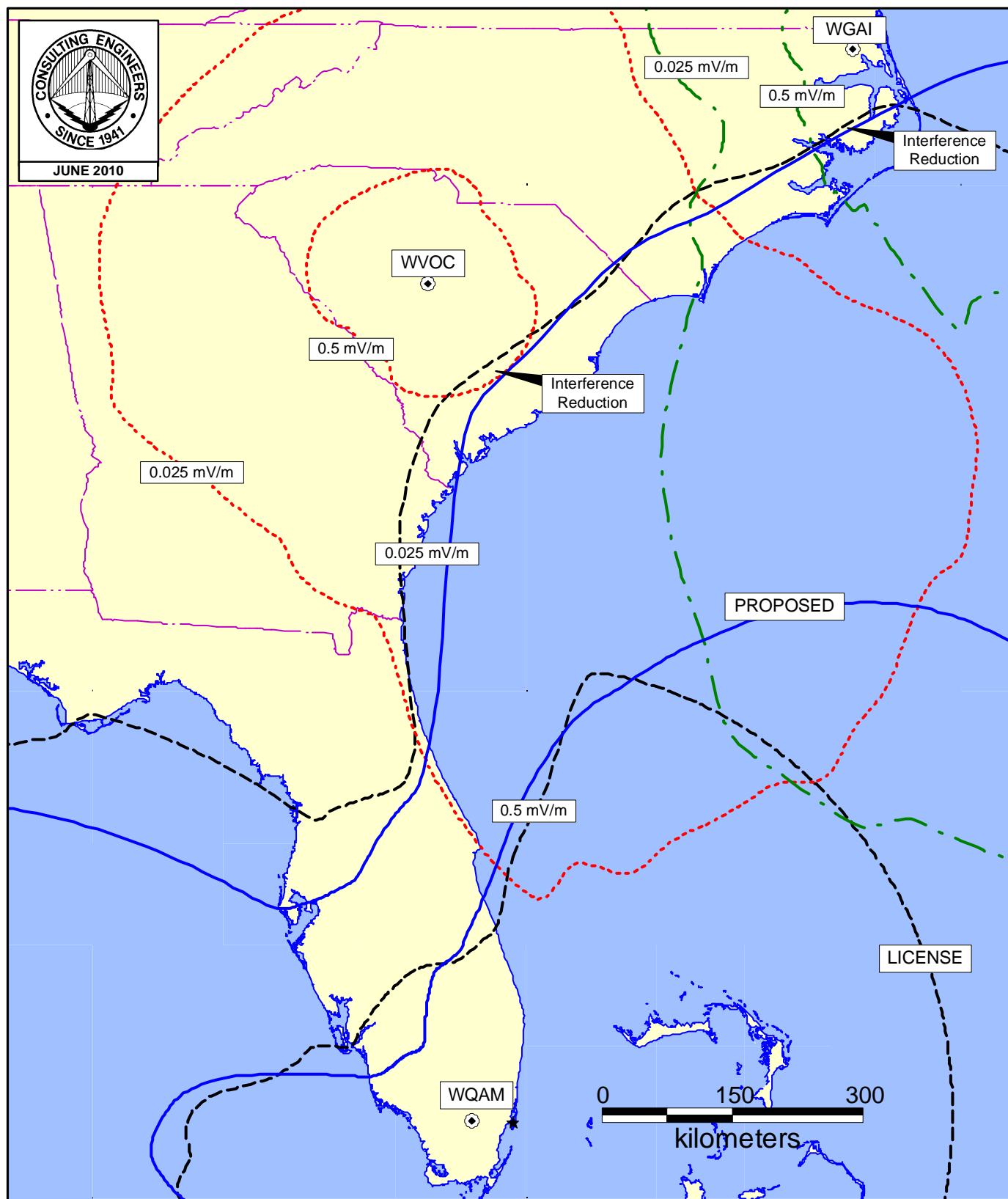
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



EXISTING DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

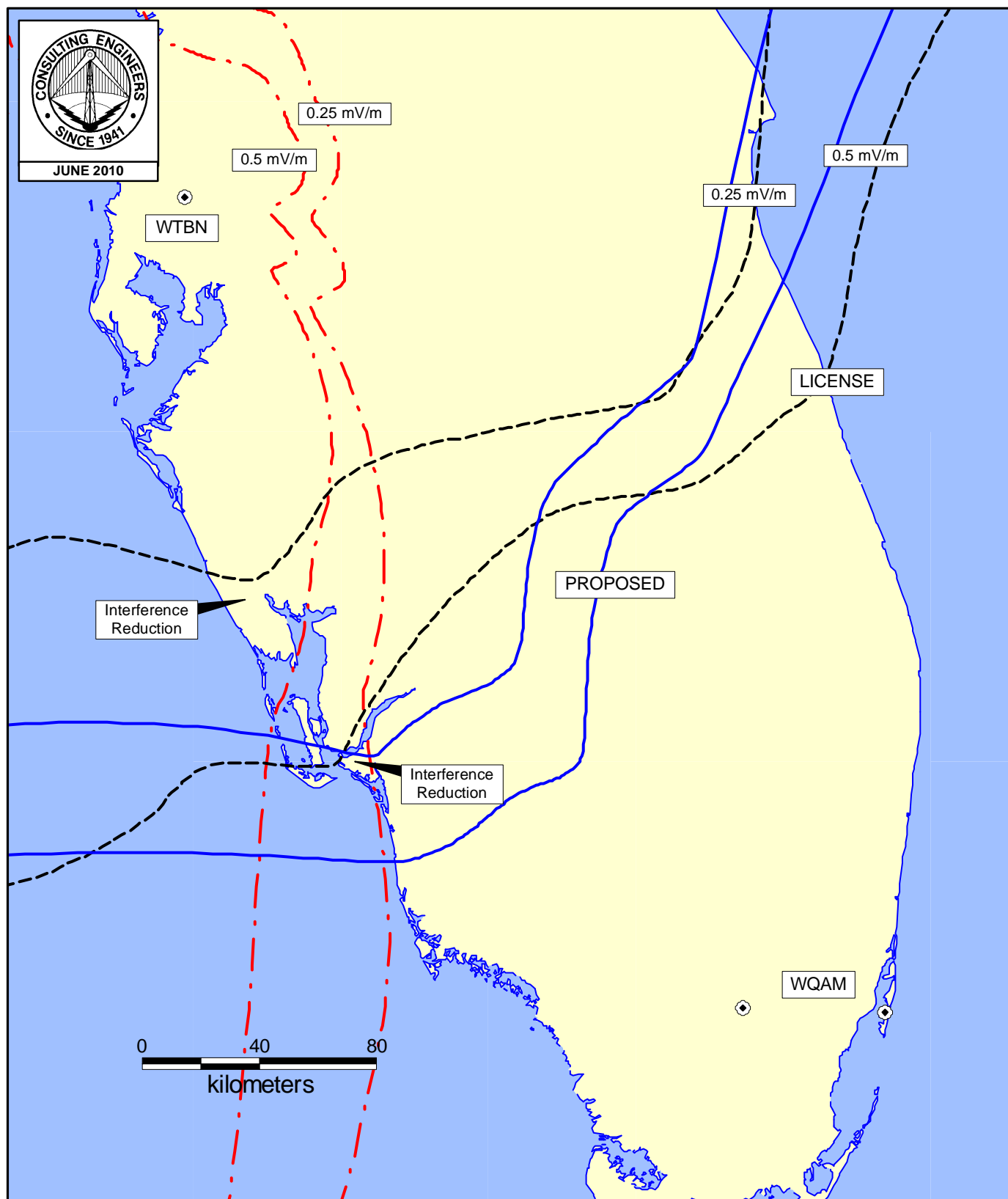
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

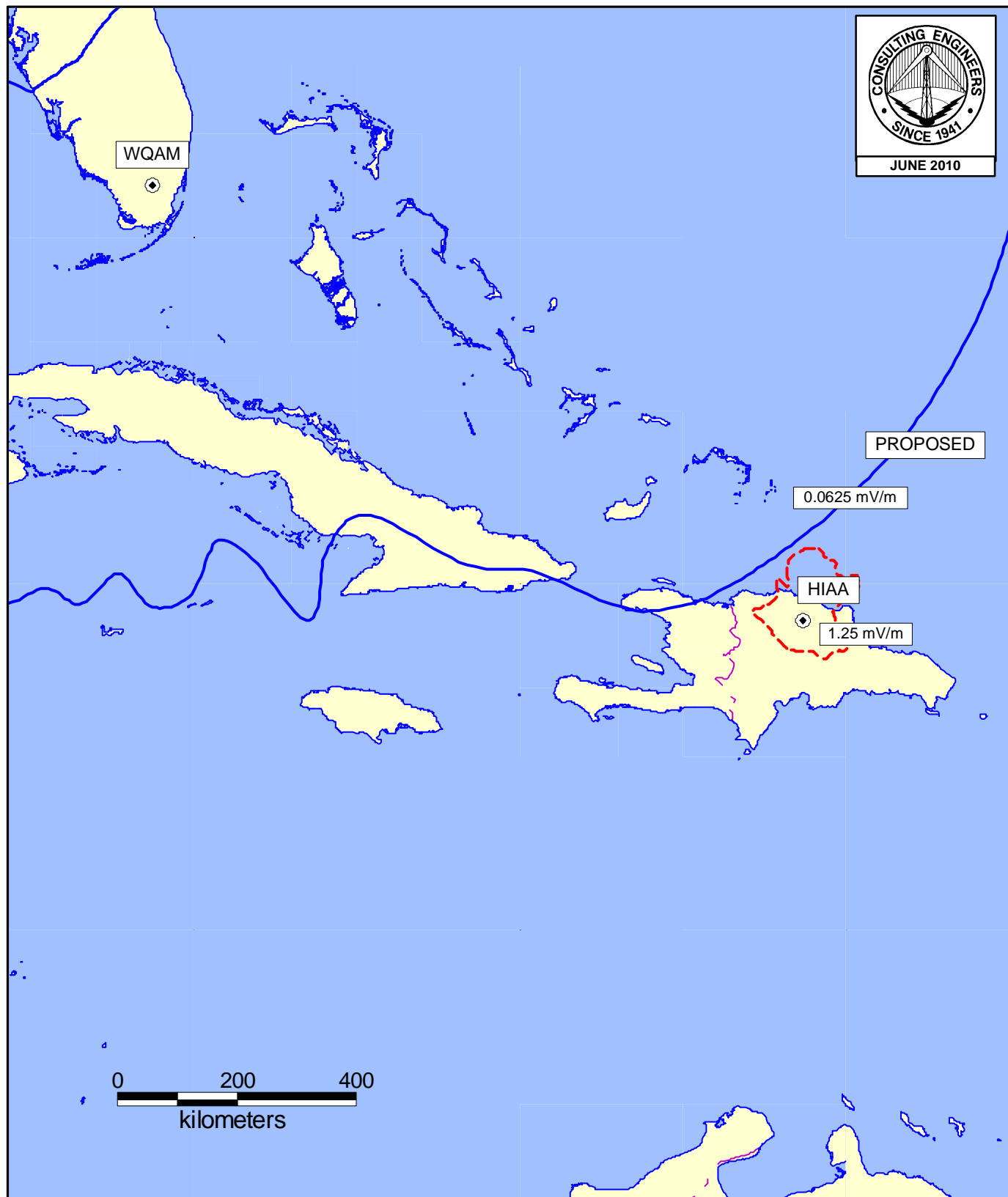
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

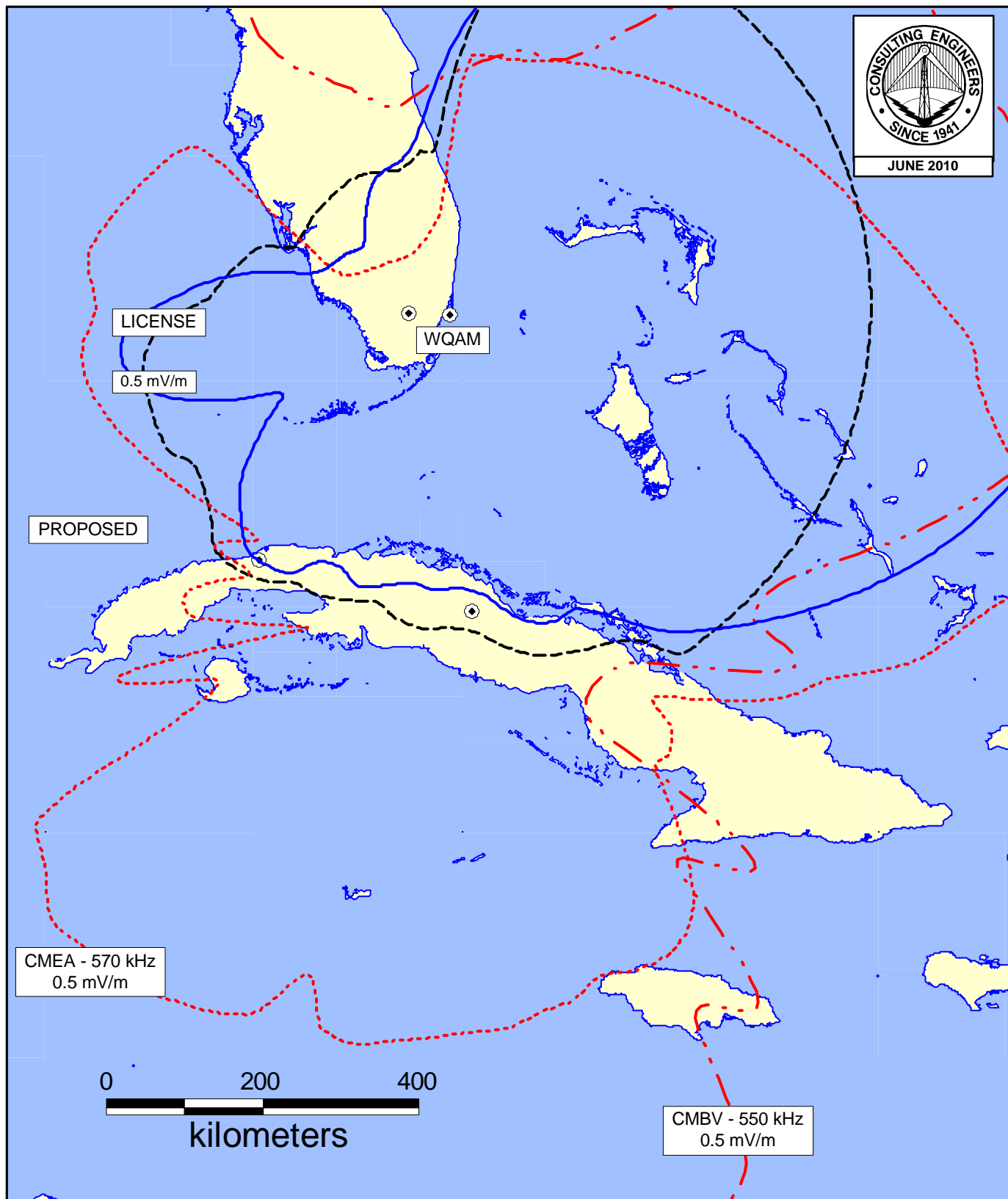
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
RADIO STATION WQAM
MIAMI, FLORIDA

560 KHZ 30 KW-D 25 KW-N U DA-2

Tabulation of Data Employed in
Calculation of Groundwave Contours

Reference Station: WQAM, 560 kHz
Location: 25-45-25 N, 080-38-13 W

550 kHz Station

354.0 km	CMBV	23-01-00 N	082-26-00 W	500.0 kW	ND1 - 329.3 mV/m@1km
220.0 mi		Azi: 210.6	Class: A	Sched: U	File #:
		Location: WAJAY, , CU			

560 kHz Stations

471.5 km	CMIA	21-53-00 N	078-43-00 W	10.0 kW	ND1 - 310.5 mV/m@1km
293.0 mi		Azi: 155.9	Class: B	Sched: U	File #:
		Location: CIEGO DE AVI, , CU			

918.7 km	WVOC	L	34-02-00 N	081-08-32 W	5.0 kW	DAN - 305.8 mV/m@1km
570.9 mi			Azi: 356.8	Class: B	Sched: U	File #: BL11447
			Location: COLUMBIA, SC, US			

945.6 km	JBC	17-58-00 N	076-53-00 W	5.0 kW	ND1 - 300.4 mV/m@1km
587.6 mi		Azi: 156.5	Class: B	Sched: U	File #:
		Location: NAGGO HEAD, , JM			

1127.0 km	XEQAA	18-29-39 N	088-17-56 W	2.5 kW	ND1 - 278.0 mV/m@1km
700.3 mi		Azi: 223.1	Class: B	Sched: U	File #:
		Location: CHETUMAL, QR, MX			

1237.5 km	HIAA	19-29-00 N	070-40-00 W	0.5 kW	ND1 - 300.4 mV/m@1km
768.9 mi		Azi: 126.0	Class: C	Sched: U	File #:
		Location: SANTIAGO 5, , DR			

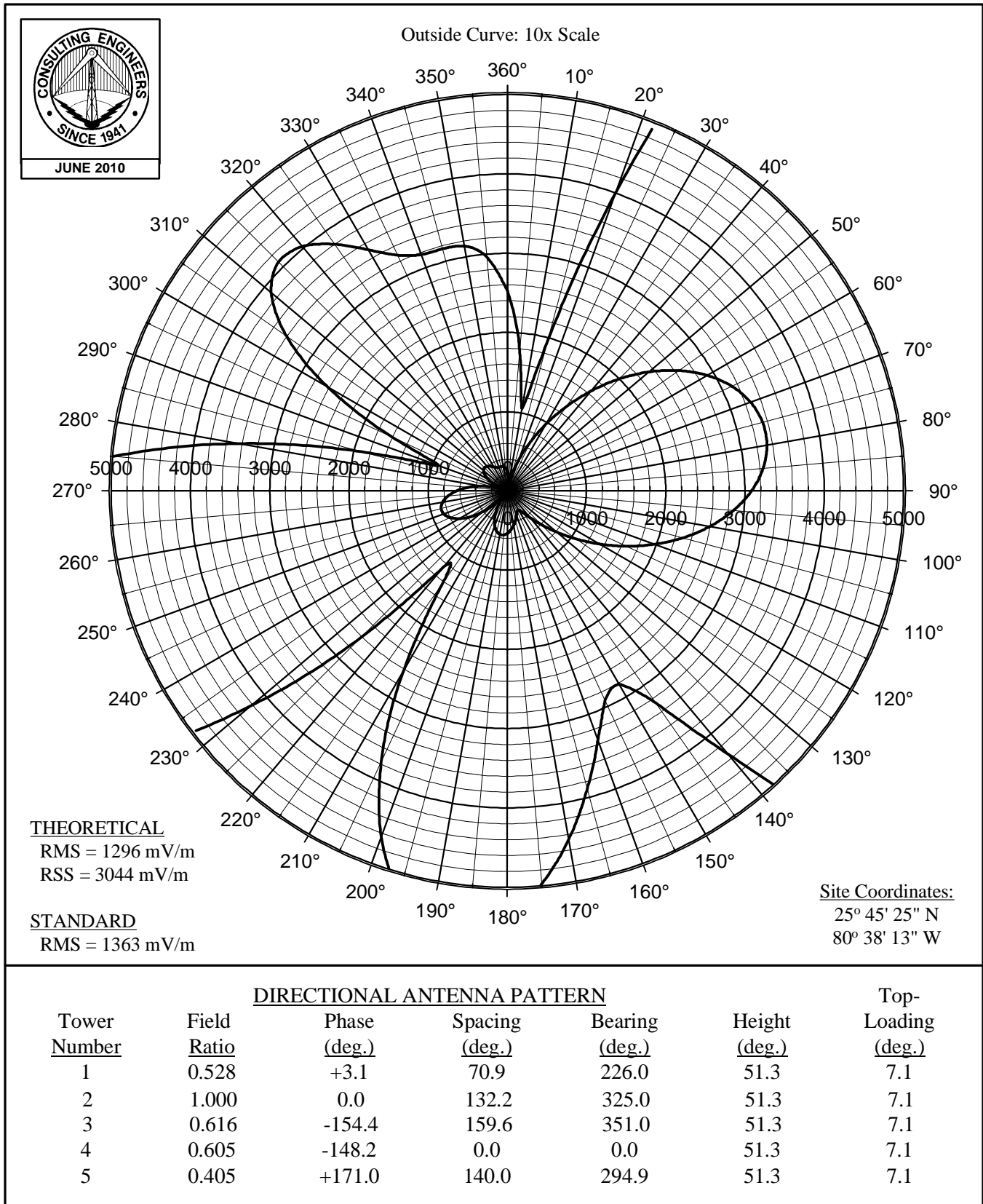
1245.3 km	WGAI	L	36-20-16 N	076-14-49 W	1.0 kW	DA2 - 297.4 mV/m@1km
773.8 mi			Azi: 20.8	Class: B	Sched: U	File #: BL20040831ACS
			Location: ELIZABETH CITY, NC, US			

570 kHz Stations

330.5 km	WTBN	L	28-12-40 N	082-31-46 W	5.0 kW	DA2 - 656.4 mV/m@1km
205.4 mi			Azi: 324.9	Class: B	Sched: U	File #: BL19860801AD
			Location: PINELLAS PARK, FL, US			

374.2 km	CMEA	22-27-00 N	079-53-00 W	30.0 kW	ND1 - 311.6 mV/m@1km
232.5 mi		Azi: 168.3	Class: A	Sched: U	File #:
		Location: SANTA CLARA, , CU			

Figure 8



NIGHTTIME HORIZONTAL PLANE RADIATION PATTERN WITH REVISED TOWER NUMBERING

RADIO STATION WQAM
MIAMI, FLORIDA
560 KHZ 30 KW-D 25 KW-N U DA-2

du Treil, Lundin & Rackley, Inc. Sarasota, Florida