

ENGINEERING EXHIBIT
APPLICATION FOR MODIFICATION OF
CONSTRUCTION PERMIT
INTERNATIONAL BROADCASTING CORP.
STATION WTCV-DT
SAN JUAN, PUERTO RICO
CH 32 19.3 KW (MAX-DA) 854 M

Engineering Statement

This Engineering Exhibit has been prepared on behalf of International Broadcasting Corp., permittee of digital television station WCTV-DT San Juan, PR. Station WCTV-DT holds a construction permit authorizing a new DTV station to operate on channel 32, employing maximum effective radiated power of 49.4 kilowatts with antenna height above average terrain of 854 meters, File Number BPCDT-20000501AFC. The applicant proposes to change the DTV antenna, with complete details contained herein.

It is proposed to employ a Jampro type JA/MS-8 directional antenna, with the major lobe center directed towards an azimuth of 270 degrees true. The directional antenna pattern is plotted on Sheet 1 of Figure 1 and tabulated on Sheet 2. Sheet 3 of Figure 1 is a plot of the antenna's vertical radiation pattern.

San Juan, Puerto Rico
Page 2 of 3

The proposed operation will utilize a maximum effective radiated power of 19.3 kilowatts. The antenna height above average terrain remains at 854 meters. Predicted signal strength coverage from the proposed operation is shown a map, attached as Figure 2. The 41 dBu noise-limited contour and the 48 dBu principal community contour are shown. The entire city of San Juan is located within the predicted 48 dBu contour.

The proposed WTCV-DT facilities were evaluated in terms of potential radiofrequency energy exposure at ground level to workers and the general public. The radiation center will be 51 meters above ground level and the maximum effective radiated power will be 19.3 kilowatts. It was determined that the relative field toward the based of the tower would not exceed 0.22, hence, the power density two meters above ground level was determined to be 0.013 mw/cm^2 or 3.4 percent of the limit of 0.387 mw/cm^2 at channel 32, for an uncontrolled environment. A facility producing less than 5 percent of the guideline value for an uncontrolled environment is exempt from further study.

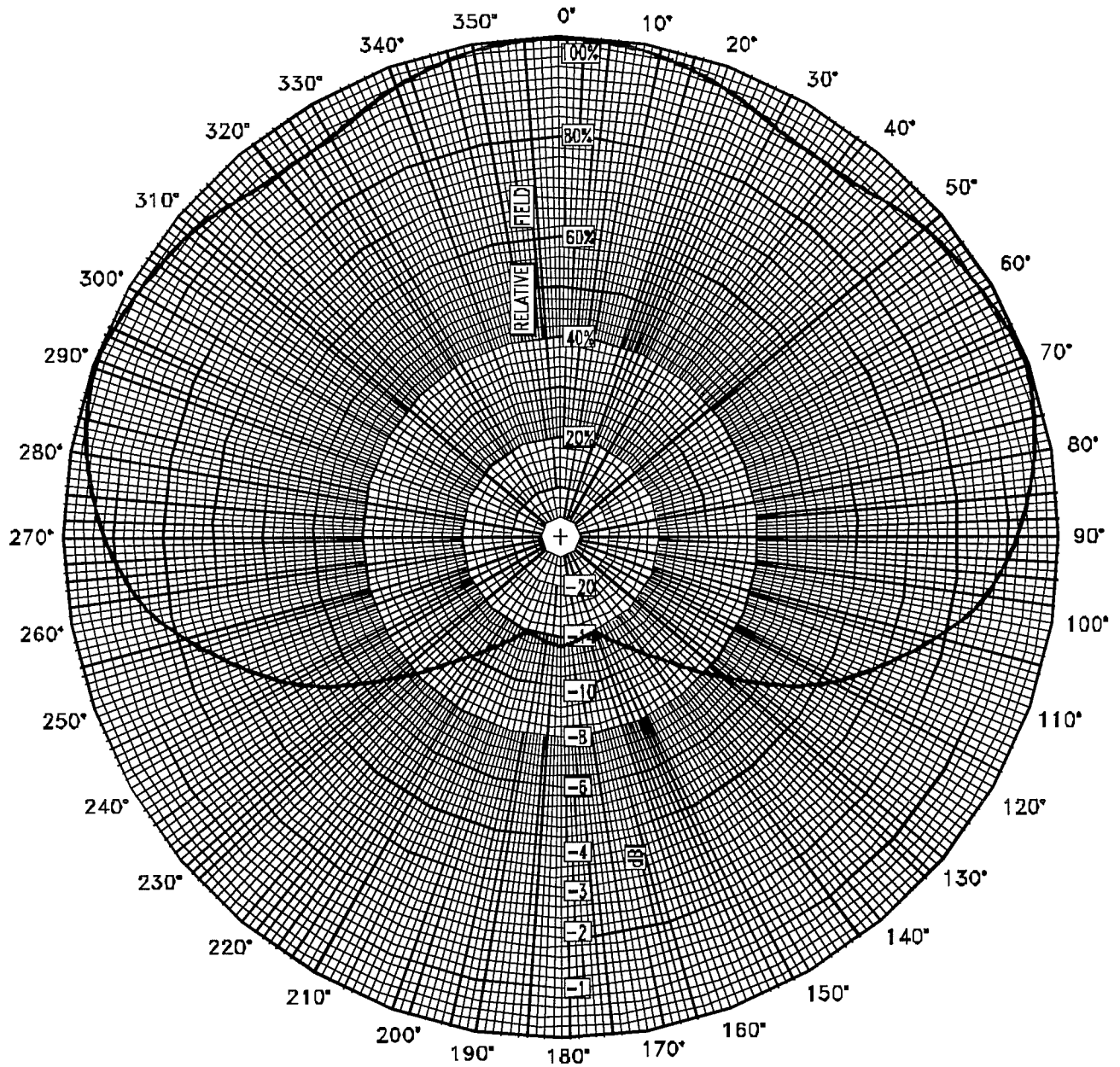
San Juan, Puerto Rico
Page 3 of 3

The Interference Office at the Arecibo
Observatory will be notified of the change in the antenna
radiation pattern.



Louis R. du Treil, Sr.
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237-6019
941 329 6000

April 14, 2003



AZIMUTH PATTERN INFORMATION

Frequency: 632 MHz (UHF Mid-Band)

Model: Prostar Slot Antenna

Pattern: Full Cardioid

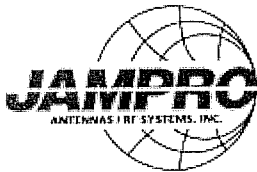
Notes: UHF Slot Antenna



**FULL CARDIOID
UHF SLOT ANTENNA
ANTENNA PATTERN TABULATION**

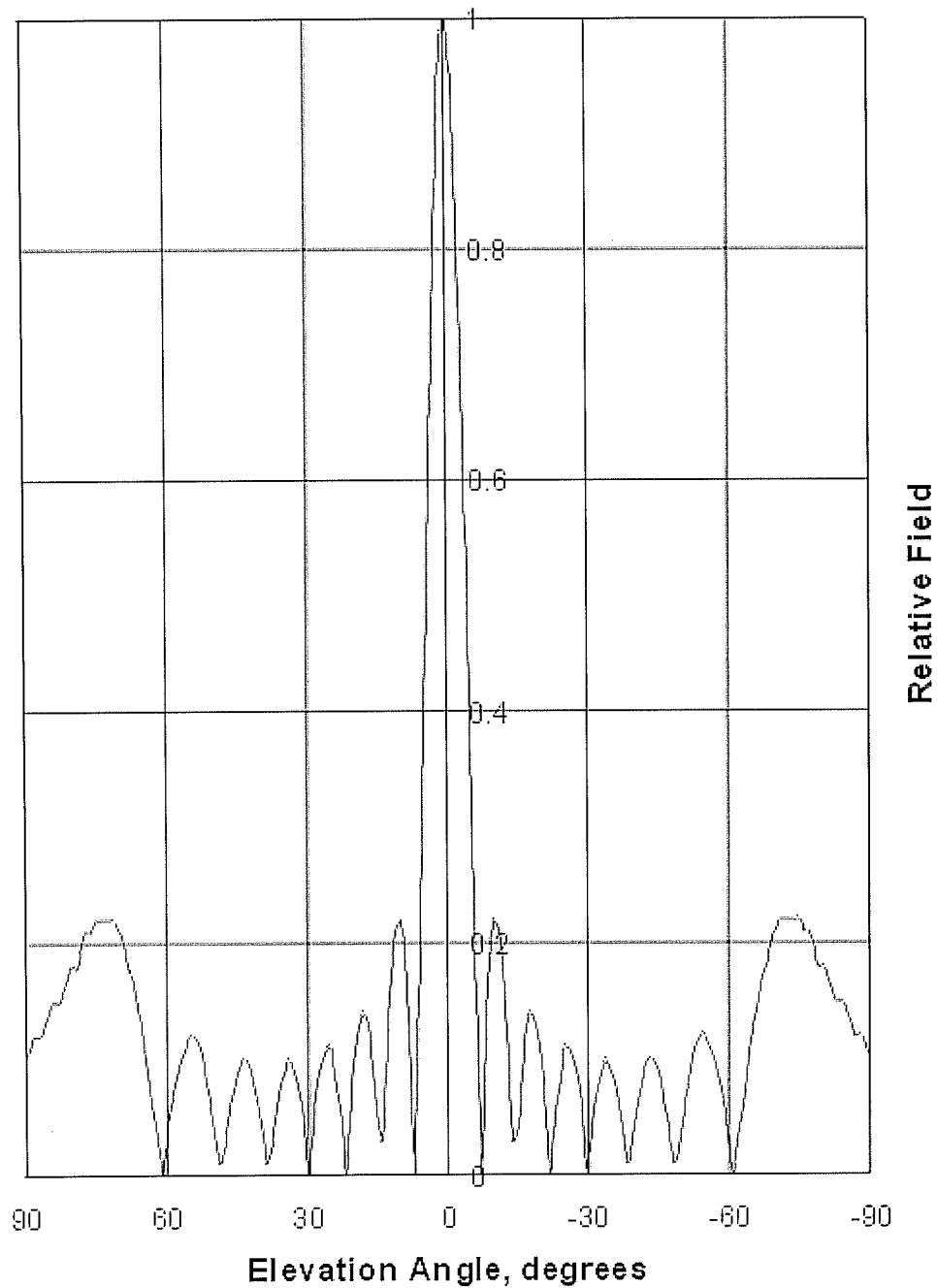
0 DEGREES = TRUE NORTH

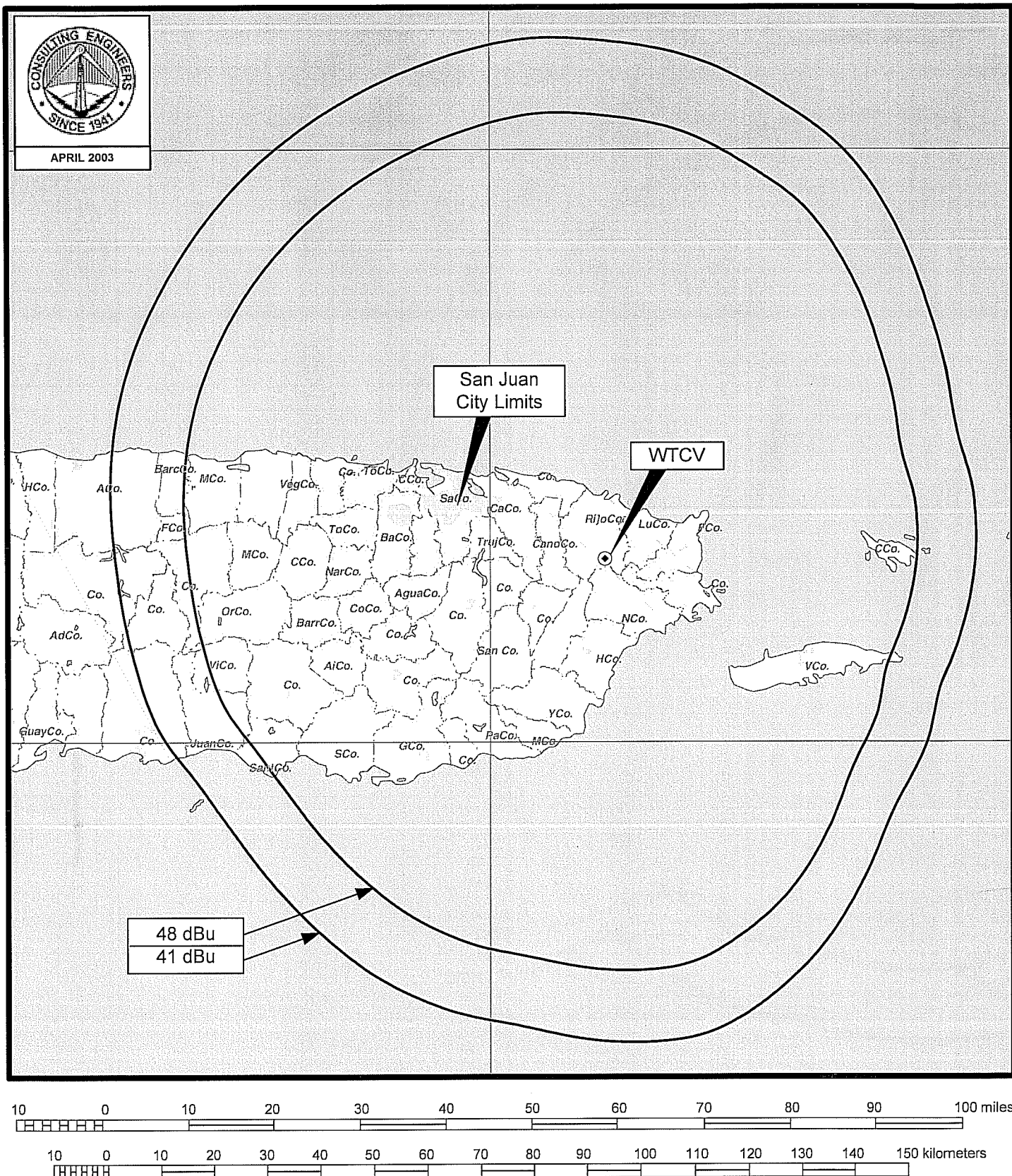
AZIMUTH	FIELD	dB
0	1.00	0.00
10	0.99	-0.09
20	0.96	-0.35
30	0.92	-0.72
40	0.92	-0.72
50	0.96	-0.35
60	0.98	-0.18
70	1.00	0.00
80	0.97	-0.26
90	0.92	-0.72
100	0.85	-1.41
110	0.72	-2.85
120	0.60	-4.44
130	0.44	-7.13
140	0.32	-9.90
150	0.25	-12.04
160	0.20	-13.98
170	0.21	-13.56
180	0.22	-13.15
190	0.21	-13.56
200	0.20	-13.98
210	0.25	-12.04
220	0.32	-9.90
230	0.44	-7.13
240	0.60	-4.44
250	0.72	-2.85
260	0.85	-1.41
270	0.92	-0.72
280	0.97	-0.26
290	1.00	0.00
300	0.98	-0.18
310	0.96	-0.35
320	0.92	-0.72
330	0.92	-0.72
340	0.96	-0.35
350	0.99	-0.09



6340 Sky Creek Drive
Sacramento, Ca. 95828
(916) 383-1177
Fax (916) 383-1182
<http://www.JAMPRO.COM>

Slot
8 Bay No Beam Tilt No Null Fill





PREDICTED SIGNAL STRENGTH COVERAGE CONTOURS

STATION WTCV-DT
SAN JUAN, PUERTO RICO
CH 32 19.3 KW (MAX-DA) 854 M