

TECHNICAL EXHIBIT  
MINOR MODIFICATION OF CONSTRUCTION PERMIT  
STATION WLII-DT (FACILITY ID 19777)  
CAGUAS, PUERTO RICO

JANUARY 31, 2002

CH 56    71 KW (MAX-DA)    357 M

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Technical Narrative

This Technical Exhibit was prepared on behalf of digital television broadcast station WLII-DT at Caguas, Puerto Rico. Station WLII-DT is authorized to operate on channel 56 with a directional antenna maximum effective radiated power (ERP) of 71 kW and an antenna height above average terrain (HAAT) of 354 meters (BPCDT-19991020ACQ). This “checklist” application proposes to correct the transmitter site coordinates. A slight increase in antenna HAAT will result. There is no proposed change in ERP, directional antenna, channel (56) or community of license (Caguas).

Proposed Facilities

The proposed site is located on a tower adjacent to the analog tower with the same coordinates as WLII(TV): 18-16-54 N, 66-06-46 W (NAD 27). A directional antenna maximum ERP of 71 kW and antenna HAAT of 357 meters are proposed. The FCC antenna structure registration number for the DTV operation is 1013621.

The FCC assigned an ERP of 707.9 kilowatts (kW) with a directional antenna envelope and an antenna height above average terrain (HAAT) of 354 meters for the WLII DTV allotment. The proposed 41 dBu reference contour ERP of 71 kW, even when adjusted per section 73.622(f)(3) for the slight HAAT increase, will not exceed the allotted WLII-DT reference contour in any azimuth. Therefore, this application is considered “checklist” and no

allocation studies are necessary. The proposal would not be subject to environmental processing in accordance with Section 1.1306.

The closest FCC monitoring station is at Sabana Seca, Puerto Rico, approximately 23 kilometers to the north-northwest. The closest point of the National Radio Quiet Zone (VA/WV) is more than 2,400 kilometers to the north-northwest. The closest radio astronomy site operating on TV channel 37 is at Arecibo, Puerto Rico, approximately 68 kilometers to the west. The proposed “checklist” application operation will not have any adverse impact to the Sabana Seca monitoring station or the Arecibo radio astronomy site over that of the current DTV allotment for WLII-DT.

#### Nearby Broadcast Facilities

There are no known authorized full service AM stations within 5 kilometers of the proposed transmitter site. The following is a list of known authorized full service FM and TV stations within 16 kilometers (10 miles) of the proposed site.

<u>Station</u>	<u>Channel</u>	<u>Bearing(°True)</u>	<u>Distance(km)</u>
WCAD, San Juan, PR	289B	0	0.0
WKAQ-FM, San Juan, PR	284B	112	0.3
WRTU, San Juan, PR	209B	119	3.4
WFID, Rio Piedras, PR	239B	119	3.4
WBRQ, Cidra, PR	249A	166	6.5
WXYX(CP), Bayamon, PR	264B	271	7.1
WLII, Caguas, PR	11	0	0.0
WDWL, Bayamon, PR	36	152	0.5
WUJA-DT(CP), Caguas, PR	57	152	0.5
WUJA, Caguas, PR	58	152	0.5
WDWL-DT(CP), Bayamon, PR	59	152	0.5
WSJU-TV, San Juan, PR	30	110	2.2
WSJU-DT(CP), San Juan, PR	31	110	2.2
WTCV(CP), San Juan, PR	18	110	2.2

Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems that may result from its proposed operation.

Radiofrequency Electromagnetic Field Exposure

The proposed WLII-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed antenna is located 65.5 meters above ground level with a maximum ERP of 71 kW. A conservative relative field value of 0.15 was assumed for the antenna's downward radiation (see Figure 2C). The calculated power density at a point 2 meters (6.6 feet) above ground level is  $0.0132 \text{ mW/cm}^2$ . This is less than 3% of the FCC's recommended limit of  $0.48 \text{ mW/cm}^2$  for channel 56 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is multi-user site an agreement will control access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WLII-DT operation appears to be otherwise categorically excluded from environmental processing.



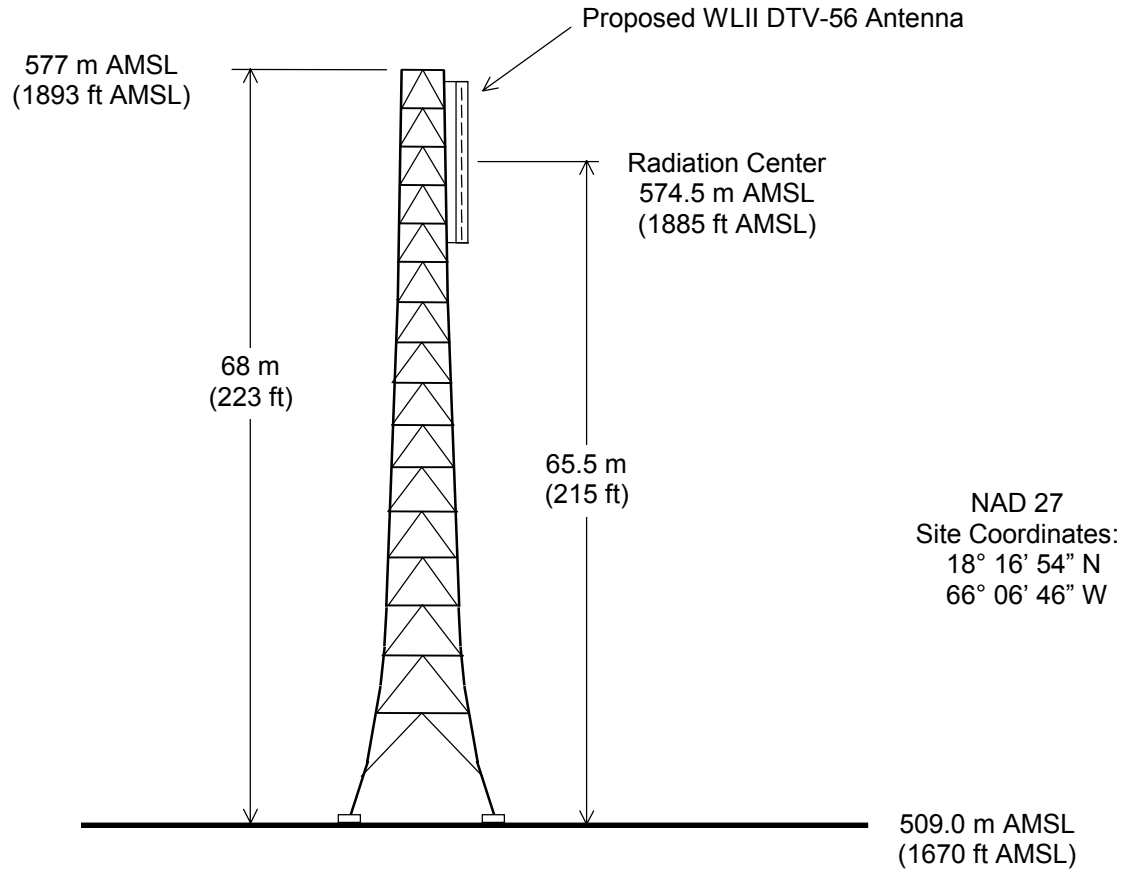
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201 Fletcher Avenue  
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January 31, 2003



Antenna Reg. No. 1013621



Not to Scale

## **ANTENNA AND SUPPORTING STRUCTURE**

STATION WLII-DT

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



Date	31 Jan 2003	
Call Letters	WLII-DT	Channel 56
Location	Caguas, PR	
Customer		
Antenna Type	TFU-16DSB-J (C)	

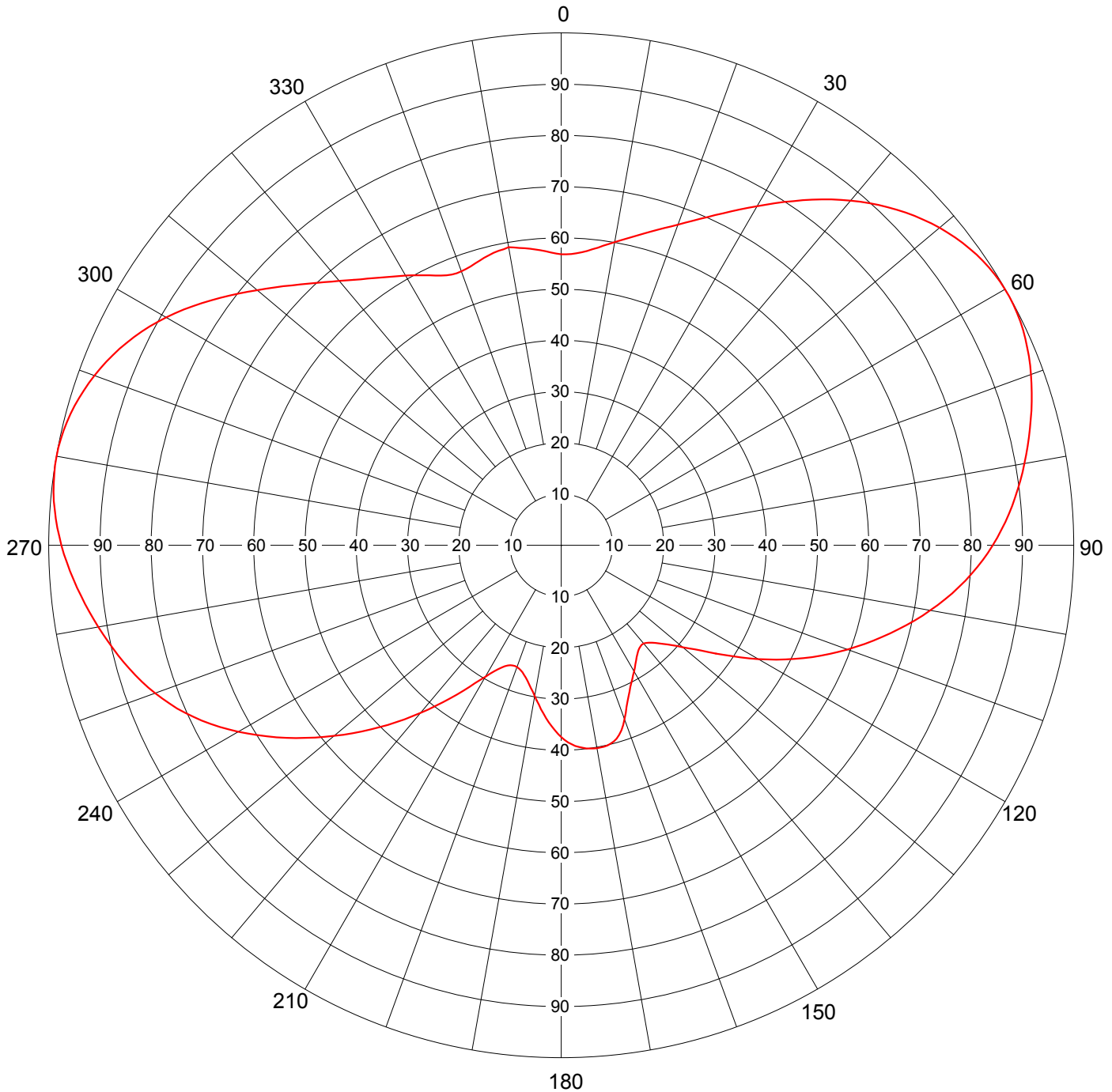
### AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**2.00 (3.01 dB)**  
**Calculated**

Frequency  
Drawing #

**725 MHz**  
**DSB-J**



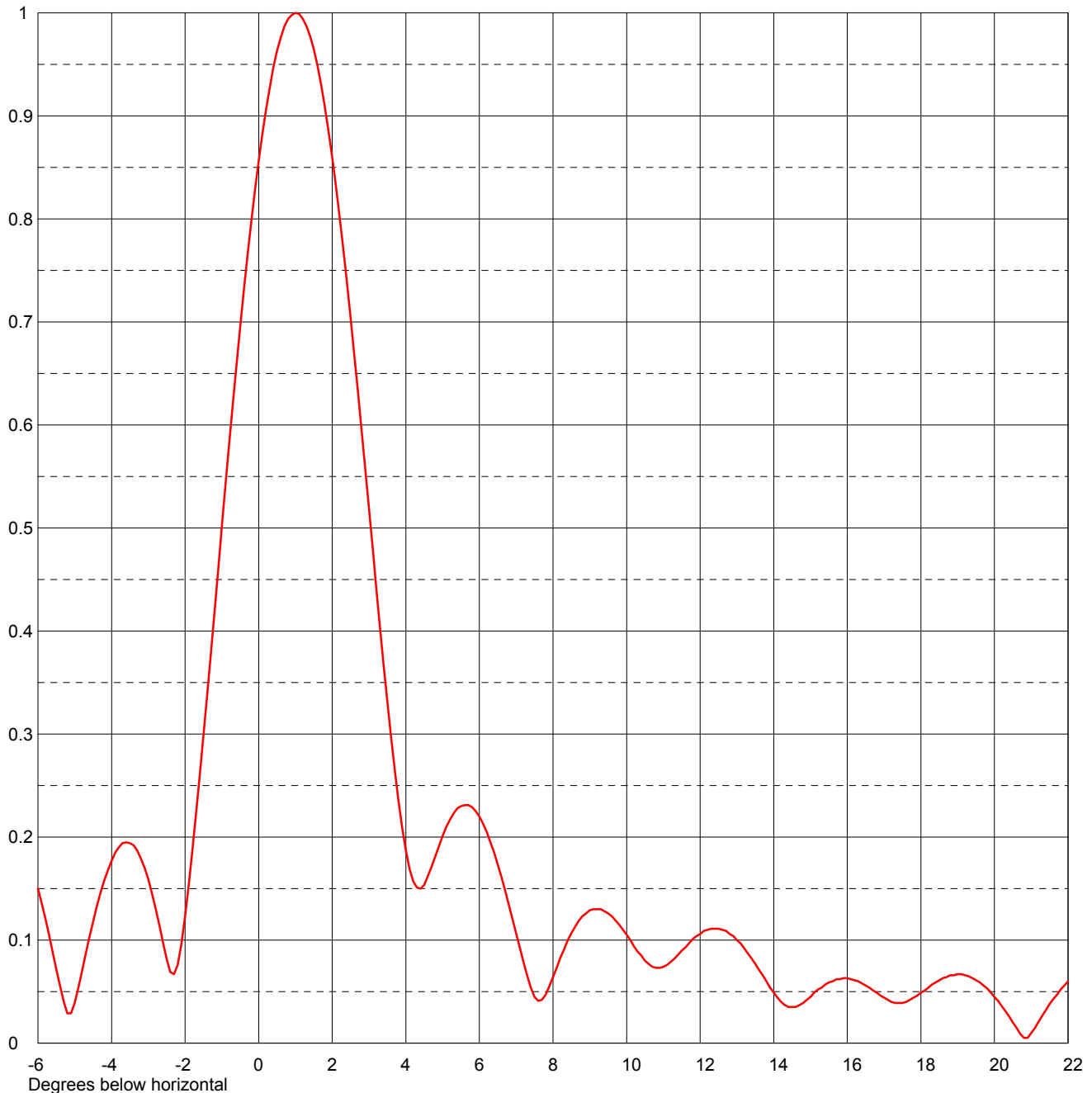
Remarks:



Date	31 Jan 2003	
Call Letters	WLII-DT	Channel 56
Location	Caguas, PR	
Customer		
Antenna Type	TFU-16DSB-J (C)	

### ELEVATION PATTERN

RMS Gain at Main Lobe	16.0 (12.04 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	11.8 (10.72 dB)	Frequency	725.00 MHz
Calculated / Measured	Calculated	Drawing #	16B160100



Remarks:

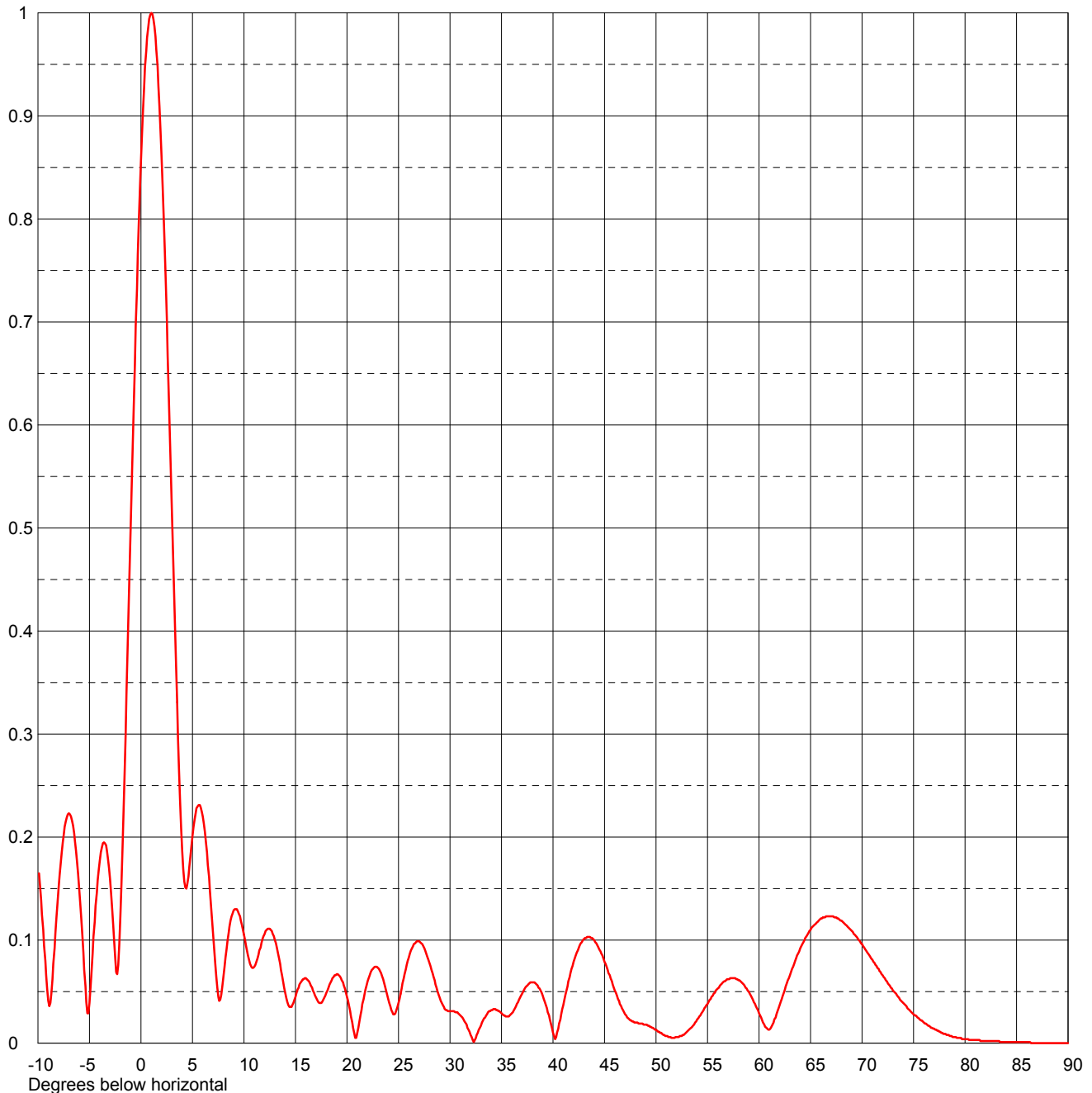




Date	31 Jan 2003	
Call Letters	WLII-DT	Channel 56
Location	Caguas, PR	
Customer		
Antenna Type	TFU-16DSB-J (C)	

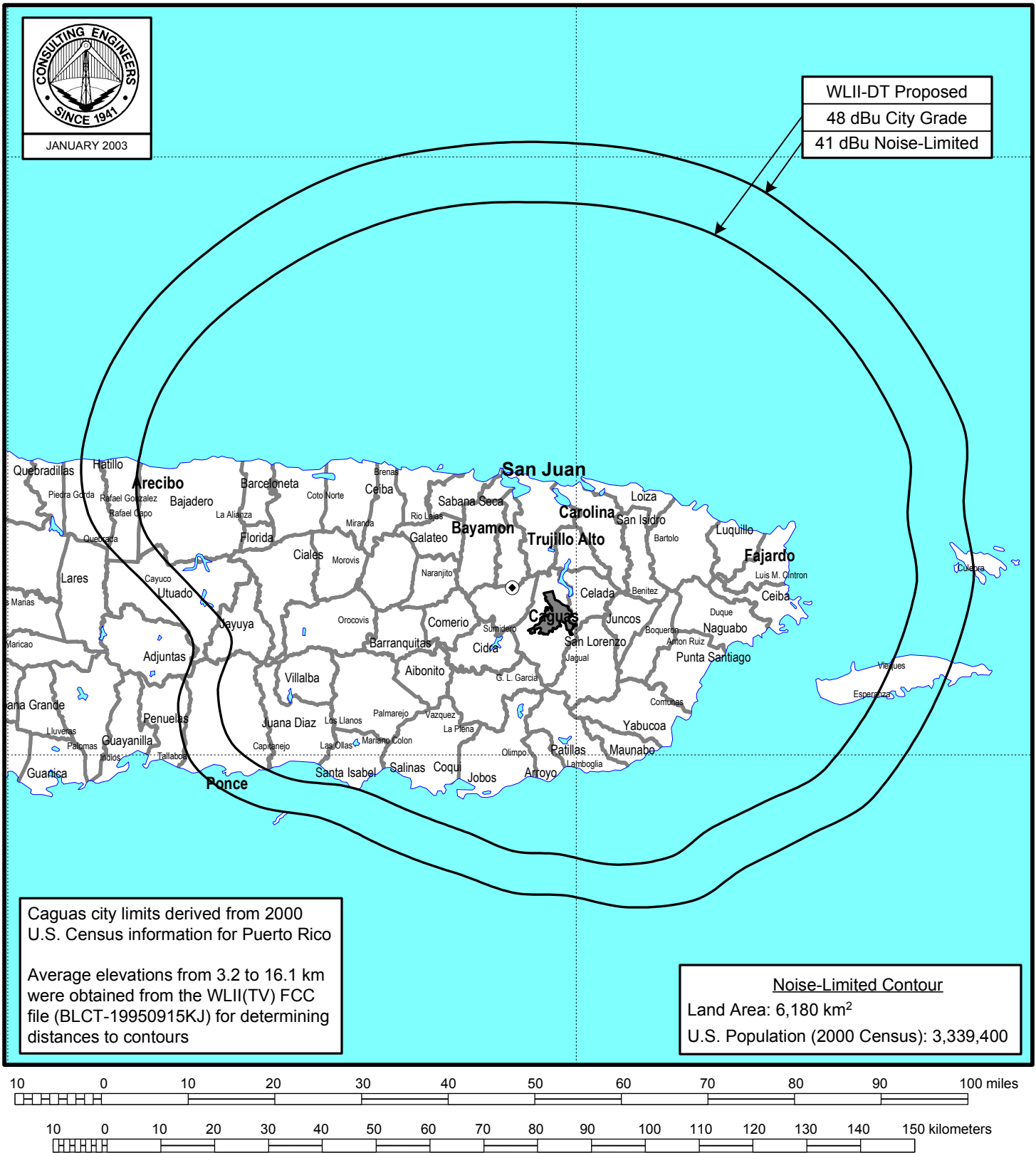
### ELEVATION PATTERN

RMS Gain at Main Lobe	16.0 (12.04 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	11.8 (10.72 dB)	Frequency	725.00 MHz
Calculated / Measured	Calculated	Drawing #	16B160100-90



Remarks:

Figure 3



## **PREDICTED F(50,90) COVERAGE CONTOURS**

STATION WLII-DT

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du Treil, Lundin & Rackley, Inc Sarasota, Florida