

TECHNICAL EXHIBIT  
MINOR MODIFICATION OF CONSTRUCTION PERMIT  
STATION WSUR-DT (FACILITY ID 19776)  
PONCE, PUERTO RICO

JULY 22, 2002

CH 43 68 KW (MAX-DA) 834 M

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Technical Narrative

This Technical Exhibit was prepared on behalf of digital television broadcast station WSUR-DT at Ponce, Puerto Rico. Station WSUR-DT is authorized for operation on channel 43 with a non-directional antenna effective radiated power (ERP) of 380 kW and an antenna height above average terrain (HAAT) of 849 meters (BPCDT-19991028ACZ). This “checklist” application proposes to reduce ERP and antenna HAAT and change to a directional antenna. There is no proposed change in site, channel (43) or community of license (Ponce).

Proposed Facilities

The proposed site coordinates remain (NAD27): 18-10-18 N, 66-34-37 W. A directional antenna maximum ERP of 68 kW and antenna HAAT of 834 meters are proposed. The FCC antenna structure registration number is 1011021.

The FCC assigned an ERP of 380.2 kilowatts (kW) with a directional antenna (DA) envelope and an antenna height above average terrain (HAAT) of 849 meters for the WSUR DTV allotment. The proposed ERP (68 kW-DA) will not exceed the allotted ERP in any azimuth and the proposed antenna HAAT is less than the allotted HAAT. 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 proposed transmitter site is more than 2,800 kilometers from the closest point of the Canadian border. The site is more than 2,000 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Santa Isabel, Puerto Rico, approximately 28 kilometers to the southeast. The FCC predicted F(50,90) signal at the monitoring station, as compared to the authorized operation, will be *reduced* from 95.8 dBu to 82.0 dBu by the proposed operation. The closest point of the National Radio Quiet Zone (VA/WV) is more than 2,400 kilometers to the north-northwest. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 4,400 kilometers to the northwest. The closest radio astronomy site operating on TV channel 37 is at Arecibo, Puerto Rico, approximately 27 kilometers to the northwest. The FCC predicted F(50,90) signal at the Arecibo site, as compared to the authorized operation, will be *reduced* from 97.2 dBu to 89.6 dBu by the proposed operation.

#### Nearby Broadcast Facilities

There are no known authorized full service AM stations within 10 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>
WPUC-FM, Ponce, PR	205B	280	1.6
WZAR, Ponce, PR	270B	129	3.1
WNRT, Manati, PR	245B	22	10.7
WERR, Utuado, PR	281B	328	15.8
WTIN, Ponce, PR	14	187	0.2
WIRS-DT(CP), Yauco, PR	41	174	0.3
WIRS, Yauco, PR	42	174	0.3
WSUR-TV, Ponce, PR	9	174	0.3
WMEI(CP), Arecibo, PR	60	144	0.3
WSTE, Ponce, PR	7	128	3.0

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 WSUR-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 49 meters above ground level with a maximum ERP of 68 kW. A relative field value of 0.123 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 0.0156 mW/cm<sup>2</sup>. This is 3.6% of the FCC's recommended limit of 0.43 mW/cm<sup>2</sup> for channel 43 for an "uncontrolled" environment.

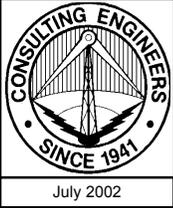
Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is multi-user site an agreement will control access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure 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 WSUR-DT operation appears to be otherwise categorically excluded from environmental processing.



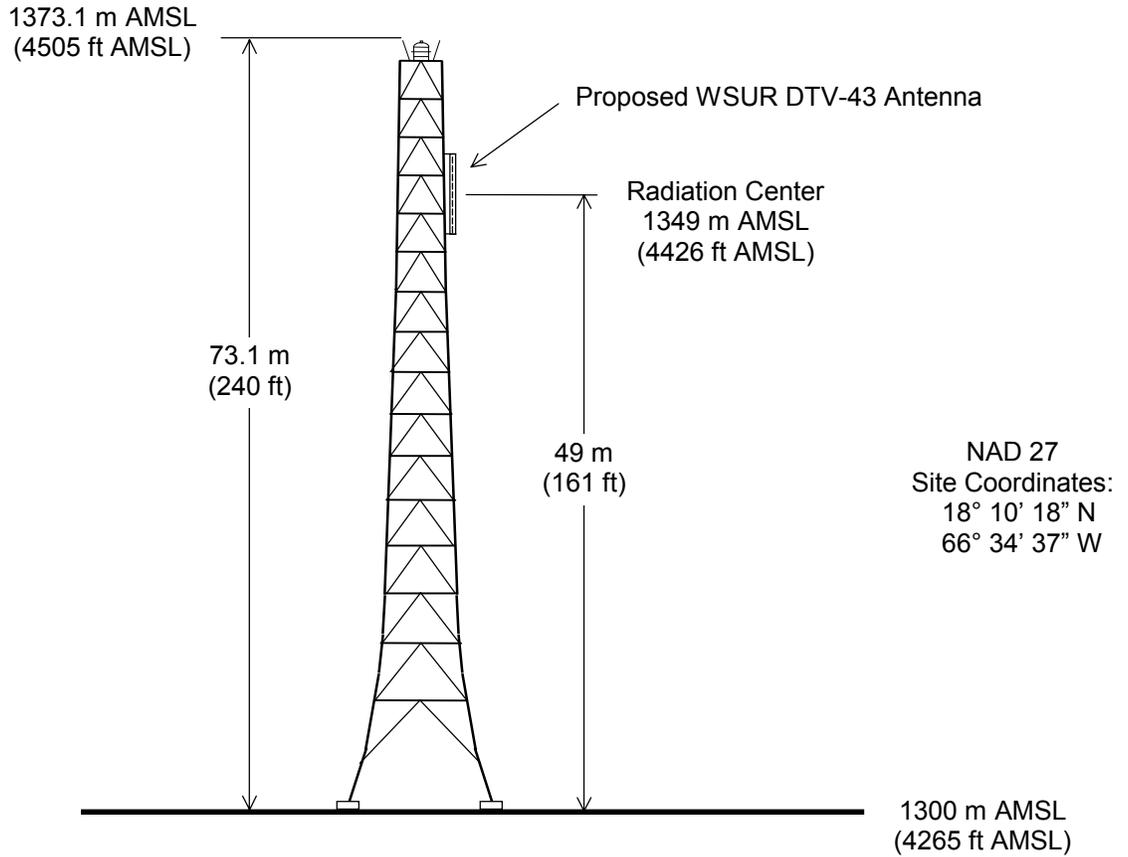
Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

July 22, 2002



Antenna Reg. No. 1011021



Not to Scale

**ANTENNA AND SUPPORTING STRUCTURE**

STATION WSUR-DT

PONCE, PUERTO RICO

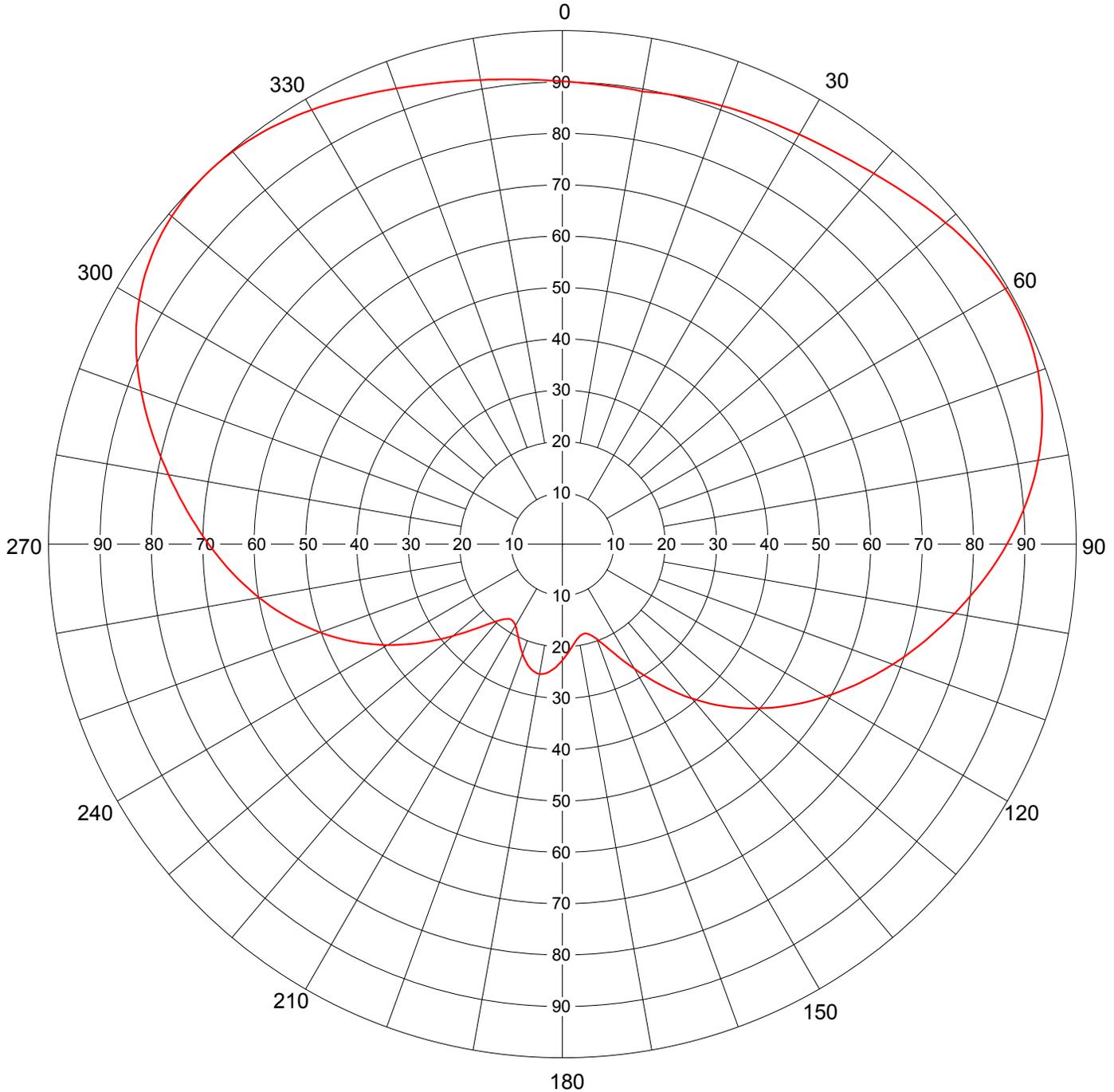
CH 43 68 KW (MAX-DA) 834 M

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

Date **22 Jul 2002**  
Call Letters **WSUR-DT** Channel **43**  
Location **Ponce, PR**  
Customer  
Antenna Type **TFU-16DSB-M (C)**

### AZIMUTH PATTERN

RMS Gain at Main Lobe **1.90 (2.79 dB)** Frequency **647 MHz**  
Calculated / Measured **Calculated** Drawing # **DSB-M**



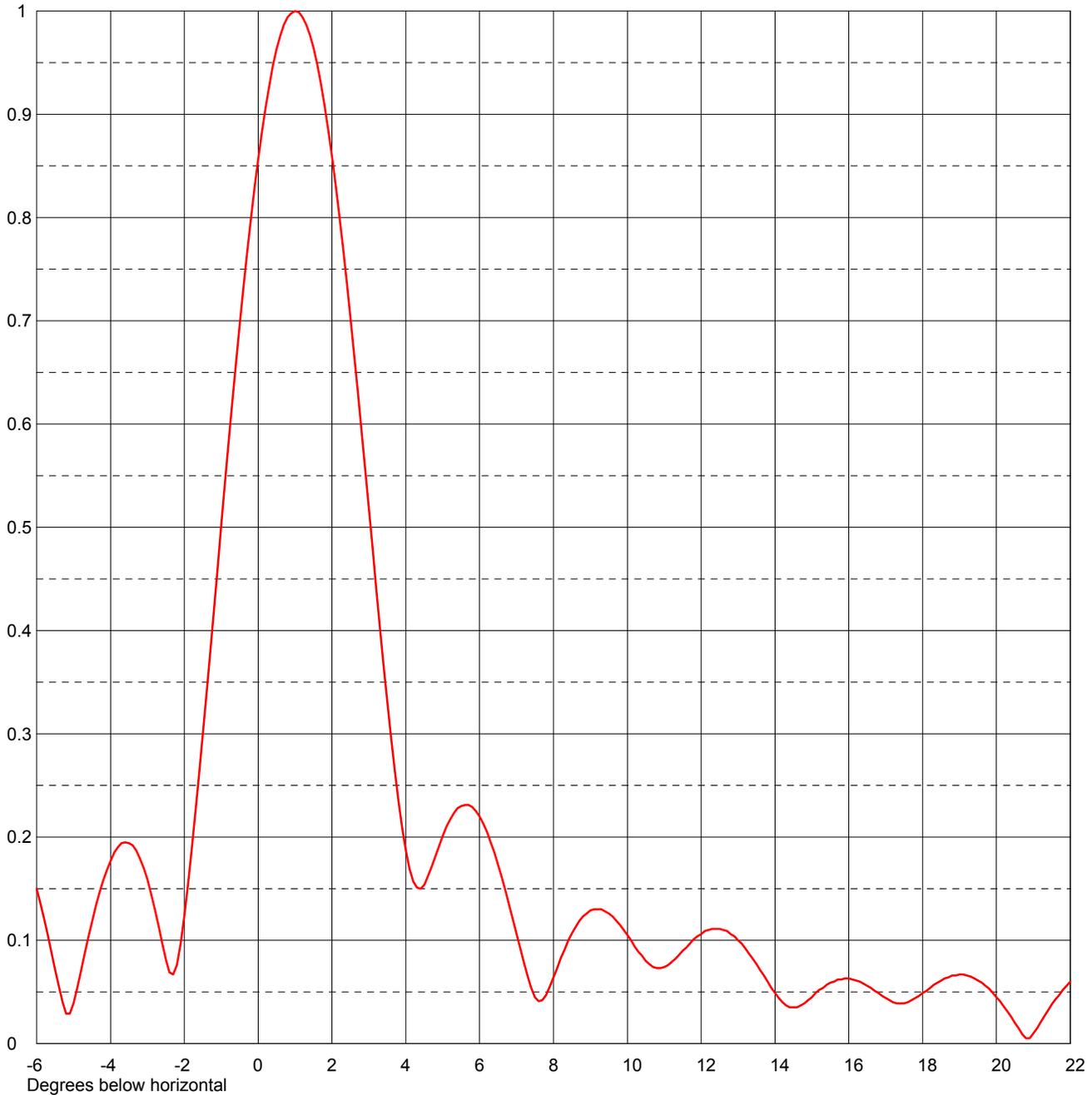
Remarks:



Date **22 Jul 2002**  
Call Letters **WSUR-DT** Channel **43**  
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Customer  
Antenna Type **TFU-16DSB-M (C)**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>16.0 (12.04 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>11.8 (10.72 dB)</b>	Frequency	<b>647.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>16B160100</b>



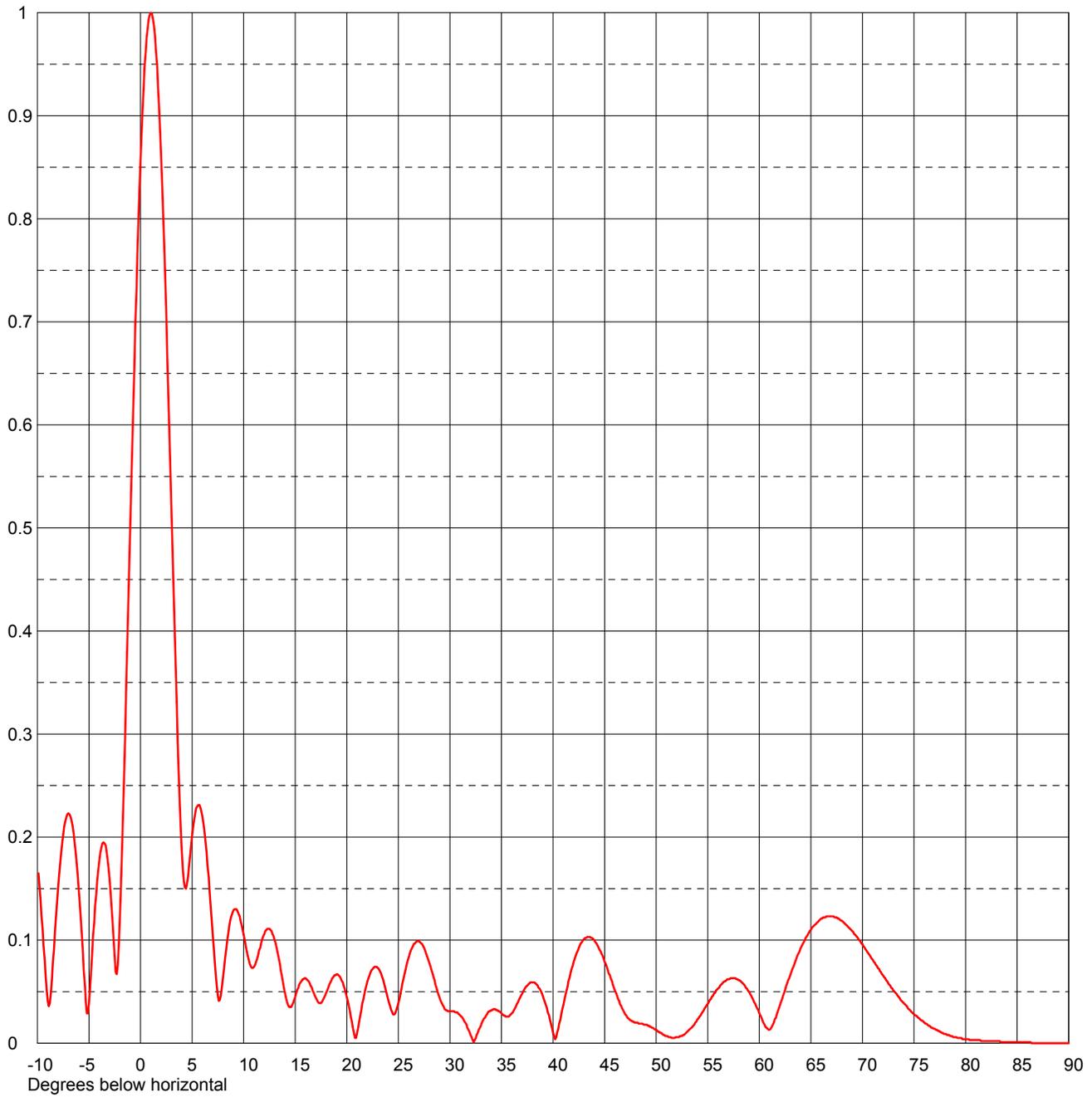
Remarks:



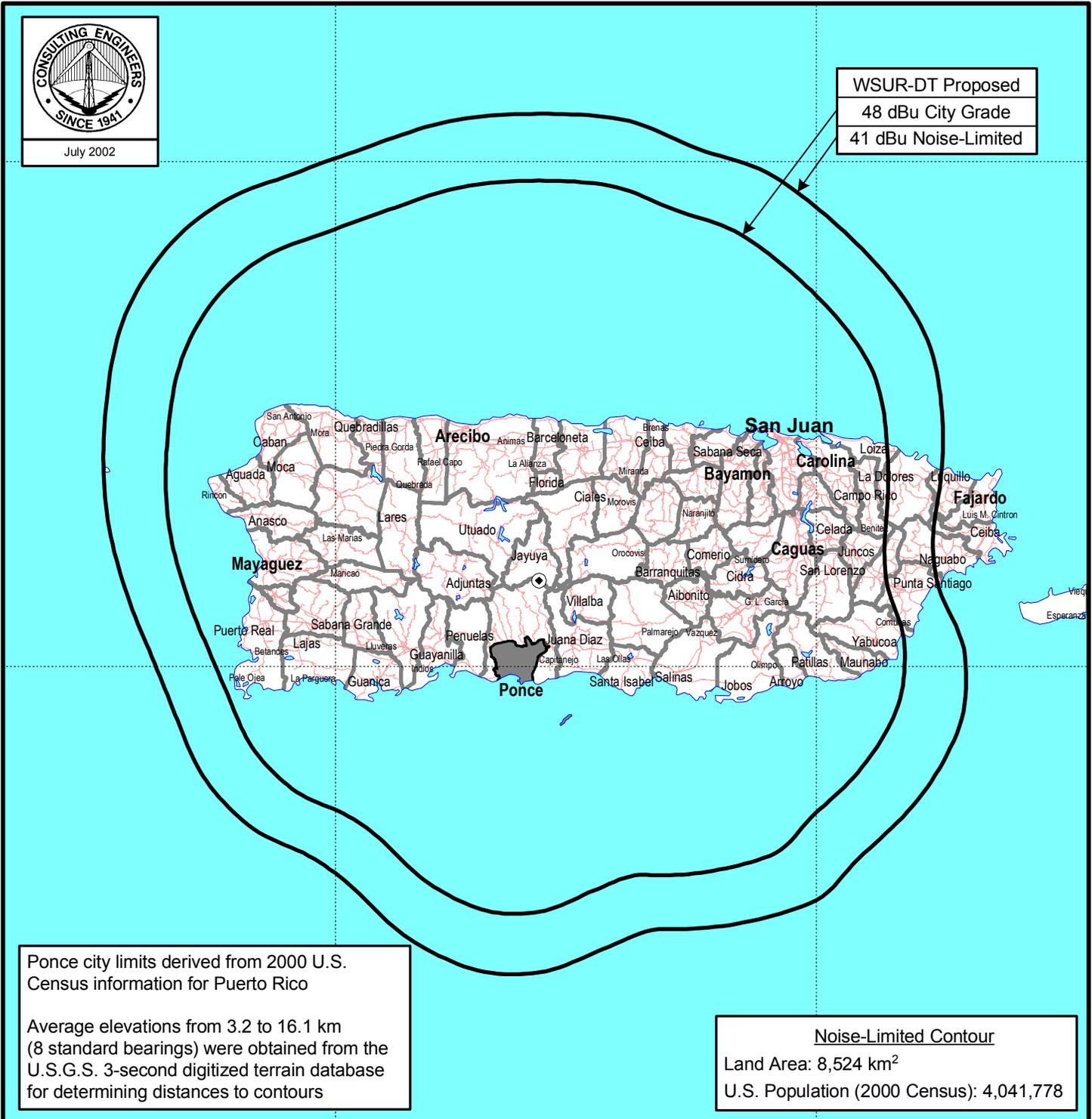
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RMS Gain at Horizontal	<b>11.8 (10.72 dB)</b>	Frequency	<b>647.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>16B160100-90</b>



Remarks:



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

STATION WSUR-DT

PONCE, PUERTO RICO

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du Treil, Lundin & Rackley, Inc Sarasota, Florida