

TECHNICAL EXHIBIT  
DISPLACEMENT APPLICATION  
TV TRANSLATOR W34CI (FACILITY ID 71730)  
MAYAGUEZ, PR  
CH 46 17.1 KW (MAX-DA)

August 22, 2007

TECHNICAL EXHIBIT  
DISPLACEMENT APPLICATION  
TV TRANSLATOR W34CI (FACILITY ID 71730)  
MAYAGUEZ, PR  
CH 46 17.1 KW (MAX-DA)

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Technical Narrative

This Technical Exhibit supports a displacement application for TV translator station W34CI. W34CI is licensed to operate on analog channel 34 with a directional antenna (visual) effective radiated power (ERP) of 6 kW and an antenna height above mean sea level (RCAMSL) of 407 (BLTT-19971031JA).

Station W34CI is predicted to receive interference to 84% of its analog service population from DTV station WELU-DT, Aguadilla, PR (see Figure 1). Station W34CI is also predicted to cause new interference to 9% of the DTV service population of WELU-DT. WELU-DT operates on channel 34 from a transmitter site 27.9 kilometers southeast of the W34CI site. Thus, W34CI hereby requests to displace to another channel for its analog operation.

Proposed Facilities

W34CI proposes to change to channel 46, increase ERP and employ a directional antenna. There is no proposed change in transmitter site (18-18-51 N, 67-11-30 W); the existing supporting structure has ASRN #1010409. It is proposed to operate with a directional antenna maximum ERP of 17.1 kW and antenna RCAMSL of 407 meters and Minus carrier frequency offset. A notification letter has been sent to the Arecibo Observatory, included herein as Appendix 2.

Figure 3 is a coverage map showing the present and proposed 74 dBu coverage contours. As the proposal will operate from the currently licensed operation, there will be common area where both 74 dBu contours overlap.

#### Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations.

Using the procedures outlined in the FCC's OET-69 Bulletin, no interference is predicted to occur to any other station. If necessary, a waiver of the FCC rules is respectfully requested based on use of the procedures outlined in the FCC's OET-69 Bulletin to the remaining LPTV/translator stations.

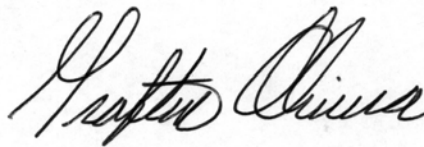
The applicant recognizes the proposal is secondary to authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

#### Radiofrequency Electromagnetic Field Exposure

The proposed W34CI 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 antenna is located 45 meters above ground level. The proposed maximum ERP is 17.1 kW peak, 8.55 kW average. A detailed analysis using the vertical plane pattern data shown in Appendix 1 shows that the highest RF exposure can be expected at depression angles of 74 to 77 degrees below the horizon, where the calculated power density at a point 2 meters above ground level is predicted to be  $10.7 \text{ uW/cm}^2$ . This is 2.4% of the FCC's recommended limit of  $443.3 \text{ uW/cm}^2$  for channel 46 for an "uncontrolled" environment, and thus in compliance with FCC rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. 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.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.



Grafton Olivera, P.E.

du Treil, Lundin & Rackley, Inc.

201 Fletcher Avenue

Sarasota, Florida 34237

(941) 329-6000

August 22, 2007

Census data selected: 1990  
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 08-23-2007 Time: 10:57:29

Record Selected for Analysis

W34CI USERRECORD-01 MAYAGUEZ PR US  
Channel 34 ERP 6. kW HAAT 407. m RCAMSL 00407 m  
Latitude 018-18-51 Longitude 0067-11-30  
Status APP Zone 2 Border Offset +  
Dir Antenna Make CDB Model 00000000017786 Beam tilt N Ref Azimuth 85.  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	5.245	388.2	24.5
45.0	1.561	310.5	16.2
90.0	0.844	239.2	11.8
135.0	3.745	333.7	21.3
180.0	3.745	407.0	23.2
225.0	0.014	407.0	4.2
270.0	0.017	404.8	4.5
315.0	0.437	381.1	12.4

Contour Overlap Evaluation from LPTV Station to Full Service TV & DTV

Station inside contour of station

WELU 34 AGUADILLA PR BMPEDT 20040316AFD

Station inside contour of station

WIPM-TV 35 MAYAGUEZ PR BMPEDT 20030204ADS

Contour Overlap Evaluation from LPTV to Full Service TV & DTV Complete

*(continued)*

Analysis of Interference to Affected Station 1

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
34	WELU-DT	AGUADILLA PR	DTVPLN	-DTVP0954

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
33	WPRV-DT	FAJARDO PR	146.8	PLN	DTVPLN	-DTVP0916
34	WRUA	FAJARDO PR	146.8	PLN	DTVPLN	-NPLN1482
35	WIPM-DT	MAYAGUEZ PR	28.0	PLN	DTVPLN	-DTVP0990

Results for: 34A PR AGUADILLA DTVPLN DTVP0954 PLN  
HAAT 296.0 m, ATV ERP 50.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	603237	5133.0
not affected by terrain losses	594907	5099.5
lost to NTSC IX	22292	127.0
lost to additional IX by ATV	64481	264.9
lost to ATV IX only	69479	274.7
lost to all IX	86773	391.9

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
32	WELU	AGUADILLA PR	DTVPLN	-NPLN1436

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
24	WSJNTV	SAN JUAN PR	140.6	PLN	DTVPLN	-NPLN1223
25	WQTO-DT	PONCE PR	52.9	PLN	DTVPLN	-DTVP0616
28	WKAQ-DT	SAN JUAN PR	121.6	PLN	DTVPLN	-DTVP0724
29	WORA-DT	MAYAGUEZ PR	27.5	PLN	DTVPLN	-DTVP0763
30	WRWRTV	SAN JUAN PR	115.4	PLN	DTVPLN	-NPLN1390
31	WRWR-DT	SAN JUAN PR	115.4	PLN	DTVPLN	-DTVP0839
32	WSJU-DT	SAN JUAN PR	146.8	PLN	DTVPLN	-DTVP0879
33	WPRV-DT	FAJARDO PR	146.8	PLN	DTVPLN	-DTVP0916
34	WELU-DT	AGUADILLA PR	0.0	PLN	DTVPLN	-DTVP0954
35	WIPM-DT	MAYAGUEZ PR	28.0	PLN	DTVPLN	-DTVP0990
36	WDWL	BAYAMON PR	113.5	PLN	DTVPLN	-NPLN1527
39	WJWN-DT	SAN SEBASTIAN PR	1.0	PLN	DTVPLN	-DTVP1103
46	WIDP	GUAYAMA PR	140.8	PLN	DTVPLN	-NPLN1708
47	WVOZ-DT	PONCE PR	53.0	PLN	DTVPLN	-DTVP1371

Results for: 32N PR AGUADILLA DTVPLN NPLN1436 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	603237	5133.0
not affected by terrain losses	466708	4553.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	36587	649.9
lost to all IX	36587	649.9

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
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34 WELU AGUADILLA PR BMPEDT -20040316AFD

# Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
33	WPRV-DT	FAJARDO PR	127.4	PLN	DTVPLN	-DTVP0916
34	WRUA	FAJARDO PR	127.4	LIC	BLCT	-19970216KE
35	WIPM-TV	MAYAGUEZ PR	0.7	CP MOD	BMPEDT	-20030204ADS
35	WIPM-DT	MAYAGUEZ PR	0.7	PLN	DTVPLN	-DTVP0990
34	W34CI	MAYAGUEZ PR	27.9	APP	USERRECORD-01	

Total scenarios = 4

Result key: 1

Scenario 1 Affected station 1 WELU

Before Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP

HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	214755	977.9
lost to additional IX by ATV	44683	170.5
lost to ATV IX only	133585	453.5
lost to all IX	259438	1148.4

Potential Interfering Stations Included in above Scenario 1

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP

After Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP

HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	266599	1159.3
lost to additional IX by ATV	38254	133.1
lost to ATV IX only	133585	453.5
lost to all IX	304853	1292.4

Potential Interfering Stations Included in above Scenario 1

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP
34N PR MAYAGUEZ	USERRECORD01		APP

The following station failed the de minimis interference criteria.

34N PR MAYAGUEZ USERRECORD01

ERP 6.00 kW HAAT 407.0 m RCAMSL 407.0 m

Antenna CDB 00000000017786

Due to interference to the following station and scenario: 1  
34D PR AGUADILLA BMPEDT 20040316AFD  
ERP 250.00 kW HAAT 605.0 m RCAMSL 897.0 m  
Antenna CDB 999999999999999

Percent Service lost without proposal: -147.6 to BMPEDT 20040316AFD  
Percent Service lost with proposal: -138.7 to BMPEDT 20040316AFD

Result key: 2  
Scenario 2 Affected station 1 WELU  
Before Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP  
HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	214755	977.9
lost to additional IX by ATV	50448	193.2
lost to ATV IX only	138145	506.7
lost to all IX	265203	1171.1

Potential Interfering Stations Included in above Scenario 2

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN

After Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP  
HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	266599	1159.3
lost to additional IX by ATV	42310	150.8
lost to ATV IX only	138145	506.7
lost to all IX	308909	1310.1

Potential Interfering Stations Included in above Scenario 2

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN
34N PR MAYAGUEZ	USERRECORD01		APP

The following station failed the de minimis interference criteria.  
34N PR MAYAGUEZ USERRECORD01  
ERP 6.00 kW HAAT 407.0 m RCAMSL 407.0 m  
Antenna CDB 00000000017786

Due to interference to the following station and scenario: 2  
34D PR AGUADILLA BMPEDT 20040316AFD

ERP 250.00 kW HAAT 605.0 m RCAMSL 897.0 m  
Antenna CDB 999999999999999

Percent Service lost without proposal: -146.5 to BMPEDT 20040316AFD  
Percent Service lost with proposal: -137.9 to BMPEDT 20040316AFD

Result key: 3  
Scenario 3 Affected station 1 WELU  
Before Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP  
HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	214755	977.9
lost to additional IX by ATV	44683	170.5
lost to ATV IX only	133585	453.5
lost to all IX	259438	1148.4

Potential Interfering Stations Included in above Scenario 3

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP

After Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP  
HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	266599	1159.3
lost to additional IX by ATV	38254	133.1
lost to ATV IX only	133585	453.5
lost to all IX	304853	1292.4

Potential Interfering Stations Included in above Scenario 3

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP
34N PR MAYAGUEZ	USERRECORD01		APP

The following station failed the de minimis interference criteria.

34N PR MAYAGUEZ USERRECORD01  
ERP 6.00 kW HAAT 407.0 m RCAMSL 407.0 m  
Antenna CDB 00000000017786

Due to interference to the following station and scenario: 3

34D PR AGUADILLA BMPEDT 20040316AFD  
ERP 250.00 kW HAAT 605.0 m RCAMSL 897.0 m  
Antenna CDB 999999999999999

Percent Service lost without proposal: -147.6 to BMPEDT 20040316AFD

Percent Service lost with proposal: -138.7 to BMPEDT 20040316AFD

Result key: 4

Scenario 4 Affected station 1 WELU

Before Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP

HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	214755	977.9
lost to additional IX by ATV	50448	193.2
lost to ATV IX only	138145	506.7
lost to all IX	265203	1171.1

Potential Interfering Stations Included in above Scenario 4

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN

After Analysis

Results for: 34A PR AGUADILLA BMPEDT 20040316AFD CP

HAAT 605.0 m, ATV ERP 250.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1726804	36155.5
not affected by terrain losses	1517644	35499.0
lost to NTSC IX	266599	1159.3
lost to additional IX by ATV	42310	150.8
lost to ATV IX only	138145	506.7
lost to all IX	308909	1310.1

Potential Interfering Stations Included in above Scenario 4

34N PR FAJARDO	BLCT	19970216KE	LIC
33A PR FAJARDO	DTVPLN	DTVP0916	PLN
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN
34N PR MAYAGUEZ	USERRECORD01		APP

The following station failed the de minimis interference criteria.

34N PR MAYAGUEZ USERRECORD01  
ERP 6.00 kW HAAT 407.0 m RCAMSL 407.0 m  
Antenna CDB 00000000017786

Due to interference to the following station and scenario: 4

34D PR AGUADILLA BMPEDT 20040316AFD  
ERP 250.00 kW HAAT 605.0 m RCAMSL 897.0 m  
Antenna CDB 999999999999999

Percent Service lost without proposal: -146.5 to BMPEDT 20040316AFD

Percent Service lost with proposal: -137.9 to BMPEDT 20040316AFD

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
34	W34CI	MAYAGUEZ PR	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
27	WAPA-TV	SAN JUAN PR	122.5	LIC	BLCDDT -20060621ACQ
27	WAPA-DT	SAN JUAN PR	122.5	PLN	DTVPLN -DTVP0687
31	WRWR-DT	SAN JUAN PR	116.0	PLN	DTVPLN -DTVP0839
31	WSJU-TV	SAN JUAN PR	116.0	CP MOD	BMPCDDT -20060628ACE
32	WTCV	SAN JUAN PR	116.0	LIC	BLCDDT -20040722ADD
34	WELU	AGUADILLA PR	27.9	CP MOD	BMPEDT -20040316AFD
34	WELU-DT	AGUADILLA PR	0.6	PLN	DTVPLN -DTVP0954
34	WRUA	FAJARDO PR	147.4	LIC	BLCT -19970216KE
34	W34CI	MAYAGUEZ, ETC. PR	0.0	LIC	BLTT -19971031JA
34	W34DT	PONCE PR	71.4	CP	BNPTTL -20000807ADG
34	W34DO	CHRISTIANSTED VI	266.5	CP	BNPTTL -20000831AMA
35	WIPM-TV	MAYAGUEZ PR	28.6	CP MOD	BMPEDT -20030204ADS
35	WIPM-DT	MAYAGUEZ PR	28.6	PLN	DTVPLN -DTVP0990
41	WIRS	YAUCO PR	66.9	CP MOD	BMPCDDT -20040430AGV
41	WIRS-DT	YAUCO PR	66.9	PLN	DTVPLN -DTVP1172
48	WVOZ-TV	PONCE PR	53.6	LIC	BLCT -19860808KK
49	W49AC	ADJUNTAS PR	53.9	LIC	BLTT -1491
49	W49CZ-D	AGUADA PR	2.6	CP	BDCCDDL -20061030ADH
49	WVSN-DT	HUMACAO PR	141.3	PLN	DTVPLN -DTVP1430
49	WVSN	HUMACAO PR	141.3	CP MOD	BMPCDDT -20060719ACQ

Total scenarios = 4

Result key: 13

Scenario 1 Affected station 5 W34CI  
Before Analysis

Results for: 34N PR MAYAGUEZ USERRECORD01 APP

	POPULATION	AREA (sq km)
within Noise Limited Contour	286382	895.0
not affected by terrain losses	259904	832.0
lost to NTSC IX	239442	770.0
lost to additional IX by ATV	0	0.0
lost to all IX	239442	770.0

Potential Interfering Stations Included in above Scenario 1

34N PR FAJARDO	BLCT	19970216KE	LIC
34N PR MAYAGUEZ, ETC.	BLTT	19971031JA	LIC
34A PR AGUADILLA	BMPEDT	20040316AFD	CP
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP

Result key: 14

Scenario 2 Affected station 5 W34CI

Before Analysis

Results for: 34N PR MAYAGUEZ	USERRECORD01	APP
	POPULATION	AREA (sq km)
within Noise Limited Contour	286382	895.0
not affected by terrain losses	259904	832.0
lost to NTSC IX	239442	770.0
lost to additional IX by ATV	0	0.0
lost to all IX	239442	770.0

Potential Interfering Stations Included in above Scenario 2

34N PR FAJARDO	BLCT	19970216KE	LIC
34N PR MAYAGUEZ, ETC.	BLTT	19971031JA	LIC
34A PR AGUADILLA	BMPEDT	20040316AFD	CP
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN

Result key: 15  
Scenario 3 Affected station 5 W34CI  
Before Analysis

Results for: 34N PR MAYAGUEZ	USERRECORD01	APP
	POPULATION	AREA (sq km)
within Noise Limited Contour	286382	895.0
not affected by terrain losses	259904	832.0
lost to NTSC IX	239442	770.0
lost to additional IX by ATV	0	0.0
lost to all IX	239442	770.0

Potential Interfering Stations Included in above Scenario 3

34N PR FAJARDO	BLCT	19970216KE	LIC
34N PR MAYAGUEZ, ETC.	BLTT	19971031JA	LIC
34A PR AGUADILLA	DTVPLN	DTVP0954	PLN
35A PR MAYAGUEZ	BMPEDT	20030204ADS	CP

Result key: 16  
Scenario 4 Affected station 5 W34CI  
Before Analysis

Results for: 34N PR MAYAGUEZ	USERRECORD01	APP
	POPULATION	AREA (sq km)
within Noise Limited Contour	286382	895.0
not affected by terrain losses	259904	832.0
lost to NTSC IX	239442	770.0
lost to additional IX by ATV	0	0.0
lost to all IX	239442	770.0

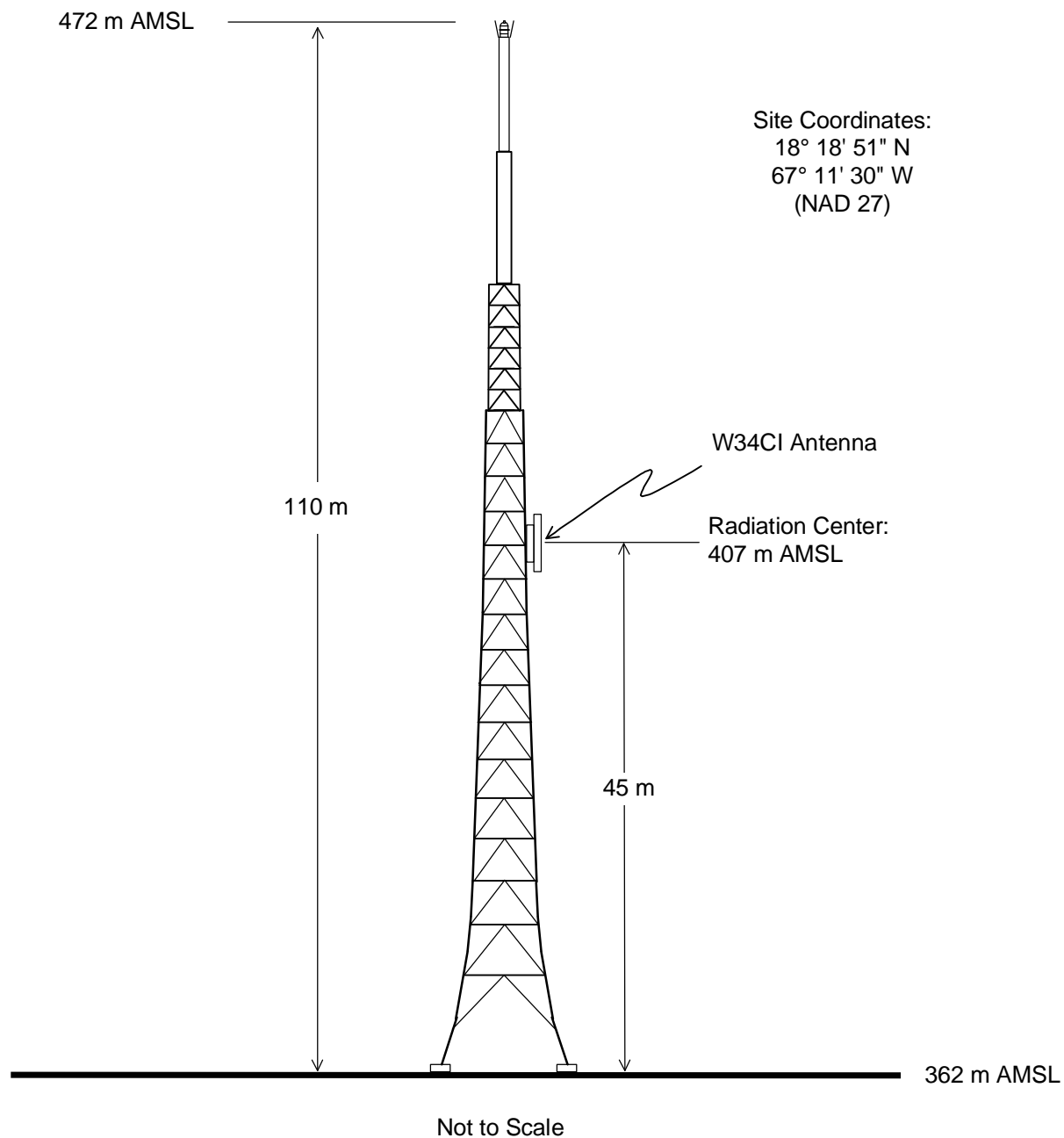
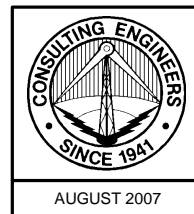
Potential Interfering Stations Included in above Scenario 4

34N PR FAJARDO	BLCT	19970216KE	LIC
34N PR MAYAGUEZ, ETC.	BLTT	19971031JA	LIC
34A PR AGUADILLA	DTVPLN	DTVP0954	PLN
35A PR MAYAGUEZ	DTVPLN	DTVP0990	PLN

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Figure 2

FCC Tower ID: 1010409



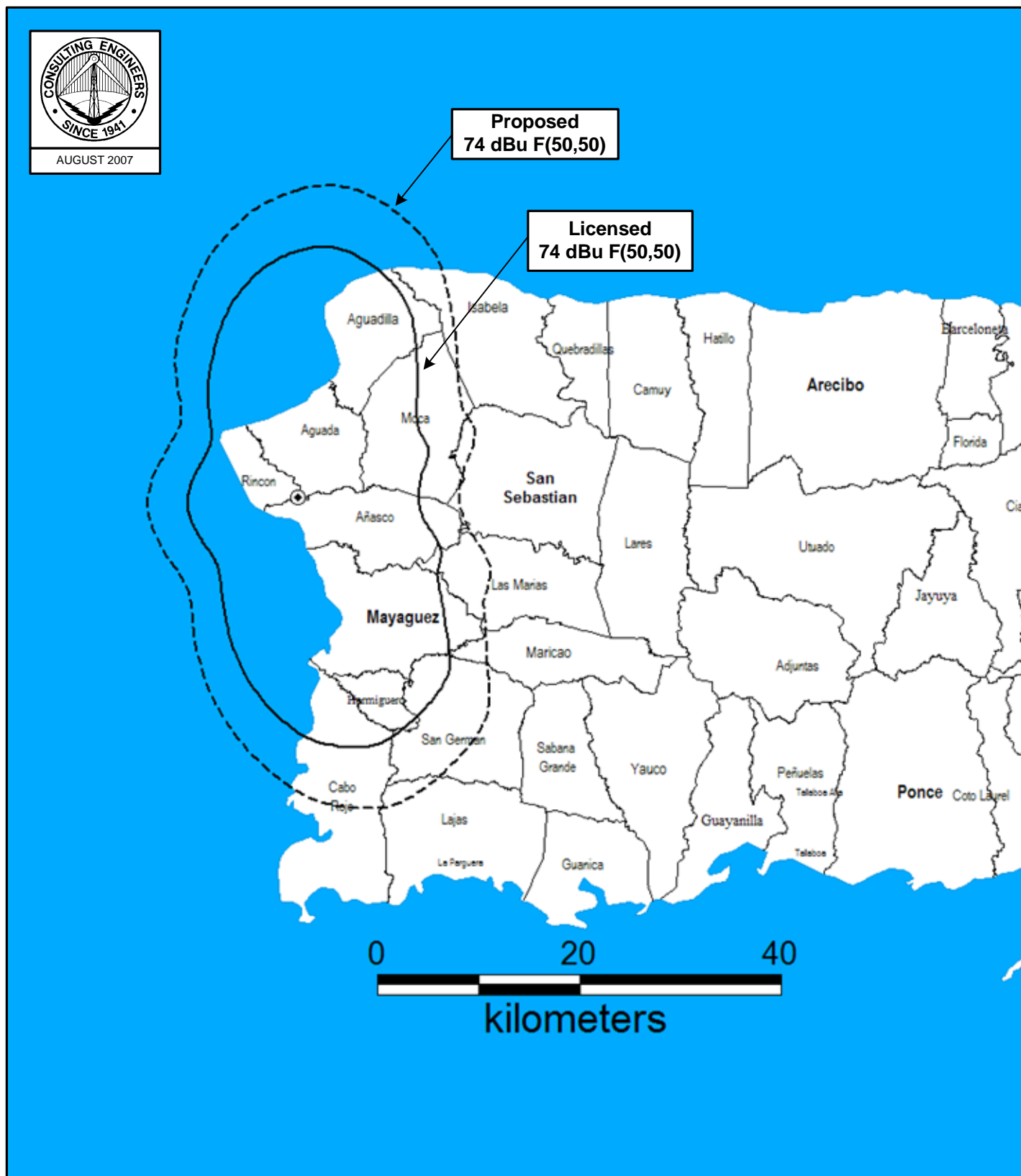
## ANTENNA AND SUPPORTING STRUCTURE

TV TRANSLATOR W34CI

MAYAGUEZ, PR

CH 46 17.1 KW (MAX-DA)

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



## **PREDICTED COVERAGE CONTOURS**

TV TRANSLATOR W34CI

MAYAGUEZ, PR

CH 46 17.1 KW (MAX-DA)

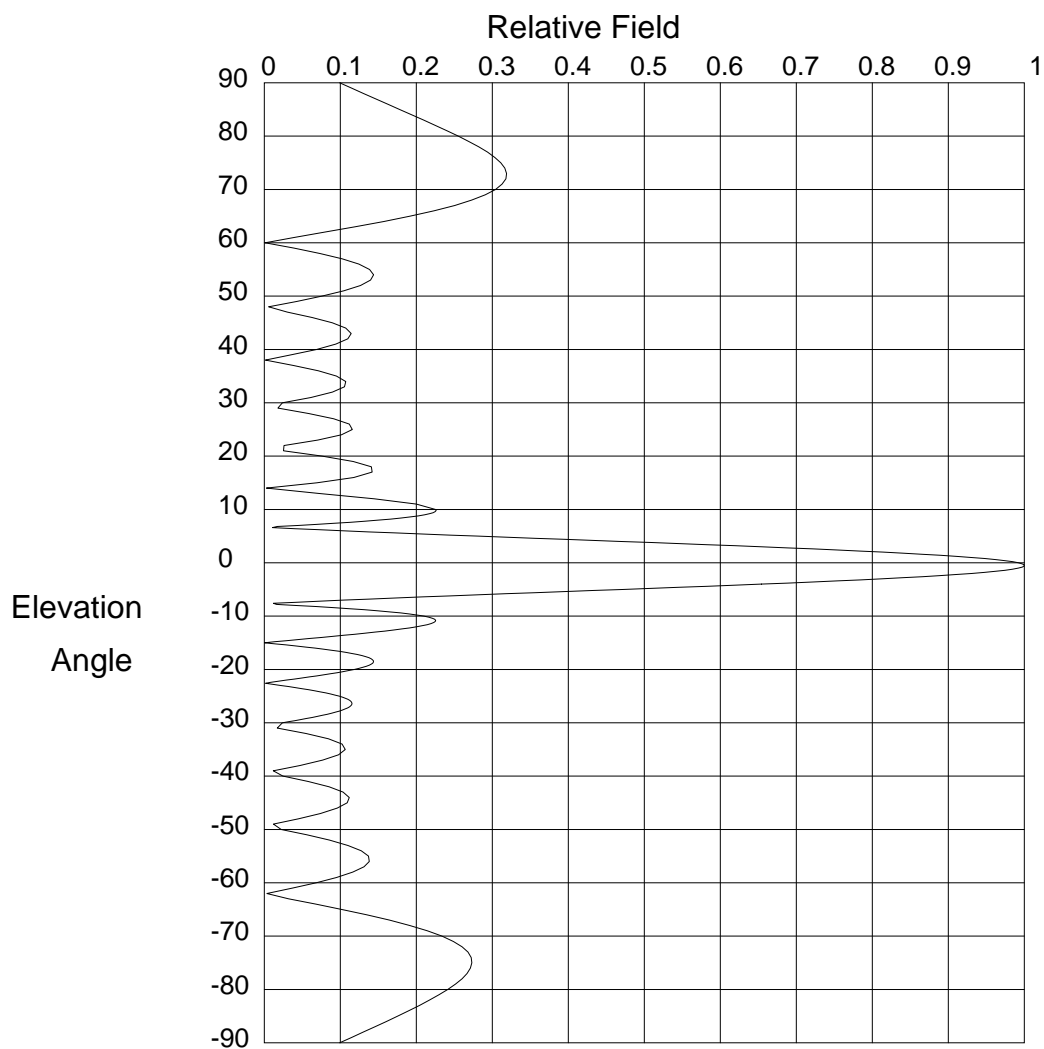
du Treil, Lundin & Rackley, Inc Sarasota, Florida



TECHNICAL EXHIBIT  
DISPLACEMENT APPLICATION  
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CH 46 17.1 KW (MAX-DA)

Manufacturer's Horizontal and Vertical Plane Pattern Data

*{six sheets follow}*



## Elevation Pattern

Scale: Linear

Units: Field, Relative

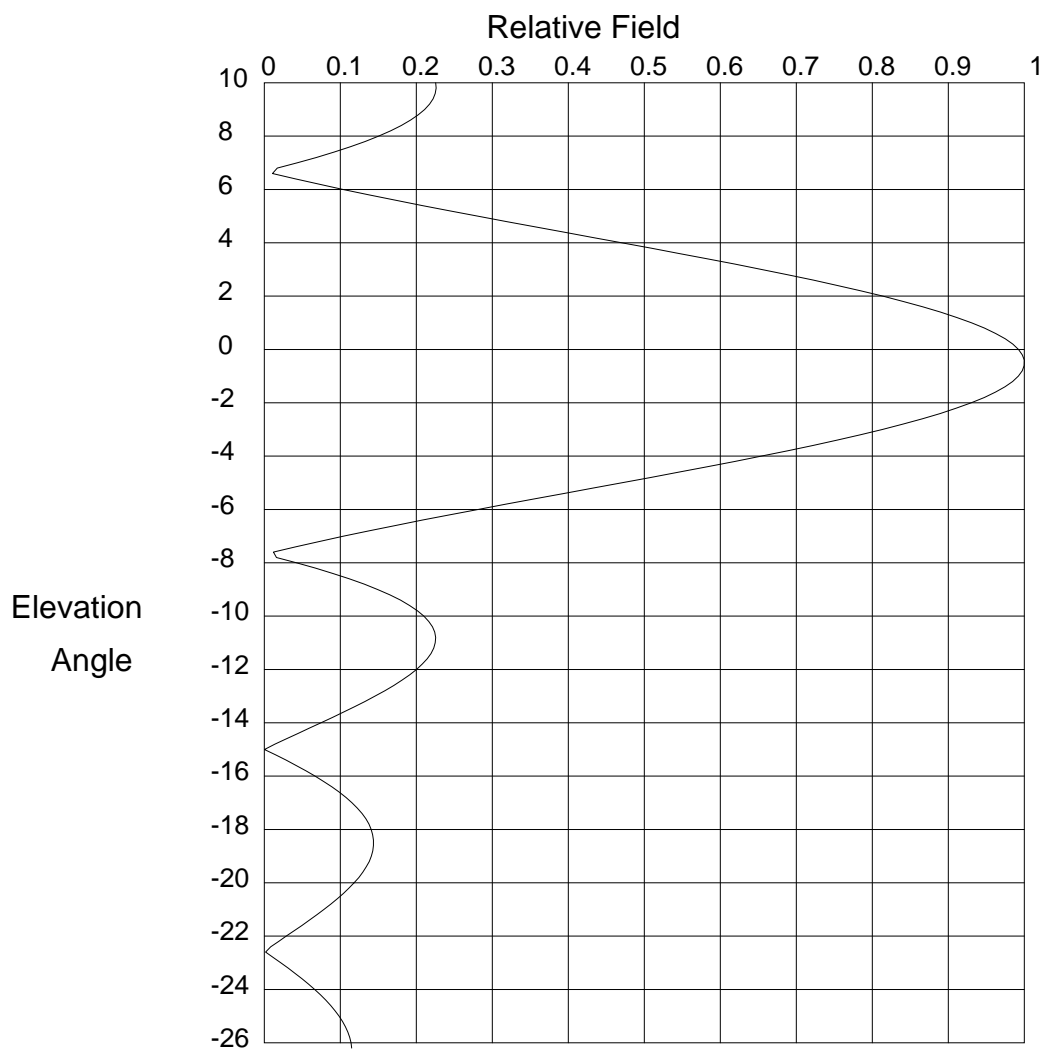
Antenna Concepts Inc.

CLIENT: *du Treil, Lundin & Rackley, Inc. / Grafton Olivera*  
 ANTENNA TYPE: Low Power Side Mount 8 Bay Slot Antenna  
 FREQUENCY: 665  
 PATTERN POL.: Horizontal  
 DIRECTIVITY(Peak): 8.606/9.348 dBd  
 DIRECTIVITY(Horiz): 8.477/9.282 dBd

Date: 8/21/2007

Beam Tilt (Deg.) : -.5

Null Fill(s)(%) : 0, 0, 0



## Elevation Pattern

Scale: Linear

Units: Field, Relative

Antenna Concepts Inc.

CLIENT: *du Treil, Lundin & Rackley, Inc. / Grafton Olivera*

Date: 8/21/2007

ANTENNA TYPE: Low Power Side Mount 8 Bay Slot Antenna

FREQUENCY: 665

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.606/9.348 dBd

Beam Tilt (Deg.) : -.5

DIRECTIVITY(Horiz): 8.477/9.282 dBd

Null Fill(s)(%) : 0, 0, 0

# Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.619 (-4.164)	-4.4	.583 (-4.691)	-12.0	.20 (-13.965 )
3.0	.655 (-3.68)	-4.6	.546 (-5.259)	-12.2	.191 (-14.359 )
2.8	.689 (-3.235)	-4.8	.508 (-5.877)	-12.4	.181 (-14.825 )
2.6	.722 (-2.826)	-5.0	.471 (-6.549)	-12.6	.17 (-15.367 )
2.4	.754 (-2.45)	-5.2	.432 (-7.281)	-12.8	.159 (-15.994 )
2.2	.785 (-2.105)	-5.4	.394 (-8.083)	-13.0	.146 (-16.717 )
2.0	.814 (-1.791)	-5.6	.356 (-8.964)	-13.2	.133 (-17.55 )
1.8	.841 (-1.504)	-5.8	.319 (-9.938)	-13.4	.119 (-18.512 )
1.6	.866 (-1.246)	-6.0	.281 (-11.023)	-13.6	.104 (-19.634 )
1.4	.89 (-1.013)	-6.2	.244 (-12.244)	-13.8	.09 (-20.957 )
1.2	.911 (-0.807)	-6.4	.208 (-13.638)	-14.0	.075 (-22.547 )
1.0	.931 (-0.624)	-6.6	.173 (-15.258)	-14.2	.059 (-24.515 )
.8	.948 (-0.466)	-6.8	.138 (-17.191)	-14.4	.044 (-27.071 )
.6	.963 (-0.332)	-7.0	.105 (-19.594)	-14.6	.029 (-30.689 )
.4	.975 (-0.221)	-7.2	.073 (-22.784)	-14.8	.014 (-36.907 )
.2	.985 (-0.132)	-7.4	.042 (-27.608)	-15.0	.00 (-67.993 )
.0	.992 (-0.066)	-7.6	.012 (-38.337)	-15.2	.015 (-36.638 )
-.2	.997 (-0.022)	-7.8	.016 (-35.944)	-15.4	.029 (-30.866 )
-.4	1.00 (0)	-8.0	.042 (-27.442)	-15.6	.042 (-27.535 )
-.6	1.00 (0)	-8.2	.067 (-23.438)	-15.8	.055 (-25.226 )
-.8	.997 (-0.023)	-8.4	.09 (-20.869)	-16.0	.067 (-23.49 )
-1.0	.992 (-0.067)	-8.6	.112 (-19.025)	-16.2	.078 (-22.123 )
-1.2	.985 (-0.134)	-8.8	.131 (-17.622)	-16.4	.089 (-21.019 )
-1.4	.975 (-0.223)	-9.0	.149 (-16.521)	-16.6	.099 (-20.113 )
-1.6	.962 (-0.334)	-9.2	.165 (-15.642)	-16.8	.108 (-19.363 )
-1.8	.947 (-0.469)	-9.4	.179 (-14.933)	-17.0	.116 (-18.742 )
-2.0	.93 (-0.628)	-9.6	.191 (-14.364)	-17.2	.123 (-18.23 )
-2.2	.911 (-0.81)	-9.8	.202 (-13.91)	-17.4	.129 (-17.812 )
-2.4	.889 (-1.017)	-10.0	.21 (-13.556)	-17.6	.134 (-17.477 )
-2.6	.866 (-1.25)	-10.2	.217 (-13.289)	-17.8	.138 (-17.219 )
-2.8	.841 (-1.509)	-10.4	.221 (-13.101)	-18.0	.141 (-17.031 )
-3.0	.813 (-1.795)	-10.6	.224 (-12.985)	-18.2	.143 (-16.908 )
-3.2	.784 (-2.11)	-10.8	.225 (-12.937)	-18.4	.144 (-16.847 )
-3.4	.754 (-2.454)	-11.0	.225 (-12.954)	-18.6	.144 (-16.846 )
-3.6	.722 (-2.83)	-11.2	.223 (-13.033)	-18.8	.143 (-16.905 )
-3.8	.689 (-3.24)	-11.4	.219 (-13.173)	-19.0	.141 (-17.022 )
-4.0	.654 (-3.684)	-11.6	.214 (-13.374)	-19.2	.138 (-17.199 )
-4.2	.619 (-4.167)	-11.8	.208 (-13.638)	-19.4	.134 (-17.436 )

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Date: 8/21/2007

ANTENNA TYPE: Low Power Side Mount 8 Bay Slot Antenna

FREQUENCY: 665

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.606/9.348 dBd

Beam Tilt (Deg.) : -.5

DIRECTIVITY(Horiz): 8.477/9.282 dBd

Null Fill(s)(%) : 0, 0, 0

# Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.13 (-17.735)	-27.2	.11 (-19.183)	-54.0	.128 (-17.875 )
-19.8	.124 (-18.101)	-27.4	.107 (-19.429)	-55.0	.137 (-17.255 )
-20.0	.118 (-18.538)	-27.6	.103 (-19.734)	-56.0	.138 (-17.184 )
-20.2	.112 (-19.052)	-27.8	.099 (-20.101)	-57.0	.131 (-17.64 )
-20.4	.104 (-19.651)	-28.0	.094 (-20.535)	-58.0	.117 (-18.671 )
-20.6	.096 (-20.347)	-28.2	.089 (-21.042)	-59.0	.095 (-20.43 )
-20.8	.088 (-21.155)	-28.4	.083 (-21.632)	-60.0	.068 (-23.314 )
-21.0	.079 (-22.096)	-28.6	.077 (-22.314)	-61.0	.037 (-28.588 )
-21.2	.069 (-23.2)	-28.8	.07 (-23.105)	-62.0	.003 (-49.57 )
-21.4	.059 (-24.513)	-29.0	.063 (-24.025)	-63.0	.032 (-29.894 )
-21.6	.05 (-26.105)	-29.2	.056 (-25.103)	-64.0	.068 (-23.41 )
-21.8	.039 (-28.097)	-29.4	.048 (-26.383)	-65.0	.102 (-19.819 )
-22.0	.029 (-30.724)	-29.6	.04 (-27.935)	-66.0	.135 (-17.408 )
-22.2	.019 (-34.534)	-29.8	.032 (-29.873)	-67.0	.165 (-15.663 )
-22.4	.008 (-41.468)	-30.0	.024 (-32.42)	-68.0	.191 (-14.357 )
-22.6	.002 (-54.896)	-31.0	.017 (-35.281)	-69.0	.215 (-13.368 )
-22.8	.012 (-38.484)	-32.0	.055 (-25.203)	-70.0	.234 (-12.623 )
-23.0	.022 (-33.225)	-33.0	.084 (-21.47)	-71.0	.249 (-12.073 )
-23.2	.031 (-30.044)	-34.0	.102 (-19.804)	-72.0	.26 (-11.685 )
-23.4	.041 (-27.787)	-35.0	.107 (-19.436)	-73.0	.268 (-11.433 )
-23.6	.05 (-26.061)	-36.0	.098 (-20.201)	-74.0	.272 (-11.299 )
-23.8	.058 (-24.683)	-37.0	.077 (-22.287)	-75.0	.273 (-11.269 )
-24.0	.066 (-23.555)	-38.0	.047 (-26.557)	-76.0	.271 (-11.33 )
-24.2	.074 (-22.616)	-39.0	.012 (-38.496)	-77.0	.267 (-11.474 )
-24.4	.081 (-21.828)	-40.0	.024 (-32.245)	-78.0	.26 (-11.695 )
-24.6	.087 (-21.162)	-41.0	.058 (-24.737)	-79.0	.252 (-11.986 )
-24.8	.093 (-20.601)	-42.0	.085 (-21.382)	-80.0	.241 (-12.344 )
-25.0	.099 (-20.13)	-43.0	.104 (-19.675)	-81.0	.23 (-12.767 )
-25.2	.103 (-19.74)	-44.0	.112 (-19.02)	-82.0	.217 (-13.253 )
-25.4	.107 (-19.421)	-45.0	.109 (-19.237)	-83.0	.204 (-13.803 )
-25.6	.11 (-19.169)	-46.0	.096 (-20.347)	-84.0	.19 (-14.42 )
-25.8	.112 (-18.978)	-47.0	.074 (-22.608)	-85.0	.176 (-15.109 )
-26.0	.114 (-18.845)	-48.0	.045 (-26.89)	-86.0	.161 (-15.877 )
-26.2	.115 (-18.768)	-49.0	.012 (-38.306)	-87.0	.146 (-16.737 )
-26.4	.116 (-18.745)	-50.0	.022 (-32.97)	-88.0	.13 (-17.703 )
-26.6	.115 (-18.775)	-51.0	.056 (-25.043)	-89.0	.115 (-18.801 )
-26.8	.114 (-18.857)	-52.0	.086 (-21.32)	-90.0	.099 (-20.066 )
-27.0	.112 (-18.993)	-53.0	.11 (-19.147)	90.0	.00 (-50 )

Antenna Concepts Inc.

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CLIENT: *du Treil, Lundin & Rackley, Inc. / Grafton Olivera*

Date: 8/21/2007

ANTENNA TYPE: Low Power Side Mount 8 Bay Slot Antenna

FREQUENCY: 665

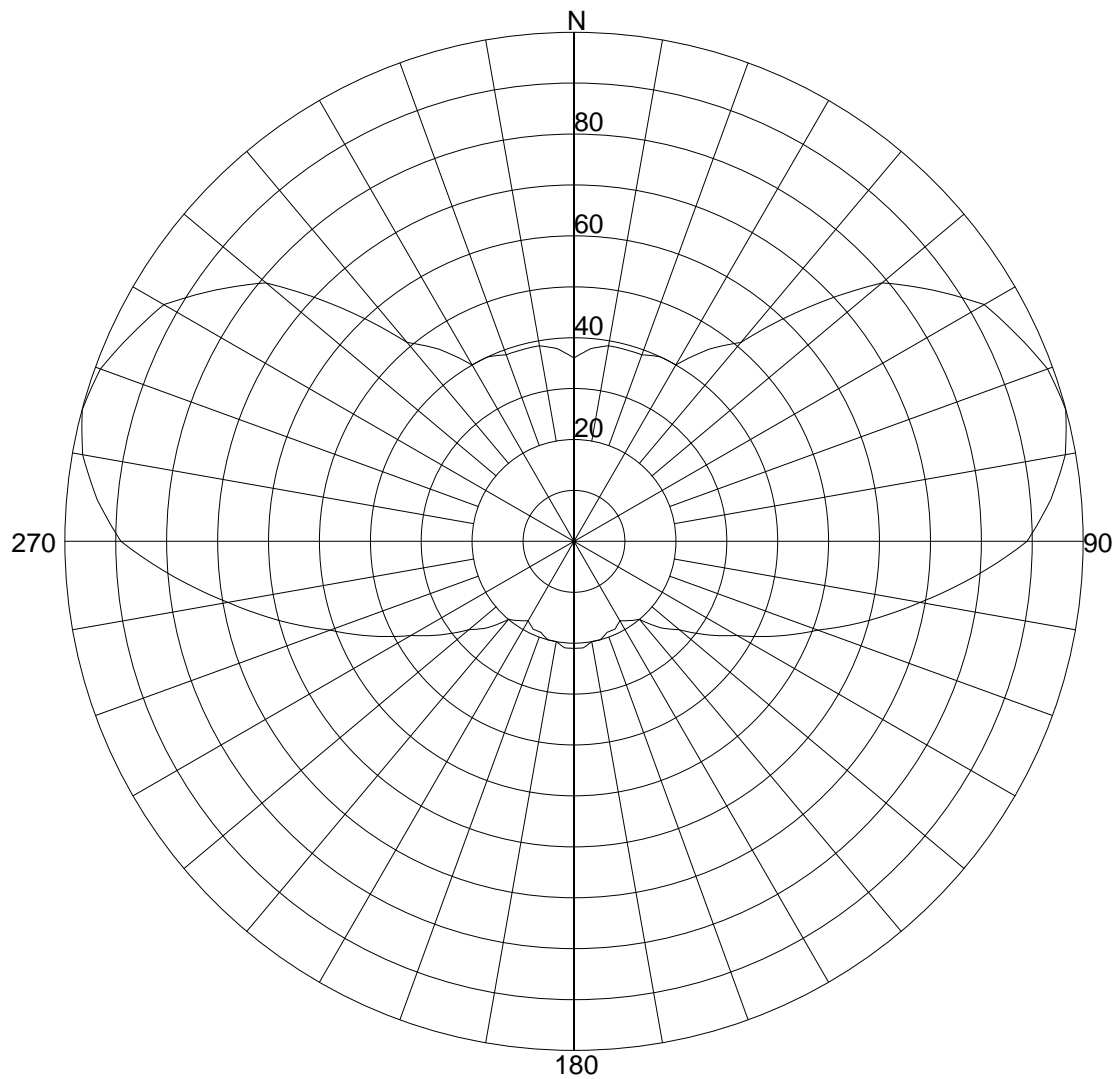
PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.606/9.348 dBd

Beam Tilt (Deg.) : -.5

DIRECTIVITY(Horiz): 8.477/9.282 dBd

Null Fill(s)(%) : 0, 0, 0



## Azimuth Pattern

Scale: Linear

Unit: Relative Field

Antenna Concepts Inc.

CLIENT: *du Treil, Lundin & Rackley, Inc. / Grafton Olivera*

Date: 8/21/2007

ANTENNA TYPE: Low Power Side Mount Slot

FREQUENCY: 665

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 2.942 / 4.69dB

PATTERN RMS: 0.583

## Relative Field Tabulation(Azimuth)

Azimuth Heading	Relative Field(dB)	Azimuth Heading	Relative Field(dB)
0	.36 (-8.85 )	180	.21 (-13.51 )
5	.38 (-8.38 )	185	.21 (-13.51 )
10	.39 (-8.16 )	190	.20 (-13.94 )
15	.39 (-8.16 )	195	.20 (-13.94 )
20	.39 (-8.16 )	200	.19 (-14.38 )
25	.40 (-7.94 )	205	.19 (-14.38 )
30	.40 (-7.94 )	210	.18 (-14.85 )
35	.46 (-6.73 )	215	.19 (-14.38 )
40	.51 (-5.83 )	220	.20 (-13.94 )
45	.65 (-3.73 )	225	.24 (-12.36 )
50	.79 (-2.04 )	230	.27 (-11.34 )
55	.86 (-1.3 )	235	.32 (-9.87 )
60	.93 (-0.62 )	240	.37 (-8.61 )
65	.96 (-0.35 )	245	.44 (-7.11 )
70	.99 (-0.08 )	250	.51 (-5.83 )
75	1.00 ( 0.01 )	255	.60 (-4.42 )
80	.98 (-0.17 )	260	.69 (-3.21 )
85	.94 (-0.53 )	265	.79 (-2.04 )
90	.89 (-1 )	270	.89 (-1 )
95	.79 (-2.04 )	275	.94 (-0.53 )
100	.69 (-3.21 )	280	.98 (-0.17 )
105	.60 (-4.42 )	285	1.00 ( 0.01 )
110	.51 (-5.83 )	290	.99 (-0.08 )
115	.44 (-7.11 )	295	.96 (-0.35 )
120	.37 (-8.61 )	300	.93 (-0.62 )
125	.32 (-9.87 )	305	.86 (-1.3 )
130	.27 (-11.34 )	310	.79 (-2.04 )
135	.24 (-12.36 )	315	.65 (-3.73 )
140	.20 (-13.94 )	320	.51 (-5.83 )
145	.19 (-14.38 )	325	.46 (-6.73 )
150	.18 (-14.85 )	330	.40 (-7.94 )
155	.19 (-14.38 )	335	.40 (-7.94 )
160	.19 (-14.38 )	340	.39 (-8.16 )
165	.20 (-13.94 )	345	.39 (-8.16 )
170	.20 (-13.94 )	350	.39 (-8.16 )
175	.21 (-13.51 )	355	.38 (-8.38 )

### Antenna Concepts Inc.

CLIENT: *du Treil, Lundin & Rackley, Inc. / Grafton Olivera*

Date: 8/21/2007

ANTENNA TYPE: Low Power Side Mount Slot

FREQUENCY: 665

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 2.942 / 4.69dB

PATTERN RMS: 0.583

TECHNICAL EXHIBIT  
DISPLACEMENT APPLICATION  
TV TRANSLATOR W34CI (FACILITY ID 71730)  
MAYAGUEZ, PR  
CH 46 17.1 KW (MAX-DA)

Notification to the National Astronomy and Ionosphere Center

*{one sheet follows}*





201 Fletcher Ave.  
Sarasota, FL 34237-6019  
941-329-6000  
941-329-6031 FAX

**Grafton Olivera**  
Direct Dial 941-329-6001  
e-mail: [grifton@dlr.com](mailto:grifton@dlr.com)

August 22, 2007

Via Telefax 787-878-1861

Dr. Tim Hankins, Director  
Mr. Reinaldo Velez, Spectrum Manager  
National Astronomy and Ionosphere Center  
Arecibo Observatory  
HC3 Box 53995  
Arecibo, PR 00612

Gentlemen:

On behalf of our client, Western Broadcasting Corporation of Puerto Rico licensee of TV Translator Station W34CI, Mayaguez, Puerto Rico, in accordance with Section 73.1030 of the FCC Rules, we are hereby notifying you of an application for channel displacement. The particulars of the proposal are as follows:

Existing Facility:

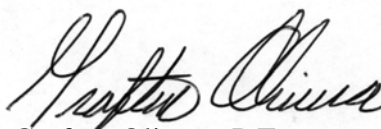
Geographical coordinates of antenna location (NAD83): 18-18-44 / 67-11-29  
Antenna height (radiation center): 45 m AGL; 407 m AMSL  
Max Antenna Gain: 11.5 dBd  
Main Lobe Orientation: 85° True  
Licensed Analog Channel: 34 (590-596 MHz)  
Type of emission: 4M5C3F (video) 75K0F3E (audio)  
Max. Effective isotropic radiated power (horizontal polarization, average power): 4.9 kW

Proposed Facility:

Geographical coordinates of antenna location: no change  
Antenna height (radiation center): no change  
Max Antenna Gain: 14.5 dBd  
Main Lobe Orientation: 85° True  
Licensed Analog Channel: 46 (662-668 MHz)  
Type of emission: 4M5C3F (video) 75K0F3E (audio)  
Max. Effective isotropic radiated power (horizontal polarization, average power): 14.0 kW

Please review this proposal and let us know your findings. Please feel free to communicate via email (<mailto:grifton@dlr.com>), telefax (941-329-6031) or regular mail.

Very truly yours,



Grafton Olivera, P.E.