

Exhibit 12.1 - Copy of Existing Antenna Structure Registration

Registration Detail

Reg Number	1247493	Status	Constructed
File Number	A0459519	Constructed	08/11/2005
FAA Study	2004-AGL-3642-OE	EMI	No
FAA Issue Date	11/10/2004	NEPA	No

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Communications Purposes

Location (in NAD83 Coordinates)

Lat/Long 40-07-35.0 N 088-17-25.0 W 2603 West Bradley

City, State Champaign , IL

Center of
AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
235.9	129.8
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
365.7	128.9

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

Owner & Contact Information

FRN	0009269655	Licensee ID	L00074309
-----	------------	-------------	-----------

Owner

Saga Communications of Illinois, LLC
Attention To: Gregory Urbiel
73 Kercheval Avenue, Suite 201
Grosse Pointe Farms , MI 48236

P: (313)886-7070
E: gurbiel@sagacom.com

Contact

Smithwick , Gary S Esq
5028 Wisconsin Avenue NW, Suite 301
Washington , DC 20016

P: (202)363-4560
E: gsmithwick@fccworld.com

Last Action Status

Status	Constructed	Received	08/11/2005
Purpose	Notification	Entered	08/11/2005
Mode	Interactive		

Related Applications

08/11/2005	A0459519 - Notification (NT)
03/09/2005	A0431393 - New (NE)

Comments

Comments

None



Exhibit 12.2

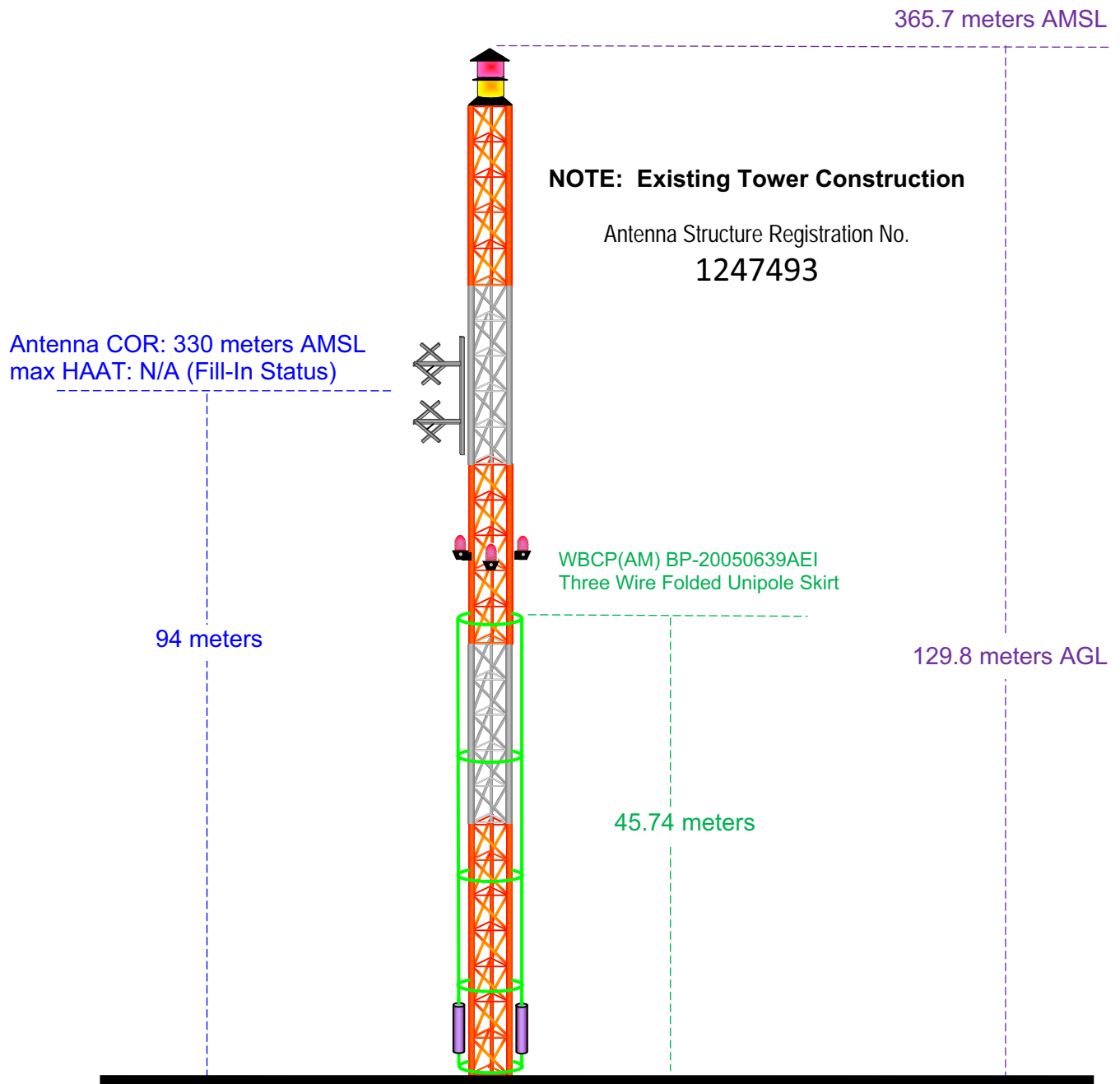
Vertical Plan of Antenna System

The site is located at 2603 West Bradley,
the city of Champaign, Champaign County, Illinois.

Site Location (NAD 27)

NL: 40° 07' 35"

WL: 88° 17' 25"



Ground Elevation = 235.9 m AMSL

Drawing is not to Scale

MUNN-REESE, INC.

Broadcast Engineering Consultants
Coldwater, MI 49036

Exhibit 12.3 Present vs. Proposed Service Contour Study

W221CJ.C
BPFT-20090813AAQ
Latitude: 40-07-35 N
Longitude: 088-17-25 W
ERP: 0.195 kW
Channel: 221
Frequency: 92.1 MHz
AMSL Height: 330.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:

Proposed 60 dBu Contour
Total Population: 133,097
Total Area: 446.19 sq. km

W221CJ.P
Proposed Operation
Latitude: 40-07-35 N
Longitude: 088-17-25 W
ERP: 0.225 kW
Channel: 221
Frequency: 92.1 MHz
AMSL Height: 322.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:

Proposed 60 dBu Contour
Total Population: 133,097
Total Area: 446.19 sq. km

Present 60 dBu Contour
Proposed 60 dBu Contour

W221CJ.C
W221CJ.P

Champaign

Urbana

Savoy

Bondville

Mariemont

Scale 1:150,000

0 2 4 6 km



MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339

Exhibit 12.4

Proposed vs. Primary Service Contour Study

WIXY.L
BMLH20081215ABB
Latitude: 40-00-45 N
Longitude: 088-08-29 W
ERP: 13.00 kW
Channel: 262
Frequency: 100.3 MHz
AMSL Height: 347.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model:

CH221D.P
Proposed Operation
Latitude: 40-07-35 N
Longitude: 088-17-25 W
ERP: 0.195 kW
Channel: 221
Frequency: 92.1 MHz
AMSL Height: 330.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:

CH221D.P

Champaign

WIXY.L

Primary 57 dBu Contour

Proposed 57 dBu Contour (Sect. 74.1201(g))

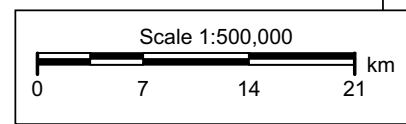


Exhibit 12.5

Tabulation of Proposed Allocation

Radio Assist Ministry, Inc.

REFERENCE CH# 221D - 92.1 MHz, Pwr= 0.195 kW, HAAT= 109.6 M, COR= 330 M DISPLAY DATES
40 07 35.0 N. Average Protected F(50-50)= 12.66 km DATA 08-17-09
88 17 25.0 W. Standard Directional SEARCH 08-24-09

CH CITY	CALL	TYPE STATE	ANT ---	AZI FILE #	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
221A	WWGO Charleston	LIC	ZCN IL	184.9 4.8	66.7 BLH20020418ABC	39 31 40.0 88 21 23.0	6.000 100	87.2 305	28.8 Whqq, Inc	-31.6*<	0.4
219B	WBGL Champaign	LIC	_CX IL	78.5 258.7	15.2 BLED20050711ABR	40 09 12.0 88 06 56.0	20.000 140	4.3 352	41.2 Illinois Bible Institute,	-1.8<	-27.0*<
223B1	WCFF Urbana	LIC	_C_ IL	134.9 315.0	17.9 BLH20010717AAA	40 00 45.0 88 08 29.0	16.000 125	3.8 334	42.5 Saga Communications Of Ill	2.3	-25.9*<
220B	WUIS Springfield	LIC	_C_ IL	249.2 68.5	105.8 BLED20080214AFY	39 47 01.1 89 26 45.9	50.000 152	78.1 331	52.2 Board Of Trustees Of The U	16.8	37.9
220B	WUIS Springfield	LIC	_CN IL	249.2 68.5	105.9 BLED19871020KH	39 47 00.0 89 26 46.0	50.000 152	77.7 329	51.8 Board Of Trustees Of The U	17.2	38.3
Grandfathered at 50 kW ERP and 152 meters HAAT											
221D	638365 Bloomington	APP	_C_ IL	302.6 122.1	67.9 BNPFT20030317AFI	40 27 09.9 88 57 55.7	0.080	17.5 282	5.4 Spirit Education Associati	38.1	20.5
221D	628827 Normal	APP	_C_ IL	307.9 127.5	68.3 BNPFT20030310ABB	40 30 05.0 88 55 38.0	0.170	21.5 267	6.4 Cornerstone Community Radi	34.8	20.6
221D	636357 Bloomington	APP	_C_ IL	308.5 128.1	68.6 BNPFT20030317ADZ	40 30 30.0 88 55 30.0	0.170	21.5 273	6.4 Covenant Network	35.1	21.0
222D	W222BG Clinton	LIC	_C_ IL	266.8 86.3	57.6 BLFT20090610AAF	40 05 43.0 88 57 51.0	0.100	11.2 276	7.8 Kaskaskia Broadcasting, In	35.1	33.4
275B	WSOY-FM Decatur	LIC	_CN IL	243.8 63.4	62.1 BLH19990512KB	39 52 41.0 88 56 32.0	54.000 135	0.0 339	0.0 Neuhoff Family Limited Par	14.5R	47.6M
220B	WJCH Joliet	LIC	_CN IL	0.6 180.6	143.1 BLED19860505KF	41 24 55.0 88 16 19.0	50.000 151	78.8 319	52.8 Family Stations, Inc.	52.5	73.0
220B	WJCH Joliet	LIC	_CX IL	0.6 180.6	143.1 BMLD20081124ABB	41 24 55.0 88 16 19.0	50.000 151	78.8 319	52.8 Family Stations, Inc.	52.5	73.0
218B	WCIC Pekin	LIC	DCN IL	294.3 113.5	118.6 BLED19981116KA	40 33 28.0 89 34 04.0	47.000 154	5.8 339	51.3 Illinois Bible Institute,	100.8	66.5
224B1	WQLZ Taylorville	LIC	_CN IL	243.2 62.4	117.6 BLH19930528KE	39 38 38.0 89 30 51.0	11.500 147	3.9 322	44.7 Long Nine, Inc.	102.8	71.9
222B1	WZPW Peoria	LIC	_CX IL	300.6 119.7	146.3 BLH20020911ABB	40 47 10.0 89 47 01.0	19.200 114	62.1 312	47.1 B&g Broadcasting, Inc.	72.0	77.1

Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone = 1, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
**affixed to 'IN' or 'OUT' values = site inside protected contour.
Reference station has protected zone issue: AM tower

Yellow highlighted text denotes a §74.1204(d) Waiver Request for given second adjacent channel interference to WBGL.L - Champaign, IL, CH219B and WCFF.L - Urbana, IL, CH223B1. Full protection will be afforded both facilities as the calculated interference area will not reach the ground or a 7 meter artificial plane representing a standard two story building when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the downward radiation study and antenna manufacturer specifications has been included in Exhibit 12.7.

Exhibit 12.6

Contour Protection Toward WWGO.L

FMCommander Single Allocation Study - 08-24-2009 - NED 03 SEC
W221CJ.P's Overlaps (In= -31.55 km, Out= 0.45 km)

W221CJ.P CH 221 D DA
Lat= 40 07 35.0, Lng= 88 17 25.0
0.195 kW 109.6 M HAAT, 330 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WWGO CH 221 A 73.215 Z BLH20020418ABC
Lat= 39 31 40.0, Lng= 88 21 23.0
6.0 kW 100 M HAAT, 305 M COR
Prot.= 60 dBu, Intef.= 40 dBu

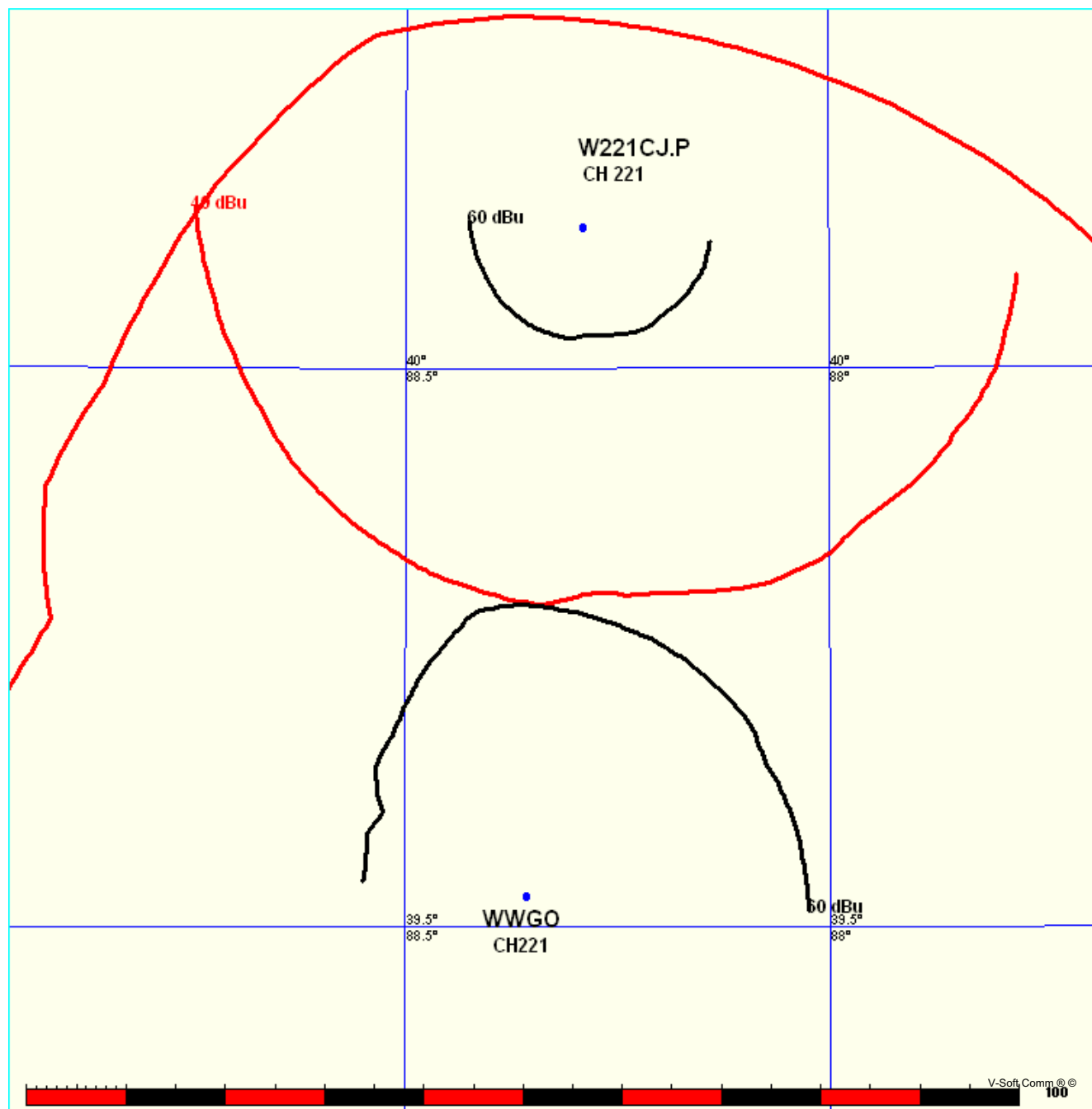


Exhibit 12.6

Contour Protection Toward WWGO.L

08-24-2009

NED 03 SEC Terrain Data

FMOver Analysis

W221CJ.P

Channel = 221D

Max ERP = 0.195 kW

RCAMSL = 330 M

N. Lat. 40 07 35.0

W. Lng. 88 17 25.0

Protected

60 dBu

WWGO BLH20020418ABC

Channel = 221A

Max ERP = 6 kW

RCAMSL = 305 M

N. Lat. 39 31 40.0

W. Lng. 88 21 23.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
142.0	000.1950	0112.7	012.8	013.4	006.0000	0101.8	058.0	48.69**	28.94
143.0	000.1950	0113.1	012.8	013.3	006.0000	0101.9	057.8	48.76**	29.14
144.0	000.1950	0113.3	012.9	013.2	006.0000	0102.0	057.7	48.84**	29.33
145.0	000.1950	0113.1	012.9	013.0	006.0000	0102.0	057.5	48.90**	29.50
146.0	000.1950	0112.9	012.8	012.9	006.0000	0102.0	057.3	48.95**	29.65
147.0	000.1950	0112.9	012.8	012.7	006.0000	0102.0	057.2	49.02**	29.82
148.0	000.1950	0112.9	012.8	012.5	006.0000	0102.1	057.0	49.08**	29.99
149.0	000.1950	0113.0	012.8	012.4	006.0000	0102.1	056.9	49.14**	30.15
150.0	000.1950	0113.0	012.8	012.2	006.0000	0102.1	056.7	49.20**	30.31
151.0	000.1950	0113.0	012.8	012.1	006.0000	0102.2	056.6	49.26**	30.47
152.0	000.1950	0113.2	012.9	011.9	006.0000	0102.2	056.4	49.32**	30.63
153.0	000.1950	0112.9	012.8	011.7	006.0000	0102.3	056.3	49.37**	30.76
154.0	000.1950	0112.4	012.8	011.5	006.0000	0102.3	056.2	49.42**	30.89
155.0	000.1950	0111.7	012.8	011.3	006.0000	0102.3	056.1	49.46**	30.99
156.0	000.1950	0111.0	012.7	011.1	006.0000	0102.3	056.0	49.49**	31.09
157.0	000.1950	0110.4	012.7	010.9	006.0000	0102.4	055.9	49.53**	31.20
158.0	000.1950	0109.8	012.7	010.7	006.0000	0102.4	055.8	49.58**	31.31
159.0	000.1950	0109.3	012.6	010.5	006.0000	0102.5	055.7	49.61**	31.41
160.0	000.1950	0108.7	012.6	010.3	006.0000	0102.5	055.6	49.65**	31.49
161.0	000.1950	0107.9	012.6	010.1	006.0000	0102.5	055.5	49.67**	31.56
162.0	000.1950	0107.3	012.5	009.8	006.0000	0102.5	055.4	49.70**	31.64
163.0	000.1950	0106.7	012.5	009.6	006.0000	0102.6	055.4	49.73**	31.72
164.0	000.1950	0106.3	012.5	009.4	006.0000	0102.6	055.3	49.76**	31.80
165.0	000.1950	0106.1	012.5	009.2	006.0000	0102.6	055.2	49.79**	31.88
166.0	000.1950	0105.8	012.4	009.0	006.0000	0102.6	055.1	49.82**	31.96
167.0	000.1950	0105.4	012.4	008.8	006.0000	0102.6	055.1	49.85**	32.02
168.0	000.1950	0104.9	012.4	008.6	006.0000	0102.6	055.0	49.87**	32.08
169.0	000.1950	0104.7	012.4	008.3	006.0000	0102.6	055.0	49.89**	32.14
170.0	000.1950	0104.6	012.4	008.1	006.0000	0102.7	054.9	49.92**	32.21
171.0	000.1950	0104.7	012.4	007.9	006.0000	0102.7	054.8	49.95**	32.28
172.0	000.1950	0104.9	012.4	007.7	006.0000	0102.7	054.8	49.97**	32.35
173.0	000.1950	0105.0	012.4	007.5	006.0000	0102.7	054.7	50.00**	32.42
174.0	000.1950	0104.6	012.4	007.3	006.0000	0102.7	054.7	50.01**	32.45
175.0	000.1950	0104.1	012.3	007.0	006.0000	0102.8	054.6	50.02**	32.48
176.0	000.1950	0104.2	012.4	006.8	006.0000	0102.9	054.6	50.05**	32.54

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

Exhibit 12.6

Contour Protection Toward WWGO.L

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	
177.0	000.1950	0104.3	012.4	006.6	006.0000	0102.9	054.6	50.07**	32.60
178.0	000.1950	0104.7	012.4	006.4	006.0000	0103.0	054.5	50.09**	32.66
179.0	000.1950	0105.4	012.4	006.2	006.0000	0103.0	054.4	50.12**	32.74
180.0	000.1950	0106.5	012.5	005.9	006.0000	0103.1	054.3	50.16**	32.83
181.0	000.1950	0107.9	012.6	005.7	006.0000	0103.1	054.3	50.20**	32.94
182.0	000.1950	0109.5	012.7	005.5	006.0000	0103.2	054.1	50.25**	33.06
183.0	000.1950	0111.1	012.7	005.3	006.0000	0103.4	054.0	50.30**	33.19
184.0	000.1950	0112.6	012.8	005.0	006.0000	0103.5	054.0	50.33**	33.29
185.0	000.1950	0114.1	012.9	004.8	006.0000	0103.5	053.9	50.37**	33.38
186.0	000.1950	0115.7	013.0	004.6	006.0000	0103.6	053.8	50.40**	33.47
187.0	000.1950	0116.6	013.0	004.3	006.0000	0103.6	053.8	50.42**	33.51
188.0	000.1950	0116.5	013.0	004.1	006.0000	0103.7	053.8	50.42**	33.52
189.0	000.1950	0116.8	013.0	003.8	006.0000	0103.8	053.8	50.43**	33.52
190.0	000.1950	0117.4	013.1	003.6	006.0000	0103.9	053.8	50.44**	33.55
191.0	000.1950	0117.8	013.1	003.4	006.0000	0103.9	053.8	50.44**	33.55
192.0	000.1950	0117.5	013.1	003.1	006.0000	0104.0	053.8	50.42**	33.51
193.0	000.1950	0117.3	013.1	002.9	006.0000	0104.0	053.9	50.41**	33.47
194.0	000.1950	0117.3	013.1	002.6	006.0000	0104.1	053.9	50.40**	33.44
195.0	000.1950	0117.3	013.1	002.4	006.0000	0104.1	054.0	50.38**	33.40
196.0	000.1950	0117.4	013.1	002.2	006.0000	0104.1	054.0	50.36**	33.35
197.0	000.1950	0117.4	013.1	001.9	006.0000	0104.1	054.1	50.34**	33.29
198.0	000.1950	0117.2	013.1	001.7	006.0000	0104.1	054.1	50.31**	33.22
199.0	000.1950	0117.2	013.1	001.5	006.0000	0104.2	054.2	50.29**	33.16
200.0	000.1950	0117.4	013.1	001.3	006.0000	0104.2	054.3	50.27**	33.11
201.0	000.1950	0117.9	013.1	001.0	006.0000	0104.3	054.3	50.25**	33.07
202.0	000.1950	0118.2	013.1	000.8	006.0000	0104.3	054.4	50.23**	33.00
203.0	000.1950	0118.2	013.1	000.6	006.0000	0104.4	054.5	50.20**	32.93
204.0	000.1950	0118.1	013.1	000.3	006.0000	0104.4	054.6	50.17**	32.85
205.0	000.1950	0117.8	013.1	000.1	006.0000	0104.5	054.7	50.13**	32.75
206.0	000.1950	0118.0	013.1	359.9	005.9985	0104.6	054.8	50.10**	32.67
207.0	000.1950	0117.6	013.1	359.7	005.9948	0104.8	054.9	50.07**	32.57
208.0	000.1950	0117.3	013.1	359.5	005.9912	0104.9	055.0	50.02**	32.46
209.0	000.1950	0117.1	013.1	359.3	005.9876	0104.9	055.1	49.98**	32.33
210.0	000.1950	0117.1	013.1	359.1	005.9839	0105.0	055.2	49.93**	32.21
211.0	000.1950	0116.9	013.1	358.9	005.9804	0105.0	055.4	49.89**	32.09
212.0	000.1950	0116.7	013.0	358.7	005.9770	0105.0	055.5	49.84**	31.95
213.0	000.1950	0116.7	013.0	358.5	005.9735	0105.0	055.6	49.78**	31.80
214.0	000.1950	0116.6	013.0	358.3	005.9702	0105.0	055.8	49.73**	31.66
215.0	000.1950	0116.6	013.0	358.2	005.9668	0105.1	055.9	49.68**	31.53
216.0	000.1950	0116.5	013.0	358.0	005.9636	0105.1	056.0	49.63**	31.39
217.0	000.1950	0116.4	013.0	357.8	005.9604	0105.2	056.2	49.57**	31.24
218.0	000.1950	0116.4	013.0	357.6	005.9572	0105.2	056.3	49.51**	31.09
219.0	000.1950	0116.3	013.0	357.4	005.9542	0105.1	056.5	49.45**	30.91
220.0	000.1950	0116.4	013.0	357.3	005.9511	0105.0	056.6	49.39**	30.75
221.0	000.1950	0116.5	013.0	357.1	005.9481	0105.0	056.8	49.33**	30.59

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI 49036

Exhibit 12.6

Contour Protection Toward WWGO.L

08-24-2009 NED 03 SEC Terrain Data

WWGO BLH20020418ABC
 Channel = 221A
 Max ERP = 6 kW
 RCAMSL = 305 M
 N. Lat. 39 31 40.0
 W. Lng. 88 21 23.0
 Protected
 60 dBu

W221CJ.P
 Channel = 221D
 Max ERP = 0.195 kW
 RCAMSL = 330 M
 N. Lat. 40 07 35.0
 W. Lng. 88 17 25.0
 Interfering
 40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
320.0	001.5000	0103.3	020.9	200.7	000.0964	0117.7	054.0	33.29	
321.0	001.5759	0103.1	021.2	200.8	000.0964	0117.8	053.5	33.46	
322.0	001.6537	0102.8	021.4	200.8	000.0964	0117.8	053.1	33.62	
323.0	001.7334	0102.3	021.6	200.7	000.0964	0117.7	052.7	33.79	
324.0	001.8150	0102.2	021.8	200.7	000.0964	0117.7	052.2	33.96	
325.0	001.8984	0102.2	022.0	200.7	000.0964	0117.7	051.8	34.13	
326.0	001.9837	0102.2	022.3	200.6	000.0964	0117.7	051.4	34.31	
327.0	002.0709	0102.2	022.5	200.6	000.0964	0117.6	050.9	34.48	
328.0	002.1600	0102.1	022.7	200.5	000.0964	0117.6	050.5	34.65	
329.0	002.2509	0102.4	022.9	200.5	000.0964	0117.6	050.0	34.83	
330.0	002.3438	0102.9	023.2	200.4	000.0964	0117.6	049.5	35.02	
331.0	002.4653	0103.1	023.5	200.4	000.0964	0117.5	049.0	35.21	
332.0	002.5899	0103.2	023.8	200.3	000.0964	0117.5	048.5	35.40	
333.0	002.7176	0103.4	024.1	200.2	000.0964	0117.5	048.0	35.59	
334.0	002.8483	0103.5	024.3	200.1	000.0964	0117.5	047.5	35.78	
335.0	002.9822	0103.9	024.6	200.0	000.0964	0117.4	047.0	35.98	
336.0	003.1190	0104.2	024.9	199.8	000.0964	0117.4	046.5	36.18	
337.0	003.2590	0104.4	025.2	199.7	000.0964	0117.3	046.0	36.37	
338.0	003.4021	0103.7	025.4	199.4	000.0965	0117.3	045.6	36.54	
339.0	003.5482	0103.4	025.5	199.1	000.0965	0117.2	045.2	36.72	
340.0	003.6974	0103.5	025.8	198.9	000.0966	0117.2	044.7	36.92	
341.0	003.8882	0103.4	026.1	198.7	000.0966	0117.2	044.2	37.12	
342.0	004.0838	0103.4	026.4	198.4	000.0967	0117.2	043.7	37.33	
343.0	004.2842	0103.3	026.6	198.1	000.0967	0117.2	043.2	37.54	
344.0	004.4894	0103.3	026.9	197.8	000.0968	0117.3	042.7	37.76	
345.0	004.6993	0103.6	027.2	197.5	000.0968	0117.4	042.2	37.98	
346.0	004.9142	0103.7	027.5	197.2	000.0969	0117.4	041.7	38.20	
347.0	005.1338	0104.4	027.9	196.9	000.0970	0117.5	041.1	38.44	
348.0	005.3582	0104.8	028.2	196.5	000.0970	0117.5	040.6	38.67	
349.0	005.5874	0104.5	028.4	196.0	000.0971	0117.4	040.2	38.86	

Exhibit 12.6

Contour Protection Toward WWGO.L

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
350.0	005.8214	0104.8	028.7	195.6	000.0972	0117.4	039.7	39.08
351.0	005.8391	0104.7	028.7	194.9	000.0974	0117.3	039.5	39.18
352.0	005.8569	0104.6	028.7	194.2	000.0975	0117.3	039.3	39.27
353.0	005.8747	0105.0	028.8	193.6	000.0976	0117.3	039.0	39.38
354.0	005.8925	0104.9	028.8	192.9	000.0977	0117.4	038.8	39.48
355.0	005.9103	0105.3	028.9	192.2	000.0979	0117.5	038.6	39.59
356.0	005.9282	0105.1	028.9	191.5	000.0980	0117.6	038.5	39.66
357.0	005.9461	0105.0	028.9	190.8	000.0982	0117.7	038.3	39.74
358.0	005.9641	0105.1	028.9	190.0	000.0983	0117.4	038.2	39.79
359.0	005.9820	0105.0	028.9	189.3	000.0987	0117.0	038.1	39.82
000.0	006.0000	0104.6	028.9	188.5	000.0992	0116.6	038.0	39.84
001.0	006.0000	0104.3	028.9	187.8	000.0997	0116.6	038.0	39.87
002.0	006.0000	0104.1	028.8	187.0	000.1001	0116.6	038.0	39.91
003.0	006.0000	0104.0	028.8	186.3	000.1006	0116.0	038.0	39.90
004.0	006.0000	0103.7	028.8	185.5	000.1011	0114.9	038.0	39.84
005.0	006.0000	0103.5	028.8	184.7	000.1015	0113.7	038.0	39.76
006.0	006.0000	0103.1	028.7	184.0	000.1020	0112.6	038.1	39.67
007.0	006.0000	0102.8	028.7	183.2	000.1025	0111.4	038.1	39.58
008.0	006.0000	0102.7	028.7	182.5	000.1029	0110.3	038.2	39.50
009.0	006.0000	0102.6	028.6	181.8	000.1034	0109.1	038.2	39.40
010.0	006.0000	0102.5	028.6	181.0	000.1038	0107.9	038.3	39.28
011.0	006.0000	0102.3	028.6	180.3	000.1043	0106.9	038.4	39.18
012.0	006.0000	0102.2	028.6	179.6	000.1049	0105.9	038.6	39.07
013.0	006.0000	0102.0	028.6	178.9	000.1055	0105.3	038.7	38.98
014.0	006.0000	0101.8	028.5	178.2	000.1061	0104.7	038.8	38.90
015.0	006.0000	0101.7	028.5	177.5	000.1067	0104.4	039.0	38.83
016.0	006.0000	0101.8	028.5	176.8	000.1073	0104.3	039.2	38.78
017.0	006.0000	0101.7	028.5	176.1	000.1079	0104.2	039.3	38.72
018.0	006.0000	0101.7	028.5	175.4	000.1085	0104.1	039.5	38.66
019.0	006.0000	0101.5	028.5	174.8	000.1090	0104.2	039.7	38.59
020.0	006.0000	0100.9	028.4	174.2	000.1095	0104.4	040.0	38.51
021.0	006.0000	0100.7	028.4	173.6	000.1101	0105.0	040.3	38.46
022.0	006.0000	0101.0	028.4	172.9	000.1107	0105.0	040.5	38.41
023.0	006.0000	0101.2	028.5	172.3	000.1112	0105.0	040.7	38.34
024.0	006.0000	0101.0	028.4	171.7	000.1117	0104.8	041.0	38.22
025.0	006.0000	0101.2	028.4	171.1	000.1122	0104.7	041.2	38.12
026.0	006.0000	0101.1	028.4	170.6	000.1127	0104.7	041.5	38.02
027.0	006.0000	0101.0	028.4	170.0	000.1132	0104.6	041.8	37.91
028.0	006.0000	0100.8	028.4	169.5	000.1137	0104.6	042.1	37.79
029.0	006.0000	0100.7	028.4	169.0	000.1141	0104.7	042.5	37.68
030.0	006.0000	0100.6	028.4	168.5	000.1146	0104.8	042.8	37.57
031.0	006.0000	0100.7	028.4	168.0	000.1150	0104.9	043.1	37.46
032.0	006.0000	0100.7	028.4	167.5	000.1154	0105.2	043.5	37.36
033.0	006.0000	0100.8	028.4	167.0	000.1159	0105.3	043.8	37.25
034.0	006.0000	0100.8	028.4	166.6	000.1163	0105.6	044.2	37.13
035.0	006.0000	0100.5	028.4	166.2	000.1166	0105.7	044.6	37.00

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI 49036

Exhibit 12.7 **§74.1204(d) Waiver Request** **Toward WCFF.L - Urbana, IL** **& WBGL.L - Champaign, IL**

WBGL.L
BLD20050711ABR
Latitude: 40-09-12 N
Longitude: 088-06-56 W
ERP: 20.00 kW
Channel: 219
Frequency: 91.7 MHz
AMSL Height: 352.0 m
Horiz. Pattern: Omni

 **WBGL.L**

 **CH221D.P 113.0 dBu f(50:10)**
W221CJ.P

W221CJ.P
Proposed Operation
Latitude: 40-07-35 N
Longitude: 088-17-25 W
ERP: 0.195 kW
Channel: 221
Frequency: 92.1 MHz
AMSL Height: 330.0 m
Horiz. Pattern: Directional

WCFF.L
BLH20010717AAA
Latitude: 40-00-45 N
Longitude: 088-08-29 W
ERP: 16.00 kW
Channel: 223
Frequency: 92.5 MHz
AMSL Height: 334.0 m
Horiz. Pattern: Omni

 **WCFF.L**

WBGL.L - 73.0 dBu f(50:50)

WCFF.L - 73.0 dBu f(50:50)

Proposed Antenna: BKG77/2-DA Two Bay 0.9 λ Spaced
Proposed Power: 0.195 kW
Antenna Height AGL: 94 meters
Interference Contour: 113 dBu f(50:10)
Artificial Ground Plane Height: 7 meters
Distance (Free Space) Equation: $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)) * 1000}$
Field Strength (dBu) Equation: $= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$

Depression	Antenna			Distance	Distance	Field Strength	Distance	Field Strength
Angle	Relative	ERP	ERP	from Ant.	from Ant. to	in dBu @	from Ant.	in dBu @
Below	Field	in kW	in dBk	to Interference	Artificial Plane	Artificial Plane	to Ground Level	Ground Level
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	to Ground Level	Ground Level
0°	1.000	0.195	-7.10	219.29 m	infinite	---	---	---
-5°	0.970	0.183	-7.36	212.71 m	998.21 m	99.57 dBu	1078.53 m	98.90 dBu
-10°	0.885	0.153	-8.16	194.07 m	501.01 m	104.76 dBu	541.32 m	104.09 dBu
-15°	0.743	0.108	-9.68	162.93 m	336.14 m	106.71 dBu	363.19 m	106.04 dBu
-20°	0.568	0.063	-12.01	124.56 m	254.37 m	106.80 dBu	274.84 m	106.13 dBu
-25°	0.377	0.028	-15.57	82.67 m	205.86 m	105.08 dBu	222.42 m	104.40 dBu
-30°	0.189	0.007	-21.57	41.45 m	174.00 m	100.54 dBu	188.00 m	99.87 dBu
-35°	0.018	0.000	-41.99	3.95 m	151.68 m	81.31 dBu	163.88 m	80.64 dBu
-40°	0.123	0.003	-25.30	26.97 m	135.35 m	98.99 dBu	146.24 m	98.32 dBu
-45°	0.226	0.010	-20.02	49.56 m	123.04 m	105.10 dBu	132.94 m	104.43 dBu
-50°	0.290	0.016	-17.85	63.59 m	113.57 m	107.96 dBu	122.71 m	107.29 dBu
-55°	0.321	0.020	-16.97	70.39 m	106.21 m	109.43 dBu	114.75 m	108.76 dBu
-60°	0.321	0.020	-16.97	70.39 m	100.46 m	109.91 dBu	108.54 m	109.24 dBu
-65°	0.299	0.017	-17.59	65.57 m	95.99 m	109.69 dBu	103.72 m	109.02 dBu
-70°	0.261	0.013	-18.77	57.23 m	92.58 m	108.82 dBu	100.03 m	108.15 dBu
-75°	0.217	0.009	-20.37	47.59 m	90.07 m	107.46 dBu	97.32 m	106.79 dBu
-80°	0.171	0.006	-22.44	37.50 m	88.34 m	105.56 dBu	95.45 m	104.88 dBu
-85°	0.138	0.004	-24.30	30.26 m	87.33 m	103.79 dBu	94.36 m	103.12 dBu
-90°	0.124	0.003	-25.23	27.19 m	87.00 m	102.90 dBu	94.00 m	102.23 dBu

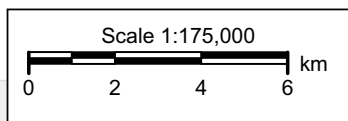
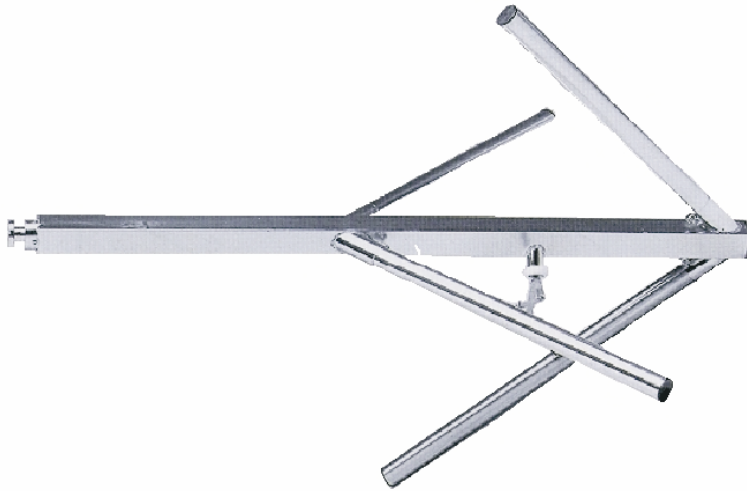


Exhibit 12.7 - Manufacturer's Directional Antenna Pattern Data (Actual Pattern Rotated to 40.0°T)



NICOM
BKG77

Medium Power

**Broadband
FM Circular
Polarization
Antenna
Antena de
FM Banda Ancha
Polarizacion Circular**

This antenna, constructed completely of stainless steel, offers circular polarization for better coverage especially in urban areas. In order to facilitate and decrease shipping costs, this model is simple to break down and reassemble when ready to be installed. It is insulated with Teflon, and with the appropriate connector has a maximum input of 2 kw.

Esta antena, fabricada completamente de acero inoxidable, le ofrece polarización circular para mejor alcance, especialmente en zonas urbanas. Para facilitar y disminuir los costos de transportación, este modelo es fácil de desarmar y volver a montar tan pronto que la quiera instalar. Está aislada con Teflon, y con el conector apropiado tiene una entrada máxima de 2 kw.



TECHNICAL SPECIFICATIONS

Antenna type	circular polarization dipole	Front-to-back ratio	3 dB
Frequency range	87.5 - 108 MHz	Lightening protection	all parts grounded
Bandwidth	16 MHz	Max wind velocity	119 mph (190 km/h)
Impedance	50 ohms	Wind load	53 Lbs (24 kg)
Connectors	N type (1 kw) - 7/8 type (2 kw)	Wind surface	1.1 ft ² (0.10 m ²)
Power rating	2000 Watts max	Materials (external)	stainless steel
VSWR	< 1.3	Mounting	from 2" to 4"
Polarization	vertical and horizontal	Weight	23.1 Lbs (10.5 kg)
Gain	- 3 dBd (referred to half-wave dipole)	Dimensions	58"×32"×32" (1450×800×800mm)
H plane	omnidirectional ±1.5 dB (with a 4" mast)	Packing	72"×6"×6" (1500×152×152mm)
V plane	omnidirectional ±3 dB (with a 4" mast)		

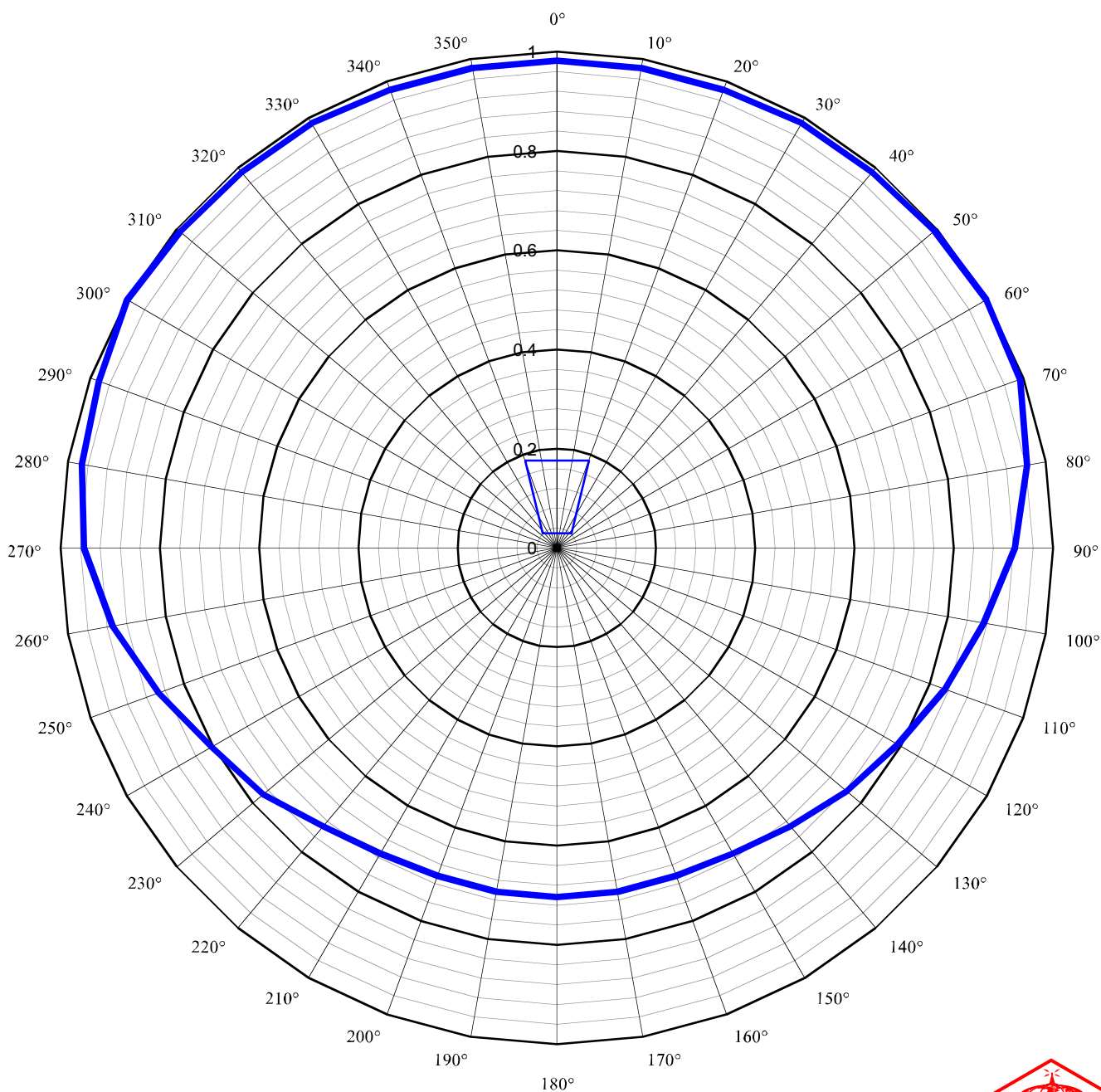


Exhibit 12.7 - Manufacturer's Directional Antenna Pattern Data (Actual Pattern Rotated to 40.0°T)

Plot of Horizontal Antenna Pattern

Manufacturer: NicomUSA, Inc.
Make/Model: BKG77/2-DA
Polarization: Circular
Inter Bay Spacing: 0.9λ (Wavelength)
Antenna Gain: -0.1 dBd

Frequency: 87.5 MHz - 108.0 MHz
Weight: 14 kg
Max Power: 5.0 kW
Return Loss: -27.1 dB
R.C. Phase: -89°



MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339

Exhibit 12.7 - Manufacturer's Directional Antenna Pattern Data (Actual Pattern Rotated to 40.0°T)

Tabulation of Horizontal Antenna Pattern

Manufacturer: NicomUSA, Inc. Make/Model: BKG77/2-DA Polarization: Circular Inter Bay Spacing: 0.9 λ (Wavelength) Antenna Gain: -0.1 dBd	Frequency: 87.5 MHz - 108.0 MHz Weight: 14 Kg Max Power: 5 kW Return Loss: -27.1 dB R.C. Phase: -89°
--	---

Horizontal Azimuth	Field (%)	Field dB	Horizontal Azimuth	Field (%)	Field dB	Horizontal Azimuth	Field (%)	Field dB
0.0°	0.982	-0.08	120.0°	0.792	-1.01	240.0°	0.802	-0.96
10.0°	0.982	-0.08	130.0°	0.762	-1.18	250.0°	0.853	-0.69
20.0°	0.982	-0.08	140.0°	0.732	-1.35	260.0°	0.909	-0.41
30.0°	0.988	-0.05	150.0°	0.710	-1.49	270.0°	0.953	-0.21
40.0°	0.988	-0.05	160.0°	0.703	-1.53	280.0°	0.972	-0.12
50.0°	0.993	-0.03	170.0°	0.703	-1.53	290.0°	0.982	-0.08
60.0°	1.000	0.00	180.0°	0.703	-1.53	300.0°	1.000	0.00
70.0°	0.993	-0.03	190.0°	0.703	-1.53	310.0°	0.991	-0.04
80.0°	0.962	-0.17	200.0°	0.703	-1.53	320.0°	0.988	-0.05
90.0°	0.923	-0.35	210.0°	0.711	-1.48	330.0°	0.988	-0.05
100.0°	0.873	-0.59	220.0°	0.732	-1.35	340.0°	0.982	-0.08
110.0°	0.832	-0.80	230.0°	0.772	-1.12	350.0°	0.982	-0.08

Exhibit 12.7 - Manufacturer's Directional Antenna Pattern Data (Actual Pattern Rotated to 40.0°T)

Plot of Vertical Radiation Pattern

Manufacturer: NicomUSA, Inc.
Make/Model: BKG77/2-DA
Polarization: Circular
Inter Bay Spacing: 0.9λ (Wavelength)
Antenna Gain: -0.1 dBd

Frequency: 87.5 MHz - 108.0 MHz
Weight: 14 kg
Max Power: 5.0 kW
Return Loss: -27.1 dB
R.C. Phase: -89°

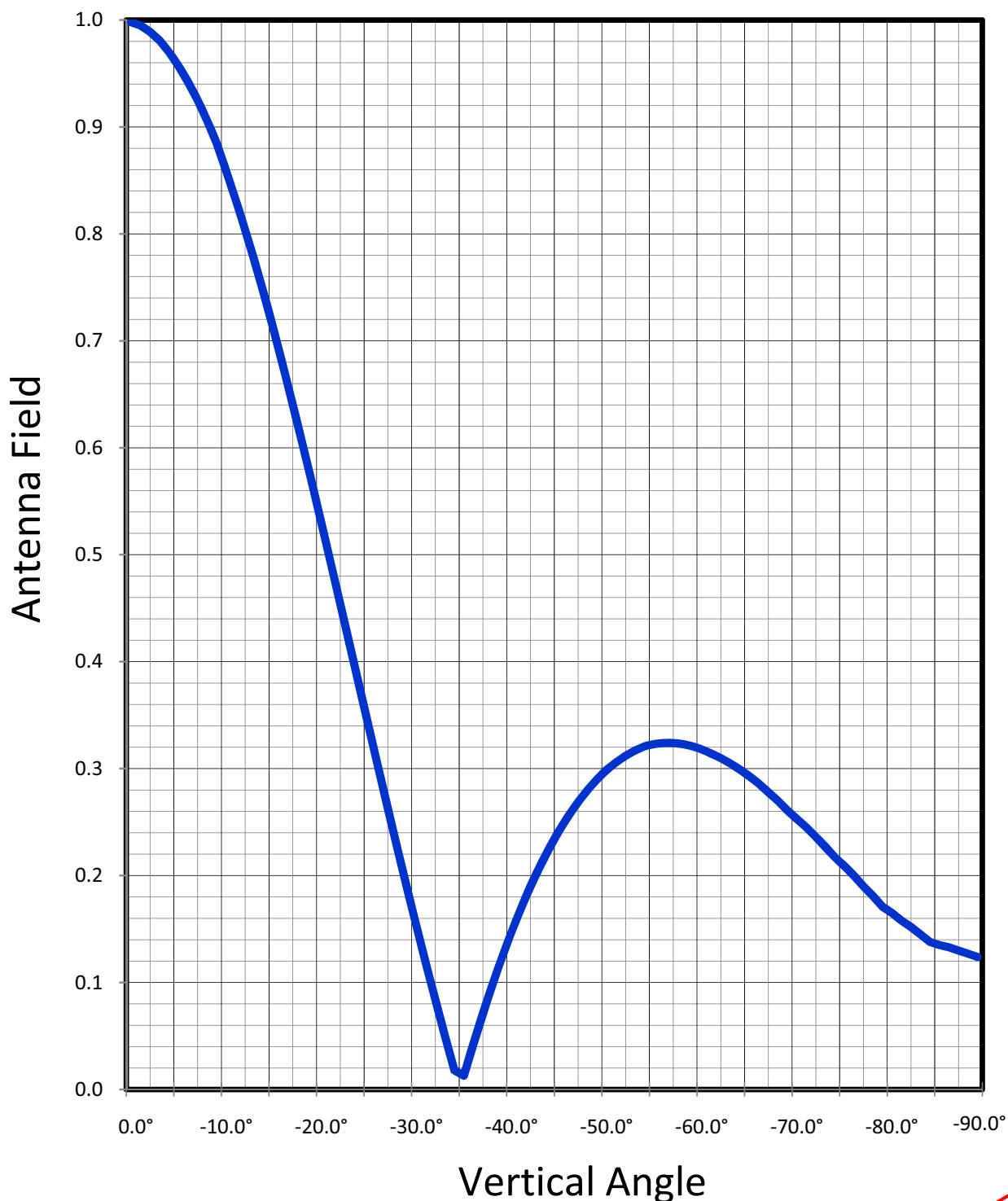


Exhibit 12.7 - Manufacturer's Directional Antenna Pattern Data (Actual Pattern Rotated to 40.0°T)

Tabulation of Vertical Radiation Pattern

Manufacturer: NicomUSA, Inc.

Frequency: 87.5 MHz - 108.0 MHz

Make/Model: BKG77/2-DA

Weight: 14 Kg

Polarization: Circular

Max Power: 5 kW

Inter Bay Spacing: 0.9 λ (Wavelength)

Return Loss: -27.1 dB

Antenna Gain: -0.1 dBd

R.C. Phase: -89°

Vertical Azimuth	Field (%)	dB	Vertical Azimuth	Field (%)	dB	Vertical Azimuth	Field (%)	dB
0.0°	1.000	0.00	-30.0°	0.189	-7.24	-60.0°	0.321	-4.93
-1.0°	0.998	-0.01	-31.0°	0.153	-8.15	-61.0°	0.318	-4.98
-2.0°	0.995	-0.02	-32.0°	0.118	-9.28	-62.0°	0.314	-5.03
-3.0°	0.989	-0.05	-33.0°	0.083	-10.81	-63.0°	0.310	-5.09
-4.0°	0.981	-0.08	-34.0°	0.050	-13.01	-64.0°	0.305	-5.16
-5.0°	0.970	-0.13	-35.0°	0.018	-17.45	-65.0°	0.299	-5.24
-6.0°	0.957	-0.19	-36.0°	0.013	-18.86	-66.0°	0.293	-5.33
-7.0°	0.942	-0.26	-37.0°	0.043	-13.67	-67.0°	0.286	-5.44
-8.0°	0.925	-0.34	-38.0°	0.071	-11.49	-68.0°	0.278	-5.56
-9.0°	0.906	-0.43	-39.0°	0.098	-10.09	-69.0°	0.270	-5.69
-10.0°	0.885	-0.53	-40.0°	0.123	-9.10	-70.0°	0.261	-5.83
-11.0°	0.859	-0.66	-41.0°	0.147	-8.33	-71.0°	0.253	-5.97
-12.0°	0.832	-0.80	-42.0°	0.169	-7.72	-72.0°	0.245	-6.11
-13.0°	0.804	-0.95	-43.0°	0.190	-7.21	-73.0°	0.236	-6.27
-14.0°	0.774	-1.11	-44.0°	0.209	-6.80	-74.0°	0.227	-6.44
-15.0°	0.743	-1.29	-45.0°	0.226	-6.46	-75.0°	0.217	-6.64
-16.0°	0.710	-1.49	-46.0°	0.242	-6.16	-76.0°	0.209	-6.80
-17.0°	0.676	-1.70	-47.0°	0.256	-5.92	-77.0°	0.200	-6.99
-18.0°	0.640	-1.94	-48.0°	0.269	-5.70	-78.0°	0.190	-7.21
-19.0°	0.605	-2.18	-49.0°	0.280	-5.53	-79.0°	0.181	-7.42
-20.0°	0.568	-2.46	-50.0°	0.290	-5.38	-80.0°	0.171	-7.67
-21.0°	0.530	-2.76	-51.0°	0.299	-5.24	-81.0°	0.165	-7.83
-22.0°	0.492	-3.08	-52.0°	0.306	-5.14	-82.0°	0.158	-8.01
-23.0°	0.454	-3.43	-53.0°	0.312	-5.06	-83.0°	0.152	-8.18
-24.0°	0.415	-3.82	-54.0°	0.317	-4.99	-84.0°	0.145	-8.39
-25.0°	0.377	-4.24	-55.0°	0.321	-4.93	-85.0°	0.138	-8.60
-26.0°	0.339	-4.70	-56.0°	0.323	-4.91	-86.0°	0.135	-8.70
-27.0°	0.301	-5.21	-57.0°	0.324	-4.89	-87.0°	0.133	-8.76
-28.0°	0.263	-5.80	-58.0°	0.324	-4.89	-88.0°	0.130	-8.86
-29.0°	0.226	-6.46	-59.0°	0.323	-4.91	-89.0°	0.127	-8.96
						-90.0°	0.124	-9.07

