

PROPOSED ANTENNA STRUCTURE

WOCC-LP
LPTV - CHANNEL 13
CHICAGO, IL

**FIGURE
1**

GAITHERSBURG, MARYLAND U.S.A

SIZE
A

FSCM NO
N/A

DWG NO
20050125KMCF1

REV
NONE

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SCALE
N/A

JANUARY 2005

SHEET

1 OF 1

WOCK-CA (LICENSE)
BLTVA20021125AAU
Latitude: 41-53-56 N
Longitude: 087-37-23 W
Channel: 13-
Frequency: 212.5 MHz
ERP: 3.00 kW
Antenna HAAT: 362.51 m
Antenna AMSL Height: 542.0 m
Antenna AGL Height: 363.0 m
Site Elevation AMSL: 179.0 m
Horiz. Pattern: Directional

WOCK-CA (APPLICATION)
Latitude: 41-53-56 N
Longitude: 087-37-23 W
Channel: 13-
Frequency: 213.0 MHz
ERP: 3.00 kW
Antenna HAAT: 391.31 m
Antenna AMSL Height: 570.8 m
Antenna AGL Height: 390.1 m
Site Elevation AMSL: 180.7 m
Horiz. Pattern: Directional

PREDICTED SERVICE CONTOURS
PRESENT AND PROPOSED

WOCK-CA, CHIANNEL 13
CHICAGO, IL

FIGURE 2

Population Report 2000 US Census (SF1)
Contour Parameters: Type: FCC Contour F(50-50)
FS: 74.00 dBu [360 Radials]

PRESENT

Total Population Within Contour: 2,211,083
Total Housing Units Within Contour: 888,851
Total Area Within Contour: 705.66 sq. km

PROPOSED

Total Population Within Contour: 2,390,186
Total Housing Units Within Contour: 966,744
Total Area Within Contour: 796.29 sq. km

74 dBu f(50,50)

Cook WOCK-SPP

Chicago

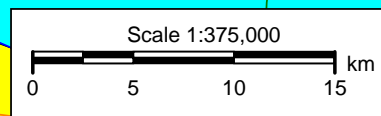
Naperville

East Chicago

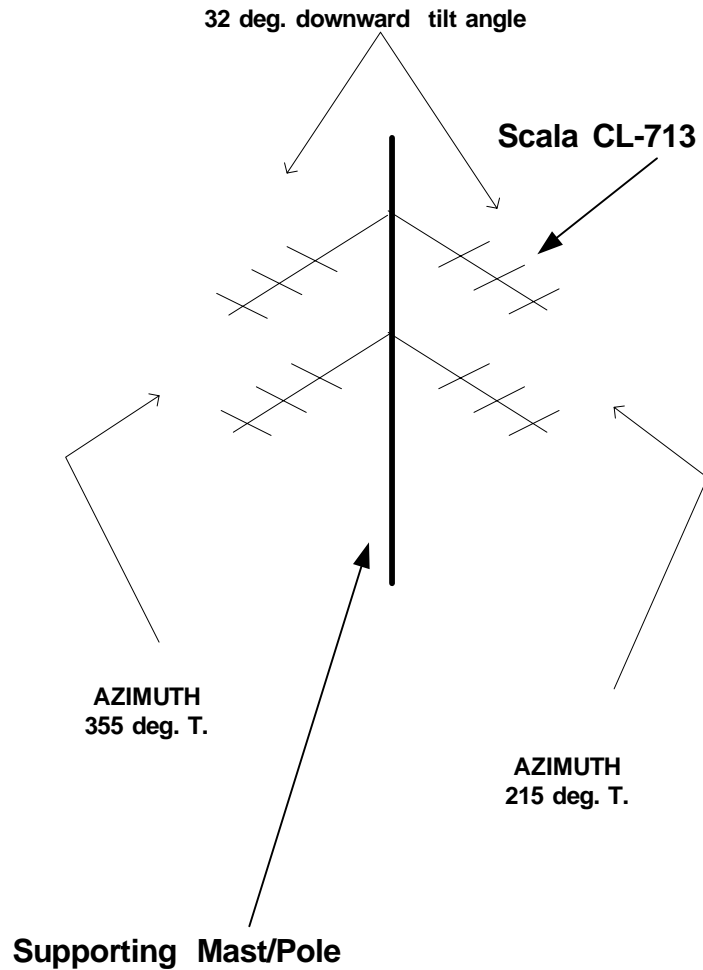
Calumet City

Harvey

Oak Forest



**ANTENNA ARRAY:
CL-713 COMPOSITE
4 - SCALA CL-713 YAGI ANTENNAS**



Proposed Ch. 13 WOCK-CA Antenna Mounting Angles -
Azimuths & Angle Below Horizontal



**ANTENNA ELEMENT LAYOUT
SCALA CL-713 COMPOSITE**

WOCK-CA
CHICAGO, IL

**FIGURE
3**

GAITHERSBURG, MARYLAND U.S.A

SIZE
A

FSCM NO
N/A

DWG NO
20050125KMCF3

REV
NONE

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SCALE N/A

JANUARY 2005

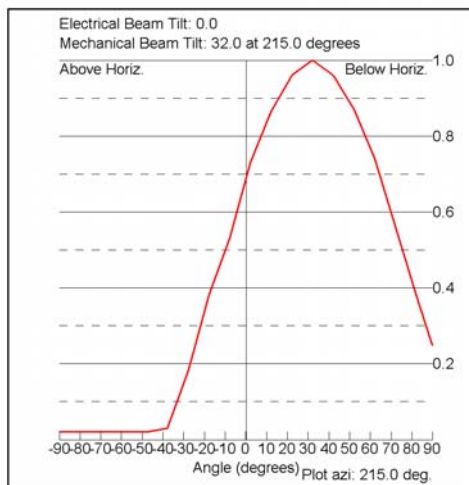
SHEET

1 OF 2

MECANICAL BEAM TILT 32 DEGREES ON AZIMUTH 215 DEGREES AND 355 DEGREES TRUE

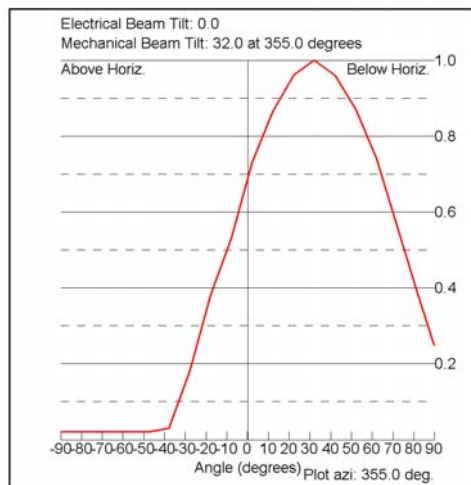
Vertical Elevation Pattern

Angle (deg)	Relative Field
-90.0	0.02
-80.0	0.02
-70.0	0.03
-60.0	0.18
-50.0	0.38
-40.0	0.53
-30.0	0.73
-20.0	0.865
-10.0	0.96
0.0	1.0
10.0	0.96
20.0	0.87
30.0	0.74
40.0	0.56
50.0	0.38
60.0	0.21
70.0	0.07
80.0	0.04
90.0	0.02



Vertical Elevation Pattern

Angle (deg)	Relative Field
-90.0	0.02
-80.0	0.02
-70.0	0.03
-60.0	0.18
-50.0	0.38
-40.0	0.53
-30.0	0.73
-20.0	0.865
-10.0	0.96
0.0	1.0
10.0	0.96
20.0	0.87
30.0	0.74
40.0	0.56
50.0	0.38
60.0	0.21
70.0	0.07
80.0	0.04
90.0	0.02



ELEVATION RELATIVE FIELD PATTERN 215 AND 355 DEGEES TRUE

WOCK-CA
CHICAGO, IL

FIGURE
3

GAITHERSBURG, MARYLAND U.S.A

SIZE
A

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DWG NO
20050125KMCF3-2

REV
NONE

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SCALE
N/A

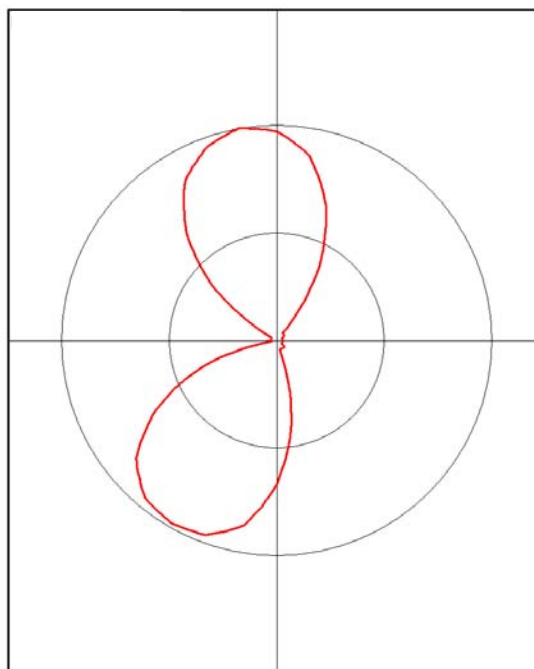
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SHEET
2 OF 2

Antenna Pattern Toward Radio Horizon

Azimuth (deg) Effective Field

0.0	0.985
5.0	0.971
10.0	0.921
15.0	0.872
20.0	0.769
25.0	0.666
30.0	0.529
35.0	0.392
40.0	0.218
45.0	0.043
50.0	0.044
55.0	0.044
60.0	0.040
65.0	0.036
70.0	0.030
75.0	0.025
80.0	0.026
85.0	0.026
90.0	0.026
95.0	0.026
100.0	0.027
105.0	0.028
110.0	0.027
115.0	0.026
120.0	0.026
125.0	0.026
130.0	0.037
135.0	0.047
140.0	0.046
145.0	0.046
150.0	0.045
155.0	0.044
160.0	0.044
165.0	0.043
170.0	0.218
175.0	0.392
180.0	0.529
185.0	0.666
190.0	0.769
195.0	0.872
200.0	0.916
205.0	0.961
210.0	0.970
215.0	0.978
220.0	0.965
225.0	0.952
230.0	0.902
235.0	0.852
240.0	0.751
245.0	0.649
250.0	0.513
255.0	0.377
260.0	0.202
265.0	0.026
270.0	0.026
275.0	0.026
280.0	0.027
285.0	0.028
290.0	0.027
295.0	0.026
300.0	0.026
305.0	0.026



310.0	0.202
315.0	0.377
320.0	0.513
325.0	0.649
330.0	0.751
335.0	0.852
340.0	0.902
345.0	0.952
350.0	0.976
355.0	1.000

Composite Antenna: SCALA-713-COMPOSITE
4-STACKED/SKEWED CL-713 ANTENNAS
MECHANICAL BEAM TILT 32 DEGREES
AT 215 DEG. T. AND 255 DEG.T

COMPUTED GAIN: ANTENNA GAIN (PWR)
H GAIN AT HORIZON: 6.16 dBd 4.13
H GAIN MAX : 9.26 dBd 8.43



RELATIVE FIELD PATTERN TOWARD RADIO HORIZON

WOCK-CA
CHICAGO, IL

**FIGURE
4**

GAITHERSBURG, MARYLAND U.S.A

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A

FSCM NO
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REV
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SCALE N/A

JANUARY 2005

SHEET 1 OF 1

