



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF A REQUEST FOR  
SPECIAL TEMPORARY AUTHORIZATION  
WLS-TV - CHICAGO, ILLINOIS  
DTV - CH. 7 - 7.0 kW - 457 m HAAT**

Prepared for: WLS TELEVISION, INC.

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

**GENERAL**

This office has been authorized by WLS TELEVISION, INC., permittee of WLS-TV, channel 44, Chicago, Illinois, and the applicant for a replacement translator on channel 7, BTRDCDT-20090817ACC, to prepare this statement and associated exhibits in support of a request for a Special Temporary Authorization (STA). The permittee is in the process of construction of its authorized channel 44 facility at Willis Tower. WLS-TV was operating a channel 7 "fill-in" facility at Willis Tower, based on its pending replacement translator application, authorized by STA BDSTA-20090908ABP, as extended by BELDSTA-20110408ABH, which uses WLS-TV's existing former main channel 7 antenna. WLS-TV's construction permit implementation has required the removal of the transmission line to that former main channel 7 antenna. WLS-TV therefore seeks to modify its current channel 7 STA to utilize its former auxiliary antenna in order to quickly restore its "fill-in" service on channel 7 to the viewers who currently depend on that service.

**INTERIM MODIFIED REPLACEMENT TRANSLATOR STA FACILITY**

WLS-TV had previously installed, in 1973 with the FCC's approval, an experimental circularly polarized antenna at the Sears Tower, the purpose of which was to demonstrate and quantify the advantage of using circularly polarized transmission of television signals. That RCA custom circularly polarized antenna was ultimately licensed as WLS-TV's main antenna, and was relegated to auxiliary service in 1982.

Now that the former main channel 7 antenna's transmission line has been removed to make way for its new channel 44 antenna, WLS-TV seeks to restore its current channel 7 STA operation by switching to this auxiliary antenna. The proposed antenna is located 51 meters lower than the currently authorized omni-directional antenna, whereas the proposed antenna has a directional horizontal azimuth pattern. (See antenna exhibit) There is also a proposed increase in ERP to 7.0 kW to compensate for the reduced HAAT. Correspondingly, the distance to the predicted 36 dBu F(50,90) signal contour based on the current STA operation will not be exceeded in any direction by the predicted 36 dBu F(50,90) signal contour of the STA facility proposed herein.

**ALLOCATION AND PROTECTION CONSIDERATIONS**

Based on the facts that the antenna HAAT will be reduced by 51 meters, the ERP will be increased only enough to partly compensate for the reduced height, and the distance to contour for the current authorization will not be exceed at any azimuth, the permittee therefore asserts that the proposed change in its channel 7 replacement translator STA operation, by substitution of its former auxiliary antenna for its former main antenna, will cause no new interference to any other authorized television facility.

**RADIO FREQUENCY IMPACT & OCCUPATIONAL SAFETY**

Access to the roof area of the Willis Tower is completely restricted, and controlled continuously by security personnel, and is allowed only to authorized persons. As a tenant, WLS-TV is subject to the Willis Tower RF Safety program. The program's RF Safety Procedures ensure that each broadcasting facility is compliant with requirements to operate with reduced power or to cease operation as required by the location of the work. A description of the Willis Tower RF Safety Program and notification procedures is contained in WLS-TV's original application for construction permit, BPCDT-20091001ACI.

**SUMMARY**

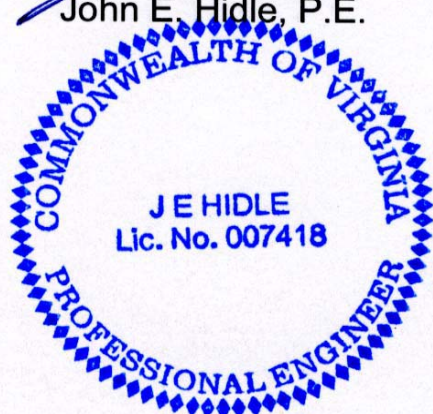
It is submitted that, because of the complicated CP implementation process, the STA, as proposed herein, is essential to restore the interim "replacement translator" service to the viewing public. This immediate grant of this requested STA is considered to be in the public interest. This statement and the attached exhibits were prepared by me and are believed to be true and correct to the best of my knowledge and belief.

DATED: September 9, 2011

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John E. Hidle, P.E.





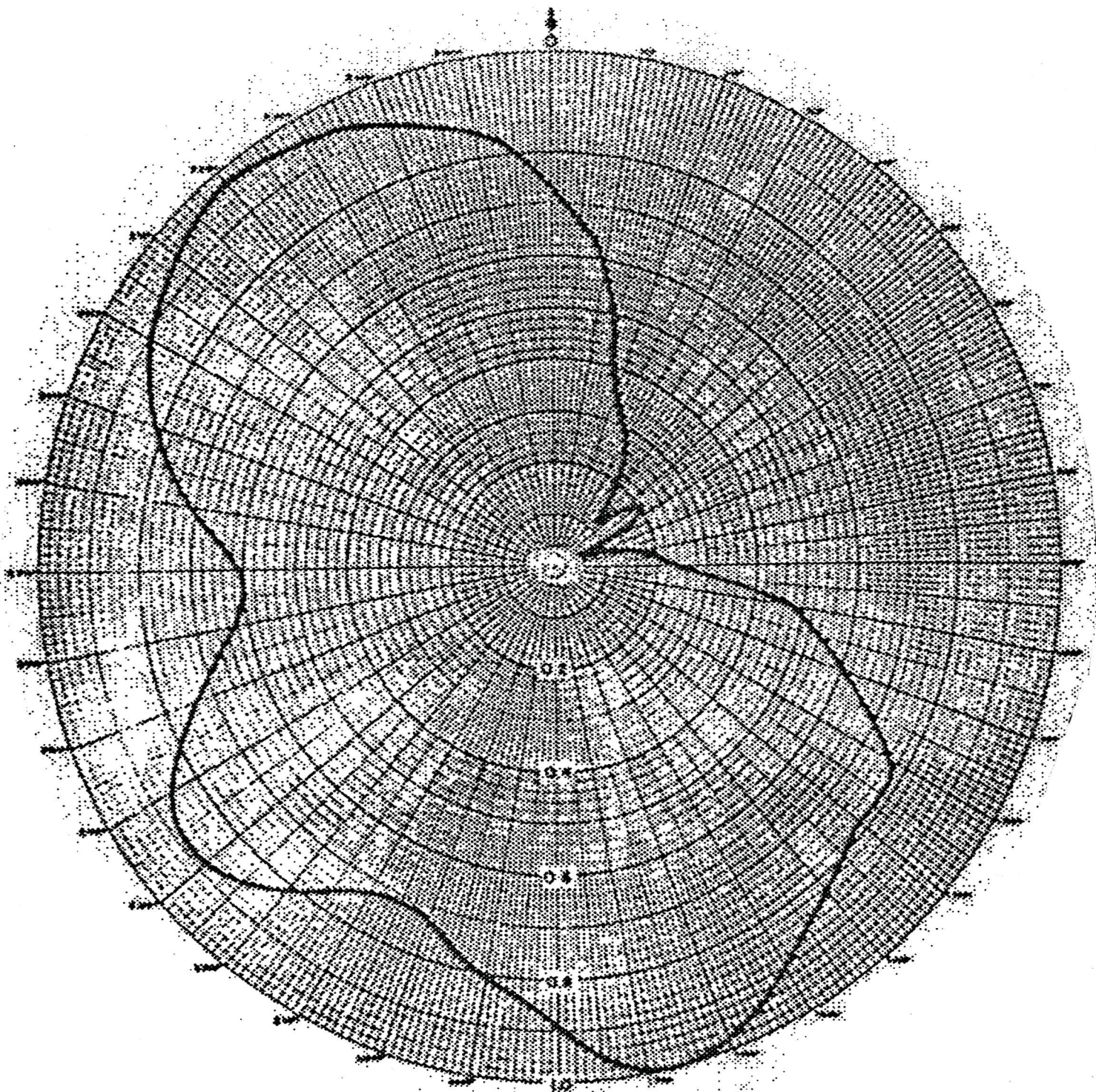
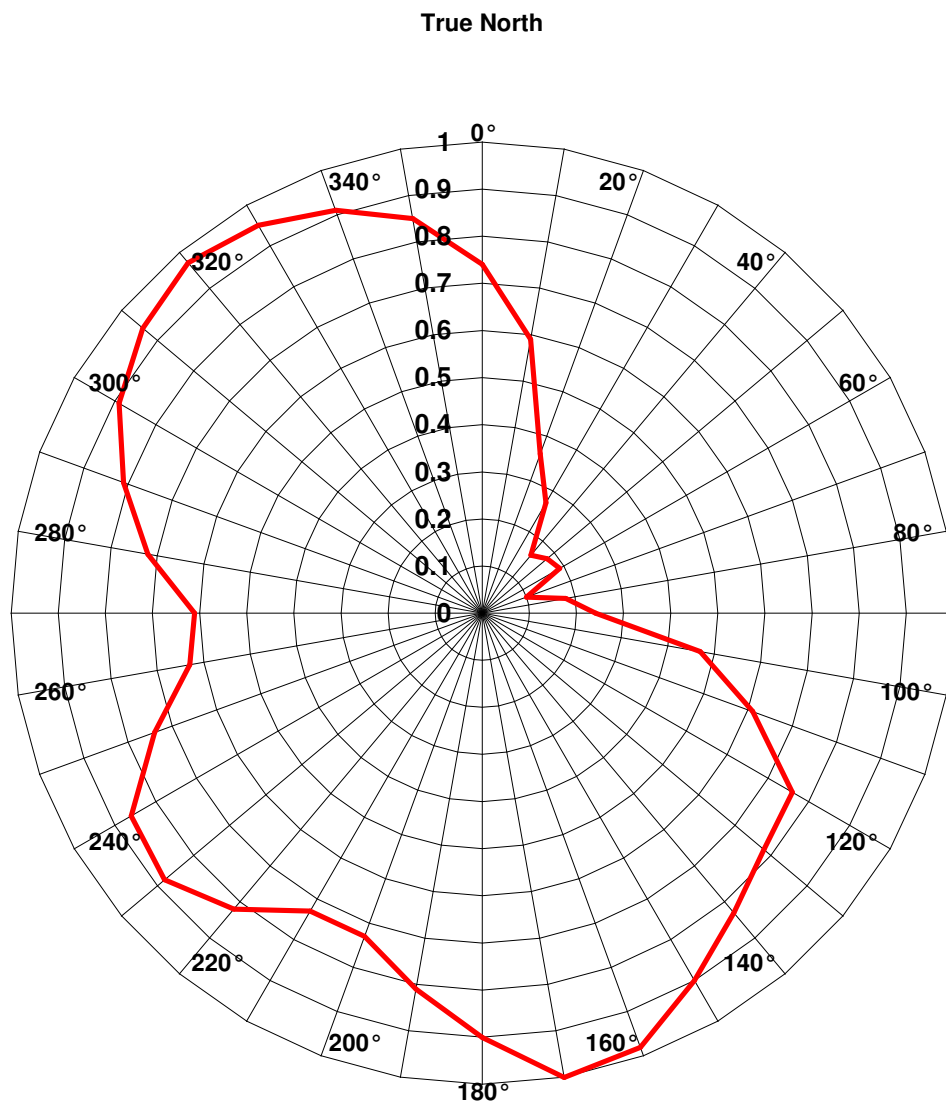


Figure 22.

**RCA 3 Section Custom Circularly Polarized Antenna  
Horizontal Azimuth Pattern**



# Exhibit 1



Azimuth (deg T.)	Relative Field	ERP (kilowatts)	ERP (dBk)
0	0.74	3.833	5.84
10	0.59	2.437	3.87
20	0.36	0.907	-0.42
30	0.27	0.510	-2.92
40	0.16	0.179	-7.47
50	0.18	0.227	-6.44
60	0.19	0.253	-5.97
70	0.1	0.070	-11.55
80	0.18	0.227	-6.44
90	0.24	0.403	-3.94
100	0.47	1.546	1.89
110	0.61	2.605	4.16
120	0.76	4.043	6.07
130	0.78	4.259	6.29
140	0.83	4.822	6.83
150	0.9	5.670	7.54
160	0.98	6.723	8.28
170	1	7.000	8.45
180	0.9	5.670	7.54
190	0.81	4.593	6.62
200	0.73	3.730	5.72
210	0.73	3.730	5.72
220	0.82	4.707	6.73
230	0.88	5.421	7.34
240	0.86	5.177	7.14
250	0.74	3.833	5.84
260	0.63	2.778	4.44
270	0.61	2.605	4.16
280	0.72	3.629	5.60
290	0.81	4.593	6.62
300	0.89	5.545	7.44
310	0.94	6.185	7.91
320	0.97	6.586	8.19
330	0.95	6.318	8.01
340	0.91	5.797	7.63
350	0.85	5.058	7.04

**RCA 3 Section Custom Circularly Polarized Antenna  
Horizontal Azimuth Pattern  
WLS-DT CH 7, CHICAGO, IL**

## Tabulation of Horizontal Azimuth Pattern

<u>Azimuth</u> <u>(deg T.)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(kilowatts)</u>	<u>ERP</u> <u>(dBk)</u>
0°	0.74	3.833	5.84
10°	0.59	2.437	3.87
20°	0.36	0.907	-0.42
30°	0.27	0.510	-2.92
40°	0.16	0.179	-7.47
50°	0.18	0.227	-6.44
60°	0.19	0.253	-5.97
70°	0.1	0.070	-11.55
80°	0.18	0.227	-6.44
90°	0.24	0.403	-3.94
100°	0.47	1.546	1.89
110°	0.61	2.605	4.16
120°	0.76	4.043	6.07
130°	0.78	4.259	6.29
140°	0.83	4.822	6.83
150°	0.9	5.670	7.54
160°	0.98	6.723	8.28
170°	1	7.000	8.45
180°	0.9	5.670	7.54
190°	0.81	4.593	6.62
200°	0.73	3.730	5.72
210°	0.73	3.730	5.72
220°	0.82	4.707	6.73
230°	0.88	5.421	7.34
240°	0.86	5.177	7.14
250°	0.74	3.833	5.84
260°	0.63	2.778	4.44
270°	0.61	2.605	4.16
280°	0.72	3.629	5.60
290°	0.81	4.593	6.62
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310°	0.94	6.185	7.91
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330°	0.95	6.318	8.01
340°	0.91	5.797	7.63
350°	0.85	5.058	7.04

**RCA 3 Section Custom Circularly Polarized Antenna**