



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
DIGITAL DISPLACEMENT OF CLASS A LPTV STATION
W16AX - ITHACA, NEW YORK
BLTTA-20010302ABE
CLASS A LPTV - TO CH. 51 - 15 kW - 27 m AGL**

Prepared for: WSYT Licensee, L.P.

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 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 WSYT Licensee, L.P., licensee of W16AX, Class A LPTV station, channel 16, Ithaca, New York, to prepare this statement, FCC Form 301-CA, Section III, Engineering (digital), and associated exhibits in support of an application for digital displacement from analog channel 16+ to digital channel 51. The licensee of W16AX initially intended to seek an authorization to "flash-cut" to digital operation on channel 16, however because of the significant differences in the desired-to-undesired signal ratios between analog-to-digital first adjacent channel protection requirements and the digital-to-digital protection requirements, the licensee determined that, because of the requisite protection to WSYR-TV, channel 17, Syracuse, New York, and the fact that W16AX's site is located within WSYR-TV's protected 41 dBu noise-limited contour, it is not feasible, nor possible, for W16AX to "flash-cut" to digital on channel 16.

WSYT Licensee, L.P. therefore seeks to obtain digital authority for W16AX by displacement, according to Section 74.787(a)(4). In addition to the proposed channel change it is proposed to substitute an omni-directional antenna on the existing tower support structure at the same Height Above Average Terrain (HAAT), and a concurrent decrease in Effective Radiated Power (ERP) to the LPTV digital class maximum of 15 kW. No other changes are proposed.

PROPOSED OMNI-DIRECTIONAL ANTENNA

The applicant proposes to substitute a new antenna, a Dielectric model TLP-8A omni-directional antenna instead of the currently authorized model TLP-8E directional transmitting antenna. The substitute antenna's center of radiation will be the same height above ground of 27 meters, as currently authorized. The antenna manufacturer's vertical plane radiation pattern, illustrating the proposed antenna's radiation characteristics above and below the horizontal plane, due to electrical beam tilt, is shown in exhibits 1 and 2, and is tabulated in exhibit 3.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.684 of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was

determined using the National Geophysical Data Center Thirty Second Point Database (TPG-0050) as prescribed in the FCC Rules. The antenna site elevation and coordinates were determined from W16AX's license record in the FCC's database. Exhibit 4 shows the predicted Noise Limited (51 dBu) contour, which completely encompasses the principal community of license, Ithaca, New York.

ALLOCATION CONSIDERATIONS

DTV Allocation Considerations

A study was performed, using the Commission's LPTV application processing software, DLPTV, to determine if the instant application for displacement construction permit for W16AX is predicted to cause any level of new prohibited interference to domestic DTV stations, expansion construction permits or DTV allotments. Results of the study indicate that the instant application for displacement of W16AX to channel 51 is predicted to cause no unacceptable level of **new** interference to the populations served by any other domestic full service DTV station, expansion construction permit or allotment.

Class A Television Allocation Considerations

As required in Section 73.616(f) of the FCC's Rules, a study was performed, using the FCC's application processing software. The study revealed no spacing violations, contour overlap with, or interference to, any Class A LPTV stations.

LPTV Allocation Considerations

The DLPTV study did reveal a potential mutually exclusive situation between the instant proposal for digital displacement of W16AX and a pending application for a new

LPTV station proposed to serve Center Lisle, NY, BNPDTL-20100510ADC. According to the DLPTV study, that proposal is located 32.5 kilometers from W16AX's existing site. However, according to Sections 74.787(a)(4), and 73.3572(a)(4)(iii), of the Commission's Rules, a Class A displacement application takes priority over all other LPTV applications, except applications for replacement translators. There is no indication that the application for the NEW LPTV station proposed in BNPDTL-20100510ADC seeks status as a "replacement translator", therefore W16AX is not obligated to protect that application.

BLANKETING AND INTERMODULATION INTERFERENCE

A number of broadcast and non-broadcast facilities are co-located with, as well as located within 10 km of the existing W16AX antenna site. The applicant recognizes its responsibility to remedy complaints of interference created by this proposal in accordance with applicable Rules.

ENVIRONMENTAL CONSIDERATIONS

RADIO FREQUENCY IMPACT

Effective October 15, 1997 the FCC adopted new guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines provide a maximum

permissible exposure (MPE) level for occupational or "controlled" situations that apply in cases that affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The FCC's Maximum Permitted Exposure (MPE) level for "uncontrolled" environments is 0.2 milliwatts per centimeter squared (mW/cm^2) when applied to broadcast facilities operating between 30 MHz and 300 MHz, and for broadcast facilities operating between 300 MHz and 1500 MHz, primarily UHF TV stations, is derived from the formula, $(\text{frequency}/1500)$. The MPE level for "controlled" environments is 1.0 milliwatts per centimeter squared (mW/cm^2) for operations between 30 MHz and 300 MHz, and for broadcast stations operating between 300 MHz and 1500 MHz is derived from the formula, $(\text{frequency}/300)$.

The predicted emissions of W16AX operating on channel 51 must be considered, along with the predicted emissions from other proposed and existing stations at the proposed site. For W16AX, which will operate on television Channel 51 (692-698 MHz), the MPE is 0.463 milliwatts per centimeter squared (mW/cm^2) in an "uncontrolled"

environment and 2.315 mW/cm^2 in a "controlled" environment. The proposed W16AX facility will operate with a maximum ERP of 15 kW from an omni-directional transmitting antenna with a centerline height of 27 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the W16AX facility is predicted to produce a power density at two meters above ground level of 0.07214 mW/cm^2 , which is 15.57% of the FCC's guideline value for an "uncontrolled" environment, and 3.11% of the FCC's guideline value for "controlled" environments (see Appendix A). The total percentage of the ANSI value at the proposed site, considering the cumulative radiation of all post-transition stations within relevant proximity is only 34.17% of the limit for "uncontrolled" environments, and 6.83% of the limit for "controlled" environments.

OCCUPATIONAL SAFETY

The licensee of W16AX is committed to the protection of station personnel and/or tower contractors working in the vicinity of the W16AX antenna, and is committed to reducing power and/or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

SUMMARY

It is submitted that the instant application for a construction permit to authorize displacement of Class A LPTV station W16AX to channel 51, to change the antenna from a directional to an omni-directional azimuth pattern on the existing tower support structure, and to adjust the ERP to 15 kW, as described herein complies with the Rules, Regulations

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and relevant Policies of the Federal Communications Commission. This statement, FCC Form 301-CA, Section III, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: September 10, 2010



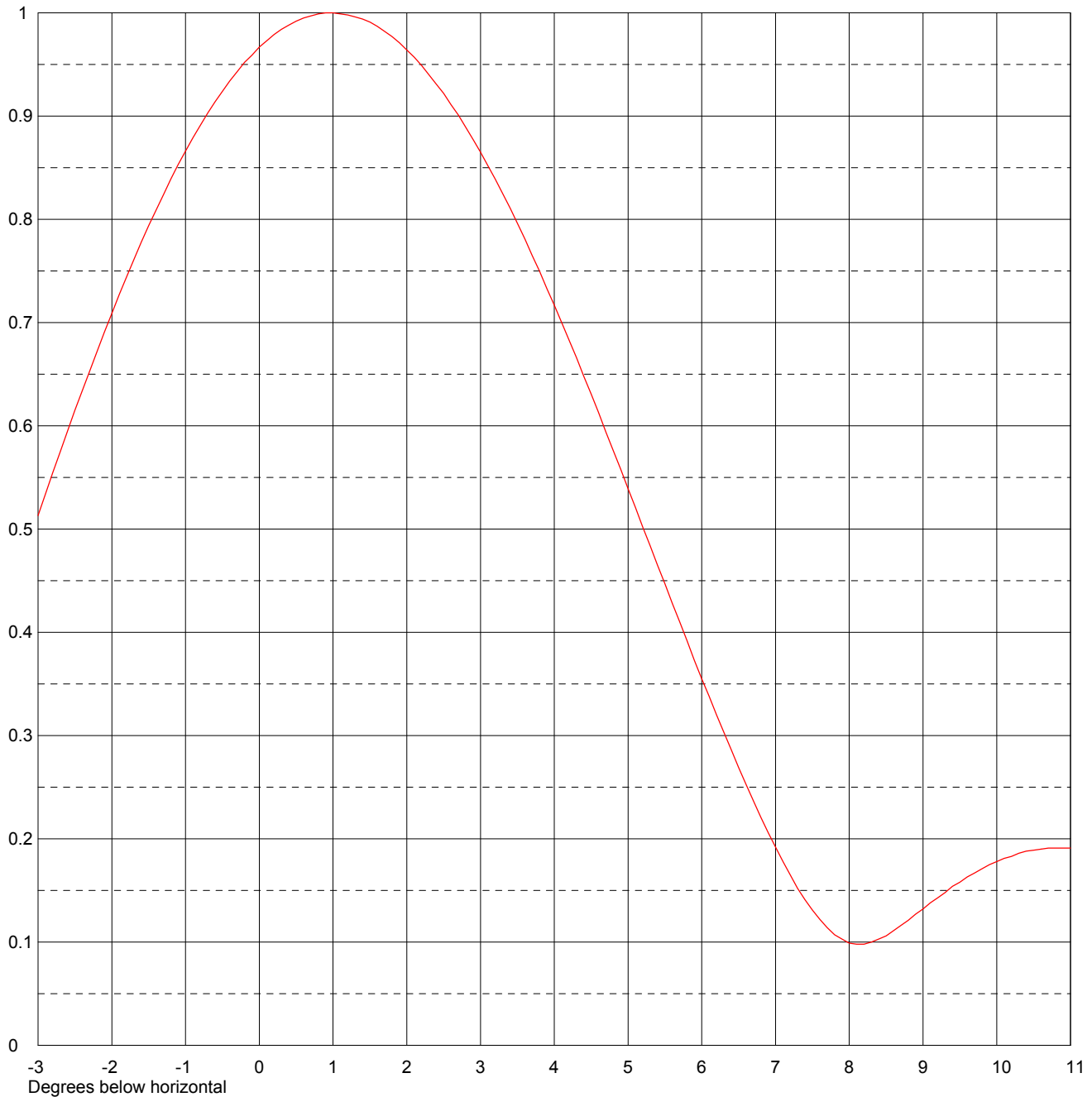


Exhibit No.
ONE

Date	09 Sep 2010	Channel	51
Call Letters	W16AX		
Location	ITHACA, NY		
Customer	WSYT Licensee, L.P.		
Antenna Type	TLP-8A		

ELEVATION PATTERN

RMS Gain at Main Lobe	8.0 (9.03 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	7.5 (8.75 dB)	Frequency	695.00 MHz
Calculated / Measured	Calculated	Drawing #	08L080100



Remarks:



Exhibit No.
TWO

Date
Call Letters
Location
Customer
Antenna Type

09 Sep 2010
W16AX Channel **51**
ITHACA, NY
WSYT Licensee, L.P.
TLP-8A

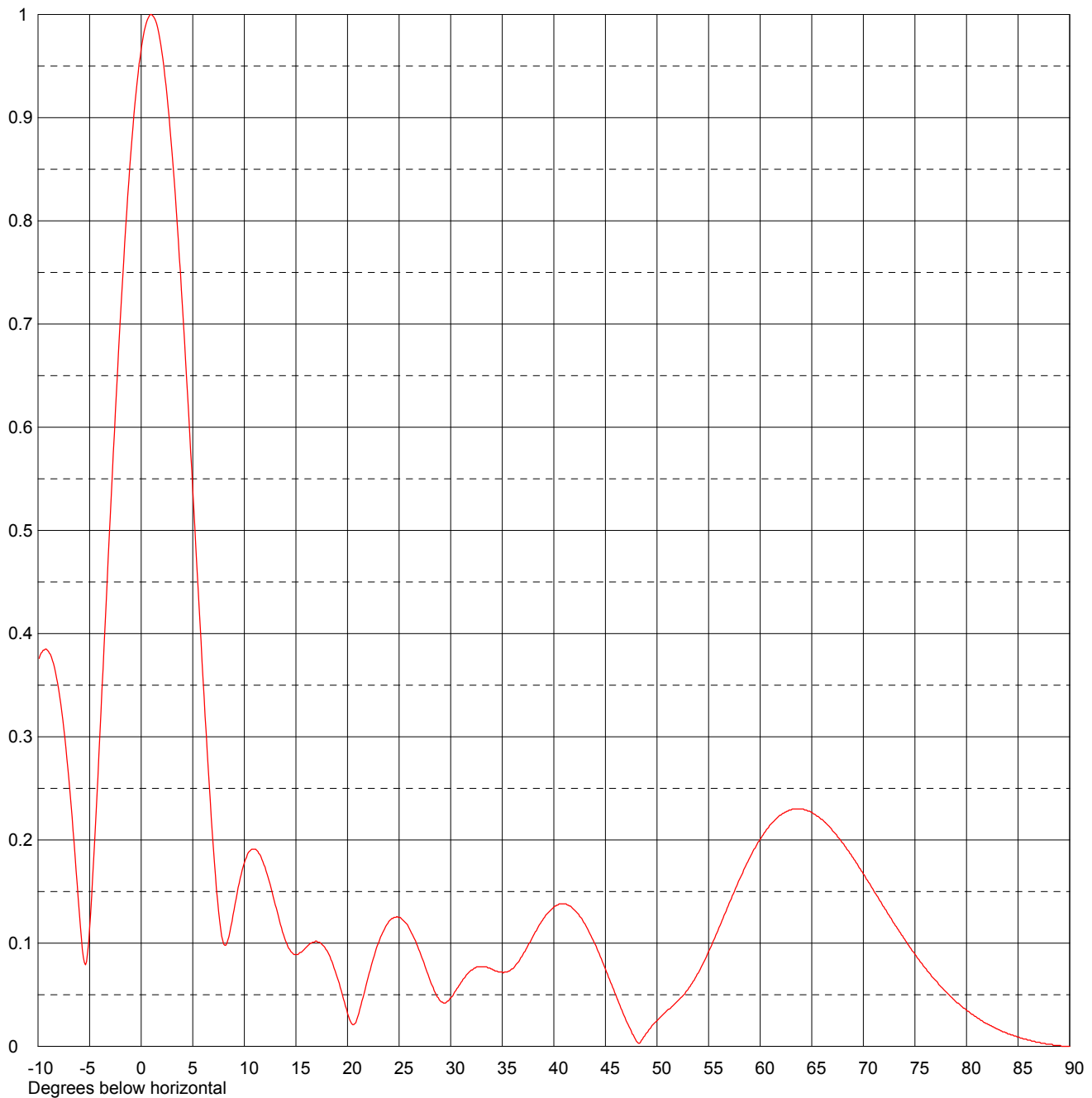
ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

8.0 (9.03 dB)
7.5 (8.75 dB)
Calculated

Beam Tilt
Frequency
Drawing #

1.00 Degrees
695.00 MHz
08L080100-90



Remarks:



Exhibit No.
THREE

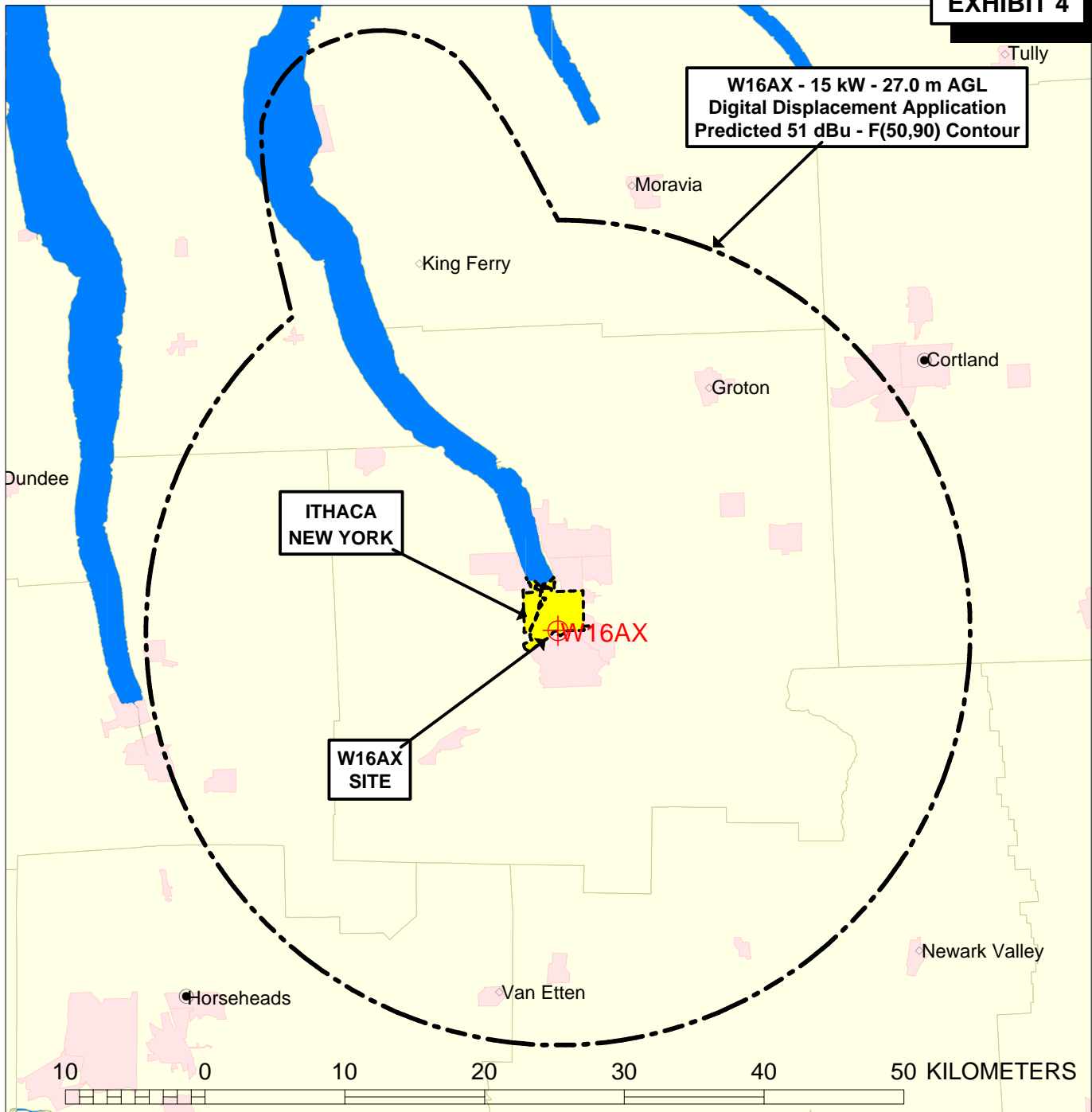
Date **09 Sep 2010**
 Call Letters **W16AX** Channel **51**
 Location **ITHACA, NY**
 Customer **WSYT Licensee, L.P.**
 Antenna Type **TLP-8A**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **08L080100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.374	2.4	0.931	10.6	0.190	30.5	0.054	51.0	0.035	71.5	0.143
-9.5	0.384	2.6	0.911	10.8	0.191	31.0	0.062	51.5	0.039	72.0	0.135
-9.0	0.383	2.8	0.889	11.0	0.191	31.5	0.069	52.0	0.044	72.5	0.127
-8.5	0.371	3.0	0.865	11.5	0.186	32.0	0.074	52.5	0.049	73.0	0.119
-8.0	0.346	3.2	0.839	12.0	0.174	32.5	0.077	53.0	0.055	73.5	0.111
-7.5	0.308	3.4	0.811	12.5	0.157	33.0	0.077	53.5	0.063	74.0	0.104
-7.0	0.258	3.6	0.781	13.0	0.137	33.5	0.077	54.0	0.071	74.5	0.096
-6.5	0.197	3.8	0.750	13.5	0.118	34.0	0.075	54.5	0.081	75.0	0.089
-6.0	0.130	4.0	0.717	14.0	0.102	34.5	0.073	55.0	0.092	75.5	0.082
-5.5	0.081	4.2	0.683	14.5	0.092	35.0	0.072	55.5	0.103	76.0	0.076
-5.0	0.114	4.4	0.648	15.0	0.089	35.5	0.072	56.0	0.115	76.5	0.070
-4.5	0.201	4.6	0.613	15.5	0.091	36.0	0.075	56.5	0.127	77.0	0.064
-4.0	0.303	4.8	0.576	16.0	0.096	36.5	0.081	57.0	0.139	77.5	0.058
-3.5	0.408	5.0	0.539	16.5	0.100	37.0	0.089	57.5	0.150	78.0	0.053
-3.0	0.513	5.2	0.502	17.0	0.102	37.5	0.098	58.0	0.162	78.5	0.048
-2.8	0.555	5.4	0.465	17.5	0.099	38.0	0.107	58.5	0.173	79.0	0.043
-2.6	0.595	5.6	0.428	18.0	0.093	38.5	0.116	59.0	0.183	79.5	0.039
-2.4	0.634	5.8	0.392	18.5	0.082	39.0	0.124	59.5	0.192	80.0	0.035
-2.2	0.672	6.0	0.355	19.0	0.067	39.5	0.130	60.0	0.201	80.5	0.031
-2.0	0.709	6.2	0.320	19.5	0.050	40.0	0.135	60.5	0.208	81.0	0.028
-1.8	0.744	6.4	0.286	20.0	0.032	40.5	0.138	61.0	0.215	81.5	0.025
-1.6	0.778	6.6	0.253	20.5	0.021	41.0	0.138	61.5	0.220	82.0	0.022
-1.4	0.809	6.8	0.221	21.0	0.029	41.5	0.136	62.0	0.224	82.5	0.019
-1.2	0.839	7.0	0.192	21.5	0.047	42.0	0.132	62.5	0.227	83.0	0.017
-1.0	0.866	7.2	0.165	22.0	0.067	42.5	0.126	63.0	0.229	83.5	0.014
-0.8	0.891	7.4	0.141	22.5	0.085	43.0	0.119	63.5	0.230	84.0	0.012
-0.6	0.914	7.6	0.122	23.0	0.100	43.5	0.109	64.0	0.230	84.5	0.011
-0.4	0.934	7.8	0.107	23.5	0.112	44.0	0.099	64.5	0.229	85.0	0.009
-0.2	0.952	8.0	0.099	24.0	0.121	44.5	0.087	65.0	0.227	85.5	0.007
0.0	0.967	8.2	0.098	24.5	0.125	45.0	0.075	65.5	0.223	86.0	0.006
0.2	0.979	8.4	0.103	25.0	0.125	45.5	0.062	66.0	0.220	86.5	0.005
0.4	0.988	8.6	0.111	25.5	0.121	46.0	0.050	66.5	0.215	87.0	0.004
0.6	0.995	8.8	0.121	26.0	0.114	46.5	0.037	67.0	0.209	87.5	0.003
0.8	0.999	9.0	0.132	26.5	0.104	47.0	0.025	67.5	0.203	88.0	0.002
1.0	1.000	9.2	0.143	27.0	0.092	47.5	0.015	68.0	0.197	88.5	0.001
1.2	0.998	9.4	0.154	27.5	0.078	48.0	0.005	68.5	0.190	89.0	0.001
1.4	0.994	9.6	0.163	28.0	0.064	48.5	0.006	69.0	0.183	89.5	0.000
1.6	0.987	9.8	0.171	28.5	0.052	49.0	0.013	69.5	0.175	90.0	0.000
1.8	0.977	10.0	0.178	29.0	0.044	49.5	0.020	70.0	0.167		
2.0	0.964	10.2	0.183	29.5	0.042	50.0	0.025	70.5	0.159		
2.2	0.949	10.4	0.188	30.0	0.047	50.5	0.030	71.0	0.151		

Remarks:



PREDICTED COVERAGE CONTOUR

W16AX, ITHACA, NEW YORK
Displacement Application to
CH. 51, 15 kW - 27.0 m AGL

Predicted Class A Digital Coverage Contour
F(50,90) - 51 dBu

SEPTEMBER 2010

CARL T. JONES
CORPORATION

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**
W16AX, ITHACA, NEW YORK
CHANNEL 51, 15 kW ERP, 91.0 m HAAT
SEPTEMBER, 2010

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm²)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
W16AX	DT	51	695	H	25	15.000	0.300	0.07214	0.463	15.57%
W16AX	TV	16	485	H	25	25.000	0.300	0.06014	0.323	18.60%

TOTAL PERCENTAGE OF ANSI VALUE= 34.17%

*** The antenna heights indicated above are 2 meters less than the actual antenna heights*

so that the predicted power densities consider the 2 meter human height allowance.

This evaluation includes facilities collocated at the site, and facilities located within 315 meters.

CARL T. JONES
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