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BERNARD R. SEGAL, P. E.  
CONSULTING ENGINEER  
KENSINGTON, MARYLAND

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ENGINEERING EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
FOR AUXILIARY ANTENNA  
HEARST STATIONS INC.  
STATION WPTZ, NORTH POLE, NEW YORK  
CHANNEL 14 3.98 KW 853 METERS

The instant Engineering Exhibit has been prepared on behalf of Hearst Stations Inc. (hereafter, Hearst), the licensee of digital television Station WPTZ, North Pole, New York. Hearst seeks a construction permit for an auxiliary antenna for Station WPTZ. The WPTZ main antenna operation is on Channel 14 using a directional antenna with a maximum effective radiated power of 650 kW and radiation center height above average terrain of 845 meters.

The proposed auxiliary antenna operation is from the same site as for the main antenna with the auxiliary antenna mounted above the main antenna. The auxiliary antenna will be diplexed with the auxiliary antenna operation for co-located Station WCAX-TV, Burlington, Vermont, Channel 22. The auxiliary antenna is a Dielectric, Model TUP-04-2/8U-1-R. The antenna is omni-directional, and has a 1° electrical beam tilt. Figure 1 is the vertical plane pattern for the antenna, and Figure 2 is the tabulation of relative field data for the plot of Figure 1. The proposed effective radiated power is 3.98 kW, and the antenna radiation center height above average terrain is 853 meters.

An auxiliary antenna may not extend coverage beyond that authorized for the main antenna. The proposed auxiliary antenna radiation center is 1270 meters AMSL; 54 mAGL; and 8 meters higher than the radiation center for the main antenna. The main antenna has its minimum relative field radiation of 0.079 occurring along an axis of 40° true. Based on a maximum radiation of 650 kW, the effective radiated power in the 40° true direction is 4.06 kW, or 6.09 dBk. For the main antenna, the calculated distance to the 41 dBu, F(50,90), contour is 75.8 kilometers, based on a radiation center height above average terrain of 653 meters in the 40° true direction.

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Engineering Exhibit  
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The auxiliary antenna's permissible effective radiated power, which will not extend the 41 dBu, F(50,90), contour distance in the 40° true direction greater than 75.8 kilometers, is 3.98 kW, or 6.00 dBk. The foregoing result is based on a radiation center height above average terrain of 661 meters in the 40° true direction. The proposed operation satisfies the FCC's coverage limitation for an auxiliary antenna.

Environmental impact considerations for the proposed operation have been taken into account. The site is atop Mount Mansfield and is used by several stations. Mt. Mansfield Television is the site manager and all tower occupants have entered into a signed agreement to abide by all procedures set by the site manager for the avoidance of over exposure to radiofrequency radiation as embodied in the FCC's adopted criteria. The proposed operation does not require an Environmental Assessment.

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 20, 2010.

*Bernard R. Segal, P.E.*

Bernard R. Segal, P. E.

Maryland License #: 25811

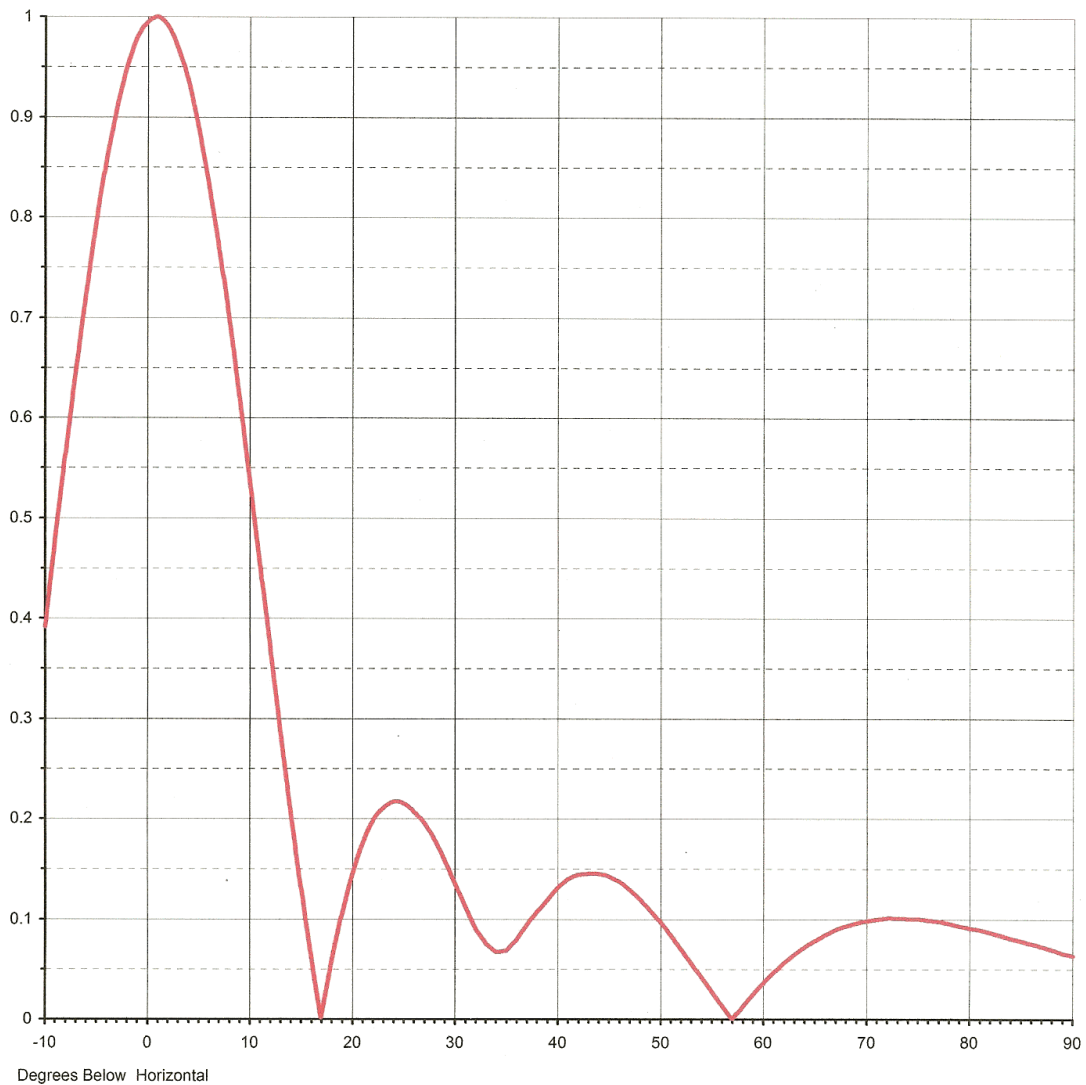


Proposal Number **DCA-11109** Revision: **1**  
Date **12-Jan-06**  
Call Letters **WPTZ-DT** Channel **14**  
Location **Burlington, VT**  
Customer  
Antenna Type **TUP-O4-2/8U-1-R**

FIGURE 1

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>4.10 ( 6.13 dB )</b>	Beam Tilt	<b>1.00 deg</b>
RMS Gain at Horizontal	<b>4.10 ( 6.13 dB )</b>	Frequency	<b>473.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>02U041100-90</b>





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FIGURE 2

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **02U041100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.391	2.4	0.983	10.6	0.493	30.5	0.126	51.0	0.085	71.5	0.101
-9.5	0.435	2.6	0.978	10.8	0.477	31.0	0.114	51.5	0.078	72.0	0.101
-9.0	0.479	2.8	0.974	11.0	0.460	31.5	0.103	52.0	0.071	72.5	0.101
-8.5	0.522	3.0	0.968	11.5	0.418	32.0	0.092	52.5	0.064	73.0	0.101
-8.0	0.565	3.2	0.962	12.0	0.375	32.5	0.084	53.0	0.057	73.5	0.101
-7.5	0.607	3.4	0.956	12.5	0.333	33.0	0.077	53.5	0.050	74.0	0.100
-7.0	0.648	3.6	0.949	13.0	0.292	33.5	0.072	54.0	0.043	74.5	0.100
-6.5	0.687	3.8	0.942	13.5	0.252	34.0	0.068	54.5	0.036	75.0	0.100
-6.0	0.725	4.0	0.934	14.0	0.212	34.5	0.068	55.0	0.029	75.5	0.100
-5.5	0.761	4.2	0.925	14.5	0.174	35.0	0.069	55.5	0.022	76.0	0.099
-5.0	0.795	4.4	0.916	15.0	0.136	35.5	0.073	56.0	0.015	76.5	0.098
-4.5	0.827	4.6	0.907	15.5	0.100	36.0	0.079	56.5	0.008	77.0	0.098
-4.0	0.858	4.8	0.897	16.0	0.065	36.5	0.086	57.0	0.001	77.5	0.097
-3.5	0.885	5.0	0.888	16.5	0.033	37.0	0.093	57.5	0.005	78.0	0.095
-3.0	0.910	5.2	0.877	17.0	0.002	37.5	0.100	58.0	0.012	78.5	0.094
-2.8	0.919	5.4	0.866	17.5	0.028	38.0	0.106	58.5	0.018	79.0	0.093
-2.6	0.927	5.6	0.855	18.0	0.055	38.5	0.112	59.0	0.024	79.5	0.092
-2.4	0.936	5.8	0.844	18.5	0.080	39.0	0.118	59.5	0.030	80.0	0.091
-2.2	0.944	6.0	0.832	19.0	0.103	39.5	0.124	60.0	0.035	80.5	0.090
-2.0	0.951	6.2	0.819	19.5	0.124	40.0	0.130	60.5	0.041	81.0	0.089
-1.8	0.958	6.4	0.807	20.0	0.143	40.5	0.135	61.0	0.046	81.5	0.088
-1.6	0.964	6.6	0.794	20.5	0.159	41.0	0.139	61.5	0.051	82.0	0.086
-1.4	0.970	6.8	0.781	21.0	0.174	41.5	0.142	62.0	0.056	82.5	0.085
-1.2	0.975	7.0	0.767	21.5	0.186	42.0	0.144	62.5	0.060	83.0	0.084
-1.0	0.980	7.2	0.753	22.0	0.196	42.5	0.145	63.0	0.064	83.5	0.082
-0.8	0.984	7.4	0.739	22.5	0.204	43.0	0.145	63.5	0.068	84.0	0.080
-0.6	0.987	7.6	0.725	23.0	0.210	43.5	0.146	64.0	0.072	84.5	0.079
-0.4	0.990	7.8	0.710	23.5	0.214	44.0	0.145	64.5	0.076	85.0	0.078
-0.2	0.993	8.0	0.695	24.0	0.217	44.5	0.145	65.0	0.079	85.5	0.077
0.0	0.995	8.2	0.680	24.5	0.217	45.0	0.143	65.5	0.082	86.0	0.075
0.2	0.997	8.4	0.664	25.0	0.216	45.5	0.141	66.0	0.084	86.5	0.074
0.4	0.998	8.6	0.649	25.5	0.213	46.0	0.138	66.5	0.087	87.0	0.072
0.6	0.999	8.8	0.633	26.0	0.208	46.5	0.134	67.0	0.090	87.5	0.071
0.8	1.000	9.0	0.618	26.5	0.203	47.0	0.130	67.5	0.092	88.0	0.069
1.0	1.000	9.2	0.601	27.0	0.196	47.5	0.126	68.0	0.093	88.5	0.068
1.2	0.999	9.4	0.585	27.5	0.189	48.0	0.121	68.5	0.095	89.0	0.066
1.4	0.998	9.6	0.568	28.0	0.181	48.5	0.115	69.0	0.096	89.5	0.064
1.6	0.996	9.8	0.560	28.5	0.171	49.0	0.110	69.5	0.097	90.0	0.063
1.8	0.994	10.0	0.544	29.0	0.160	49.5	0.104	70.0	0.098		
2.0	0.991	10.2	0.527	29.5	0.149	50.0	0.098	70.5	0.099		
2.2	0.987	10.4	0.510	30.0	0.138	50.5	0.092	71.0	0.100		