

TECHNICAL EXHIBIT
APPLICATION FOR DTV MAXIMIZATION
STATION WTNZ-DT (FACILITY ID 19200)
KNOXVILLE, TENNESSEE
CH 34 930 KW 527 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station WTNZ-DT to maximize its post-transition facility. This application requests a construction permit (CP) for a digital television operation on channel 34, using its licensed non-directional antenna.

Proposed Facilities

Station WTNZ-DT proposes to operate DTV channel 34 with a non-directional effective radiated power (ERP) of 930 kilowatts and antenna height above average terrain (HAAT) of 527 meters. The antenna HAAT has been revised per the OET-69 software output. The transmitter site coordinates are:

36° 00' 13" North Latitude
83° 56' 34" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1. Figure 2 is a map showing the DTV predicted coverage contours. The predicted 48 dBu contour will encompass all of Knoxville. The Knoxville city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Population Served

The herein proposed WTNZ-DT “maximized” facility is predicted to serve 1,431,625 persons, post-transition, based upon the 2000 Census. WTNZ-DT’s associated Appendix B facility is predicted to serve 1,344,000 persons. Therefore, the herein proposed WTNZ-DT facility would serve more than 100% of WTNZ-DT’s Appendix B population.

Allocation Considerations

The proposed WTNZ-DT operation meets the FCC’s 0.5% post-transition interference standards to pertinent Class A and DTV facilities using the procedures outlined in the FCC’s OET-69 Bulletin and a standard 2 kilometer cell size and 1 kilometer terrain distance increment.

Radiofrequency Electromagnetic Field Exposure

The proposed WTNZ-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 413.3 meters above ground level with an ERP of 930 kW. A conservative relative field value of 0.3 was assumed for the calculation (see Figure 3). The calculated power density at a point 2 meters above ground level will not exceed 0.017 mW/cm^2 . This is less than 5% of the FCC's recommended limit of 0.4 mW/cm^2 for channel 34 for an “uncontrolled” environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site an agreement between the stations will control site access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio

frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WTNZ-DT operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

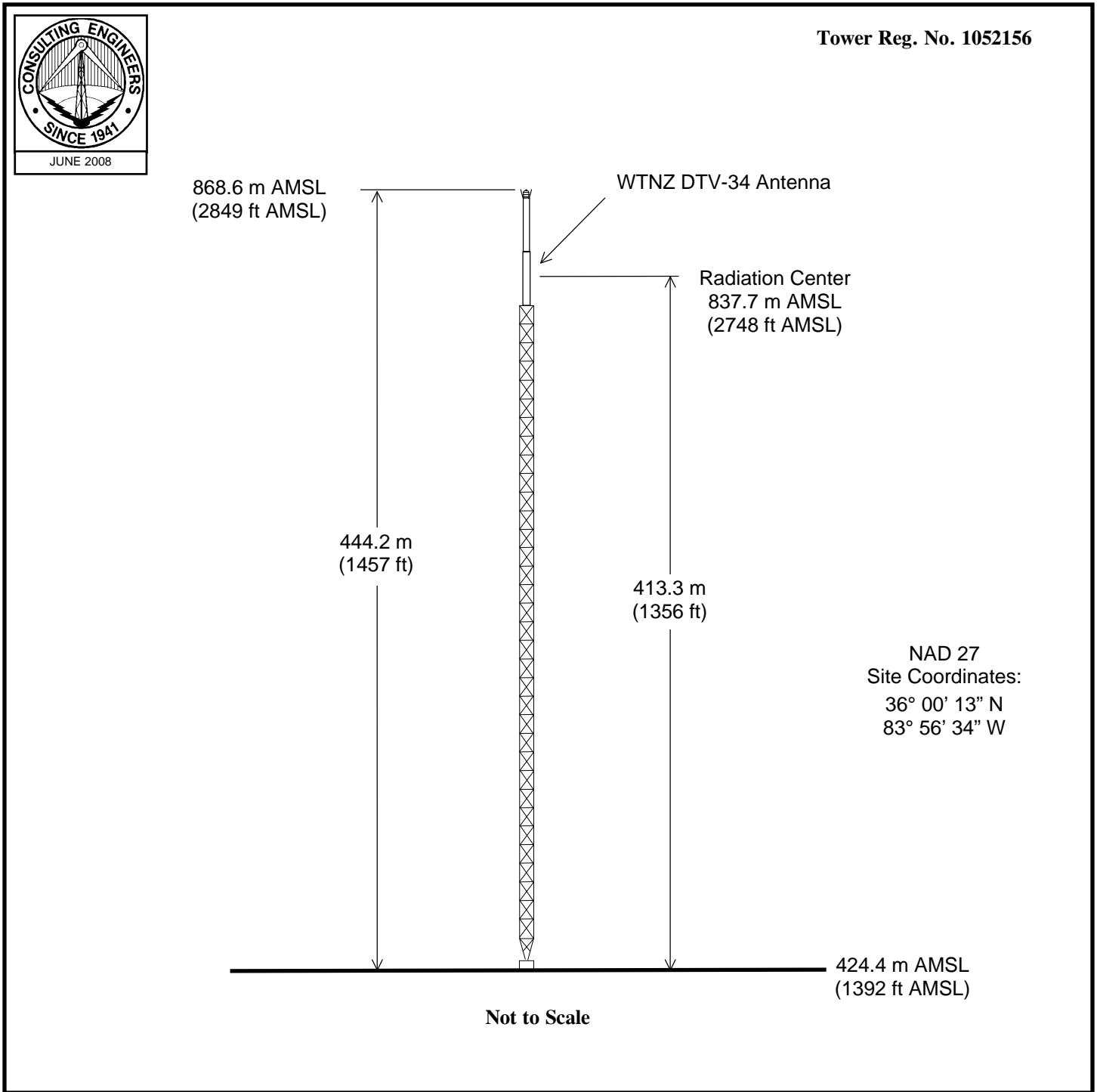


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Figure 1

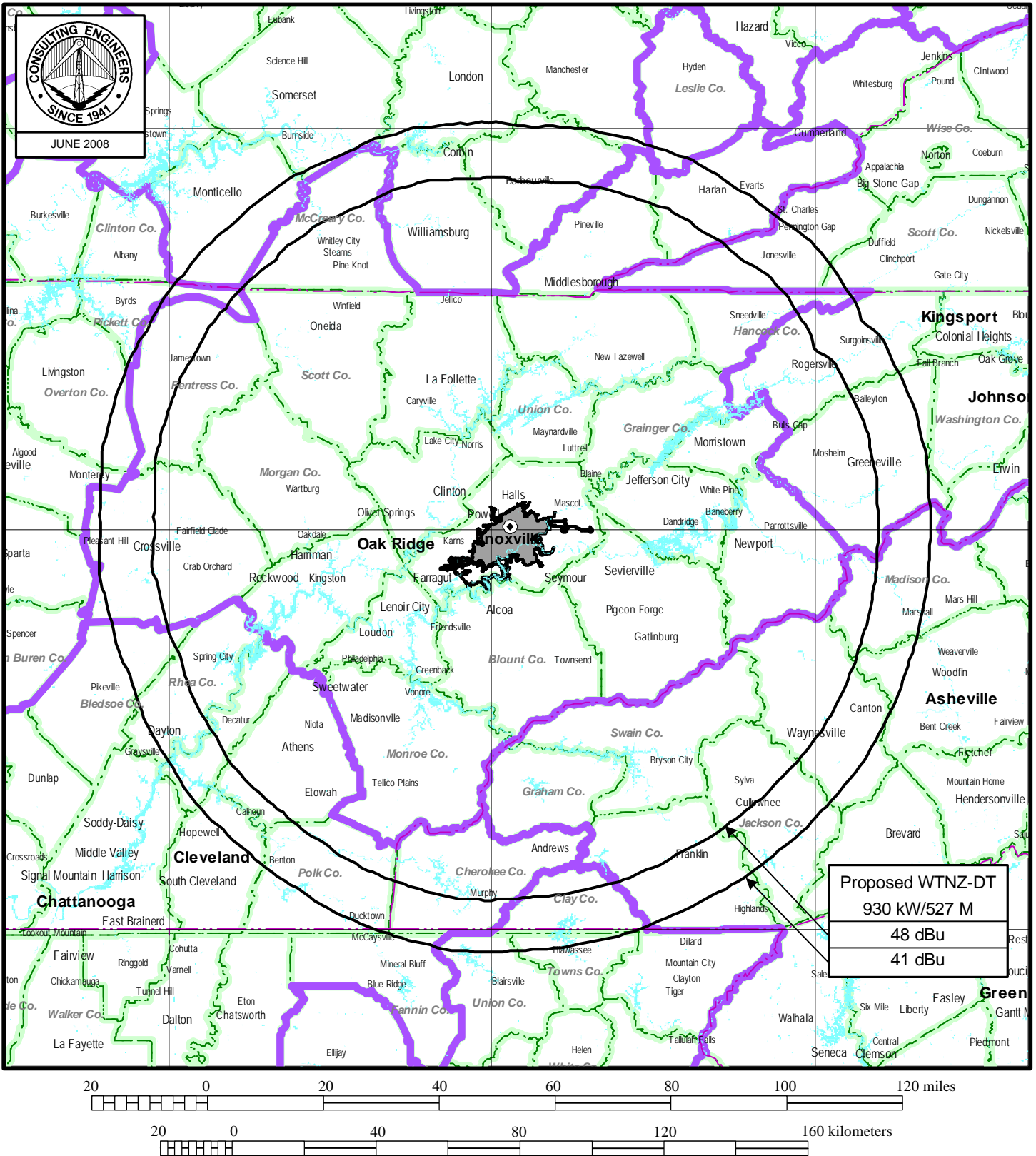


PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION WTNZ-DT
KNOXVILLE, TENNESSEE
CH 34 930 KW 527 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



PREDICTED COVERAGE CONTOURS

STATION WTNZ-DT
KNOXVILLE, TENNESSEE
CH 34 930 kW 527 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Proposal Number **DCA-9330**Date **31-Mar-01**

Call Letters

Channel **34**Location **Knoxville, TN**Customer **Spectrasite**Antenna Type **TUD-O5-16/80H-2-B****TABULATION OF ELEVATION PATTERN**Elevation Pattern Drawing #: **16U318075-B34-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.027	2.4	0.224	10.6	0.061	30.5	0.013	51.0	0.015	71.5	0.019
-9.5	0.046	2.6	0.231	10.8	0.070	31.0	0.020	51.5	0.029	72.0	0.019
-9.0	0.027	2.8	0.236	11.0	0.072	31.5	0.018	52.0	0.039	72.5	0.018
-8.5	0.060	3.0	0.222	11.5	0.047	32.0	0.009	52.5	0.038	73.0	0.016
-8.0	0.096	3.2	0.186	12.0	0.024	32.5	0.011	53.0	0.029	73.5	0.013
-7.5	0.075	3.4	0.138	12.5	0.041	33.0	0.015	53.5	0.015	74.0	0.010
-7.0	0.029	3.6	0.098	13.0	0.027	33.5	0.011	54.0	0.014	74.5	0.008
-6.5	0.058	3.8	0.097	13.5	0.031	34.0	0.008	54.5	0.023	75.0	0.006
-6.0	0.046	4.0	0.128	14.0	0.057	34.5	0.018	55.0	0.024	75.5	0.005
-5.5	0.060	4.2	0.160	14.5	0.050	35.0	0.022	55.5	0.017	76.0	0.005
-5.0	0.130	4.4	0.176	15.0	0.018	35.5	0.016	56.0	0.023	76.5	0.006
-4.5	0.128	4.6	0.173	15.5	0.026	36.0	0.008	56.5	0.048	77.0	0.007
-4.0	0.052	4.8	0.152	16.0	0.029	36.5	0.012	57.0	0.075	77.5	0.007
-3.5	0.081	5.0	0.118	16.5	0.017	37.0	0.013	57.5	0.094	78.0	0.007
-3.0	0.083	5.2	0.080	17.0	0.043	37.5	0.007	58.0	0.100	78.5	0.007
-2.8	0.063	5.4	0.055	17.5	0.054	38.0	0.013	58.5	0.090	79.0	0.006
-2.6	0.086	5.6	0.060	18.0	0.035	38.5	0.022	59.0	0.065	79.5	0.006
-2.4	0.156	5.8	0.079	18.5	0.014	39.0	0.023	59.5	0.036	80.0	0.005
-2.2	0.243	6.0	0.090	19.0	0.026	39.5	0.015	60.0	0.045	80.5	0.004
-2.0	0.329	6.2	0.089	19.5	0.019	40.0	0.009	60.5	0.087	81.0	0.004
-1.8	0.398	6.4	0.075	20.0	0.023	40.5	0.014	61.0	0.129	81.5	0.003
-1.6	0.440	6.6	0.053	20.5	0.046	41.0	0.015	61.5	0.161	82.0	0.002
-1.4	0.444	6.8	0.035	21.0	0.045	41.5	0.009	62.0	0.179	82.5	0.002
-1.2	0.405	7.0	0.045	21.5	0.021	42.0	0.012	62.5	0.183	83.0	0.002
-1.0	0.324	7.2	0.068	22.0	0.018	42.5	0.023	63.0	0.174	83.5	0.002
-0.8	0.216	7.4	0.088	22.5	0.025	43.0	0.026	63.5	0.153	84.0	0.002
-0.6	0.154	7.6	0.099	23.0	0.015	43.5	0.020	64.0	0.126	84.5	0.003
-0.4	0.258	7.8	0.098	23.5	0.045	44.0	0.009	64.5	0.091	85.0	0.003
-0.2	0.435	8.0	0.087	24.0	0.074	44.5	0.010	65.0	0.064	85.5	0.003
0.0	0.617	8.2	0.068	24.5	0.072	45.0	0.016	65.5	0.044	86.0	0.003
0.2	0.778	8.4	0.046	25.0	0.038	45.5	0.014	66.0	0.035	86.5	0.003
0.4	0.902	8.6	0.031	25.5	0.029	46.0	0.009	66.5	0.034	87.0	0.003
0.6	0.978	8.8	0.033	26.0	0.068	46.5	0.018	67.0	0.034	87.5	0.003
0.8	1.000	9.0	0.043	26.5	0.086	47.0	0.029	67.5	0.033	88.0	0.003
1.0	0.967	9.2	0.050	27.0	0.076	47.5	0.032	68.0	0.028	88.5	0.003
1.2	0.885	9.4	0.048	27.5	0.056	48.0	0.025	68.5	0.022	89.0	0.003
1.4	0.765	9.6	0.039	28.0	0.032	48.5	0.013	69.0	0.016	89.5	0.003
1.6	0.621	9.8	0.033	28.5	0.017	49.0	0.010	69.5	0.012	90.0	0.003
1.8	0.472	10.0	0.023	29.0	0.018	49.5	0.018	70.0	0.012		
2.0	0.342	10.2	0.030	29.5	0.017	50.0	0.018	70.5	0.015		
2.2	0.254	10.4	0.046	30.0	0.009	50.5	0.011	71.0	0.018		