

ENGINEERING STATEMENT
APPLICATION FOR
A DTV CONSTRUCTION PERMIT
W40CV-D, JACKSONVILLE, ILLINOIS
CHANNEL 40 15 KW MAX ERP 469 METERS RC/AMSL

NOVEMBER 2011

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

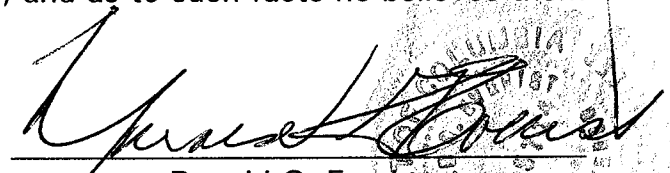
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;


That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

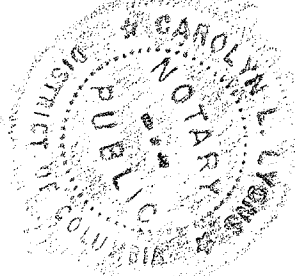
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 1st day of November, 2011.


Notary Public

My Commission Expires: 7/28/2013



Introduction

This engineering statement has been prepared on behalf of WAND(TV) Partnership, licensee of W40CV-D, Jacksonville, Illinois. This statement supports the licensee's request for modification of license to serve with a DTV effective radiated power ("ERP") of 15 kW (max) at a radiation center above mean sea level ("RCAMSL") of 469 meters.

Transmitter Site

No significant alteration of the tower is proposed. The existing tower is located approximately 1.1 km south of Franklin, Illinois. The geographic coordinates of the existing site follow below.

North Latitude: 39° 36' 9.02"

West Longitude: 90° 02' 47.0"

NAD-27

Elevation Data

Elevation of site above mean sea level	205.1 meters (672.9 feet)
Center of radiation of antenna above ground level	264 meters (866 feet)
Center of radiation of antenna above mean sea level	469 meters (1538.9 feet)
Overall height of the tower above ground with appurtenances	297.5 meters (976 feet)
Overall height of the tower above mean sea level with appurtenances	1649 meters (502.6 feet)

The Antenna Structure Registration Number ("ASRN") for the existing tower is 1221865. A tower sketch has been included as Exhibit E-1.

Equipment Data

Transmitter:	Type-approved
Transmission Line:	Dielectric, rigid copper outer conductor, 3-1/8" air dielectric, 267.4 meters (877 feet) with 59.2% efficiency [0.26 dB loss/100 ft]
Antenna:	Dielectric, Model DL-12B with maximum gain of 13.09 dBd and 1° electrical beam tilt. Antenna pattern information is provided in Exhibit E-2
Transmission Mask:	Simple

Power Data

Transmitter:	1.24 kW	0.948 dBk
Transmission Line Efficiency/Loss:	59.2%	2.28 dB
Input Into Antenna:	0.736 kW	-1.329 dBk
Antenna Gain:	20.37	13.09 dB
ERP:	15 kW	11.76 dBk

As indicated above, the transmitter with typical power output of 1.24 kW will deliver 0.736 kW to the input of the antenna. The antenna, having a maximum power gain of 20.37 and an electrical beam tilt of 1 degree, will produce maximum ERP of 15 kW. A coverage map of

the proposed facility has been included as Exhibit E-3 of this report. Exhibit E-4 provides the normally protected contour authorized by the outstanding construction permit in relation to that herein proposed. The proposed site is 18.4 km from the authorized site.

Other Broadcast Facilities

A brief analysis was completed to determine the presence of stations in the vicinity of the WSEC-TV tower using the October 11, 2011 data contained within the Commission's Consolidated Database System ("CDBS"). Within 100 meters of the proposed site, no authorized FM radio stations were identified and one authorized DTV (WSEC-TV) and no translator television stations except for the translator station proposed herein were also found within 100 meters. There are no AM facilities within 3.2 km of the existing tower. Although no adverse technical affects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

Interference Analysis

A study of predicted interference caused by the proposed W40CV-D digital translator operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at http://www.fcc.gov/oet/dtv/dtv_apps.html. The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Microsoft Windows XP/Intel platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and

calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2000 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. A Longley-Rice study was performed with the proposed W40CV digital translator facilities and all relevant stations listed in the FCC data base as of November 1, 2011. The study results and the included stations are listed in Table I.

Other Licensed and Broadcast Facilities

No adverse technical effect is anticipated by the proposed DTV operation to any other FCC licensed facility. If required, the licensee will install filters or take other measures as necessary to resolve the problem.

FCC Rule, Section 1.1307

The proposed 15 kW directional operation will utilize an Dielectric, Type DL-12B antenna (or equivalent) described above with a center of radiation above ground of 264 meters. The proposed antenna is side-mounted on a steel lattice guyed tower with an overall height of 297.5 meters above ground.

As previously indicated, there are no AM stations located within 3.2 km of the proposed tower site. According to the FCC database, there are no FM stations and one full-service DTV station located within 100 meters of the WSEC-TV tower. Access to the tower property is prevented by a six foot security fence with barbed wire at top with a locked gate.

The proposed operation based upon the current OET Bulletin No. 65, Edition 97-01 dated August 1997 and Supplement A meets the provisions of the FCC radiofrequency field ("RFF") guidelines, and thus, complies with Section 1.1307 of the FCC Rules. The elevation pattern for the Dielectric, Type DL-12B antenna, Exhibit E-2, shows a maximum relative field of less than 0.025 toward the ground (30° to 90° below the horizontal). Calculation according to OET Bulletin 65 predicts a maximum RFF power density of less than one $\mu\text{W}/\text{cm}^2$, 2 meters above ground or less than one percent of the controlled Maximum Permissible Exposure ("MPE") guideline.

For completeness, the contribution by facilities located within 100 meters to the electromagnetic field environment is considered herein. The RFF study will also consider the following stations:

The RFF contribution of each station will be calculated using the following basic formula:

$$S = \frac{33.4(F^2) \text{ Total ERP}}{R^2}$$

where:

S = power density in $\mu\text{W}/\text{cm}^2$

F = relative field factor

Total ERP = ERP Horizontal Polarization + ERP Vertical Polarization

R = RCAGL - 2 meters

ERP = RMS ERP in watts for DTV Stations

ERP = ERP (horizontally polarized)

WSEC-TV DTV Facility (License)

Channel 15 Freq: 476-482 MHz range
 ERP = 75,000 watts
 Polarization = Horizontal
 RCAGL -2 meters = 285.9 meters

$$S = \frac{33.4 (F^2) \text{ Tot ERP}}{R^2} \quad \text{Tot ERP} = 75,000 \text{ watts (Horizontal Only)}$$

$$R = 285.9 \text{ meters}$$

$$F = 0.1 \text{ (from manufacturer's data--30 to 90°)}$$

$$S = <1 \mu\text{W}/\text{cm}^2$$

Therefore, WSEC-TV contributes less than one $\mu\text{W}/\text{cm}^2$ at 2 meters above ground.

The limit for a controlled environment for this frequency is 1597 $\mu\text{W}/\text{cm}^2$.

WSEC-TV contributes less than one percent RFF level for a controlled environment two meters above the ground.

W40CV DTV Translator Facility (Proposed)

Channel 40 Freq: 626-632 MHz range
 ERP = 15,000 watts
 Polarization = Horizontal
 RCAGL -2 meters = 262 meters

$$S = \frac{33.4 (F^2) \text{ Tot ERP}}{R^2} \quad \text{Tot ERP} = 15,000 \text{ Watts (Horizontal Only)}$$

$$R = 262 \text{ meters}$$

$$F = 0.016 \text{ (from manufacturer's data--30 to 90°)}$$

$$S = <1 \mu\text{W}/\text{cm}^2$$

Therefore, W40CV contributes less than one $\mu\text{W}/\text{cm}^2$ at 2 meters above ground.

The limit for a controlled environment for this frequency is 2096 $\mu\text{W}/\text{cm}^2$.

The proposed W40CV contributes less than one percent RFF level for a controlled environment two meters above the ground.

Total RFF contribution

$<1\% \text{ (DTV)} + <1\% \text{ (proposed)} = <2\%$ for the controlled environment two meters above ground including the proposed DTV translator operation.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

ABOVE GROUND

ABOVE MEAN SEA LEVEL

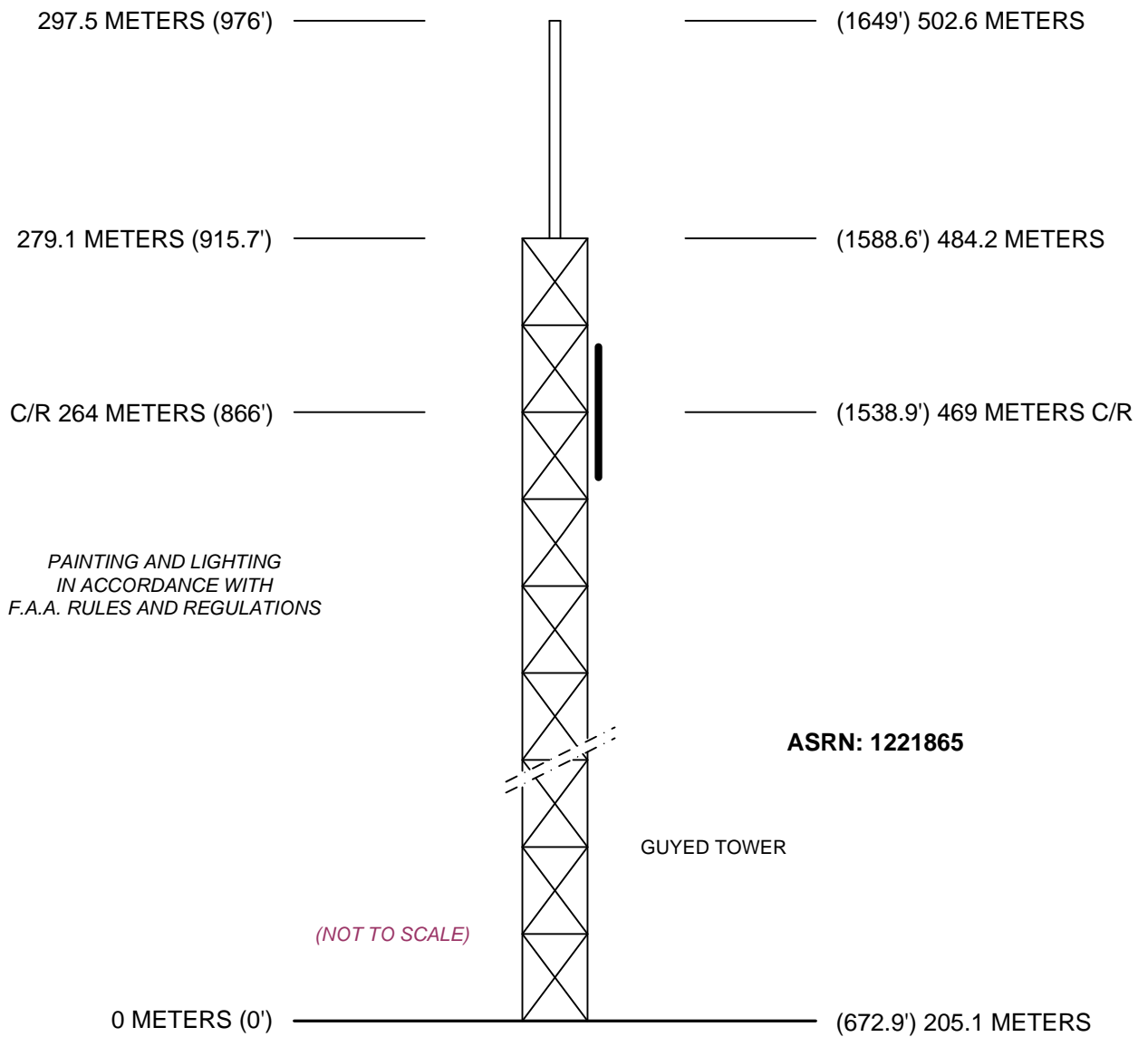


EXHIBIT E - 1
PROPOSED TOWER AT
FRANKLIN, ILLINOIS
NOVEMBER 2011

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

W40CV, JACKSONVILLE, ILLINOIS



Exhibit No.

Date

04 Aug 2011

Call Letters

WAND

Channel

40

Location

Customer

DL

Antenna Type

TLP-12B

ELEVATION PATTERN

RMS Gain at Main Lobe

12.0 (10.79 dB)

Beam Tilt

1.00 Degrees

RMS Gain at Horizontal

10.1 (10.04 dB)

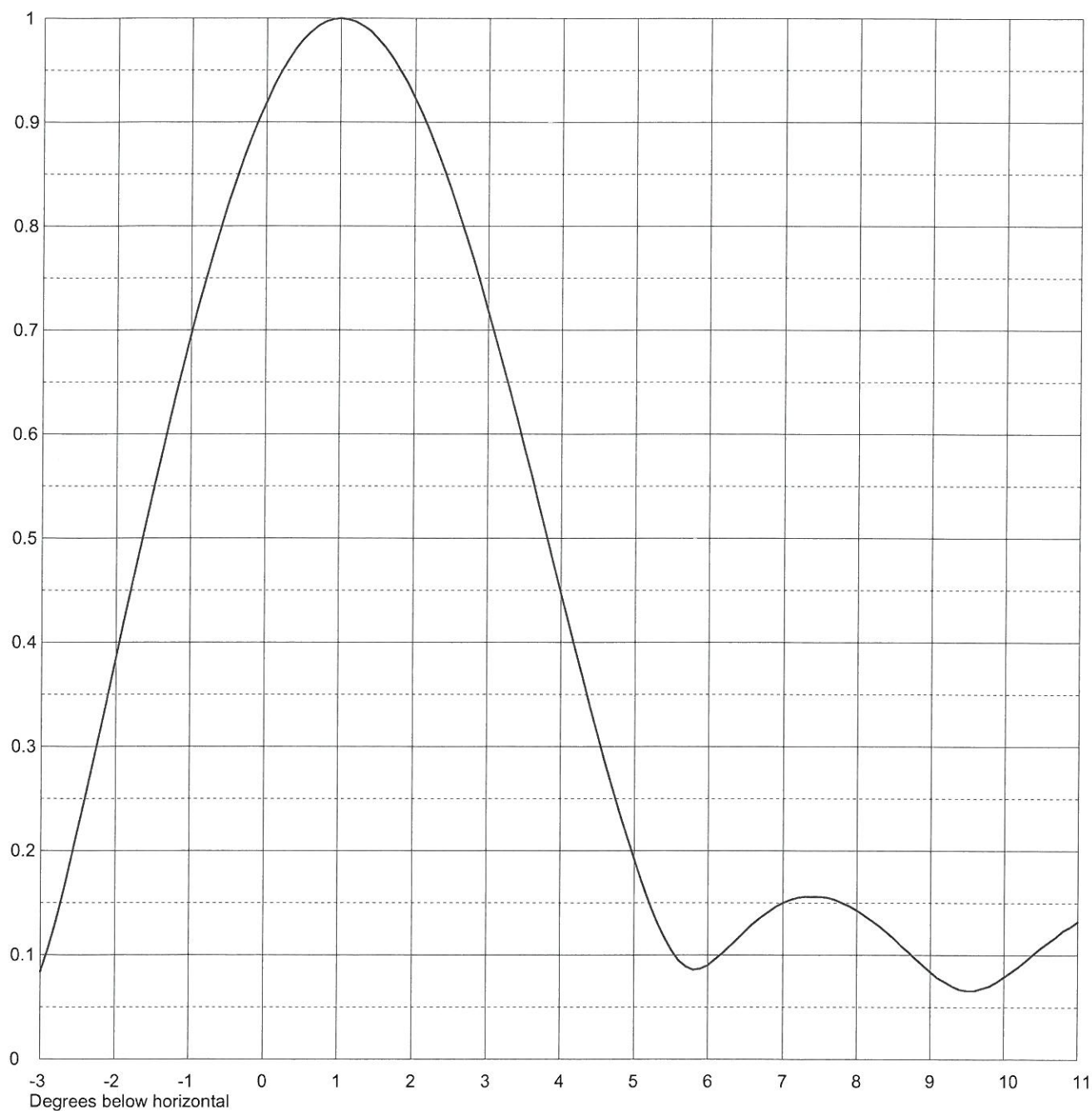
Frequency

629.00 MHz

Calculated / Measured

Calculated

Drawing #

12L120100

Remarks:

Date **05 Aug 2011**

Call Letters

Channel **40**

Location

Customer

Antenna Type **TLP-12B****TABULATION OF AZIMUTH PATTERN**Azimuth Pattern Drawing # **TLP-B**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0.899	90	0.661	135	0.577	180	0.645	225	0.584	270	0.650	315	0.893
1	1.000	46	0.895	91	0.656	136	0.578	181	0.645	226	0.583	271	0.654	316	0.897
2	0.999	47	0.890	92	0.651	137	0.580	182	0.645	227	0.582	272	0.659	317	0.902
3	0.999	48	0.886	93	0.646	138	0.582	183	0.645	228	0.581	273	0.663	318	0.906
4	0.999	49	0.881	94	0.641	139	0.584	184	0.645	229	0.580	274	0.668	319	0.910
5	0.998	50	0.876	95	0.637	140	0.586	185	0.644	230	0.579	275	0.673	320	0.914
6	0.998	51	0.872	96	0.632	141	0.588	186	0.644	231	0.578	276	0.678	321	0.919
7	0.998	52	0.867	97	0.628	142	0.590	187	0.643	232	0.577	277	0.683	322	0.923
8	0.997	53	0.862	98	0.624	143	0.592	188	0.643	233	0.576	278	0.688	323	0.927
9	0.996	54	0.857	99	0.619	144	0.594	189	0.642	234	0.575	279	0.694	324	0.930
10	0.996	55	0.852	100	0.615	145	0.596	190	0.641	235	0.574	280	0.699	325	0.934
11	0.995	56	0.847	101	0.612	146	0.598	191	0.640	236	0.573	281	0.705	326	0.938
12	0.994	57	0.842	102	0.608	147	0.600	192	0.640	237	0.572	282	0.711	327	0.941
13	0.993	58	0.836	103	0.604	148	0.603	193	0.639	238	0.572	283	0.716	328	0.944
14	0.992	59	0.831	104	0.601	149	0.605	194	0.638	239	0.571	284	0.722	329	0.948
15	0.990	60	0.826	105	0.597	150	0.607	195	0.637	240	0.570	285	0.728	330	0.951
16	0.989	61	0.820	106	0.594	151	0.609	196	0.636	241	0.570	286	0.734	331	0.954
17	0.987	62	0.815	107	0.591	152	0.611	197	0.634	242	0.570	287	0.740	332	0.956
18	0.985	63	0.810	108	0.589	153	0.614	198	0.633	243	0.570	288	0.747	333	0.959
19	0.983	64	0.804	109	0.586	154	0.616	199	0.632	244	0.570	289	0.753	334	0.962
20	0.981	65	0.799	110	0.583	155	0.618	200	0.631	245	0.571	290	0.759	335	0.964
21	0.979	66	0.793	111	0.581	156	0.619	201	0.629	246	0.572	291	0.765	336	0.966
22	0.977	67	0.787	112	0.579	157	0.621	202	0.628	247	0.573	292	0.771	337	0.968
23	0.975	68	0.782	113	0.577	158	0.623	203	0.626	248	0.575	293	0.777	338	0.971
24	0.972	69	0.776	114	0.575	159	0.625	204	0.625	249	0.577	294	0.783	339	0.973
25	0.970	70	0.771	115	0.574	160	0.627	205	0.623	250	0.579	295	0.789	340	0.975
26	0.967	71	0.765	116	0.573	161	0.628	206	0.621	251	0.581	296	0.795	341	0.977
27	0.964	72	0.759	117	0.571	162	0.630	207	0.619	252	0.584	297	0.801	342	0.979
28	0.961	73	0.754	118	0.570	163	0.632	208	0.618	253	0.587	298	0.806	343	0.980
29	0.958	74	0.748	119	0.569	164	0.633	209	0.616	254	0.590	299	0.812	344	0.982
30	0.955	75	0.742	120	0.569	165	0.634	210	0.613	255	0.593	300	0.817	345	0.984
31	0.952	76	0.737	121	0.568	166	0.636	211	0.611	256	0.596	301	0.823	346	0.986
32	0.949	77	0.731	122	0.568	167	0.637	212	0.609	257	0.600	302	0.828	347	0.988
33	0.946	78	0.726	123	0.568	168	0.638	213	0.607	258	0.603	303	0.834	348	0.990
34	0.942	79	0.720	124	0.568	169	0.639	214	0.605	259	0.607	304	0.839	349	0.991
35	0.939	80	0.714	125	0.568	170	0.640	215	0.602	260	0.610	305	0.844	350	0.993
36	0.935	81	0.709	126	0.568	171	0.641	216	0.600	261	0.614	306	0.849	351	0.994
37	0.932	82	0.703	127	0.569	172	0.642	217	0.598	262	0.618	307	0.854	352	0.995
38	0.928	83	0.698	128	0.569	173	0.643	218	0.596	263	0.622	308	0.859	353	0.996
39	0.924	84	0.692	129	0.570	174	0.643	219	0.594	264	0.625	309	0.864	354	0.997
40	0.920	85	0.687	130	0.571	175	0.644	220	0.592	265	0.629	310	0.869	355	0.998
41	0.916	86	0.682	131	0.572	176	0.644	221	0.590	266	0.633	311	0.874	356	0.999
42	0.912	87	0.676	132	0.573	177	0.645	222	0.589	267	0.637	312	0.879	357	0.999
43	0.908	88	0.671	133	0.574	178	0.645	223	0.587	268	0.641	313	0.883	358	0.999
44	0.904	89	0.666	134	0.575	179	0.645	224	0.586	269	0.646	314	0.888	359	1.000

Remarks:

Date **05 Aug 2011**

Call Letters

Channel **40**

Location

Customer

Antenna Type **TLP-12B****TABULATION OF ELEVATION PATTERN**Elevation Pattern Drawing # **12L120100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.076	2.4	0.854	10.6	0.112	30.5	0.037	51.0	0.086	71.5	0.088
-9.5	0.089	2.6	0.812	10.8	0.123	31.0	0.051	51.5	0.083	72.0	0.084
-9.0	0.117	2.8	0.767	11.0	0.132	31.5	0.061	52.0	0.078	72.5	0.080
-8.5	0.163	3.0	0.718	11.5	0.147	32.0	0.066	52.5	0.072	73.0	0.076
-8.0	0.221	3.2	0.667	12.0	0.149	32.5	0.065	53.0	0.064	73.5	0.072
-7.5	0.282	3.4	0.614	12.5	0.139	33.0	0.059	53.5	0.055	74.0	0.067
-7.0	0.339	3.6	0.559	13.0	0.120	33.5	0.049	54.0	0.045	74.5	0.063
-6.5	0.384	3.8	0.503	13.5	0.094	34.0	0.038	54.5	0.036	75.0	0.058
-6.0	0.409	4.0	0.447	14.0	0.071	34.5	0.031	55.0	0.026	75.5	0.054
-5.5	0.409	4.2	0.392	14.5	0.061	35.0	0.034	55.5	0.018	76.0	0.049
-5.0	0.379	4.4	0.338	15.0	0.070	35.5	0.046	56.0	0.010	76.5	0.045
-4.5	0.317	4.6	0.286	15.5	0.087	36.0	0.060	56.5	0.005	77.0	0.041
-4.0	0.227	4.8	0.237	16.0	0.101	36.5	0.073	57.0	0.006	77.5	0.037
-3.5	0.116	5.0	0.192	16.5	0.107	37.0	0.082	57.5	0.010	78.0	0.034
-3.0	0.084	5.2	0.151	17.0	0.104	37.5	0.088	58.0	0.013	78.5	0.030
-2.8	0.132	5.4	0.118	17.5	0.092	38.0	0.089	58.5	0.015	79.0	0.027
-2.6	0.191	5.6	0.095	18.0	0.074	38.5	0.085	59.0	0.016	79.5	0.024
-2.4	0.254	5.8	0.086	18.5	0.054	39.0	0.078	59.5	0.017	80.0	0.021
-2.2	0.319	6.0	0.090	19.0	0.041	39.5	0.067	60.0	0.018	80.5	0.018
-2.0	0.385	6.2	0.102	19.5	0.045	40.0	0.053	60.5	0.021	81.0	0.016
-1.8	0.451	6.4	0.116	20.0	0.062	40.5	0.038	61.0	0.025	81.5	0.014
-1.6	0.515	6.6	0.130	20.5	0.077	41.0	0.023	61.5	0.030	82.0	0.012
-1.4	0.578	6.8	0.141	21.0	0.087	41.5	0.007	62.0	0.036	82.5	0.010
-1.2	0.639	7.0	0.150	21.5	0.089	42.0	0.008	62.5	0.043	83.0	0.009
-1.0	0.696	7.2	0.155	22.0	0.083	42.5	0.020	63.0	0.050	83.5	0.007
-0.8	0.750	7.4	0.156	22.5	0.069	43.0	0.030	63.5	0.057	84.0	0.006
-0.6	0.800	7.6	0.155	23.0	0.049	43.5	0.037	64.0	0.064	84.5	0.005
-0.4	0.845	7.8	0.150	23.5	0.024	44.0	0.041	64.5	0.071	85.0	0.004
-0.2	0.885	8.0	0.143	24.0	0.008	44.5	0.043	65.0	0.077	85.5	0.003
0.0	0.919	8.2	0.133	24.5	0.032	45.0	0.043	65.5	0.082	86.0	0.002
0.2	0.948	8.4	0.122	25.0	0.056	45.5	0.043	66.0	0.087	86.5	0.002
0.4	0.971	8.6	0.109	25.5	0.076	46.0	0.043	66.5	0.091	87.0	0.001
0.6	0.987	8.8	0.096	26.0	0.090	46.5	0.045	67.0	0.094	87.5	0.001
0.8	0.997	9.0	0.084	26.5	0.097	47.0	0.050	67.5	0.097	88.0	0.001
1.0	1.000	9.2	0.074	27.0	0.096	47.5	0.056	68.0	0.098	88.5	0.000
1.2	0.997	9.4	0.067	27.5	0.089	48.0	0.063	68.5	0.099	89.0	0.000
1.4	0.988	9.6	0.066	28.0	0.075	48.5	0.071	69.0	0.099	89.5	0.000
1.6	0.972	9.8	0.070	28.5	0.057	49.0	0.077	69.5	0.098	90.0	0.000
1.8	0.950	10.0	0.079	29.0	0.037	49.5	0.082	70.0	0.096		
2.0	0.923	10.2	0.089	29.5	0.020	50.0	0.086	70.5	0.094		
2.2	0.891	10.4	0.101	30.0	0.022	50.5	0.087	71.0	0.091		

Remarks:



Exhibit No.

Date

04 Aug 2011

Call Letters

WAND

Channel

40

Location

Customer

DL

Antenna Type

TLP-12B

AZIMUTH PATTERN

Gain

1.70 (2.30 dB)

Frequency

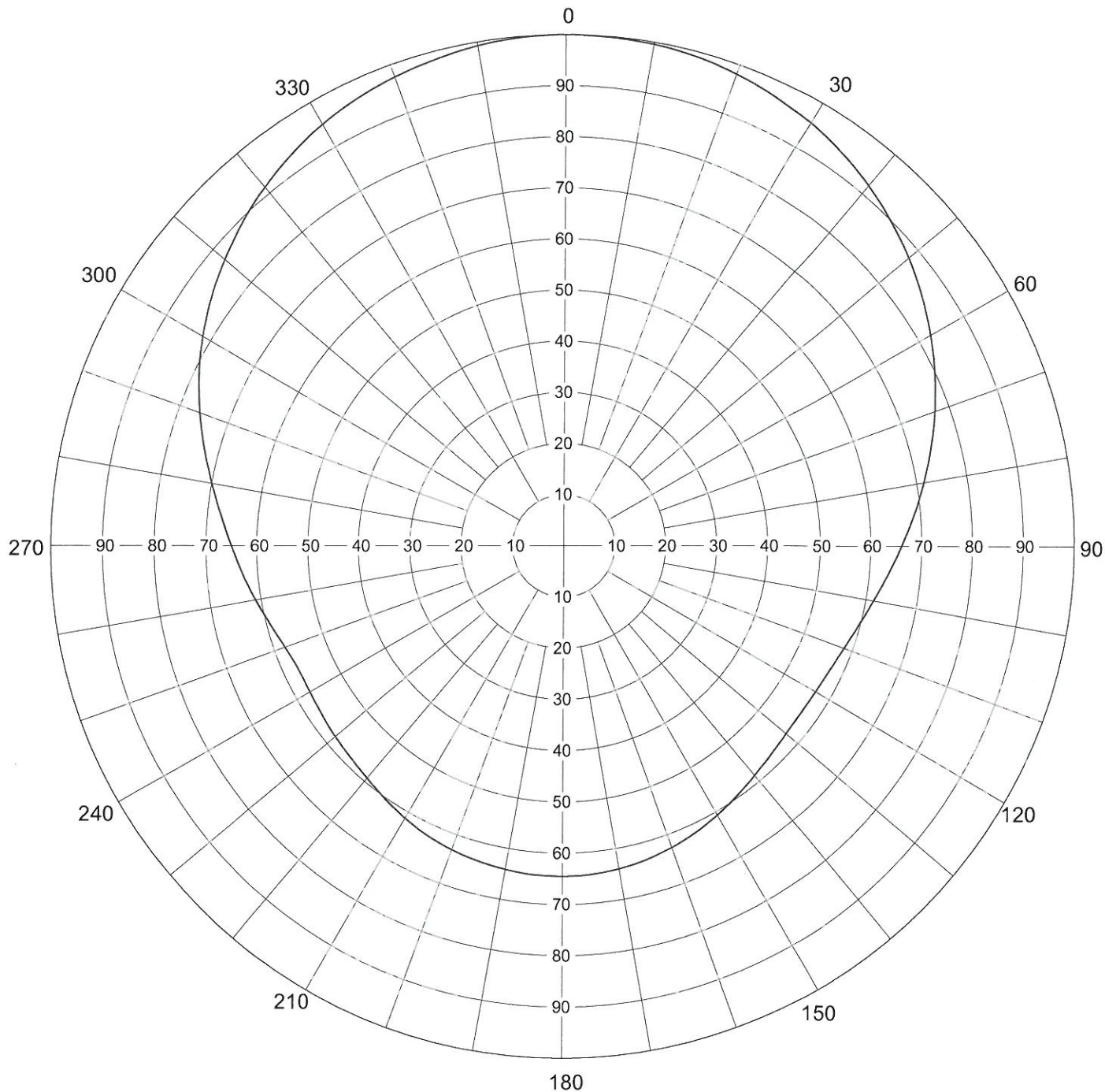
629 MHz

Calculated / Measured

Calculated

Drawing #

TLP-B



Remarks:

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I
LONGLEY-RICE ANALYSIS
FOR THE PROPOSED DIGITAL OPERATION OF
W40CV, JACKSONVILLE, ILLINOIS
CH 40 15 KW ERP 469 METERS RC/AMSL
NOVEMBER 2011

39° 36' 09"

90° 02' 47"

Simple Mask

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Dist(km)</u>	<u>Status</u>	<u>FCC File No.</u>	<u>Result</u>
33	K33GU	ST. LOUIS MO	116.9	LIC	BLTT-20031016ABC	0.00%
39	W39BH	CHAMPAIGN IL	164.5	LIC	BLTTL-19920420IM	0.00%
39	WAOE	PEORIA IL	121.8	CP	BPCDT-20080620AFR	0.03%
39	WAOE	PEORIA IL	121.8	LIC	BLCDT-20070801EOU	0.00%
39	KETC	ST. LOUIS MO	128.2	LIC	BLEDT-20090804ABV	0.03%
40	WSIU-TV	CARBONDALE IL	222	CP	BDRTEDT-20100830ABJ	No interference
40	WESV-LD	CHICAGO IL	324.4	LIC	BLDTL-20101213AGJ	No interference
40	NEW	QUINCY IL	116.2	APP	BNPDTL-20101015AAD	0.05%
40	W40DF-D	ROCKFORD IL	272.6	CP	BNPDTL-20091019ABX	No interference
40	W40CN-D	SUGAR GROVE IL	278.1	LIC	BLDTA-20110103ACG	No interference
40	W40DH-D	EVANSVILLE IN	309.3	CP	BNPDTL-20100806ABY	No interference
40	WHAN-LD	SALEM IN	359.1	CP	BDCCDTL-20061003AAP	0.00%
40	K40MG-D	COLUMBIA MO	199.1	CP	BNPDTL-20090825BUY	No interference
40	K40MI-D	ELDON MO	256	CP	BNPDTL-20090825BVU	No interference
40	K40JW-D	MACON MO	215.2	CP	BNPTTL-20000829ASF	No interference
40	K40MH-D	MARSHALL MO	261.7	CP	BNPDTL-20090825BXV	No interference
40	K40MJ-D	SEDALIA MO	298.9	CP	BNPDTL-20090825BXA	No interference
41	KGCW	BURLINGTON IA	182.2	LIC	BLCDT-20081120ABD	No interference
41	WICD	CHAMPAIGN IL	189.4	LIC	BLCDT-20050620AAO	No interference
41	WSIU-TV	EDWARDSVILLE IL	115.6	APP	BDRTEDT-20100830ABI	No interference
41	W41DP-D	SPRINGFIELD IL	25.1	CP	BNPDTL-20090825AXE	1.73%

TABLE II
CONTOUR DATA
FOR THE PROPOSED TRANSLATOR AT
W40CV-D, JACKSONVILLE, ILLINOIS
CHANNEL 40 15 KW ERP DA 469 METERS RCAMSL
NOVEMBER 2011

Radial <u>Bearing</u> (N ° E, T)	Average* <u>Elevation</u> <u>3.2 to 16.1 km</u> meters	Effective <u>Height</u> meters	Radio <u>Horizon</u> kW	Distance to Contour F(50/90) <u>51 dBu</u> km
0	203.4	265.6	12.696	52.7
10	204.9	264.1	11.511	52.1
20	204.7	264.3	10.234	51.5
30	203.7	265.3	8.917	50.8
40	202.9	266.1	7.647	50.0
50	202.3	266.7	6.554	49.2
60	200.8	268.2	5.673	48.5
70	200.1	268.9	5.098	48.0
80	197.5	271.5	4.856	47.8
90	196.4	272.6	4.891	47.9
100	199.0	270.0	5.151	48.1
110	200.1	268.9	5.527	48.4
120	199.9	269.1	5.897	48.8
130	200.4	268.6	6.144	48.9
140	199.1	269.9	6.24	49.1
150	199.5	269.5	6.163	49.0
160	199.2	269.8	5.972	48.9
170	195.2	273.8	5.637	48.8
180	191.3	277.7	5.257	48.6
190	192.1	276.9	5.029	48.3
200	188.0	281.0	4.874	48.4
210	186.2	282.8	5.029	48.6
220	181.5	287.5	5.582	49.4
230	187.9	281.1	6.338	49.8
240	194.7	274.3	7.329	50.2
250	194.9	274.1	8.641	51.1
260	203.7	265.3	10.012	51.4
270	209.7	259.3	11.327	51.7
280	209.5	259.5	12.531	52.3

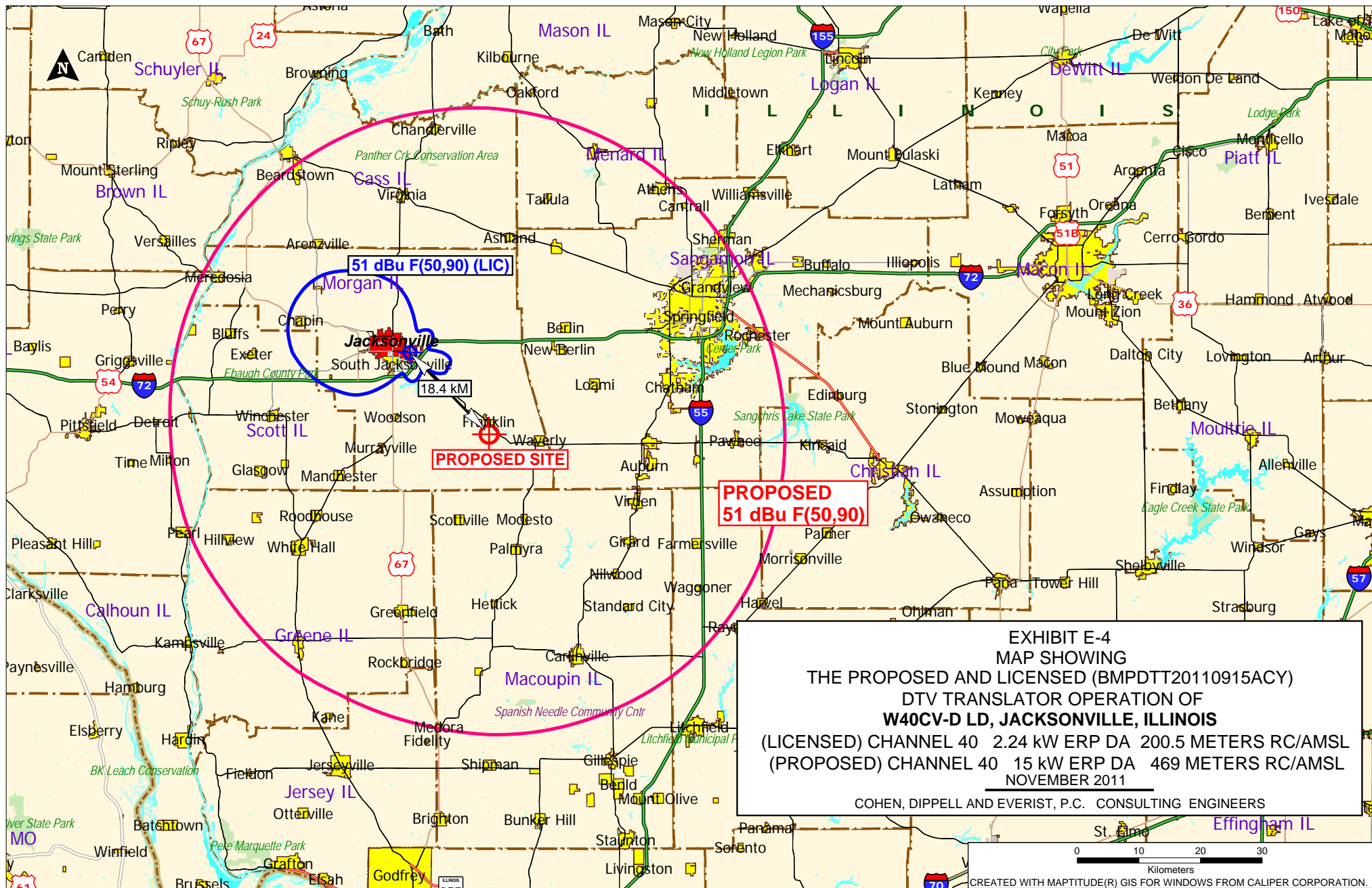
TABLE II
CONTOUR DATA
FOR THE PROPOSED TRANSLATOR AT
W40CV-D, JACKSONVILLE, ILLINOIS
CHANNEL 40 15 KW ERP DA 469 METERS RCAMSL
NOVEMBER 2011

<u>Radial</u> <u>Bearing</u> (N ° E, T)	<u>Average*</u> <u>Elevation</u> <u>3.2 to 16.1 km</u> meters	<u>Effective</u> <u>Height</u> meters	<u>Radio</u> <u>Horizon</u> kW	<u>Distance to Contour</u> <u>F(50/90)</u> <u>51 dBu</u> km
290	207.9	261.1	13.566	52.8
300	205.1	263.9	14.259	53.2
310	203.6	265.4	14.791	53.5
320	201.5	267.5	15.0	53.7
330	202.3	266.7	14.88	53.6
340	201.8	267.2	14.435	53.5
350	203.8	265.2	13.68	53.1

51 dBu F(50,90)

SITE

EXHIBIT E - 3
PREDICTED 51 dBu CONTOUR
FOR THE PROPOSED TRANSLATOR AT
W40CV-D, JACKSONVILLE, ILLINOIS
CHANNEL 40 15 kW ERP DA 469 METERS RCAMSL
NOVEMBER 2011



Section III - Engineering (Digital)

TECHNICAL SPECIFICATIONS Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel: _____

2. Translator Input Channel No. _____

3. Station proposed to be rebroadcast:

Call Sign	City	State	Channel
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4. Antenna Location Coordinates: (NAD 27)

____° ____' ____" ☐ N ☐ S Latitude
____° ____' ____" ☐ E ☐ W Longitude

5. Antenna Structure Registration Number: _____

☐ Not applicable

See Explanation
in Exhibit No.

☐ FAA Notification Filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: _____ meters

7. Overall Tower Height Above Ground Level: _____ meters

8. Height of Radiation Center Above Ground Level: _____ meters

9. Maximum Effective Radiated Power (ERP): _____ kW

10. Transmitter Output Power: _____ kW

11. a. Transmitting Antenna: ☐ Nondirectional ☐ Directional ☐ Directional composite

Manufacturer	Model
--------------	-------

b. Electrical Beam Tilt: _____ degrees ☐ Not applicable

c. Directional Antenna Relative Field Values:

Rotation: _____ ° ☐ No rotation ☐ N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

- d. Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt? ☐ Yes ☐ No

If Yes, attach an Exhibit (see instructions for details).

Exhibit No.

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. **Out-of-Channel Emission Mask:** Simple ☐ Stringent ☐ Full Service ☐

CERTIFICATION

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. ☐ Yes ☐ No

See Explanation in Exhibit No.
14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radio frequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. **An Exhibit is required.** ☐ Yes ☐ No

See Explanation in Exhibit No.
- Exhibit No.

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.

PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.

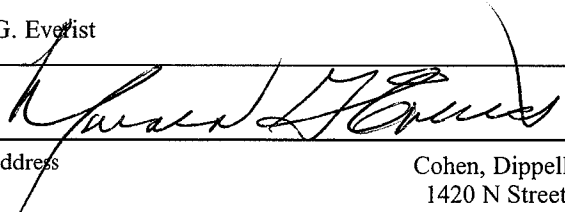
15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

- ☐ The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.
- ☐ Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

- ☐ Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.
- ☐ Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.
- ☐ Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name Donald G. Everist		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature 		Date 11/1/11	
Mailing Address Cohen, Dippell and Everist, P.C. 1420 N Street, NW, Suite One			
City Washington	State or Country (if foreign address) DC	ZIP Code 20005	
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).