

ENGINEERING STATEMENT  
RE DTV BROADCAST ENGINEERING DATA  
APPLICATION FOR CONSTRUCTION PERMIT  
ON BEHALF OF  
GRIFFIN TULSA I LICENSING, L.L.C.  
KOTV-DT, TULSA, OKLAHOMA  
CHANNEL 45 840 KW ERP 556.2 METERS HAAT

MARCH 2008

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

COHEN, DIPPELL AND EVERIST, P. C.

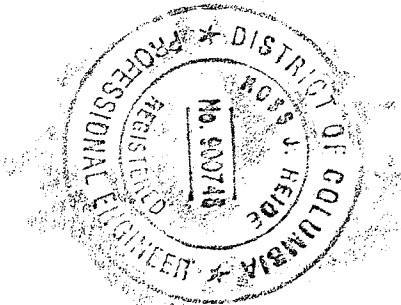
City of Washington                    )  
  ) ss  
District of Columbia                )

Ross J. Heide, being duly sworn upon his oath, deposes and states that:

He is a graduate of the Massachusetts Institute of Technology in Operations Research and Management Science, a Registered Professional Engineer in the District of Columbia, and employed by Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

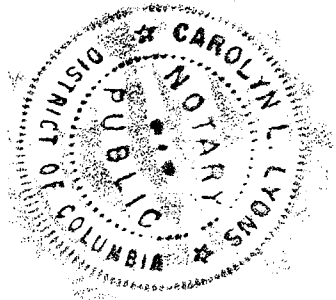
That the attached engineering report was prepared by him or under his supervision and direction and

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.



Ross J. Heide  
Ross J. Heide  
District of Columbia  
Professional Engineer  
Registration No. PE900748

Subscribed and sworn to before me this 14<sup>th</sup> day of March, 2008.



Carolyn L. Lyons  
Notary Public

My Commission Expires: 2/28/2013

This engineering statement has been prepared in support of an application for construction permit on behalf of Griffin Tulsa I Licensing, L.L.C., licensee of KOTV-DT, Tulsa, Oklahoma. The purpose of the application is to specify an omni-directional effective radiated power and antenna height to fit within the allotted Appendix B<sup>1</sup> facilities. The 840 kW non-directional effective radiated power (“ERP”) requested herein at a reduced antenna height above average terrain (“HAAT”) of 556.2 meters does not exceed the service contour of the currently licensed Grade B. The licensee requests expedited processing since the proposed operation meets the provisions of Paragraph 140 of the Third Periodic Review Report and Order.<sup>2</sup>

KOTV-TV is licensed to operate on NTSC television Channel 6 with a maximum visual ERP of 100 kW and a HAAT of 573 meters (1878 feet). KOTV-DT has been allocated DTV Channel 45 with facilities of 840 kW ERP directional and HAAT of 573 meters in the revised DTV Table of Allotments.<sup>3</sup> KOTV-DT proposes to construct DTV facilities of 840 kW non-directional ERP at a decreased height above average terrain of 556.2 meters.

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<sup>1</sup>“In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service”, MM Docket 87-268, Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eighth Report and Order (FCC 08-72) Released March 6, 2008.

<sup>2</sup>“In the Matter of Third Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television”, MB Docket No. 07-91, Report & Order (FCC 07-228), Released December 31, 2007.

<sup>3</sup>Ibid.

Expedited Processing

An allocation study from the proposed site has not been performed as the predicted F(50,90) 41 dBu contour of the proposed DTV facilities at the currently authorized site fits entirely within the predicted F(50,90) 41 dBu contour of the KOTV-DT facility in Appendix B. The purpose of requesting these proposed reduced facilities is to meet the provisions of Paragraph 140 of the Third Periodic Review Report and Order.<sup>4</sup> The proposed operation does not extend beyond the KOTV-DT facility in Appendix B and the proposed operation is predicted to serve 1,289,300 persons in an area of 40,060 square kilometers, which is 99.5% of the population served by the KOTV-DT facility in Appendix B.

The DTV antenna will be located on the same tower as KOTV-DT transition Channel 55 operates. There are no AM stations located within 3.2 km of the proposed KOTV-DT tower site. There are three NCE FM stations and three other post-transition full-service DTV stations within 500 meters of the KOTV-DT tower site.

The KOTV DTV antenna will be the lower of a two-tier stack top-mounted on the existing tower. The KOTV-DT antenna will be located on the existing tower having a total overall structure height above ground of 560.5 meters (1839 feet). The existing transmitter site is located at 101<sup>st</sup> Street and 273<sup>rd</sup> Avenue in Oneta, Oklahoma.

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<sup>4</sup>Ibid.

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KOTV-DT, TULSA, OKLAHOMA

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Since there is no change in overall height, FAA airspace approval is not required. The antenna structure registration number of the existing tower is 1011355. Exhibit E-1 is a vertical sketch of the existing tower and the proposed transmitting antenna.

The geographic coordinates of the proposed site are as follows:

North Latitude: 36° 01' 15" NAD-27

West Longitude: 95° 40' 32"

Equipment Data

Antenna: Dielectric, TFU-30GBH-R O8 (or equivalent) with 0.75 degrees electrical beamtilt. The vertical plane pattern and other exhibits required by Section 73.625(c) are herein included as Exhibit E-3.

Transmission Line: 594 meters (1950 ft) of Dielectric, Type EIA/DCA, EHT, 6-1/8", 75 ohm (or equivalent)

Power Data

Transmitter output	54.9 kW	17.39 dBk
Combiner and Transmission line efficiency/loss	56.7%	-2.46 dB
Input power to the antenna	31.1 kW	14.93 dBk
Antenna power gain	27.0	14.31 dB
Effective Radiated Power	840 kW	29.24 dBk

Elevation Data

Vertical dimension for Channel 45 antenna without lightning protector	14.6 meters 48.0 feet
Overall height above ground of the existing antenna structure (including beacon and lightning rod)	560.5 meters 1839 feet
Center of radiation of Channel 45 antenna above ground	532.8 meters 1748.0 feet
Elevation of site above mean sea level	216.4 meters 710.0 feet
Center of radiation of Channel 45 antenna above mean sea level	749.2 meters 2458.0 feet
Overall height above mean sea level of existing tower and stacked antenna (including beacon)	776.9 meters 2549.0 feet
Antenna height above average terrain	556.2 meters

Note: Slight height differences may result due to conversion to metric.

Allocation

An allocation and interference study from the proposed site has not been performed since the proposed DTV facilities do not exceed those listed in Appendix B.

Coverage

The average elevation data for 3.2 to 16.1 km along each radial are based upon the 3-second NGDC terrain data. This 3-second NGDC profile data conforms very closely to the terrain information of that determined by using the 7.5 minute topographic maps on file at the Commission.

The F(50,90) DTV coverage contour has been computed from reference to the propagation data for Channels 14-69, as published by the FCC in Figures 10b and 10c, Section 73.699 of the FCC Rules and Regulations.

Utilizing the formula in Section 73.625(b)(2) of the Rules for the effective heights, it is found that the depression angle,  $A_h$ , varies from 0.64 to 0.67 degrees. Since the relative vertical field is greater than 90% of the maximum at these depression angles, the maximum power was used in determining the distance to the DTV contour.

Table I includes the distances to the 41 and 48 dBu F(50,90) coverage contours, the average elevation 3.2 to 16.1 km, and the antenna height above average terrain for the eight radials. Exhibit E-2 provides the 41 and 48 dBu F(50,90) coverage contours on a map and demonstrates that the community of license is covered by the F(50,90) 48 dBu contour.

#### Total Radiofrequency Field Levels at KOTV-DT Tower Site

The total percentage of radiofrequency field levels ("RFF") can be calculated by combining the percentage contribution of each station. Since the proposed operation is post-transition, all analog full-service stations have been omitted from the RFF analysis. The RFF analysis and the stations considered are shown in Table II.

The total "worst-case" post-transition RFF contribution of all stations two meters above the ground near the base of the KOTV-DT tower is approximately 5% of the FCC guidelines for an uncontrolled environment and which is no more than 1% of the proposed FCC guidelines for a controlled environment. KOTV-DT will likely not operate its post-transition facilities until 2009,

thereby potentially reducing the RFF at the site after analog operations are removed from the tower and the vicinity.

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 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.



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- (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 change the tower lighting 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 MEAN SEA LEVEL

ABOVE GROUND

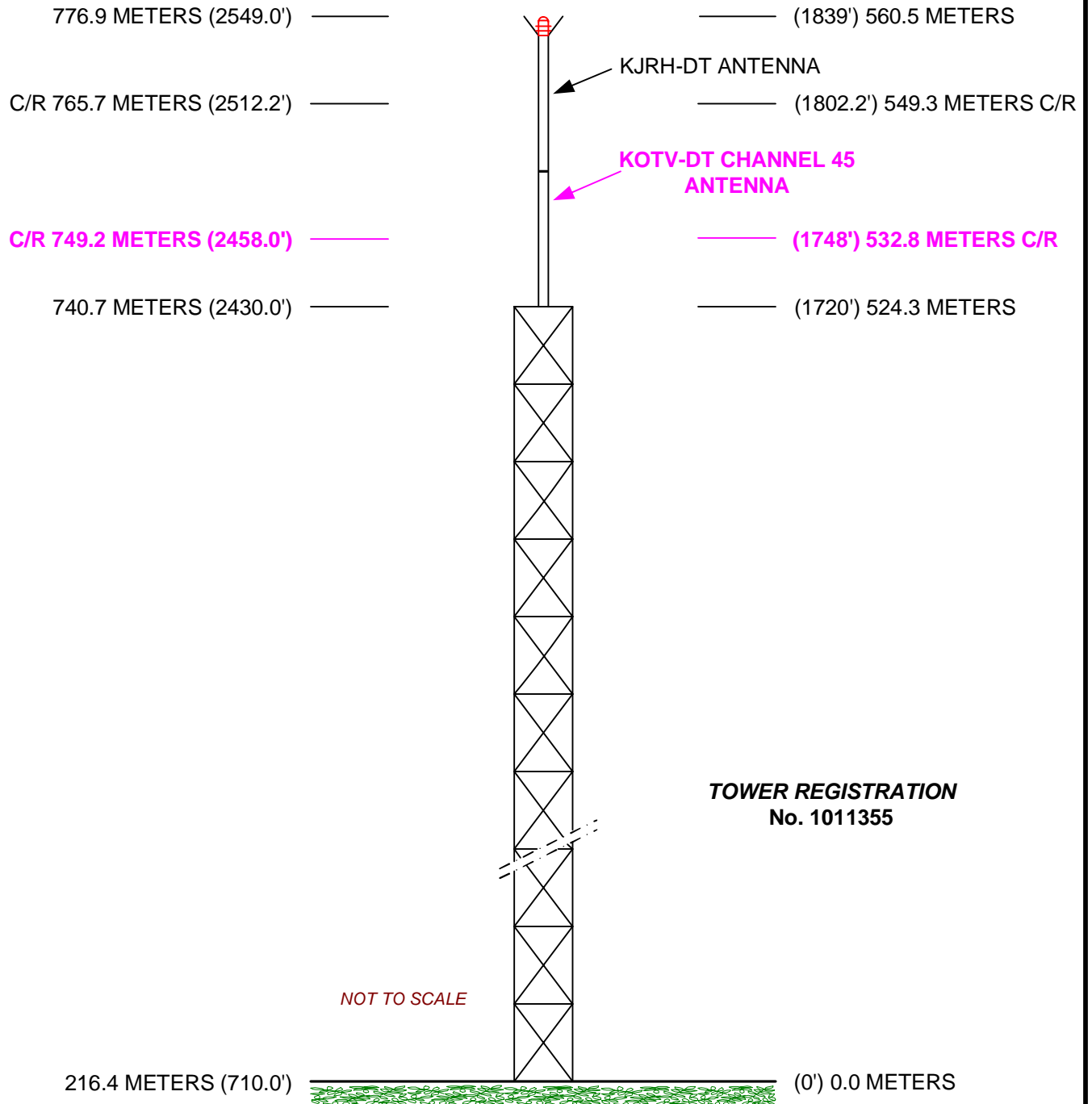
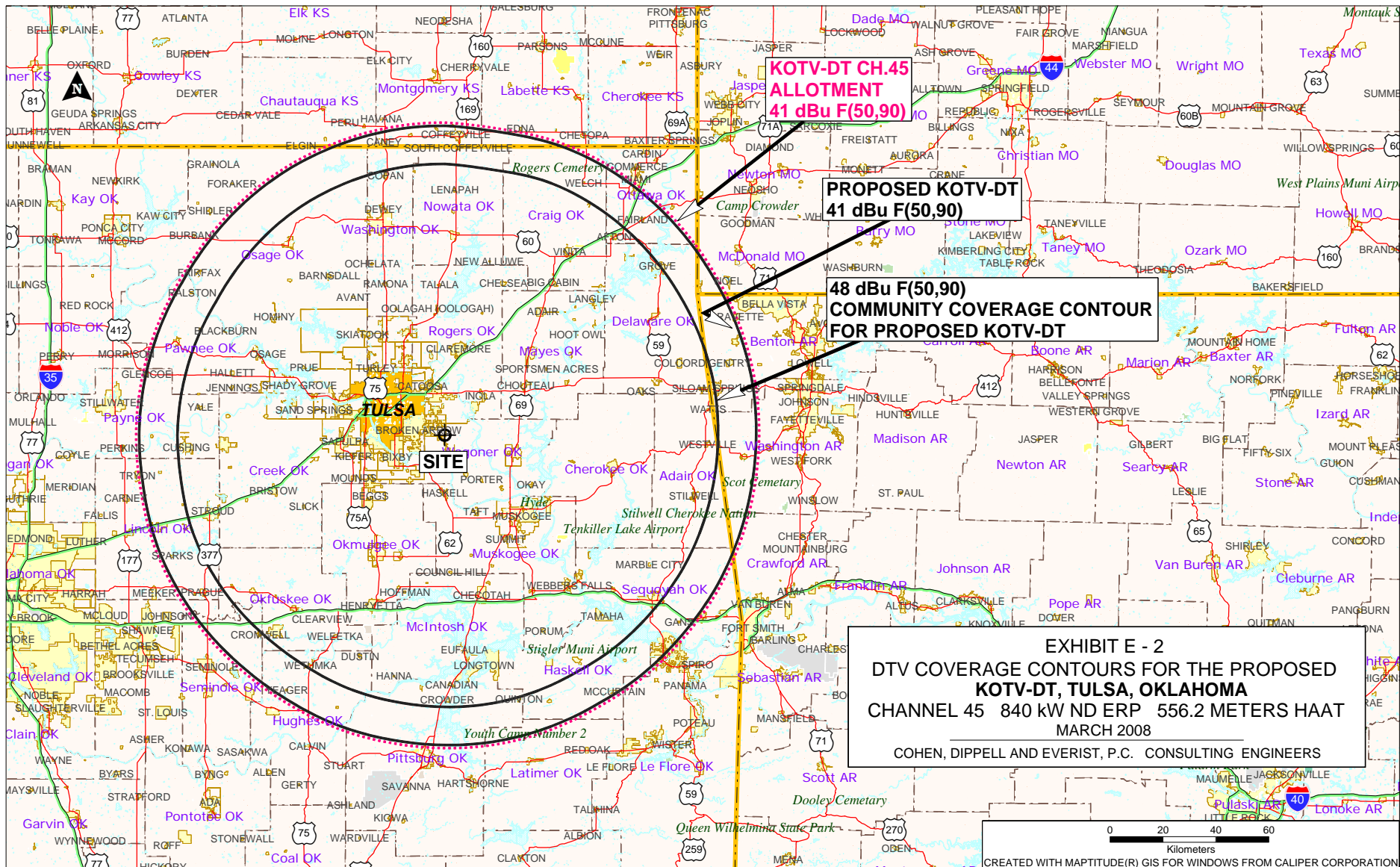


EXHIBIT E-1  
TOWER SKETCH  
**KOTV-DT, TULSA, OKLAHOMA**  
MARCH 2008



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EXHIBIT E-3

ANTENNA MANUFACTURER DATA

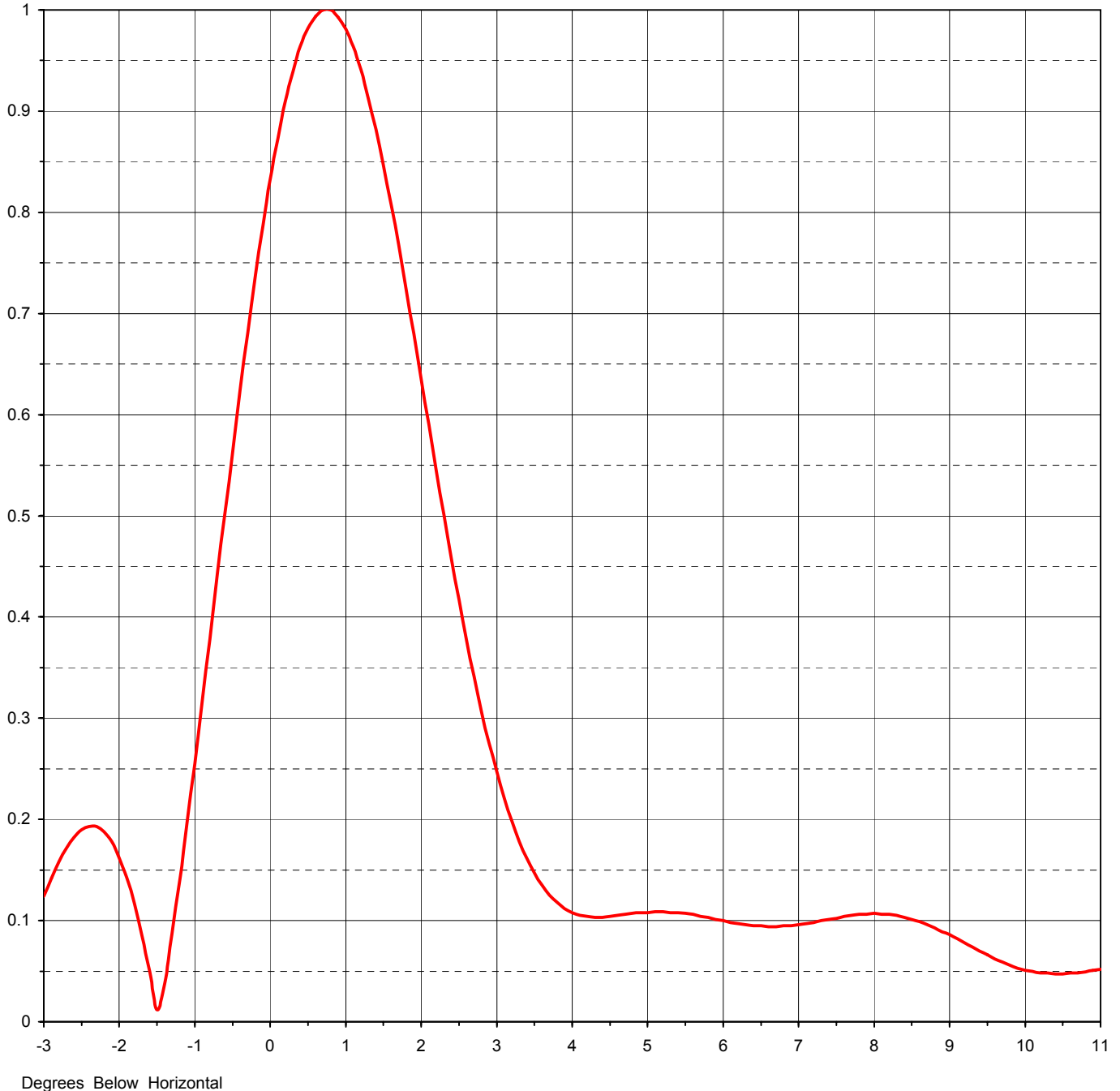
KOTV-DT, TULSA, OKLAHOMA



Proposal Number	<b>C-01038</b>	Revision:	<b>3</b>
Date	<b>4-Dec-07</b>		
Call Letters	<b>KOTV-DT</b>	Channel	<b>45</b>
Location	<b>Tulsa, OK</b>		
Customer			
Antenna Type	<b>TFU-30GBH-R 08</b>		

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>27.00 ( 14.31 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>18.70 ( 12.72 dB )</b>	Frequency	<b>659.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>30G270075</b>

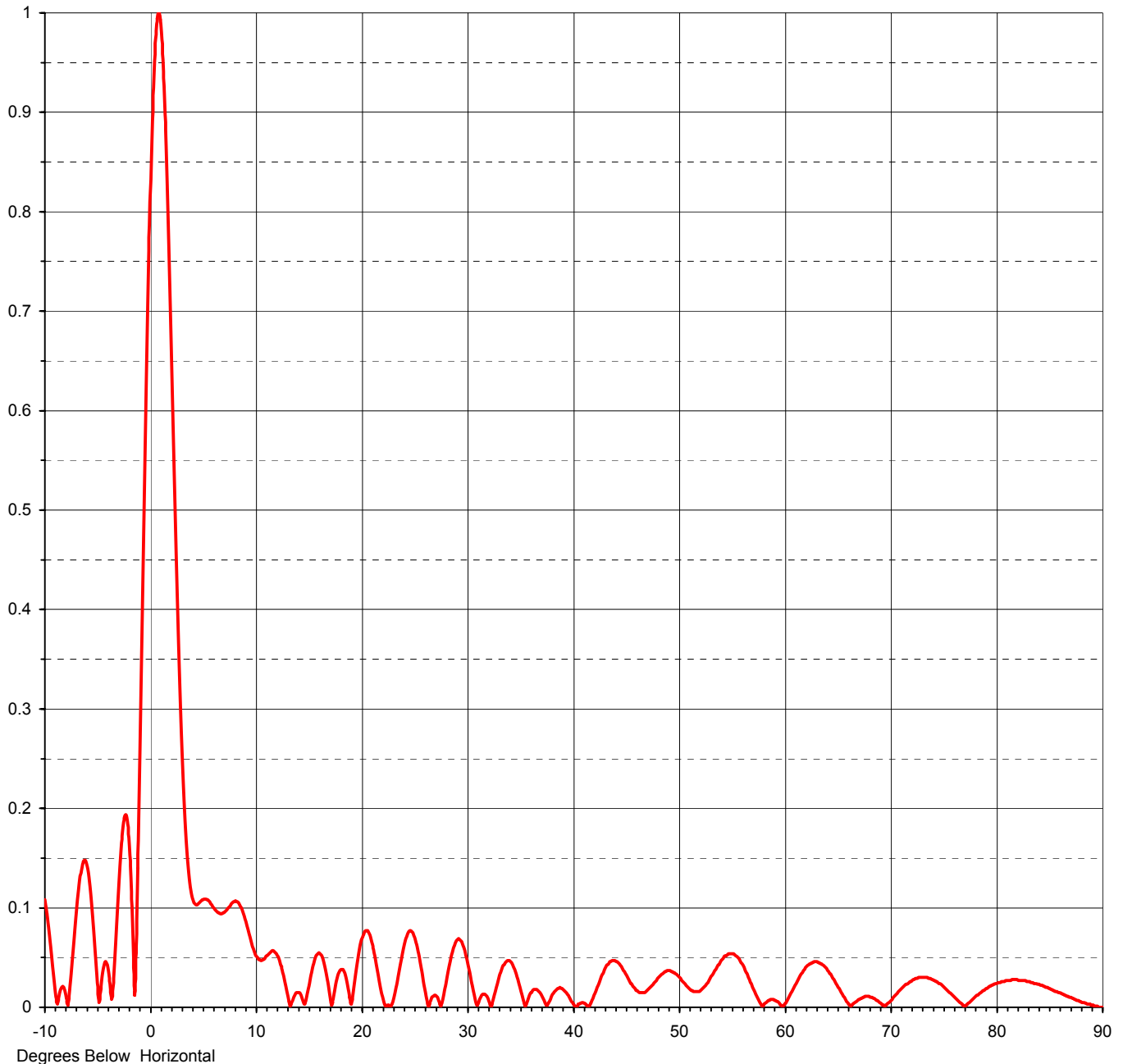




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Calculated / Measured	<b>Calculated</b>	Drawing #	<b>30G270075-90</b>





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 Date **4-Dec-07**  
 Call Letters **KOTV-DT** Channel **45**  
 Location **Tulsa, OK**  
 Customer  
 Antenna Type **TFU-30GBH-R 08**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **30G270075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.108	2.4	0.458	10.6	0.047	30.5	0.022	51.0	0.019	71.5	0.023
-9.5	0.066	2.6	0.378	10.8	0.048	31.0	0.002	51.5	0.016	72.0	0.027
-9.0	0.015	2.8	0.307	11.0	0.051	31.5	0.013	52.0	0.016	72.5	0.029
-8.5	0.018	3.0	0.247	11.5	0.056	32.0	0.009	52.5	0.021	73.0	0.030
-8.0	0.012	3.2	0.198	12.0	0.054	32.5	0.008	53.0	0.029	73.5	0.029
-7.5	0.033	3.4	0.161	12.5	0.040	33.0	0.028	53.5	0.038	74.0	0.027
-7.0	0.096	3.6	0.135	13.0	0.016	33.5	0.043	54.0	0.047	74.5	0.024
-6.5	0.141	3.8	0.118	13.5	0.007	34.0	0.047	54.5	0.052	75.0	0.020
-6.0	0.141	4.0	0.108	14.0	0.015	34.5	0.038	55.0	0.054	75.5	0.015
-5.5	0.091	4.2	0.104	14.5	0.006	35.0	0.020	55.5	0.051	76.0	0.010
-5.0	0.017	4.4	0.103	15.0	0.019	35.5	0.001	56.0	0.044	76.5	0.005
-4.5	0.038	4.6	0.105	15.5	0.044	36.0	0.014	56.5	0.033	77.0	0.001
-4.0	0.037	4.8	0.107	16.0	0.055	36.5	0.018	57.0	0.020	77.5	0.006
-3.5	0.029	5.0	0.108	16.5	0.044	37.0	0.013	57.5	0.009	78.0	0.011
-3.0	0.124	5.2	0.109	17.0	0.015	37.5	0.002	58.0	0.001	78.5	0.015
-2.8	0.158	5.4	0.108	17.5	0.017	38.0	0.011	58.5	0.007	79.0	0.019
-2.6	0.182	5.6	0.106	18.0	0.037	38.5	0.018	59.0	0.008	79.5	0.022
-2.4	0.193	5.8	0.103	18.5	0.033	39.0	0.019	59.5	0.005	80.0	0.024
-2.2	0.188	6.0	0.100	19.0	0.005	39.5	0.013	60.0	0.002	80.5	0.026
-2.0	0.162	6.2	0.097	19.5	0.034	40.0	0.005	60.5	0.012	81.0	0.027
-1.8	0.116	6.4	0.095	20.0	0.066	40.5	0.003	61.0	0.022	81.5	0.028
-1.6	0.050	6.6	0.094	20.5	0.077	41.0	0.004	61.5	0.032	82.0	0.027
-1.4	0.038	6.8	0.095	21.0	0.065	41.5	0.001	62.0	0.040	82.5	0.027
-1.2	0.140	7.0	0.096	21.5	0.038	42.0	0.012	62.5	0.044	83.0	0.026
-1.0	0.255	7.2	0.098	22.0	0.011	42.5	0.025	63.0	0.046	83.5	0.024
-0.8	0.378	7.4	0.101	22.5	0.002	43.0	0.038	63.5	0.044	84.0	0.023
-0.6	0.503	7.6	0.104	23.0	0.006	43.5	0.046	64.0	0.039	84.5	0.021
-0.4	0.624	7.8	0.106	23.5	0.031	44.0	0.047	64.5	0.029	85.0	0.019
-0.2	0.735	8.0	0.107	24.0	0.059	44.5	0.042	65.0	0.020	85.5	0.016
0.0	0.832	8.2	0.106	24.5	0.076	45.0	0.034	65.5	0.011	86.0	0.014
0.2	0.909	8.4	0.103	25.0	0.072	45.5	0.024	66.0	0.003	86.5	0.012
0.4	0.964	8.6	0.099	25.5	0.051	46.0	0.017	66.5	0.004	87.0	0.010
0.6	0.994	8.8	0.093	26.0	0.020	46.5	0.015	67.0	0.008	87.5	0.007
0.8	1.000	9.0	0.086	26.5	0.004	47.0	0.017	67.5	0.011	88.0	0.005
1.0	0.981	9.2	0.078	27.0	0.012	47.5	0.022	68.0	0.010	88.5	0.003
1.2	0.941	9.4	0.070	27.5	0.001	48.0	0.029	68.5	0.008	89.0	0.002
1.4	0.882	9.6	0.062	28.0	0.024	48.5	0.034	69.0	0.004	89.5	0.001
1.6	0.808	9.8	0.059	28.5	0.051	49.0	0.037	69.5	0.002	90.0	0.000
1.8	0.724	10.0	0.053	29.0	0.067	49.5	0.035	70.0	0.007		
2.0	0.635	10.2	0.050	29.5	0.066	50.0	0.031	70.5	0.013		
2.2	0.545	10.4	0.048	30.0	0.048	50.5	0.025	71.0	0.019		

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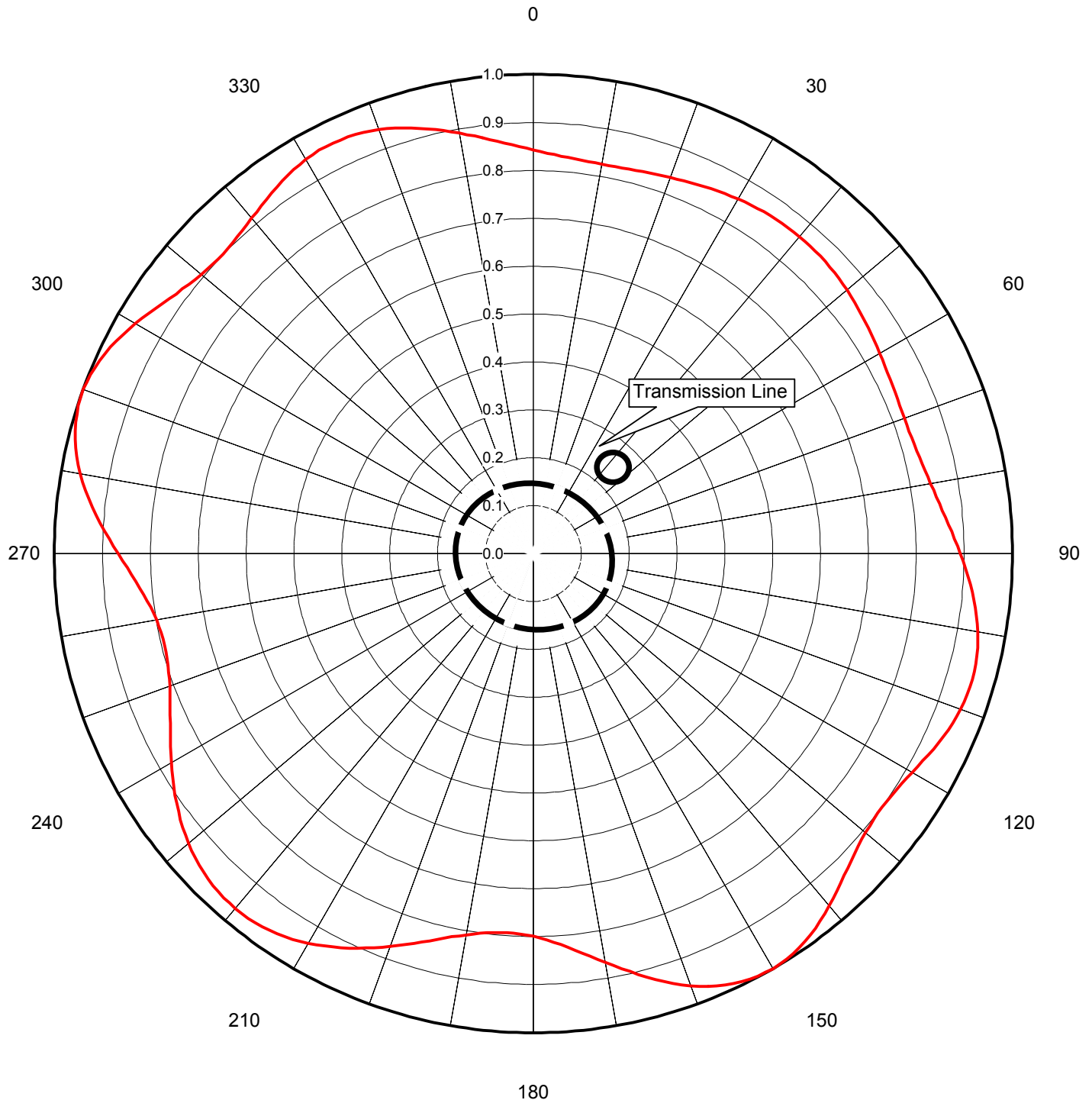


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Date	<b>4-Dec-07</b>		
Call Letters	<b>KOTV-DT</b>	Channel	<b>45</b>
Location	<b>Tulsa, OK</b>		
Customer			
Antenna Type	<b>TFU-30GBH-R O8</b>		

## AZIMUTH PATTERN

Gain **1.30** (1.14 dB)  
Calculated / Measured **Calculated**

Frequency **659.00 MHz**  
Drawing # **TFU-O8-6590**







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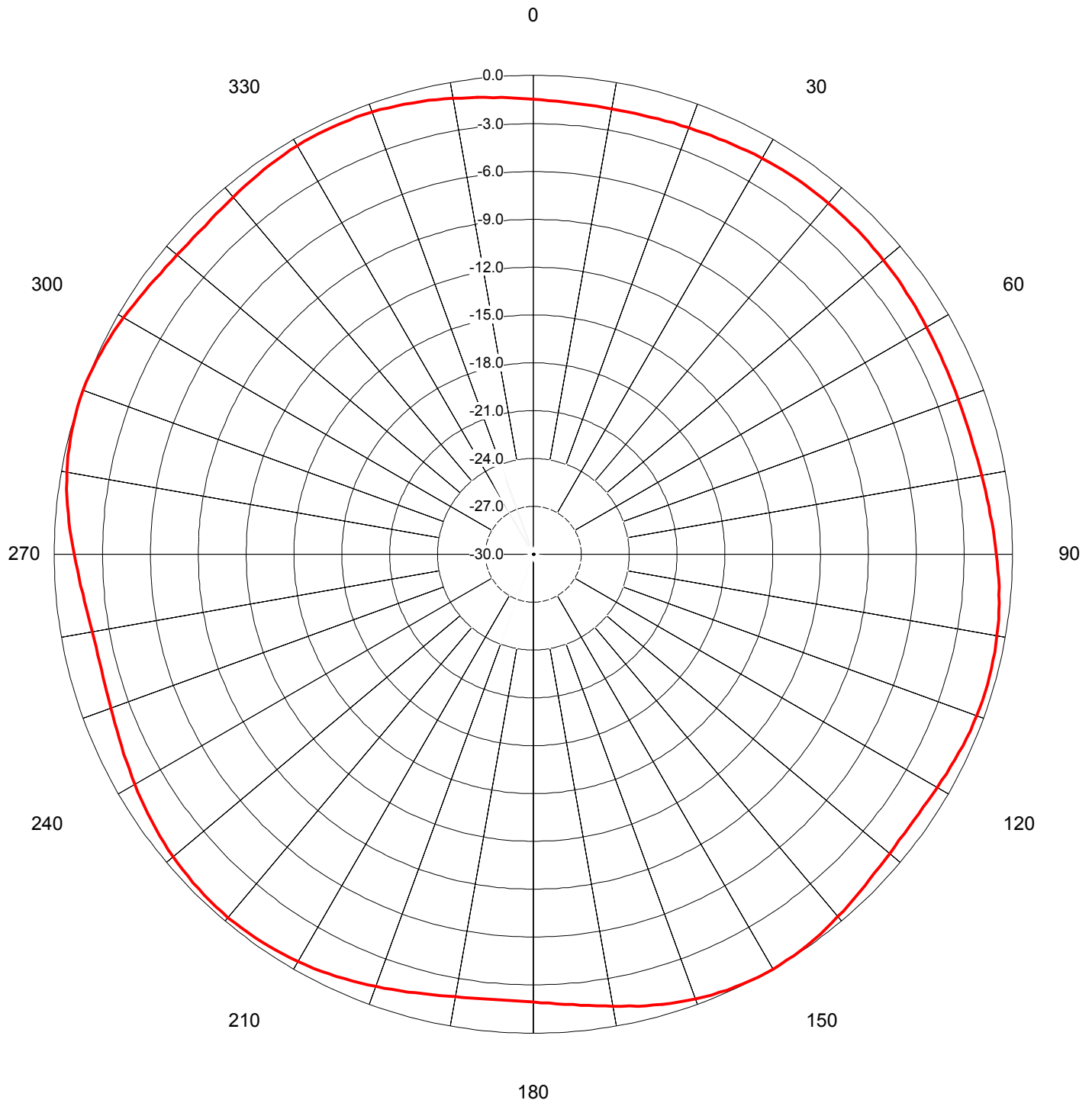
### AZIMUTH PATTERN (dB)

Gain **1.30**  
Calculated / Measured

( **1.14 dB** )  
**Calculated**

Frequency  
Drawing #

**659.00 MHz**  
**TFU-O8-6590**





Proposal Number **C-01038** Revision: **3**  
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Location **Tulsa, OK**  
Customer  
Antenna Type **TFU-30GBH-R 08**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-08-6590**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.842	45	0.861	90	0.891	135	0.928	180	0.799	225	0.960	270	0.867	315	0.901
1	0.839	46	0.860	91	0.897	136	0.934	181	0.796	226	0.957	271	0.876	316	0.902
2	0.836	47	0.859	92	0.903	137	0.941	182	0.794	227	0.953	272	0.886	317	0.905
3	0.833	48	0.858	93	0.909	138	0.947	183	0.794	228	0.949	273	0.896	318	0.907
4	0.831	49	0.856	94	0.914	139	0.954	184	0.793	229	0.945	274	0.906	319	0.911
5	0.829	50	0.855	95	0.920	140	0.960	185	0.794	230	0.940	275	0.916	320	0.914
6	0.828	51	0.853	96	0.925	141	0.967	186	0.795	231	0.934	276	0.925	321	0.918
7	0.827	52	0.851	97	0.929	142	0.973	187	0.798	232	0.928	277	0.935	322	0.922
8	0.826	53	0.849	98	0.934	143	0.978	188	0.800	233	0.922	278	0.944	323	0.926
9	0.825	54	0.847	99	0.938	144	0.984	189	0.804	234	0.916	279	0.952	324	0.930
10	0.825	55	0.845	100	0.942	145	0.988	190	0.808	235	0.909	280	0.960	325	0.934
11	0.825	56	0.843	101	0.945	146	0.992	191	0.813	236	0.902	281	0.967	326	0.938
12	0.825	57	0.841	102	0.948	147	0.995	192	0.818	237	0.895	282	0.975	327	0.941
13	0.826	58	0.839	103	0.950	148	0.998	193	0.824	238	0.887	283	0.980	328	0.945
14	0.827	59	0.837	104	0.952	149	0.999	194	0.830	239	0.880	284	0.986	329	0.947
15	0.828	60	0.835	105	0.953	150	1.000	195	0.837	240	0.872	285	0.990	330	0.950
16	0.829	61	0.834	106	0.953	151	0.999	196	0.843	241	0.865	286	0.994	331	0.951
17	0.830	62	0.832	107	0.953	152	0.999	197	0.850	242	0.857	287	0.996	332	0.953
18	0.832	63	0.830	108	0.953	153	0.996	198	0.857	243	0.850	288	0.999	333	0.953
19	0.833	64	0.829	109	0.951	154	0.994	199	0.865	244	0.843	289	0.999	334	0.953
20	0.835	65	0.828	110	0.949	155	0.990	200	0.872	245	0.836	290	1.000	335	0.952
21	0.837	66	0.826	111	0.947	156	0.986	201	0.879	246	0.830	291	0.998	336	0.952
22	0.839	67	0.826	112	0.944	157	0.980	202	0.887	247	0.824	292	0.997	337	0.950
23	0.841	68	0.825	113	0.941	158	0.974	203	0.894	248	0.818	293	0.994	338	0.948
24	0.843	69	0.825	114	0.937	159	0.967	204	0.901	249	0.813	294	0.991	339	0.944
25	0.845	70	0.824	115	0.933	160	0.960	205	0.908	250	0.808	295	0.987	340	0.941
26	0.847	71	0.825	116	0.929	161	0.952	206	0.915	251	0.804	296	0.983	341	0.937
27	0.849	72	0.825	117	0.925	162	0.943	207	0.921	252	0.800	297	0.977	342	0.933
28	0.851	73	0.826	118	0.921	163	0.934	208	0.928	253	0.797	298	0.972	343	0.929
29	0.852	74	0.827	119	0.917	164	0.925	209	0.933	254	0.795	299	0.966	344	0.924
30	0.854	75	0.829	120	0.913	165	0.915	210	0.939	255	0.794	300	0.959	345	0.919
31	0.856	76	0.831	121	0.910	166	0.905	211	0.944	256	0.793	301	0.953	346	0.913
32	0.857	77	0.833	122	0.906	167	0.895	212	0.949	257	0.793	302	0.946	347	0.908
33	0.859	78	0.835	123	0.904	168	0.886	213	0.953	258	0.794	303	0.940	348	0.902
34	0.860	79	0.839	124	0.902	169	0.876	214	0.957	259	0.796	304	0.934	349	0.896
35	0.861	80	0.842	125	0.901	170	0.866	215	0.960	260	0.798	305	0.928	350	0.891
36	0.862	81	0.846	126	0.900	171	0.857	216	0.962	261	0.802	306	0.922	351	0.885
37	0.863	82	0.850	127	0.900	172	0.848	217	0.964	262	0.806	307	0.917	352	0.879
38	0.863	83	0.854	128	0.901	173	0.840	218	0.966	263	0.812	308	0.912	353	0.874
39	0.864	84	0.859	129	0.903	174	0.832	219	0.967	264	0.818	309	0.909	354	0.869
40	0.864	85	0.864	130	0.905	175	0.825	220	0.967	265	0.825	310	0.905	355	0.864
41	0.864	86	0.869	131	0.909	176	0.818	221	0.967	266	0.832	311	0.903	356	0.859
42	0.863	87	0.874	132	0.912	177	0.812	222	0.966	267	0.840	312	0.901	357	0.854
43	0.863	88	0.880	133	0.917	178	0.806	223	0.965	268	0.848	313	0.901	358	0.850
44	0.862	89	0.886	134	0.922	179	0.803	224	0.963	269	0.857	314	0.900	359	0.846

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TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED DTV OPERATION OF  
KOTV-DT, TULSA, OK  
CHANNEL 45, 840 KW ERP, 556.2 METERS HAAT  
MARCH 2008

<u>Radial</u> <u>Bearing</u> N° E, T	Average * Elevation <u>3.2 to 16.1 km</u> meters	Effective <u>Height</u> meters	Depression <u>Angle</u>	ERP At Radio <u>Horizon</u> kW	<u>Distance to Contour F(50,90)</u>	
					<u>48 dBu</u> <u>City Grade</u> km	<u>41 dBu</u> <u>Noise-Limited</u> km
0	195.3	553.9	0.652	299.384	93.2	107.0
45	175.4	573.8	0.664	706.347	101.7	115.9
90	174.8	574.4	0.664	838.321	103.1	117.5
135	188.2	561.0	0.656	838.321	102.4	116.7
180	191.5	557.7	0.654	665.364	100.2	114.4
225	196.9	552.3	0.651	241.779	91.3	105.0
270	208.0	541.2	0.644	41.399	77.1	89.3
315	213.8	535.4	0.641	35.301	75.7	87.6
Average	193	556.2				

\* Based on data from FCC 3-second data base

DTV Channel 45 (656-662 MHz)  
Average Elevation 3.2 to 16.1 km 193 meters AMSL  
Center of Radiation 749.2 meters AMSL  
Antenna Height Above Average Terrain 556.2 meters  
Effective Radiated Power 840 kW (29.24 dBk) Max.

North Latitude: 36° 01' 15"  
West Longitude: 95° 40' 32"

(NAD-27)

TABLE II  
RFF ANALYSIS CONSIDERS STATIONS  
IN THE VICINITY OF THE PROPOSED OPERATION OF  
KOTV-DT, TULSA, OKLAHOMA  
MARCH 2008

<u>Call Sign</u>	<u>Status</u>	<u>Channel</u>	<u>Frequency MHz</u>	<u>ERP kW</u>	<u>RCAGL-2 meters</u>	<u>Assumed Relative Field Value</u>	<u>RFF <math>\mu\text{W}/\text{cm}^2</math></u>	<u>Uncontrolled MPE <math>\mu\text{W}/\text{cm}^2</math></u>	<u>% Uncontrolled</u>
KOTV-DT	Proposed	45	656-662	840 (H)	530.6	0.06	0.36	437.3	0.08%
KJRH-DT	Expected	8	180-186	19.9 (H&V)	547.3	0.15	0.05	200	0.03%
KOED-DT	Expected	11	198-204	39 (H)	496.5	0.1	0.05	200	0.03%
KWHB-DT	Appendix B	47	668-674	50 (H)	432	0.2	0.36	445.3	0.08%
KNYD(FM)	Expected	213C	90.5	100 (H&V)	280	0.3	7.7	200	3.90%
KWGS(FM)	License	208C1	89.5	50 (H&V)	294	0.2	1.6	200	0.80%
KWTU(FM)	License	204C2	88.7	5 (H&V)	294	0.2	0.15	200	<u>0.08%</u>
Total									$\approx 5\%$

### SECTION III - D - DTV Engineering

**Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.**

**Pre-Transition Certification Checklist:** An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction pen-nit application to modify pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

**Post-Transition Expedited Processing.** An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:
  - (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☐ No
  - (d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"). ☐ Yes ☐ No  
☐ N/A
  - (e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B. ☐ Yes ☐ No  
☐ N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RIF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☐ Yes ☐ No

Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☐ Yes ☐ No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☐ Yes ☐ No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☐ Yes ☐ No

### SECTION III - D DTV Engineering

**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 Number: DTV \_\_\_\_\_ Analog TV, if any \_\_\_\_\_
2. Zone: ☐ I ☐ II ☐ III
3. Antenna Location Coordinates: (NAD 27)
- \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ N ☐ S Latitude  
\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " ☐ E ☐ W Longitude
4. Antenna Structure Registration Number: \_\_\_\_\_
- ☐ Not applicable ☐ FAA Notification Filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level: \_\_\_\_\_ meters
6. Overall Tower Height Above Ground Level: \_\_\_\_\_ meters
7. Height of Radiation Center Above Ground Level: \_\_\_\_\_ meters
8. Height of Radiation Center Above Average Terrain: \_\_\_\_\_ meters
9. Maximum Effective Radiated Power (average power): \_\_\_\_\_ kW
10. Antenna Specifications:
- a. 

Manufacturer	Model
--------------	-------
- b. Electrical Beam Tilt: \_\_\_\_\_ degrees ☐ Not Applicable
- c. Mechanical Beam Tilt: \_\_\_\_\_ degrees toward azimuth \_\_\_\_\_ degrees True ☐ Not Applicable
- Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No.
- d. Polarization: ☐ Horizontal ☐ Circular ☐ Elliptical

## TECH BOX

e. Directional Antenna Relative Field Values:

☐

Not applicable (Nondirectional)

Rotation: \_\_\_\_\_

☐

No rotation

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											

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No.

11. Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616?

☐

Yes

☐

No

If "No," attach as an Exhibit justification therefore, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No.

- a. If **Certification Checklist Item 2** is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, 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.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

**PREPARER'S CERTIFICATION IN SECTION III MUST BE COMPLETED AND SIGNED.**

13. **Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.** If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the FM Table of Allotments (47 C.F.R. Section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter-proponent will apply to participate in the auction of the channel allotment requested and specified in this application.

☐ Yes ☐ No ☐ N/A

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in 'good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

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).

### SECTION III PREPARER'S CERTIFICATION

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	Relationship to Applicant (e.g., Consulting Engineer)	
Signature	Date	
Mailing Address		
City	State or Country (if foreign address)	ZIP Code
Telephone Number (include area code)	E-Mail Address (if available)	

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).