EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of CHRISTIAN BROADCASTING OF YAKIMA, licensee of Low Power Television station K39DM, Channel 39 in Ellensburg, Washington, in support of this amendment to its displacement Application for Construction Permit to specify operation on digital Channel 27 from a slightly different site location. This application is necessary due to a 120-day letter sent by T-Mobile, auction winner of the spectrum on which K39DM operates. The purpose of this amendment is to specify a full-service emission mask. No other changes to the proposed facility are proposed herein.

It is proposed to mount an ERI directional antenna at the 10-meter level of an existing 12-meter tower located near the licensed K39DM tower. The proposed effective radiated power for the facility is 13.3 kW in horizontal plane. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted.

Azimuth and elevation pattern data for the proposed ERI directional antenna is included in Exhibit C. Since the facility proposed herein specifies a new channel and digital operation, an interference study is included herein as Exhibit D. It concludes that the facility proposed herein meets the Commission's interference rules with respect to all co-channel and adjacent-channel full-power and LPTV facilities. A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing tower is proposed herein, and due to the diminutive height of the tower (12 meters above ground) and its proximity to the nearest airport runway, the Federal Aviation Administration has not been notified of this

EXHIBIT A

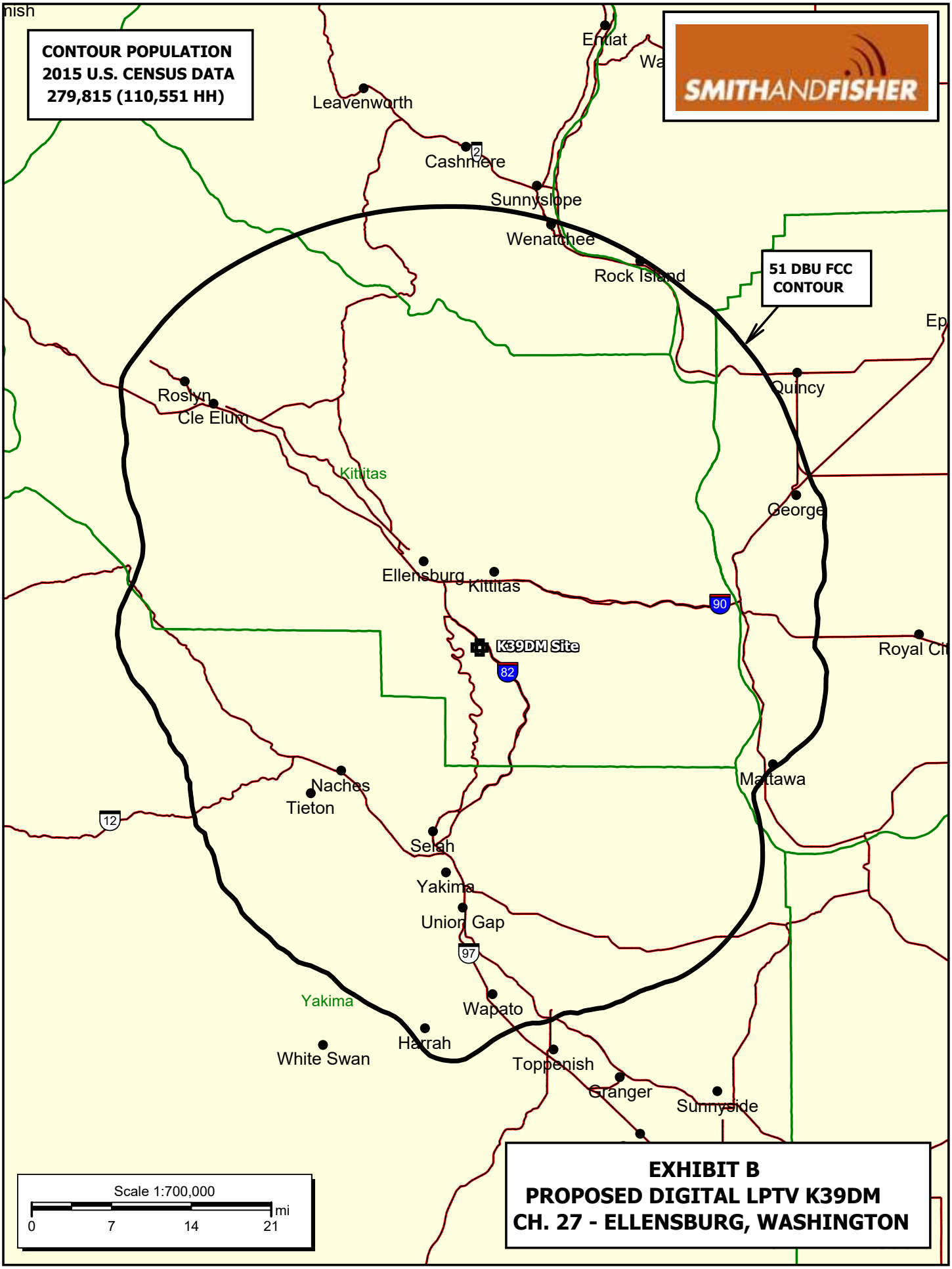
application. In addition, and for the same reasons, FCC Antenna Structure Registration is not required. This conclusion is supported by the Commission's TOWAIR software.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



KEVIN T. FISHER

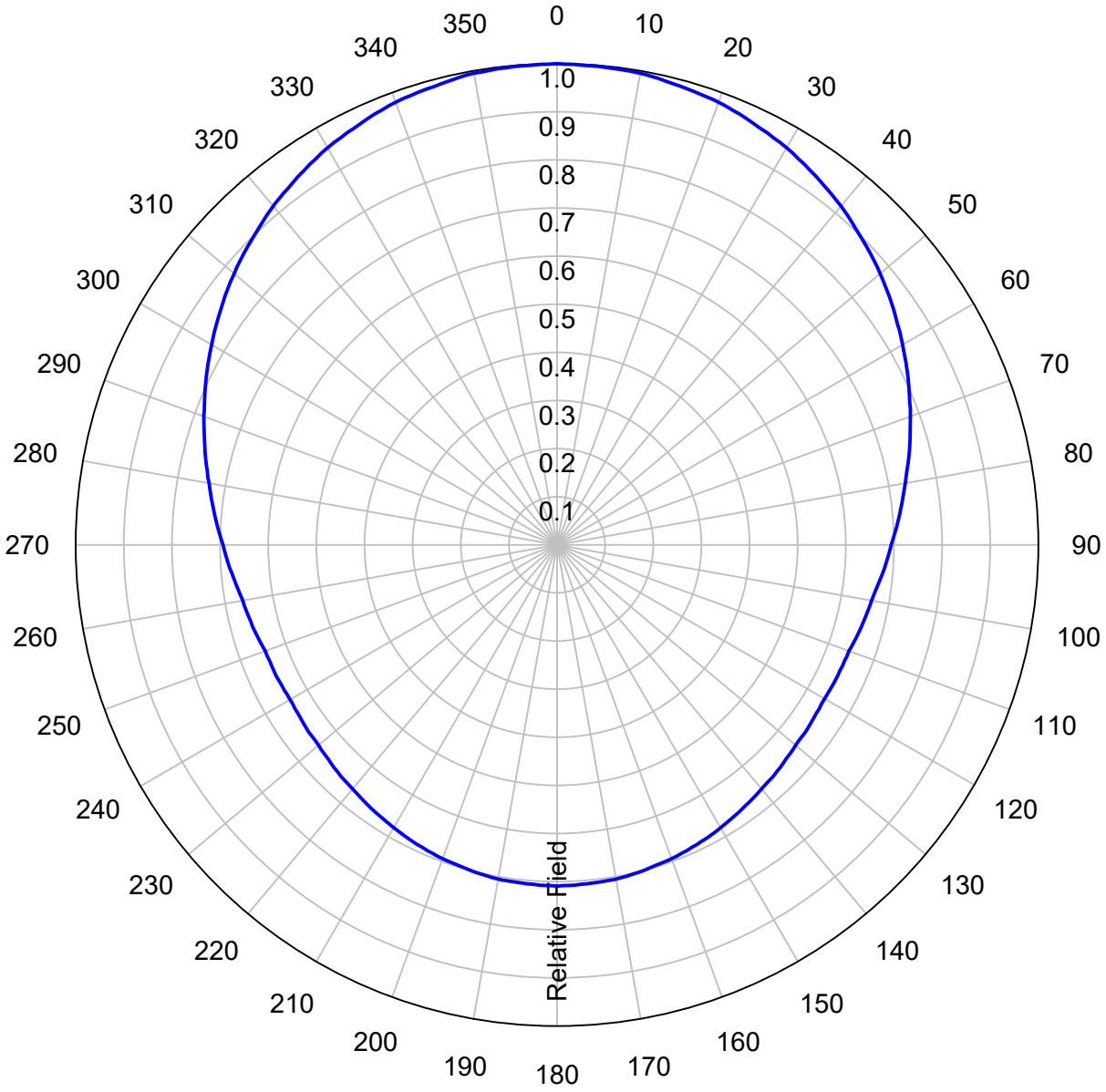
October 18, 2018


CONTOUR POPULATION
2015 U.S. CENSUS DATA
279,815 (110,551 HH)
SMITHANDFISHER
51 DBU FCC CONTOUR
Leavenworth
Cashmere
Sunnyslope
Wenatchee
Rock Island
Quincy
George
Roslyn
Cle Elum
Kittitas
Ellensburg
Kittitas
K39DM Site
Royal Ci
Mattawa
Nachas
Tieton
Selah
Yakima
Union Gap
Yakima
Wapato
Harrah
White Swan
Toppenish
Granger
Sunnyside
90
82
12
97
Scale 1:700,000
0 7 14 21 mi
EXHIBIT B
PROPOSED DIGITAL LPTV K39DM
CH. 27 - ELLENSBURG, WASHINGTON

AZIMUTH PATTERN

Type:	**AL-OC**		**Channel:**	**26**
	Numeric	**dBd**	**Location:**	
Directivity:	**1.62**	**2.10**	**Polarization:**	**Horizontal**
Peak(s) at:				

Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

TABULATED DATA FOR AZIMUTH PATTERN

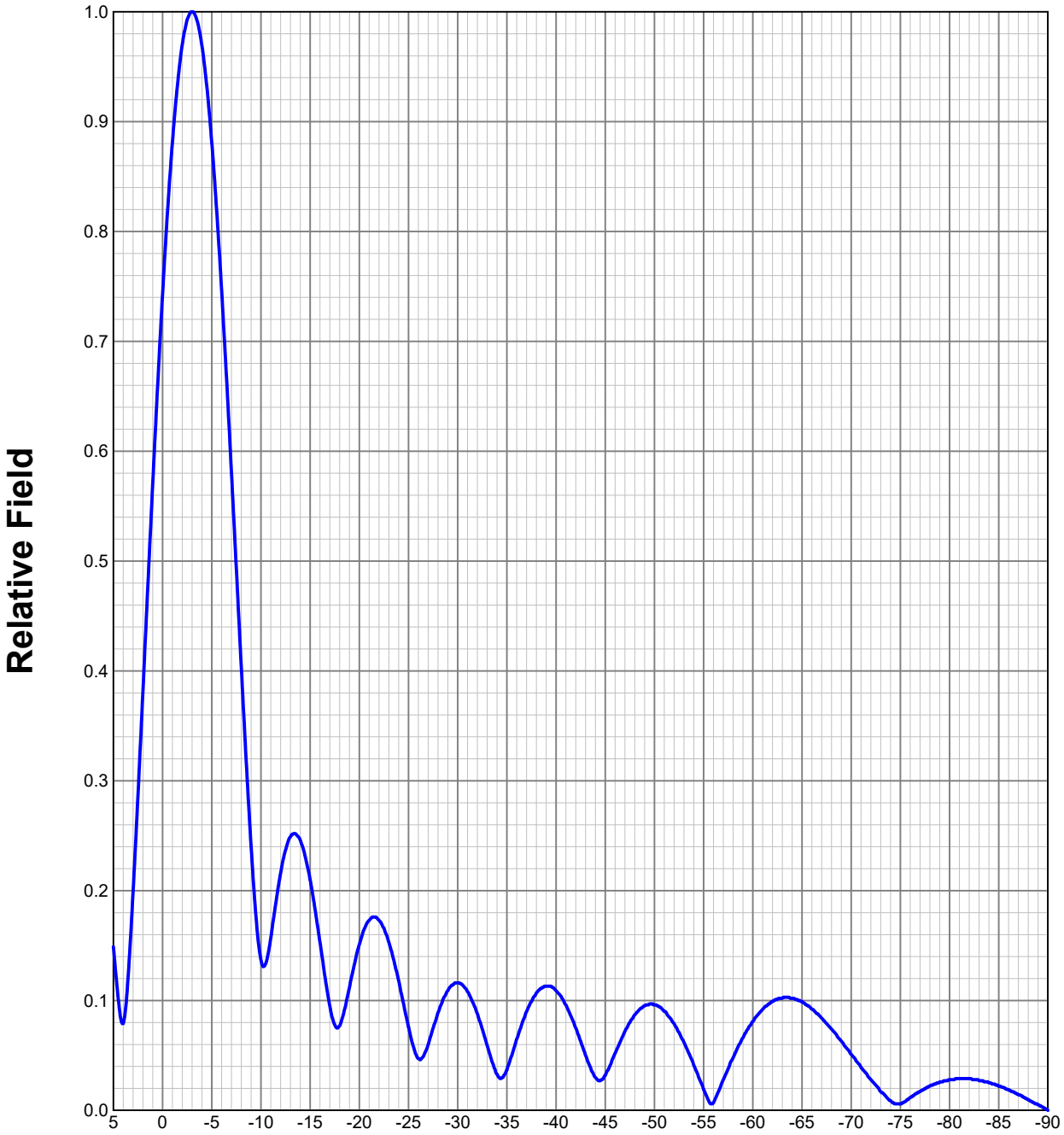
Type: AL-OC
PolarizationHorizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	92	0.688	-3.25	184	0.707	-3.01	276	0.718	-2.88
2	0.999	-0.01	94	0.682	-3.32	186	0.706	-3.02	278	0.726	-2.78
4	0.998	-0.02	96	0.675	-3.41	188	0.706	-3.02	280	0.734	-2.69
6	0.997	-0.03	98	0.669	-3.49	190	0.705	-3.04	282	0.743	-2.58
8	0.996	-0.03	100	0.663	-3.57	192	0.703	-3.06	284	0.753	-2.46
10	0.995	-0.04	102	0.660	-3.61	194	0.701	-3.09	286	0.762	-2.36
12	0.992	-0.07	104	0.656	-3.66	196	0.698	-3.12	288	0.771	-2.26
14	0.988	-0.10	106	0.653	-3.70	198	0.696	-3.15	290	0.781	-2.15
16	0.985	-0.13	108	0.649	-3.76	200	0.694	-3.17	292	0.790	-2.05
18	0.982	-0.16	110	0.645	-3.81	202	0.691	-3.21	294	0.800	-1.94
20	0.979	-0.18	112	0.644	-3.82	204	0.688	-3.25	296	0.810	-1.83
22	0.974	-0.23	114	0.643	-3.84	206	0.685	-3.29	298	0.820	-1.72
24	0.969	-0.27	116	0.643	-3.84	208	0.682	-3.32	300	0.829	-1.63
26	0.963	-0.33	118	0.642	-3.85	210	0.678	-3.38	302	0.839	-1.52
28	0.958	-0.37	120	0.641	-3.86	212	0.675	-3.41	304	0.848	-1.43
30	0.953	-0.42	122	0.642	-3.85	214	0.672	-3.45	306	0.858	-1.33
32	0.946	-0.48	124	0.643	-3.84	216	0.668	-3.50	308	0.867	-1.24
34	0.939	-0.55	126	0.645	-3.81	218	0.665	-3.54	310	0.876	-1.15
36	0.932	-0.61	128	0.646	-3.80	220	0.661	-3.60	312	0.885	-1.06
38	0.925	-0.68	130	0.647	-3.78	222	0.659	-3.62	314	0.893	-0.98
40	0.918	-0.74	132	0.650	-3.74	224	0.656	-3.66	316	0.901	-0.91
42	0.910	-0.82	134	0.653	-3.70	226	0.653	-3.70	318	0.910	-0.82
44	0.901	-0.91	136	0.656	-3.66	228	0.650	-3.74	320	0.918	-0.74
46	0.893	-0.98	138	0.659	-3.62	230	0.647	-3.78	322	0.925	-0.68
48	0.885	-1.06	140	0.661	-3.60	232	0.646	-3.80	324	0.932	-0.61
50	0.876	-1.15	142	0.665	-3.54	234	0.645	-3.81	326	0.939	-0.55
52	0.867	-1.24	144	0.668	-3.50	236	0.643	-3.84	328	0.946	-0.48
54	0.858	-1.33	146	0.672	-3.45	238	0.642	-3.85	330	0.953	-0.42
56	0.848	-1.43	148	0.675	-3.41	240	0.641	-3.86	332	0.958	-0.37
58	0.839	-1.52	150	0.679	-3.36	242	0.642	-3.85	334	0.963	-0.33
60	0.829	-1.63	152	0.682	-3.32	244	0.643	-3.84	336	0.969	-0.27
62	0.820	-1.72	154	0.685	-3.29	246	0.644	-3.82	338	0.974	-0.23
64	0.810	-1.83	156	0.688	-3.25	248	0.644	-3.82	340	0.979	-0.18
66	0.800	-1.94	158	0.691	-3.21	250	0.645	-3.81	342	0.982	-0.16
68	0.790	-2.05	160	0.694	-3.17	252	0.649	-3.76	344	0.985	-0.13
70	0.781	-2.15	162	0.696	-3.15	254	0.653	-3.70	346	0.988	-0.10
72	0.771	-2.26	164	0.698	-3.12	256	0.656	-3.66	348	0.992	-0.07
74	0.762	-2.36	166	0.701	-3.09	258	0.660	-3.61	350	0.995	-0.04
76	0.753	-2.46	168	0.703	-3.06	260	0.663	-3.57	352	0.996	-0.03
78	0.743	-2.58	170	0.705	-3.04	262	0.669	-3.49	354	0.997	-0.03
80	0.734	-2.69	172	0.706	-3.02	264	0.675	-3.41	356	0.998	-0.02
82	0.726	-2.78	174	0.706	-3.02	266	0.682	-3.32	358	0.999	-0.01
84	0.718	-2.88	176	0.707	-3.01	268	0.688	-3.25	360	1.000	0.00
86	0.710	-2.97	178	0.708	-3.00	270	0.694	-3.17			
88	0.702	-3.07	180	0.709	-2.99	272	0.702	-3.07			
90	0.694	-3.17	182	0.708	-3.00	274	0.710	-2.97			

Preliminary, subject to final design and review.

ELEVATION PATTERN

Type:	AL8		Channel:	26
Directivity:	Numeric	dBd	Location:	
Main Lobe:	8.68	9.39	Beam Tilt:	-1.75
Horizontal:	4.79	6.80	Polarization:	Horizontal



Preliminary, subject to final design and review.

TABULATED DATA FOR ELEVATION PATTERN

Type: AL8
PolarizationHorizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
5.00	0.149	-16.54	-6.75	0.625	-4.09	-27.00	0.060	-24.44	-50.50	0.094	-20.54	-74.00	0.009	-40.92
4.75	0.124	-18.13	-7.00	0.581	-4.72	-27.50	0.075	-22.50	-51.00	0.090	-20.92	-74.50	0.006	-44.44
4.50	0.101	-19.91	-7.25	0.537	-5.40	-28.00	0.089	-21.01	-51.50	0.085	-21.41	-75.00	0.006	-44.44
4.25	0.083	-21.57	-7.50	0.493	-6.14	-28.50	0.101	-19.91	-52.00	0.079	-22.05	-75.50	0.008	-41.94
4.00	0.079	-22.05	-7.75	0.448	-6.97	-29.00	0.109	-19.25	-52.50	0.071	-22.97	-76.00	0.012	-38.42
3.75	0.093	-20.58	-8.00	0.404	-7.87	-29.50	0.114	-18.86	-53.00	0.062	-24.15	-76.50	0.015	-36.48
3.50	0.122	-18.27	-8.25	0.360	-8.86	-30.00	0.116	-18.71	-53.50	0.052	-25.68	-77.00	0.017	-35.39
3.25	0.158	-16.03	-8.50	0.318	-9.95	-30.50	0.114	-18.86	-54.00	0.041	-27.74	-77.50	0.020	-33.98
3.00	0.199	-14.02	-8.75	0.278	-11.12	-31.00	0.108	-19.33	-54.50	0.030	-30.46	-78.00	0.022	-33.15
2.75	0.242	-12.32	-9.00	0.240	-12.40	-31.50	0.099	-20.09	-55.00	0.019	-34.42	-78.50	0.024	-32.40
2.50	0.287	-10.84	-9.25	0.206	-13.74	-32.00	0.088	-21.11	-55.50	0.009	-40.92	-79.00	0.026	-31.70
2.25	0.334	-9.53	-9.50	0.176	-15.09	-32.50	0.074	-22.62	-56.00	0.007	-43.10	-79.50	0.027	-31.37
2.00	0.381	-8.38	-9.75	0.152	-16.36	-33.00	0.059	-24.58	-56.50	0.017	-35.39	-80.00	0.028	-31.06
1.75	0.429	-7.34	-10.00	0.137	-17.27	-33.50	0.044	-27.13	-57.00	0.028	-31.06	-80.50	0.028	-31.06
1.50	0.477	-6.43	-10.50	0.134	-17.46	-34.00	0.033	-29.63	-57.50	0.038	-28.40	-81.00	0.029	-30.75
1.25	0.524	-5.61	-11.00	0.157	-16.08	-34.50	0.030	-30.46	-58.00	0.048	-26.38	-81.50	0.029	-30.75
1.00	0.571	-4.87	-11.50	0.188	-14.52	-35.00	0.037	-28.64	-58.50	0.058	-24.73	-82.00	0.029	-30.75
0.75	0.616	-4.21	-12.00	0.216	-13.31	-35.50	0.050	-26.02	-59.00	0.066	-23.61	-82.50	0.028	-31.06
0.50	0.660	-3.61	-12.50	0.237	-12.51	-36.00	0.065	-23.74	-59.50	0.074	-22.62	-83.00	0.027	-31.37
0.25	0.702	-3.07	-13.00	0.249	-12.08	-36.50	0.078	-22.16	-60.00	0.081	-21.83	-83.50	0.026	-31.70
0.00	0.743	-2.58	-13.50	0.252	-11.97	-37.00	0.090	-20.92	-60.50	0.087	-21.21	-84.00	0.025	-32.04
-0.25	0.782	-2.14	-14.00	0.246	-12.18	-37.50	0.099	-20.09	-61.00	0.092	-20.72	-84.50	0.024	-32.40
-0.50	0.818	-1.74	-14.50	0.231	-12.73	-38.00	0.107	-19.41	-61.50	0.096	-20.35	-85.00	0.022	-33.15
-0.75	0.851	-1.40	-15.00	0.210	-13.56	-38.50	0.111	-19.09	-62.00	0.099	-20.09	-85.50	0.021	-33.56
-1.00	0.881	-1.10	-15.50	0.183	-14.75	-39.00	0.113	-18.94	-62.50	0.101	-19.91	-86.00	0.019	-34.42
-1.25	0.909	-0.83	-16.00	0.153	-16.31	-39.50	0.113	-18.94	-63.00	0.102	-19.83	-86.50	0.017	-35.39
-1.50	0.932	-0.61	-16.50	0.122	-18.27	-40.00	0.109	-19.25	-63.50	0.103	-19.74	-87.00	0.014	-37.08
-1.75	0.953	-0.42	-17.00	0.095	-20.45	-40.50	0.104	-19.66	-64.00	0.102	-19.83	-87.50	0.012	-38.42
-2.00	0.970	-0.26	-17.50	0.078	-22.16	-41.00	0.096	-20.35	-64.50	0.101	-19.91	-88.00	0.010	-40.00
-2.25	0.983	-0.15	-18.00	0.077	-22.27	-41.50	0.086	-21.31	-65.00	0.099	-20.09	-88.50	0.007	-43.10
-2.50	0.993	-0.06	-18.50	0.092	-20.72	-42.00	0.075	-22.50	-65.50	0.096	-20.35	-89.00	0.005	-46.02
-2.75	0.998	-0.02	-19.00	0.112	-19.02	-42.50	0.063	-24.01	-66.00	0.092	-20.72	-89.50	0.003	-50.46
-3.00	1.000	0.00	-19.50	0.133	-17.52	-43.00	0.050	-26.02	-66.50	0.088	-21.11	-90.00	0.000	-40.00
-3.25	0.998	-0.02	-20.00	0.151	-16.42	-43.50	0.039	-28.18	-67.00	0.084	-21.51			
-3.50	0.992	-0.07	-20.50	0.165	-15.65	-44.00	0.030	-30.46	-67.50	0.079	-22.05			
-3.75	0.982	-0.15	-21.00	0.173	-15.24	-44.50	0.027	-31.37	-68.00	0.074	-22.62			
-4.00	0.969	-0.27	-21.50	0.176	-15.09	-45.00	0.032	-29.90	-68.50	0.069	-23.22			
-4.25	0.952	-0.43	-22.00	0.173	-15.24	-45.50	0.041	-27.74	-69.00	0.063	-24.01			
-4.50	0.932	-0.61	-22.50	0.166	-15.60	-46.00	0.052	-25.68	-69.50	0.057	-24.88			
-4.75	0.908	-0.84	-23.00	0.153	-16.31	-46.50	0.062	-24.15	-70.00	0.051	-25.85			
-5.00	0.881	-1.10	-23.50	0.137	-17.27	-47.00	0.072	-22.85	-70.50	0.045	-26.94			
-5.25	0.851	-1.40	-24.00	0.118	-18.56	-47.50	0.080	-21.94	-71.00	0.039	-28.18			
-5.50	0.819	-1.73	-24.50	0.097	-20.26	-48.00	0.087	-21.21	-71.50	0.034	-29.37			
-5.75	0.784	-2.11	-25.00	0.076	-22.38	-48.50	0.092	-20.72	-72.00	0.028	-31.06			
-6.00	0.747	-2.53	-25.50	0.058	-24.73	-49.00	0.095	-20.45	-72.50	0.023	-32.77			
-6.25	0.707	-3.01	-26.00	0.047	-26.56	-49.50	0.097	-20.26	-73.00	0.017	-35.39			
-6.50	0.667	-3.52	-26.50	0.049	-26.20	-50.00	0.096	-20.35	-73.50	0.013	-37.72			

Preliminary, subject to final design and review.

EXHIBIT D

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED K39DM-D
CHANNEL 27 – ELLENSBURG, WASHINGTON

Study created: 2017.07.10 08:53:19

Study build station data: LMS TV 2017-04-14 (2)

Proposal: K39DM D27 LD LIC ELLENSBURG, WA
File number: BLTTL19930628IE
Facility ID: 10947
Station data: User record
Record ID: 21
Country: U.S.
Zone: II

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
KNDU	D26	DT	LIC	RICHLAND, WA	BLCDT20091007ACO	133.0 km
K26IV-D	D26	LD	CP	WENATCHEE, WA	BDCCDTT20061030AGJ	56.1
K27DX-D	D27	DC	LIC	MCCALL, ID	BLDTA20140915ACG	404.6
K27DO-D	D27	LD	LIC	BEND, ETC., OR	BLDTL20110324AAR	275.1
KSLM-LD	D27	LD	LIC	DALLAS, OR	BLDTL20100506AEF	297.6
K05KY	D27	LD	CP	LINCOLN CITY, OR	BDISDTL20090729AFB	366.1
NEW	D27	LD	APP	QUINCY, WA	BNPDTL20090825ADQ	61.7
NEW	D27	LD	APP	QUINCY, WA	BNPDTL20090825ALR	58.2
KBTC-TV	D27	DT	LIC	TACOMA, WA	BLEDT20130805ACW	162.5
K28CQ-D	D28	LD	LIC	HOOD RIVER, OR	BLDTT20120514ACX	154.3
K28KJ-D	D28	LD	LIC	CHELAN, WA	BLDTL20111012ABP	106.8
K28KJ-D	D28	LD	CP	CHELAN, WA	BMPDTT20101012ABD	106.8
NEW	D28	LD	APP	ELLENSBURG, WA	BNPDTL20090825AEW	13.5
KAYU-TV	D28	DT	LIC	SPOKANE, WA	BLCDT20091029ACN	249.6
K28KW-D	D28	LD	LIC	SUNNYSIDE, WA	BLDTL20130719ABV	69.3

Data is not available for AM station check

Record parameters as studied:

Channel: D27
Mask: Stringent
Latitude: 46 53 13.80 N (NAD83)
Longitude: 120 26 37.90 W

Height AMSL: 987.0 m
HAAT: 0.0 m
Peak ERP: 13.3 kW
Antenna: AL8 0.0 deg

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	10.6 kW	491.6 m	63.3 km
45.0	5.99	422.2	57.4
90.0	5.05	256.0	48.4
135.0	6.04	353.5	54.5
180.0	5.05	462.7	57.9
225.0	5.99	266.7	49.9
270.0	10.6	231.7	50.9
315.0	13.3	512.5	65.3

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 375 m

Distance to Canadian border: 234.9 km

Distance to Mexican border: 1609.1 km

Conditions at FCC monitoring station: Ferndale WA
Bearing: 326.4 degrees Distance: 278.5 km
ERP: 13.0 kW Field strength: -19.0 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 116.0 degrees Distance: 1431.3 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

No IX check failures found.

EXHIBIT E

POWER DENSITY CALCULATION

PROPOSED DIGITAL LPTV K39DM
CHANNEL 27 – ELLENSBURG, WASHINGTON

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Ellensburg facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 13.3 kW, an antenna radiation center 10 meters above ground, and the specific elevation pattern of the proposed ERI antenna, maximum power density two meters above ground of 0.071 mW/cm^2 is calculated to occur 4 meters northwest of the base of the tower. Since this is only 19.5 percent of the 0.36 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 27 (542-548 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.