

**ENGINEERING STATEMENT**  
**IN SUPPORT OF**  
**APPLICATION FOR MINOR MODIFICATION**  
**OF**  
**DIGITAL LPTV CONSTRUCTION PERMIT**  
**K29KY-D**  
**BLACKFOOT, ID**

**Background**

Sawtooth Mountains Broadcast & Wireless Corp. (SMBWC), licensee of digital low power television translator station K29KY-D (Facility ID. 187479) at Blackfoot, ID, is seeking, in its instant application, to change the transmit antenna and location from that specified on the current construction permit (CDBS File No . BNPDTL-20100609AHK).

**Parameters**

SMBWC is proposing the following parameters for the K29KY-D digital operation on Ch. 29:

Coordinates:	43° 23' 15.5" N (NAD83) 112° 06' 50.6" W
ERP:	15.0 kW
RCAMSL:	1463.6m
RCAGL:	50.2m
Antenna:	Kathrein 2x3 750 10300
Mask:	Full-Service

## **Interference**

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.5) with the default parameters. The results of the study (copy attached hereto) show that potential interference from the proposed facility is not predicted to exceed 0.49% to any full-service DTV or Class A stations.

The results of the study do also show predicted interference to both the K29KG-D licensed (LMS File No. 0000087474) and construction permit (LMS File No. 0000088191) facilities above the 1.99% limit; however, the licensee of K29KG-D has agreed to accept the interference from the proposed modified K29KY-D facility. Attached to this Engineering Statement is a letter from the K29KG-D licensee to that effect.

Beyond the predicted interference to K29KG-D, the results show no predicted interference above 1.99% to any other low power stations as required by the Commission's Rules.

## **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed facility is a multi-user site and it is assumed to currently be "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst-case ground level RFR contributed to the site by this proposal is calculated to be 0.013482 mW/cm<sup>2</sup> at 2m AGL. The calculated RFR is much less than 5% of the maximum permissible exposure (MPE) for public areas (0.375333 mW/cm<sup>2</sup>) at Ch. 29 (560-566 MHz).

Per Section 1.1307(b) of the FCC Rules, the proposed operation would be categorically excluded from taking corrective action in areas with levels above the MPE limit where the contribution to the RFR from the proposed facility is less than 5%.

SMBWC agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



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Benjamin Pidek, P.E.  
October 12, 2021

Attached:  
TVStudy Interference Check Report  
Antenna Azimuth and Elevation Pattern Plots and Tabulations  
K29KG-D Licensee Interference Agreement

## TVStudy TV Interference Check Report for K29KY-D on Ch. 29

Study created: 2021.09.29 11:10:19

Study build station data: LMS TV 2021-09-29

Proposal: K29KY-D D29 LD CP BLACKFOOT, ID  
File number: K29KY\_C29\_2x310300-15kFM  
Facility ID: 187479  
Station data: User record  
Record ID: 1906  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K14IL	N14	TX	LIC	PINEDALE, ETC., WY	BLTT19921228IG	178.0 km
No	K22IY-D	N22	TX	LIC	BIG PINEY, WY	BLTT20100119AAE	178.0
Yes	K28LE-D	D28	LD	LIC	IDAHO FALLS, ID	BLDTL20140225ABP	25.2
No	KSAW-LD	D28	LD	CP	TWIN FALLS, ID	BLANK0000054775	200.7
No	DK28AZ	N28	TX	APP	WEST YELLOWSTONE, MT	BLTT19880426IB	168.4
No	KIWB-LD	D29	LD	LIC	BOISE, ID	BLANK0000126124	326.4
No	K29JG-D	D29	LD	CP	BURLEY, ID	BNPDTL20090825BOC	168.5
No	K29NB-D	D29	LD	LIC	CASCADE, ID	BLANK0000156694	339.2
No	K29GV-D	D29	LD	LIC	HAGERMAN, ID	BLDTL20100113ADE	234.8
Yes	K29KG-D	D29	LD	LIC	IDAHO FALLS, ID	BLANK0000087474	19.9
Yes	K29KG-D	D29	LD	CP	IDAHO FALLS, ID	BLANK0000088191	66.9
No	K29BM-D	D29	LD	LIC	MONTPELIER, ID	BLDTT20111116AYI	125.8
No	K29EY-D	D29	LD	LIC	PRESTON, ID	BLDTT20111116AIA	143.0
No	K49IC-D	D29	LD	LIC	SALMON, ID	BLANK0000059727	246.8
Yes	K29LG-D	D29	LD	LIC	SODA SPRINGS, ID	BLANK0000059259	90.6
No	KDBZ-CD	D29	DC	LIC	BOZEMAN, MT	BLANK0000116068	259.1
No	K29JT-D	D29	LD	CP	BUTTE, MT	BNPDTL20100310ABV	295.4
No	K29OB-D	D29	LD	CP	DRUMMOND, MT	BLANK0000154220	374.8
No	KUHM-TV	D29	DT	LIC	HELENA, MT	BLANK0000004580	383.4
No	KUHM-TV	D29	DT	APP	HELENA, MT	BLANK0000035768	383.4
No	K29IN-D	D29	LD	LIC	COALVILLE AND ADJ.AR, UT	BLDTT20090624AAY	280.1
No	K29MC-D	D29	LD	LIC	HEBER CITY, UT	BLANK0000115848	318.4
No	K29FY-D	D29	LD	LIC	HENEFER/ECHO, UT	BLDTT20110314ACH	273.6
No	K29MX-D	D29	LD	LIC	MANILA, ETC, UT	BLANK0000095217	349.5
No	K29II-D	D29	LD	LIC	PARK CITY, UT	BLDTT20090414AFT	304.5
No	K29MF-D	D29	LD	LIC	PEOA AND OAKLEY, UT	BLANK0000093229	302.6
No	KUPX-TV	D29	DT	LIC	PROVO, UT	BLCDDT20020510AAP	304.0
No	K29MY-D	D29	LD	LIC	RANDOLPH, UT	BLANK0000093592	212.0
No	K29IM-D	D29	LD	LIC	SAMAK, UT	BLDTT20090624ABL	314.3
No	K29HX-D	D29	LD	LIC	WANSHIP, UT	BLDTT20090624ADL	292.7
No	K29HG-D	D29	LD	LIC	JACKSON, WY	BLDTL20090224AAW	102.9
No	K29HV-D	D29	LD	LIC	LA BARGE, ETC., WY	BLDTT20070523ACE	199.8
No	K29IH-D	D29	LD	LIC	MEETEETSE, ETC., WY	BLANK0000120349	276.8
No	K29IG-D	D29	LD	LIC	SUNLIGHT BASIN, WY	BLANK0000137989	266.3
No	K30QH-D	D30	LD	LIC	BURLEY, ETC., ID	BLANK0000068251	162.4
No	K30BU-D	D30	LD	LIC	LEADORE, ID	BLDTT20101216AAS	176.0
No	K30KT-D	D30	LD	CP	MALTA, ID	BNPDTL20090825BOK	151.0
No	K14NT-D	D30	LD	LIC	MONTPELIER, ID	BLANK0000063416	125.8
No	K30MY-D	D30	LD	CP	JACKSON, WY	BLANK0000071524	110.1
No	K31DC-D	N31	TX	LIC	FREEDOM, WY	BLTT20050303AAK	85.1
No	K32LS-D	N32z	TX	CP	DRIGGS, ID	BDISTT20130802ACU	104.9
No	K33DS-D	N33-	TX	LIC	FREEDOM-ETNA, WY	BLTT19921130JH	93.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D29  
Mask: Full Service  
Latitude: 43 23 15.30 N (NAD83)  
Longitude: 112 6 50.60 W  
Height AMSL: 1463.6 m  
HAAT: 0.0 m  
Peak ERP: 15.0 kW  
Antenna: KAT 2x3 750 10300 310.0 deg  
Elev Pattn: Generic

50.2 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	8.82 kW	31.8 m	28.1 km
45.0	15.0	32.6	30.7
90.0	2.11	-24.2	21.1
135.0	0.307	-148.1	13.0
180.0	4.18	50.3	29.7
225.0	13.7	65.7	38.3
270.0	7.22	30.4	26.8
315.0	6.77	26.3	26.5

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m    Computed HAAT: 8 m

Distance to Canadian border: 623.7 km

Distance to Mexican border: 1207.4 km

Conditions at FCC monitoring station: Ferndale WA

Bearing: 311.3 degrees    Distance: 1012.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 120.0 degrees    Distance: 672.5 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%

**\*\*IX check failure to BLANK000087474 LIC scenario 1, 99.97% interference caused**

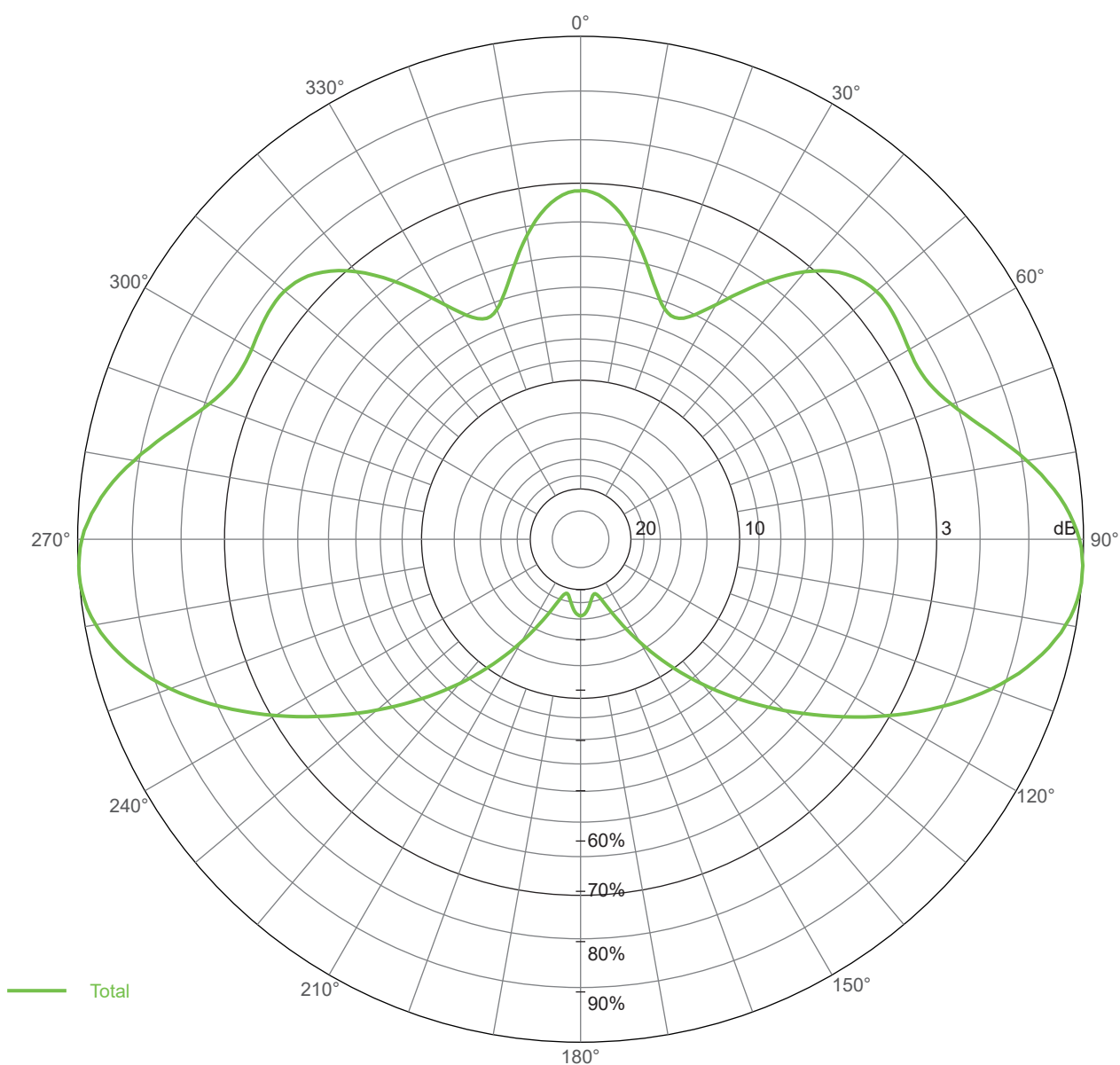
**\*\*IX check failure to BLANK000088191 CP scenario 1, 5.05% interference caused**

---- Below is IX received by proposal K29KY\_C29\_2x310300-15k ----

Proposal receives 14.29% interference from scenario 1

Proposal receives 19.72% interference from scenario 2

## Azimuthal Pattern (polar-linear)



Antenna, Order No. 75010300

Panels per Bay: 3

Frequency: 563 MHz

Azimuthal Directivity: 3.56 dB

Directivity: 10.27 dBd

No.	Azimuth [°]	Radius [mm]	Offset [mm]	Power	Phase [°]
1	270	290	0	2	0
2	0	290	0	1	10
3	90	290	0	2	0

simulation with typical exactness of +/- 8% of max signal

**KATHREIN**

2x3 750 10300 Custom array

K29KY

Date: 2021.08.18

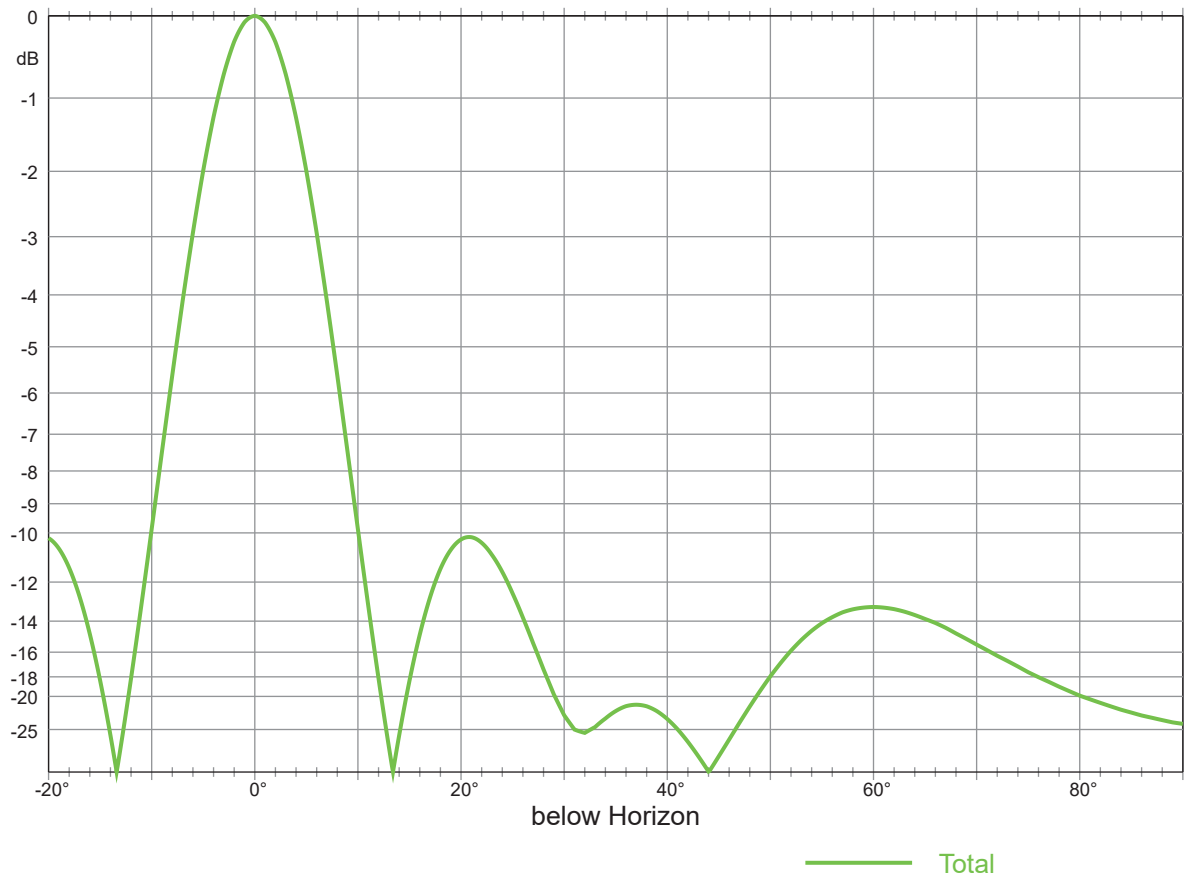
KBU mj

Page: 3

### TABULATED DATA FOR AZIMUTH PATTERN

ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD
0	0.694	52	0.769	104	0.946	156	0.168	208	0.212	260	0.979	312	0.763
1	0.693	53	0.768	105	0.934	157	0.158	209	0.224	261	0.985	313	0.759
2	0.690	54	0.767	106	0.923	158	0.149	210	0.236	262	0.990	314	0.754
3	0.686	55	0.765	107	0.912	159	0.140	211	0.249	263	0.994	315	0.746
4	0.680	56	0.763	108	0.897	160	0.133	212	0.263	264	0.997	316	0.738
5	0.672	57	0.761	109	0.884	161	0.126	213	0.276	265	0.999	317	0.729
6	0.663	58	0.758	110	0.870	162	0.120	214	0.289	266	0.999	318	0.719
7	0.653	59	0.756	111	0.854	163	0.117	215	0.303	267	0.999	319	0.707
8	0.641	60	0.754	112	0.839	164	0.114	216	0.316	268	0.997	320	0.694
9	0.628	61	0.753	113	0.823	165	0.112	217	0.331	269	0.995	321	0.681
10	0.614	62	0.752	114	0.806	166	0.112	218	0.345	270	0.991	322	0.666
11	0.600	63	0.753	115	0.789	167	0.113	219	0.360	271	0.987	323	0.651
12	0.586	64	0.754	116	0.772	168	0.115	220	0.375	272	0.980	324	0.635
13	0.570	65	0.756	117	0.755	169	0.118	221	0.389	273	0.974	325	0.619
14	0.556	66	0.759	118	0.737	170	0.122	222	0.404	274	0.965	326	0.602
15	0.541	67	0.764	119	0.720	171	0.126	223	0.419	275	0.957	327	0.586
16	0.528	68	0.770	120	0.702	172	0.131	224	0.434	276	0.947	328	0.569
17	0.516	69	0.777	121	0.684	173	0.136	225	0.449	277	0.937	329	0.553
18	0.505	70	0.785	122	0.667	174	0.139	226	0.464	278	0.926	330	0.538
19	0.495	71	0.793	123	0.649	175	0.143	227	0.480	279	0.914	331	0.524
20	0.488	72	0.804	124	0.631	176	0.146	228	0.496	280	0.901	332	0.511
21	0.483	73	0.814	125	0.614	177	0.149	229	0.512	281	0.890	333	0.500
22	0.480	74	0.825	126	0.597	178	0.151	230	0.528	282	0.876	334	0.491
23	0.479	75	0.838	127	0.579	179	0.152	231	0.545	283	0.864	335	0.484
24	0.481	76	0.850	128	0.563	180	0.152	232	0.562	284	0.851	336	0.480
25	0.485	77	0.862	129	0.546	181	0.152	233	0.578	285	0.839	337	0.477
26	0.492	78	0.875	130	0.530	182	0.150	234	0.595	286	0.827	338	0.478
27	0.501	79	0.889	131	0.513	183	0.149	235	0.613	287	0.816	339	0.481
28	0.513	80	0.901	132	0.498	184	0.146	236	0.630	288	0.805	340	0.486
29	0.525	81	0.913	133	0.482	185	0.143	237	0.648	289	0.795	341	0.494
30	0.538	82	0.925	134	0.467	186	0.139	238	0.666	290	0.786	342	0.504
31	0.553	83	0.936	135	0.451	187	0.134	239	0.683	291	0.778	343	0.514
32	0.570	84	0.947	136	0.435	188	0.130	240	0.701	292	0.771	344	0.527
33	0.586	85	0.957	137	0.420	189	0.126	241	0.719	293	0.766	345	0.540
34	0.602	86	0.966	138	0.405	190	0.122	242	0.736	294	0.761	346	0.555
35	0.619	87	0.973	139	0.390	191	0.118	243	0.753	295	0.757	347	0.569
36	0.635	88	0.980	140	0.375	192	0.114	244	0.771	296	0.755	348	0.585
37	0.650	89	0.987	141	0.361	193	0.112	245	0.788	297	0.754	349	0.599
38	0.666	90	0.992	142	0.346	194	0.111	246	0.805	298	0.754	350	0.614
39	0.681	91	0.996	143	0.332	195	0.111	247	0.821	299	0.754	351	0.627
40	0.695	92	0.998	144	0.318	196	0.113	248	0.837	300	0.755	352	0.640
41	0.706	93	1.000	145	0.304	197	0.116	249	0.853	301	0.757	353	0.652
42	0.719	94	1.000	146	0.290	198	0.120	250	0.869	302	0.759	354	0.662
43	0.729	95	1.000	147	0.276	199	0.126	251	0.883	303	0.761	355	0.672
44	0.738	96	0.998	148	0.263	200	0.132	252	0.897	304	0.764	356	0.679
45	0.746	97	0.995	149	0.250	201	0.140	253	0.910	305	0.766	357	0.685
46	0.752	98	0.991	150	0.237	202	0.148	254	0.922	306	0.767	358	0.690
47	0.758	99	0.986	151	0.224	203	0.158	255	0.934	307	0.768	359	0.693
48	0.762	100	0.979	152	0.212	204	0.168	256	0.944	308	0.769		
49	0.765	101	0.973	153	0.200	205	0.178	257	0.954	309	0.769		
50	0.767	102	0.964	154	0.189	206	0.188	258	0.963	310	0.768		
51	0.769	103	0.956	155	0.178	207	0.200	259	0.972	311	0.766		

## Elevation Pattern (cartesian-linear)



Antenna, Order No. 75010300  
Number of Bays: 2

Frequency: 563 MHz  
Elevation Directivity: 6.71 dBd  
Directivity: 10.27 dBd  
Downtilt: 0°  
Compensation: 0.97 %

No.	Vert. Distance [mm]	Power	Phase [°]
2	1150	1	0
1	0	1	0

Subject to alternation





VENTURA MEDIA COMMUNICATIONS LLC  
3619 E. Ventura Avenue  
Fresno, CA 93702

October 5, 2021

Todd Achilles, President  
Sawtooth Mountain Broadcast & Wireless LLC  
943 W. Overland Road  
Meridian, ID 83642

RE: K29KG-D Idaho Falls, ID – Interference Agreement

Dear Mr. Achilles:

Ventura Media Communications LLC, licensee of station K29KG-D, Idaho Falls, ID (FIN [128365](#)) (the “**Station**”) hereby accepts any/all interference to FCC file numbers # [0000087474](#), # [0000157081](#) and # [0000088191](#) from the proposed facility of station K29KY-D, Blackfoot, ID (FIN [187479](#)) (the “**Interfering Station**”) in Shelly, ID, ASR # [1233537](#) (43-23-15.3 N, 112-06-50.6 W).

Please direct any questions regarding this notice to Todd Lopes at (559) 265-4326 | [todd@venturabroadcasting.com](mailto:todd@venturabroadcasting.com).

Sincerely yours,

Todd Lopes  
General Manager  
Cc: File