

June 30, 2021

Engineering Statement
Better Live Television, Inc.
K33HH, Redding, California
BLTTL-20030507AAC

Better Life Television (Better Life) hereby submits this digital flash-cut application. The application also corrects the station tower coordinates and proposes a small increase in power. All other parameters of its license will remain unchanged.

Corrected NAD 83 coordinates:
40-39-14.4 N, 122-31-17.32 W

Proposed power 2.5 kW, channel 33, 587 MHz:

This document includes the OET-69 allocation study, that shows no interference beyond Commission's maximums will be caused. See attachment #1.

Regarding protection to the environment, the proposal will use the facility's existing registered tower and antenna. The tower sits among six other communication towers in the common "uncontrolled" antenna farm at a very remote, hard to reach, location. No change to this tower's height or profile is proposed. An OET 65 analysis of the power density, at the base of the tower, using the antenna's, high-gain, vertical elevation field of 0.2, indicates that $4.11 \mu\text{W}/\text{cm}^2$ will be produced, at head height (28.5m AG), that is 1.051% of the maximum for channel 33 ($391.24 \mu\text{W}/\text{cm}^2$.) Since this station's power density contribution to the site is well under five percent, there appears to be no need for further investigation. Better Life will reduce power or terminate transmission to protect workers at the towers. An agreement between users of the common site exists to enhance cooperation, when required, to protect workers at, or on, other towers. Warning signs are posted.

Attachment #2 is a proposed coverage map of the channel 33 LPTV facility.

Attachment #3 is a documentation of this preparer's qualifications.



tvstudy v2.2.5 (4uoc83)

Database: 127.0.0.1, Study: BLTTL20030507AAC #182, Model: Longley-Rice

Start: 2021.06.30 16:42:59

Study created: 2021.06.30 16:42:59

Study build station data: LMS TV 2021-06-25

Proposal: K33HH D33 LD LIC REDDING, CA

File number: BLTTL20030507AAC

Facility ID: 49529

Station data: User record

Record ID: 185

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Search options:

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K19FY-D	N19+	TX	LIC	CHICO, CA	BLTT20060109ABD	103.0 km
Yes	NEW	D32	LD	CP	CHICO, CA	BNPDTL20090825BPI	103.8
No	K41LQ-D	D32	LD	CP	EUREKA, CA	BLANK0000071823	122.6
Yes	K32OU-D	D32	LD	CP	REDDING, CA	BNPDTL20090825BPH	0.0
No	K32LQ-D	D32	LD	LIC	YREKA, CA	BLANK0000017048	119.4
No	K32DY-D	D32	DC	LIC	MEDFORD`, OR	BLDTA20150213ADA	183.7
No	KQSX-LP	D33+	LD	CP	CAL - OREGON, CA	BLANK0000031876	67.9
No	KEMY-LD	D33	LD	LIC	EUREKA, CA	BLANK0000142981	122.8
No	KEMY-LD	N33+	TX	LIC	EUREKA, CA	BLTTL20050729AMZ	122.8
Yes	K33NA-D	D33	LD	CP	ORLAND, CA	BNPDTL20100514AAE	115.0
No	KMSX-LD	D33	LD	CP	SACRAMENTO, CA	BLANK0000052053	234.0
No	KKPX-TV	D33	DT	LIC	SAN JOSE, CA	BLANK0000108766	329.8
No	KNPB	D33	LD	LIC	RENO, NV	BLEDT20111026AAC	287.8
No	K33IB-D	D33	LD	LIC	SILVER SPRINGS, NV	BLDTT20100803ABT	303.0
No	K33ER-D	D33	LD	LIC	VERDI/MOGUL, NV	BLDTT20140618ABM	250.0

No	K33ER-D	D33	LD	CP	VERDI/MOGUL, NV	BDFCDTT20080922AEY	250.0
No	K33CP-D	D33	LD	LIC	GOLD BEACH, OR	BLANK0000011190	253.5
No	K50FW-D	D33	LD	LIC	GRANTS PASS, OR	BLANK0000063231	201.2
Yes	KFTS	D33	DT	LIC	KLAMATH FALLS, OR	BLEDT20060202AHF	176.6
No	K33KD-D	D33	LD	LIC	LONDON SPRINGS, OR	BLDTT20091109AAX	334.9
No	K33GJ-D	D33	LD	LIC	MERLIN, OR	BLDTL20110527ALR	227.3
No	K33LZ-D	D33	LD	LIC	MYRTLE POINT, OR	BLDTT20120613AAS	311.4
No	K33NY-D	D33	LD	LIC	ROSEBURG, OR	BLANK0000058775	291.9
No	K48KB	D34z	LD	CP	CHICO, CA	BLANK0000054000	108.5
Yes	KRCR-TV	D34	LD	LIC	REDDING, CA	BLCDT20131126ACK	12.3
No	K47DV-D	D34	LD	LIC	Yreka, CA	BLANK0000063985	119.4
No	K34DJ	D34-	LD	LIC	PHOENIX, ETC., OR	BLANK0000067760	183.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D33
Mask: Simple
Latitude: 40 39 14.40 N (NAD83)
Longitude: 122 31 17.30 W
Height AMSL: 1000.0 m
HAAT: 0.0 m
Peak ERP: 2.50 kW
Antenna: BOG-B16UR (ID 18063) 170.0 deg
Elev Pattn: Generic

50.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.002 kW	3.9 m	3.8 km
45.0	0.008	614.1	22.2
90.0	1.26	734.3	54.6
135.0	2.48	770.0	59.7
180.0	2.40	578.4	55.8
225.0	2.16	209.8	40.8
270.0	0.400	455.2	41.4
315.0	0.002	338.0	12.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 463 m

Distance to Canadian border: 845.3 km

Distance to Mexican border: 1003.0 km

Conditions at FCC monitoring station: Livermore CA
Bearing: 168.3 degrees Distance: 332.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 86.5 degrees Distance: 1460.3 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%

Interference to BNPDTL20090825BPI CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	NEW	D32	LD	CP	CHICO, CA	BNPDTL20090825BPI	
Undesireds:	K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	103.8 km
	K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	103.8
	K32OU-D	D32	LD	CP	REDDING, CA	BNPDTL20090825BPH	103.8
	KSTV-LD	D32-	LD	LIC	SACRAMENTO, CA	BLANK0000071667	153.9
	KCNS	D32	DT	LIC	SAN FRANCISCO, CA	BLANK0000108769	251.6
	K33NA-D	D33	LD	CP	ORLAND, CA	BNPDTL20100514AAE	50.7
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
9502.6	294,998	8349.6		271,564	8080.1	269,455	0.00 0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
K33HH N33 TX LIC	0.0	0	0.0	0
K33HH D33 LD LIC	40.1	11		0.0
K32OU-D D32 LD CP	232.6	1,510	211.5	1,202
KSTV-LD D32- LD LIC	12.0	80	5.0	0
KCNS D32 DT LIC	48.0	804	23.0	416
K33NA-D D33 LD CP	4.9	103	4.9	103

Interference to BNPDTL20090825BPH CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K32OU-D	D32	LD	CP	REDDING, CA	BNPDTL20090825BPH	
Undesireds:	K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	0.0 km
	K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	0.0
	K31PS-D	D31	LD	LIC	LAKESHORE, CA	BLANK0000085943	29.6
	NEW	D32	LD	CP	CHICO, CA	BNPDTL20090825BPI	103.8
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	4717.2	171,254	4141.2	169,216	3926.6	155,598	3841.8 152,967 2.16 1.69

Undesired		Total IX	Unique IX, before	Unique IX, after
K33HH N33 TX LIC	0.0	0	0.0	0
K33HH D33 LD LIC	228.7	12,409		84.9
K31PS-D D31 LD LIC	21.9	85	17.9	79
NEW D32 LD CP	196.6	13,539	192.7	13,533
				54.9
				3,761

Interference to BNPDTL20100514AAE CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K33NA-D	D33	LD	CP	ORLAND, CA	BNPDTL20100514AAE	
Undesireds:	K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	114.9 km
	K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	115.0
	KEMY-LD	D33	LD	LIC	EUREKA, CA	BLANK0000142981	193.6
	K33ER-D	D33	LD	LIC	VERDI/MOGUL, NV	BLDTT20140618ABM	191.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
562.8 9,371	562.8 9,371	562.8 9,371	547.0 9,367	2.81 0.04
Undesired	Total IX	Unique IX, before	Unique IX, after	
K33HH N33 TX LIC	0.0 0	0.0 0		
K33HH D33 LD LIC	15.8 4		15.8 4	

Interference to BLEDT20060202AHF LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KFTS	D33	DT	LIC	KLAMATH FALLS, OR	BLEDT20060202AHF	
Undesireds: K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	176.7 km
K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	176.6
K32DY-D	D32	DC	LIC	MEDFORD, OR	BLDTA20150213ADA	94.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
21723.6 75,788	15479.8 65,459	15458.8 65,294	15457.8 65,294	0.01 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
K33HH N33 TX LIC	0.0 0	0.0 0		
K33HH D33 LD LIC	1.0 0		1.0 0	
K32DY-D D32 DC LIC	21.0 165	21.0 165	21.0 165	

Interference to BLCDT20131126ACK LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KRCR-TV	D34	LD	LIC	REDDING, CA	BLCDT20131126ACK	
Undesireds: K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	12.4 km
K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	12.3
KEMY-LD	D33	LD	LIC	EUREKA, CA	BLANK0000142981	112.5
K48KB	D34z	LD	CP	CHICO, CA	BLANK0000054000	107.9
KEZT-CD	D34	DC	LIC	SACRAMENTO, CA	BLANK0000115780	247.5
KFSF-DT	D34	DT	LIC	VALLEJO, CA	BLCDT20100513ABB	316.9
K34DJ	D34-	LD	LIC	PHOENIX, ETC., OR	BLANK0000067760	188.6

K35PG-D D35 LD CP REDDING, CA BNPDTL20090825BPG 12.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
16076.0 230,423	14049.5 224,710	14020.6 224,672	14010.6 224,631	0.07 0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
K33HH N33 TX LIC 0.0	0	0.0 0	
K33HH D33 LD LIC 19.9	79		10.0 41
K48KB D34z LD CP 11.0	0	10.0 0	8.0 0
KEZT-CD D34 DC LIC 2.0	0	2.0 0	2.0 0
K35PG-D D35 LD CP 16.9	38	15.9 38	8.9 0

Interference to proposal scenario 1

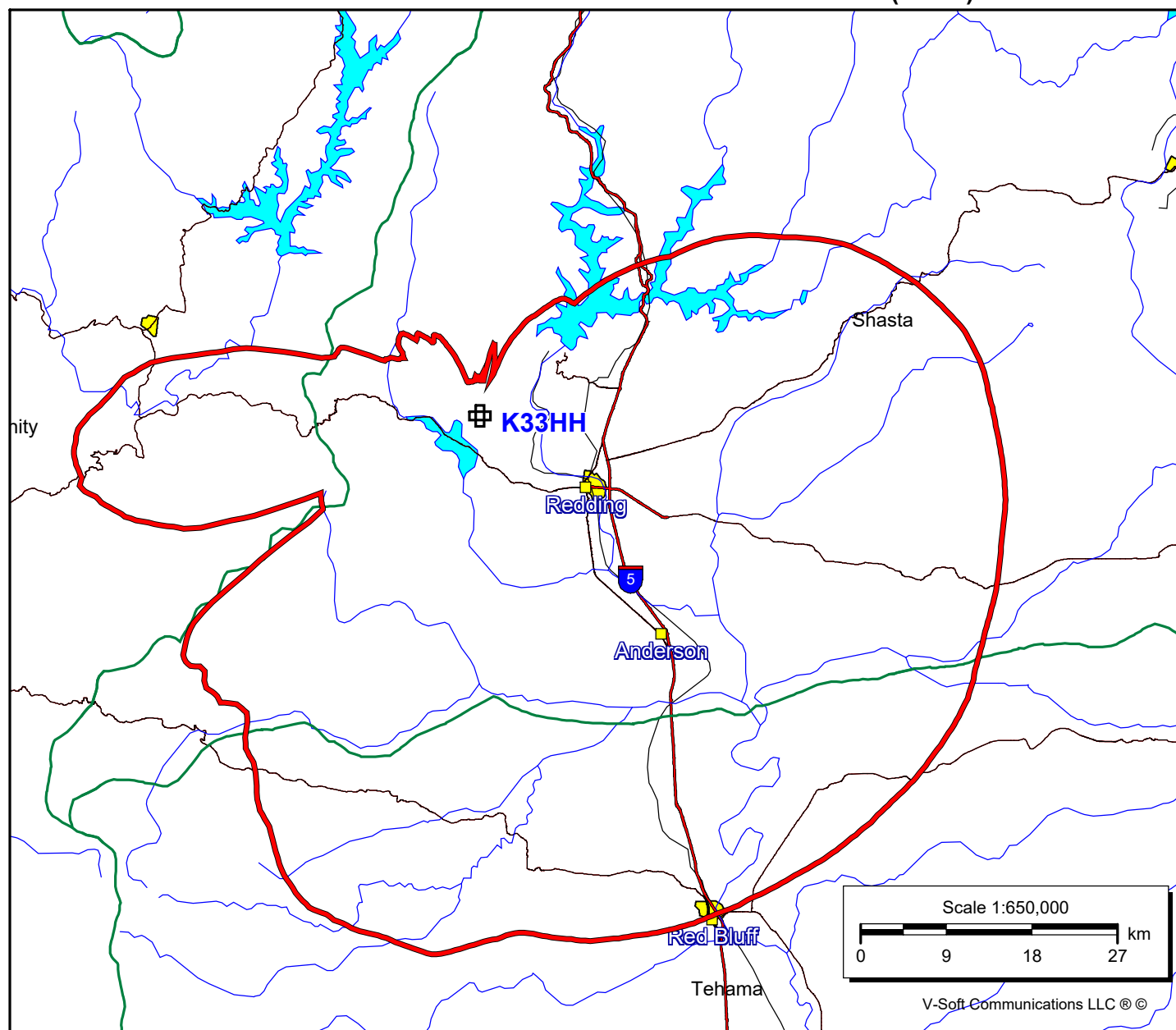
Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: K33HH	D33	LD	LIC	REDDING, CA	BLTTL20030507AAC	
Undesireds: K32OU-D	D32	LD	CP	REDDING, CA	BNPDTL20090825BPH	0.0 km
KQSX-LP	D33+	LD	CP	CAL - OREGON, CA	BLANK0000031876	67.9
KEMY-LD	D33	LD	LIC	EUREKA, CA	BLANK0000142981	122.8
K33ER-D	D33	LD	LIC	VERDI/MOGUL, NV	BLDTT20140618ABM	250.0
KRCR-TV	D34	LD	LIC	REDDING, CA	BLCDT20131126ACK	12.3

Service area	Terrain-limited	IX-free	Percent IX
5220.6 189,354	4525.5 186,698	4266.5 183,511	5.72 1.71

Undesired	Total IX	Unique IX	Prcnt Unique IX
K32OU-D D32 LD CP 25.8	62	8.9 0	0.20 0.00
KQSX-LP D33+ LD CP 1.0	0	1.0 0	0.02 0.00
KRCR-TV D34 LD LIC 249.1	3,187	232.2 3,125	5.13 1.67

51 dBu Noise-Limited F(50-90) Service Contour**K33HH**

Redding, California
BLTTL-20030507AAC
Latitude: 40-39-14.40 N
Longitude: 122-31-17.32 W
ERP: 2.50 kW
Channel: 33
Frequency: 587.0 MHz
AMSL Height: 1000.0 m
Elevation: 968.4 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.75
Prop Model: None



V Doug Vernier
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Telecommunication Consultants

**Declaration and
Statement of Qualifications**

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 40 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Life-time Certification received in 2010);

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by Better Life Television, Inc. to prepare the engineering showing appended hereto;

That, I have prepared this broadcast engineering showing, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.

Douglas L. Vernier

A handwritten signature in blue ink, appearing to read "Doug Vernier", with a large, stylized initial "D" and a horizontal line extending to the right.

Executed on July 1, 2021