

ENGINEERING NARRATIVE
IN SUPPORT OF REQUEST FOR SPECIAL TEMPORARY AUTHORITY
Prepared for
HORIZON MEDIA LLC
KJWY-LD CH 36 Facility ID 189343 0.555 kW DA RC 338.1 M AMSL
SALEM, OREGON
JULY 2018

Summary

Horizon Media LLC ("Horizon") specifies herein temporary STA facilities for KJWY-LD, Salem, Oregon, to allow the station to return to the air at a site 2.33 kilometers SSE of the station's licensed facilities. The site is an existing 61meter self-supporting tower known as the Bald Hill Communications Site. A pair of horizontally polarized panel antennas will be mounted 36.6 meters above the tower with the center of the main lobe oriented at 205 degrees. The maximum ERP is 555 watts. The entire community boundary of Salem, Oregon is located well inside the city grade contour.

Attached herein is the TVStudy version 2.2.5 output which demonstrates that the proposed facility will cause no impermissible interference to any station.

Environmental

The proposed panel antenna system is a single level horizontally polarized, UHF, slot type, TV antenna. The radiation center is 36.6 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.2 has been used to calculate the power density 2 meters above ground. The maximum power density is 0.675 microwatts/cm squared calculated for an ERP of 555

watts H. polarization. This value is 0.17% of the General Population exposure per section 1.1310. Based on this analysis it is believed that the proposed facility follows OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Worker Safety Guidelines.

TVSTUDY VERSION 2.2.5
Allocation Study Using LMS database dated 07/15/2018

KJWY-LD CH 36 STA SALEM OREGON

Study created: 2018.07.19 21:24:18
Study build station data: LMS TV 2018-07-15

Proposal: KJWY-LD D36 LD LIC SALEM, OR
File number: BALD HILL SITE STA
Facility ID: 189343
Station data: User record
Record ID: 91
Country: U.S.

Search options:
All records for new LPTV stations excluded

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K35HW-D	D35	LD	LIC	FLORENCE, OR	BLDTT20100114AEE	136.7 km
No	K35JH-D	D35	LD	LIC	LONDON SPRINGS, OR	BLDTT20091109AAY	151.3
No	K35LW-D	D35	LD	CP	PHILOMATH, OR	BNPDTL20100514AIO	55.3
No	KORK-CD	D35	DC	LIC	PORTLAND, OR	BLANK0000001496	66.5
No	K35CR-D	D35	LD	LIC	TILLAMOOK, ETC., OR	BLDTL20130220AAR	52.9
No	K35HU-D	D35	LD	LIC	GRAYS RIVER, WA	BLDTT20111031AEM	165.6

No	K36HM-D	D36	LD	LIC	FORT DICK, CA	BLDTT20090810ACY	332.5
No	K49IG-D	D36	LD	CP	YREKA, CA	BLANK0000035593	362.9
No	K36LI-D	D36	LD	CP	ASTORIA, OR	BNPDTL20100324ACB	162.3
No	K49KT-D	D36	LD	CP	BEND, OR	BLANK0000051823	193.8
No	K36BA-D	D36	LD	LIC	BURNS, OR	BLDTT20100823ACF	357.0
No	K36BX-D	D36	LD	LIC	COOS BAY, OR	BLDTL20100402ACG	194.6
Yes	K50CT-D	D36	LD	CP	COTTAGE GROVE, OR	BLANK0000029358	135.8
No	K47GI-D	D36	DC	CP	GRANTS PASS, OR	BLANK0000027790	290.8
No	K36FG-D	D36	LD	LIC	HOOD RIVER, ETC., OR	BLDTT20091125AAU	148.2
No	K36KF-D	D36	LD	CP	MEDFORD, OR	BNPDTL20090825BFO	283.6
No	K36IB-D	D36	LD	LIC	MIDLAND, ETC., OR	BLDTT20090921ACY	338.1
No	K38DT-D	D36	LD	CP	NORTH LA PINE, OR	BLANK0000052548	180.9
No	K36DP-D	D36	LD	LIC	PENDLETON, OR	BLDTT20120621ABZ	303.6
Yes	KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK0000027188	66.5
No	K48MA-D	D36	LD	CP	Rainier, OR	BLANK0000053673	131.7
No	K36GU-D	D36	LD	LIC	ROCKAWAY BEACH, OR	BLDTT20110808ACE	103.3
Yes	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	199.8
No	K36JZ-D	D36	LD	LIC	ROSEBURG, OR	BLDTL20140221ACK	200.3
No	KBWU-LD	D36	LD	LIC	RICHLAND, ETC., , WA	BLDTL20080701AEM	336.4
No	KZJO	D36	DT	CP	SEATTLE, WA	BLANK0000025375	298.2
Yes	KEVE-LD	D36	LD	LIC	VANCOUVER, WA	BLDTL20101028ABP	66.4
No	K36KY-D	D36	LD	LIC	WENATCHEE, WA	BLANK0000010595	342.2
No	KWYT-LP	D36	LD	CP	YAKIMA, WA	BLANK0000029321	267.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36
Mask: Full Service
Latitude: 44 59 49.00 N (NAD83)
Longitude: 123 9 15.00 W
Height AMSL: 338.1 m
HAAT: 0.0 m
Peak ERP: 0.555 kW
Antenna: CUSTOM NICOM BKU 4-5 DUAL PANEL0 205.0 deg
Elev Pattn: Generic

Elec Tilt: 0.5
 50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.000 kW	133.7 m	4.2 km
45.0	0.000	295.4	5.9
90.0	0.038	288.1	23.1
135.0	0.465	227.3	33.4
180.0	0.369	276.2	34.5
225.0	0.382	257.6	33.9
270.0	0.498	244.3	34.6
315.0	0.093	282.2	27.5

Database HAAT does not agree with computed HAAT
 Database HAAT: 0 m Computed HAAT: 251 m

Distance to Canadian border: 360.0 km

Distance to Mexican border: 1463.5 km

Conditions at FCC monitoring station: Ferndale WA
 Bearing: 5.7 degrees Distance: 442.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 103.9 degrees Distance: 1556.9 km

Study cell size: 0.50 km
 Profile point spacing: 0.10 km

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

----- Below is IX received by proposal BALD HILL SITE STA -----

Proposal receives 28.22% interference from scenario 1
 No IX check failures found.

KJWY-LD CH 36 STA SALEM OREGON TVIX STUDY DETAIL :

tvstudy v2.2.5 (4uoc83) Database: 127.0.0.1, Study: BALD HILL SITE STA, Model: Longley-Rice
Start: 2018.07.19 21:24:18

Study created: 2018.07.19 21:24:18

Study build station data: LMS TV 2018-07-15

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No	K35JH-D	D35	LD	LIC	LONDON SPRINGS, OR	BLDTT20091109AAY	151.3
No	K35LW-D	D35	LD	CP	PHILOMATH, OR	BNPDTL20100514AIO	55.3
No	KORK-CD	D35	DC	LIC	PORTLAND, OR	BLANK0000001496	66.5
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No	K48MA-D	D36	LD	CP	Rainier, OR	BLANK0000053673	131.7
No	K36GU-D	D36	LD	LIC	ROCKAWAY BEACH, OR	BLDTT20110808ACE	103.3
Yes	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	199.8
No	K36JZ-D	D36	LD	LIC	ROSEBURG, OR	BLDTL20140221ACK	200.3
No	KBWU-LD	D36	LD	LIC	RICHLAND, ETC., , WA	BLDTL20080701AEM	336.4
No	KZJO	D36	DT	CP	SEATTLE, WA	BLANK0000025375	298.2
Yes	KEVE-LD	D36	LD	LIC	VANCOUVER, WA	BLDTL20101028ABP	66.4
No	K36KY-D	D36	LD	LIC	WENATCHEE, WA	BLANK0000010595	342.2
No	KWYT-LP	D36	LD	CP	YAKIMA, WA	BLANK0000029321	267.7

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Antenna: CUSTOM NICOM BKU 4-5 DUAL PANEL0 205.0 deg
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Elec Tilt: 0.5
50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
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Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 103.9 degrees Distance: 1556.9 km

Study cell size: 0.50 km
Profile point spacing: 0.10 km

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

Interference to BLANK0000029358 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K50CT-D	D36	LD	CP	COTTAGE GROVE, OR	BLANK0000029358	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	135.8 km
	K35JH-D	D35	LD	LIC	LONDON SPRINGS, OR	BLDTT20091109AAY	16.2
	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	68.7
	K36JZ-D	D36	LD	LIC	ROSEBURG, OR	BLDTL20140221ACK	69.5
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	1294.5	75,110	1095.1	52,242	1087.0	51,044	1086.8 51,044 0.02 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
KJWY-LD D36 LD LIC				0.2	0	0.2	0
K35JH-D D35 LD LIC				4.1	29	4.1	29
KTCW D36 DT CP				4.0	1,169	3.7	1,169
K36JZ-D D36 LD LIC				0.2	0	0.0	0

Interference to BLANK0000027188 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK0000027188	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	66.5 km
	K47GI-D	D36	DC	CP	GRANTS PASS, OR	BLANK0000027790	351.6
	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	262.1
	KZJO	D36	DT	CP	SEATTLE, WA	BLANK0000025375	235.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11122.0 2,275,834	9789.9 2,180,829	9788.4 2,180,829	9772.3 2,177,903	0.16 0.13
Undesired	Total IX	Unique IX, before	Unique IX, after	
KJWY-LD D36 LD LIC	16.1 2,926		16.1 2,926	
KZJO D36 DT CP	1.5 0	1.5 0	1.5 0	

Interference to BLANK0000027188 CP scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK0000027188	
Undesireds: KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	66.5 km
K47GI-D	D36	DC	CP	GRANTS PASS, OR	BLANK0000027790	351.6
KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	262.1
KZJO	D36	DT	BL	SEATTLE, WA	DTVBL69571	235.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11122.0 2,275,834	9789.9 2,180,829	9788.4 2,180,829	9772.3 2,177,903	0.16 0.13
Undesired	Total IX	Unique IX, before	Unique IX, after	
KJWY-LD D36 LD LIC	16.1 2,926		16.1 2,926	
KZJO D36 DT BL	1.5 0	1.5 0	1.5 0	

Interference to BLANK0000034586 CP scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	
Undesireds: KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	199.8 km
K47GI-D	D36	DC	CP	GRANTS PASS, OR	BLANK0000027790	91.9
KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK0000027188	262.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11712.5 105,557	10523.7 94,438	10517.8 94,438	10515.6 94,438	0.02 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
KJWY-LD D36 LD LIC	2.4 0		2.2 0	
K47GI-D D36 DC CP	5.7 0	5.7 0	5.7 0	
KKEI-CD D36 DC CP	0.2 0	0.2 0	0.0 0	

Interference to BLANK0000034586 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	199.8 km
	K47GI-D	D36	DC	BL	GRANTS PASS, OR	DTVBL5011	91.9
	KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK0000027188	262.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
11712.5	105,557	10523.7		94,438	10518.3	94,438	0.02 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KJWY-LD	D36 LD LIC	2.4		0		2.2	0
K47GI-D	D36 DC BL	5.2		0	5.2 0	5.2	0
KKEI-CD	D36 DC CP	0.2		0	0.2 0	0.0	0

Interference to BLANK0000034586 CP scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	199.8 km
	K47GI-D	D36	DC	CP	GRANTS PASS, OR	BLANK0000027790	91.9
	KKEI-CD	D36	DC	BL	PORTLAND, OR	DTVBL71078	262.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
11712.5	105,557	10523.7		94,438	10517.8	94,438	0.02 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KJWY-LD	D36 LD LIC	2.4		0		2.2	0
K47GI-D	D36 DC CP	5.7		0	5.7 0	5.7	0
KKEI-CD	D36 DC BL	0.2		0	0.2 0	0.0	0

Interference to BLANK0000034586 CP scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTCW	D36	DT	CP	ROSEBURG, OR	BLANK0000034586	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	199.8 km
	K47GI-D	D36	DC	BL	GRANTS PASS, OR	DTVBL5011	91.9
	KKEI-CD	D36	DC	BL	PORTLAND, OR	DTVBL71078	262.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11712.5 105,557	10523.7 94,438	10518.3 94,438	10516.1 94,438	0.02 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KJWY-LD D36 LD LIC	2.4 0		2.2 0
K47GI-D D36 DC BL	5.2 0	5.2 0	5.2 0
KKEI-CD D36 DC BL	0.2 0	0.2 0	0.0 0

Interference to BLDLTL20101028ABP LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KEVE-LD	D36	LD	LIC	VANCOUVER, WA	BLDLTL20101028ABP	
Undesireds:	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	66.4 km
	KORK-CD	D35	DC	LIC	PORTLAND, OR	BLANK0000001496	0.3
	K36LI-D	D36	LD	CP	ASTORIA, OR	BNPDLTL20100324ACB	134.1
	KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK00000027188	0.3
	K48MA-D	D36	LD	CP	Rainier, OR	BLANK00000053673	71.9
	KZJO	D36	DT	CP	SEATTLE, WA	BLANK00000025375	235.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
10230.4 2,256,617	8907.0 2,153,441	3882.0 289,742	3882.0 289,742	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KJWY-LD D36 LD LIC	7.4 295		0.0 0
KORK-CD D35 DC LIC	16.0 1,133	0.0 0	0.0 0
K36LI-D D36 LD CP	0.2 0	0.0 0	0.0 0
KKEI-CD D36 DC CP	5025.0 1,863,699	5003.4 1,862,544	4996.0 1,862,249
K48MA-D D36 LD CP	4.4 22	0.0 0	0.0 0
KZJO D36 DT CP	1.2 0	0.0 0	0.0 0

Interference to proposal scenario 1
28.22% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KJWY-LD	D36	LD	LIC	SALEM, OR	BALD HILL SITE STA	
Undesireds:	KKEI-CD	D36	DC	CP	PORTLAND, OR	BLANK00000027188	66.5 km
	KEVE-LD	D36	LD	LIC	VANCOUVER, WA	BLDLTL20101028ABP	66.4

Service area	Terrain-limited	IX-free	Percent IX
2291.0 307,488	2058.6 299,540	1789.6 215,015	13.07 28.22

Undesired		Total IX		Unique IX	Prcnt Unique IX
KKEI-CD D36 DC CP	265.5	83,805	44.0	27,886	2.14 9.31
KEVE-LD D36 LD LIC	225.0	56,639	3.5	720	0.17 0.24

Conclusion

Based on the information supplied herein, and accompanying application for STA, it is believed that the proposed facilities meet all applicable FCC requirements.

The foregoing was prepared on behalf of Horizon Media, LLC by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By _____

Clarence M. Beverage
for Communications Technologies, Inc.
 Marlton, New Jersey
 July 20, 2018

The map displays the KJWY-LD service area in central Oregon, covering parts of Polk and Marion counties. The service area is outlined in black, and the county boundary is shown in red. The map includes a grid of latitude and longitude, a scale bar in kilometers, and a list of towns and cities. A blue star marks the location of the KJWY-LD station, with a callout box indicating 'STA 0.555 KW' and 'KJWY-LD LIC'. A black arrow points from the station location to a box labeled 'SILKE TOWER 555 WATT ERP STA'.

Figure 1