

CITY OF LICENSE
CALL LETTERS
PREPARED FOR
VERSION
JOB

Pendleton. OR
K234CD
COMMUNITY MEDIA ASSISTANCE PROJECT
1.1
115106

CONSOLIDATED

ENGINEERING EXHIBIT

FCC Form 349 - Section III-A - Engineering

**ENGINEERING STATEMENT
PROPOSED MINOR-MODIFICATION
TO FM TRANSLATOR CONSTRUCTION PERMIT BNPFT-20130328ATW
K234CD, BIGGS, OR - MOVING TO CH276, PENDLETON, OR**

This is a 250 Mile Translator Relocation Filing Window application, filed under the provisions of the December 23, 2015 Public Notice¹. This application is being filed by the permittee, Community Media Assistance Project (“CMAP”, formerly known as Northwest Community Radio Project (“NWCRP”)²). An FCC Form 345 application seeking assignment of the CP from CMAP to KSRV, Inc., has been filed. The purpose of the translator will be to provide fill-in service for KTIK, Pendleton, OR, which is owned by KSRV, Inc.

This application meets all requirements of the first 250 Mile Translator Relocation Filing Window³, in that:

1. The proposed new site, near Pendleton, Oregon, is 181.9km/113mi from the CP site - well within the 250 mile relocation limitation.
2. The proposed primary station, KTIK, Pendleton, is a Class C station.
3. KTIK is owned by the proposed translator Assignee, and the Assignment application has already been filed.
4. The proposed translator 60dBu contour will be fully contained within the 2mV/m daytime contour of KTIK, and also within 25 miles of the KTIK transmitter site, in compliance with §74.1201(g). (See **Exhibit 10**)

¹MEDIA BUREAU ANNOUNCES FILING DATES AND PROCEDURES FOR AM STATION FILING WINDOW FOR FM TRANSLATOR MODIFICATIONS, DA 1491

²This name change was duly registered with the State of Oregon, in 2013. Concurrently, the FCC Auctions Desk was notified of the change, by letter, and the FRN and CDBS records were updated., prior to the filing of the Long Form, which was filed as CMAP - the “new” name. However, the CP was still issued as NWCRP, the “old” name.

There has been no change in the mission, purpose, or board members of the organization, since its inception in 2003. Only the name has changed.

³The first window runs from January 29 to July 28, 2016.

This application proposes to modify the location, ERP, community of license, and input and output channel of the translator. The transmission antenna would be co-located on an existing tower at Emigrant Hill (commonly known as Cabbage Hill), southeast of Pendleton, OR.

Exhibit 10
Prop. K234CD CP MOD
vs KTIK (AM)

Brown Broadcast Services, Inc.
Job: XLTR FOR KTIK_JAN29 2016.fmj
Master Database: 2016_Jan_28.fmd
Lat: N45:35:27 Lon: W118:34:47 NAD-27
Scale: 1:750000
Channel: 276 Class: DX

rfInvestigator Version 3.8.13
by rfSoftware, Inc.
Date: 1/29/2016 4:44:43 PM

Red=Proposed Translator 60dBu
Blue=KTIK 2mV/m Daytime
Green=25mi/40km from KTIK

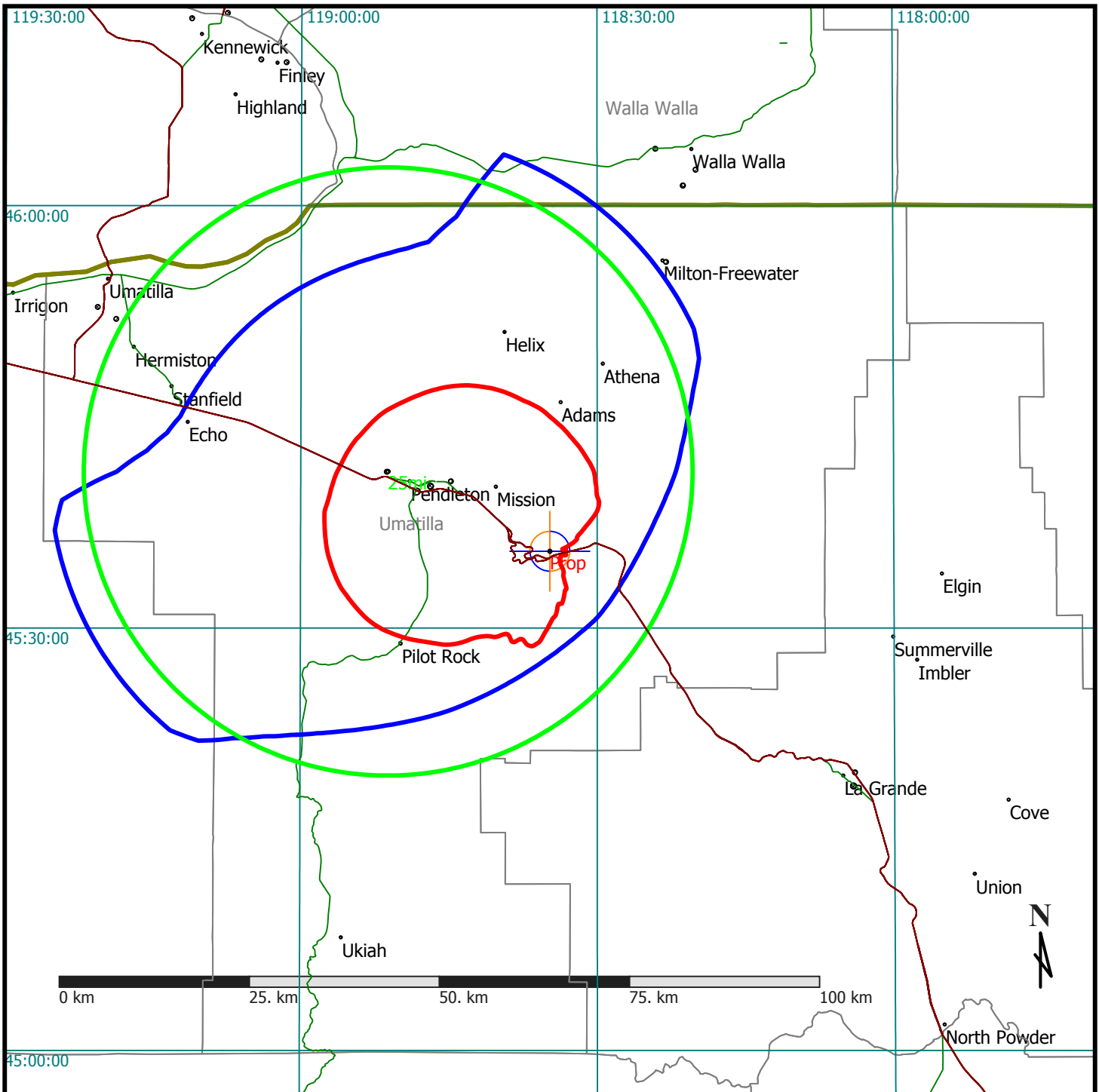


EXHIBIT 13

OVERLAP REQUIREMENTS

INTERFERENCE PROTECTION

PENDLETON XLTR FOR KTI X										
KSRV, INC.										
REFERENCE	CH# 276D - 103.1 MHz, Pwr= 0.19 kW DA, HAAT= 333.0 M, COR= 1104 M DISPLAY DATES									
45 35 27.0 N.	Average Protected F(50-50)= 22.2 km DATA 01-27-16									
118 34 47.0 W.	Standard Directional SEARCH 01-28-16									
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
278C1 Pendleton	KWHT	LIC	CX OR	34.0 214.1	28.14 BLH20050112ADB	45 48 02.0 118 22 36.0	100.000 219	9.2 934	68.1 Ksrv, Inc.	-40.2*
274C0 Richland	KORD-FM	LIC	CX WA	323.3 142.9	70.71 BLH20091009ADP	46 05 58.4 119 07 40.2	100.000 404	10.6 721	74.6 Townsquare Media Tri-city	-4.6*
276D Kennewick	K276EU	LIC	C WA	321.6 141.1	91.73 BLFT20070619ABM	46 14 07.0 119 19 13.0	0.015 256	30.6 501	9.4 Educational Media Foundati	0.2
276C2 Union	KVBL	LIC	NCX OR	115.0 295.6	73.18 BLH20120627ABD	45 18 33.0 117 43 54.0	0.950 768	137.4 2183	59.9 Kvbl, Lic	1.9
223C1 Dayton	KZHR	LIC	CN WA	35.2 215.5	54.29 BLH19920731KC	45 59 19.0 118 10 28.0	54.000 379	0.0 1137	0.0 Ccr-tri Cities Iv, Lic	21.5R 32.8M
276C2 Selah	KYKV	LIC	CX WA	310.5 129.2	182.26 BLED20090420ACO	46 38 27.0 120 23 46.0	5.400 435	129.6 975	51.5 Educational Media Foundati	40.7
Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM										
In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3 rd adjacent.										
All separation margins (if shown) include rounding.										
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)										
Incoming contour overlap is ignored.										
***affixed to 'IN' or 'OUT' values = site inside restricted contour.										
« = Station meets FCC minimum distance spacing for its class.										

This application meets all requirements of 47 CFR §74.1204 regarding interference protection to other stations and authorizations. **Exhibits 13a** and **13b** show the required contour protections to co-channel stations. There are no first-adjacent stations within range.

The two 2nd-adjacent stations are KWHT, Pendleton, OR, and KORD-FM, Richland, WA. Protection to these stations is provided using the ratio method. The F(50/50) signal strength of KWHT is 80dBu at the proposed translator site. The signal strength of the KORD-FM is 61.5dBu at the proposed translator site. Using the appropriate U/D ratio of 40dB, the corresponding “worst-case” interfering contour of the proposed translator is therefore

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INCORPORATED

Michael D. Brown

3740 S.W. Comus St.

Portland, Oregon 97219-7418

503-245-6065

101.5dBu. Exhibit 13c shows a Google Earth plot of this contour. As shown by this exhibit, there are no populated areas within the interfering contour.

PROTECTED ZONES REPORT:

Protected zones report for NEW! on channel 276D 01-29-2016
Lat. 45 35 27.0 Lng. 118 34 47.0, ERP= 0.19 kw, HAAT= 333 m

Facility is okay with respect to Canada. Distance = 379.0 km.

Facility is okay with respect to AM station towers.

Closest AM Facility is KUMA, PENDLETON, OR, L, DAN at 305.4° at a distance of 15.9 km
Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 480.0 km= Ferndale, WA

Facility is okay toward West Virginia Quiet Zone. Distance to center = 3336.4 km

Facility is okay toward Table Mountain. Distance to Center = 1247.3 km, Azimuth = 114.5
Degrees True

METHODOLOGY:

FMOver calculations were done using V-Soft FM Commander software, using “HAAT method 0 (zero)”, 51 data points per radial, and the FCC-modified version of the NGDC 30 second terrain database. According to V-Soft, this combination results in “astounding agreement” with FCC software.

Exhibit 13a

Co-channel Contour Protection

Brown Broadcast Services, Inc.
Job: XLTR FOR KTX JAN29 2016.fmj
Master Database: 2016_Jan_28.fmd
Lat: N45:35:27 Lon: W118:34:47 NAD-27
Scale: 1:1000000
Channel: 276 Class: DX

PROPOSED
Interfering: 40dBu F(50,10)
AFFECTED
Protected: 60dBu F(50,50)

rfInvestigator Version 3.8.13
by rfSoftware, Inc.
Date: 1/29/2016 5:36:52 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

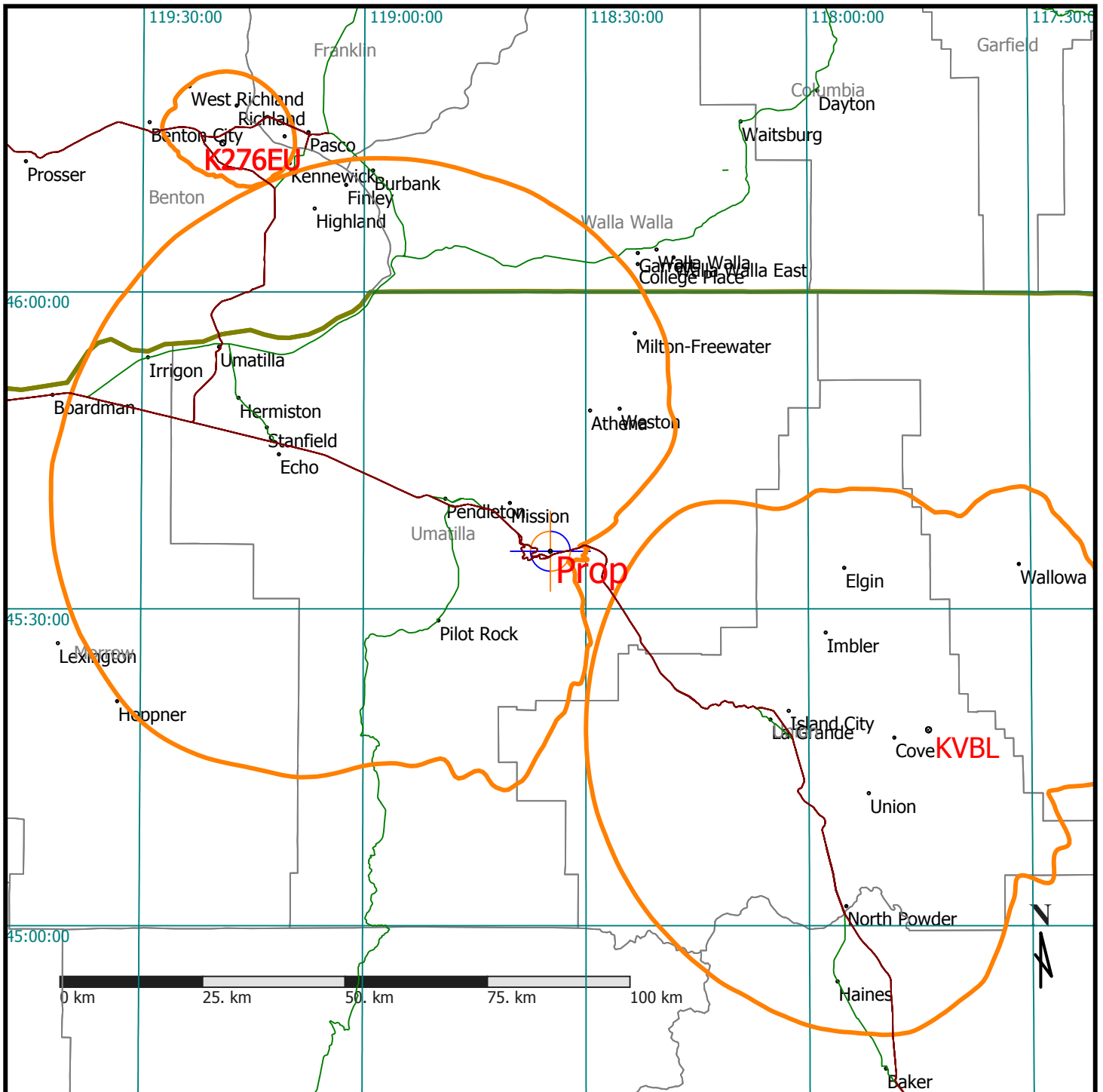


EXHIBIT 13b

FMOVER ANALYSIS

Proposed vs. K276EU, Kennewick, WA

01-29-2016 Terrain Data: FCC NGDC 30 Sec FMOver Analysis

K276EU BLFT20070619ABM

NEW!

Channel = 276D
 Max ERP = 0.015 kW
 RCAMSL = 501 m
 N. Lat. 46 14 07.0
 W. Lng. 119 19 13.0
 Protected
 60 dBu

Channel = 276D
 Max ERP = 0.19 kW
 RCAMSL = 1104 m
 N. Lat. 45 35 27.0
 W. Lng. 118 34 47.0
 Interfering
 40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
096.0	000.0150	0376.4	012.5	327.7	000.0888	0624.7	083.4	38.81	
097.0	000.0150	0373.4	012.5	327.6	000.0890	0624.8	083.2	38.86	
098.0	000.0150	0370.1	012.4	327.5	000.0893	0624.9	083.1	38.92	
099.0	000.0150	0366.9	012.4	327.4	000.0896	0624.9	083.0	38.98	
100.0	000.0150	0363.8	012.3	327.2	000.0899	0625.0	082.8	39.03	
101.0	000.0150	0360.7	012.3	327.1	000.0902	0625.0	082.7	39.09	
102.0	000.0150	0358.1	012.2	327.0	000.0905	0625.0	082.6	39.14	
103.0	000.0150	0355.3	012.2	326.8	000.0909	0625.1	082.5	39.19	
104.0	000.0150	0352.4	012.1	326.7	000.0912	0625.1	082.4	39.25	
105.0	000.0150	0349.5	012.1	326.6	000.0916	0625.1	082.3	39.30	
106.0	000.0150	0346.4	012.0	326.4	000.0919	0625.1	082.2	39.34	
107.0	000.0150	0343.2	012.0	326.3	000.0923	0625.1	082.1	39.39	
108.0	000.0150	0339.7	011.9	326.2	000.0926	0625.1	082.0	39.43	
109.0	000.0150	0335.6	011.8	326.0	000.0930	0625.1	081.9	39.47	
110.0	000.0150	0331.8	011.8	325.9	000.0934	0625.1	081.9	39.51	
111.0	000.0150	0328.1	011.7	325.7	000.0938	0625.1	081.8	39.55	
112.0	000.0150	0324.7	011.6	325.6	000.0942	0625.2	081.8	39.59	
113.0	000.0150	0321.6	011.6	325.5	000.0946	0625.2	081.7	39.63	
114.0	000.0150	0318.2	011.5	325.3	000.0949	0625.2	081.6	39.66	
115.0	000.0150	0314.3	011.5	325.2	000.0953	0625.3	081.6	39.69	
116.0	000.0150	0309.5	011.4	325.0	000.0957	0625.3	081.6	39.72	
117.0	000.0150	0304.0	011.3	324.9	000.0962	0625.3	081.6	39.74	
118.0	000.0150	0297.6	011.2	324.7	000.0966	0625.3	081.6	39.76	
119.0	000.0150	0290.0	011.0	324.5	000.0970	0625.3	081.6	39.76	
120.0	000.0150	0281.7	010.9	324.4	000.0975	0625.3	081.7	39.76	
121.0	000.0150	0273.4	010.7	324.2	000.0979	0625.3	081.8	39.76	
122.0	000.0150	0266.9	010.6	324.0	000.0984	0625.3	081.8	39.76	
123.0	000.0150	0263.5	010.5	323.9	000.0987	0625.3	081.8	39.78	
124.0	000.0150	0262.8	010.5	323.8	000.0991	0625.4	081.8	39.81	
125.0	000.0150	0263.3	010.5	323.7	000.0994	0625.4	081.7	39.85	
126.0	000.0150	0262.9	010.5	323.5	000.0998	0625.4	081.6	39.88	
127.0	000.0150	0260.5	010.5	323.4	000.1001	0625.4	081.6	39.89	
128.0	000.0150	0256.9	010.4	323.3	000.1005	0625.4	081.7	39.90	
129.0	000.0150	0253.3	010.3	323.1	000.1009	0625.4	081.7	39.91	
130.0	000.0150	0250.6	010.3	323.0	000.1012	0625.4	081.7	39.92	
131.0	000.0150	0248.1	010.2	322.9	000.1016	0625.4	081.7	39.93	
132.0	000.0150	0245.1	010.1	322.7	000.1019	0625.4	081.7	39.94	
133.0	000.0150	0242.0	010.1	322.6	000.1022	0625.4	081.8	39.94	
134.0	000.0150	0238.8	010.0	322.5	000.1025	0625.4	081.8	39.94	
135.0	000.0150	0235.3	009.9	322.4	000.1029	0625.3	081.9	39.94	
136.0	000.0150	0231.1	009.9	322.2	000.1032	0625.3	081.9	39.93	
137.0	000.0150	0226.4	009.8	322.1	000.1035	0625.3	082.0	39.92	
138.0	000.0150	0221.7	009.7	322.0	000.1038	0625.2	082.1	39.90	
139.0	000.0150	0217.4	009.6	321.9	000.1041	0625.1	082.2	39.89	
140.0	000.0150	0213.4	009.5	321.7	000.1045	0625.1	082.3	39.87	

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141.0	000.0150	0210.0	009.4	321.6	000.1048	0625.0	082.3	39.86
142.0	000.0150	0207.5	009.3	321.5	000.1051	0624.9	082.4	39.85
143.0	000.0150	0205.9	009.3	321.4	000.1054	0624.9	082.4	39.85
144.0	000.0150	0204.6	009.3	321.3	000.1057	0624.8	082.5	39.85
145.0	000.0150	0203.1	009.2	321.2	000.1061	0624.7	082.5	39.85
146.0	000.0150	0200.6	009.2	321.1	000.1064	0624.6	082.6	39.84
147.0	000.0150	0197.4	009.1	321.0	000.1067	0624.6	082.7	39.82
148.0	000.0150	0193.3	009.0	320.9	000.1069	0624.5	082.8	39.79
149.0	000.0150	0188.7	008.9	320.8	000.1072	0624.4	082.9	39.76
150.0	000.0150	0184.1	008.8	320.7	000.1075	0624.4	083.1	39.73
151.0	000.0150	0179.4	008.7	320.6	000.1077	0624.4	083.2	39.70
152.0	000.0150	0174.8	008.6	320.5	000.1080	0624.3	083.4	39.66
153.0	000.0150	0170.4	008.4	320.4	000.1082	0624.3	083.5	39.62
154.0	000.0150	0166.5	008.3	320.3	000.1085	0624.3	083.6	39.58
155.0	000.0150	0163.2	008.2	320.3	000.1087	0624.2	083.8	39.55
156.0	000.0150	0160.6	008.2	320.2	000.1089	0624.2	083.9	39.53
157.0	000.0150	0158.5	008.1	320.1	000.1091	0624.2	084.0	39.50
158.0	000.0150	0156.2	008.0	320.0	000.1094	0624.2	084.1	39.48
159.0	000.0150	0153.8	008.0	320.0	000.1096	0624.2	084.2	39.45
160.0	000.0150	0151.1	007.9	319.9	000.1098	0624.2	084.3	39.42
161.0	000.0150	0148.4	007.8	319.8	000.1100	0624.2	084.4	39.39
162.0	000.0150	0144.9	007.7	319.8	000.1102	0624.2	084.6	39.35
163.0	000.0150	0139.6	007.6	319.7	000.1103	0624.2	084.8	39.29
164.0	000.0150	0132.9	007.4	319.7	000.1104	0624.2	085.0	39.23
165.0	000.0150	0126.7	007.2	319.7	000.1105	0624.2	085.2	39.17
166.0	000.0150	0121.9	007.1	319.6	000.1106	0624.2	085.3	39.12
167.0	000.0150	0118.9	007.0	319.6	000.1107	0624.2	085.5	39.09
168.0	000.0150	0116.1	006.9	319.5	000.1108	0624.2	085.6	39.05
169.0	000.0150	0113.1	006.9	319.5	000.1110	0624.2	085.7	39.02
170.0	000.0150	0109.0	006.7	319.4	000.1111	0624.2	085.9	38.97
171.0	000.0150	0105.0	006.6	319.4	000.1111	0624.2	086.1	38.92
172.0	000.0150	0102.1	006.5	319.4	000.1112	0624.2	086.2	38.88
173.0	000.0150	0099.3	006.4	319.4	000.1113	0624.2	086.3	38.83
174.0	000.0150	0096.8	006.3	319.3	000.1114	0624.2	086.5	38.80
175.0	000.0150	0092.9	006.2	319.3	000.1114	0624.2	086.6	38.74
176.0	000.0150	0089.2	006.1	319.3	000.1114	0624.2	086.8	38.69
177.0	000.0150	0086.9	006.0	319.3	000.1115	0624.2	086.9	38.65
178.0	000.0150	0084.9	005.9	319.3	000.1115	0624.2	087.1	38.61
179.0	000.0150	0082.5	005.8	319.3	000.1116	0624.2	087.2	38.57
180.0	000.0150	0080.4	005.8	319.2	000.1116	0624.2	087.3	38.54
181.0	000.0150	0078.3	005.7	319.2	000.1117	0624.2	087.4	38.50
182.0	000.0150	0076.2	005.6	319.2	000.1117	0624.2	087.6	38.46
183.0	000.0150	0076.1	005.6	319.2	000.1119	0624.2	087.6	38.44
184.0	000.0150	0077.0	005.6	319.1	000.1120	0624.2	087.7	38.44
185.0	000.0150	0078.5	005.7	319.0	000.1122	0624.2	087.7	38.43

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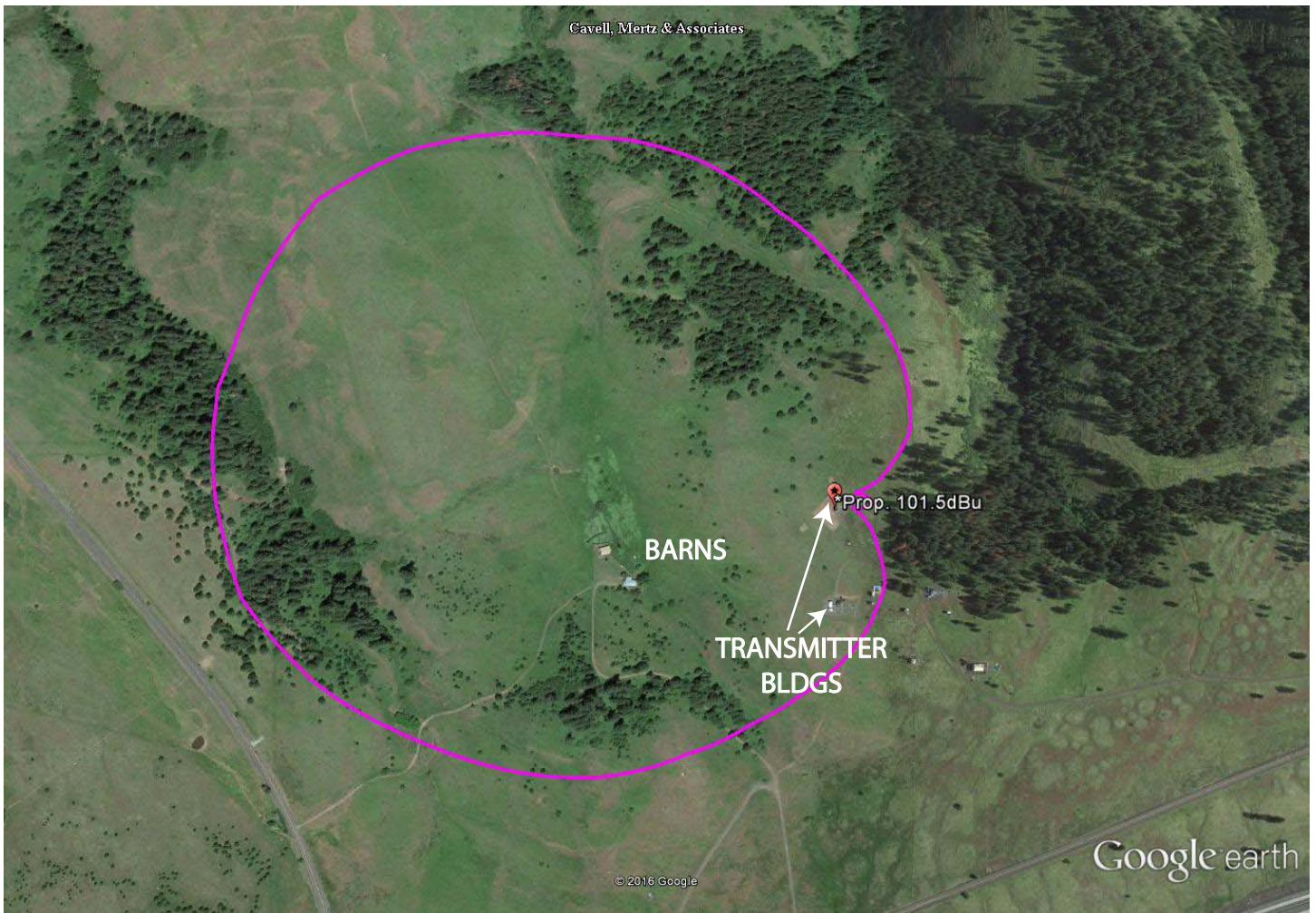
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503-245-6065

EXHIBIT 13c
101.5dBu Interfering Contour
vs. KORD-FM



Google earth

feet |—————| 2000
meters |—————| 800



There are no populated structures or major roads within this contour. The barns are used only on an occasional basis, and the transmitter buildings are only occupied during occasional repairs.

Exhibit 13d

Antenna Pattern (Azimuth)

Brown Broadcast Services, Inc.

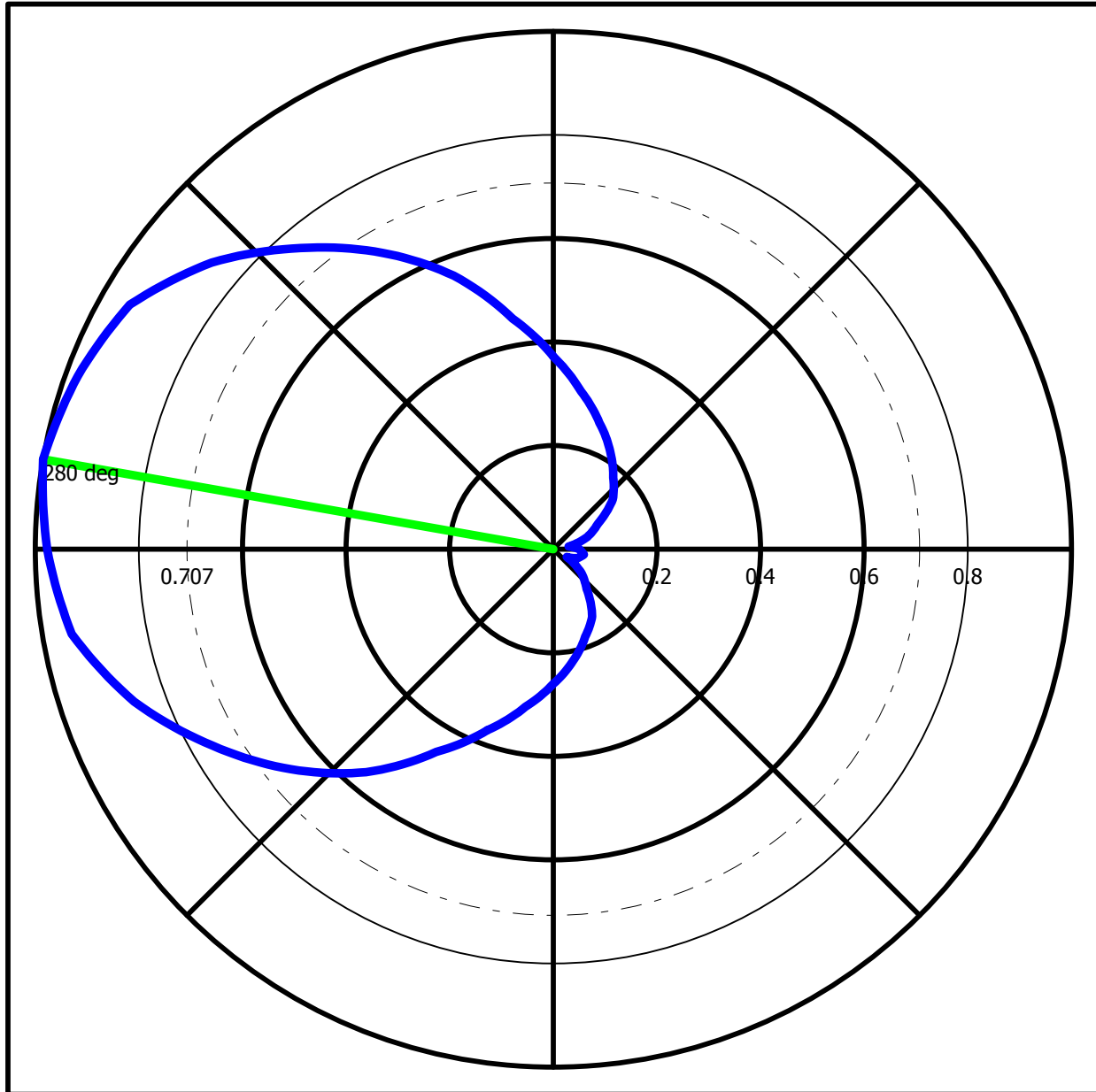
Job: XLTR FOR KTX JAN29 2016.fmj

Description:

rfInvestigator Version 3.8.13

Pattern RMS = 0.529

Date: 1/29/2016 5:57:24 PM



Degree	Field	Degree	Field	Degree	Field	Degree	Field	Degree	Field	Degree	Field
000	0.372	060	0.100	120	0.030	180	0.260	240	0.759	300	0.944
010	0.309	070	0.070	130	0.070	190	0.309	250	0.861	310	0.861
020	0.260	080	0.030	140	0.100	200	0.372	260	0.944	320	0.759
030	0.219	090	0.050	150	0.150	210	0.452	270	0.977	330	0.661
040	0.180	100	0.060	160	0.180	220	0.562	280	1.000	340	0.562
050	0.150	110	0.050	170	0.219	230	0.661	290	0.977	350	0.452

EXHIBIT 17

ENVIRONMENTAL PROTECTION ACT / NIER ANALYSIS

The applicant proposes mounting a new Kathrein 754–154 panel antenna on an existing 9 meter tower. The proposed center of radiation is 9m AGL, with 190 watts ERP. Since this exact antenna is not modeled in FM Model for Windows, version 2.10, the “worst-case” Phelps Dodge-Ring Stub” setting was employed. FM Model predicted a peak exposure of $155.9\mu\text{W}/\text{cm}^2$, at 2 meters from the tower. A perimeter fence surrounds this tower at a minimum distance of 8 meters from the tower base. At 8 meters, the predicted exposure drops to $88.4\mu\text{W}/\text{cm}^2$.

The only other significant contributor of ground-level exposure is KVWN-FM, Pendleton, which operates on an adjacent tower with 75kW ERP at 30m AGL, with an ERI “rototiller” G5CPS-6AC3 antenna. Using the appropriate settings, FM Model predicted a peak exposure of $436.3\mu\text{W}/\text{cm}^2$, at 9m from the tower. The same perimeter fence is at least 14m from this tower, and the exposure drops to $198.7\mu\text{W}/\text{cm}^2$ at that point, and is lower at all greater distances. Therefore, outside the locked perimeter fence, it is expected that the total exposure would not exceed $287.1\mu\text{W}/\text{cm}^2$. This is 28.7% of the Maximum Permissible Exposure (MPE) of $1000\mu\text{W}/\text{cm}^2$ for controlled/occupational environments.

The site is normally considered to be a controlled access area, as entry is limited by a gate, and RF warning signs are posted.

If tower climbing by authorized personnel becomes necessary, transmitter power will be reduced or operation will cease, as necessary and in cooperation with others at the site, so as to not exceed the RF exposure limits.

BROWN BROADCAST SERVICES

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