CITY OF LICENSE	Corvallis, OR
CALL LETTERS	K264AA
FACILITY ID	65756
PREPARED FOR	The KBOO Foundation
VERSION	1.0
JOB	114045

CONSOLIDATED ENGINEERING EXHIBIT

FCC Form 349 - Section III-A - Engineering

BROWN BROADCAST SERVICES
INCORPORATED
Michael D. Brown 3740 S.W. Comus St. Portland, Oregon 97219-7418 503-245-6065

ENGINEERING STATEMENT

MINOR CHANGE TO LICENSED FM TRANSLATOR K264AA, CORVALLIS, OR

- increase ERP, reposition antenna on pole -

The KBOO Foundation

SUMMARY

The KBOO Foundation ("KBOO") hereby seeks a minor change to licensed FM translator K264AA. This translator provides fill-in service for KLVU-FM, Sweet Home, OR. This application proposes increasing the power to 175w ERP, and repositioning the antenna on the pole. The location will not change.

This application is being filed concurrently with proposed minor changes to K239BP, Flynn, OR (FID: 149659), and K282BH, Philomath, OR (FID: 149626), which are also repositioning themselves on the same pole structure. While this application is not contingent with the others, the pole work is planned to be done at the same time, in the first week of October. Expedited processing is hereby requested, so that this can be accomplished in the narrow window of tower crew availability, early next month.

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EXHIBIT 13
OVERLAP REQUIREMENTS

INTERFERENCE PROTECTION

This minor-change application proposes a power increase to 175w ERP, and moving the existing directional antenna to a position lower on the pole. No other changes are proposed. This is a fill-in proposal, as shown by **Exhibit 13a**. The radial HAAT power limitations of §74.1235(b)(2) are not applicable.

Exhibits 13c to **13e** and the Station Table below show that this proposal meets all contour protection requirements of §74.1204(a).

K264AA Increase ERP
The Kboo Foundation

REFERENCE CH# 264D - 100.7 MHz, Pwr= 0.175 kW DA, HAAT= 298.5 M, COR= 449 M DISPLAY DATES
44 38 25.0 N. Average Protected F(50-50)= 20.7 km DATA 09-02-14
123 16 25.0 W. Standard Directional SEARCH 09-21-14

CH CALL	TYPE ANT	AZI. DIST	LAT.	Pwr(kW)	INT(km) PRO(km)	*OUT*
CITY STATE	<-- FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)
264D K264AA	LIC DH	0.0 0.00	44 38 25.0	0.023	31.0 9.2	-59.6*
Corvallis OR	0.0	BLFT20140527AAA	123 16 25.0		456	The Kboo Foundation
211A KAJC	LIC DCX	15.8 13.74	44 45 33.0	0.560	0.0 0.0	10.0R 3.7M
Salem OR	195.9	BLED20050124AHZ	123 13 34.0	39	150	Calvary Chapel Monmouth-in
264C2 KPPT-FM	LIC CX	282.2 62.72	44 45 23.0	17.500	124.2 49.0	6.9
Depoe Bay OR	101.6	BLH20030926AQJ	124 03 01.0	255	328	Agpal Broadcasting Inc.
266C KXL-FM	LIC C	23.4 106.22	45 30 58.0	100.000	12.8 88.0	17.3
Portland OR	203.7	BLH20100503ACD	122 43 59.0	502	594	Alpha Media Licensee Llc
262C KKRZ	LIC C	22.7 106.47	45 31 21.0	100.000	12.4 85.5	20.0
Portland OR	203.1	BLH20011214AAE	122 44 45.0	470	561	Citicasters Licenses, Inc.
264L1 KQRZ-LP	LIC	19.2 96.33	45 27 29.0	0.005		25.8
Hillsboro OR	199.5	BLL20130711ACH	122 52 05.0	131	227	Oregon Amateur Radio Club
263D K263AF	LIC DH	129.3 42.16	44 23 57.0	0.250	5.3 3.0	37.1
Sweet Home OR	309.6	BLFT20080602AJQ	122 51 47.0	428	678	Bicoastal Media Licenses V
264L1 1592751	APP	29.5 112.84	45 31 17.5	0.067		39.2
Portland OR	210.0	BNPL20131114BUZ	122 33 37.8	37	117	The Oregon Center For The

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 3rd adjacent.
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 protected contour.
« = Station meets FCC minimum distance spacing for its class.

PROTECTED ZONES REPORT

Protected zones report for K264AA on channel 264D 09-21-2014
Lat. 44 38 25.0 Lng. 123 16 25.0, ERP= 0.175 kw, HAAT= 298.5M

Facility is okay with respect to Canada. Distance = 398.6 km.
Facility is okay with respect to AM station towers.
Closest AM Facility is KOAC, CORVALLIS, OR, L, DA2 at 93.6º at a distance of 6.4 km
Facility is okay with respect to FCC monitoring stations.
Closest FCC Monitoring Station is 482.9 km= Ferndale, WA
Facility is okay toward West Virginia Quiet Zone. Distance to center = 3720.3 km
Facility is okay toward Table Mountain. Distance to Center = 1567.1 km, Azimuth = 102.4 Degrees True

Exhbit 13a
Proposed K264AA Modification - Showing Fill-in Status

Brown Broadcast Services, Inc.
Job: K264AA Power Incr_Sept2014.fmj
Master Database: 2014_Sep_21.fmd
Scale: 1:1000000
Channel: 264 Class: DX

rfInvestigator Version 3.8.2
by rfSoftware, Inc.
Date: 9/21/2014 12:03:21 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

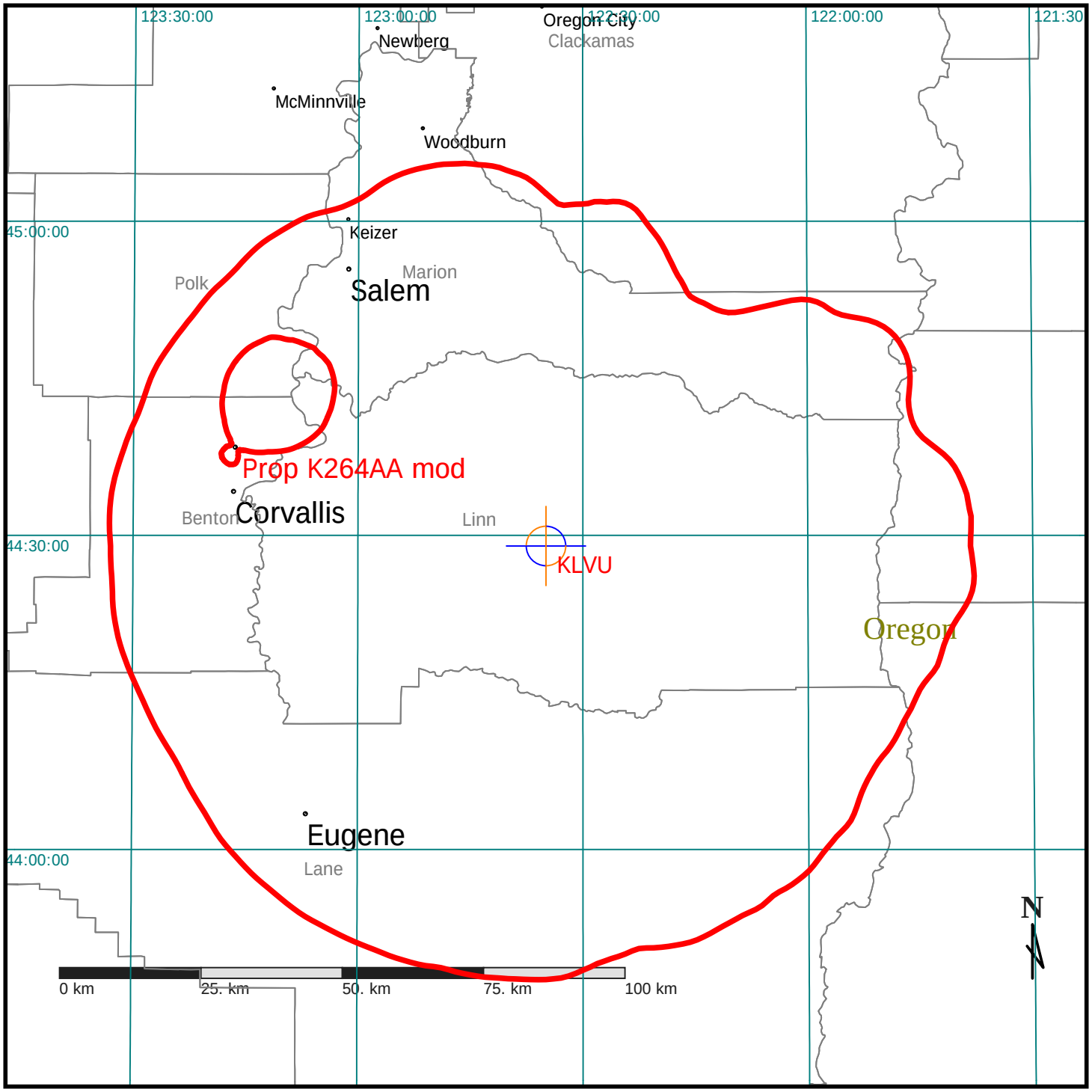

Exhibit 13b
Proposed vs. Lic

Brown Broadcast Services, Inc.
Job: K264AA Power Incr_Sept2014.fmj
Master Database: 2014_Sep_21.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:250000
Channel: 264 Class: DX

rfInvestigator Version 3.8.2
by rfSoftware, Inc.
Date: 9/21/2014 10:58:04 AM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

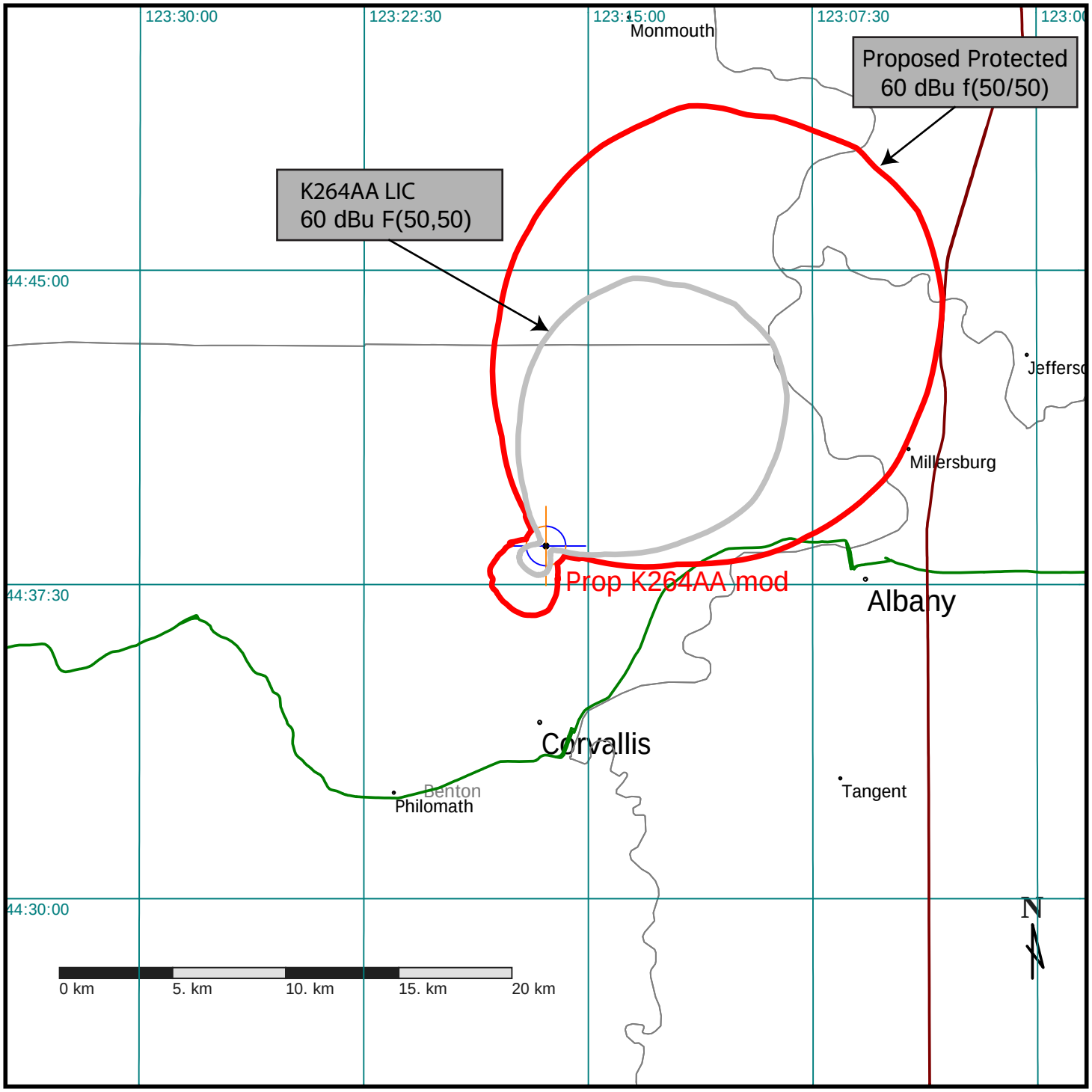

Exhibit 13c
Co-channel Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Power Incr_Sept2014.fmj
Master Database: 2014_Sep_21.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:750000
Channel: 264 Class: DX

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

rfInvestigator Version 3.8.2
by rfSoftware, Inc.
Date: 9/21/2014 10:57:04 AM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

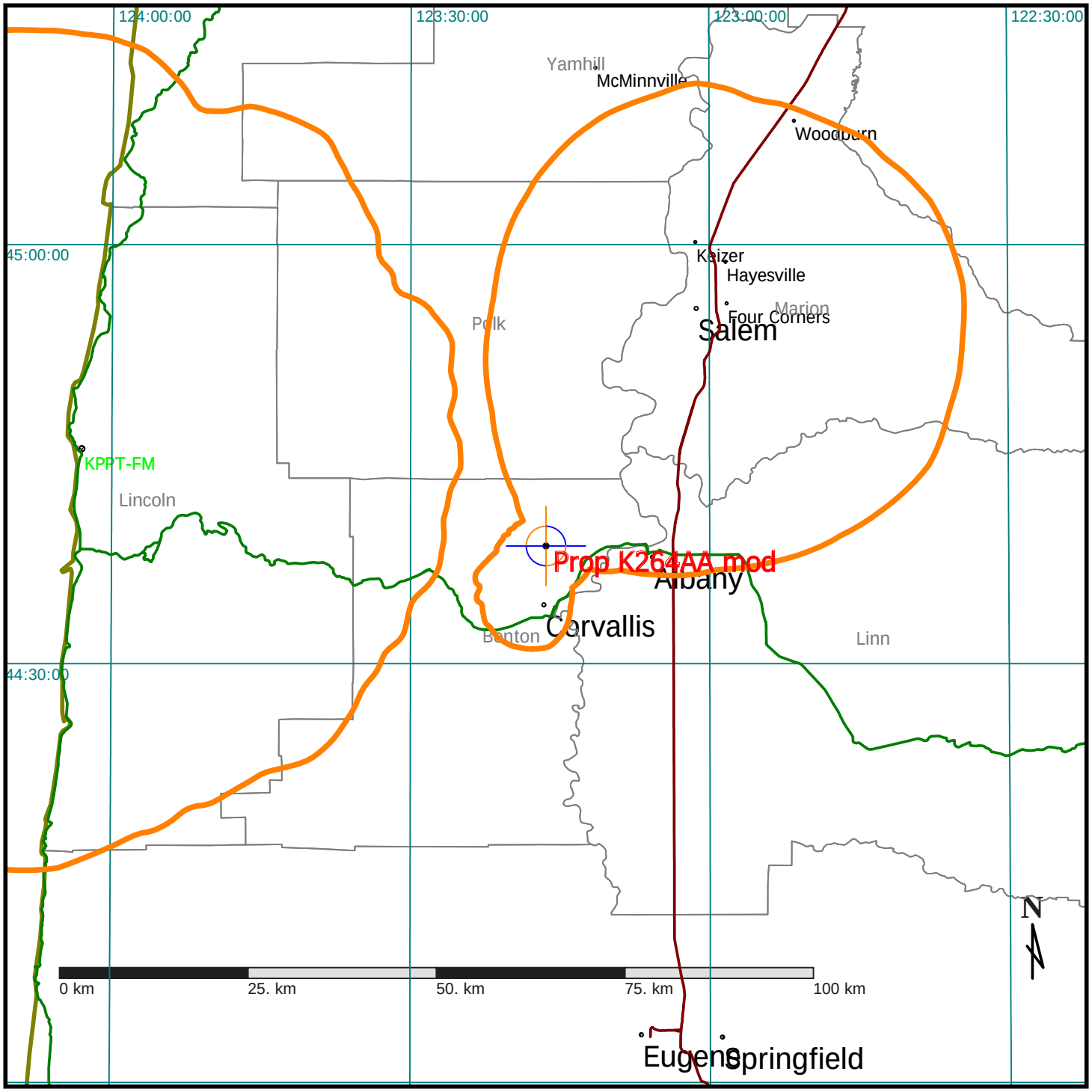

Exhibit 13d
First-Adjacent Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Power Incr_Sept2014.fmj
Master Database: 2014_Sep_21.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:1750000
Channel: 264 Class: DX

PROPOSED
Interfering: 54dBu F(50,10)
AFFECTED
Protected: 60dBu F(50,50)

rfInvestigator Version 3.8.2
by rfSoftware, Inc.
Date: 9/21/2014 11:01:31 AM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

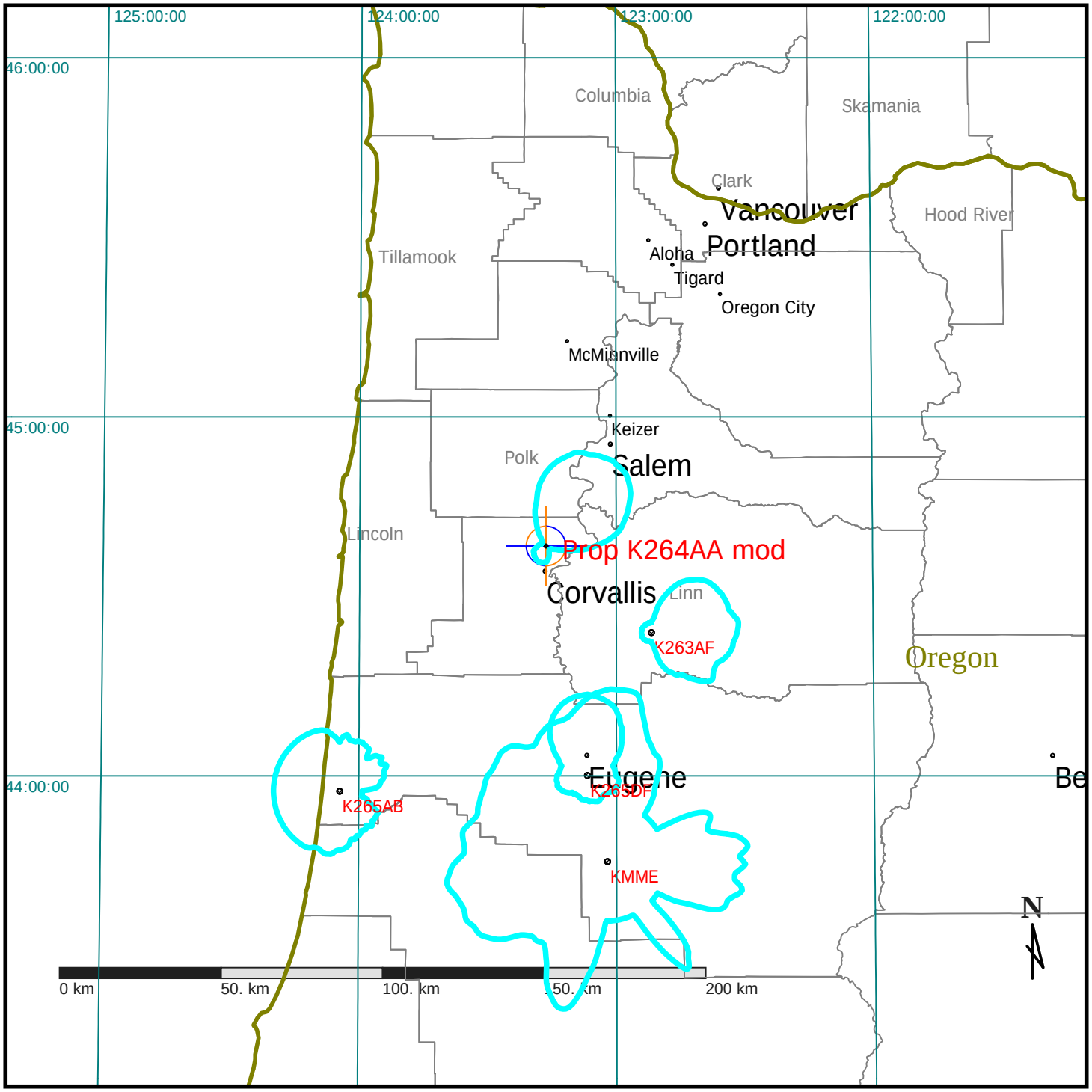

Exhibit 13e
Second-Adjacent Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Power Incr_Sept2014.fmj
Master Database: 2014_Sep_21.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:750000
Channel: 264 Class: DX

PROPOSED
Interfering: 100dBu F(50,10)
AFFECTED
Protected: 60dBu F(50,50)

rfInvestigator Version 3.8.2
by rfSoftware, Inc.
Date: 9/21/2014 11:02:58 AM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

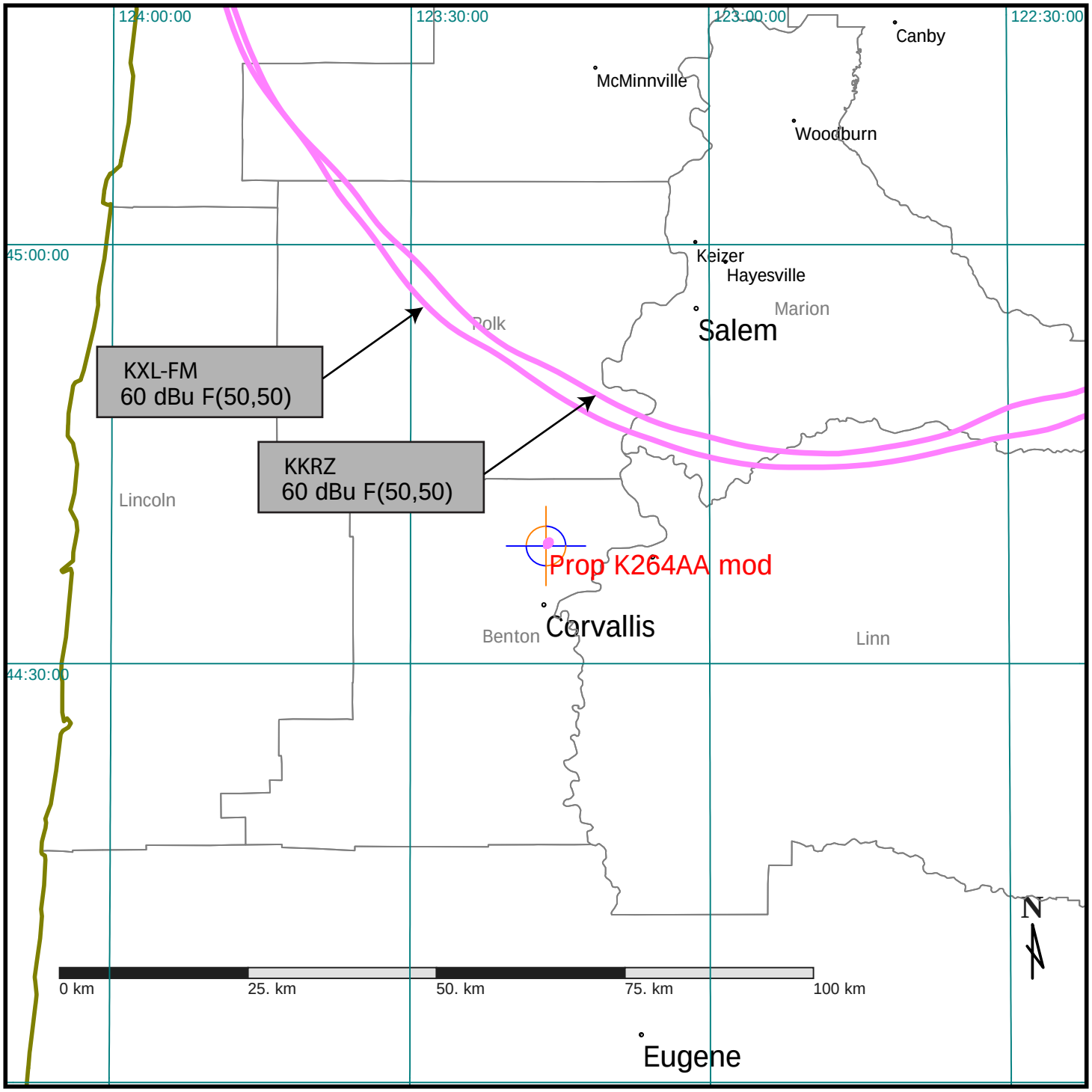

EXHIBIT 17
ENVIRONMENTAL PROTECTION ACT / NIER ANALYSIS

The applicant proposes mounting a Scala CL-FMRX/HCM horizontally-polarized antenna on an existing 22 meter pole. The proposed center of radiation is 10m AGL. Calculations were made using FM Model for Windows, version 2.10c, with the Phelps-Dodge Ring Stub or Dipole "worst-case" setting employed. This resulted in a predicted peak exposure of 25.3μW/cm^2, at 4.4 meters from the tower. This represents 12.65% of the Maximum Permissible Exposure (MPE) of 200μW/cm^2 for uncontrolled environments.

There are 6 other broadcast facilities within 200m of this proposal. As shown by the table below, the total predicted exposure is 37.8% of the MPE for uncontrolled/public environments:

Station	**K264AA**	**K243BG**	**K239BP**	**K282BH**	**K224EU**	**KOAC-DT**	**K14GW-D**	**TOTAL**
Service	FX	FX	FX	FX	FX	DT	LD	V
Community	Corvallis, OR	Corvallis, OR	Flynn, OR	Corvallis, OR	Corvallis, OR	Corvallis, OR	Corvallis, OR	
Status	Prop mod herein	LIC	prop mod - filed concurrently	prop mod - filed concurrently	CP, off air	LIC	LIC	
Freq (MHz)	100.7	96.5	95.7	104.3	92.9	174-180 (CH7)	470-476 (CH14)	
Antenna	Scala CLFM	2X Scala CLFM	Bexl TFC-2k	Bexl TFC-2k	Scala CLFM	Dielectric TW-9B7-R	Bogner B16UA	
ERP - H (W)	175	250	15.5	15.5	99	18,100	4,400	
ERP - V (W)	0	250	15.5	15.5	0	0	0	
Bays	1	2	2	2	1	-	-	
Spacing	1	1	0.5	0.55	1	-	-	
Prop or LIC AGL (m)	10	14	21	21	32	75	27.4	
Predicted worst-case NIER, uw/cm2	25.3	48.3	0.3	0.29	0.31	0.3	1.1	
Methodology	FM Model - Ring Stub	FM Model - Ring Stub	FM Model - Double V	FM Model - Double V	FM Model - Ring Stub	OET Bulletin 65, with factory-supplied elevation patterns	OET Bulletin 65, with factory-supplied elevation patterns	
MPE-Uncontrolled uw/cm2	200	200	200	200	200	200	315	
Percentage of MPE	12.65	24.15	0.15	0.145	0.155	0.15	0.35	**37.8**
Notes			Proposed mod was filed concurrently with this proposal. Calcs are based on that proposed mod. Diplexed with K282BH	Proposed mod was filed concurrently with this proposal. Calcs are based on that proposed mod. Diplexed with K239BP	separate tower			

The other RF facilities within 200m of this proposal are non-broadcast in nature, and are not expected to be significant contributors to ground-level RF exposures.

Vehicle access to the site is limited by a locked gate. However the site has been characterized as “uncontrolled”, since hikers sometimes traverse the area.

The pole is inherently unclimbable without specialized equipment, since the lower section is devoid of climbing pegs. The site will be posted with appropriate RF exposure warning signs. If pole climbing by authorized personnel becomes necessary, transmitter power will be reduced or operation will cease, as necessary, so as to not exceed the RF exposure limits.

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