

## **EXHIBIT 11A ENGINEERING STATEMENT**

The information and data contained within these engineering exhibits were prepared on behalf of Raider Communications, Inc., in support of an application for construction permit to modify its licensed translator station, K279AJ, at Roseburg, Oregon, FCC File No. BLFT-20010425ABJ, Facility ID No. 13709. The translator station rebroadcasts the signal of Channel 245C station KROG(FM) in Grants Pass, Oregon.

It is proposed to move the K279AJ facility from its present location at Mt. Rose, to another nearby communications site at Mt. Nebo. The applicant will mount a custom vertically-polarized directional antenna system to the side of an existing tower at Mt. Nebo, FCC Structure Registration No. 1019017, Roseburg, Douglas County, Oregon. The antenna will be mounted with its center of radiation 18.3 meters above ground and 426.4 meters above mean sea level.

The locations of the service and interference contours depicted on the cartographic exhibits were computed according to computer methods outlined in F.C.C. publication PB-249144, *Field Strength Calculations for TV And FM Broadcasting*. The computer methods use digitized data taken directly from the graphs of § 73.333. Intermediate values are obtained using bivariate interpolation techniques for surface fitting.

The average elevations from three to sixteen kilometers on radials for each degree of azimuth starting with True North from the transmitter sites of the facilities studied were determined from topographic data obtained from the Defense Mapping Agency three arc-second point elevation database. Exhibits 12A through 12E are maps depicting the proposed interference contours and the relevant service contours of allocation-pertinent stations. Exhibits 12C and 12D show that the proposed site is located within the protected 60 dB $\mu$  F(50,50) service contours of third adjacent channel stations KRSB-FM on Channel 276A at Roseburg, and KKMXX(FM) on Channel 282C2 at Tri City, Oregon.

However, the detailed map of exhibit 11E shows that the area within the K279AJ proposed 100 dB $\mu$  F(50,10) interference contour is void of population. This is to be expected since the proposed site is an unmanned communications site located remotely from any populated area. The map shows the locations of the nearest 2000 U.S. Census block centroids to which are attached the smallest population groups made publicly available by the

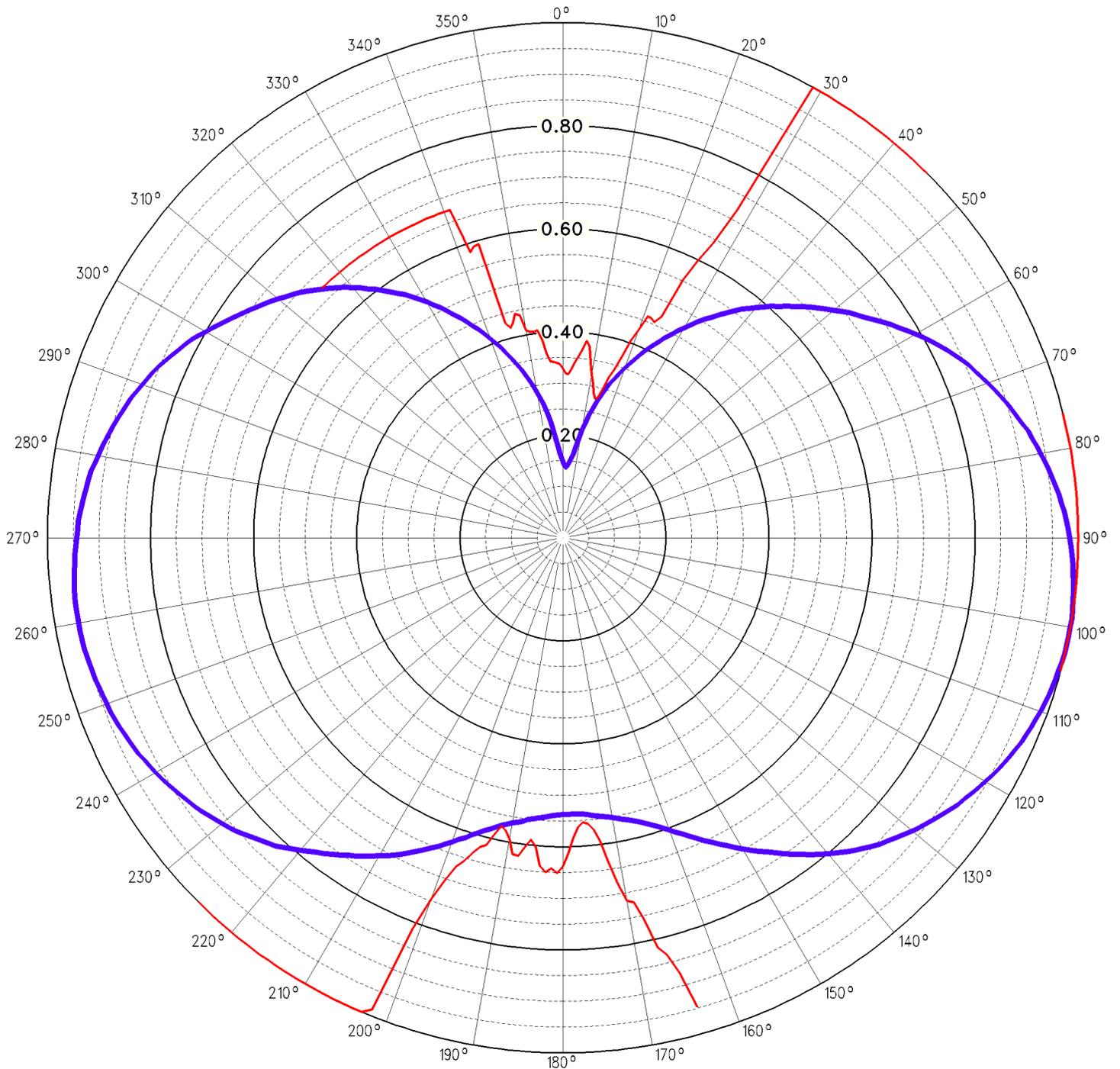
U.S. government. The area encompassed by the 100 dB $\mu$  F(50,10) interference contour does not include any blocks. Therefore, the population subject to interference is zero, and the provisions of 47 C.F.R. § 74.1204(d) apply in this instance.

A suitable low power transmitter will be used to produce the power required to drive a transmission line, four-way power splitter, and antennas. The antennas will be oriented at 77, 124, 233 and 288 degrees true. The input power to the splitter will be 39.0325 watts to produce the proposed pattern. The total composite radiation will not exceed 75 watts in any direction. The overall gain of the system is 2.83635 dBd. The antenna system will produce field pattern maxima at 99.1 and 259.0 degrees true, and minima at 2.5 and 178.5 degrees true. Exhibit 11B depicts the proposed horizontal plane radiation pattern.

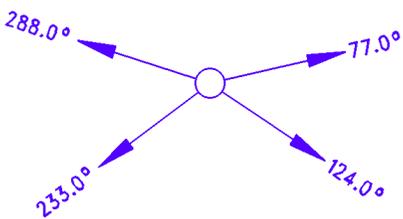
Appropriate filters will be installed and adjusted to insure that intermodulation products will not exceed levels permitted by the Commission's Rules.



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April 3, 2002



**ANTENNA ORIENTATION**



**RELATIVE FIELD AZIMUTHAL PATTERN**

**EXHIBIT 11B  
RAIDER COMMUNICATIONS, INC.  
MT. NEBO TRANSMITTER SITE AT ROSEBURG**

ANT. NO.	ANT. CODE	ANTENNA MANUFACTURER	ANTENNA MODEL NO.	PAT SRC	ANT POL	TRUE ORIENTATION	MAXIMUM ERP IN WATTS
1	SCA	SCALA ELECTRONICS	CL-FM	1	V	77.00	47.70597
2	SCA	SCALA ELECTRONICS	CL-FM	1	V	124.00	47.70597
3	SCA	SCALA ELECTRONICS	CL-FM	1	V	233.00	47.70597
4	SCA	SCALA ELECTRONICS	CL-FM	1	V	288.00	47.70597

CALL: K279AJ  
 FREQUENCY: 103.70 MHz  
 CHANNEL: 279  
 POWER: 75.00 Watts  
 N. LAT: 43° 12' 08"  
 W. LON: 123° 22' 54"  
 DATE: 03/31/02



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