

TECHNICAL SUMMARY  
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT  
FILE NO. 0000216338  
TV STATION KKAC  
CARLSBAD, NEW MEXICO  
CHANNEL 19 90 KW (ND) 335 m

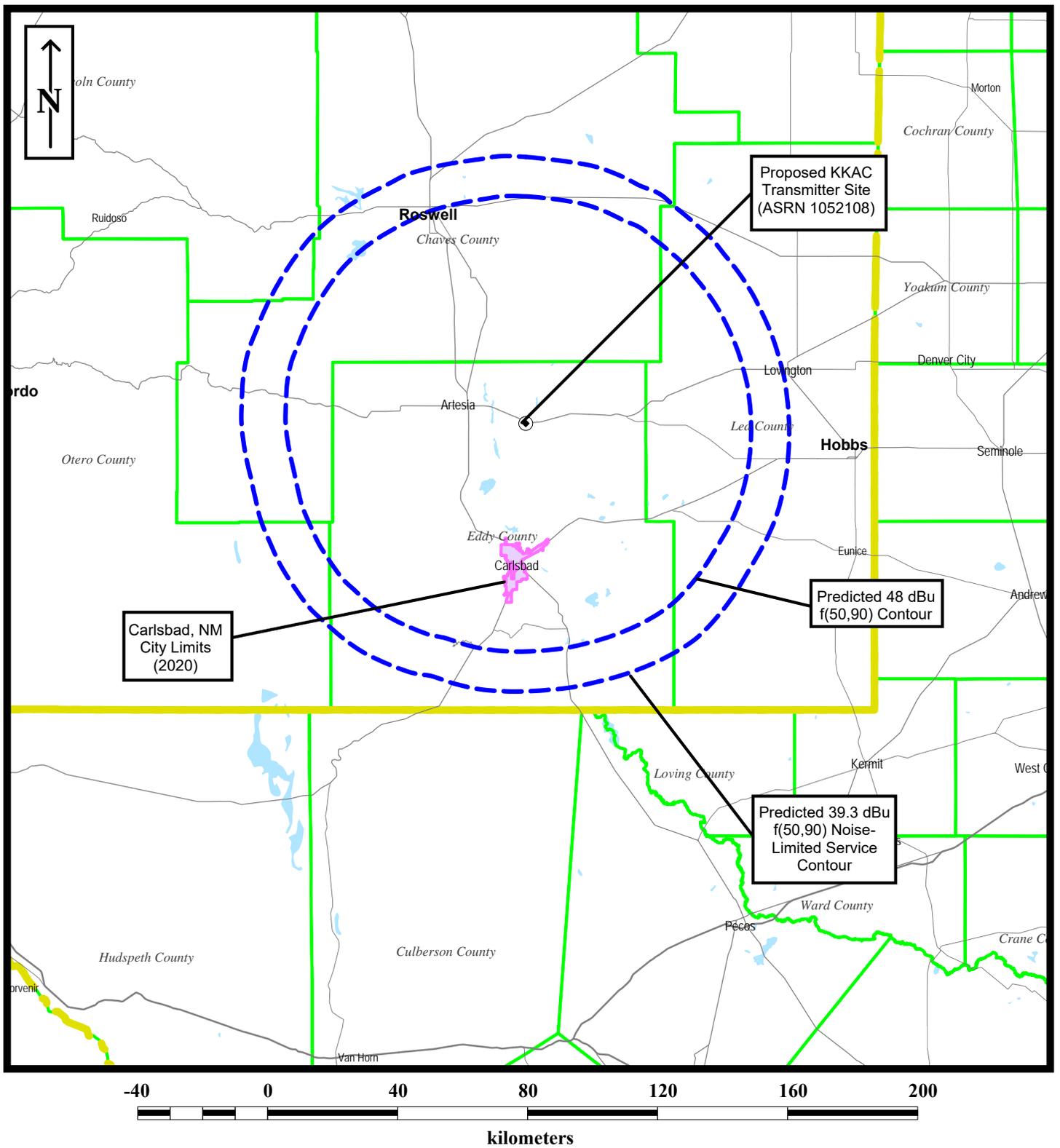
1. *Purpose of Application:* It is proposed to modify KKAC's outstanding construction permit (File No. 0000216338) to increase the ERP from 80 kW to 90 kW. Specifically, it is proposed operate from ASRN 1052108 with a nondirectional antenna maximum ERP of 90 kW, an RCAGL of 276 meters, an RCAMSL of 1407.1 meters and an HAAT of 335 meters. There will be no change in the overall structure height of ASRN 1052108.

2. *City Coverage Compliance:* The instant modification application will provide the requisite city grade (48 dBu) signal to all of Carlsbad (see Figure 1).

3. *Interference Compliance:* As demonstrated in the attached *TVStudy* analysis exhibit, the proposal complies with the FCC's interference protection requirements based on a cell size of 2.0 km and profile resolution of 1.0 points/km.

4. *RFR Compliance:* The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna will be located 276 meters above ground level. The total DTV ERP is 90 kW (horizontal polarization). A conservative vertical plane relative field value of 0.18 is presumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 1.3 uW/cm<sup>2</sup> which is 0.39% of the FCC's recommended limit of 335.3 uW/cm<sup>2</sup> for channel 19 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site is restricted and appropriately markets with RFR warning signs. Also, as this is a multi-user site, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.



## PREDICTED COVERAGE CONTOURS

duTreil, Lundin & Rackley, Inc. Sarasota, Florida

TVSTUDY ANALYSIS FOR PROPOSED KKAC  
CH 19, CARLSBAD, NEW MEXICO

tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: KKAC 90 kW, Model: Longley-Rice  
Start: 2023.08.31 14:04:19

Study created: 2023.08.31 14:04:19

Study build station data: LMS TV 2023-08-31

Proposal: KKAC D19 DT CP CARLSBAD, NM  
File number: KKAC 90 kW  
Facility ID: 776230  
Station data: User record  
Record ID: 533  
Country: U.S.  
Zone: II

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KDBC-TV	D18	DT	LIC	EL PASO, TX	BLANK0000209059	240.3 km
No	KPTF-DT	D18	DT	LIC	FARWELL, TX	BLCDT20090612AEB	205.1
No	KUPB	D18	DT	LIC	MIDLAND, TX	BLCDT20090615ABW	189.8
No	KAMR-TV	D19	DT	LIC	AMARILLO, TX	BLCDT20080519ACZ	358.5
No	KIDY	D19	DT	LIC	SAN ANGELO, TX	BLCDT20110520ADN	372.1
No	KTFN	D20	DT	LIC	EL PASO, TX	BLANK0000068199	240.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D19  
Latitude: 32 47 38.00 N (NAD83)  
Longitude: 104 12 31.00 W  
Height AMSL: 1407.1 m  
HAAT: 335.0 m  
Peak ERP: 90.0 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.50

39.3 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	90.0 kW	318.0 m	82.1 km
45.0	90.0	301.8	80.4
90.0	90.0	305.6	80.8
135.0	90.0	333.4	83.8
180.0	90.0	322.0	82.6
225.0	90.0	365.9	87.0
270.0	90.0	368.1	87.2
315.0	90.0	366.1	87.0

Distance to Canadian border: 1801.3 km

\*\*Proposal is within coordination distance of Mexican border  
Distance to Mexican border: 228.6 km

Conditions at FCC monitoring station: Douglas AZ  
Bearing: 255.8 degrees Distance: 532.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 353.9 degrees Distance: 819.1 km

No land mobile station failures found

Study cell size: 2.00 km  
Profile point spacing: 1.00 km

TVSTUDY ANALYSIS FOR PROPOSED KKAC  
CH 19, CARLSBAD, NEW MEXICO

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

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Interference to proposal scenario 1

Desired:	Call KKAC	Chan D19	Svc DT	Status CP	City, State CARLSBAD, NM	File Number KKAC 90 kW	Distance
Undesireds:	KAMR-TV	D19	DT	LIC	AMARILLO, TX	BLCDT20080519ACZ	358.5 km
	Service area	Terrain-limited			IX-free	Percent IX	
	22130.2	119,884	21976.8	119,842	21972.8	119,842	0.02 0.00
Undesired			Total IX		Unique IX	Prcnt Unique IX	
KAMR-TV	D19	DT	LIC	4.0	0	4.0	0 0.02 0.00