

**April 2021
KCDC(FM) Channel 272C2
Loma, Colorado
Allocation Study**

This application proposes a “one step” upgrade of KCDC from Channel 273C3 to Channel 272C2, at Loma, Colorado, with no change in transmitter site (apart from a slight correction of coordinates to match the actual tower location). Separate allotment and transmitter sites are specified.

Channel 272C2 Allotment Site

The attached spacing study shows that the proposed allotment site meets the co-channel and adjacent channel spacing requirements for Class C2 stations as prescribed in §73.207 of the Commission's Rules.

The allotment site is located 16.2 kilometers from the far side of Loma. The standard 70 dBu contour distance for a Class C2 station is 32.6 kilometers. Therefore, and as depicted on the attached 70 dBu contour map exhibit, the proposed allotment will provide a 70 dBu contour to 100% of Loma.

Channel 272C2 Transmitter Site

The attached spacing study shows that the proposed transmitter site meets the co-channel and adjacent channel spacing requirements for Class C2 stations as prescribed in §73.207 of the Commission's Rules, with the exception of a short-spacing to the licensed operation of KVLE-FM on Channel 272C3 at Gunnison. Processing pursuant to §73.215 of the Commission's Rules is requested with respect to KVLE-FM, and the attached allocation study map exhibit is included to demonstrate the lack of prohibited contour overlap with that station.

It should be noted that KVLE-FM itself is authorized pursuant to §73.215 of the Commission's Rules. This was specified in the underlying construction permit application BPH-20160722ABI, and is listed on the station's license, a copy of which is included here for reference. The LMS database, however, does not clearly specify that KVLE-FM is a §73.215 station; this is likely a coding error from the conversion of the CDBS database to the LMS database. The allocation study map correctly depicts the licensed KVLE-FM protected and interfering contours.

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SEARCH PARAMETERS                               FM Database Date: 20210407
Channel: 272C2 102.3 MHz                      Page 1
Latitude: 39 5 29.0 (NAD83)
Longitude: 108 48 19.0
Safety Zone: 32 km
Job Title: LOMA 272C2 ALLOTMENT SITE

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Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
K269AB LIC	DELTA CO	BLFT-20151022AFP	269D 101.7	0.010 0.0	38 25 11.4 108 23 47.3	154.5	82.58 0.00	0 TRANS
ALC	OLATHE CO		270C2 101.9	0.000 0.0	38 36 17.9 107 58 56.2	126.9	89.56 31.56	58 CLEAR
K270AY LIC	BATTLEMENT MESA CO	BLFT-20190821AAQ	270D 101.9	0.118 0.0	DA 39 5 21.9 108 13 35.3	90.1	50.08 0.00	0 TRANS
K270AY CP	BATTLEMENT MESA CO	BPFT-20190823AAB	270D 101.9	0.094 0.0	DA 39 3 58.9 108 44 43.4	118.3	5.88 0.00	0 TRANS
K271BG LIC	MOAB UT	BLFT-20080102ACA	271D 102.1	0.089 0.0	38 31 42.9 109 19 31.4	215.9	77.10 0.00	0 TRANS
K271AE LIC	GRAND JUNCTION CO	BLFT-20160811ADP	271D 102.1	0.020 0.0	38 52 39.9 108 13 32.2	115.2	55.54 0.00	0 TRANS
K271BA LIC	RIFLE CO	BLFT-20190122AAA	271D 102.1	0.050 0.0	39 30 41.9 107 44 59.2	62.4	102.31 0.00	0 TRANS
KDUT LIC	RANDOLPH UT	BLH-20030729AEW	272C 102.3	89.000 647.0	40 52 15.8 110 59 45.6	317.4	272.15 23.15	249 CLEAR
K272FT LIC	MONTROSE CO	BLFT-20171208ACI	272D 102.3	0.250 0.0	38 28 8.0 107 53 7.2	130.7	105.67 0.00	0 TRANS
K272DB LIC	REDSTONE CO	BLFT-20050203AAL	272D 102.3	0.010 0.0	39 14 18.9 107 13 3.1	82.7	138.19 0.00	0 TRANS
KVLE-FM LIC	GUNNISON CO	0000113787	272C3 102.3	9.500 115.0	38 31 22.7 106 54 25.0	110.4	176.56 -0.44	177 SHORT
NOTE: KVLE-FM IS AUTHORIZED UNDER SECTION 73.215								
KCDC LIC	LOMA CO	BLH-20190820AAU	273C3 102.5	0.435 383.0	39 4 0.9 108 44 41.4	117.5	5.89 -111.11	117 SHORT
NEW ALC	BATTLEMENT MESA CO		275C3 102.9	0.000 0.0	39 26 32.9 107 58 3.3	61.3	82.13 26.13	56 CLEAR
K275CC LIC	GRAND JUNCTION CO	BLFT-20161110AAQ	275D 102.9	0.090 0.0	39 1 7.3 108 31 45.2	108.6	25.22 0.00	0 TRANS

===== END OF FM SPACING STUDY FOR CHANNEL 272 =====

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SEARCH PARAMETERS FM Database Date: 20210407

Channel: 272C2 102.3 MHz Page 1

Latitude: 39 4 1.5 (NAD83)

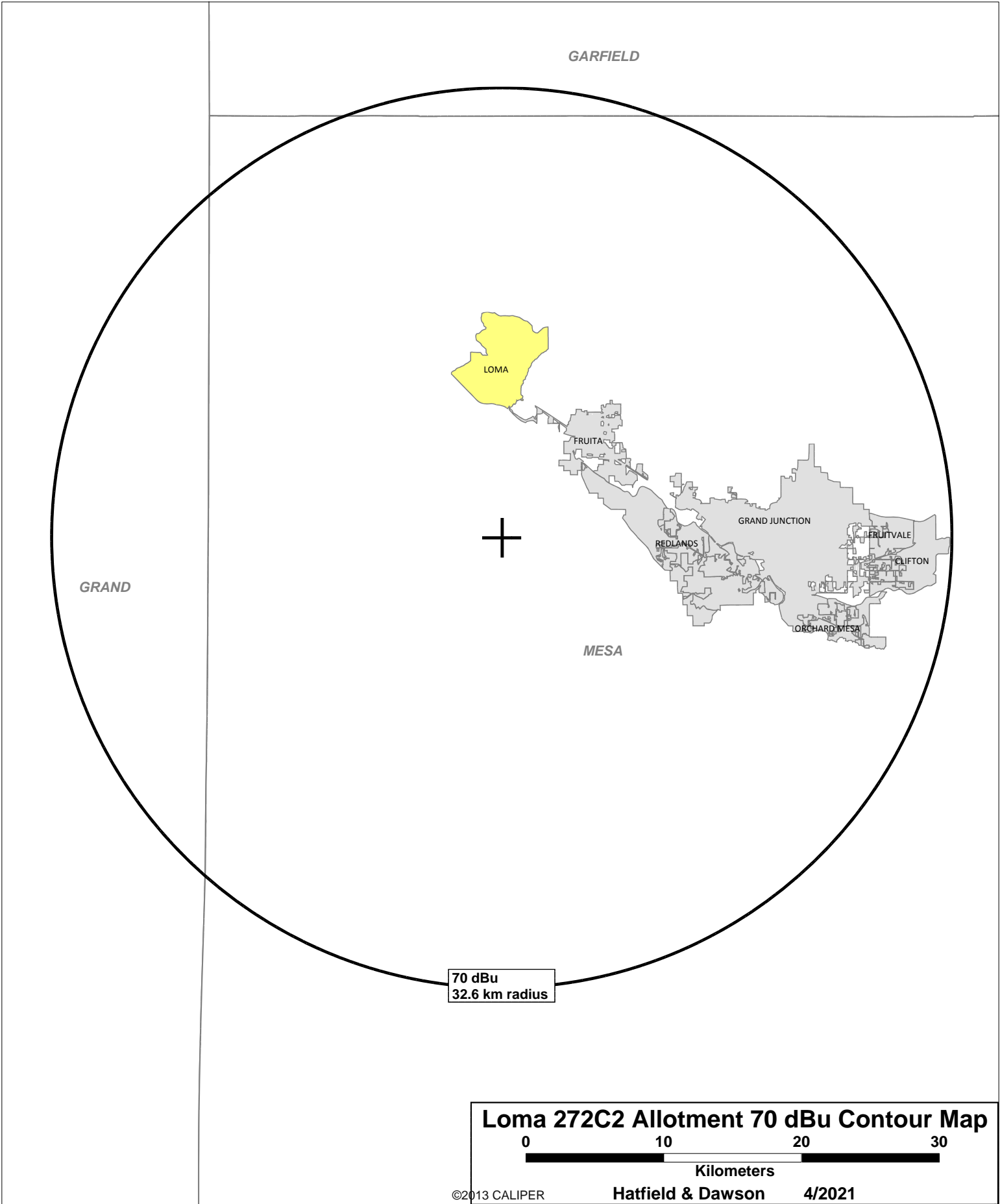
Longitude: 108 44 42.2

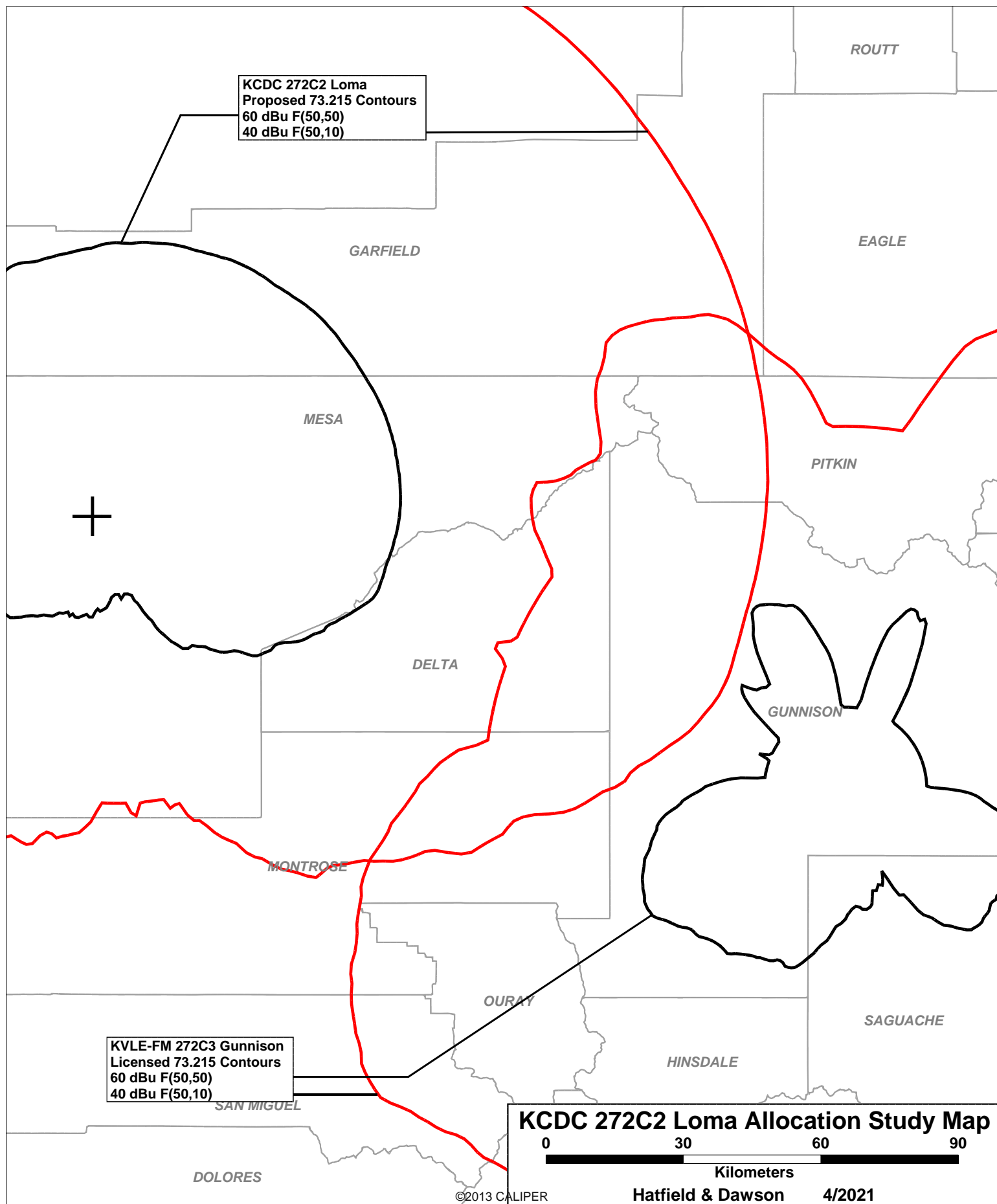
Safety Zone: 32 km

Job Title: KCDC 272C2 TRANSMITTER SITE

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
K219DH LIC	GRAND JUNCTION CO	BLFT-19980824TB	219D 91.7	0.010 0.0	DA 39 5 21.9 108 13 35.2	86.7	44.95 0.00	0 TRANS
K269AB LIC	DELTA CO	BLFT-20151022AFP	269D 101.7	0.010 0.0	38 25 11.4 108 23 47.3	157.1	77.98 0.00	0 TRANS
ALC	OLATHE CO		270C2 101.9	0.000 0.0	38 36 17.9 107 58 56.2	127.6	83.77 25.77	58 CLEAR
K270AY LIC	BATTLEMENT MESA CO	BLFT-20190821AAQ	270D 101.9	0.118 0.0	DA 39 5 21.9 108 13 35.3	86.7	44.94 0.00	0 TRANS
K270AY CP	BATTLEMENT MESA CO	BFPT-20190823AAB	270D 101.9	0.094 0.0	DA 39 3 58.9 108 44 43.4	199.7	0.09 0.00	0 TRANS
K271BG LIC	MOAB UT	BLFT-20080102ACA	271D 102.1	0.089 0.0	38 31 42.9 109 19 31.4	220.2	78.20 0.00	0 TRANS
K271AE LIC	GRAND JUNCTION CO	BLFT-20160811ADP	271D 102.1	0.020 0.0	38 52 39.9 108 13 32.2	115.0	49.68 0.00	0 TRANS
K271BA LIC	RIFLE CO	BLFT-20190122AAA	271D 102.1	0.050 0.0	39 30 41.9 107 44 59.2	59.7	99.04 0.00	0 TRANS
KDUT LIC	RANDOLPH UT	BLH-20030729AEW	272C 102.3	89.000 647.0	40 52 15.8 110 59 45.6	317.0	277.67 28.67	249 CLEAR
K272FT LIC	MONTROSE CO	BLFT-20171208ACI	272D 102.3	0.250 0.0	38 28 8.0 107 53 7.2	131.5	99.96 0.00	0 TRANS
K272DB LIC	REDSTONE CO	BLFT-20050203AAL	272D 102.3	0.010 0.0	39 14 18.9 107 13 3.1	81.3	133.41 0.00	0 TRANS
KVLE-FM LIC	GUNNISON CO	0000113787	272C3 102.3	9.500 115.0	38 31 22.7 106 54 25.0	110.2	170.73 -6.27	177 SHORT
ABSOLUTE MINIMUM 73.215 SPACING = 166 KM								
NOTE: KVLE-FM IS AUTHORIZED UNDER SECTION 73.215								
KCDC LIC	LOMA CO	BLH-20190820AAU	273C3 102.5	0.435 383.0	39 4 0.9 108 44 41.4	134.0	0.03 -116.97	117 SHORT
NEW ALC	BATTLEMENT MESA CO		275C3 102.9	0.000 0.0	39 26 32.9 107 58 3.3	57.8	79.00 23.00	56 CLEAR
K275CC LIC	GRAND JUNCTION CO	BLFT-20161110AAQ	275D 102.9	0.090 0.0	39 1 7.3 108 31 45.2	106.0	19.44 0.00	0 TRANS

===== END OF FM SPACING STUDY FOR CHANNEL 272 =====





Federal Communications Commission

FM STATION LICENSE

Permittee

BOBCAT RADIO,
INC.
Post Office Box 1288
Gunnison, CO, 81230

Call Sign	Facility ID
KVLE-FM	27158

File Number 0000113787	This License Covers Construction Permit No. BPH-20160722ABI	
Filing Date 05/21/2020	Grant Date 05/27/2020	Expiration Date 04/01/2021

Community of License City: GUNNISON State: CO	Frequency (MHz) 102.3	Station Channel 272	Station Class C3
Hours of Operation: Unlimited			
Facility Type: Commercial			

Transmitter Certified for Compliance. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.	Transmitter Output Power 4.767 kW
Antenna Type Non-Directional	Antenna Coordinates (NAD 83) Latitude 38-31-22.7 N Longitude 106-54-25.0 W
Antenna Description SWR,FMEC/4,1.0	
Major Lobe Directions Not Applicable	

	Horizontally Polarized Antenna	Vertically Polarized Antenna
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Effective Radiated Power in the Horizontal Plane (kW)	9.5	9.5
Height of Radiation Center Above Ground (meters)	18	18
Height of Radiation Center Above Mean Sea Level (meters)	2650	2650
Height of Radiation Center Above Average Terrain (meters)	115	115

Antenna Structure Registration Number 1202485	Overall Height of Antenna Structure Above Ground (meters) See the registration for this antenna structure.
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Obstruction Marking and Lighting Specifications for Antenna Structure See the registration for this antenna structure.
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<p>Special Operating Conditions or Restrictions</p> <p>The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.</p> <ul style="list-style-type: none"> Grant of this license application is conditioned upon the continuous operation of the licensed facility for the twelve-month period following grant, including specifically: (a) operation of the station in accordance with the station's FCC authorization with (i) an antenna mounted on a pole, tower, or other structure that is attached to a durable, non-movable structure, (ii) the antenna connected to a permanent power source, and (iii) if located on public property, advance approval by a written governmental authorization; and (b) operation of the station each day in accordance with the FCC's rules for minimum operating schedule (47 C.F.R. § 73.1740(a) for FM stations, 47 C.F.R. § 73.561(a) for NCE-FM stations and 47 C.F.R. § 73.850(b) for LPFM stations) without recourse to the procedures set out in 47 C.F.R. §§ 73.1740(a)(4), 73.561(d), and 73.850(d). The failure of the station to operate in compliance with any of the foregoing requirements will result in the rescission of this grant, dismissal of the license application and the forfeiture of the associated construction permit pursuant to 47 C.F.R. § 73.3598(e) unless the licensee rebuts the resulting presumption that the authorized facilities were temporarily constructed. Evidence of non-temporary construction could include, but is not limited to, station logs, utility bills, lease documents, photographs of the installed antenna/transmitter/studio equipment, and other relevant documentation. ***** This is a Section 73.215 contour protection grant ***** as requested by this applicant *****
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Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934.



**April 2021
KCDC(FM) Channel 272C2
Loma, Colorado
RF Exposure Study**

Facilities Proposed

The proposed operation will be on Channel 272C2 (102.3 MHz) with an effective radiated power of 4.1 kilowatts. Operation is proposed with the existing 3-element circularly-polarized omni-directional 0.67-wavelength-spaced antenna. The antenna is mounted on an existing tower atop Black Ridge, and is shared with KRZX 291C3 Redlands.

The antenna support structure does not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

RF Exposure Calculations

Study of the area within 500 meters of the proposed site reveals no other likely sources of non-ionizing radiation. Thus, the ground level RF Exposure values near the base of the proposed structure are believed to be negligible. Precise calculations are made only with regard to the levels from this proposal.

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

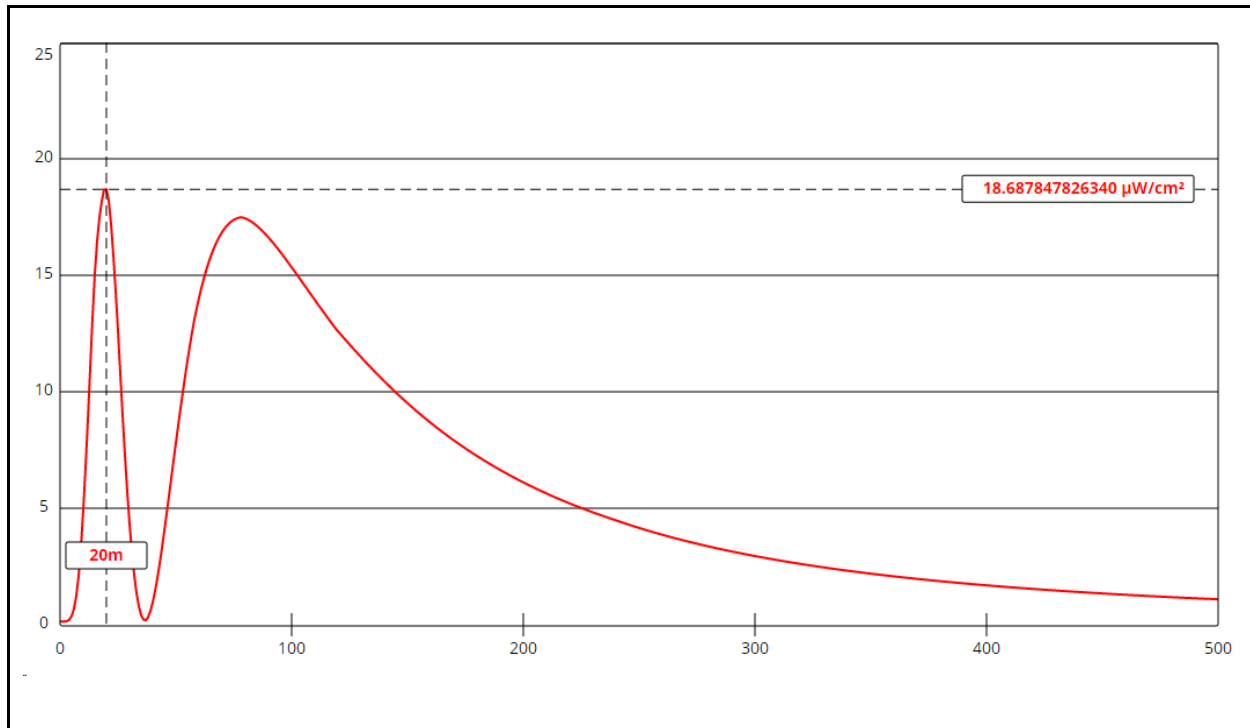
D is the distance in meters from the center of radiation to the calculation point.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 500 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the proposed antenna system assume a Type 2 element pattern, which is the element pattern for the Shively 6832-3 (0.67 wavelength at the KCDC frequency) antenna proposed for use. The highest calculated ground level power density occurs at a distance of 20 meters from the base of the antenna support structure. At this point the power density is calculated to be $18.7 \mu\text{W}/\text{cm}^2$, which is 1.9% of $1000 \mu\text{W}/\text{cm}^2$ (the FCC standard for controlled environments) and 9.4% of $200 \mu\text{W}/\text{cm}^2$ (the FCC standard for uncontrolled environments).

The Black Ridge transmitter site hosts several FM and TV transmitter facilities, spread out along 350 meters of the ridgeline. Should the Commission so require, post-construction measurements will be performed to ensure that ground-level RF exposure levels do not exceed the applicable FCC limit.

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.



Ground-Level RF Exposure

OET FMModel

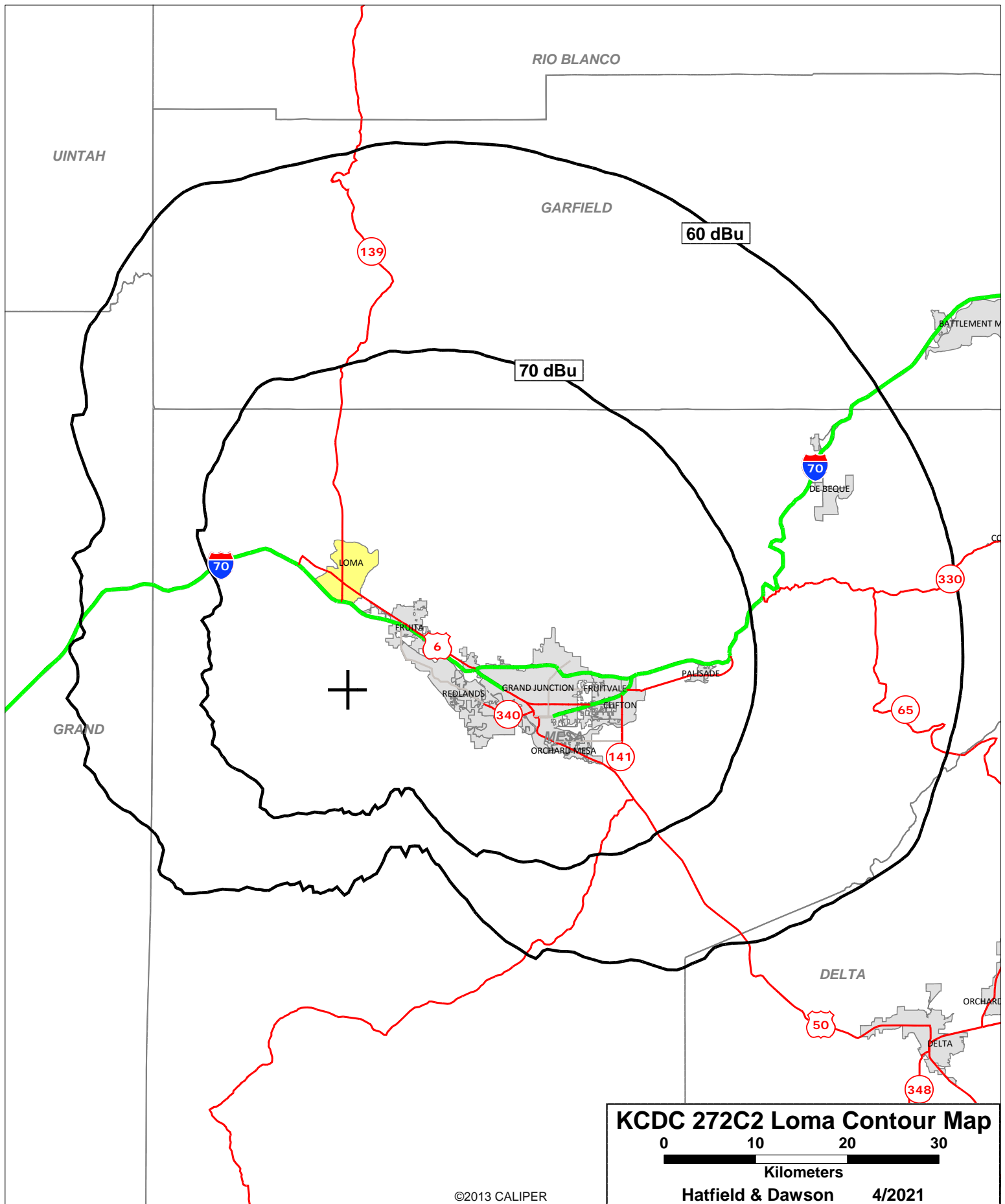
KCDC 272C2 Loma

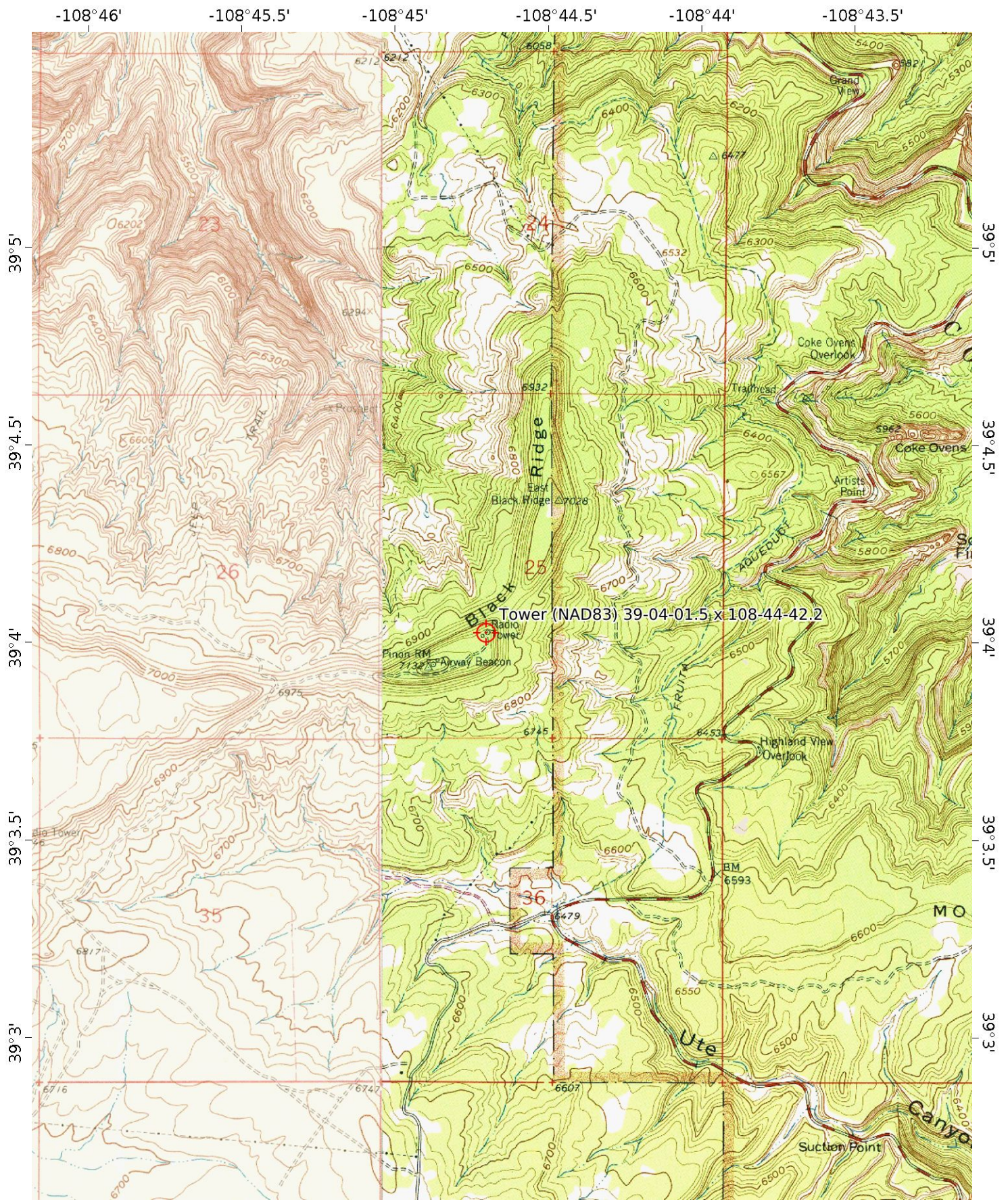
Antenna Type: Shively 6832-3 (Type 2)
No. of Elements: 3
Element Spacing: 0.67 wavelength

Distance: 500 meters
Horizontal ERP: 4.1 kW
Vertical ERP: 4.1 kW

Antenna Height: 23 meters AGL

Maximum Calculated Power Density is 18.7 $\mu\text{W}/\text{cm}^2$ at 20 meters from the antenna structure.





Mercator Projection

WGS84

USNG Zone 12SXJ



0.5 1.0 1.5 2.0 2.5 km

0.5 1.0 1.5 mi

Scale 1:24000

1 inch = 2000 feet

