

Technical Report K280GK.CP Minor Modification

This technical report is submitted for a minor modification application to K280GK.CP, FCC file no. BMPFT-20160726ABB. A correction of the tower height and the antenna COR is submitted. The translator is to serve as a fill-in facility to rebroadcast KROE(AM) 930 kHz at Sheridan, WY, FCC facility I.D. no. 38626.

K280GK.CP Modification Analysis:

An overlap study in exhibit E-1 shows the K280GK.CP modification does not produce any interference overlaps. The 60 dBu F(50-50) contour overlaps the current 60 dBu and is contained within the primary KROE(AM) 2.0 mV/m daytime contour and 40 km radius (exhibit E-2).

Antenna System:

The K280GK.CP modification will be relocated to an existing 24 meter tower at coordinates:

44 37 24N 107 07 01W NAD 27.

A TOWAIR determination (exhibit E-3) shows the tower does not require registration. The translator is to be combined into an ERI Axiom four bay, half wavelength-spaced, nondirectional antenna mounted at a COR AGL of 21 meters, 2363 meters AMSL and operate at 0.250 kW ERP.

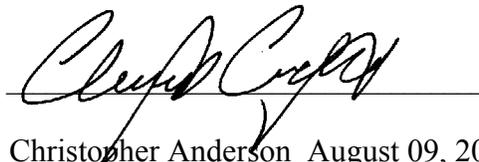
RF Exposure Calculation:

The RF contribution was calculated using FM Model (exhibit E-4). The RF is calculated to be 1.16 $\mu\text{W}/\text{cm}^2$ at a distance of 73.8 meters from the base of the tower,

which is below 5% of the 200 $\mu\text{W}/\text{cm}^2$ maximum permissible for uncontrolled exposure, allowing exclusion from consideration.

Conclusion:

It is concluded that the K280GK.CP modification complies with all Commission rules and policies.

A handwritten signature in black ink, appearing to read "Christopher Anderson", is written over a horizontal line.

Christopher Anderson August 09, 2016
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E-1 K280GK.CP Mod. Overlap Study

REFERENCE
44 37 24.0 N.
107 07 01.0 W.

CH# 280D - 103.9 MHz, Pwr= 0.25 kW, HAAT= 0.0 M, COR= 2363 M
Average Protected F(50-50)= 7.09 km
Omni-directional

DISPLAY DATES
DATA 08-09-16
SEARCH 08-09-16

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
280D Sheridan	K280GK	APP _C_ WY		0.0 0.0	0.00 BMPFT20160726ABB	44 37 24.0 107 07 01.0	0.250	108.0 2363	41.8 Lovcom, Inc.	-149.7*	-149.7*
280D Sheridan	K280GK	CP _C_ WY		0.0 0.0	0.00 BMPFT20160726ABB	44 37 24.0 107 07 01.0	0.250	107.7 2354	41.6 Lovcom, Inc.	-149.4*	-149.6*
281C Powell	KCGL	LIC _C_ WY		265.7 84.2	161.90 BLH20011205AAM	44 29 42.0 109 09 10.0	100.000 547	145.5 2337	98.1 Legend Communications Of W	2.3	53.6
278D Casper	K278CJ	CP _C_ WY		134.5 314.8	43.76 BMPFT20160219ABP	44 20 48.0 106 43 28.0	0.250	1.1 1511	7.1 Legend Communications Of W	19.0	34.4
277CO Cowley	KBEN-FM	LIC _CX WY		268.1 86.9	134.88 BLH20100212ABN	44 34 13.0 108 49 09.0	100.000 427	13.3 1965	88.0 White Park Broadcasting, I	106.7	45.6

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.
All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

E-2 K280GK.CP Mod. 60 dBu Contour

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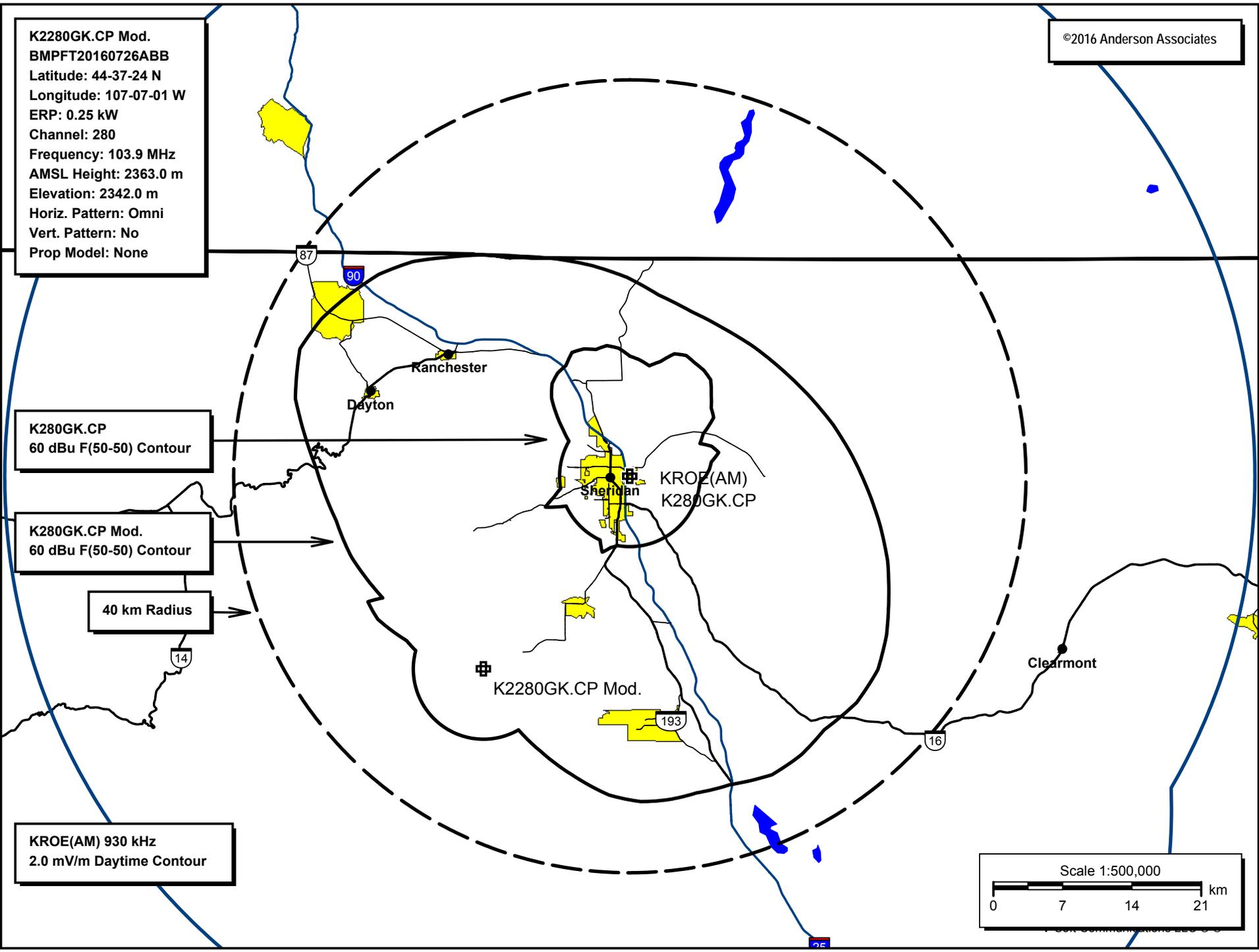
K280GK.CP Mod.
BMPFT20160726ABB
Latitude: 44-37-24 N
Longitude: 107-07-01 W
ERP: 0.25 kW
Channel: 280
Frequency: 103.9 MHz
AMSL Height: 2363.0 m
Elevation: 2342.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

K280GK.CP
60 dBu F(50-50) Contour

K280GK.CP Mod.
60 dBu F(50-50) Contour

40 km Radius

KROE(AM) 930 kHz
2.0 mV/m Daytime Contour



TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	44-37-23.9 north
Longitude	107-07-03.2 west

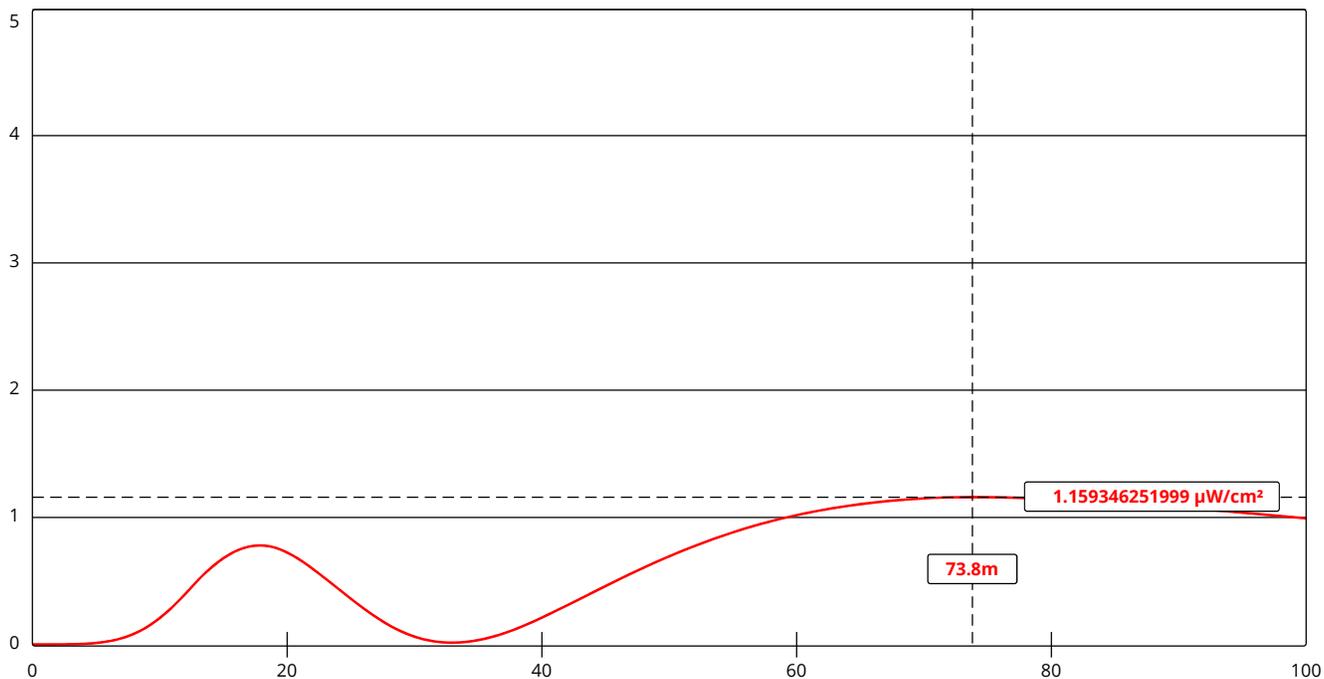
Measurements (Meters)

Overall Structure Height (AGL)	24
Support Structure Height (AGL)	0
Site Elevation (AMSL)	2342

Structure Type

GTOWER - Guyed Structure Used for Communication Purposes

FM Model



Channel Selection	Channel 280 (103.9 MHz)		
Antenna Type +	EPA Type 3: Opposed U Dipole		
Height (m)	21	Distance (m)	100
ERP-H (W)	250	ERP-V (W)	250
Num of Elements	4	Element Spacing (λ)	0.5
Num of Points	500		