

**Modify K287CB FM Translator Station
CH 287D (105.3 MHz) - 0.020 kW Glenwood, IA**

Proposed CH281D (104.1 MHz) - 0.235 kW Omaha, NE

September 22, 2022

TECHNICAL NARRATIVE

This Technical Narrative and attached exhibits were prepared on behalf of Hickory Radio, LLC, (“Hickory”), licensee of FM translator station K287CB, Channel 287D, Facility ID No. 138708, Glenwood, Iowa. Hickory herein proposes to modify K287CB by relocating to a new tower site. The modified K287CB will be used as a fill-in translator for KIBM, 1490 kHz, Facility ID No. 74104, licensed to Omaha, NE. Walnut Radio, LLC (“Walnut”) is the licensee of KIBM. The principal owners of Walnut are also the principal owners of Hickory, so written consent to retransmit KIBM is not required. An exhibit demonstrating FCC Section 74.1201(g) “Fill-In Translator” is included with this application.

The application site is an existing self-supporting tower, 131.0 meters in overall height. The tower is registered with Antenna Structure Registration (“ASR”) number 1223431. The application site coordinates are 41° 13' 29.6" N. Latitude and 95° 57' 11.6" W. Longitude. The proposed K287CB facility would operate on Channel 281D with 235 watts ERP non-directional with circular polarization at 120 meters above ground and 157.5 meters HAAT.

Hickory is seeking Channel 281D (104.1 MHz) which is a non-adjacent channel. In FCC 1940 MB Docket No. 18-119 released May 9, 2019, the Commissions adopted changes to Section 74.1233(a)(1) which allows an FM translator to change to any available same-band FM channel as a minor change, upon a showing of actual or predicted interference to or from any other

broadcast station. An exhibit demonstrating that K287CB qualifies to relocate to a non-adjacent channel is included with this application.

A channel study using Section 73.207 separation distances for Class A FM stations is included as an exhibit. This channel study is provided as a courtesy to FCC staff to help identify potential contour overlap issues. Exhibits demonstrating Section 74.1204 contour protection are included for second adjacent full power FM stations KSRZ, Channel 283C0, Omaha, NE and KXKT, Channel 279C0, Glenwood, IA, and co-channel full power FM stations KIBZ, Channel 281C2, Crete, NE, WNAX-FM, Channel 281C1, Yankton, SD and KOEZ, Channel 281C1, Ames, IA.

Hickory respectfully requests a waiver of Section 74.1235 to use the 3.0 kW Class A spacing rules. An exhibit is provided that shows that the proposed transmit site is fully spaced to IF spaced FM station KFFF, Channel 227C3 using the 3 kW spacing rules. The exhibit also demonstrates that a modification to the top of the tower at the proposed application site would result in an FCC F(50,50) 60 dBu contour distance less than that of a full Class 3.0 kW Class FM station (24 km.)

An exhibit demonstrating compliance with Section 74.1233(a) "Common Overlap" is included.

A study has been undertaken to show the proposed K287CB facility is in compliance with the Commission's radio frequency emission limits and are attached as exhibits.

Non-Adjacent Channel Change Request

Hickory Radio, LLC, (“Hickory”) is seeking a non-adjacent Channel 281D (104.1 MHz). In FCC 1940 MB Docket No. 18-119 released May 9, 2019, the Commissions adopted changes to Section 74.1233(a)(1) which allows an FM translator to change to any available same-band FM channel as a minor change, upon a showing of actual or predicted interference to or from any other broadcast station. The standard established in this policy is FM translator FCC F(50,50) 60 dBu contour overlaps the 45 dBu contour of an co-channel or first adjacent channel FM station or another co-channel or first adjacent channel FM station’s FCC F(50,50) 60 dBu contour overlaps with the FM translator’s 45 dBu contour.

The map included with this exhibit demonstrates that the 45 dBu contour of first adjacent full power FM station KFMT-FM, Channel 288A, Fremont, NE does overlap the FCC F(50,50) 60 dbu contour of the K287CB licensed facility.

Therefore, it is believed that the proposed K287CD non-adjacent channel change meets the requirements established in FCC 1940 MB Docket No. 18-119.

K287CB

Glenwood, IA
BLFT20180405AAD
Latitude: 41-15-26 N
Longitude: 095-57-52.10 W
ERP: 0.02 kW
HAAT: 159.78
Channel: 287
Frequency: 105.3 MHz
AMSL Height: 492.0 m
Elevation: 360.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

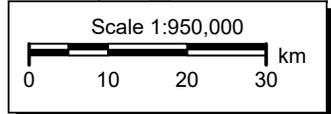
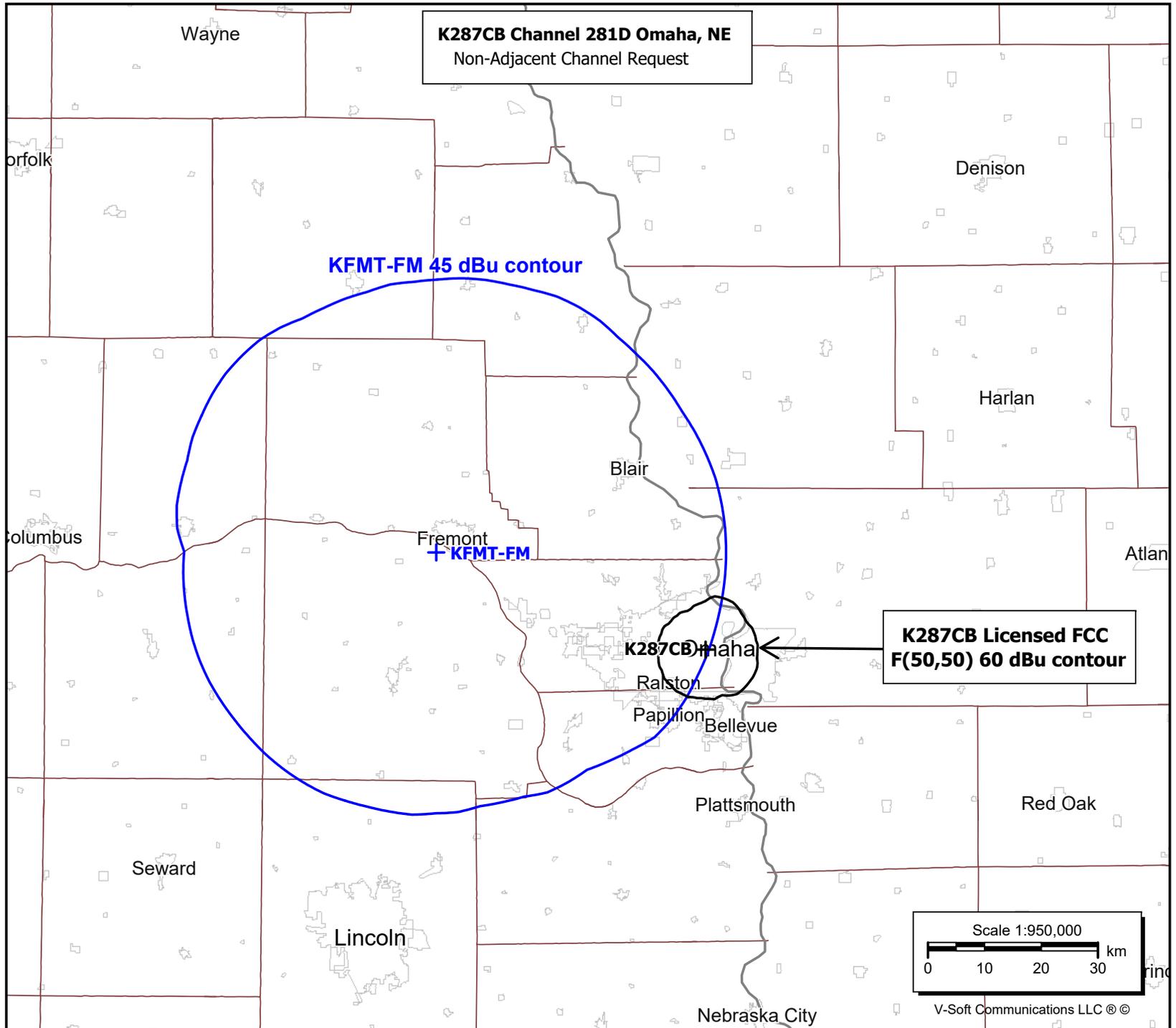
KFMT-FM

Fremont, NE
BLH19800416AB
Latitude: 41-24-40 N
Longitude: 096-31-54.10 W
ERP: 1.20 kW
HAAT: 137.0
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 516.0 m
Elevation: 408.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

K287CB Channel 281D Omaha, NE
Non-Adjacent Channel Request

KFMT-FM 45 dBu contour

K287CB Licensed FCC
F(50,50) 60 dBu contour



V-Soft Communications LLC ©

K287CB

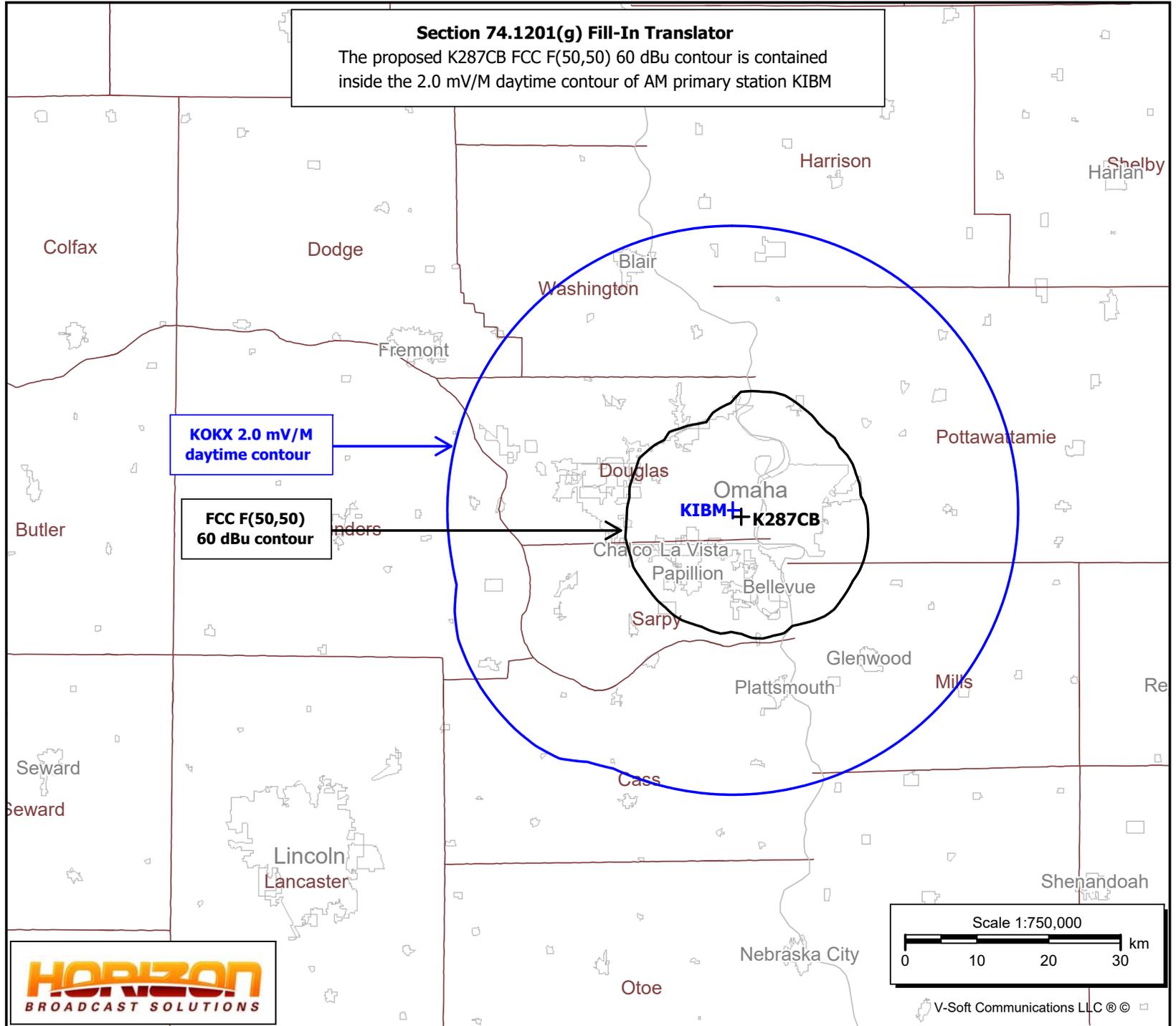
Omaha, NE
BLFT20180405AAD
Latitude: 41-13-29.60 N
Longitude: 095-57-11.60 W
ERP: 0.235 kW
HAAT: 169.5
Channel: 281
Frequency: 104.1 MHz
AMSL Height: 495.0 m
Elevation: 375.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KIBM

Type: AM
Channel: 1490
Latitude: 41-13-59 N
Longitude: 095-58-02 W
Power: 1.0 kW Day

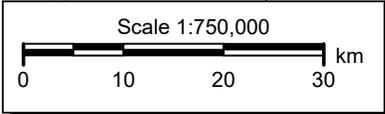
Section 74.1201(g) Fill-In Translator

The proposed K287CB FCC F(50,50) 60 dBu contour is contained inside the 2.0 mV/M daytime contour of AM primary station KIBM



**KOKX 2.0 mV/M
daytime contour**

**FCC F(50,50)
60 dBu contour**



V-Soft Communications LLC ©

W287CB CH281 Class AM FM Channel Study

REFERENCE							DISPLAY DATES
41 13 29.6 N.				CLASS = A			DATA 09-03-22
95 57 11.6 W.				Current Spacings to 3rd Adj.			SEARCH 09-03-22

----- Channel 281 - 104.1 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		

KSRZ	LIC	283C0	Omaha	NE	324.7	10.8	85.5	-74.7
41 18 16.0	96 01	42.1	CN		100.000 kW	332 M		
	Sm-Ksrz-Fm, LLC				BMLH20050610AIL			

Note: See Section Section 74.1204 Contour Protection Exhibit: KSRZ & KXKT

KXKT	LIC	279C0	Glenwood	IA	326.9	11.2	85.5	-74.4
41 18 32.0	96 01	34.1	CN		100.000 kW	331 M		
	Ihm Licenses, LLC				BLH20060531ANQ			

Note: See Section Section 74.1204 Contour Protection Exhibit: KSRZ & KXKT

KIBZ	LIC	281C2	Crete	NE	221.4	104.3	165.5	-61.2
40 31 06.0	96 46	07.1	CN		31.000 kW	187 M		
	Alpha 3e Licensee LLC Debt				BMLH20140911ACG			

Note: See Section Section 74.1204 Contour Protection Exhibit: KIBZ WNAX-FM KOEZ

WNAX-FM	LIC	281C1	Yankton	SD	330.3	181.9	199.5	-17.6
42 38 23.9	97 03	22.1	CN		100.000 kW	299 M		
	Saga Communications Of Sou				BLH19891026KA			

Note: See Section Section 74.1204 Contour Protection Exhibit: KIBZ WNAX-FM KOEZ

KOEZ	LIC	281C1	Ames	IA	65.5	186.7	199.5	-12.8
41 54 08.8	93 54	16.1	CN		100.000 kW	277 M		
	Saga Communications Of Iow				0000177355			

Note: See Section Section 74.1204 Contour Protection Exhibit: KIBZ WNAX-FM KOEZ

KFFF	LIC-N	227C3	Bennington	NE	324.7	10.8	11.5	-0.7
41 18 16.0	96 01	42.0	NCN		1.000 kW	361 M		
	Ihm Licenses, LLC				0000195350			

KFFF	ALO	227C3	Bennington	NE	351.9	13.5	11.5	2.0
41 20 43.0	95 58	34.0			0.000 kW	100 M		
	Ihm Licenses, LLC							

Section 74.1204 Contour Protection to KSRZ & KXKT

This comprehensive exhibit has been prepared to demonstrate that the proposed modification to FM translator K287CB will not cause prohibited interference to second adjacent full power FM stations KSRZ, Channel 283C0, Omaha, NE and KXKT, Channel 279C0, Glenwood, IA. This statement demonstrates that a lack of population and/or other factors allow this proposal to be compliant with Section 74.1204. The process commonly called “Living Way,” allows for the use of U/D Analysis, also known as “signal strength ratio methodology.” In this instant case the facilities to be protected are second adjacent and are to be afforded protection from signals 40 dB stronger than they present in the location of the proposed antenna location.

The KSRZ F(50,50) protected contour at the proposed K287CB application site is 99.5 dBu. Therefore, the proposed new K287CB F(50,10) interfering contour with respect to KSRZ is the 139.5 dBu contour. The KXKT F(50,50) protected contour at the proposed K287CB application site is 99.0 dBu. Therefore, the proposed new K287CB F(50,10) interfering contour with respect to KXKT is the 139.0 dBu contour. Therefore, K287CB will cause greater interference to KXKT and that contour will be used to determine Section 74.1204 compliance. Using the FCC's FM propagation curves program (see attached), the 139.0 dBu contour was calculated to extend 12 meters from the antenna.

The proposed transmit antenna would be mounted 120 meters above ground level and there are no high rise buildings in the vicinity of the tower. Therefore, a lack of population has been demonstrated within the area of predicted interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204. It is believed that the proposed K287CB modification

will not cause prohibited interference to KSRZ or KXKT as the interfering contour does not reach the ground or any high rise buildings in the area.

K287CB

Omaha, NE
Latitude: 41-13-29.60 N
Longitude: 095-57-11.60 W
ERP: 0.235 kW
HAAT: 157.5 m
Channel: 281
Frequency: 104.1 MHz
AMSL Height: 483.0 m
Elevation: 363.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KSRZ

Omaha, NE
BMLH20050610AIL
Latitude: 41-18-16 N
Longitude: 096-01-42.10 W
ERP: 100.00 kW
HAAT: 331.7 m
Channel: 283
Frequency: 104.5 MHz
AMSL Height: 672.8 m
Elevation: 363.8 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KXKT

Glenwood, IA
BLH20060531ANQ
Latitude: 41-18-32 N
Longitude: 096-01-34.10 W
ERP: 100.00 kW
HAAT: 331.0 m
Channel: 279
Frequency: 103.7 MHz
AMSL Height: 674.0 m
Elevation: 354.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

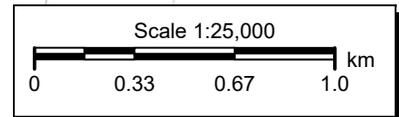
Section 74.1204 Contour Protection

KSRZ Channel 283C0 Omaha, NE
KXKT Channel 279C0 Glenwood, IA

**KXKT F(50,50) FCC
99 dBu contour**

+ K287CB

**KSRZ F(50,50) FCC
99 dBu contour**



FM and TV Propagation Curves

Databases & Searches

AM Query

Antenna Height Above Average Terrain (HAAT) Calculator

Antenna Structure Registration (ASRN) Records Within A Radius

Broadcast Station Mailing Address Search

CDBS Database Public Files

Children's Educational Television Reporting - Form 2100, Schedule H

Children's Programming Query

COLORIT HTML Color Generator

Degrees Minutes Seconds to/from Decimal Degrees

Distance and Azimuths Between Two Sets of Coordinates

Electioneering Communications Database

EEO Filing Search

Filing Systems and Databases

Find Community Coordinates

Find Terminal Coordinates

Find Values (Conversions)

FM and TV Propagation Curves

FM Query

This Javascript calculator uses the FM or TV propagation curves to find the distance to a service or interfering contour, or the corresponding field strength at a given contour distance. [More after the form.](#)

Select Contour Type:	F(50,50) Service Contour -- FM and NTSC (analog) TV F(50,10) Interfering Contour F(50,90) Digital TV Service Contour
Select Channel Range: (not TV Virtual Channel)	FM Radio or TV Transmit Channels 2-6 TV Transmit Channels 7-13 TV Transmit Channels 14-69
Find This:	Field Strength, given a Distance (in km) Distance, Given a Field Strength (in dBu) FM ERP, given Distance and Field Strength [F(50,50) Service Contour]
<input type="text" value="235"/> ERP (kW)	<input type="text" value=""/> Distance (km)
<input type="text" value="157.5"/> HAAT (meters)	<input type="text" value="139"/> Field (dBu)
<input type="button" value="Find Result"/>	<input type="button" value="Clear Form"/>
Results:	
Calculated Distance = 0.012 km	
Free Space equation used to compute distance.	

This function uses the FCC's CURVES program to make calculations of the F(50,50) FM and NTSC (analog) TV service curves, the F(50,10) interfering signal curves, and the F(50,90) digital TV service curves. Printable copies of these propagation curves are available at [FM and TV Propagation Curves Graphs](#).

Antenna Height Above Average Terrain (HAAT) values for a particular FM or TV station can be obtained from the [FM Query](#) or the [TV Query](#), or use the [HAAT Calculator](#). The class of an FM station may be retrieved from the [FM Query](#).

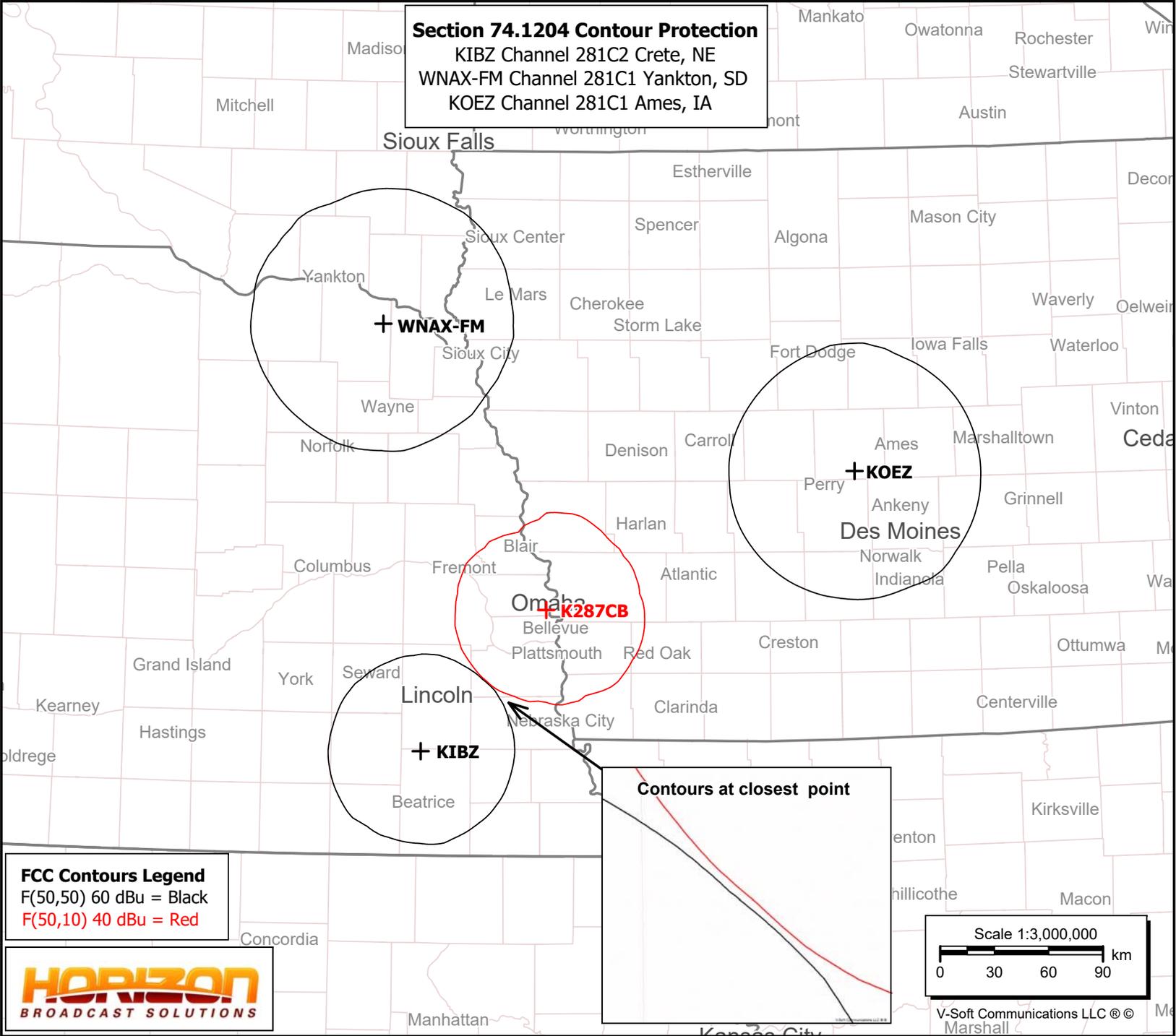
K287CB
 Omaha, NE
 Latitude: 41-13-29.60 N
 Longitude: 095-57-11.60 W
 ERP: 0.235 kW
 HAAT: 157.5 m
 Channel: 281
 Frequency: 104.1 MHz
 AMSL Height: 483.0 m
 Elevation: 363.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

KIBZ
 Crete, NE
 BMLH20140911ACG
 Latitude: 40-31-06 N
 Longitude: 096-46-07.10 W
 ERP: 31.00 kW
 HAAT: 187.0 m
 Channel: 281
 Frequency: 104.1 MHz
 AMSL Height: 614.0 m
 Elevation: 451.0 m

WNAX-FM
 Yankton, SD
 Latitude: 42-38-23.90 N
 Longitude: 097-03-22.10 W
 ERP: 100.00 kW
 HAAT: 299.0 m
 Channel: 281
 Frequency: 104.1 MHz
 AMSL Height: 726.0 m
 Elevation: 488.0 m

KOEZ
 Ames, IA
 0000177355
 Latitude: 41-54-08.80 N
 Longitude: 093-54-16.10 W
 ERP: 100.00 kW
 HAAT: 277.0
 Channel: 281
 Frequency: 104.1 MHz
 AMSL Height: 578.0 m
 Elevation: 309.0 m

Section 74.1204 Contour Protection
 KIBZ Channel 281C2 Crete, NE
 WNAX-FM Channel 281C1 Yankton, SD
 KOEZ Channel 281C1 Ames, IA



Section 74.1235 Waiver Request
3.0 kW Class A IF spacing

Hickory Radio, LLC (“Hickory”), licensee of K287CB Channel 287D and applicant for non-adjacent channel 281D, respectfully requests a waiver of Section 74.1235 to use the 3.0 kW Class A spacing rules. An exhibit is provided that shows that the proposed Channel 281D transmit site is fully spaced to IF spaced FM station KFFF, Channel 227C3, Bennington, NE using the 3 kW Class A spacing rules.

The spacing for A 6.0 kW Class A to a Class C3 “IF” spaced station is 12 km. (rounded to 11.5 km.) The distance to KFFF is 10.8 km. The attached Channel Study using 3.0 kW Class A spacing distances shows the Class C3 IF spacing is 11 km (rounded to 10.5 km.)

The distance from the K287CB application site and KFFF is 10. km. This is short spaced by 0.7 km. under the 6.0 kW Class A spacing table but clear by 0.3 km using the 3.0 kW Class A spacing table.

Hickory must also demonstrate that K287CB FCC F(50,50) 60 dBu contour if located at the top of the application site tower would not extend further than the FCC F(50,50) 60 dBu of a full 3.0 Class A facility (24.223 km.) The map included with this exhibit clearly shows that the K287CB FCC F(50,50) 60 dBu contour would not exceed 24.233 km.

Therefore, Hickory believes the proposed K287CB application for a construction permit of 235 watts ERP meets the requirements to receive a waiver of FCC Section 74.1235.

**Section 74.1235 Waiver Request
W287CB 3.0 kW Class A FM Channel Study**

REFERENCE		DISPLAY DATES				
41 13 29.6 N.	CLASS = A Int = A	DATA 09-03-22				
95 57 11.6 W.	Former Spacings to 3rd Adj.	SEARCH 09-03-22				
----- Channel 281 - 104.1 MHz -----						
Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		

KSRZ	LIC 283C0	Omaha	NE 324.7	10.8	85.5	-74.7
41 18 16.0	96 01 42.1	CN	100.000 kW	332 M		
	Sm-Ksrz-Fm, LLC		BMLH20050610AIL			
KXKT	LIC 279C0	Glenwood	IA 326.9	11.2	85.5	-74.4
41 18 32.0	96 01 34.1	CN	100.000 kW	331 M		
	Ihm Licenses, LLC		BLH20060531ANQ			
KIBZ	LIC 281C2	Crete	NE 221.4	104.3	162.5	-58.2
40 31 06.0	96 46 07.1	CN	31.000 kW	187 M		
KOEZ	ALO 281C0	Ames	IA 65.5	186.7	214.5	-27.8
41 54 08.9	93 54 15.8		0.000 kW	450 M		
	Saga Communications Of Iow					
WNAX-FM	LIC 281C1	Yankton	SD 330.3	181.9	195.5	-13.6
42 38 23.9	97 03 22.1	CN	100.000 kW	299 M		
	Saga Communications Of Sou		BLH19891026KA			
KOEZ	LIC 281C1	Ames	IA 65.5	186.7	195.5	-8.8
41 54 08.8	93 54 16.1	CN	100.000 kW	277 M		
	Saga Communications Of Iow					0000177355
KFFF	LIC-N 227C3	Bennington	NE 324.7	10.8	10.5	0.35
41 18 16.0	96 01 42.0	NCN	1.000 kW	361 M		
	Ihm Licenses, LLC		0000195350			

Note: Hickory requests a waiver of FCC Section 74.1235 for K287CB



Antenna Structure Registration

[FCC](#) > [WTB](#) > [ASR](#) > [Online Systems](#) > [ASR Search](#)
[FCC Site Map](#)

ASR Registration Search

Registration 1223431

HELP
[New Search](#) | [Return to Results](#) | [Printable Page](#) | [Reference Copy](#) | [Map Registration](#)

Registration Detail			
Reg Number	1223431	Status	Constructed
File Number	A0920777	Constructed	03/14/2001
EMI	No	Dismantled	
NEPA	No		
Antenna Structure			
Structure Type	TOWER - Free standing or Guyed Structure used for Commu		
Location (in NAD83 Coordinates - Convert to NAD27)			
Lat/Long	41-13-29.6 N 095-57-11.6 W	Address	2808 "B" Street
City, State	Omaha , NE	County	DOUGLAS
Zip	68107	Position of Tower in Array	
Center of AM Array			
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
363.0		131.0	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
494.0		121.9	
Painting and Lighting Specifications			
FAA Chapters 4, 8, 12 Paint and Light in Accordance with FAA Circular Number 70/7460-1K			
FAA Notification			
FAA Study	01-ACE-2153-OE	FAA Issue Date	10/05/2001
Owner & Contact Information			
FRN	0011498342	Owner Entity Type	Limited Liability Company
Assignor FRN	0009764150	Assignor ID	L00759842
Owner			
Global Tower, LLC, through American Towers, LLC Attention To: FAA/FCC Regulatory 10 Presidential Way Woburn , MA 01801		P: (678)564-3236 F: E: faa-fcc@americantower.com	
Contact			
Attention To: FAA/FCC Regulatory 10 Presidential Way Woburn , MA 01801		P: (678)564-3236 F: E: faa-fcc@americantower.com	
Last Action Status			
Status	Constructed	Received	09/02/2014
Purpose	Change Owner	Entered	09/02/2014
Mode	Interactive		
Related Applications			
09/02/2014	A0920777 - Change Owner (OC)		
08/29/2014	A0918075 - Change Owner (OC)		
05/18/2009	A0637703 - Admin Update (AU)		
All related applications (8)			
Comments			
Comments			
None			
History			
Date	Event		
09/03/2014	Registration Printed		
09/03/2014	Change of Ownership Letter Sent		
09/02/2014	Change of Ownership Received		
All History (16)			
Pleadings			
Pleading Type	Filer Name	Description	Date Entered
None			
Automated Letters			
09/03/2014	Ownership Change , Reference 822044		
03/29/2005	Authorization , Reference 415814		
09/15/2004	Ownership Change , Reference 358754		
All letters (5)			

ASR Help	ASR License Glossary - FAQ - Online Help - Documentation - Technical Support
ASR Online Systems	TOWAIR - CORES - ASR Online Filing - Application Search - Registration Search
About ASR	Privacy Statement - About ASR - ASR Home
Registration Search	By Registration Number <input type="text"/> <input type="button" value="SUBMIT"/>

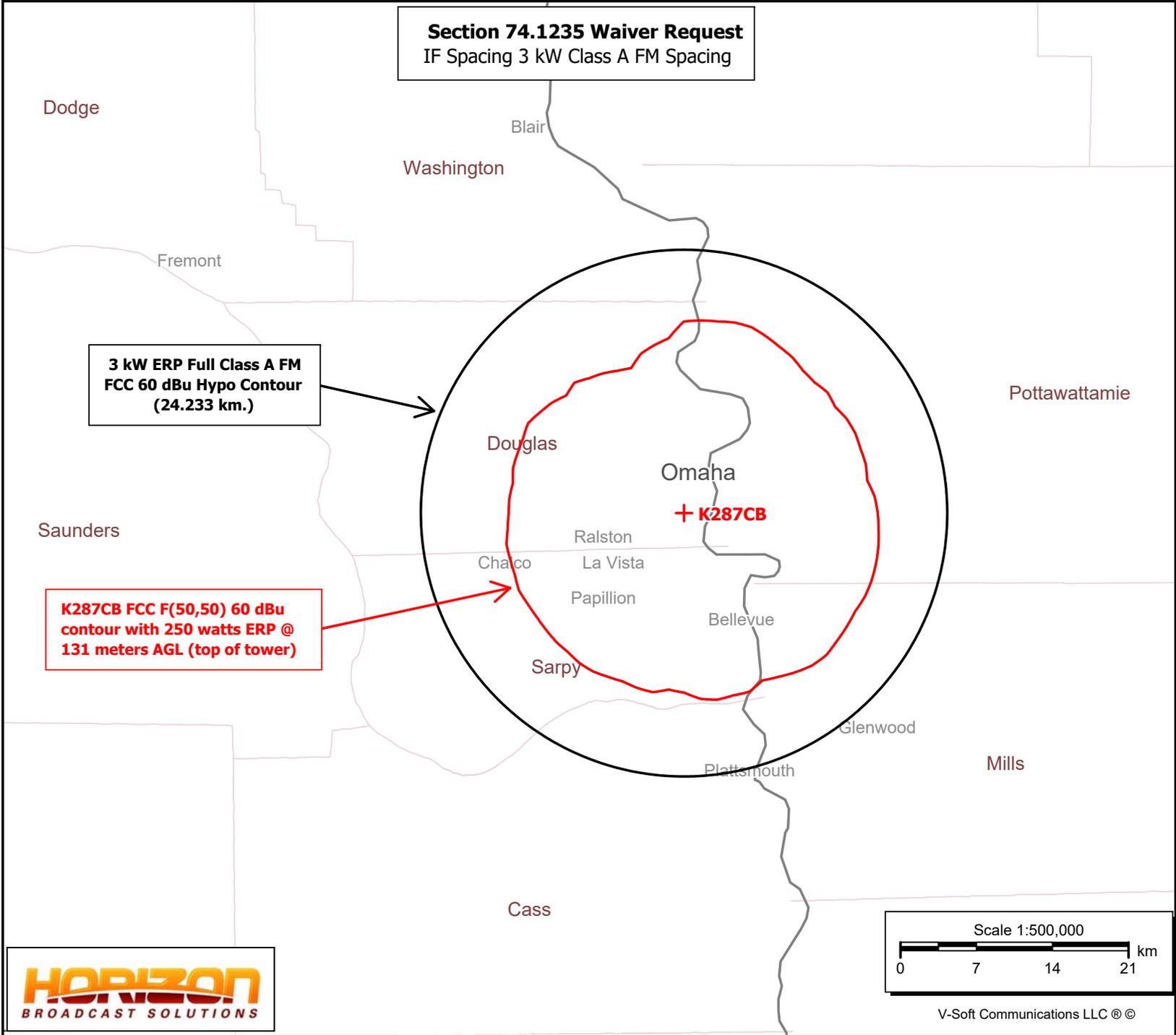
K287CB

Omaha, NE
Latitude: 41-13-29.60 N
Longitude: 095-57-11.60 W
ERP: 0.25 kW
HAAT: 168.5 m
Channel: 281
Frequency: 104.1 MHz
AMSL Height: 494.0 m
Elevation: 363.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Section 74.1235 Waiver Request
IF Spacing 3 kW Class A FM Spacing

**3 kW ERP Full Class A FM
FCC 60 dBu Hypo Contour
(24.233 km.)**

**K287CB FCC F(50,50) 60 dBu
contour with 250 watts ERP @
131 meters AGL (top of tower)**



**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Hickory Radio, LLC, ("Hickory"), licensee of FM translator station K287CB, Channel 287D, Facility ID No. 138708, Glenwood, Iowa herein proposes to modify K287CB by relocating to a different tower site and operating on non-adjacent channel 281D (104.1 MHz). The transmitting site is an existing tower 133 meters in overall height and is not registered with an FCC Antenna Structure Registration (ASR) number. The tower is located at 33° 41' 20.4" N ~ 84° 30' 37.7" W (NAD 83). The proposed antenna is an ERI Model 100A side mounted two bay half wave circularly polarized antenna. The proposed W287CB facility would operate with 235 watts ERP non-directional at 120 meters above ground level and 157.5 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. Because K287CB proposes to operate from an existing tower and antenna and no changes are being made to the tower, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The revised FM Model Program does include the ERI antenna under Type Two, Opposed V - dipole. Using the Type 2 EPA element, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $0.119 \mu\text{W}/\text{cm}^2$ at 219.6 meters, which is 0.060 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

FM Model

Radio Frequency Safety

[FCC Policy on Human Exposure](#)

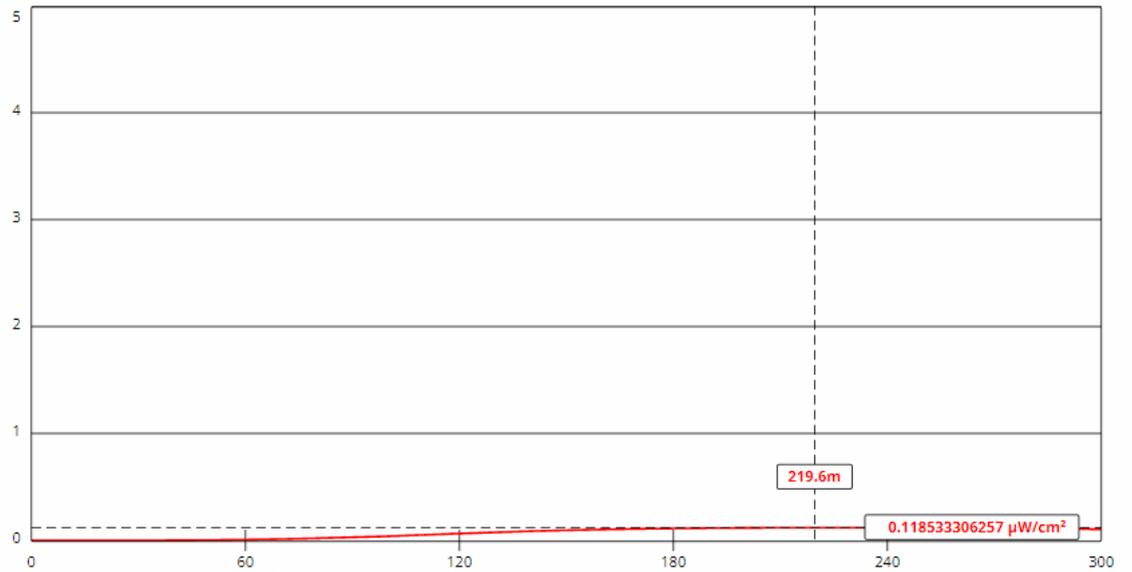
[RF Safety FAQ](#)

[Body Tissue Dielectric Parameters](#)

[RF Safety Highlighted Releases](#)

FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA. [Show More....](#)



[View Tabular Results +](#)

Channel Selection	Channel 281 (104.1 MHz) ▼		
Antenna Type +	EPA Type 2: Opposed V Dipole ▼		
Height (m)	<input type="text" value="120"/>	Distance (m)	<input type="text" value="300"/>
ERP-H (W)	<input type="text" value="235"/>	ERP-V (W)	<input type="text" value="235"/>
Num of Elements	<input type="text" value="2"/>	λ	<input type="text" value="0.5"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	