

EXHIBIT 12 – COMPREHENSIVE TECHNICAL EXHIBIT

Applicant is losing it's current transmitter site, a water tower serving the city of New Ulm, MN which is be dismantled, and seeks to move to an alternate site as detailed in the instant application.

LACK OF CONTOUR OVERLAP

The following Channel Study (**Figure 1**) reveals the lack of any contour overlap with all relevant 1st, 2nd, 3rd adjacent, and I.F. frequencies.

CHANNEL STUDY											
REFERENCE		Minn-iowa Christian Broadcasting, Inc.								DISPLAY DATES	
44 25 52.4 N.		CH# 285D - 104.9 MHz, Pwr= 0.07 kw, HAAT= 62.7 M, COR= 366 M								DATA 05-14-15	
94 31 54.4 W.		Average Protected F(50-50)= 7.5 km								SEARCH 05-16-15	
		Omni-directional									
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
285D	K285FX!	LIC	C	161.7	14.61	44 18 23.0	0.070	21.9	5.9	-15.5	-20.6
New Ulm		MN		341.8	BLFT20070911ABD	94 28 27.0	38	331	Minn-iowa Christian Broadc		
284C	KCLD-FM	LIC	CN	0.7	126.34	45 34 03.0	100.000	105.9	73.1	13.8	43.8
St. Cloud		MN		180.7	BLH19910913KB	94 30 43.0	300	658	Leighton Enterprises, Inc.		
283C2	KJLY	LIC	CX	146.4	69.36	43 54 38.0	50.000	6.1	53.4	54.3	15.4
Blue Earth		MN		326.7	BMLE20091008ABL	94 03 09.0	150	461	Minn-iowa Christian Broadc		
286C2	KARL	LIC	NCX	264.2	107.14	44 19 32.0	45.000	83.2	56.4	15.4	39.2
Tracy		MN		83.2	BMLH20080813ADU	95 52 19.0	153	594	Kmhl Broadcasting Company		
286D	K286AU	LIC	C	17.5	36.42	44 44 37.0	0.115	14.2	10.1	15.6	16.7
Glencoe		MN		197.6	BLFT20070601BRU	94 23 36.0	89	407	Minnesota Public Radio		
288C3	KRBI-FM	LIC	NCX	126.2	48.60	44 10 20.0	25.000	3.1	29.8	37.7	16.5
St. Peter		MN		306.5	BLH20100614AQT	94 02 23.0	68	354	Digit 3e License, Llc		
285C3	KMRR	LIC	CN	201.3	136.32	43 17 13.0	25.000	110.2	35.5	18.2	73.5
Spencer		IA		20.8	BLH19970508KE	95 08 34.0	85	521	Saga Communications Of Iow		
285A	KRFO-FM	LIC	NCX	109.8	114.74	44 04 26.0	4.700	78.0	23.4	29.7	68.2
Owatonna		MN		290.7	BMLH20131203AFP	93 10 48.0	53	424	Townsquare Media Faribault		
286D	K286AW	LIC	C	127.1	53.06	44 08 31.0	0.010	7.3	4.9	37.9	36.4
Mankato		MN		307.5	BLFT20091217ACV	94 00 05.0	75	364	Minnesota Public Radio		
286A	WGVX	LIC	NCN	74.2	113.45	44 42 05.0	2.600	39.5	26.0	66.9	77.3
Lakeville		MN		255.1	BLH19960507KA	93 09 02.0	152	440	Radio License Holdings Llc		
288A	KMGH	LIC	CN	299.0	98.87	44 51 24.0	3.000	2.3	23.7	89.4	72.9
Montevideo		MN		118.2	BLH19821019AP	95 37 46.0	90	398	Iowa City Broadcasting Com		
285C3	WLMX-FM	LIC	CN	56.6	218.51	45 29 27.0	22.000	115.2	41.8	96.4	153.1
Balsam Lake		WI		238.2	BLH19970224KB	92 11 32.0	106	479	Red Rock Radio Corp.		

Terrain database is 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 exclamation marks 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)

Facility being modified

Figure 1

60 dBu overlap of Authorized and Proposed facilities

The qualifying overlap of the 60 dBu F(50,50) contours is demonstrated in **Figure 2**.

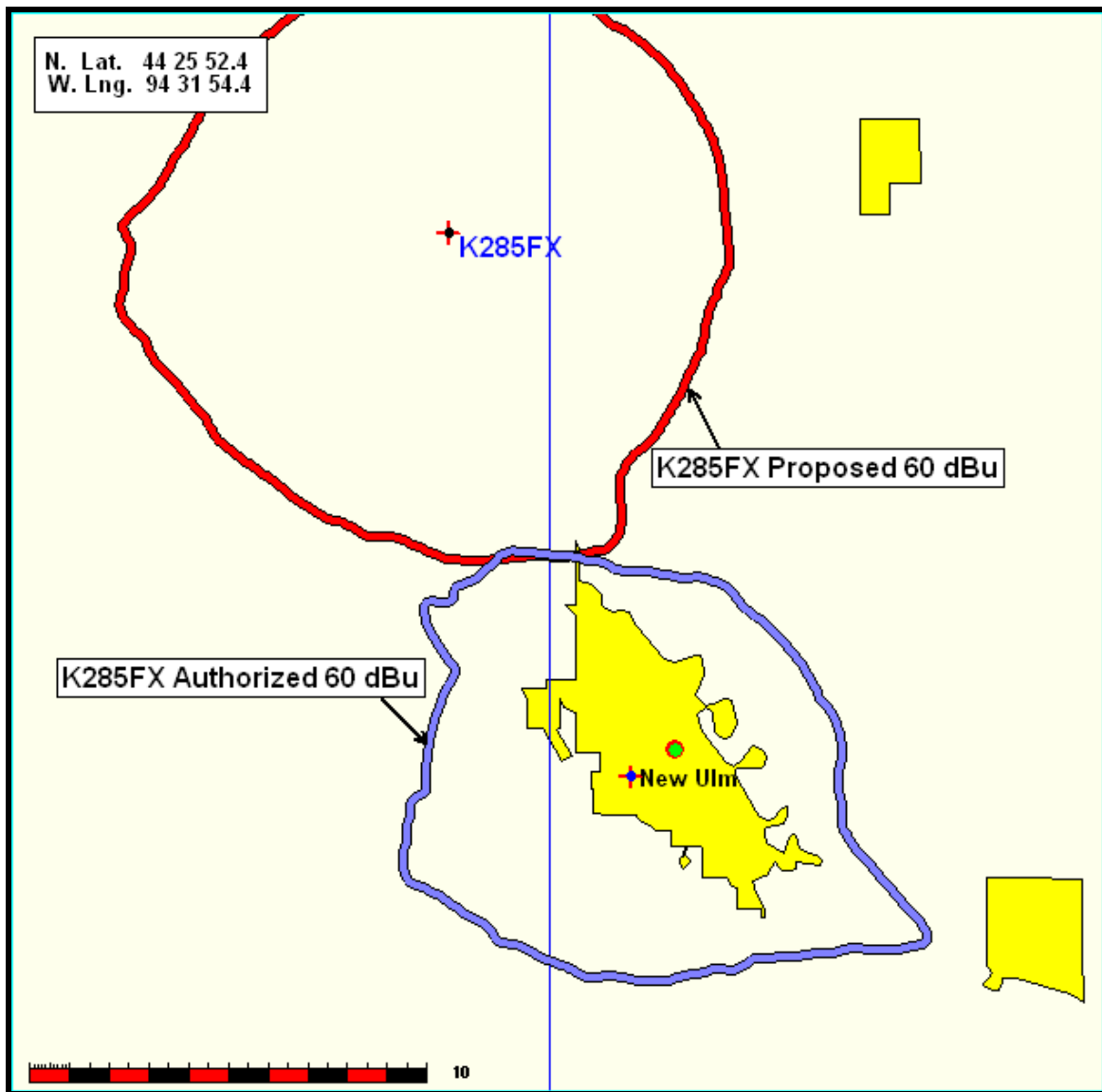


Figure 2

ENVIRONMENTAL COMPLIANCE

There will be no new construction. The antenna will be side-mounted on an existing structure at an existing communications site.

The Commission’s rules exempt FM translators operating with an effective radiated power of less than 100 watts from the requirement to submit an environmental assessment to determine compliance with FCC specified guidelines for human exposure to radiofrequency radiation. The applicant proposes operation with a maximum effective radiated power of 78 watts and is, therefore, exempt.

TOWAIR DETERMINATION

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	44-25-52.2 north
Longitude	094-31-55.3 west
Measurements (Meters)	
Overall Structure Height (AGL)	59.4
Support Structure Height (AGL)	0
Site Elevation (AMSL)	315
Structure Type	
GTOWER - Guyed Structure Used for Communication Purposes	