

Non-Interference Compliance

Regarding Facility id 146071

Channel 230

Description of Exhibit 13 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Page 4 includes a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

NOTE: The adjacent channel study indicates prohibitive interference with application BPFT-20100628AOJ for W273AT, Milwaukee, WI (FIN: 149984). W273AT has been off the air for over 2 years. It is anticipated that this application will be dismissed and the license rescinded.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

Note: There are no occupied buildings or major roads within the zone of predicted interference. Furthermore this proposal provides 35.4m ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1086384	BLH20050923AAH	WLDB	86.4	86.4
418791	BLH19991020ABM	WLWK-FM	87	87
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				86.4

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **86.4 dBμ**, this makes the proposed translator's worst-case interfering contour **126.4 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **53.1 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 6 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **35.4 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

Note: There are no occupied buildings or major roads within the zone of predicted interference. Furthermore this proposal provides 35.4m ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	NIC
Antenna Model:	BKG77
CORAGL:	59 m
Maximum ERP:	0.25 kW
Interfering Contour:	126.4 dBμ
Max Int. Contour Distance:	53.1 m
Min Ground Clearance:	35.4 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.999	249.5	53.0	52.8	54.4
10	.982	241.1	52.1	51.3	49.9
15	.954	227.5	50.6	48.9	45.9
20	.918	210.7	48.7	45.8	42.3
25	.871	189.7	46.2	41.9	39.5
30	.818	167.3	43.4	37.6	37.3
35	.758	143.6	40.2	33.0	35.9
40	.691	119.4	36.7	28.1	35.4
45	.616	94.9	32.7	23.1	35.9
50	.538	72.4	28.6	18.4	37.1
55	.465	54.1	24.7	14.2	38.8
60	.391	38.2	20.8	10.4	41.0
65	.313	24.5	16.6	7.0	43.9
70	.239	14.3	12.7	4.3	47.1
75	.176	7.7	9.3	2.4	50.0
80	.128	4.1	6.8	1.2	52.3
85	.103	2.7	5.5	0.5	53.6
90	.105	2.8	5.6	0.0	53.4
Minimum Clearance above TGL:					35.4 m



BK077

Vertical	-66	0.297	54	0.479	174	0.468
Values	-63	0.345	57	0.436	177	0.479
-180	0.487	-60	0.391	60	0.391	
-177	0.478	-57	0.436	63	0.345	
-174	0.467	-54	0.479	66	0.297	
-171	0.460	-51	0.523	69	0.253	
-168	0.454	-48	0.568	72	0.211	
-165	0.447	-45	0.616	75	0.176	
-162	0.439	-42	0.661	78	0.145	
-159	0.429	-39	0.706	81	0.120	
-156	0.419	-36	0.745	84	0.105	
-153	0.402	-33	0.783	87	0.100	
-150	0.385	-30	0.818	90	0.105	
-147	0.369	-27	0.852	93	0.118	
-144	0.359	-24	0.881	96	0.134	
-141	0.350	-21	0.910	99	0.151	
-138	0.338	-18	0.934	102	0.168	
-135	0.326	-15	0.954	105	0.185	
-132	0.314	-12	0.972	108	0.202	
-129	0.303	-9	0.987	111	0.219	
-126	0.290	-6	0.999	114	0.236	
-123	0.278	-3	0.999	117	0.252	
-120	0.265	0	1.000	120	0.265	
-117	0.251	3	0.999	123	0.278	
-114	0.236	6	0.999	126	0.290	
-111	0.218	9	0.987	129	0.304	
-108	0.202	12	0.972	132	0.314	
-105	0.185	15	0.954	135	0.327	
-102	0.168	18	0.934	138	0.338	
-99	0.151	21	0.910	141	0.350	
-96	0.134	24	0.881	144	0.360	
-93	0.118	27	0.852	147	0.370	
-90	0.105	30	0.818	150	0.386	
-87	0.100	33	0.783	153	0.403	
-84	0.105	36	0.745	156	0.420	
-81	0.120	39	0.706	159	0.430	
-78	0.145	42	0.661	162	0.440	
-75	0.176	45	0.616	165	0.448	
-72	0.211	48	0.568	168	0.455	
-69	0.253	51	0.523	171	0.461	

Better than SWR

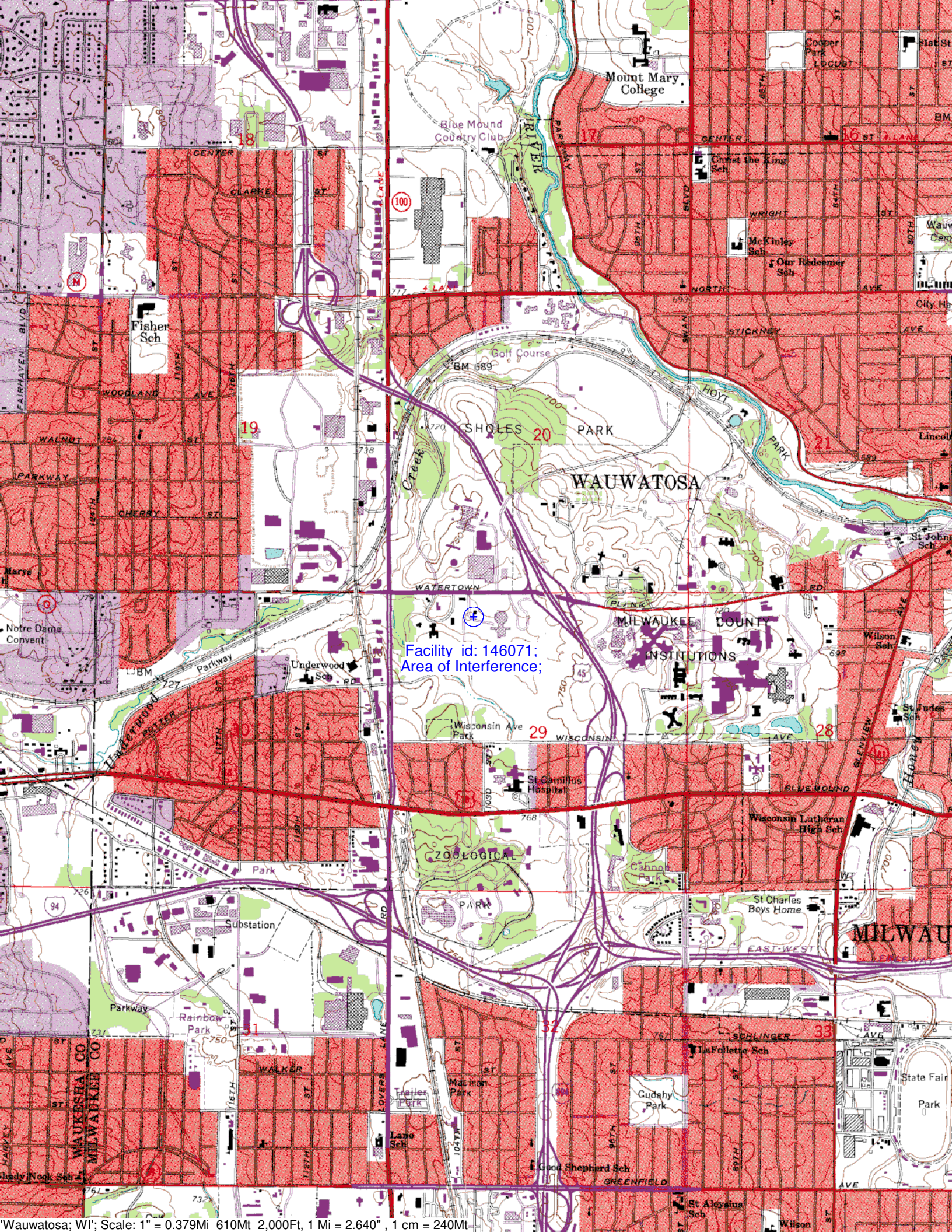
Adjacent Channel Study **For Station W284CI, Facility_id: 146071**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
1391021	149984	BPFT-20100628AOJ	W273AT	IVAN RENE MOORE	D	MILWAUKEE	WI	APP	0.099	293	230	0	7.9	107.884
418791	74095	BLH-19991020ABM	WLWK-FM	JOURNAL BROADCAST CORPORATION	B	MILWAUKEE	WI	LIC	14	498	233	3	12.5	2.7503
1086384	59974	BLH-20050923AAH	WLDB	MILWAUKEE RADIO ALLIANCE, LLC	B	MILWAUKEE	WI	LIC	16	468	227	3	12.6	2.7503
182200	9968	BLH-19930225KB	WBFM	MIDWEST COMMUNICATIONS, INC.	A	SHEBOYGAN	WI	LIC	6	277	229	1	79.1	0
1245873	73142	BMLH-20080515ABR	WJJO	MID-WEST MANAGEMENT, INC.	B	WATERTOWN	WI	LIC	50	416	231	1	83	0
213899	9962	BLH-19950920KB	WYDR	MIDWEST COMMUNICATIONS, INC.	C3	NEENAH-MENASHA	WI	LIC	13	387	232	2	125.4	0
431899	70042	BLH-20000119ABJ	WLIT-FM	AMFM BROADCASTING LICENSES, LLC	B	CHICAGO	IL	LIC	4	663	230	0	133.8	0
46066	25132	BLH-19820809AH	WEKZ-FM	BIG RADIO	B	MONROE	WI	LIC	36	454	229	1	144.4	0
67517	41678	BLH-19840309AR	WTNR	RADIO LICENSE HOLDING CBC, LLC	B	HOLLAND	MI	LIC	50	353	233	3	170.5	0

Intermediate Frequencies (53 and 54 channels difference):

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
983509	53506	BLH-20040317ADF	WDDW	ADELANTE MEDIA OF WISCONSIN LICENSE LLC	A	STURTEVANT	WI	LIC	4.2	315	284	54	26.4	16.4
179103	60612	BLH-19921125KD	WSLD	WPW BROADCASTING, INC.	A	WHITEWATER	WI	LIC	6	381	283	53	67.5	57.5
1107415	60042	BLH-20060109ACJ	WXER	MIDWEST COMMUNICATIONS, INC.	A	PLYMOUTH	WI	LIC	5.1	401	283	53	75.7	65.7



Facility id: 146071;
Area of Interference;

