



ENGINEERING STATEMENT
OF
JOHN F.X. BROWNE, P.E.
IN SUPPORT OF AN APPLICATION FOR
Construction Permit For a New FM Translator
Traverse City, MI
Central Michigan University

Background

Central Michigan University (CMU) is the licensee of WCMW-FM at Harbor Springs, MI (BLED-1997-1212KC, Facility ID #9923, CH280C, 103.9 MHz). CMU now wishes to construct a new FM Translator at Traverse City, MI to rebroadcast the WCMW-FM signal that will operate on CH236 (95.1 MHz). The WCMW-FM signal will be delivered off-the air to the new translator.

Site

The coordinates of the proposed site are:

NAD27
44-46-36 N. Latitude
85-41-02 W. Longitude

The proposed facility is located within the Canadian border zone and coordination with the Canadian government is requested.



Antenna System and Tower

CMU proposes to operate with an ERI SHPX-1AE omni-directional antenna, side mounted on an existing tower (ASRN 1031838). The radiation center of the antenna will be at 76m AGL (163.8m HAAT). The construction will not alter the overall height of the existing tower and, therefore, neither notification to the FAA nor any change to the ASR is required.

Coverage

The entire principal community of Traverse City, MI is well within the predicted F(50,50) 60 dBu contour based on the proposed height and 10 watt ERP.

Interference

A study (attached as Figure 1) was conducted with the proposed parameters using software that emulates the software used by the FCC. The results of the study indicate that there would be prohibited overlap between the proposed facility's 100dBu F(50,10) contour and the 60dBu F(50,50) contour of WJZJ-FM (Glen Arbor, MI). However, Section 74.1204(d) of the Commission's rules states that an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to lack of population. The 100dBu contour of the proposed facility extends to a small area around the transmitter site that has no population (based on 2000 US Census maps); therefore, this application should be deemed acceptable for filing. A map showing the 100dBu contour with a census scattergram based on the 2000 U.S. census is attached.

The study also shows that there is no overlap of any CH6 TV station contours.



Unattended Operation

The proposed facility will be operated “unattended” and will meet all the requirements of Section 74.1234 of the Commission’s rules regarding “unattended” operation.

Multiple Translators

CMU does not operate any translators that substantially serve the same area.

Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.000002 mW/cm^2 which is less than 5% of the MPE for public exposure (0.2 mW/cm^2) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

CMU agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of RFR hazards is posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F. X. Browne, P.E.
June 18, 2008

CMU Proposed Translator 100 dBu F(50,10) contour

John F.X. Browne & Associates P.C.

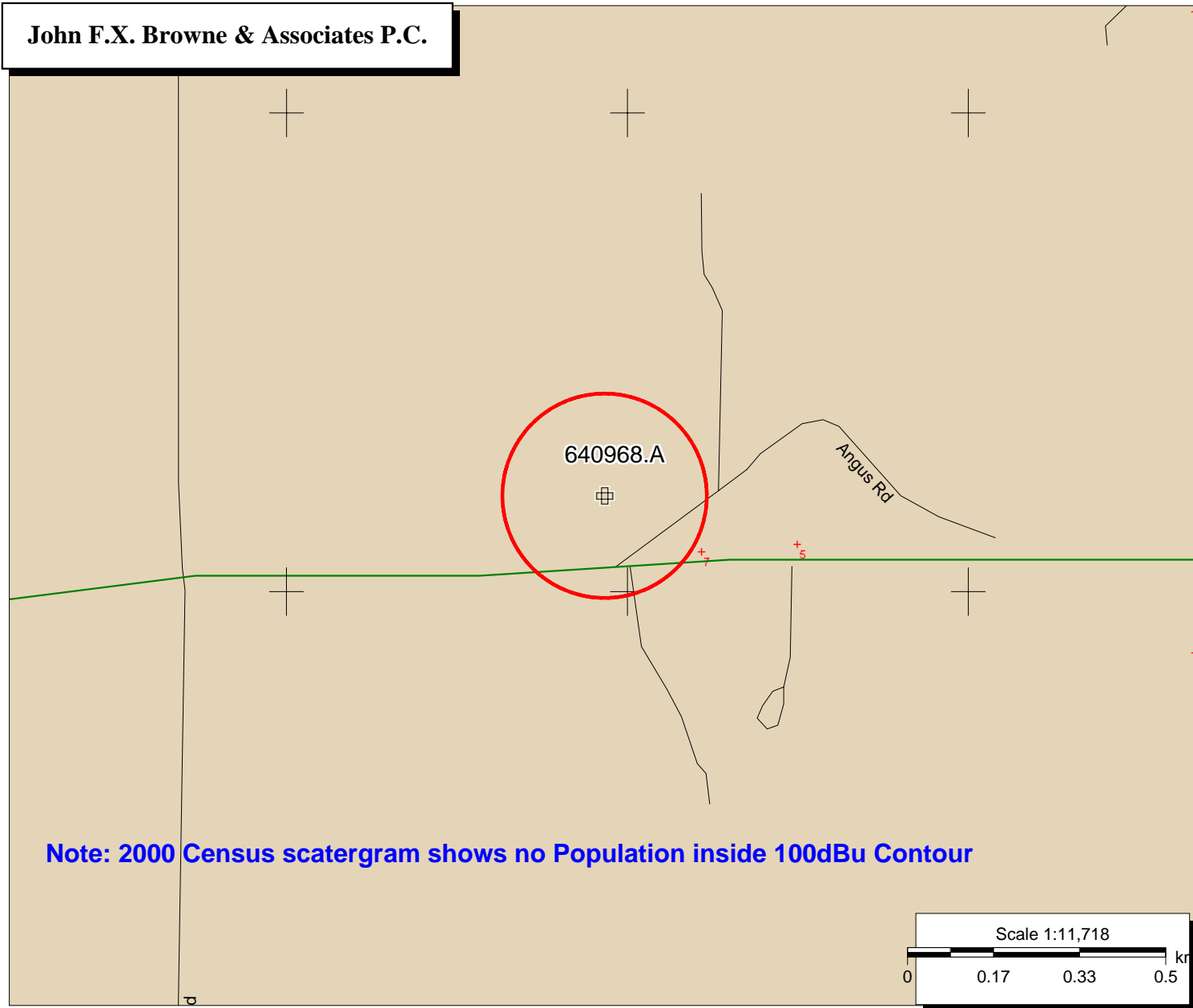


Figure 1

John F.X. Browne & Associates P.C.

Central Michigan University

REFERENCE		CH# 236D - 95.1 MHz, Pwr= 0.01 kw, HAAT= 163.8 M, COR= 396 M							DISPLAY DATES		
44 46 36.0 N.		Average Protected F(50-50)= 7.42 km							DATA 06-14-08		
85 41 02.0 W.		73.215 Omni-directional							SEARCH 06-16-08		
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)
238C2	WJZJ	LIC	_CN	281.4	25.21	44 49 16.0	21.000	5.1	47.4	13.41	-22.41*<
Glen Arbor		MI		101.2	BLH19970212KB	85 59 47.0	225	447	Northern Star Broadcasting		
From Channel 240A per D89-385											
236C1	WLST	LIC	_CN	282.3	159.03	45 03 48.0	100.000	153.3	57.2	-1.04<	79.29
Marinette		WI		100.9	BLH19931206KB	87 39 26.0	133	317	Armada Media-menominee, In		
237A	AU7057721	VAC	---	89.8	81.20	44 46 29.0	6.000	43.4	28.1	29.36	41.21
Frederic		MI		270.5	RM10216	84 39 29.0	100	485	Alpine Wireless Of Frederi		
Site Restriction: 7.6 kilometers (4.7 miles) east											
236D	640425	APP	_C_	160.0	65.69	44 13 16.0	0.050	28.2	8.5	30.63	34.26
Cadillac		MI		340.2	BNPFT20030317EHD	85 24 06.0		508	Fred Hannel		
237A	NEW	CP	NCX	81.5	80.15	44 52 43.0	3.300	40.5	26.6	31.29	41.79
Frederic		MI		262.2	BNPH20070501AGT	84 40 50.0	136	534	Darby Advertising, Inc.		
One Step Application											
235C3	WKZC	LIC	_CN	216.3	98.93	44 03 27.0	17.000	58.6	38.6	33.72	50.97
Scottville		MI		35.8	BLH19931022KC	86 24 58.0	122	318	Lake Michigan Broadcasting		
Proposed to Canada as Class C1 950126-Accepted by Canada 950331											
236D	640441	APP	_C_	29.6	70.66	45 19 42.0	0.050	15.0	4.7	47.14	37.53
Charlevoix		MI		209.9	BNPFT20030317EY	85 14 17.0		244	Fred Hannel		
236D	1056825	APP	_C_	29.6	70.66	45 19 42.0	0.050	15.0	4.7	47.14	37.53
Charlevoix		MI		209.9	BNPFT20030829APP	85 14 17.0		247	Fred Hannel		
235C2	WKJZ	LIC	_CN	78.3	141.75	45 01 15.0	50.000	76.0	50.3	57.28	79.50
Hillman		MI		259.6	BLH19940103KA	83 55 21.0	150	398	Carroll Enterprises, Inc.		

Terrain database is USGS 03 SEC Distance + R = 73.215 or FCC Spacings in KM, Distance + M = Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone = 2. with 3rd Adj Channels.
 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 protected contour.
 "<" = Contour Overlap
 Reference station has protected zone issue: Canada