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FM TRANSLATOR - W203BZ MINOR CHANGE APPLICATION TO A LICENSED FACILITY

ADJACENT CHANNEL APPLICATION

HAS FM CHANNEL 203D 88.5 MHZ
REQUESTS FM CHANNEL 206D 89.1 MHZ

0.010 KW MAX ERP H & V
387.0 METERS RCAMSL
NONDIRECTIONAL ANTENNA
WEST SCHUYLER, NEW YORK

ENGINEERING NARRATIVE

Executive Summary

The applicant proposes to modify the existing licensed facility of W203BZ to specify operation on FM Channel 206D, a third-adjacent channel due to incoming interference from WHCL-FM, Clinton, New York, a first-adjacent channel station to its current channel. Operation on channel 206D will allow the facility to change antenna type from directional to nondirectional (omni), thus improving its reception service to the area.

Other Additional Minor Changes are proposed

This proposal also makes minor changes to the facility's antenna system adding circular polarization to the former vertical polarized operation. The effective radiated power remains unchanged at 0.010 kW (10 watts).

Correction of Geographical Coordinates

A very minor change of site location is reported as a result of a new determination of geographical coordinates of the existing structure as confirmed using google earth satellite images as a reference.



Geographical Site Coordinate Correction (NAD83 Datum)

	EXISTING LICENSE	PROPOSED CORRECTION	Reported Shift (Seconds)
LATITUDE	43-08-34.30 N.	43-08-34.56 N.	+0.26
LONGITUDE	75-10-31.60 W.	75-10-33.30 W.	+1.70

Operating Parameters

The proposal will operate on FM Channel 206D with a maximum effective radiated power (ERP) of 0.010 kilowatts (H & V) and an antenna radiation center height of 387.0 meters above mean sea level (RCAMSL). The facility will employ a 1-bay nondirectional antenna system with circular polarization. The antenna type is SWR FM1-1.

Antenna Elevation in Meters

Site Elevation	363.0
Supporting Structure Overall Height AGL	48.0
Antenna AGL	24.0
Antenna RCAMSL	387.0

FCC Tower Registration (ASR) 1044680 – FAA Notification Not Required

The existing antenna mounting structure is a small self-supporting tower with an overall height of 48 meters above the ground. No change in the overall height of the existing structure will occur as the new antenna is to be side-mounted. The FCC ASR number is 1044680.

Figure 2 – Proposed Service Area

The predicted f(50,50) FCC 60 dBu service contour from the present and proposed operation is provided in Figure 2.

The predicted coverage contour was calculated in accordance with the provisions of 47 C.F.R. §73.313. The antenna radiation center heights above average terrain in the individual radial directions and the effective radiated power in the appropriate directions were used in conjunction with the F(50,50) curves of 47 C.F.R. §73.333 to determine the distance 60 dBu contour.

Figure 3 – Allocation Considerations - FM Channel Study Contour to Contour

An allocation study using the contour to contour method shows no prohibitive contour overlap will occur within populated areas, see §74.1204(d), or Intermediate Frequency distance spacing violations will occur. Adjacent channel protection to WUNY, Channel 208B Utica, New York is addressed in more detail in Figure 4 as provided for in §74.1204(d).

TV Channel 6

As noted in Figure 3, this proposal does not cause interference to operating or proposed Television Channel 6 facilities within the area at the time of filing. No interference is predicted to occur to TV Channel 6 operations from this proposal.

Figure 4 – Adjacent Channel Protection to WUNY, Channel 208B, Utica, New York

Protect to the SECOND-ADJACENT Channel WUNY, Utica, New York is provided as the predicted interference contour from this proposal does not EXTENDED beyond 0.1 meter from the tower and is located 23.9 meters above ground. As no population exists within the predicted interference contour, this proposal is acceptable in accordance with the provision of 47 CFR §74.1204(d).¹

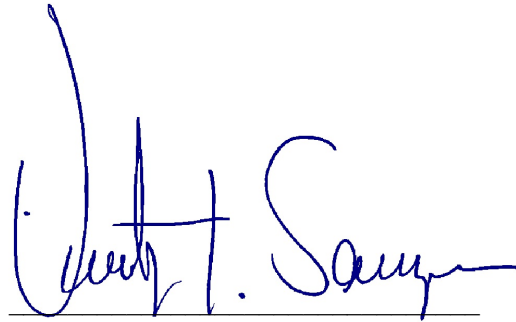
Environmental Evaluation Statement

The environmental evaluation statement concerning this proposal has been included in this application and can be found as a separate file upload within the application. A grant of this proposal would not be an action that would have a significant environmental effect, as demonstrated in the environmental evaluation statement.

Certification

The undersigned hereby certifies that this technical/engineering narrative statement and associated exhibits, tabulations, and figures were prepared by him or under his direction and are true and correct to the best of his knowledge and belief.

February 8, 2021



Timothy Z. Sawyer, Consulting Engineer

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¹ 47 CFR §74.1204 (d): The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an 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.

EXISTING STRUCTURE - NO CHANGES ARE PROPOSED

Registration Detail			
Reg Number	1044680	Status	Constructed
File Number	A1105089	Constructed	04/01/1985
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	43-08-34.0 N 075-10-33.0 W	Address	5825 GRACE ROAD
City, State	DEERFIELD , NY		
Zip	13502	County	ONEIDA
Center of AM Array		Position of Tower in Array	
Heights (meters)			
Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)		
363.0	48.0		
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances		
411.0	43.0		
Painting and Lighting Specifications			
None			
FAA Notification			
FAA Study	96-AEA-0410-OE	FAA Issue Date	05/08/1996

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FCC TOWER REGISTRATION 1044680 FAA NOTIFICATION IS NOT REQUIRED

W203BZ
WEST SCHUYLER, NEW YORK

FIGURE
1

FALL CHURCH, VIRGINIA 22043-2555

SIZE

A

CAGE NO

N/A

DWG NO

20220208W203BZ.F1

REV

(c) 2022, ALL RIGHTS RESERVED

SCALE

N/A

FEBRUARY 2022

SHEET

W203BZ CH206 APP
THIS APPLICATION - NOTE CHANNEL CHANGE
FCC FacID: 87055
NAD 83 Latitude: 43-08-34.56 N
NAD 83 Longitude: 075-10-33.30 W
ERP: 0.01 kW
Channel: 206 Frequency: 89.1 MHz
Antenna RCAMSL Height: 387.0 m
Antenna AGL Height: 24.0 m
Site Elevation: 363.0 m
Horiz. Pattern: Omni

Population Database: 2010 US Census
FCC F(50-50) 60.00 dBu
License Contour Population: 8,918
Proposed Contour Population: 53,081

PRESENT AND PROPOSED SERVICE CONTOUR

W203BZ TO CHANNEL 206D - 3RD ADJACENT CHANNEL

MINOR CHANGE APPLICATION
CHANNEL 206D 89.1 MHZ
NONDIRECTIONAL
0.010 KW RCAMSL 387.0 METERS

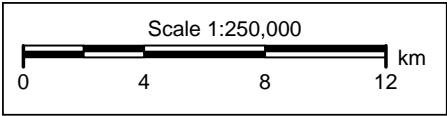
FIGURE 2

W203BZ LIC
FCC Application: BLFT20160128BCF
FCC FacID: 87055
NAD 83 Latitude: 43-08-34.30 N
NAD 83 Longitude: 075-10-31.60 W
ERP: 0.01 kW
Channel: 203 Frequency: 88.5 MHz
Antenna RCAMSL Height: 387.0 m
Antenna AGL Height: 24.0 m
Site Elevation: 363.0 m
Horiz. Pattern: Directional

LICENSED - BLACK CONTOUR
PROPOSED - BLUE CONTOUR

FCC 60 DBU F(50,50)
SERVICE CONTOUR

W203BZ CH206 APP
W203BZ LIC



Map Generated On 2/7/2022
NED 3 Second US Terrain

MINOR CHANGE APPLICATION TO 3RD ADJ CHANNEL

FIGURE 3

Pensacola Christian College, Inc.

REFERENCE CH# 206D - 89.1 MHz, Pwr= 0.01 kW, HAAT= 142.9 M, COR= 387 M
43 08 34.6 N. Average Protected F(50-50)= 6.9 km
75 10 33.3 W. Omni-directional

CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
208B Utica	WUNY	LIC	CN NY	313.8 133.8	0.16 BLED19861021KA	43 08 38.20 75 10 38.50	6.300 237	4.2 486	46.0 The Public Broadcasting Co	-11.1*	-46.0*
203D West Schuyler	W203BZ	LIC	DVN NY	101.8 281.8	0.03 BLFT20160128BCF	43 08 34.30 75 10 31.60	0.010	387	---Reference--- Pensacola Christian Colleg		
206B Schenectady	WMHT-FM	LIC	CN NY	120.8 301.6	111.24 BLED20121121ACB	42 37 31.30 74 00 36.50	6.100 361	103.8 627	40.7 Wmht Educational Telecommu	-1.1	45.1
204A Clinton	WHCL-FM	LIC	CN NY	241.5 61.3	21.34 BLED19840427CI	43 03 04.20 75 24 22.60	0.270 29	1.2 299	15.8 Trustees Of Hamilton Colle	11.2	5.2
205B Unadilla	WCIJ	APP	CN NY	188.5 8.4	84.46 0000178051	42 23 27.00 75 19 40.00	6.500 230	64.7 676	42.9 Family Life Ministries, In	13.1	32.6
204A Richfield Springs	WMHY	LIC	DVN NY	143.4 323.6	30.87 BLED20130215AAK	42 55 11.20 74 57 00.50	0.610 116	0.3 505	11.4 Mars Hill Broadcasting Co.	21.3	17.5
203A Richfield Springs	WMHY	APP	DVN NY	143.4 323.6	30.87 0000178048	42 55 11.20 74 57 00.50	0.610 116	0.3 505	11.4 Mars Hill Broadcasting Co.	21.3	17.5

TV CHANNEL 6 - NO CONTOUR OVERLAP OR INTERFERENCE IS PREDICTED

06 Schenectady	WRGB	APP	HN NY	119.9 300.7	111.62 0000183255	43 38 13.00 72 48 56.40	14.000 311	3.6 553	68.7	72.4R	39.3M
06 Westvale	WVOA-LD	LI	DHN NY	263.7 83.0	81.18 0000179340	43 03 30.00 76 09 59.00	0.750	5.0 220	5.5	10.4R	70.8M

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= East Zone, Co to 3rd adj.
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)
""affixed to 'IN' or 'OUT' values = site inside restricted contour.

The translator's 34 dBu F(50-10) contour does not touch Canada.
Facility is okay with respect to AM station towers.
Facility is okay with respect to FCC monitoring stations.
Facility is okay toward West Virginia Quiet Zone.
Facility is okay toward Table Mountain.

TV Channel 6, facility is okay with respect to TV Channel 6 operations. No prohibitive overlap occurs.

* With regards to contour overlap to 2nd adjacent channel station WUNY, Channel 208B, Utica, NY, no prohibitive contour overlap occurs over any populated areas. Interference Contour remains elevated above ground and is within property boundary of site. Interference contour extends a maximum distance of 0.1 meter from tower.

The requirements of 47 CFR Section 74.1204(d) are met as no population exists and the interference contour is fully contained within the tower site boundary. See application Figure 4 for further detailed study results.

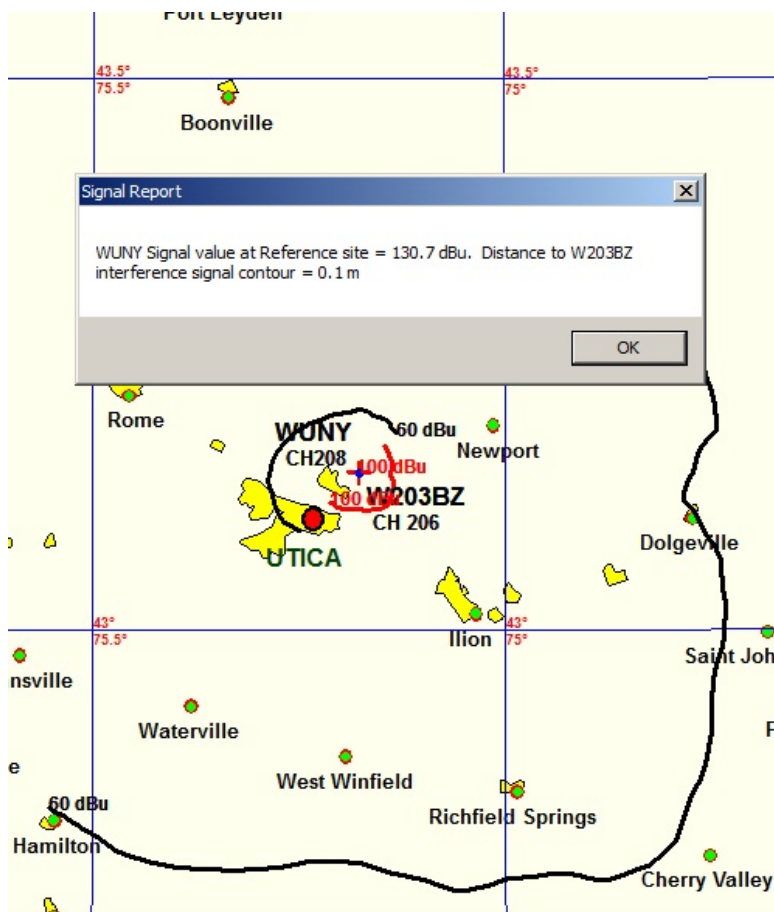
Figure 4

SECOND-ADJACENT CHANNEL CONTOUR OVERLAP WAIVER REQUEST
(IF REQUIRED)

TO STATION WUNY (Ch. 208B)
UTICA, NEW YORK

Basis for Waiver Request 47 CFR §74.1204(d)
No population within predicted interference contour area

Second-Adjacent Channel Station WUNY (Ch. 208B), a licensed facility, is predicted to have a signal level of 130.7 dBu at the proposed translator site (the reference site). The D/U (desired to undesired) signal ratio is 40.0 dBu. Thus, the interfering signal level from this proposal is $130.7 + 40 = 170.7$ dBu. The calculated predicted signal level from WUNY at the proposed translator site, and the predicted interfering contour distance results in a maximum horizontal distance of 0.1 meters from the translator antenna. As the translator antenna is 24 meters above ground, the interfering contour remains elevated at a level of 23.9 meters or greater above ground. As a result of the elevated above ground level interference contour, no population exists within the interference contour and this application is acceptable in accordance with 47 CFR §74.1204(d).



There are no tall building, roof tops, or occupied spaces within the interference contour from this proposal. No interference is predicted to occur to a populated area.

Applicant believes that it has demonstrated that due to lack of population within the interference contour to WUNY, and that it is in compliance with the Commission's rules.

Should a waiver of the rules with regards to the second-adjacent station contour overlap be necessary, it respectfully requests that said waiver be granted. A grant is in the public interest in that it has been demonstrated that no harm will occur and that no population is present within the interference contour radius of 0.1 meters from the tower.

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FM TRANSLATOR - W203BZ

FM CHANNEL 206D 89.1 MHZ (ADJACENT CHANNEL CHANGE)

0.010 KW MAX ERP H&V (0.020 KW TOTAL)

WEST SCHUYLER, NEW YORK

ENVIRONMENTAL EVALUATION STATEMENT

A grant of this proposal would NOT be an action which would have a significant environmental effect as demonstrated in this environmental evaluation statement. Any changes in equipment, or construction, if necessary will not trigger any event with regards to Section 106 of the National Historical Preservation Act (NHPA). This is an existing and developed communications site with restricted fencing about the tower.

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are not known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will not involve the use of high intensity white lights. Furthermore, operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

FCC FM MODEL CALCULATED POWER DENSITY AT 2 METERS AGL (USING EPA TYPE 1 ANTENNA)

0.020 KW (H + V SUM) CR AGL 24.0 M	MPE ($\mu\text{W}/\text{CM}^2$)	CALCULATED VALUE ($\mu\text{W}/\text{CM}^2$)	% OF MPE	PASS/FAIL
CONTROLLED AREA	1000	0.8308	0.08%	PASS
PUBLIC AREA	200		0.42%	PASS

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with any co-located facilities and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

February 8, 2021

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