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**PENSACOLA CHRISTIAN COLLEGE, INC.**

**FM TRANSLATOR STATION**

**W203AS / W208BY**

**WABASH, INDIANA**

**FACILITY ID: 85820**

**MINOR CHANGE APPLICATION FCC FORM 2100-349**

**MODIFICATION OF CONSTRUCTION PERMIT**

**BPFT-20190813AAW**

**AUGUST 2020**

**ENGINEERING EXHIBIT**

**IN SUPPORT OF**

**APPLICATION FOR AUTHORITY TO  
CONSTRUCT OR MAKE CHANGES IN AN  
FM TRANSLATOR OR FM BOOSTER STATION**

**ENGINEERING EXHIBIT**  
**PENSACOLA CHRISTIAN COLLEGE, INC.**  
**FM TRANSLATOR STATION**  
**W203AS / W208BY**  
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**AUGUST 2020**

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**PENSACOLA CHRISTIAN COLLEGE, INC.**  
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**MINOR CHANGE APPLICATION FCC FORM 2100-349**  
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**AUGUST 2020**

**NARRATIVE STATEMENT**

The engineering exhibit, of which this narrative is part, was prepared on behalf of PENSACOLA CHRISTIAN COLLEGE, INC., in support of an application to modify the CONSTRUCTION PERMIT (BPFT-20190813AAW) of W203AS / W208BY, Wabash, Indiana. No change in the designation of the primary station is sought.

The permittee seeks to make minor changes to the CONSTRUCTION PERMIT operating power (ERP) and antenna/site location. The construction permit previously authorized a channel change from channel 203 to channel 208. No change in the construction permit assigned channel of 208 (89.5 MHZ) is requested.

In support of the requested changes, the following figures, exhibits or tables are provided:

**Figure 1 – Supporting Structure Tower:**

This is an existing communications site; no changes are proposed to the antenna supporting structure. The tower has been registered with the FCC and issued ASR number 1242216.

**Figure 2 – Vertical Sketch of Tower and Antenna:**

A vertical sketch of the antenna supporting structure with the proposed antenna mounting elevation is provided in Figure 2.

Pensacola Christian College, Inc.  
FM Translator, W203AS / W208BY  
Wabash, IN

#### Nondirectional (Omni) Antenna Details:

The antenna is a circular polarized, nondirectional SWR “FM-1,” a single bay FM antenna. The effective radiated power is 0.055 kW (55 watts) using H & V polarization. This is an EPA type “1” antenna.

#### Figure 3 – Predicted Service Contour:

The predicted service contour for the FM translator facility was calculated in accordance with the provisions of 47 CFR 73.313. The average terrain elevations from 3 to 16 kilometers from the proposed translator site were obtained from the NGDC 30-second computer database. The standard twelve radials evenly spaced at 30-degree intervals were used for determining the distance to the 60 dBu translator service contour.

#### Figure 4 – FM Channel Study:

The proposed operation fully protects all other stations of concern, as detailed in the contour overlap study in Figure 4. No prohibitive overlap of contours occurs.

#### Environmental Considerations:

The applicant believes its proposal will not significantly affect the environment for the following reasons:

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, the operation of the proposed facility will not involve the exposure of workers or the general public to levels of radiofrequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission.

Pensacola Christian College, Inc.  
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Wabash, IN

The results of the FCC's FM Model computer program output indicate that the power density from this proposal using a "Type 1" EPA model antenna is predicted to be  $2.46 \mu\text{W}/\text{cm}^2$  or less. The computed power density is 0.246% of the Commission's guidelines for a controlled area and 1.23% for an uncontrolled area.

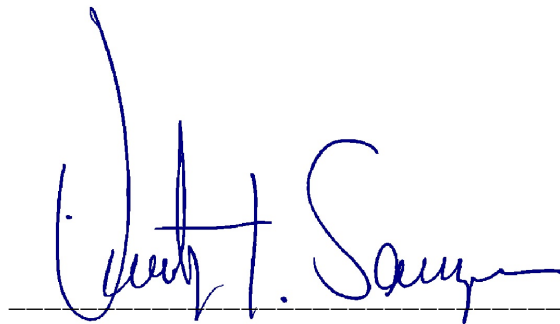
This level is well below the Commission's guidelines for maximum exposure levels to electromagnetic fields, and no further study is required. The applicant will fully-cooperate and coordinate with all site users as required by the Commission's rules.

Summary:

The FM translator will continue to operate as a translator for Noncommercial FM broadcast station WPCS, Pensacola, Florida, Facility ID: 52230, with a maximum ERP of 0.055 kilowatts (H & V Polarization) utilizing an SWR FM-1 nondirectional antenna operating on FM Channel 208D (89.5 MHz).

The proposed operation is fully in compliance with all areas of the Commission's rules and applicable international agreements.

August 11, 2020

A handwritten signature in blue ink, reading "Timothy Z. Sawyer", written over a horizontal line.

Timothy Z. Sawyer, Consulting Engineer

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**Existing Communications Tower - No FAA Notice Required**  
**(No change in existing tower height is proposed)**

Registration Detail			
Reg Number	1242216	Status	Constructed
File Number	A0999781	Constructed	04/28/2004
EMI	No	Dismantled	
NEPA	No		
Antenna Structure			
Structure Type	GTOWER - Guyed Structure Used for Communication Purposes		
Location (in NAD83 Coordinates - <a href="#">Convert to NAD27</a> )			
Lat/Long	40-49-13.9 N 085-48-08.9 W	Address	1169 MANCHESTER AVENUE
City, State	WABASH , IN		
Zip	46992	County	WABASH
Center of AM Array		Position of Tower in Array	
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
239.3		103.6	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
342.9		97.5	
Painting and Lighting Specifications			
FAA Chapters 4, 8, 12 Paint and Light in Accordance with FAA Circular Number <a href="#">70/7460-1K</a>			
FAA Notification			
FAA Study	2016-AGL-566-OE	FAA Issue Date	02/05/2016

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**FCC TOWER ASR REGISTRATION 1242216**  
**FAA NOTICE NOT REQUIRED - NO CHANGE IN STRUCTURE**

W203AS / W208BY FM TRANSLATOR  
WABASH, INDIANA

**FIGURE  
1**

FALL CHURCH, VIRGINIA 22043-2555

SIZE

A

CAGE NO

N/A

DWG NO

20200714WABASH.F1

REV

(c) 2020, ALL RIGHTS RESERVED

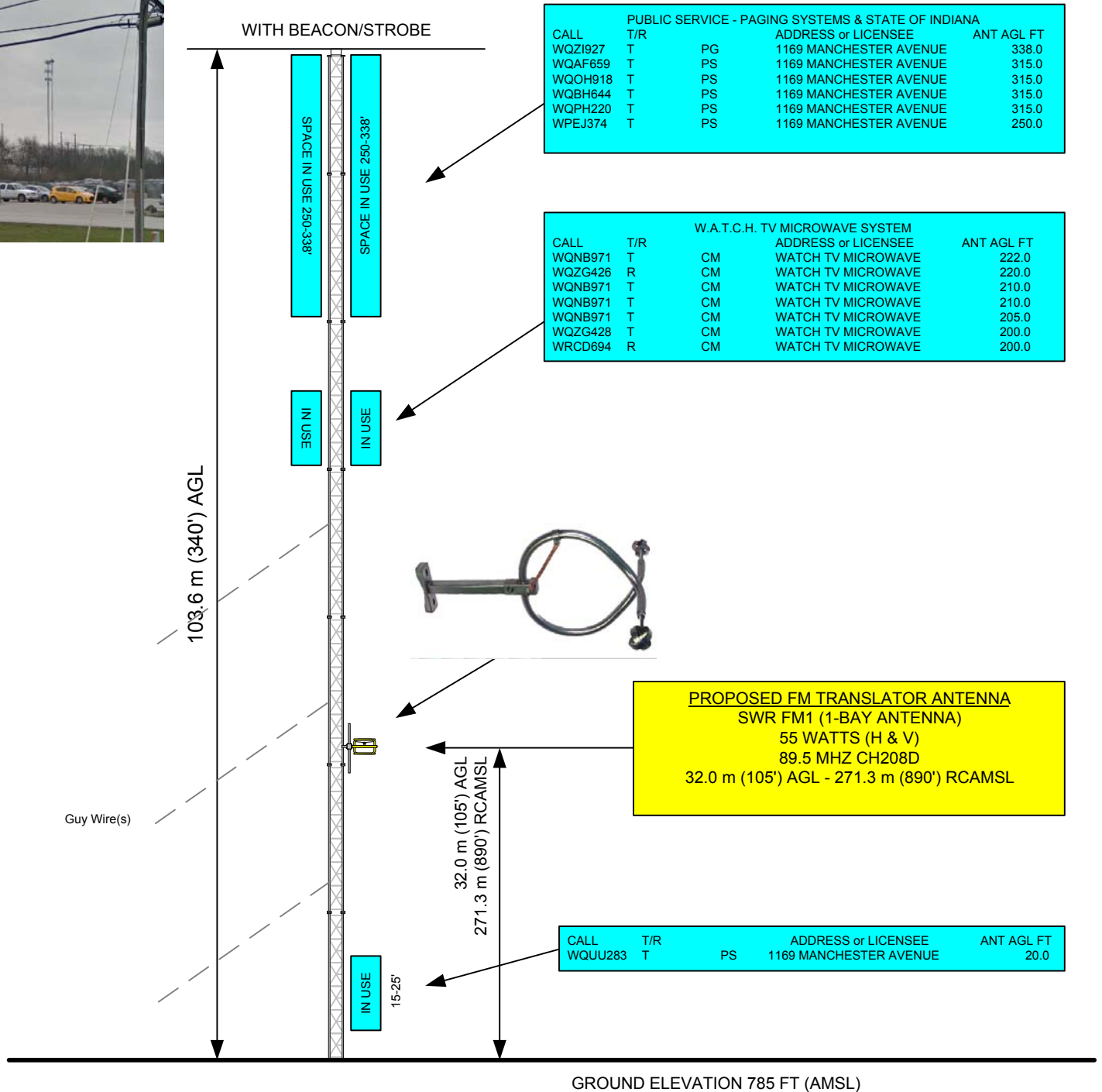
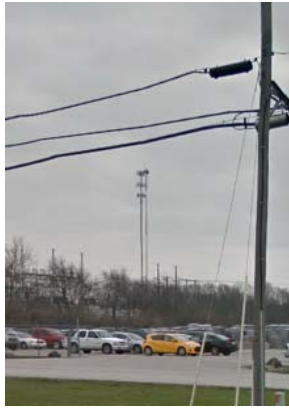
SCALE

N/A

JULY 2020

SHEET

**EXISTING COMMUNICATIONS SITE  
NO CHANGE TO SUPPORTING STRUCTURE/TOWER HEIGHT**



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**VERTICAL SKETCH OF TOWER / SUPPORTING STRUCTURE**

**W203AS / W208BY FM TRANSLATOR  
WABASH, IN**

**FIGURE  
2**

SIZE

A

CAGE NO

N/A

DWG NO

20200520W203AS.1

REV

7-20-20

SCALE

1"=50' VERTICAL  
ONLY

JULY 2020

SHEET





## MINOR SITE MOVE

FIGURE 4

Pensacola Christian College, Inc.

REFERENCE  
 40 49 13.9 N.  
 85 48 08.9 W.

CH# 208D - 89.5 MHz, Pwr= 0.055 kW, HAAT= 38.0 M, COR= 271.3 M  
 Average Protected F(50-50)= 5.4 km  
 Omni-directional

CH CITY	CALL	TYPE STATE	ANT IN	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
208D Wabash	W203AS	CP	IN	333.1 153.1	1.39 BPFT20190813AAW	40 49 54.20 85 48 35.90	0.027	18.7 304	5.7 Pensacola Christian Colleg	-23.2*	-24.0*
206B Fort Wayne	WBOI	LIC D	IN	58.8 239.2	61.19 BLED19940406KA	41 06 13.10 85 10 43.80	34.000 184	5.8 429	51.5 Northeast Indiana Public R	49.1	9.0
208A Anderson	WBSB	LIC	IN	171.3 351.3	72.26 BLED19970324KB	40 10 38.10 85 40 22.90	0.400 111	52.2 375	15.6 Ball State University	14.8	39.5
208B1 Archbold	WBCY	LIC D	OH	59.4 240.4	147.27 BLED20051205AAM	41 28 59.20 84 16 57.80	20.000 96	109.2 317	38.0 Taylor University Broadcas	31.8	93.8
209A Upland	WBCW	LIC	IN	149.6 329.8	51.92 BMLLED20080822AAG	40 25 02.10 85 29 30.90	0.150 34	9.7 300	6.6 Taylor University Broadcas	37.3	37.8
207A Plymouth	WIKV	LIC	IN	322.6 142.3	73.91 BMLLED20140610AAC	41 20 51.20 86 20 23.00	1.400 76	24.3 317	16.4 Educational Media Foundati	43.5	48.5
210A Wakarusa	WYBV	LIC	IN	358.6 178.6	71.47 BLED20060531AIM	41 27 50.20 85 49 22.00	1.750 100	1.9 357	21.4 Bible Broadcasting Network	63.8	49.5
208B1 Chesterton	WBEW	LIC D	IN	311.4 130.6	138.27 BLED20081027AAD	41 38 06.10 87 02 59.10	4.000 182	81.5 380	27.7 Chicago Public Media Inc	50.9	89.3
208B1 Schoolcraft	WOFR	LIC D	MI	5.6 185.7	143.97 BMLLED20130530AMJ	42 06 38.10 85 37 56.90	10.000 42	86.6 305	24.0 Family Stations, Inc.	51.8	102.8
209D Fort Wayne	W209AW	LIC	IN	66.2 246.7	70.14 BLFT20021217AAZ	41 04 21.20 85 02 18.90	0.080 46	9.9 284	6.9 Pensacola Christian Colleg	53.7	56.0
209D Kendallville	W209BA	LIC	IN	35.5 215.8	79.11 BLFT19980921TC	41 23 55.20 85 15 07.90	0.010 114	8.8 400	6.2 Star Educational Media Net	65.4	66.0
207D Goshen	W207BF	LIC	IN	357.1 177.1	82.01 BLFT20001115AAX	41 33 29.20 85 51 06.00	0.022 79	9.0 332	6.4 Olivet Nazarene University	67.3	67.7
208D Elkhart	W208BF	LIC	IN	350.6 170.4	92.85 BLFT20060703ACU	41 38 42.20 85 59 10.00	0.009 113	18.7 351	5.7 Olivet Nazarene University	68.4	68.1
205A Notre Dame	WSND-FM	LIC	IN	338.7 158.4	93.69 BLED19980812KB	41 36 19.20 86 12 45.00	3.400 110	2.3 348	24.7 Voice Of The Fighting Iris	85.4	68.5
211B Indianapolis	WFYI-FM	LIC	IN	198.3 18.1	107.68 BLED1574	39 53 59.10 86 12 00.90	10.000 171	3.7 418	37.8 Metropolitan Indianapolis	98.1	69.0
205B1 Battle Ground	WLXJ	LIC	IN	252.0 71.2	105.13 BLED20180131AAW	40 31 20.00 86 58 57.00	17.000 81	3.5 292	34.6 Educational Media Foundati	94.5	69.9

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 adjacent Channel. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, Blank = Omni  
 "\*"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.

No contour overlap found.

\* W203AS/W208BY Existing Construction Permit. This is a minor change modification of permit  
 to move to new site located 1.39 kilometers at a bearing of 153.1 degrees true.