

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of the WILLIAMSPORT LYCOMING BROADCAST FOUNDATION, licensee of noncommercial FM station WPTC, Channel 201A in Williamsport, Pennsylvania, in support of this Application for Construction Permit to operate from a new site located approximately two kilometers from the presently licensed site. No change in effective radiated power or antenna make/model is proposed herein.

It is intended to mount the licensed Shively two-bay circularly-polarized antenna on top of an existing 23-meter building in downtown Williamsport. It is important to note that the addition of the antenna to the building will increase the overall height of the structure by only 15-feet. The 60 dBu (1.0 mV/m) predicted service contour of the proposed facility is plotted in Exhibit B. As shown, the city of Williamsport is completely contained within the predicted 60 dBu contour of the proposed facility, as required in Section 73.515 of the FCC's Rules. In addition, the main studio location will comply with Section 73.1125 of the Commission's Rules. Exhibit C is a contour overlap study, and a power density calculation follows as Exhibit D.

It is important to note that there is no Channel 6 television facility within the distance of concern for an NCFM station operating on Channel 201. In addition, Canadian coordination of this application is unnecessary since the proposed 34 dBu interference contour from the proposed facility does not cross the U.S./Canadian border at any point.

EXHIBIT A

While no interference to any authorized communications facility at the proposed site is expected to be caused by the proposed operation, the applicant accepts its responsibility for correcting any such interference that may occur. In addition, the applicant will satisfy any complaint of interference to any FCC-listed device within its predicted blanketing contour.

Because the increase in the overall height of the existing building is less than 20 feet, the FAA has not been notified of this application. In addition, and for the same reason, FCC antenna structure registration is not required.

I declare, under penalty of perjury, that the foregoing statements and attached engineering exhibits, which were prepared by me, are true and correct to the best of my knowledge and belief.

A handwritten signature in black ink, appearing to read "K. T. Fisher". The signature is written in a cursive, somewhat stylized font.

KEVIN T. FISHER

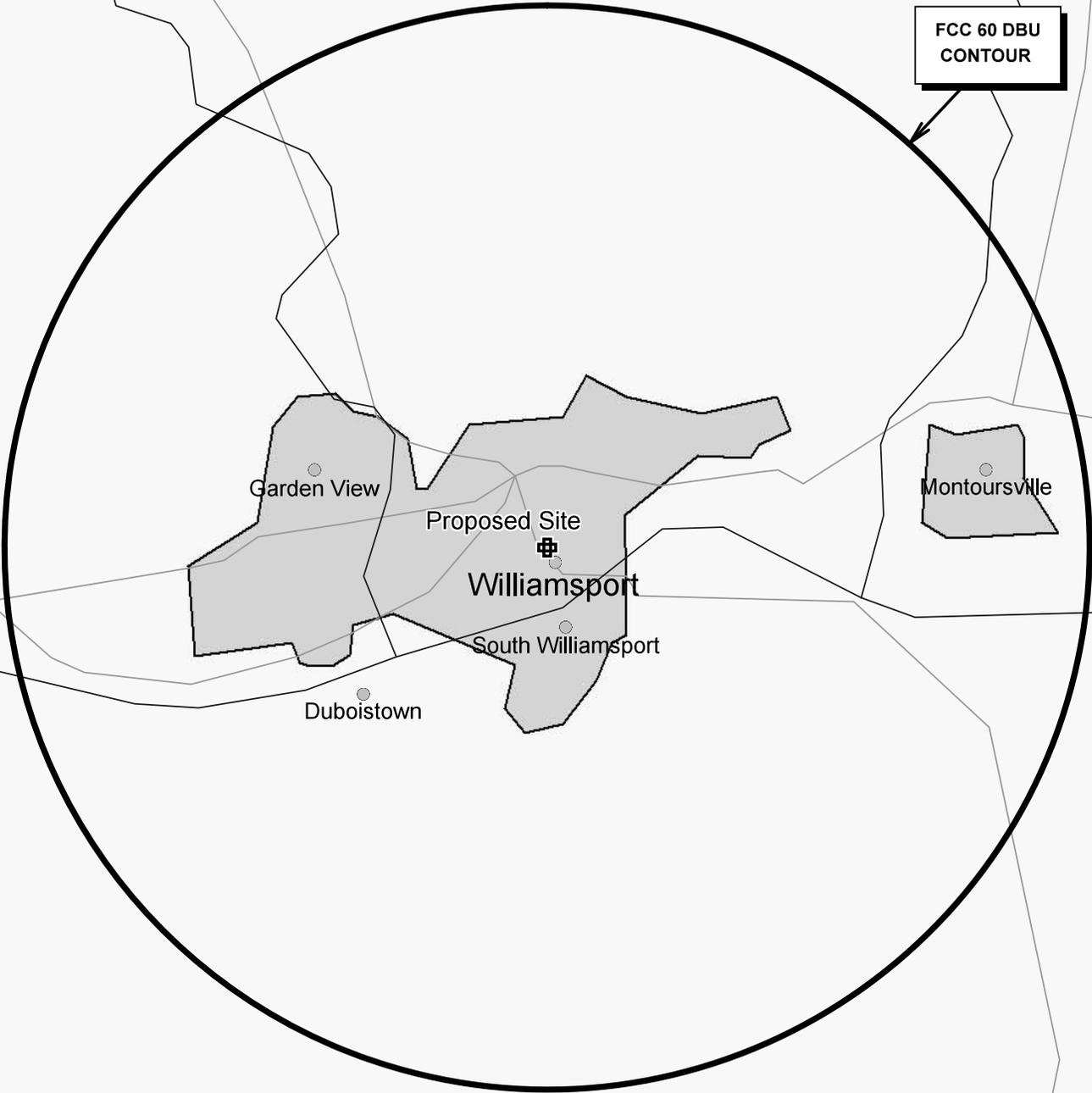
June 25, 2013

**CONTOUR POPULATION  
2010 U.S. CENSUS DATA  
60 DBU (1.0 MV/M) : 60,197**



Lycoming

**FCC 60 DBU  
CONTOUR**



Garden View

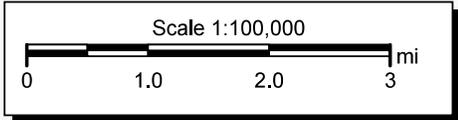
Proposed Site

Williamsport

South Williamsport

Duboistown

Montoursville



**EXHIBIT B  
PREDICTED SERVICE CONTOUR  
PROPOSED WPTC(FM)  
CH. 201A - WILLIAMSPORT, PA**

CONTOUR OVERLAP STUDY  
PROPOSED WPTC(FM)  
CHANNEL 201A – WILLIAMSPORT, PENNSYLVANIA

Attached as Exhibit C-2 is a tabulation of spacings to pertinent co- and adjacent-channel stations, assuming maximum specified power and height values for the proposed WPTC facility. The overlap separations are based upon calculation of protected and interfering contours of both the proposed station and the facilities of concern, based upon requirements in Section 73.509 of the Commission's Rules. It should be evident that if the spacing significantly exceeds the "required" spacing, prohibited contour overlap will not exist, regardless of terrain and antenna pattern variations.

Exhibit C-2 indicates three instances where the clearance is not great enough to assume an absence of prohibited overlap. Attached as Exhibits C-3 and C-4 are maps upon which the protected and interfering contours of proposed WPTC and each of the stations of concern are plotted, based on the requirements of Section 73.509 of the FCC's Rules. From these maps it is clear that no overlap between protected and interfering contours would exist between proposed WPTC and the licensed facilities of WBGM and WXPI. However, the situation with respect to the WPXI facility authorized in BPED-20120523AFY requires additional explanation.

In the referenced application for upgraded facilities, WPXI requested a waiver of the Commission's contour overlap requirements to WPTC, since the proposed WPXI 60 dBu contour completely overlapped the interfering contour (100 dBu) of WPTC. In its FCC submission, WPXI stated that it would accept a condition on its construction permit with regard

EXHIBIT C-1

to potential future modifications of WPTC, such as that proposed in the instant application.

Exhibit C-5 is a copy of the waiver request filed by WPXI in BPED-20120523AFY, and a copy of the WPXI construction permit (on which a condition with regard to WPTC is included) is provided in Exhibit C-6.

Accordingly, it is believed that the facility proposed herein meets the Commission's contour overlap requirements specified in Section 73.509 of the Rules to all stations.

# EXHIBIT C-2

## CONTOUR OVERLAP STUDY

PROPOSED WPTC(FM) - WILLIAMSPORT, PA

REFERENCE  
41 14 35.6 N.  
77 00 10.5 W.

CH# 201A - 88.1 MHz, Pwr= 0.5 kw, HAAT= -94.6 M, COR= 174.5 M  
Average Protected F(50-50)= 8.5 km  
Omni-directional

DISPLAY DATES  
DATA 06-25-13  
SEARCH 06-25-13

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*
201A Williamsport	WPTC	LIC _CN PA		248.1 68.1	2.04 BLED19941117KA	41 14 11.0 77 01 32.0	0.490 -95	28.4 177	8.5 Pennsylvania College Of Te	-34.8*	-34.9*
203A Jersey Shore	WXPI	CP DCX PA		266.3 86.2	16.79 BPED20120523AFY	41 14 00.0 77 12 10.0	3.000 32	2.6 357	28.8 The williamsport Guardian,	5.7	-13.6*
201A New Berlin	WBGW	LIC DCN PA		179.4 359.4	39.13 BLED19960823KA	40 53 27.0 76 59 54.0	0.550 127	27.4 335	8.2 Montrose Broadcasting Corp	3.3	2.5
203A Jersey Shore	WXPI	LIC _C_ PA		266.3 86.2	16.79 BLED20110531AFX	41 14 00.0 77 12 10.0	0.095 32	0.7 357	12.4 The williamsport Guardian,	7.6	2.8
201A Sweet Valley	WRGN	LIC _CN PA		84.9 265.5	73.86 BLED19890518KA	41 17 54.0 76 07 28.0	0.500 92	55.6 503	17.1 Gospel Media Institute, In	9.7	28.2
201A Dushore	WYSP	LIC _CX PA		57.4 237.8	58.71 BLED20110511AFH	41 31 33.0 76 24 35.0	0.100 -23	18.6 505	5.6 Telikoja Educational Broad	31.6	24.5
06 1C Schenectady	WRGB	LI _HN NY		57.2 239.2	291.81 BMLCDT20110816AAF	42 37 31.0 74 00 38.0	30.200 392	1.6 649	7.9 wrgb Licensee, Llc	264.5R	27.3M
202B1 State College	WKDN-FM	LIC _EX PA		241.9 61.4	82.11 BLED20080722AAM	40 53 35.0 77 51 48.0	1.800 209	46.1 608	30.5 Family Stations, Inc.	27.5	39.6
201A Elmira	WMTQ	LIC _CX NY		6.5 186.5	96.45 BLED20110217ABY	42 06 21.7 76 52 17.1	0.090 372	57.8 756	18.1 Holy Family Communications	30.1	49.8
201B1 Ridgway	WRQV	LIC DCX PA		270.7 89.6	137.85 BLED20110914AAG	41 14 49.0 78 38 51.0	2.100 249	98.4 780	38.2 Invisible Allies Ministrie	31.0	71.2
202A Mainesburg	WTIO	LIC DCX PA		6.4 186.5	57.69 BLED20120803ABE	41 45 34.0 76 55 31.0	0.048 259	16.2 779	11.2 Northeastern Pennsylvania	33.0	34.5
06 1C Philadelphia	WPVI-TV	AP _HN PA		131.3 312.5	199.88 BDSTA20120724AED	40 02 39.0 75 14 26.0	62.900 332	17.4 404	102.8 Abc, Inc.	120.2R	79.7M
06 1C Philadelphia	WPVI-TV	AP _CY PA		131.4 312.5	199.88 BPCDT20120604AEC	40 02 33.0 75 14 33.0	62.900 330	17.4 395	102.2 Abc, Inc.	119.6R	80.3M
06 1C Philadelphia	WPVI-TV	AP _CY PA		131.4 312.5	199.88 BDSTA20120619ABX	40 02 33.0 75 14 33.0	62.900 330	17.4 395	102.2 Abc, Inc.	119.6R	80.3M
06 1C Philadelphia	WPVI-TV	LI _CY PA		131.4 312.5	199.88 BLCDT20111019ACJ	40 02 33.0 75 14 33.0	34.000 330	17.4 395	95.6 Abc, Inc.	113.0R	86.9M

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
Contour distances are on direct line to and from reference station. Reference zone= , Co to 3rd adjacent.

All separation margins (if shown) include rounding

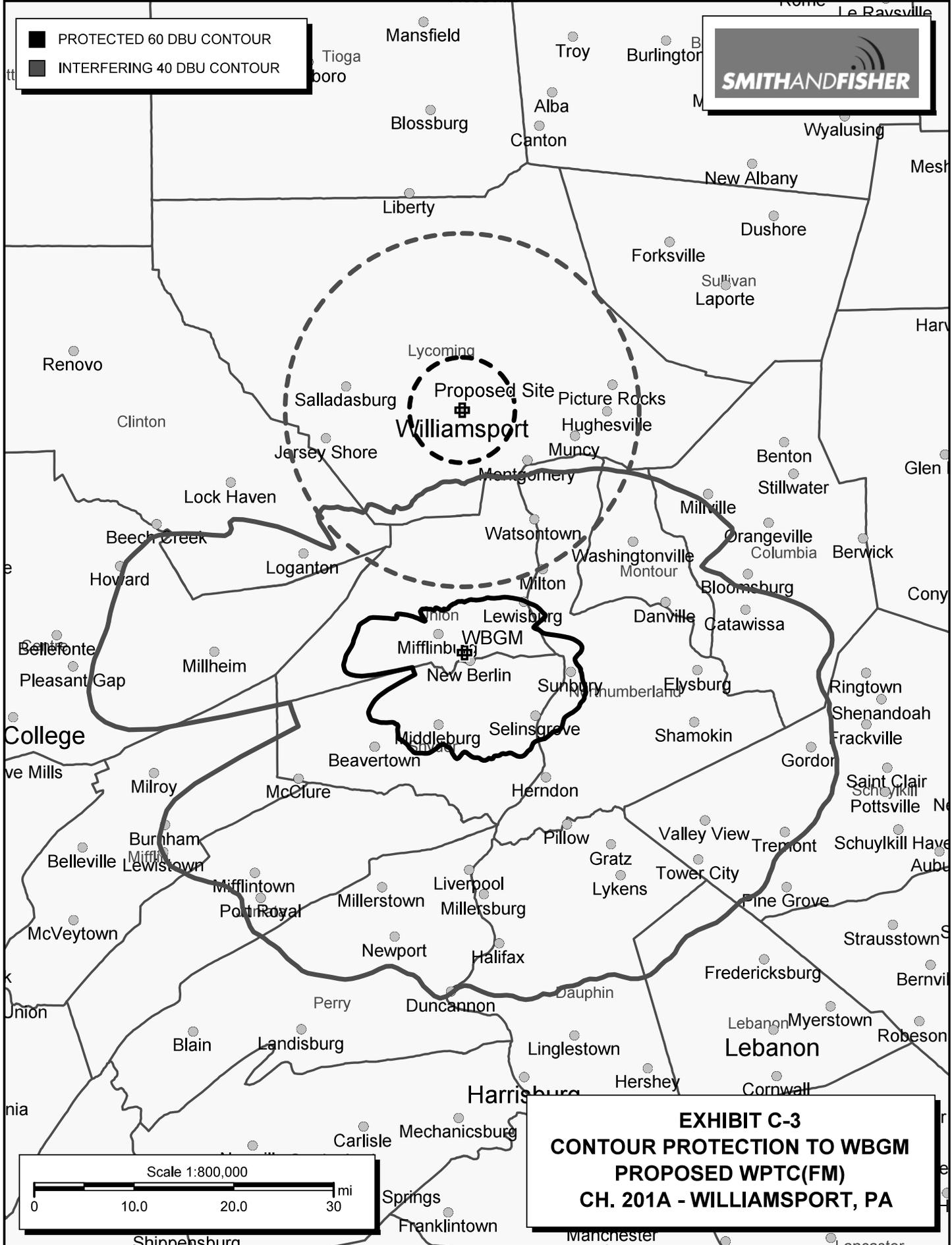
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.

< = Station meets FCC minimum distance spacing for its class.



PROTECTED 60 DBU CONTOUR  
 INTERFERING 40 DBU CONTOUR

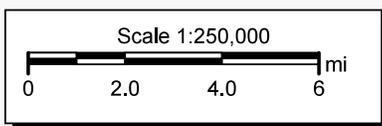
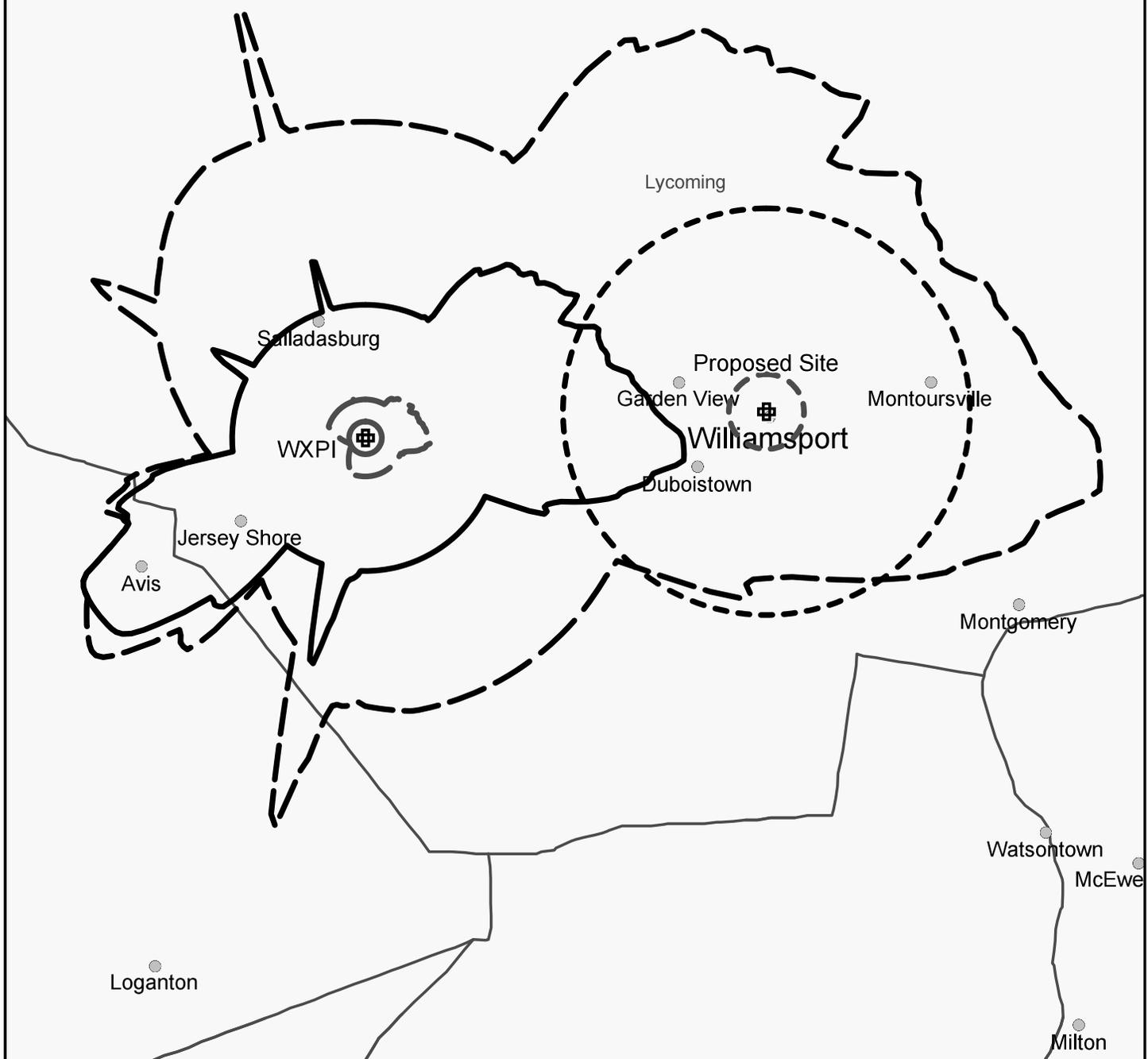


**EXHIBIT C-3**  
**CONTOUR PROTECTION TO WBGM**  
**PROPOSED WPTC(FM)**  
**CH. 201A - WILLIAMSPORT, PA**



- PROTECTED 60 DBU CONTOUR
- INTERFERING 40 DBU CONTOUR

**NOTE:**  
 SOLID LINES = WXPI AS LICENSED  
 DASHED LINES = WXPI AS AUTHORIZED  
 DOTTED LINES = PROPOSED WPTC



**EXHIBIT C-4**  
**CONTOUR PROTECTION TO WXPI**  
**PROPOSED WPTC(FM)**  
**CH. 201A - WILLIAMSPORT, PA**

**TO OUR WIVES**

The present is a time of great change for all of us. We are living in a time of great change, a time of great change. We are living in a time of great change, a time of great change. We are living in a time of great change, a time of great change.

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United States of America  
**FEDERAL COMMUNICATIONS COMMISSION**  
**FM BROADCAST STATION CONSTRUCTION PERMIT**

Authorizing Official:

Official Mailing Address:

THE WILLIAMSPORT GUARDIAN, INC.  
1307 PARK AVENUE #1  
WILLIAMSPORT PA 17701

Rodolfo F. Bonacci  
Assistant Chief  
Audio Division  
Media Bureau

Facility ID: 175293

Grant Date: August 09, 2012

Call Sign: WXPI

This permit expires 3:00 a.m.  
local time, 36 months after the  
grant date specified above.

Permit File Number: BPED-20120523AFY

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

Name of Permittee: THE WILLIAMSPORT GUARDIAN, INC.

Station Location: PA-JERSEY SHORE

Frequency (MHz): 88.5

Channel: 203

Class: A

Hours of Operation: Unlimited

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: As required to achieve authorized ERP.

Antenna type: Directional

Antenna Coordinates: North Latitude: 41 deg 14 min 00 sec  
 West Longitude: 77 deg 12 min 10 sec

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the Horizontal Plane (kW):	3.00	3.00
Height of radiation center above ground (Meters):	58	58
Height of radiation center above mean sea level (Meters):	357	357
Height of radiation center above average terrain (Meters):	32	32

Antenna structure registration number: 1027327

Overall height of antenna structure above ground (including obstruction lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components. This proof-of-performance may be accomplished using the complete full size antenna, or individual bays therefrom, mounted on a supporting structure of identical dimensions and configuration as the proposed structure, including all braces, ladders, conduits, coaxial lines, and other appurtenances; or using a carefully manufactured scale model of the entire antenna, or individual bays therefrom, mounted on an equally scaled model of the proposed supporting structure, including all appurtenances. Engineering exhibits should include a description of the antenna testing facilities and equipment employed, including appropriate photographs or sketches and a description of the testing procedures, including scale factor, measurements frequency, and equipment calibration.
  
- 2 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit an affidavit from a licensed surveyor to establish that the directional antenna has been oriented at the proper azimuth.
  
- 3 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee/licensee shall submit an affidavit that the installation of the directional antenna system was overseen by a qualified engineer. This affidavit shall include a certification by the engineer that the antenna was installed pursuant to the manufacturer's instructions and list the qualifications of the certifying engineer.

## Special operating conditions or restrictions:

- 4 BEFORE PROGRAM TESTS ARE AUTHORIZED, the permittee must submit an exhibit demonstrating that the measured directional antenna pattern complies with the appropriate community coverage provisions of 47 C.F.R. Sections 73.315 or 73.515 (See 47 C.F.R. Section 73.316(c)(2)(ix)(B)).
- 5 The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by this construction permit.

A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power:

3.0 kilowatts.

Principal minima and their associated field strength limits:

120 - 170 degrees True:	1.75 kilowatts
240 - 250 degrees True:	0.095 kilowatts

- 6 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.
- 7 Further modifications of WPTC(FM), Facility ID No. 52188, Williamsport, PA, will not be construed as a per se modification of WXPI's construction permit BPED-20120523AFY.  
(See Educational Information Corporation, 6 FCC Rcd. 2207 (1991)).

\*\*\* END OF AUTHORIZATION \*\*\*

POWER DENSITY CALCULATION

PROPOSED WPTC(FM)  
CHANNEL 201A – WILLIAMSPORT, PENNSYLVANIA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Williamsport facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 0.5 kW (H,V), an antenna radiation center 25.5 meters above ground, and the elevation pattern of a standard 2-bay FM antenna, maximum power density two meters above ground of  $0.012 \text{ mw/cm}^2$  is calculated to occur 16 meters from the base of the building. Since this is only 5.8 percent of the  $0.2 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating in the FM Band, a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

The roof upon which the antenna will be mounted is secure from unauthorized access. The station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.