



**Kessler and Gehman Associates**  
Consultants • Broadcast • Wireless

# MINOR MODIFICATION TO A LICENSED DIGITAL LPTV FACILITY

CALL SIGN: WPVS-LD  
FACILITY ID: 67976  
LOCATION: MILWAUKEE, WI

## **Prepared For:**

Polnet Communications, Ltd.  
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## **Prepared By:**

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## **1.0 INTRODUCTION AND SCOPE OF WORK**

Polnet Communications, Ltd. is the licensee of a digital low power television broadcast station having call sign WPVS-LD, and facility ID 67976. WPVS-LD has a License<sup>1</sup> to operate on channel 9 using a directional antenna with an ERP of 0.2kW at a height of 389.5m AMSL on antenna structure number 1057482. It is proposed to modify the license to

- replace the Kathrein K523157 directional antenna with a Kathrein DRV-2/3HC directional antenna,
- increase the ERP from 0.2kW to 3kW,
- and increase the antenna height by 38.1m.

The proposed modification is considered “minor” pursuant to 74.787(b) since

- there is no change in frequency (output channel),
- there is no change in transmitting antenna location where the protected contour resulting from the change does not overlap some portion of the protected contour of the current and superseded license as demonstrated in Appendix B,
- there is no change in transmitting antenna location of greater than 30 miles (48 kilometers) from the reference coordinates of the current and superseded license as demonstrated in Appendix B.

## **2.0 STATION TRANSMITTER LOCATION AND TOWER ELEVATION**

It is proposed to keep WPVS-LD at its licensed location on an existing tower which has an FCC Antenna Structure Registration Number (“ASRN”) of 1057482. The instant application does not propose to increase or modify the existing support structure or ASRN

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<sup>1</sup> FCC File No.: 0000179499

### **3.0 ALLOCATION ANALYSIS**

Appendix A are the summarized results from TVStudy V2.2.5 which illustrate that there are no interference failures or technical issues.

### **4.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

#### **4.1 General Environmental Requirements**

The existing support structure with the addition of the proposed new antenna will not modify any of the following environmental considerations that trigger an environmental assessment:

- Require high intensity white lighting.
- Is not located in an official designated wilderness area or wildlife preserve.
- Does not threaten the existence or habitat of endangered species.
- Does not affect districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture that are listed in the National Register of Historic Places or are eligible for listing.
- Does not affect Indian religious sites.
- Is not located in a floodplain
- Does not require construction that involves significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).

#### **4.2 Radio Frequency Radiation (RFR) Compliance.**

A theoretical analysis has been conducted of the human exposure to radio frequency radiation (“RFR”) using the calculation methodology described in OET Bulletin 65, Edition 97-01, pursuant to the following methodology:

Terrain<sup>2</sup> extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. In this case flat terrain was used to simulate standing on the top floor of the building. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360 degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

Appendix C is the resulting RFR study demonstrating that the peak exposure is 0.05%. The instant application is compliant with the FCC limits for human exposure to RF radiation and thus is excluded from further environmental processing.

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<sup>2</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

## **5.0 CERTIFICATION**

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed January 20, 2022.

Kessler and Gehman Associates, Inc.



Ryan Wilhour  
Consulting Engineer

## WPVS-LD – Minor Modification

Milwaukee, WI

### APPENDIX A – TVStudy V2.2.5 Allocation Analysis

Study created: 2022.01.20 10:21:16

Study build station data: LMS TV 2022-01-20

Proposal: WPVS-LD D9 LD CP MILWAUKEE, WI  
File number: Proposed  
Facility ID: 67976  
Station data: User record  
Record ID: 975  
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WWMT	D8	DT	LIC	KALAMAZOO, MI	BLANK0000159066	199.6 km
No	WZCK-LD	N8-	TX	LIC	MADISON, WI	BLTVL19920324IF	119.9
No	WMVS	D8	DT	APP	MILWAUKEE, WI	BLANK0000035791	0.0
No	WMVS	D8	DT	LIC	MILWAUKEE, WI	BLANK0000040294	0.0
No	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	334.4
No	DDWCRD-LP	D9+	LD	APP	Freeport, IL	BLANK0000054708	162.1
No	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	345.7
No	WILL-TV	D9	DT	LIC	URBANA, IL	BLEDT20050920AEE	345.7
No	WISH-TV	D9	DT	LIC	INDIANAPOLIS, IN	BLANK0000055426	383.3
No	KPDS-LD	D9	LD	LIC	WOLCOTT, IN	BLANK0000121899	206.8
Yes	WWTV	D9	DT	LIC	CADILLAC, MI	BLCDT20091217ACZ	236.3
Yes	WWTV	D9	DT	CP	CADILLAC, MI	BLANK0000035807	236.3
No	WXON-LD	N9+	TX	LIC	MILLINGTON, MI	BLTVL20030609AGJ	343.0
No	KMSP-TV	D9	DT	CP	MINNEAPOLIS, MN	BLANK0000035734	470.3
No	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BMLCDT20140703AAU	470.3
Yes	WAOW	D9	DT	CP	WAUSAU, WI	BLANK0000035727	248.0
Yes	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	248.0
No	WAOE	D10	DT	LIC	OSWEGO, IL	BLANK0000151562	218.8
No	WAOE	D10	DT	APP	OSWEGO, IL	BLANK0000168790	218.8
No	WYGN-LD	D10	LD	LIC	BERRIEN SPRINGS, MI	BLDVL20090629AAT	179.1
No	WMVS	D10	LD	LIC	MILWAUKEE, WI	BLANK0000150206	0.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D9  
Mask: Full Service  
Latitude: 43 5 46.20 N (NAD83)  
Longitude: 87 54 15.00 W  
Height AMSL: 427.6 m  
HAAT: 229.4 m  
Peak ERP: 3.00 kW  
Antenna: Kathrein DRV-2/3HC 270.0 deg  
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.90 kW	223.5 m	57.4 km
45.0	0.591	250.6	47.6
90.0	0.002	250.6	14.2
135.0	0.594	248.2	47.5
180.0	2.90	233.3	58.0
225.0	2.74	209.3	56.3
270.0	2.67	209.2	56.1
315.0	2.74	210.9	56.3

Distance to Canadian border: 401.8 km

## WPVS-LD – Minor Modification

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*Milwaukee, WI*

Distance to Mexican border: 1905.4 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 108.3 degrees    Distance: 167.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 263.1 degrees    Distance: 1473.0 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

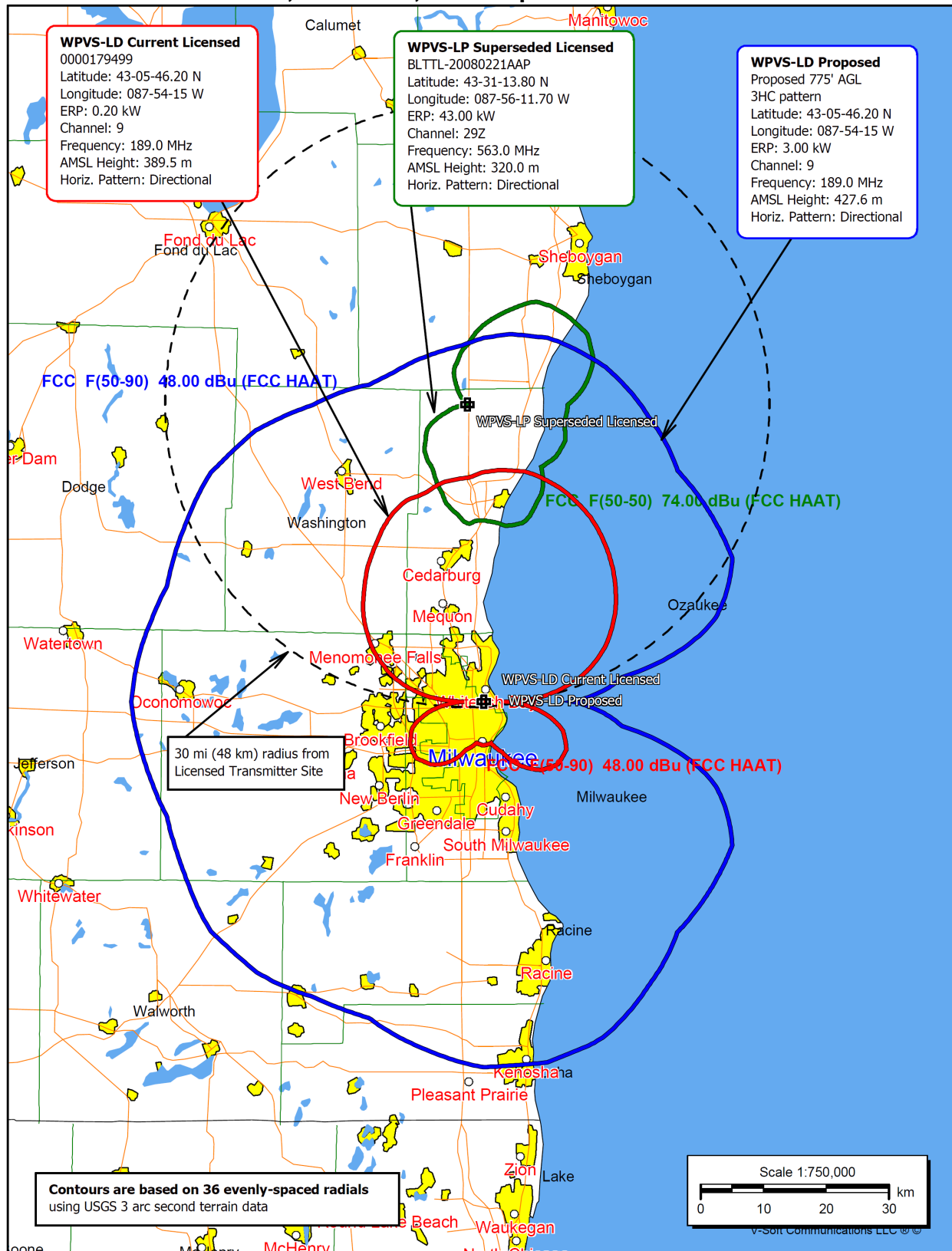
Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.



## APPENDIX B – Licensed, Permitted, and Proposed Contour



## APPENDIX C – Far Field Exposure to RF Emissions

