

***APPLICATION FOR MODIFICATION  
OF CONSTRUCTION PERMIT***

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**FM TRANSLATOR STATION W279CR  
MACOMB, ILLINOIS  
FACILITY ID: 140186  
93.1 MHz / 0.250 kW ERP / ND**

**VIRDEN BROADCASTING CORP.**

**NOVEMBER, 2016**

## **APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT**

The following engineering statement and attached exhibits have been prepared for **Virden Broadcasting Corp.** ("Virden"), permittee of FM translator station W279CR at Macomb, Illinois, and are in support of their application for modification of construction permit.<sup>1</sup> This application seeks to relocate the translator from the currently authorized location, and to change the channel of operation. The changes to the current construction permit would be minor in nature.

The current construction permit for W279CR, under FCC File No. BNPFT-20130827ABL, authorizes construction on channel 279 with a maximum effective radiated power of 250 Watts, utilizing a non-directional antenna at a center of radiation of 270 meters above mean sea level. Under this application, operation on channel 226 is proposed, a change of 53 channels, with a maximum effective radiated power of 250 Watts. The proposed center of radiation at the new site is 284.1 meters above mean sea level, 76.2 meters above ground level, with a non-directional antenna.

The proposed relocation of the facility would constitute a minor change to the existing construction permit. Exhibit E-1 provides a comparison between the authorized and proposed 60 dBu service contours for W279CR. As this map demonstrates, overlap exists between the two contours.

The current construction permit for W279CR specifies AM station WYEC, formerly WLRB, as the primary station for the translator. No change to the primary station is proposed under this

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<sup>1</sup> The Facility ID for W279CR at Macomb, Illinois is 140186.

JEREMY RUCK & ASSOCIATES, INC.

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Canton, IL 61520

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application. Exhibit E-2 illustrates the proposed 60 dBu service contour for W279CR along with the daytime 2 mV/m service contour for WYEC, and a twenty-five mile radius centered on the WYEC transmitter site location. As this map demonstrates, the predicted 60 dBu service contour for the translator would be wholly contained within both of the WYEC constructs.

The proposed facility complies with the provisions of Section 74.1204 of the Commission's Rules. Exhibit E-3 is a tabular interference study for the proposed facility. This study demonstrates that the proposed W279CR facility would comply with all of the contour overlap provisions of that section of the Commission's Rules to all relevant facilities. This tabular study is graphically illustrated in the contour map comprising Exhibit E-4.

The proposed facility would not result in a significant environmental impact, and is exempt from environmental processing. The proposed facility would utilize an existing antenna located on an existing structure that is registered with the Commission. Implementation of the construction permit requires only the installation of the transmitter at the site. No ground disturbance or excavation is required.

Additionally, the proposed facility would not result in human exposure to radiofrequency radiation in excess of the applicable safety standards. The antenna utilized by the facility is a two-bay ERI LPX-2E, which is considered a type 3 antenna by *FM Model*. That utility predicts a maximum power density of  $1.04 \mu\text{W}/\text{cm}^2$  at a distance of 24 meters from the tower base. This value complies with the uncontrolled environment condition of the Commission's safety standards, and is sufficiently low to categorically exclude the facility.

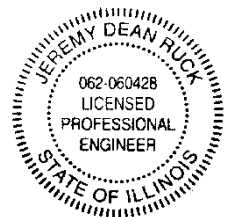
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Viriden certifies that they will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2017

Jeremy D. Ruck, PE  
November 23, 2016

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11.23.2016

BNPFT20130827ABL  
Latitude: 40-25-02.80 N  
Longitude: 090-36-50.50 W  
ERP: 0.25 kW  
Channel: 226  
Frequency: 93.1 MHz  
AMSL Height: 261.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

BNPFT20130827ABL  
Latitude: 40-29-50 N  
Longitude: 090-40-30 W  
ERP: 0.25 kW  
Channel: 279  
Frequency: 103.7 MHz  
AMSL Height: 270.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

Exhibit E-1  
Service Contour Comparison  
W279CR - Macomb, Illinois  
Virden Broadcasting Corp.  
November, 2016

Jeremy Ruck & Associates, Inc.

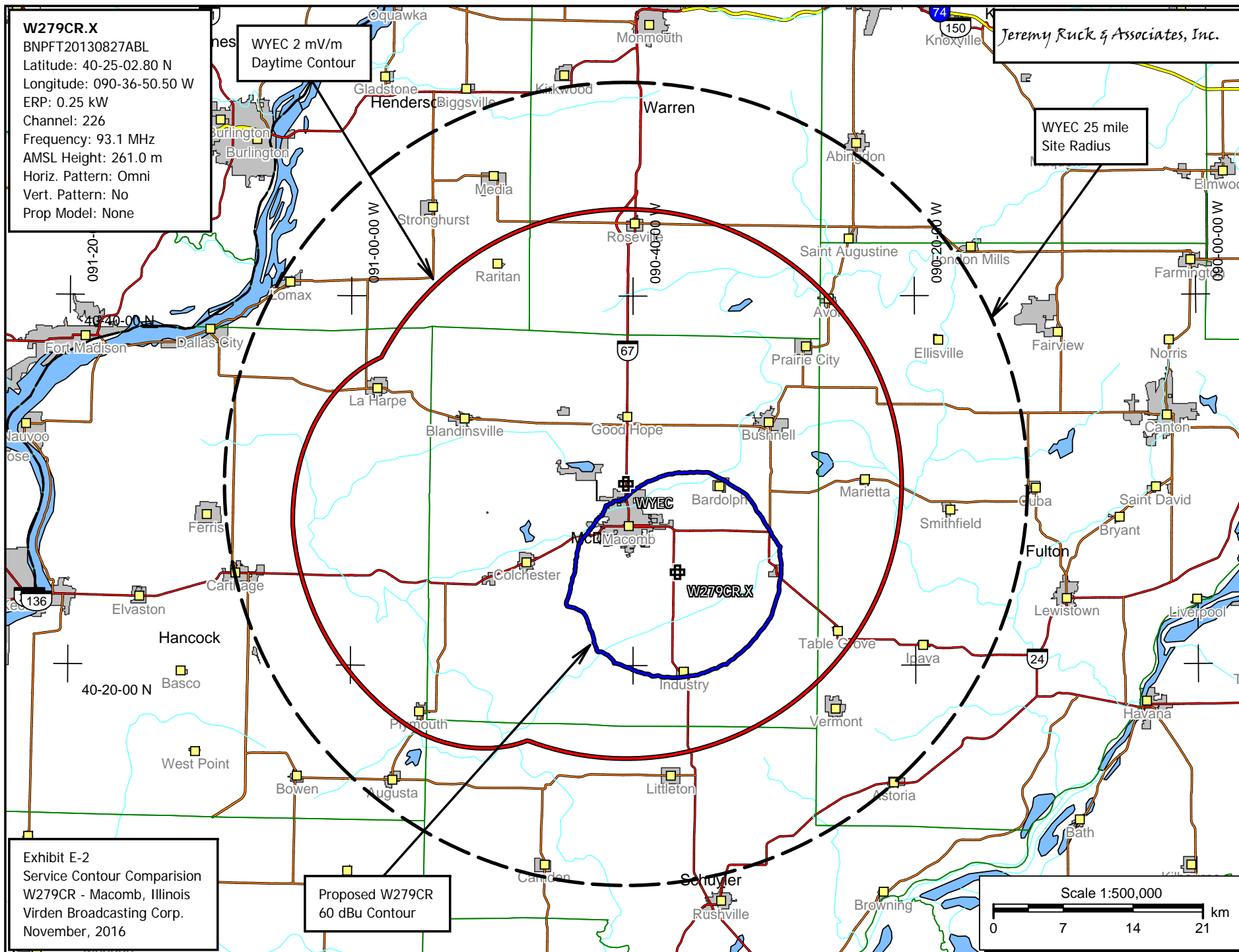
Authorized W279CR  
60 dBu Contour

### Area of Contour Overlap

Proposed W279CR  
60 dBu Contour

Scale 1:300,000





Jeremy Ruck & Associates, Inc.  
Consulting Engineers - Canton, Illinois

Exhibit E-3 - Tabular Interference Study  
W279CR - Macomb, Illinois  
CH# 226D - 93.1 MHz, Pwr= 0.25 kW, HAAT= 83.5 M, COR= 284.1 M  
Average Protected F(50-50)= 11.8 km  
Omni-directional

REFERENCE  
40 25 02.8 N.  
90 36 50.5 W.

DISPLAY DATES  
DATA 11-23-16  
SEARCH 11-23-16

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
225C1 Hannibal	KGRC	LIC _C_ MO	221.6 41.1	101.84 BLH20001218AAF	39 43 48.0 91 24 19.0	100.000 153	89.2 328	59.4 Staradio Corp.	-0.1	23.1
227B Peoria	WPBG	LIC _CY IL	74.7 255.4	94.05 BLH19810206AI	40 38 07.0 89 32 19.0	41.000 168	81.2 357	67.8 Alpha Media Licensee	0.7	0.5
223A Rushville	WKXQ	LIC _CN IL	186.8 6.7	31.18 BMLH19970624KB	40 08 20.0 90 39 26.0	6.000 100	2.5 279	25.5 Lb Sports Productions	16.5	4.6
226A Muscatine	KMCS	LIC ZCN IA	341.4 161.1	120.41 BLH19960606KB	41 26 34.0 91 04 33.0	4.400 117	89.0 310	31.2 Wpw Broadcasting, Inc.	20.1	50.6
228D Beardstown	W228BG	LIC _C_ IL	162.7 342.8	41.26 BLFT20090708AJF	40 03 47.0 90 28 11.0	0.027 64	0.4 223	4.0 Cornerstone Community Radi	28.9	36.1
228A Burlington	KKMI	LIC _CN IA	316.6 136.3	61.67 BLH19990122KE	40 49 11.0 91 07 02.0	6.000 93	2.8 278	29.1 Pritchard Broadcasting Cor	47.3	31.4
224A Galesburg	WLSR	LIC _CX IL	21.2 201.4	62.68 BLH20030324ADP	40 56 34.0 90 20 39.0	4.200 119	2.6 343	27.7 Galesburg Broadcasting Com	48.0	33.9
229D Canton	W229BZ	LIC _C_ IL	74.1 254.5	52.11 BLFT20140131ARN	40 32 40.0 90 01 15.0	0.204 69	1.0 255	8.8 Illinois Association Of Se	38.9	41.5
229D Galesburg	W229BO	LIC _C_ IL	21.2 201.4	62.68 BLFT20150313AAO	40 56 34.0 90 20 39.0	0.210	1.0 329	12.3 Galesburg Broadcasting Com	49.6	49.2

Terrain database is NED 03 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.  
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)

**W279CR.X**

BNPFT20130827ABL  
Latitude: 40-25-02.80 N  
Longitude: 090-36-50.50 W  
ERP: 0.25 kW  
Channel: 226  
Frequency: 93.1 MHz  
AMSL Height: 261.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

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- 60 dBu F(50,50) Service Contour
- 54 dBu F(50,50) Service Contour
- 40 dBu F(50,10) Interference Contour
- 48 dBu F(50,10) Interference Contour
- 54 dBu F(50,10) Interference Contour
- 100 dBu F(50,10) Interference Contour

