



Kessler and Gehman Associates
Consultants • Broadcast • Wireless

DIGITAL LPTV CONSTRUCTION PERMIT MINOR MODIFICATION APPLICATION

CALL SIGN: K1700-D
FACILITY ID: 182499
LOCATION: Sioux Falls, SD

Prepared For:

Roseland Broadcasting, Inc.
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New York, NY 10019

Prepared By:

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1.0 EXECUTIVE SUMMARY

Roseland Broadcasting, Inc. is the licensee of a digital low power television broadcast station having call sign K1700-D. K1700-D has a construction permit¹ to operate on channel 17 at antenna structure registration number 1051548. It is proposed to modify the construction permit to

- replace the Jampro JA/LS-OM-16 omniod antenna with a Kathrein 75010210 directional antenna,
- increase the ERP from 3kW to 6.7kW,
- decrease the antenna height AMSL by 54.5m,
- and change the transmitter site from
 - 42-42-15.0 N 89-59-42.0 W (NAD 83) to
 - 42-41-33.7 N 90-05-10.6 W (NAD 83)

No other changes are proposed.

2.0 MINOR MODIFICATION CLASSIFICATION

Pursuant to § 74.787(b) the proposed changes in Section 1.0 are considered “minor” since there is there is

- no change in frequency output proposed,
- no change in location where the protected contour resulting from the change does not overlap some portion of the protected contour of the authorized facilities of the existing station,
- or no change in transmitting antenna location greater than 30 miles (48 kilometers) from the reference coordinates of the existing station's antenna location.

¹ FCC File No.: BNPDTL-20090825AWE

3.0 STATION TRANSMITTER LOCATION AND TOWER ELEVATION

It is proposed to move K1700-D from its permitted location to an existing tower with antenna structure registration number 1299929. Appendix B demonstrates that the proposed protected contour is 100% subsumed within the construction permitted protected contour and the new transmitter site is further away from Madison, WI as required in Appendix D.

4.0 ALLOCATION ANALYSIS

Appendix A are the summarized results from TVStudy V2.2.5 which illustrate that there are no interference failures to other facilities.

5.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

5.1 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).

5.2 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:

Terrain² 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.

² Terrain extraction is based upon a 3 arc second point spacing terrain database.

The resulting RFR study in Appendix C demonstrates that the peak exposure is 15.4% of the most restrictive permissible exposure threshold. Pursuant to OET Bulletin 65 concerning multiple-user transmitter sites, licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is greater than 5% of the most permissible exposure at any location 2 meters above the ground, it is considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility must be considered; however, in this instance there are no additional contributors which are significant. As proposed, the facility is compliant with the FCC limits for human exposure to RF radiation and thus is excluded from further environmental processing.

6.0 CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed March 30, 2023.

Kessler and Gehman Associates, Inc.



Ryan Wilhour
Consulting Engineer

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APPENDIX A – TVStudy V2.2.5 Allocation Analysis

Study created: 2023.03.30 12:02:35

Study build station data: LMS TV 2023-03-29

Proposal: NEW D17 LD APP SIOUX FALLS, SD
File number: BLANK0000201121
Facility ID: 182499
Station data: User record
Record ID: 1253
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WTVO	D16	DT	LIC	ROCKFORD, IL	BLCDT20021024AAS	87.5 km
No	W16DU-D	D16	LD	LIC	BLOOMINGTON, WI	BLANK0000062263	73.9
No	WYTU-LD	D16	LD	LIC	MILWAUKEE, WI	BLANK0000084618	181.6
No	K17MH-D	D17	LD	LIC	CEDAR FALLS, IA	BLANK0000177243	222.6
Yes	KWQC-TV	D17	DT	LIC	DAVENPORT, IA	BLANK0000097891	131.4
No	KDIT-CD	D17-	DC	LIC	Des Moines, IA	BLANK0000199021	305.7
No	KDIT-LD	D17	LD	LIC	FORT DODGE, IA	BLANK0000176977	337.8
No	WLCF-LD	D17	LD	LIC	DECATUR, IL	BLANK0000121247	321.3
No	W17EH-D	D17	LD	LIC	QUINCY, IL	BLANK0000169061	322.4
No	W17EH-D	D17	LD	CP	QUINCY, IL	BLANK0000185140	319.7
No	WYIN	D17	DT	CP	GARY, IN	BLANK0000210997	267.4
No	WYIN	D17	DT	LIC	GARY, IN	BLEDT20040206AAA	267.4
No	WPBI-LD	D17	LD	LIC	LAFAYETTE, IN	BLANK0000088160	370.5
No	WOTV	D17	DT	LIC	BATTLE CREEK, MI	BLANK0000141782	377.8
No	WMNN-LD	D17	LD	LIC	LAKE CITY, MI	BLANK0000118076	421.4
No	K17MX-D	D17	LD	LIC	FROST, MN	BLANK0000062750	327.1
No	KMWE-LD	D17	LD	APP	SAINT CLOUD, MN	BLANK0000203353	347.6
No	KMWE-LD	D17	LD	LIC	SAINT CLOUD, MN	BLANK0000163947	392.4
No	WEAU	D17	DT	LIC	EAU CLAIRE, WI	BLANK0000120880	230.1
No	WGBD-LD	D17	LD	LIC	GREEN BAY, WI	BLANK0000068358	254.6
No	WBME-CD	D17	DC	LIC	MILWAUKEE, WI	BLANK0000086894	181.6
No	W17DZ-D	D17	LD	LIC	SISTER BAY, WI	BLANK0000086983	370.7
No	KYIN	D18	DT	LIC	MASON CITY, IA	BLEDT20090612AHJ	229.9
No	KRIN	D18	LD	APP	WATERLOO, IA	BDRTEDT20120604AFO	47.7
No	WMEU-CD	D18	DC	LIC	CHICAGO, IL	BLANK0000086889	220.8
No	WMEU-CD	D18	DC	CP	CHICAGO, IL	BLANK0000196962	220.9
No	DWMKB-LP	D18z	LD	APP	Rochelle, IL	BLANK0000054707	106.1
No	WLUK-TV	D18	DT	LIC	GREEN BAY, WI	BLANK0000199689	254.6
No	WMSN-TV	D18	DT	LIC	MADISON, WI	BLANK0000113879	60.4
No	W35DY-D	N19-	TX	LIC	STERLING-DIXON, IL	BLTT20070806AFB	96.8
No	DWMKB-LP	N25z	TX	APP	Rochelle, IL	BLTTL20070813AFM	106.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D17
Mask: Full Service
Latitude: 42 41 33.70 N (NAD83)
Longitude: 90 5 10.60 W
Height AMSL: 319.2 m
HAAT: 27.4 m
Peak ERP: 6.70 kW
Antenna: Kathrein 75010210 45.0 deg
Elev Pattn: Generic

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49.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.75 kW	14.5 m	21.5 km
45.0	6.70	16.7	27.7
90.0	1.72	26.3	21.4
135.0	0.031	42.8	9.4
180.0	0.013	32.4	6.6
225.0	0.071	22.1	9.7
270.0	0.013	20.6	6.5
315.0	0.027	43.6	9.1

Distance to Canadian border: 572.6 km

Distance to Mexican border: 1754.8 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 90.2 degrees Distance: 337.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 262.5 degrees Distance: 1291.1 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

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%

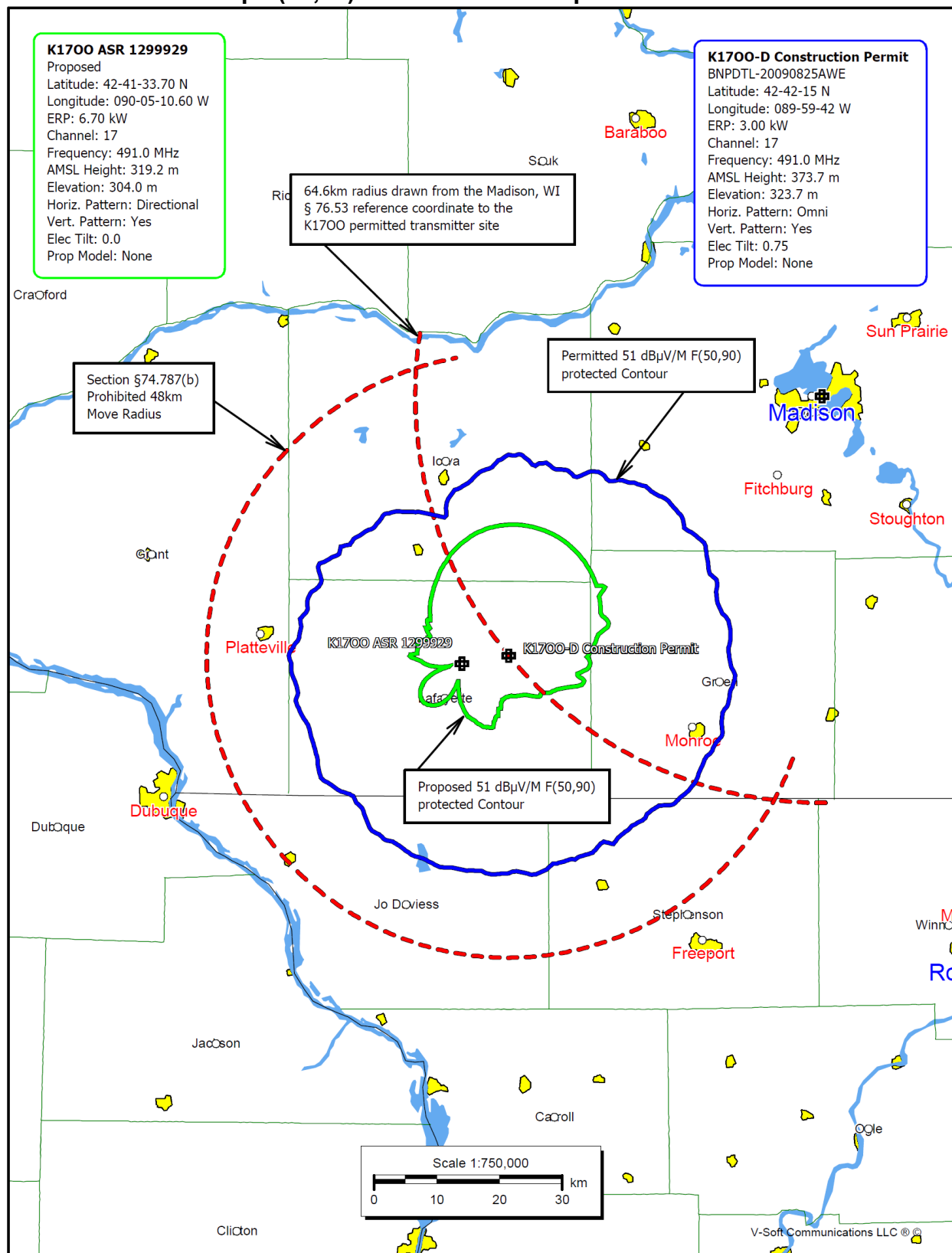
Proposal causes 0.00% interference to BLANK0000097891 LIC scenario 1

---- Below is IX received by proposal BLANK0000201121 ----

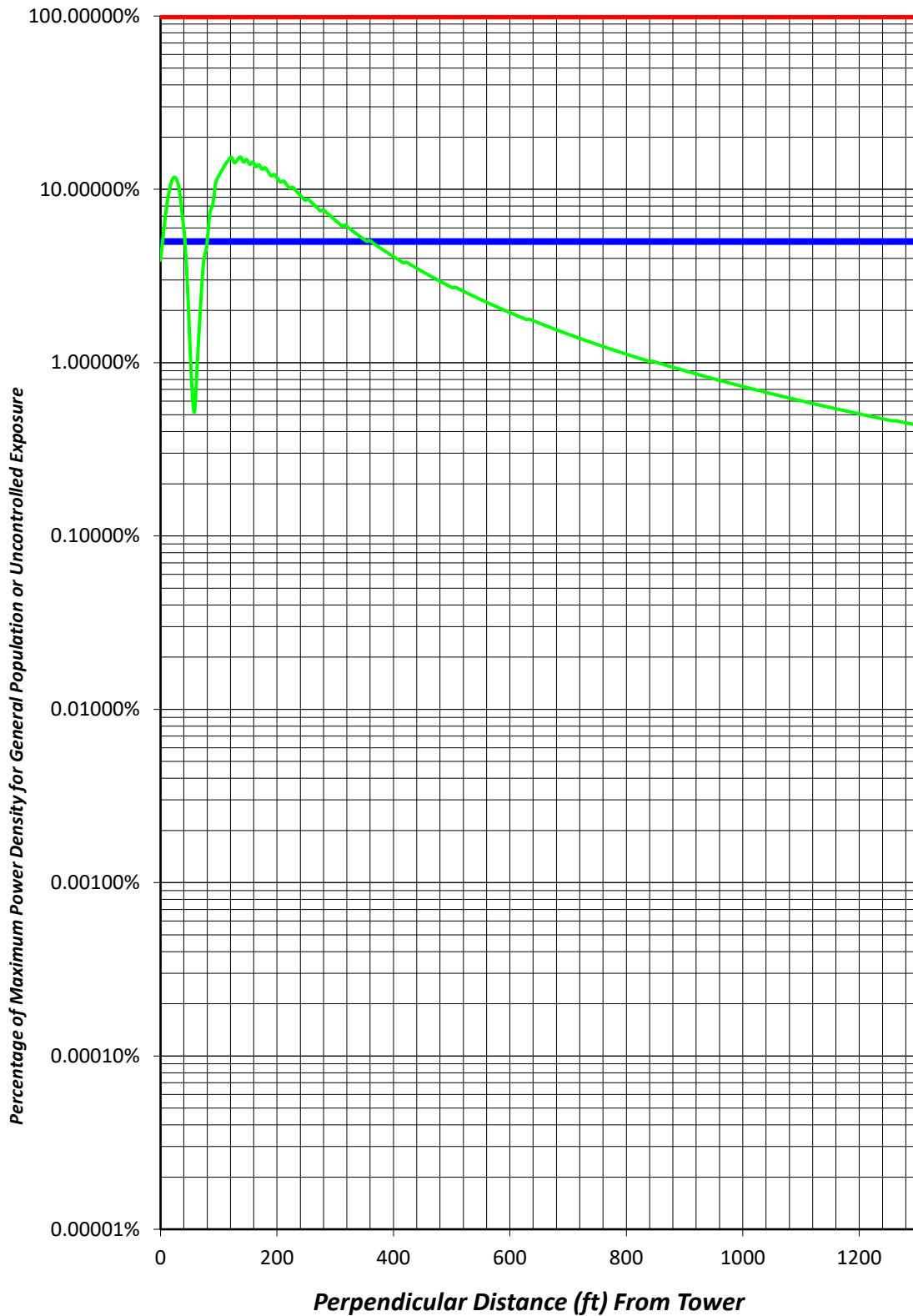
Proposal receives 11.82% interference from scenario 1

No IX check failures found.

APPENDIX B – 51dBμ F(50,90) Permitted and Proposed Contour



APPENDIX C – Far Field Exposure to RF Emissions



APPENDIX D – FCC Modification Request

Mark Colombo

From: Mark Colombo
Sent: Friday, October 7, 2022 11:19 AM
To: Ryan Wilhour; Aaron Shainis
Cc: legal@box733.com
Subject: 0000201121 - Within 121 km

Good morning,

I began to review 0000201121 (K1700-D) and found that it is within 121 km of Madison, WI, a top 100 market. Since the initial application for this permit was filed in the 2009-2010 rural window and has not yet been licensed, it should meet that distance. (See <https://docs.fcc.gov/public/attachments/DA-09-1487A1.pdf>)

That said, the current permit was apparently granted in error, despite being well within that 121 km distance. As such, you may modify the permit to be the same distance or further away from Madison than the current CP, but not closer, while also remaining outside any other 121 km circles. The current application as filed seeks to move substantially closer to Madison.

You have 30 days to amend your application and resolve the issue or it will be dismissed.

Mark J. Colombo
Associate Chief, Video Division
Federal Communications Commission