Kessler and Gehman Associates
Consultants • Broadcast • Wireless

DIGITAL CLASS A TELEVISION BROADCAST CONSTRUCTION PERMIT MINOR MODIFICATION APPLICATION

CALL SIGN: WYSJ-CD
FACILITY ID: 35134
LOCATION: YORKTOWN, VA

Prepared For:

TEGNA Inc.
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Prepared By:

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1.0 INTRODUCTION AND SCOPE OF WORK

WVEC Television, LLC, an indirect wholly owned subsidiary of TEGNA Inc., is the proposed assignee of digital Class A television broadcast station WYSJ-CD (Facility ID 35134), which currently is licensed to Jacobs Broadcasting System, Inc. WYSJ-CD is licensed to operate on channel 36 using an omni directional antenna with an ERP of 6.65kW at a height of 95.4 m AMSL on antenna structure number 1063200. Pursuant to 47 C.F.R. Section 73.3517(a), and contingent upon the approval and consummation of the assignment of WYSJ-CD's license to WVEC Television, LLC, it is proposed to modify the license to

- replace the Andrew ALP24L3-HSOC omni-directional antenna with an omni-directional Dielectric TFU-35ETT O6,
- change the polarity from horizontal to elliptical,
- increase the ERP from 6.65kW to 15W,
- increase the antenna height from 87.8m to 369.2m AGL,
- and move the transmitter site 29.15km to ASRN 1043102.

The proposed modification is considered "minor" pursuant to 73.3572(a) 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 authorized facilities of the existing station 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 existing station's antenna location.

2.0 ALLOCATION ANALYSIS

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

move WVEC from channel 11 to channel 35 is being submitted concurrently with the instant application and was added to the allocation analysis.

3.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

3.1 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).

3.2 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[1] 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 0.001%. The instant application is compliant with the FCC limits for human exposure to RF radiation and thus is excluded from further environmental processing.

4.0 CERTIFICATION

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed March 30, 2022.

Kessler and Gehman Associates, Inc.

[1] Terrain extraction is based upon a 3 arc second point spacing terrain database.

Ryan Wilhour
Consulting Engineer

APPENDIX A – TVStudy V2.2.5 Allocation Analysis

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Study created: 2022.03.30 12:31:11

Study build station data: LMS TV 2022-03-30

    Proposal: WYSJ-CD D36 DC LIC YORKTOWN, VA
 File number: Proposed
 Facility ID: 35134
Station data: User record
   Record ID: 1099
     Country: U.S.

Build options:
Protect LPTV records from Class A

Search options:
Non-U.S. records included

User records included:
1096    WVEC D35 DT LIC HAMPTON, VA WVEC Channel 35

Individual records excluded:
71130         DWCTX-CD D35 DC BL VIRGINIA BEACH, VA DTVBL71130

Stations potentially affected by proposal:
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IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	W35DW-D	D35	LD	LIC	GREENVILLE, NC	BLANK0000177044	172.6 km
No	WVIR-CD	D35	DC	LIC	CHARLOTTESVILLE, VA	BLANK0000091348	220.1
No	WVEC	D35	DT	LIC	HAMPTON, VA	WVEC Channel 35	0.0
No	WPXW-TV	D35	DT	LIC	MANASSAS, VA	BLANK0000098055	245.1
Yes	WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000152125	245.1
No	W36FB-D	D36	LD	CP	BISCOE, NC	BLANK0000150304	347.5
No	W36FB-D	D36	LD	LIC	BISCOE, NC	BLANK0000158802	347.5
No	W24CP-D	D36	LD	CP	DURHAM, NC	BLANK0000052041	263.0
No	WEPX-TV	D36	DT	LIC	GREENVILLE, NC	BLANK0000090758	190.9
No	WBFT-CD	D36	DC	LIC	SANFORD, NC	BLANK0000124673	283.7
No	WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	296.7
No	WITF-TV	D36	DT	CP	HARRISBURG, PA	BLANK0000035782	393.8
No	WITF-TV	D36	DT	LIC	HARRISBURG, PA	BLANK0000039358	393.8
No	WFXB	D36	DT	LIC	MYRTLE BEACH, SC	BLANK0000081825	381.6
No	WSVF-CD	D36	DC	LIC	HARRISONBURG, VA	BLANK0000120243	267.9
No	WPMC-CD	D36	DC	LIC	MAPPSVILLE, VA	BLANK0000001499	138.9
Yes	WRID-LD	D36	LD	CP	RICHMOND, VA	BLANK0000160252	119.5
Yes	WRID-LD	D36	LD	LIC	RICHMOND, VA	BLANK0000152708	126.7
Yes	WFXR	D36	DT	LIC	ROANOKE, VA	BLANK0000080996	329.9

```
No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:
WHKT 1010 L DA2 D PORTSMOUTH, VA BL13137
WHKT 1010 L DA2 N PORTSMOUTH, VA BL13137

Record parameters as studied:

    Channel: D36
       Mask: Stringent
   Latitude:  36 49  0.00 N (NAD83)
  Longitude:  76 28  5.00 W
Height AMSL: 369.2 m
       HAAT: 363.9 m
   Peak ERP: 15.0 kW
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    Antenna: Omnidirectional
Elev Pattrn: Generic
  Elec Tilt: 0.75

50.9 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg   15.0 kW   367.5 m   59.0 km
 45.0       15.0      365.6     58.9
 90.0       15.0      366.0     59.0
135.0       15.0      365.2     58.9
180.0       15.0      362.5     58.8
225.0       15.0      360.8     58.7
270.0       15.0      359.9     58.7
315.0       15.0      363.7     58.9

Distance to Canadian border: 692.6 km

Distance to Mexican border: 2276.8 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 353.4 degrees   Distance: 262.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 287.3 degrees   Distance: 2518.1 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%

Proposal causes no interference to BLANK0000152125 LIC
Proposal causes 0.26% interference to BLANK0000160252 CP scenario 1
Proposal causes 0.03% interference to BLANK0000152708 LIC scenario 1
Proposal causes no interference to BLANK0000080996 LIC
Proposal causes no interference to Proposed LIC
No IX check failures found.
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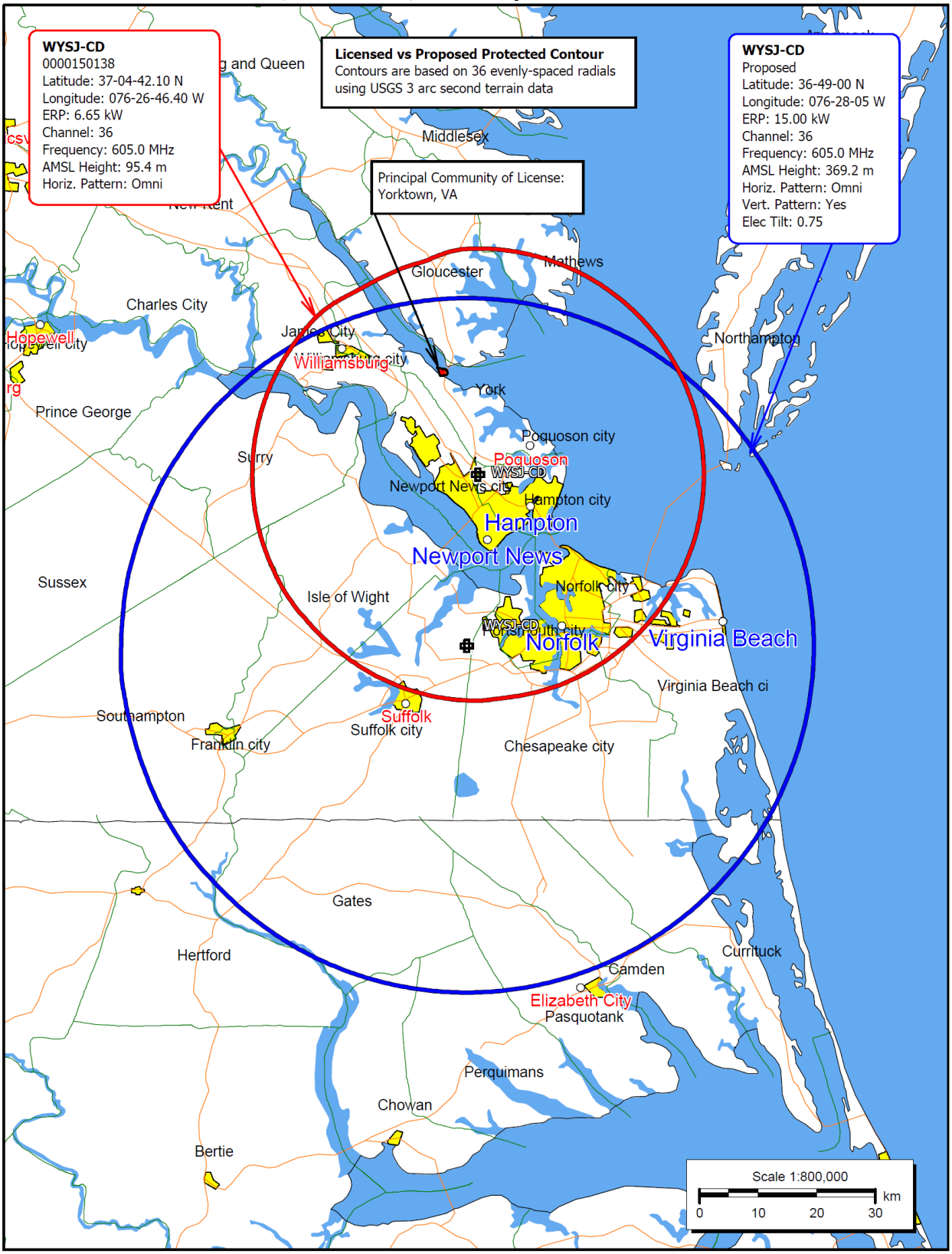
APPENDIX B – Licensed, Permitted, and Proposed Contour



APPENDIX C – Far Field Exposure to RF Emissions