

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WLNE PROVIDENCE LICENSE LLC, licensee of digital television station WLNE-TV, Channel 49 in New Bedford, Massachusetts, in support of its application for modification of Construction Permit 0000034491, which authorizes operation on its post-repack channel, Channel 24. The purpose of this application is to specify a decrease in effective radiated power from 465 kW (authorized) to 294 kW (proposed). No change in site location, antenna azimuth pattern or antenna height is proposed herein.

It is still proposed to utilize a Dielectric omnidirectional elliptically-polarized antenna which is mounted at the 270.7-meter level of the existing 281.3-meter tower on which the licensed WLNE-TV antenna was located. Exhibit B is a map upon which the predicted service contours of this new proposal are plotted.

An elevation pattern for the proposed antenna is included in Exhibit C. Exhibit D-1 contains the summary results from a TVStudy interference study for the WLNE-TV CP facility authorized in LMS-0000034491. The study was conducted using a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer. It concludes that the authorized WLNE-TV facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A facilities, except for the licensed facility of WIPL, Channel 24 in Lewiston, Maine (LMS-0000075152). As shown, the predicted interference from authorized WLNE-TV affects 5.79% of the WIPL service population. The situation arises as a result of WIPL filing a site-change application to modify its repack authorization on February 25, 2019

EXHIBIT A

(LMS-0000068026). This was approximately 16 months after WLNE-TV filed its repack maximization modification application (LMS-0000034491). Obviously, WIPL was willing to accept the interference from modified WLNE-TV when it filed its own site-change application. Exhibit D-2 provides the summary results of a similar study with the facility proposed herein. As expected from a power-decrease proposal such as this, the interference to WIPL is reduced to 4.43% of the station's service population. Accordingly, the interference to WIPL from the facility proposed herein can be ignored.

A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing WLNE-TV tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC has issued Antenna Structure Registration Number 1005123 to this tower.

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

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', with a stylized flourish at the end.

KEVIN T. FISHER

July 1, 2020

CONTOUR POPULATION
2018 U.S. CENSUS DATA ESTIMATE
CITY-GRADE : 5,851,312 (2,449,488 HH)
NOISE-LIMITED : 6,741,743 (2,825,385 HH)



**FCC NOISE-LIMITED
SERVICE CONTOUR**

**FCC CITY-GRADE
CONTOUR**

EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WLNE-TV
CH. 24 - NEW BEDFORD, MASSACHUSETTS

Scale 1:1,000,000

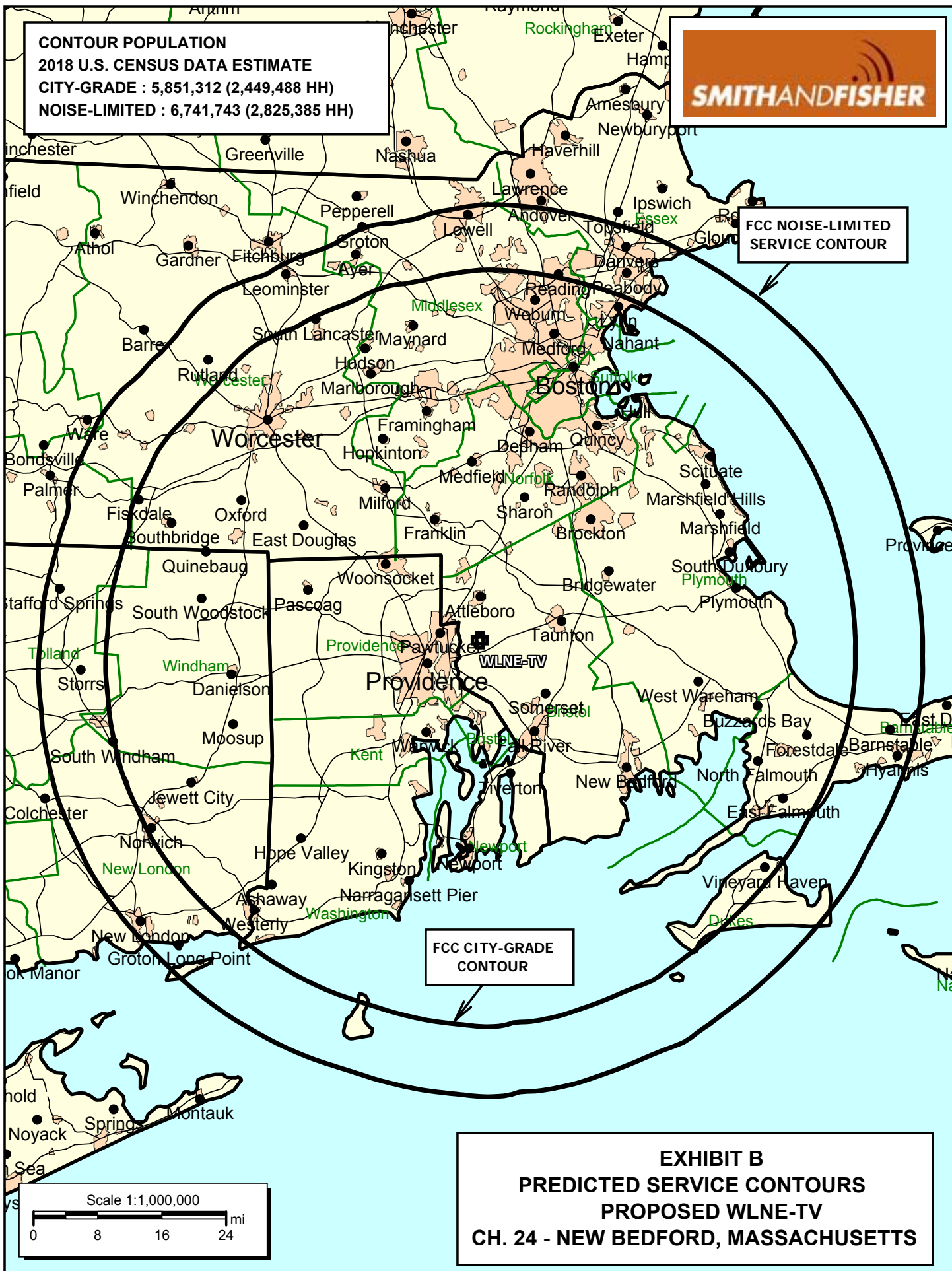
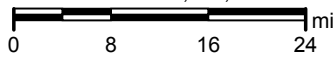


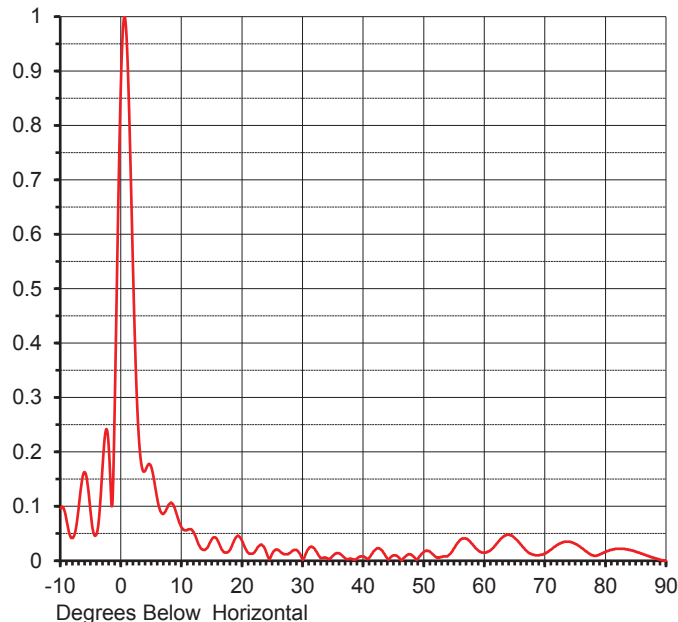
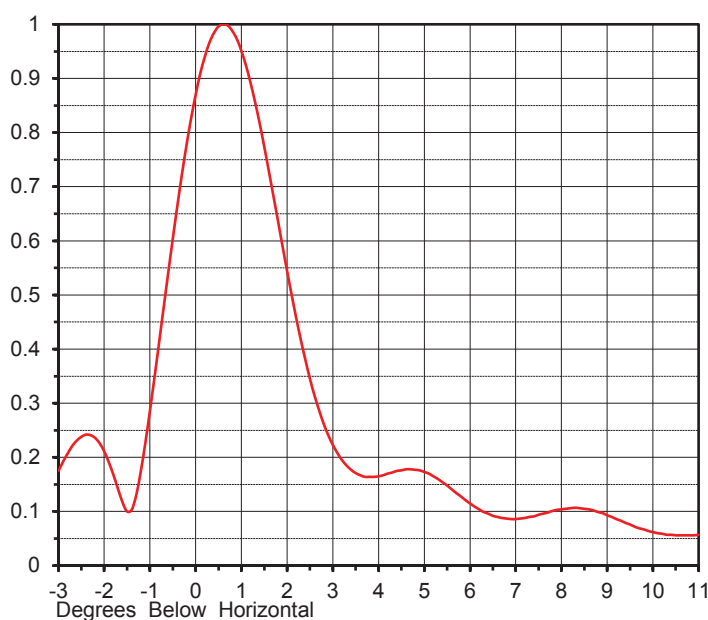
EXHIBIT C

ELEVATION PATTERN

Proposal No. **C-71018-1**
 Date **30-Oct-18**
 Call Letters **WLNE**
 Channel **24**
 Frequency **533 MHz**
 Antenna Type **TFU-32GTH/VP-R O6 DC**

RMS Directivity at Main Lobe **27.5 (14.39 dB)**
 RMS Directivity at Horizontal **22.7 (13.56 dB)**
Calculated

Beam Tilt **0.50 deg**
 Pattern Number **32G275050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.096	10.0	0.060	30.0	0.002	50.0	0.017	70.0	0.014
-9.0	0.071	11.0	0.057	31.0	0.024	51.0	0.016	71.0	0.021
-8.0	0.042	12.0	0.051	32.0	0.020	52.0	0.006	72.0	0.029
-7.0	0.103	13.0	0.025	33.0	0.005	53.0	0.007	73.0	0.034
-6.0	0.162	14.0	0.022	34.0	0.004	54.0	0.010	74.0	0.035
-5.0	0.081	15.0	0.041	35.0	0.010	55.0	0.024	75.0	0.031
-4.0	0.053	16.0	0.035	36.0	0.013	56.0	0.039	76.0	0.023
-3.0	0.192	17.0	0.016	37.0	0.004	57.0	0.040	77.0	0.015
-2.0	0.191	18.0	0.021	38.0	0.003	58.0	0.030	78.0	0.009
-1.0	0.348	19.0	0.044	39.0	0.005	59.0	0.018	79.0	0.012
0.0	0.909	20.0	0.035	40.0	0.008	60.0	0.015	80.0	0.017
1.0	0.924	21.0	0.014	41.0	0.007	61.0	0.020	81.0	0.020
2.0	0.500	22.0	0.016	42.0	0.021	62.0	0.032	82.0	0.022
3.0	0.208	23.0	0.029	43.0	0.019	63.0	0.044	83.0	0.022
4.0	0.167	24.0	0.013	44.0	0.003	64.0	0.048	84.0	0.020
5.0	0.170	25.0	0.015	45.0	0.010	65.0	0.041	85.0	0.016
6.0	0.109	26.0	0.019	46.0	0.003	66.0	0.029	86.0	0.013
7.0	0.087	27.0	0.012	47.0	0.009	67.0	0.017	87.0	0.009
8.0	0.105	28.0	0.016	48.0	0.010	68.0	0.011	88.0	0.005
9.0	0.090	29.0	0.019	49.0	0.005	69.0	0.010	89.0	0.002
								90.0	0.000

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TVSTUDY INTERFERENCE ANALYSIS RESULTS
AUTHORIZED WLNE-TV [LMS-0000034491]
 CHANNEL 24 – NEW BEDFORD, MASSACHUSETTS

Study created: 2020.07.01 16:21:30

Study build station data: LMS TV 2020-06-22

Proposal: WLNE-TV D24 DT CP NEW BEDFORD, MA
 File number: BLANK0000034491
 Facility ID: 22591
 Station data: User record
 Record ID: 814
 Country: U.S.
 Zone: I

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WPXG-TV	D23	DT	LIC	CONCORD, NH	BLANK0000078658	146.6 km
No	WFTY-DT	D23	DT	LIC	SMITHTOWN, NY	BLCDT20120427ABO	176.3
Yes	WIPL	D24	DT	LIC	LEWISTON, ME	BLANK0000075152	224.2
Yes	WTEN	D24	DT	LIC	ALBANY, NY	BLANK0000082692	239.5
Yes	WNYE-TV	D24	DT	APP	NEW YORK, NY	BLANK0000035705	256.9
Yes	WNYE-TV	D24	DT	LIC	NEW YORK, NY	BLEDT20071228ABM	256.9
No	WONO-CD	D24	DC	CP	SYRACUSE, ETC., NY	BLANK0000105580	421.4
No	W24DB-D	D24z	DC	LIC	CLARKS SUMMIT, PA	BLANK0000004543	371.9
No	DW24BB-D	D24	DC	BL	EAST STROUDSBURG, PA	DTVBL68137	363.5
No	WPHA-CD	D24	DC	LIC	PHILADELPHIA, PA	BLDTA20130920ADK	388.5
No	WPHA-CD	D24	DC	CP	PHILADELPHIA, PA	BLANK0000036105	388.5
No	WWOR-TV	D25	DT	LIC	SECAUCUS, NJ	BLANK0000054140	261.2
No	WMHT	D25	DT	LIC	SCHENECTADY, NY	BLANK0000091434	239.5
No	WJAR	D25	DT	LIC	PROVIDENCE, RI	BLANK0000087546	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: D24
 Latitude: 41 51 55.40 N (NAD83)
 Longitude: 71 17 12.70 W

Height AMSL: 331.0 m

HAAT: 302.0 m

Peak ERP: 465 kW

Antenna: Omnidirectional

Elev Pattn: Generic

Elec Tilt: 0.50

39.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	465 kW	287.6 m	90.6 km
45.0	465	298.3	92.1
90.0	465	304.1	92.9
135.0	465	303.0	92.8
180.0	465	326.4	95.4
225.0	465	318.6	94.6
270.0	465	296.5	91.9
315.0	465	283.5	89.9

Proposal 24.76 dBu contour does not cross Canadian border

Distance to Canadian border: 350.3 km

Distance to Mexican border: 2932.0 km

Conditions at FCC monitoring station: Belfast ME

Bearing: 31.2 degrees Distance: 337.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 277.6 degrees Distance: 2834.4 km

Study cell size: 2.00 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%

**IX check failure to BLANK0000075152 LIC scenario 1, 5.79% interference caused

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WLNE-TV
 CHANNEL 24 – NEW BEDFORD, MASSACHUSETTS

Study created: 2020.07.01 16:24:30

Study build station data: LMS TV 2020-06-22

Proposal: WLNE-TV D24 DT CP NEW BEDFORD, MA
 File number: BLANK0000034491
 Facility ID: 22591
 Station data: User record
 Record ID: 815
 Country: U.S.
 Zone: I

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Antenna: Omnidirectional

Elev Pattn: Generic

Elec Tilt: 0.50

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45.0	294	298.3	88.0
90.0	294	304.1	88.8
135.0	294	303.0	88.6
180.0	294	326.4	91.4
225.0	294	318.6	90.6
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Bearing: 277.6 degrees Distance: 2834.4 km

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Profile point spacing: 1.00 km

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

Maximum new IX to LPTV: 2.00%

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POWER DENSITY CALCULATION

PROPOSED WLNE-TV
CHANNEL 24 – NEW BEDFORD, MASSACHUSETTS
[MODIFICATION OF CONSTRUCTION PERMIT LMS-0000034491]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this New Bedford facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 294 kW (Horizontal) and 73.5 kW (Vertical), an antenna center of radiation 270.7 meters above ground, and the specific elevation pattern of the authorized Dielectric TFU-32GTH/VP-R O6 DC antenna (see Exhibit C), maximum power density two meters above ground of 0.00032 mW/cm^2 is calculated to occur 131 meters from the base of the tower. Since this is less than 0.1 percent of the 0.35 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 24 (530-536 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, 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.