

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING OF TEXAS, INC., licensee of Class A digital television station WLPD-CD, Channel 32 in Plano, Illinois, in support of its Application for Construction Permit to specify a new site.

It is proposed to mount a horizontally-polarized directional panel antenna at the 349-meter level of the existing 459-meter John Hancock Center in Chicago, Illinois. The proposed effective radiated power for the facility is 15.0 kW. Exhibit B-1 is a map upon which the predicted 51 dBu service contour is plotted. In Exhibit B-2, we have plotted the licensed and proposed service contours of WLPD-CD. As shown, the two contours overlap, as required by Commission rules for a Class A minor change application.

Azimuth pattern information for the proposed Jampro JUHD-2/2 antenna appear in Exhibit C. Exhibit D contains the summary results from a TVStudy interference study, which was conducted using a cell size of 1.0 kilometer and increment spacing of 1.0 kilometer. It concludes that the proposed WLPD-CD facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A facilities. A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing John Hancock Center structure is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1009012 to this structure.

EXHIBIT A

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, elongated final stroke.

KEVIN T. FISHER

November 19, 2020

CONTOUR POPULATION
2018 U.S. CENSUS DATA
6,873,414 (2,859,289 HH)

Smith and Fisher, LLC

Proposed WLPD-CD
51 dBu Service Contour

Proposed Site

EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED WLPD-CD
CHANNEL 32 - PLANO, ILLINOIS

Scale 1:650,000
0 6 12 18 mi

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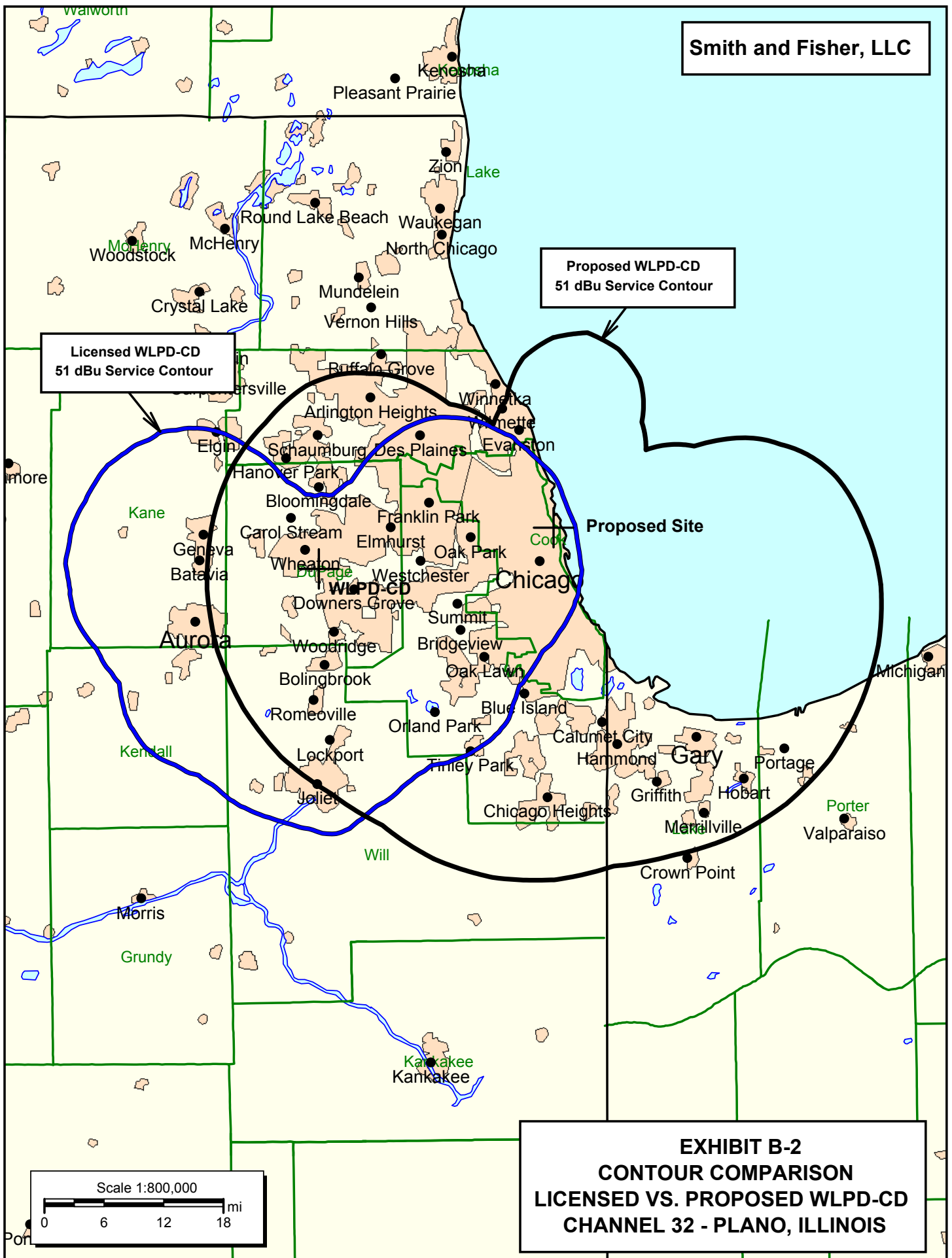
Proposed WLPD-CD
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PROPOSED WLPD-CD
CHANNEL 32 - PLANO, ILLINOIS

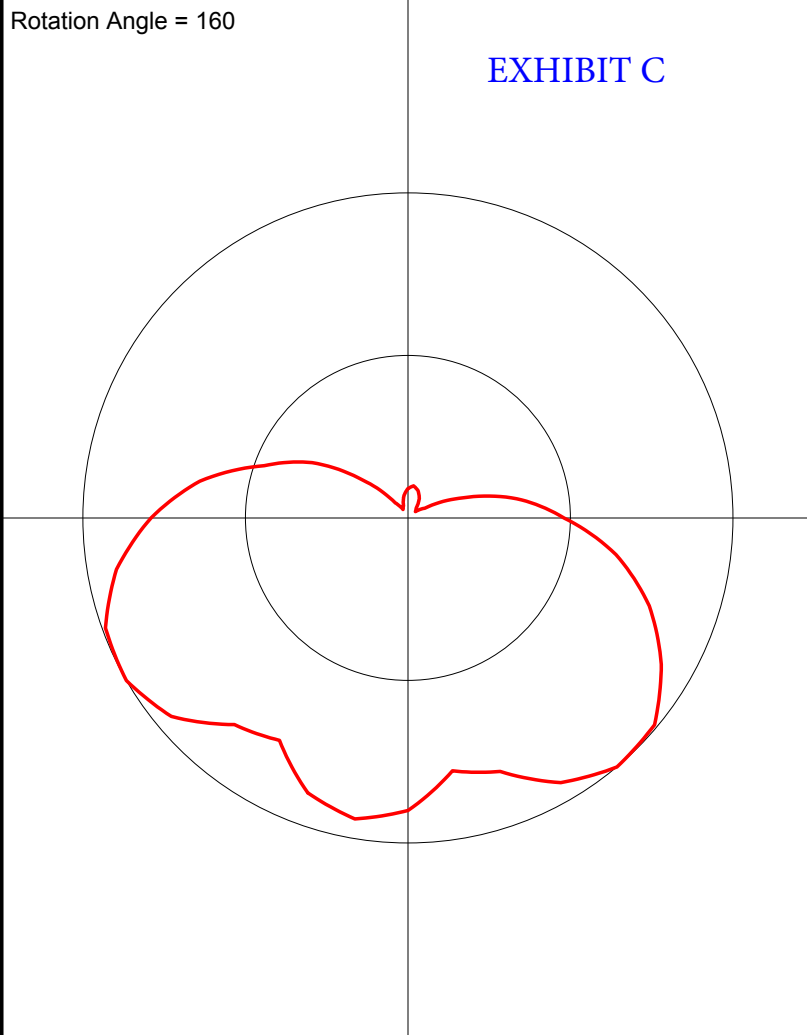
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**EXHIBIT B-2
CONTOUR COMPARISON
LICENSED VS. PROPOSED WLPD-CD
CHANNEL 32 - PLANO, ILLINOIS**

Antenna Pattern
Pre-Rotation Antenna Pattern....



TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WLPD-CD
CHANNEL 32 – PLANO, ILLINOIS

Study created: 2020.11.19 14:53:10

Study build station data: LMS TV 2020-11-16

Proposal: WLPD-CD D32 LD LIC CHICAGO, IL

File number: BLANK0000125079

Facility ID: 68043

Station data: User record

Record ID: 935

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	WMKB-LP	N25z	TX	LIC	Rochelle, IL	BLTTL20070813AFM	131.1 km
Yes	WFLD	D31	DT	LIC	CHICAGO, IL	BLANK0000055195	2.5
Yes	W31EZ-D	D31	LD	LIC	CHICAGO, IL	BLANK0000124951	0.0
No	WQAD-TV	D31	DT	LIC	MOLINE, IL	BLANK0000120809	238.2
No	W31DT-D	D31	LD	CP	STERLING - DIXON, IL	BDCCDTL20110726AJF	164.0
Yes	WNIT	D31	DT	LIC	SOUTH BEND, IN	BLANK0000087078	123.1
No	WITI	D31	DT	LIC	MILWAUKEE, WI	BLANK0000086971	134.3
No	KFKZ-LD	D32	LD	LIC	CEDAR FALLS, IA	BLANK0000069608	353.9
No	KQCT-LP	D32-	LD	CP	DAVENPORT, IA	BLANK0000068394	238.2
Yes	WICD	D32	DT	LIC	CHAMPAIGN, IL	BLANK0000059351	204.8
Yes	WLPD-CD	D32	DC	LIC	PLANO, IL	BLANK0000113895	38.4
No	WTJR	D32	DT	LIC	QUINCY, IL	BLCDDT20091110ADL	377.6
No	WANE-TV	D32	DT	LIC	FORT WAYNE, IN	BLANK0000121250	222.2
No	WDRB	D32	DT	LIC	LOUISVILLE, KY	BLANK0000087865	422.2
No	WFQX-TV	D32	DT	LIC	CADILLAC, MI	BLCDDT20091217ACU	310.2
No	WFQX-TV	D32	DT	APP	CADILLAC, MI	BLANK0000035809	310.2
No	WDIV-TV	D32	DT	LIC	DETROIT, MI	BLANK0000121737	369.5
No	WJMN-TV	D32	DT	LIC	ESCANABA, MI	BLANK0000063727	473.9

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No	WXMI	D32	LD LIC	GRAND RAPIDS, MI	BLANK0000072959	168.3
No	WBWM-LP	N32z	TX LIC	MOUNT PLEASANT, MI	BLTTL20001220ABG	298.0
No	W32DS-D	D32	LD LIC	MAPLEWOOD, OH	BLDTT20110104ABK	299.6
Yes	WTMJ-TV	D32	DT LIC	MILWAUKEE, WI	BLANK0000086939	134.5
No	WMAQ-TV	D33	DT CP	CHICAGO, IL	BLANK0000080396	2.5
No	WCHU-LD	D33	LD LIC	CHICAGO, IL	BLDTL20110928ALC	0.0
No	WOHO-CD	D33	DC LIC	HOLLAND, MI	BLDTA20120316ACT	170.8
No	WOKZ-CD	D33	DC LIC	KALAMAZOO, MI	BLANK0000084116	169.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32

Mask: Full Service

Latitude: 41 53 56.10 N (NAD83)

Longitude: 87 37 23.20 W

Height AMSL: 529.7 m

HAAT: 0.0 m

Peak ERP: 15.0 kW

Antenna: Jampro JUHD-2 Narrow Cardioid 0.0 deg

Elev Pattn: Generic

Elec Tilt: 1.00

50.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.122 kW	354.3 m	31.5 km
45.0	0.018	354.6	21.7
90.0	3.46	354.2	51.0
135.0	14.9	354.6	58.8
180.0	12.2	348.1	57.4
225.0	11.9	348.0	57.3
270.0	9.36	343.6	55.8
315.0	0.216	347.3	34.5

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 351 m

Distance to Canadian border: 370.0 km

Distance to Mexican border: 1827.9 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 59.6 degrees Distance: 158.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 268.4 degrees Distance: 1486.0 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.

POWER DENSITY CALCULATION

PROPOSED WLPD-CD
CHANNEL 32 – PLANO, ILLINOIS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Plano facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15 kW, an antenna radiation center 349 meters above ground, and assuming a maximum vertical relative field value of 20 percent at the steeper elevation angles for the proposed Jampro JUHD-2/2 antenna, maximum power density two meters above ground of 0.00016 mW/cm^2 is calculated to occur near the base of the building. Since this is significantly less than 0.1 percent of the 0.39 mW/cm^2 reference for uncontrolled environments (areas with access to the public) surrounding a facility operating on Channel 32 (578-584 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.