

**Goldman Engineering Management  
Auburn, CA**

---

WJKL-FM3 Chicago

NARRATIVE WJKL-FM3 CPMOD TO CHANGE ANTENNA

By this application, Educational Media Foundation (“EMF”), licensee of WJKL (FM) Channel 232A, Glendale Heights, IL respectfully requests a CP Modification on-channel booster WJKL-FM3 (BNPFTB-20180517AEX) within WJKL’s 60dBu contour. Please note that this on-channel booster (WJKL-FM3, 232D) for WJKL (232A) will be diplexed on the same antenna with WLEY-FM3 (300D).

FACILITIES REQUESTED

The requested facility will operate within the 60dBu contour of WJKL (FM). A map showing the coverage of this booster in relationship to the WJKL signal and the current CP is shown in Exhibit A. The antenna being used is a double, dual Shively 6025 1-2, dual element, log-periodic antenna with elements skewed by 50 degrees. The four antennas are rotated 30 degrees from vertical to achieve slant H+V polarization. The Azimuth Pattern is attached as Exhibit C.

Booster Location:	“LOOP” (WJKL-FM3)
ASR	1009155 (Exhibit B)
Geographic Coordinates (NAD27):	41°52’ 08.6” N, 87° 41’ 35.6” W
Channel:	232 (94.3 MHz)
Effective Radiated Power:	99 W (V), 26w (H)
Antenna Type, Pattern:	Double, Shively 6025 1-2, dual log-periodic
Antenna Orientation:	100° True
Site Height AMSL	182.0m
Tower OAGL	78.3m
Antenna Height :	
Above ground:	65.0m
Above mean sea level:	247.0m
Above average terrain:	65.0m

## ALLOCATION

As shown in the allocation chart below, WJKL-FM1, will be fully compliant with all pertinent commission rules:

ComStudy 2.2 search of channel 232 (94.3 MHz Class D) at 41-52-08.6 N, 87-41-35.6 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
WLIT-FM	CHICAGO	IL 230 B	4.91	0.00	77.1	-46.59 dB 2nd Adjacent- OK
WLS-FM	CHICAGO	IL 234 B	4.91	0.00	77.1	-46.98 dB 2nd Adjacent- OK
WJKL	GLENDALE HEIGHTS	IL 232 A	5.96	0.00	68.0	-35.38 dB PRIMARY Station
WOJO	EVANSTON	IL 286 B	6.70	15.00	60.2	-8.3 IF- 99 watt limit
W232CK	GARY	IN 232 D	47.86	0.00	136.5	12.43 dB
WZOC	PLYMOUTH	IN 232 B1	124.68	0.00	107.3	14.29 dB
WGFA-FM	WATSEKA	IL 231 B	119.55	0.00	182.5	20.15 dB
WKTI	MILWAUKEE	WI 233 B	136.86	0.00	352.9	24.63 dB
WZOC	PLYMOUTH	IN 232 B1	123.61	0.00	108.7	24.19 dB
WBCT	GRAND RAPIDS	MI 229 B	197.05	0.00	63.7	24.64 dB
WKTI	MILWAUKEE	WI 233 B	136.86	0.00	352.9	25.95 dB
WTNR	HOLLAND	MI 233 B	179.82	0.00	51.8	29.55 dB
WJJO	WATERTOWN	WI 231 B	173.64	0.00	320.1	30.46 dB

As shown in Exhibit A the 60dBu contour of the booster will fall inside the 60dBu contour of WJKL (FM), Channel 232A. The proposed booster is within 15km distance to WOJO (FM), 286B (54 channels) and therefore the power has thus been limited to 99 watts as required. As shown in the study above, there is no impact by the proposed booster to any co-channel or first adjacent facility other than the WJKL (FM) primary station.

## ENVIRONMENTAL CONSIDERATIONS

The Booster will be attached at the 65m height on an existing 78.3m registered tower (ASR 1009155). Because there will be no modifications to this tower it is exempt from environmental processing under CFR Section 1.1306.

The booster is proposed to operate at 99watts at 65m AGL and will be diplexed with WLEY-FM3. Using the FCC program "FM Model for Windows" for a worst case dipole antenna, the predicted RF power density at 2m AGL with a 65m center of radiation is  $1.0\mu\text{W}/\text{cm}^2$  which is 0.5% of the maximum allowable public exposure (MPE) of  $200\mu\text{W}/\text{cm}^2$ . Further as a facility operating below 100 watts, the proposed booster is considered an excluded facility for purposes of RFR compliance.

There are no other non-excluded RF sources on the tower, however, WLEY-FM3 will also operate at 99 watts from the proposed antenna.

The permittee agrees to reduce power or cease operations when it becomes necessary for workers or the general public to be on the roof in order to ensure that they will not be exposed to levels of radio frequency electromagnetic radiation that exceed FCC guidelines.

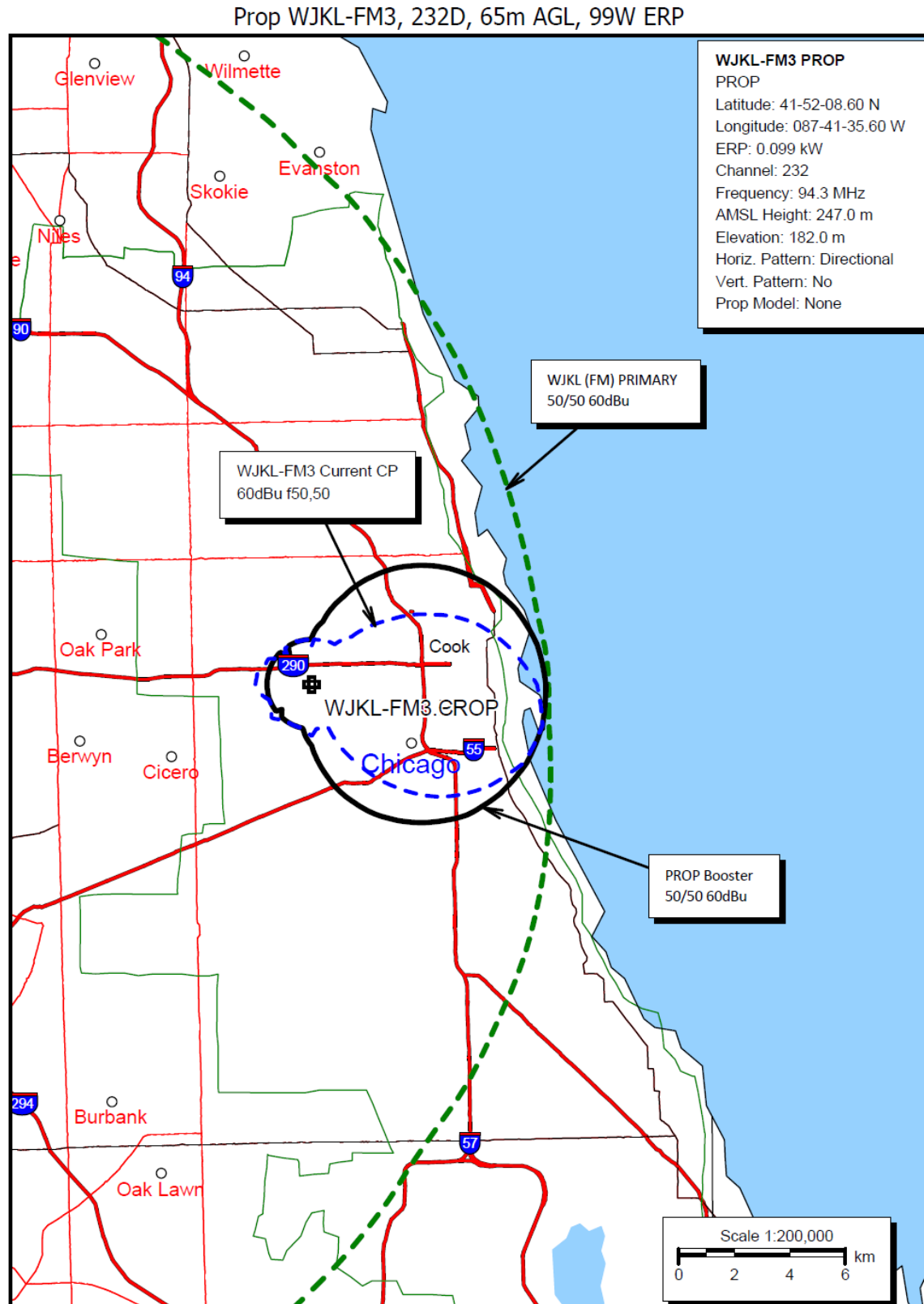
#### CERTIFICATION

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direct supervision, and that they are true and correct to the best of his knowledge and belief.

A handwritten signature in black ink, appearing to read "Bertram S. Goldman", with a long horizontal flourish extending to the right.

Bertram S. Goldman  
Goldman Engineering Management

# EXHIBIT A



## EXHIBIT B ASR

ASR Registration Search

### Registration 1009155

 [Map Registration](#)

#### Registration Detail

Reg Number	1009155	Status	Constructed
File Number	A0981564	Constructed	01/01/1984
EMI	No	Dismantled	
NEPA	No		

#### Antenna Structure

Structure Type MAST - Mast

##### Location (in NAD83 Coordinates)

Lat/Long	41-52-08.8 N 087-41-35.9 W	Address	1003 S WASHTENAW ST
City, State	CHICAGO , IL		
Zip	60612	County	COOK
Center of AM Array		Position of Tower in Array	

##### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
182.0	78.3
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
260.3	76.5

#### Painting and Lighting Specifications

FAA Chapters 4, 8, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

#### FAA Notification

FAA Study	2015-AGL-13106-OE	FAA Issue Date	10/19/2015
-----------	-------------------	----------------	------------

•

#### Owner & Contact Information

FRN	0004334249	Owner Entity Type	Limited Liability Company
-----	------------	----------------------	---------------------------

#### Owner

SBC TOWER HOLDINGS LLC	P: (855)699-7073
Attention To: FCC GROUP	F: (972)907-1131
3300 E. RENNER ROAD, B3132	E: FCCMW@att.com
RICHARDSON , TX 75082	

#### Contact

YOUNGBLOOD , REGINALD	P: (855)699-7073
Attention To: FCC GROUP	F: (972)907-1131
3300 E. RENNER ROAD, B3132	E: FCCMW@att.com
RICHARDSON , TX 75082	

•

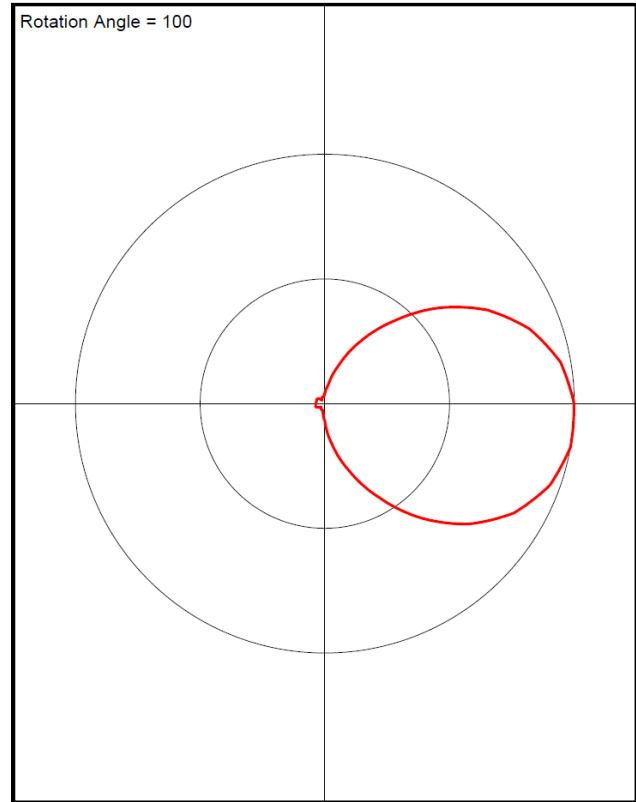
#### Last Action Status

Status	Constructed	Received	10/20/2015
Purpose	Notification	Entered	10/20/2015

# EXHIBIT C

WJKL-FM3 Antenna Pattern  
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
5.0	0.9795
10.0	0.959
15.0	0.9175
20.0	0.876
25.0	0.8135
30.0	0.751
35.0	0.6745
40.0	0.598
45.0	0.516
50.0	0.434
55.0	0.361
60.0	0.288
65.0	0.2265
70.0	0.165
75.0	0.1175
80.0	0.07
85.0	0.0555
90.0	0.041
95.0	0.034
100.0	0.027
105.0	0.0275
110.0	0.028
115.0	0.026
120.0	0.024
125.0	0.022
130.0	0.02
135.0	0.025
140.0	0.03
145.0	0.0345
150.0	0.039
155.0	0.0385
160.0	0.038
165.0	0.037
170.0	0.036
175.0	0.0355
180.0	0.035
185.0	0.035
190.0	0.035
195.0	0.036
200.0	0.037
205.0	0.034
210.0	0.031
215.0	0.024
220.0	0.017
225.0	0.0205
230.0	0.024
235.0	0.0265
240.0	0.029
245.0	0.0275
250.0	0.026
255.0	0.0335
260.0	0.041
265.0	0.058
270.0	0.075
275.0	0.1195
280.0	0.164
285.0	0.227
290.0	0.29
295.0	0.3615
300.0	0.433
305.0	0.515
310.0	0.597
315.0	0.674



320.0	0.751
325.0	0.8125
330.0	0.874
335.0	0.9165
340.0	0.959
345.0	0.979
350.0	0.999
355.0	0.9995