

**ENGINEERING REPORT**  
**Minor Modification Construction**  
**Permit Application**

for

**W230CR**  
**Facility ID: 200363**

as an AM Fill-In Translator for  
**WSLA(AM) – Slidell, LA**

August 2021

***MUNN-REESE***

Broadcast Engineering Consultants  
Coldwater, MI 49036

## Discussion

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This firm has been retained to prepare the required engineering report in support of a Minor Modification Change to Construction Permit Application for an FM Translator W230CR. Currently this translator is licensed to operate with an AMSL of 122 meters and an ERP of 0.250 kW (H&V). This proposal requests an AMSL of 130 meters and an ERP of 0.042kW (H&V) from a new tower site. The Fill-In Translator will rebroadcast Class D Primary Station WSLA(AM) – Slidell, LA (1560 kHz); Facility ID No. 39849.

The Translator as proposed will be mounted on a tower bearing Antenna Structure Registration Number 1275868.

The proposed 60 dBμ contour of the Fill-In Translator lies wholly inside the greater of the AM primary daytime 2.0 mV/m contour and a 25 mile radius around the AM site. A map of the present and proposed service area has been included in **Exhibit 1.0**.

It has been determined the Translator may be used in the area without interference to any existing FM broadcast station or facility. General allocation details are found in **Exhibit 2.0**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WQUE-FM – New Orleans, LA (CH227C0) and WTIW-FM – Galliano, LA (CH232C1) as noted in **Exhibit 2.1**. Protection has been based on the worst case calculated 109.2 dBμ F(50:10) Interference Contour, corresponding to the worst case 69.2 dBμ F(50:50) Protected Contour. Protection has been demonstrated through a downward vertical radiation study as shown in **Exhibit 2.1**.

The applicant certifies the proposed translator 34 dBu F(50:10) Interference contour does not enter Canadian territory. Documentation of the proposed 34 dBu F(50:10) Interference contour will be supplied upon request.

This translator is not within the affected distance of any TV Channel 6 stations.

The applicant would like to note use of the NED 03 second terrain database for terrain-based showings contained here-in.

# Exhibit 1.0: W230CR Present and Proposed as a Fill-In for WSLA(AM)

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## WSLA.L

Latitude: 30-15-08 N  
Longitude: 089-45-46 W

Frequency: 1560 kHz

## W230CR

0000185985

Latitude: 30-07-31.79 N  
Longitude: 089-52-02.26 W  
ERP: 0.25 kW

Channel: 230  
Frequency: 93.9 MHz  
AMSL Height: 122.1 m  
Elevation: 2.1 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

## W230CR.P

ASR 1275868

Latitude: 30-01-10.28 N  
Longitude: 089-55-36.56 W  
ERP: 0.042 kW

Channel: 230  
Frequency: 93.9 MHz  
AMSL Height: 130.0 m  
Elevation: 0.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

Circle R = 40.0 km

- W230CR (230)
- WSLA.L
- W230CR.P (230)

2.0 mV/m

FCC F(50-50) 50 dBu (FCC HAAT)

FCC F(50-50) 67.0 dBu (FCC HAAT)

Scale 1:500,000

0 7 14 21 km

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Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

## Exhibit 2.1: W230CR Proposed vs WTIX-FM and WQUE-FM in support of a 74.1204(d) Waiver Request

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### W230CR.P

ASR 1275868  
Latitude: 30-01-10.28 N  
Longitude: 089-55-36.56 W  
ERP: 0.042 kW  
Channel: 230  
Frequency: 93.9 MHz  
AMSL Height: 130.0 m  
Elevation: 0.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

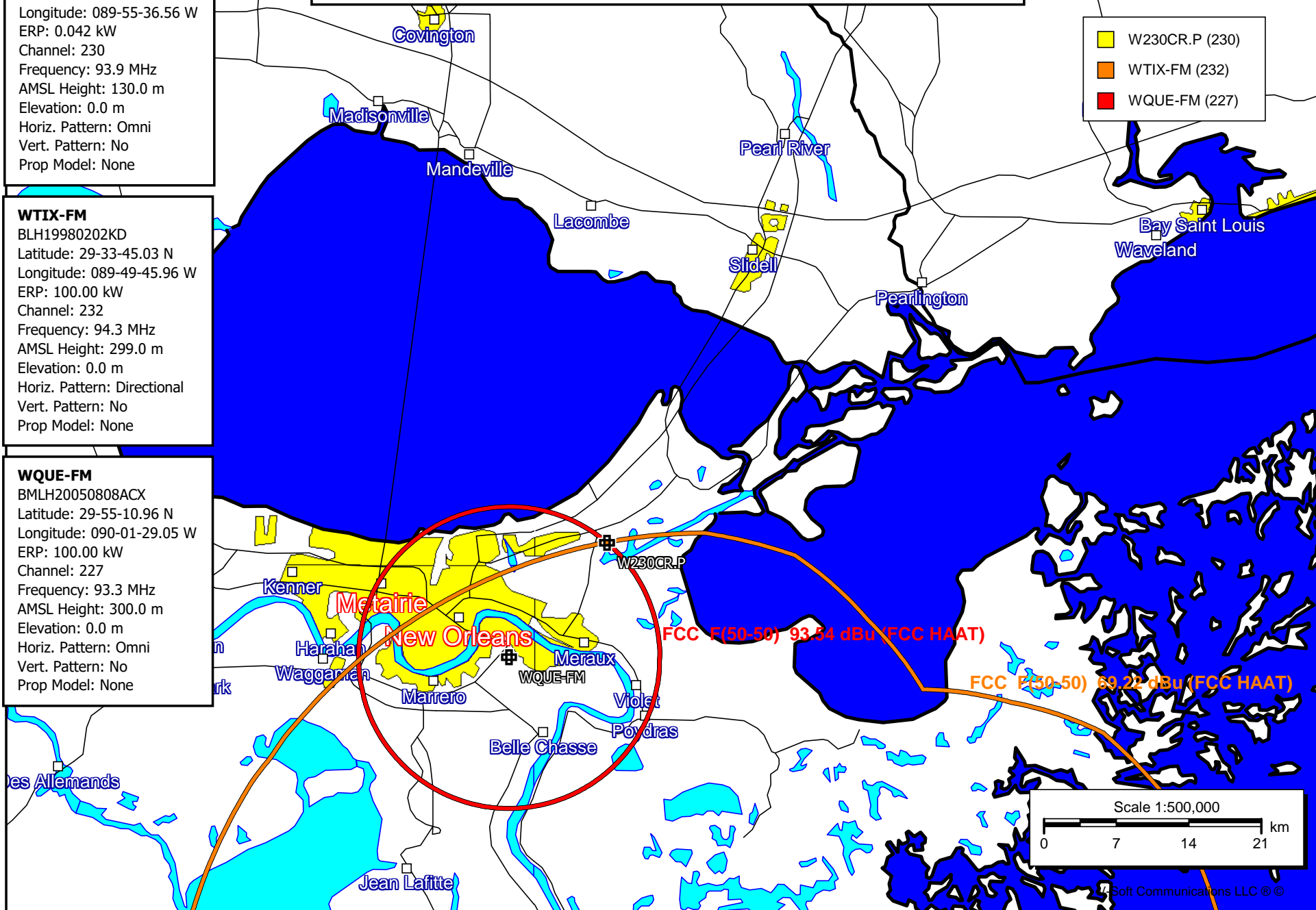
### WTIX-FM

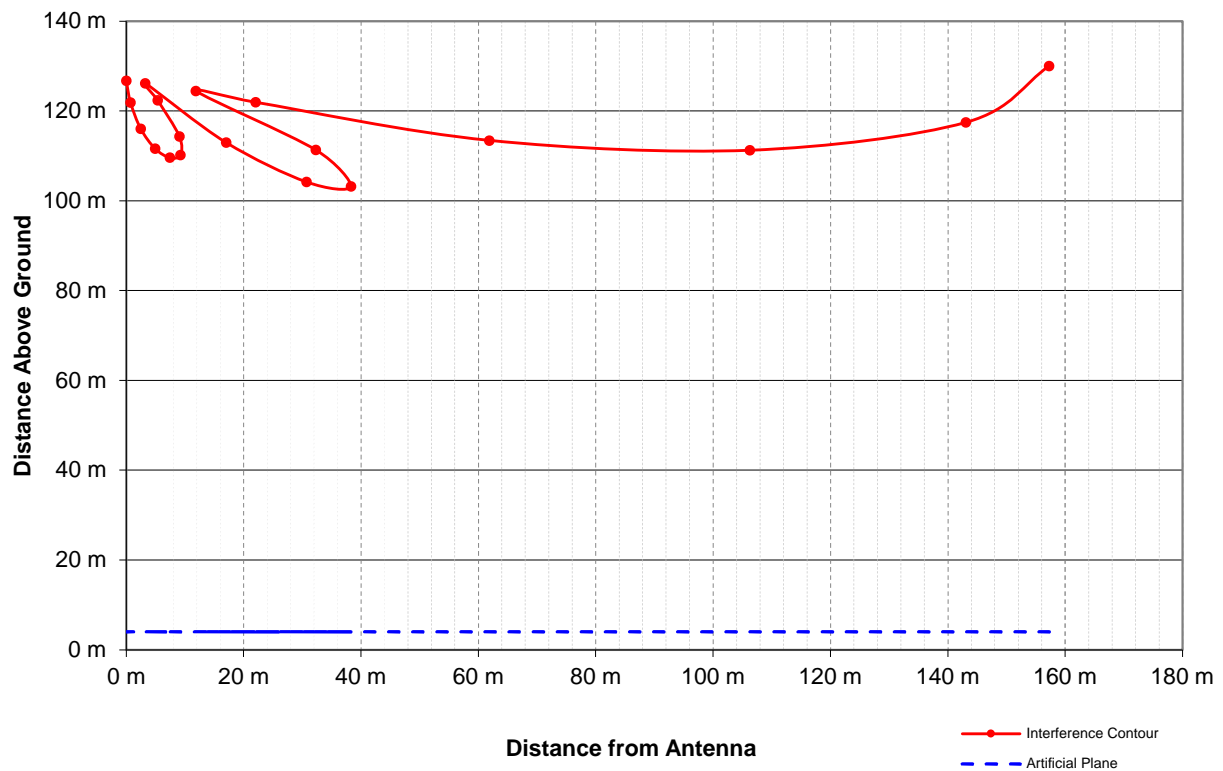
BLH19980202KD  
Latitude: 29-33-45.03 N  
Longitude: 089-49-45.96 W  
ERP: 100.00 kW  
Channel: 232  
Frequency: 94.3 MHz  
AMSL Height: 299.0 m  
Elevation: 0.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

### WQUE-FM

BMLH20050808ACX  
Latitude: 29-55-10.96 N  
Longitude: 090-01-29.05 W  
ERP: 100.00 kW  
Channel: 227  
Frequency: 93.3 MHz  
AMSL Height: 300.0 m  
Elevation: 0.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

- W230CR.P (230)
- WTIX-FM (232)
- WQUE-FM (227)





**Proposed Antenna:** BKG77/3 Three Bay 0.85λ Spaced

**Proposed Power:** 0.042 kW

**Antenna Height AGL:** 130 meters

**Interference Contour:** 109.22 dBu f(50:10)

**Artificial Ground Plane Height:** 4 meters

**Distance (Free Space) Equation:**  $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000$

**Field Strength (dBu) Equation:**  $= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$

Depression				Distance				
Angle	Antenna			from Ant.	Distance	Field Strength	Distance	Field Strength
Below	Relative	ERP	ERP	to Interference	from Ant. to	in dBu @	from Ant.	in dBu @
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	o Ground Level	Ground Level
0°	1.000	0.042	-13.77	157.26 m	infinite	---	---	---
-5°	0.913	0.035	-14.56	143.58 m	1445.69 m	89.16 dBu	1491.58 m	88.89 dBu
-10°	0.686	0.020	-17.04	107.88 m	725.61 m	92.66 dBu	748.64 m	92.39 dBu
-15°	0.407	0.007	-21.58	64.01 m	486.83 m	91.60 dBu	502.28 m	91.33 dBu
-20°	0.149	0.001	-30.30	23.43 m	368.40 m	85.29 dBu	380.09 m	85.02 dBu
-25°	0.083	0.000	-35.39	13.05 m	298.14 m	82.05 dBu	307.61 m	81.77 dBu
-30°	0.237	0.002	-26.27	37.27 m	252.00 m	92.62 dBu	260.00 m	92.35 dBu
-35°	0.297	0.004	-24.31	46.71 m	219.67 m	95.77 dBu	226.65 m	95.50 dBu
-40°	0.255	0.003	-25.64	40.10 m	196.02 m	95.44 dBu	202.24 m	95.17 dBu
-45°	0.153	0.001	-30.07	24.06 m	178.19 m	91.83 dBu	183.85 m	91.56 dBu
-50°	0.032	0.000	-43.66	5.03 m	164.48 m	78.93 dBu	169.70 m	78.66 dBu
-55°	0.059	0.000	-38.35	9.28 m	153.82 m	84.83 dBu	158.70 m	84.56 dBu
-60°	0.115	0.001	-32.55	18.09 m	145.49 m	91.11 dBu	150.11 m	90.84 dBu
-65°	0.139	0.001	-30.91	21.86 m	139.03 m	93.15 dBu	143.44 m	92.88 dBu
-70°	0.138	0.001	-30.97	21.70 m	134.09 m	93.40 dBu	138.34 m	93.13 dBu
-75°	0.121	0.001	-32.11	19.03 m	130.44 m	92.50 dBu	134.59 m	92.23 dBu
-80°	0.090	0.000	-34.68	14.15 m	127.94 m	90.10 dBu	132.01 m	89.83 dBu
-85°	0.052	0.000	-39.45	8.18 m	126.48 m	85.43 dBu	130.50 m	85.16 dBu
-90°	0.021	0.000	-47.32	3.30 m	126.00 m	77.59 dBu	130.00 m	77.32 dBu