

TECHNICAL EXHIBIT
APPLICATION FOR AUXILIARY STATION CONSTRUCTION PERMIT
STATION WJGL(FM)
JACKSONVILLE, FLORIDA
CH 245C 23 KW 171 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of radio station WJGL(FM) at Jacksonville, Florida. The WJGL(FM) main facility is presently licensed on Channel 245C with an effective radiated power of 100 kilowatts employing a non-directional antenna and antenna height above average terrain of 309 meters.¹ By this instant application, WJGL(FM) is proposing a new auxiliary (stand-by) construction permit authorization. The proposed auxiliary transmitter site is located immediately adjacent to the main transmitter site. Several FM stations, including WFYV-FM and WXXJ(FM), will employ this auxiliary transmitter site and common master FM antenna.

Transmitter Location

The proposed auxiliary site location is uniquely described by the following NAD-27 coordinates:

30° 16' 34" North Latitude
81° 33' 51" West Longitude

A sketch showing the antenna and supporting structure is shown on Figure 1. It is proposed to operate with an effective radiated power of 23 kilowatts.

¹ See FCC File No. BLH-19900420KA.

Coverage Contours

The predicted 60 dBu coverage contours for the auxiliary operation and the existing main operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the National Geophysical Data Center's (NGDC) 30-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 2 is a map showing the predicted 60 dBu coverage contours for the licensed and proposed operations. As the map illustrates, the predicted auxiliary's 60-dBu contour is entirely encompassed by the primary station's 60-dBu contour.

Radiofrequency Electromagnetic Field Considerations

The proposed WJGL(FM) auxiliary facility was evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed WJGL(FM) auxiliary antenna is located 168 meters (550 feet) above ground level. The maximum effective radiated power is 23 kilowatts. A Dielectric antenna, model number DCRM6C with six sections and 0.5 wavelength spacing will be employed. Using the Commission's *FM Model* prediction computer program, The calculated power density at a point 2 meters above ground level would not exceed $8 \mu\text{W}/\text{cm}^2$. This is less than 5 percent of the Commission's recommended limit of $0.2 \text{ mW}/\text{cm}^2$ for an FM station.

Access to the transmitting site is restricted and appropriately marked with warning signs. As this is a multi-user site an agreement between the stations will control access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

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ASRN: 1240988

194 m AMSL
(637 ft AMSL)

185 m
(607 ft)

FM Auxiliary Master
Antenna System

Radiation Center
177 m AMSL
(580 ft AMSL)

168 m
(550 ft)

NAD 27
Site Coordinates:
30° 16' 34" N
81° 33' 51" W

9 m AMSL
(30 ft AMSL)

Not to Scale

ANTENNA AND SUPPORTING STRUCTURE

RADIO STATION WJGL(FM)

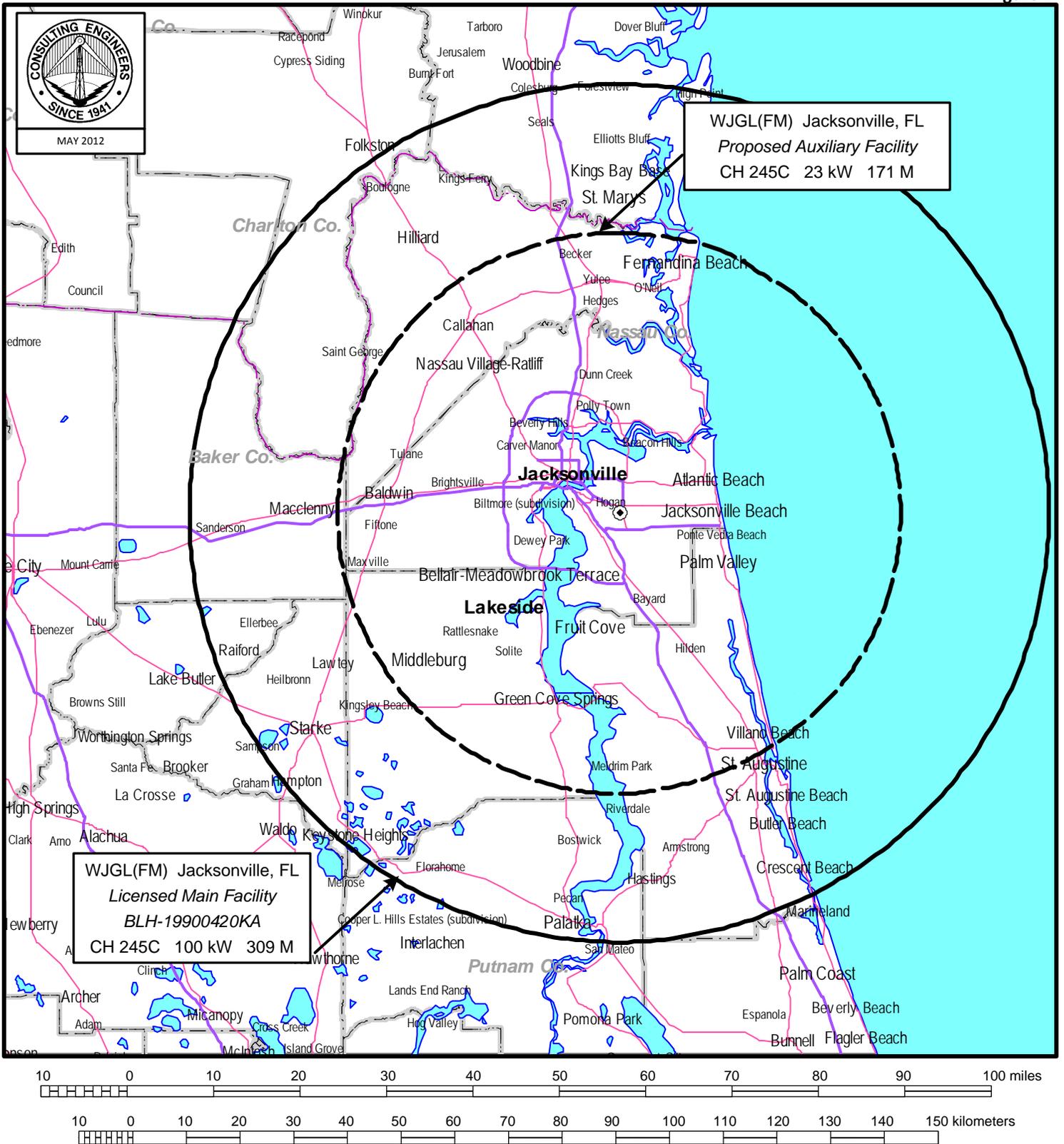
AUXILIARY FACILITY

JACKSONVILLE, FLORIDA

CH 245C 23 KW 171 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



FCC PREDICTED 60 DBU COVERAGE CONTOURS

RADIO STATION WJGL(FM)

AUXILIARY FACILITY

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du Treil, Lundin & Rackley, Inc Sarasota, Florida