

ENGINEERING STATEMENT
IN SUPPORT OF A CONSTRUCTION PERMIT
BNPFT-20030317KPI
CHANNEL 227D, MACON, MISSOURI
JUNE 2008

This technical statement including the attached exhibits have been prepared on behalf of FM 105, Inc., applicant for a new FM translator station at Macon, Missouri, in support of its application for a construction permit (BNPFT-200300317KPI).

In a Public Notice dated May 16, 2008, the Commission has designated the FM 105, Inc. short-form application for a new FM Translator at Macon, Missouri as non-mutually exclusive. FM 105, Inc. is filing an application for a construction permit on the FCC Form 349. The proposed FM Translator will operate on Channel 227D (93.3 MHz) with 0.25 kW (H&V) effective radiated power (ERP) and 52.3 meters antenna height above terrain using a non-directional antenna. The proposed FM antenna would be side-mounted near the top of an existing tower, currently used by AM station KLTI, Macon, Missouri. No adverse impact on the non-directional AM operation of KLTI is expected.

The proposed antenna site is located west of the Mississippi river; therefore the new FM translator is limited to a maximum ERP of 0.25 kW at 107 meters HAAT on any radial from the site, spaced evenly every 30 degrees. The attached Table I shows the proposed FM Translator would comply with Section 74.1235 of the Commission's rules with respect to power and antenna height limitations.

The proposed FM Translator would re-broadcast FM signals of KZZT, Moberly, Missouri which currently operates on Channel 288C2 (105.5 MHz) with 50 kW ERP and 150 meters HAAT. The attached map (Figure 1) shows the computed 1.0 mV/m contour of the proposed FM Translator operation in relation to the similar contour of KZZT(FM). The proposed FM Translator operation would be providing "Fill-in" service for KZZT(FM).

The following data provides detail information concerning the proposed FM

Translator operation:

| | | | |
|-----------------------------------|----------------------------------|--------|---------------|
| Name of the Applicant: | FM 105, Inc. | | |
| Principal community to be served: | MO-Macon | | |
| Primary Station: | KZZT, Channel 288C2, Moberly, MO | | |
| Via: | Direct-off-air | | |
| Channel: | 227 | | |
| Hours of operation: | Unlimited | | |
| Antenna Coordinates: | North latitude: | 39 deg | 42 min 34 sec |
| | West Longitude: | 92 deg | 27 min 50 sec |
| Transmitter: | Type Accepted | | |
| Antenna type: | Non-directional | | |
| Major lobe directions: | Not Applicable | | |

| | Horizontally Polarized Antenna | Vertically Polarized Antenna |
|---|--------------------------------------|------------------------------------|
| Effective radiated power in the horizontal plane (kW) | 0.25 | 0.25 |
| Height of radiation center above ground (meters) | 33.5 | 33.5 |
| Height of radiation center above means sea level (meters) | 300.2 | 300.2 |
| Antenna structure registration number: | 1047289 | |

Interference

The proposed FM translator operation on Channel 227 would comply with Section 74.1204 of the Commission’s rules with respect to interference to any existing or proposed FM stations and translators. The attached maps (Figures 2 & 3) show the

proposed operation would not cause prohibited contour overlap with any other FM station operating on ± 3 channels of Channel 227.

Since the FM Translator will not be operating on Channels 201-220, Section 74.1205 is not pertinent.

Unattended Operation

It is proposed to operate the FM Translator unattended in accordance with Section 74.124 of the Commission's rules.

Multiple Translators

The applicant does not have any interest in an FM translator or application which serves the same area and re-broadcast the same signals as the new FM Translator.

Environmental Protection Act

As stated above the proposed FM antenna would be side-mounted on the KLTI(AM) existing tower. The environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the FCC OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 0.5 kW and a radiation center of 33.5 meters above ground level, the proposed operation would have a maximum of 4.2 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of the supporting structure assuming 0.5 antenna relative field in the downward direction. The Commission's guidelines for the FM band are 1,000 $\mu\text{W}/\text{cm}^2$ for the occupational/controlled and 200 $\mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment.

Therefore, members of the public and personnel working around the proposed FM Translator facility would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, applicant, in coordination with KLTl(AM), will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

TABLE I
COMPUTED 1.0 mV/m (60 dBu) CONTOUR
FOR THE PROPOSED FM TRANSLATOR OPERATION AT
MACON, MISSOURI
JUNE 2008

Call Letters: New

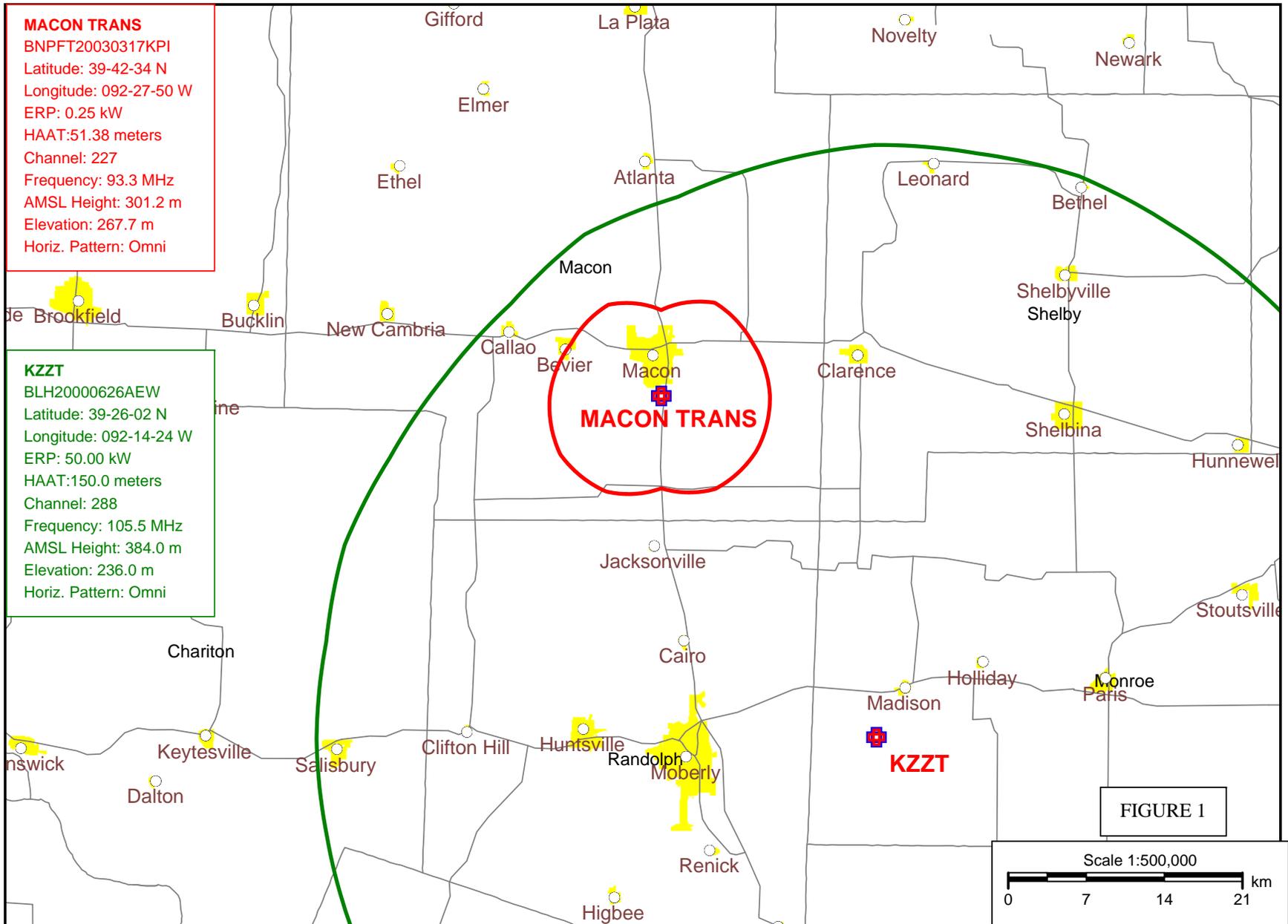
Latitude: 39-42-34 N
 Longitude: 092-27-50 W
 ERP: 0.25 kW
 Channel: 227
 Frequency: 93.3 MHz
 AMSL Height: 300.2 m
 Elevation: 266.7 m
 Horiz. Antenna Pattern: Omni
 Vert. Elevation Pattern: No

Type of contour: FCC
 Location Variability: 50.0 %
 Time Variability: 50.0 %
 Field Strength: 1.0 mV/m (60.00 dBuV/m)

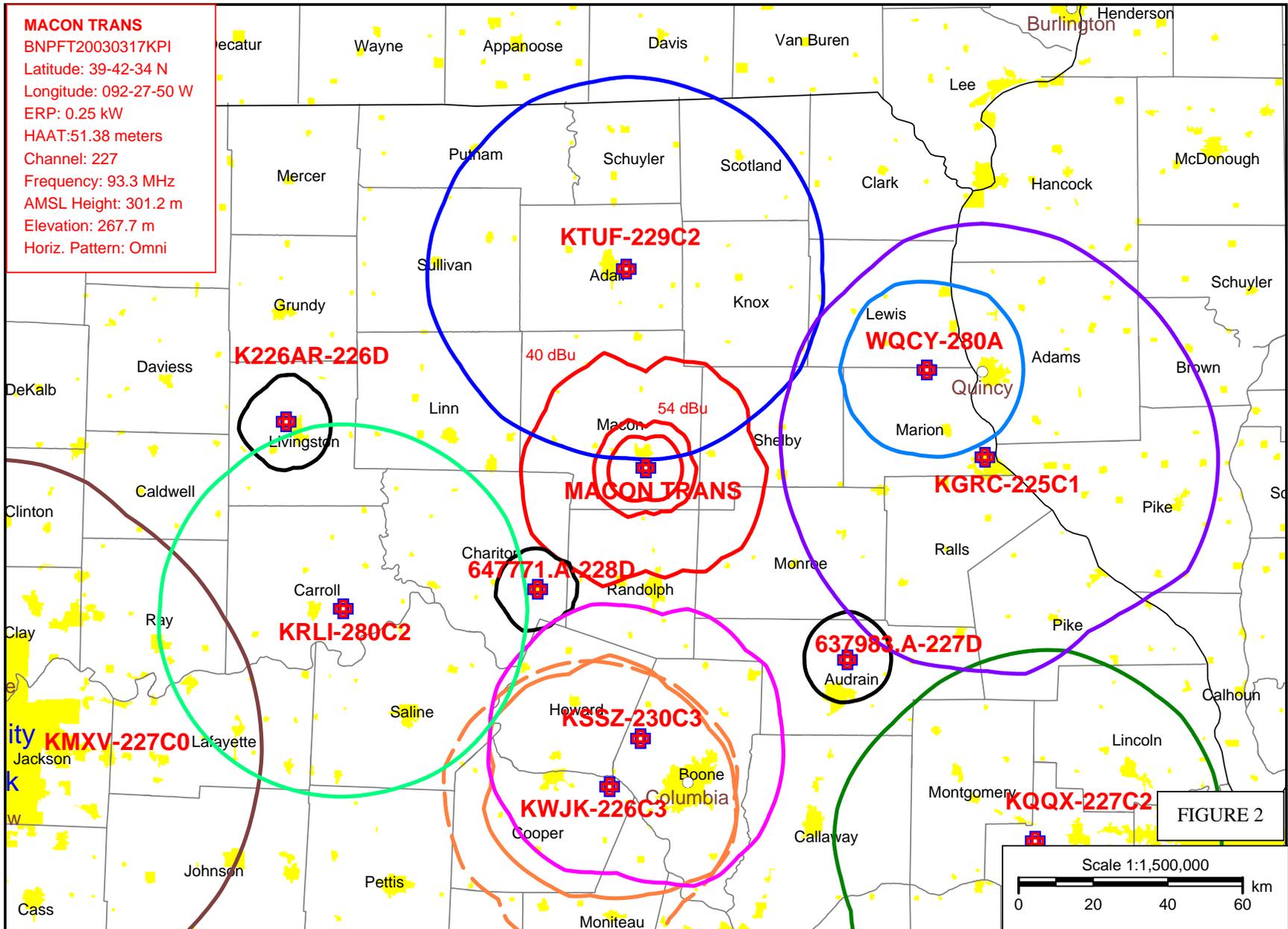
Primary Terrain: V-Soft 3 Second US Terrain

| <u>Bearing (deg)</u> | <u>Distance (km)</u> | <u>HAAT (m)</u> |
|----------------------|----------------------|-----------------|
| 0.0 | 7.7 | 35.7 |
| 30.0 | 9.6 | 53.6 |
| 60.0 | 9.5 | 51.9 |
| 90.0 | 9.7 | 54.8 |
| 120.0 | 9.8 | 56.0 |
| 150.0 | 9.6 | 53.6 |
| 180.0 | 8.3 | 40.9 |
| 210.0 | 9.9 | 56.4 |
| 240.0 | 10.5 | 63.8 |
| 270.0 | 10.0 | 57.5 |
| 300.0 | 9.3 | 50.6 |
| 330.0 | 9.4 | 51.6 |

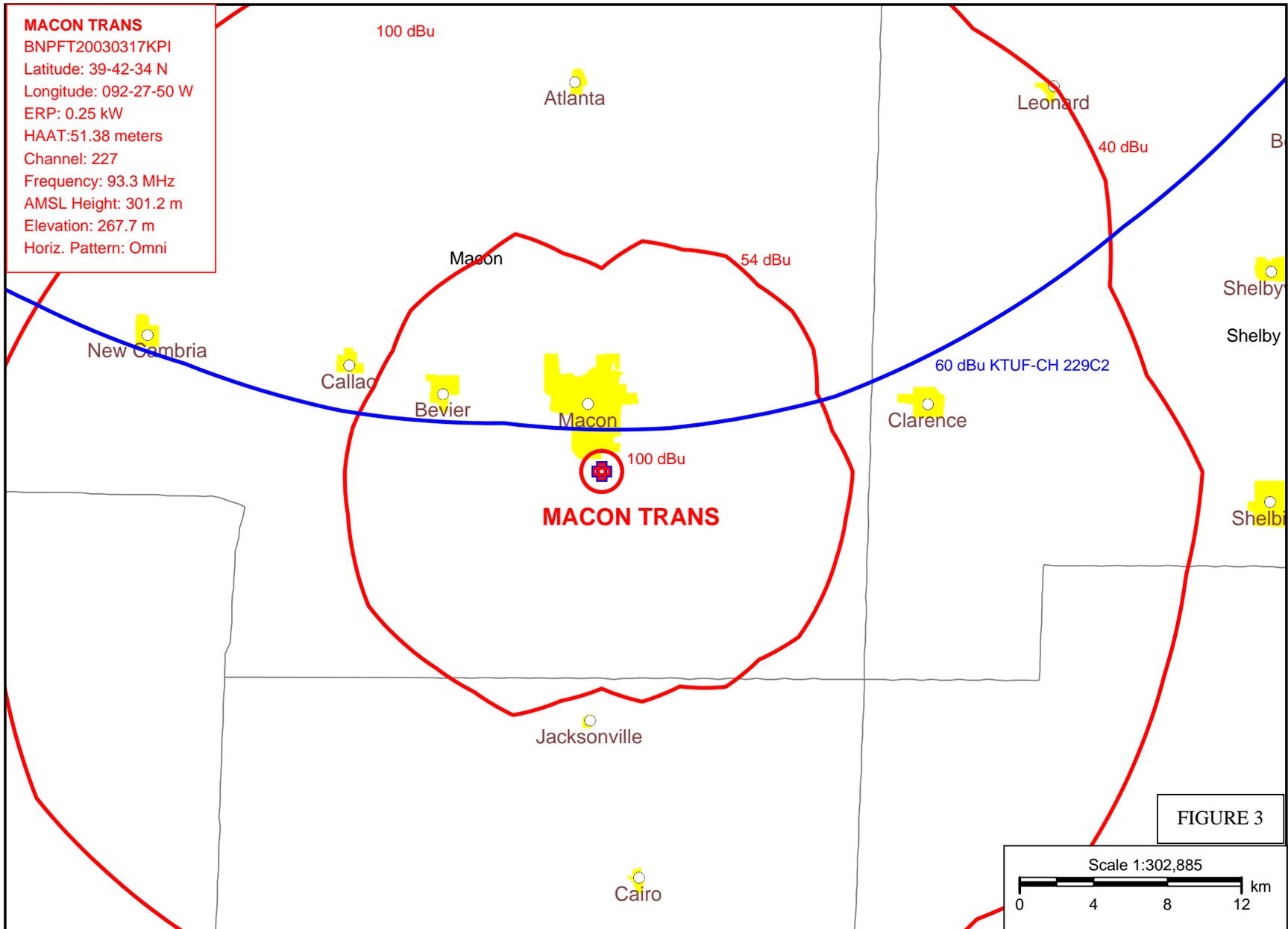
Average HAAT for radials shown: 52.3 m



COMPUTED 60 dBu CONTOURS OF FM STATION KZZT(FM) AND PROPOSED FM TRANSLATOR AT MACON, MO



COMPUTED 60 dBu CONTOURS OF FM STATIONS IN RELATION TO INTERFERING CONTOURS OF PROPOSED FM TRANSLATOR AT MACON, MO



COMPUTED 60 dBu CONTOUR OF KTUF(FM) IN RELATION TO INTERFERING CONTOUR OF PROPOSED FM TRANSLATOR AT MACON, MO