

COMPREHENSIVE TECHNICAL EXHIBIT

Discussion

Applicant seeks an LPFM Construction Permit for:

- Holland, MI
- Channel 236 (95.1 Mhz), See **Figure 3** Channel Study
- ERP = .098 kW (See **Figure 2**)
- Ground Elevation = 187meters
- RCAGL = 19.7 meters
- RCAMSL = 206.7 meters
- HAAT = 12.0 (Globe terrain data) (See **Figure 1**)
- Overall Mast Height = 19.8 meters
- FAA (TOWAIR study), See **Figure 4**
- NAD83 Latitude: 42 47 07.9N; Longitude: 86 06 24.0W
- No AM station notifications required: Closest AM Facility is WHTC, HOLLAND, MI, L, ND1 at 2.5° at a distance of 1.0 km
- Facility is okay with respect to FCC monitoring stations.
- Closest FCC Monitoring Station is 23.5 km= Allegan, MI
- Facility is okay toward West Virginia Quiet Zone. Distance to center = 743.5 km
- Facility is okay toward Table Mountain. Distance to Center = 1625.4 km, Azimuth = 266.0 Degrees True

HAAT CALCULATION (FCC HAAT Calculator)

[Antenna Height Above Average Terrain Calculations -- Results](#)

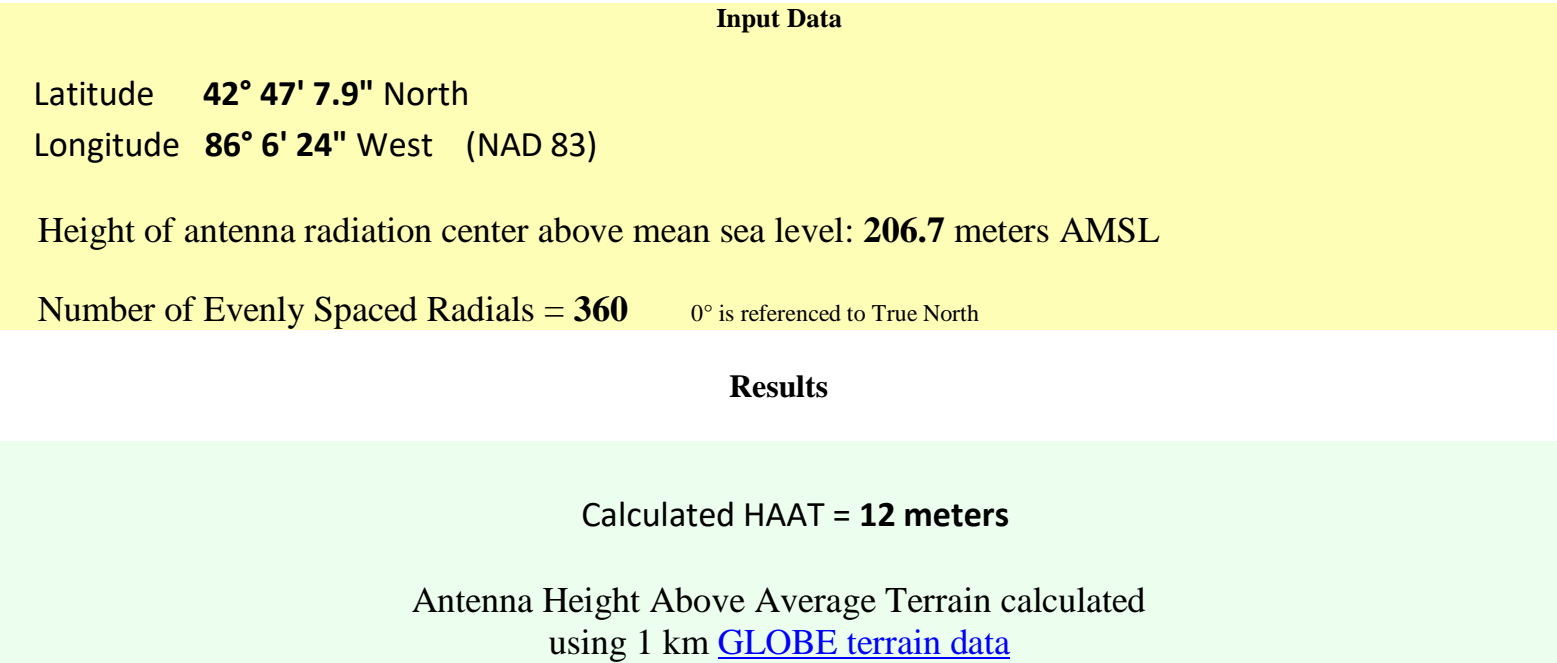


FIGURE 1

Input protection of any relevant FM Translators or Boosters

There are two (2) FM translator authorizations within 10 km of the proposed LPFM transmitter site (see **Figure 4**), however, the proposed frequency (channel 236) does not occupy the 3rd adjacent channel to the primary station off-air input of any of the nearby translators. Thus the Application complies with the provisions of 73.827(a).

HOLLAND, MI FM TRANSLATORS/BOOSTERS WITHIN 10 KM OF PROPOSED CHANNEL 236

| FCC ID | DISTANCE (km) | Translator INPUT | Primary CHANNEL |
|--------|---------------|------------------|-----------------|
| W255DI | 5.92 | Other | AM |
| W259CO | 0.99 | Other | AM |

FIGURE 4

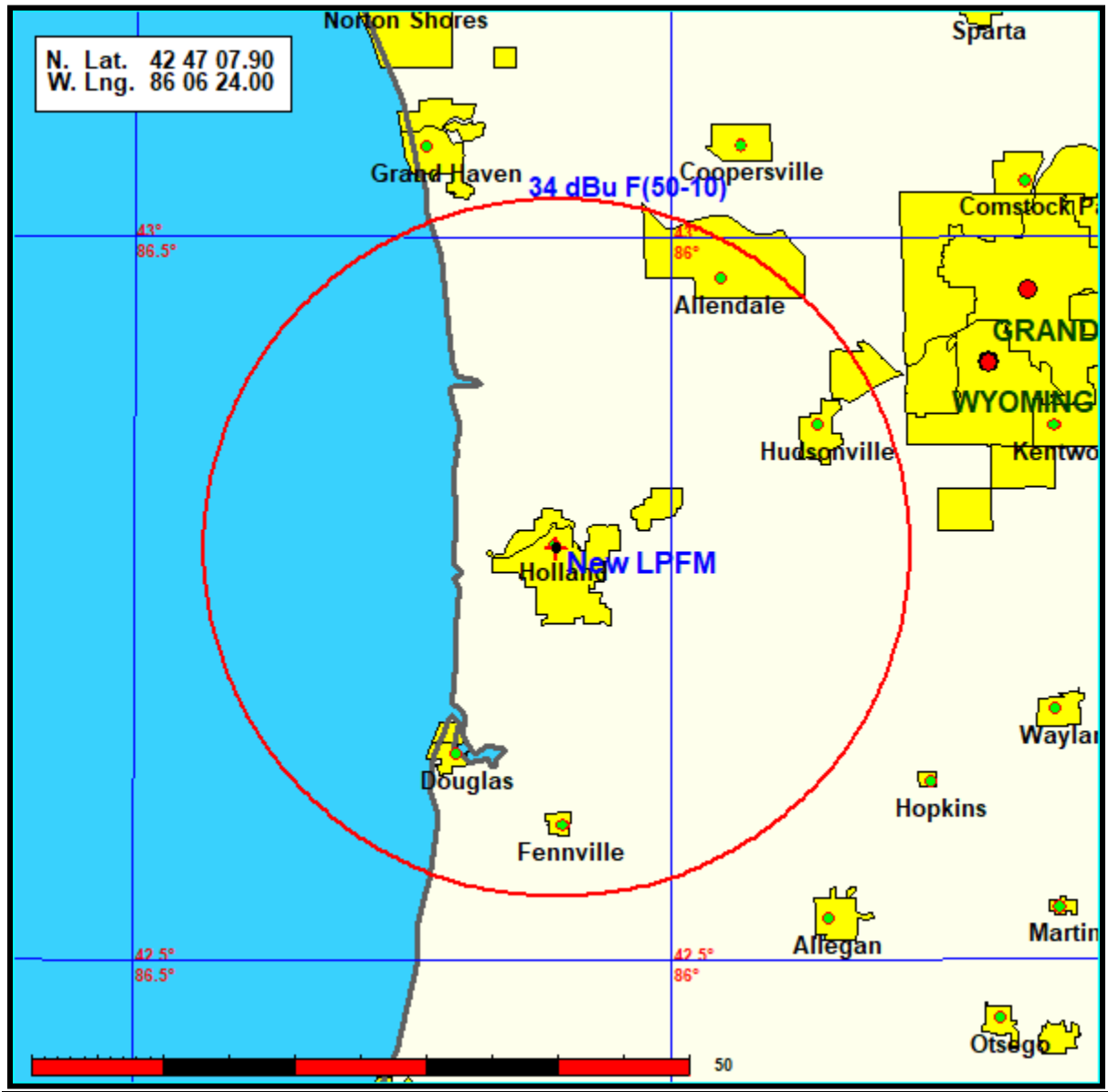
TOWAIR study

| DETERMINATION Results | |
|--|------------------|
| Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria. | |
| Your Specifications | |
| NAD83 Coordinates | |
| Latitude | 42-47-07.9 north |
| Longitude | 086-06-24.0 west |
| Measurements (Meters) | |
| Overall Structure Height (AGL) | 19.8 |
| Support Structure Height (AGL) | 13.7 |
| Site Elevation (AMSL) | 187 |
| Structure Type | |
| BMAST - Building with Mast | |

Figure 5

With Respect to Canada

The proposed LPFM transmitter site is located 252.4 km from the Canadian border, however, the proposed 34 dBu F(50,10) interfering contour does not extend more than 60 km and does not cross any Canadian territorial boundary (see **FIGURE 6**).



34 dBu F(50,10) Contour of the Proposed LPFM
FIGURE 6

RF EXPOSURE

The proposed single bay Type 2 antenna will be mounted 19.7 meters above ground level on a 6.1 meter mast atop a 13.7 meter roof, radiating 98 watts H & V. FMModel predicts a maximum ground level exposure of 5.75 uW/cm^2 at ground level, 18.2 meters horizontally from the base of the mast (107.6 uW/cm^2 at 4.2 meters from the mast base at roof level), well within limits for uncontrolled access. Access to the roof is restricted.