

WBOW(AM) – Terre Haute, IN (1300 kHz) Vertical Plan of Proposed AM “Inverted V” Special Temporary Authority (STA) Antenna System

The site is located at 4115 West US Highway 40,
the city of West Terre Haute, Vigo County, Indiana.

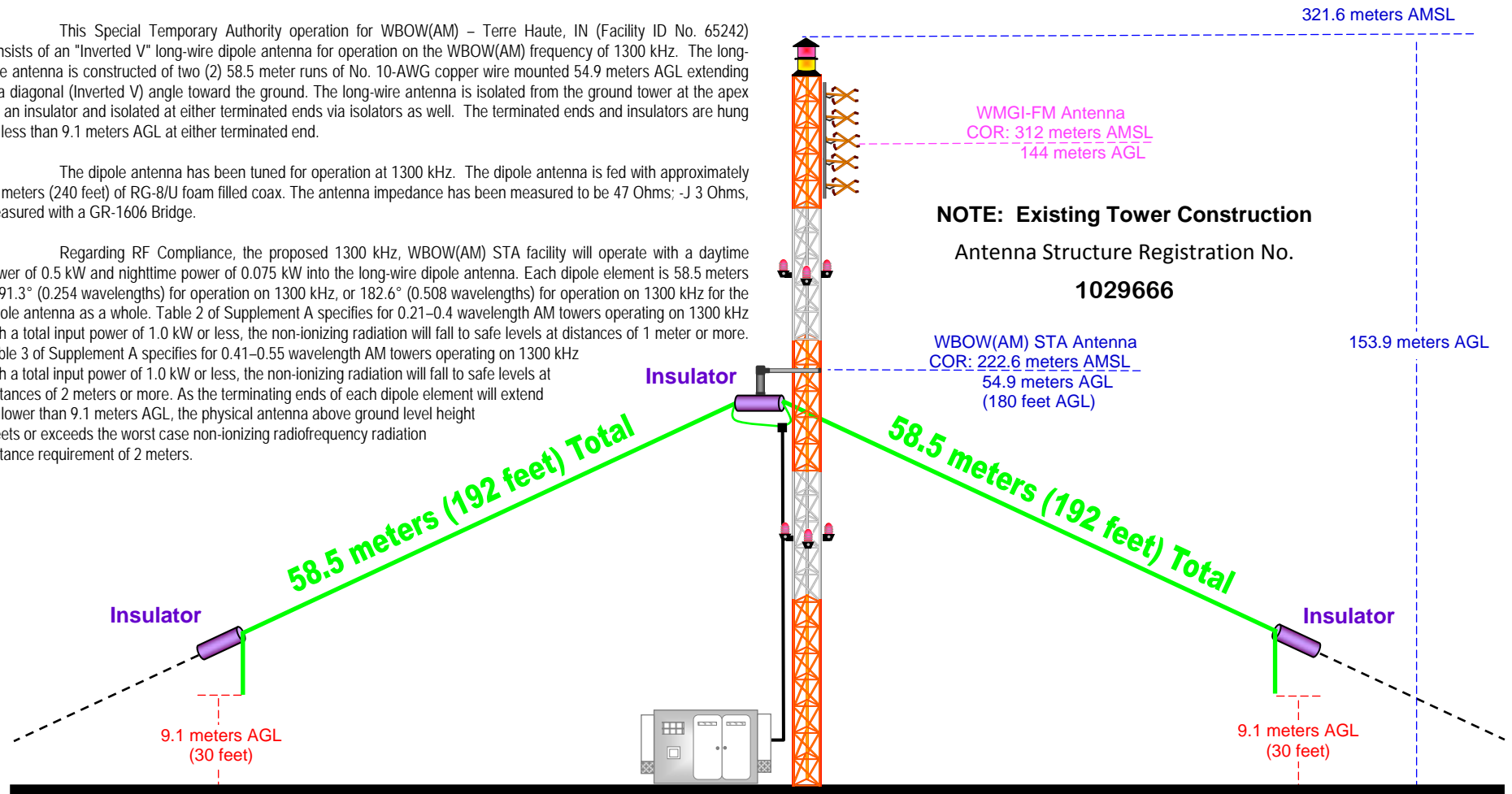
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Site Location (NAD 27)
NL: 39° 27' 22"
WL: 87° 28' 50"
(39-27-22.1 NL / 87-28-50.1 WL NAD 1983)

This Special Temporary Authority operation for WBOW(AM) – Terre Haute, IN (Facility ID No. 65242) consists of an “Inverted V” long-wire dipole antenna for operation on the WBOW(AM) frequency of 1300 kHz. The long-wire antenna is constructed of two (2) 58.5 meter runs of No. 10-AWG copper wire mounted 54.9 meters AGL extending in a diagonal (Inverted V) angle toward the ground. The long-wire antenna is isolated from the ground tower at the apex via an insulator and isolated at either terminated ends via insulators as well. The terminated ends and insulators are hung no less than 9.1 meters AGL at either terminated end.

The dipole antenna has been tuned for operation at 1300 kHz. The dipole antenna is fed with approximately 73 meters (240 feet) of RG-8/U foam filled coax. The antenna impedance has been measured to be 47 Ohms; -J 3 Ohms, measured with a GR-1606 Bridge.

Regarding RF Compliance, the proposed 1300 kHz, WBOW(AM) STA facility will operate with a daytime power of 0.5 kW and nighttime power of 0.075 kW into the long-wire dipole antenna. Each dipole element is 58.5 meters or 91.3° (0.254 wavelengths) for operation on 1300 kHz, or 182.6° (0.508 wavelengths) for operation on 1300 kHz for the dipole antenna as a whole. Table 2 of Supplement A specifies for 0.21–0.4 wavelength AM towers operating on 1300 kHz with a total input power of 1.0 kW or less, the non-ionizing radiation will fall to safe levels at distances of 1 meter or more. Table 3 of Supplement A specifies for 0.41–0.55 wavelength AM towers operating on 1300 kHz with a total input power of 1.0 kW or less, the non-ionizing radiation will fall to safe levels at distances of 2 meters or more. As the terminating ends of each dipole element will extend no lower than 9.1 meters AGL, the physical antenna above ground level height meets or exceeds the worst case non-ionizing radiofrequency radiation distance requirement of 2 meters.



Ground Elevation = 167.7 m AMSL
Drawing is not to Scale