

# Engineering Report

filed with WLHN Application for City Of License Change

## Historical Service

WLHN has been broadcasting since 1962 when the station was placed on air at it's historical transmitter site which are the licensed coordinates.

WLHN has been operating with Special Temporary Authority since 1999 when the station lost use of the historical and currently licensed transmitter site coordinates.

WLHN has been notified it's current site is being sold and proposes a new transmitter site and City Of License.

## David Letterman

Nationally known David Letterman is former resident of Indiana and his first broadcasts while attending Ball State university were on WLHN (formerly WERK).

## Equipment

WLHN owns a Harris Gates 1 Transmitter for broadcasting the WLHN signal. WLHN owns a unipole antenna system, ATU, console, EAS system, Modulation Monitor, Processing Equipment, a computer, and other necessary equipment to begin broadcasting again. It is a station with all equipment needed to broadcast and no tower.

## Programming

WLHN has broadcast until May 1, 2007 a daily lineup of educational and entertainment programs designed to serve Muncie Indiana and it's service area. The ability to continue this heritage service is a 45 year tradition the Licensee wishes to continue.

## Site Considerations

The Licensee does not have funds to construct a 90 acre 6 tower array which was originally installed at the licensed coordinates.

If the money were available to reconstruct the array the Muncie Delaware County Zoning authorities have previously provided a letter stating the property must be zoned "commercial" for the construction of a new tower array within the Muncie area. They have also offered that no such location exists. The array cannot be reconstructed in Muncie or Delaware County.

Neighboring counties have offered similar indications related to a 90 acre tower array. Due to new zoning regulations towers are mainly a nuisance to zoning officials. The laws have regulated restrictive placement of single towers. 6 towers are an impossibility.

Based on these indications the Licensee has located a single tower which it can reconstruct WLHN. The coordinates are in Rush County Indiana on an existing 200 foot tower. **The coordinates are : 39-45-01.0 N 85-33-19.0 W.** This site is the transmitter location for non-commercial FM station WJCF.

The Licensee has offered use of the tower at no cost. The unipole antenna system can be moved to the location and broadcasting can resume immediately. WLHN has requested an STA for use of this site.

## Interference Considerations

Use of a single tower as a licensed radiator and transmitter location would require a waiver of interference Rules. The Licensee requests a waiver as the number of persons receiving interference decreases. The reason for the decrease is the movement of WLHN to an area where the population is less dense. A similar geographical area receives interference however this is offset by the number of persons who would not receive interference.

### Interference WLHN Vs WITZ

Current Population in WLHN 5.0 Mv/m Contour	116,565 persons
Current Population in WITZ 5.0 Mv/m Contour	51,753 Persons

**Current** Interference to WLHN population in the 5.0 mv/m Contour from the WITZ.025 Mv/m Contour

**130, 483 Persons 1662 Sq KM**

**Proposed** Interference to WLHN population in the 5.0 mv/m Contour from the WITZ.025 Mv/m Contour

**36,219 Persons 1639 Sq KM**

*WITZ .025 Mv/m Contour with WLHN 5.0 Mv/m Contour*

LICENSED SITE : Interference to 116,565 persons

APPLICATION SITE Interference to 22, 301 Persons

While the movement and transmitting signal are fully encompassed within the WITZ .025 Mv/m Contours the population receiving interference is decreased by nearly 100,000 persons.

*WLHN .025 Mv/M Contour with WITZ 5.0 Mv/m Contour*

LICENSED SITE : No Interference

APPLICATION SITE : 22,137 Persons

The Contour overlap to the WLHN and WITZ 5 Mv/m contour currently encompasses 130,483 persons. At the WLHN APPLICATION site the interference to either stations' population in the 5 Mv/m Contour of either station is decreased to 58, 350 persons from 130,483 persons. The net decrease is less than the current Licensed operation.

Additionally, WITZ carries programming from WITZ FM which simulcasts programming on WITZ. Commission Staff has recognized in interference to Channel 6 stations that if the signal of a Channel 6 station is available from another source this can offset the interference to a given Station. The Licensee requests this interference offset apply in this specific instance. A Map plotting the WITZ and WITZ FM simulcast signal is provided which shows WITZ can be received on WITZ FM if any actual interference were to occur.

### Interference WLHN Vs WONE

The application does not significantly change the relationship between adjacent channel WLHN and WONE. Map Showing

### **Interference WLHN Vs WMVP Chicago**

The application reduces interference to and from WMVP Chicago. WMVP is an adjacent channel station. The reduction in interference to the WMVP .5 and .25 Mv/m contours is shown. Map Showing

### **Conclusion**

***WLHN has served the Public since 1962. The loss of tower site was beyond the control of the Licensee.*** The instant application would allow for a permanent replacement site for WLHN to begin broadcasts to continue the history of service the station has supplied for 45 years.

Interference showings demonstrate the actual interference to population will be decreased as the station will be serving a smaller community with a population that is not as dense as the current licensed location.

Respectfully Submitted

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