



United States of America  
**FEDERAL COMMUNICATIONS COMMISSION**  
**AM BROADCAST STATION LICENSE**

Authorizing Official:

Official Mailing Address:

IHM LICENSES, LLC  
7136 S. YALE AVENUE  
SUITE 501  
TULSA OK 74136

Son Nguyen  
Supervisory Engineer  
Audio Division  
Media Bureau

Facility Id: 35230

Call Sign: WTAG

Grant Date: November 10, 2008

This license expires 3:00 a.m.  
local time, April 01, 2014.

License File Number: BZ-20080714AFR

Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934.

Hours of Operation: Unlimited

Average hours of sunrise and sunset:  
Local Standard Time (Non-Advanced)

Jan.	7:15 AM	4:45 PM	Jul.	4:15 AM	7:30 PM
Feb.	6:45 AM	5:15 PM	Aug.	5:00 AM	6:45 PM
Mar.	6:00 AM	6:00 PM	Sep.	5:30 AM	6:00 PM
Apr.	5:15 AM	6:30 PM	Oct.	6:00 AM	5:00 PM
May	4:30 AM	7:00 PM	Nov.	6:30 AM	4:30 PM
Jun.	4:15 AM	7:30 PM	Dec.	7:15 AM	4:15 PM

Callsign: WTAG

License No.: BZ-20080714AFR

Name of Licensee: IHM LICENSES, LLC

Station Location: WORCESTER, MA

Frequency (kHz): 580

Station Class: B

Antenna Coordinates:

Day

Latitude: N 42 Deg 20 Min 13 Sec

Longitude: W 71 Deg 49 Min 15 Sec

Night

Latitude: N 42 Deg 20 Min 13 Sec

Longitude: W 71 Deg 49 Min 15 Sec

Transmitter(s): Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Nominal Power (kW): Day: 5.0 Night: 5.0

Antenna Input Power (kW): Day: 5.4 Night: 5.4

Antenna Mode: Day: DA Night: DA

(DA=Directional Antenna, ND=Non-directional Antenna; CH=Critical Hours)

Current (amperes): Day: 10.4 Night: 10.4

Resistance (ohms): Day: 50 Night: 50

Antenna Registration Number(s):

Day:

Tower No.	ASRN	Overall Height (m)
1	1007891	
2	1007892	
3	1007893	

Night:

Tower No.	ASRN	Overall Height (m)
1	1007891	
2	1007892	
3	1007893	
4	1007890	

## DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 630.86 Night: 651.78

Standard RMS (mV/m/km):

Augmented RMS (mV/m/km): Day: 677.14 Night: 685.74

Q Factor: Day: Night:

## Theoretical Parameters:

## Day Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.0000	50.000	0.0000	0.000	0	79.7
2	1.3000	0.000	90.0000	270.000	0	79.7
3	0.7000	-75.000	180.0000	270.000	0	79.7

## \* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

## Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	126.0	72.0	168.98
2	180.0	90.0	740.30
3	225.0	39.0	997.79

## Theoretical Parameters:

## Night Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.0000	0.000	0.0000	0.000	0	79.7
2	0.4600	-164.000	90.0000	270.000	0	79.7
3	1.0000	0.000	90.0000	270.000	1	79.7
4	0.1800	80.000	134.5000	219.000	0	69.0

## \* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

## Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	64.0	12.0	85.18
2	126.0	54.0	65.98
3	236.0	17.0	115.74

Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
4	244.5	10.0	197.95
5	293.0	20.0	118.80

Day Directional Operation:

Twr. Phase No. (Deg.)	Antenna Monitor Sample Current Ratio
1 47.1	0.728
2 0	1
3 -60.2	0.59

Night Directional Operation:

Twr. Phase No. (Deg.)	Antenna Monitor Sample Current Ratio
1 -0.2	0.945
2 -167	0.468
3 0	1
4 67.3	0.182

Antenna Monitor: POTOMAC INSTRUMENTS AM-1901

Sampling System Approved Under Section 73.68 of the Rules.

Monitoring Points:

Day Operation:

Radial (Deg. T)	Distance From Transmitter (kM)	Maximum Field Strength (mV/m)
90	3.94	27
285	5.75	72.2

Night Operation:

Radial (Deg. T)	Distance From Transmitter (kM)	Maximum Field Strength (mV/m)
64	3.14	24.5
95	3.25	80
236	5.92	7
244.5	5.75	23.4
293	3.22	34

## Special operating conditions or restrictions:

- 1 The permittee/licensee must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

- 2 Description of Monitoring Points:

Direction of 64 degrees true North. (Point #1, 47) (Night) To reach this location from the transmitter turn left on Shrewsbury Street and proceed to the intersection of Woodland and Shrewsbury Street. Turn left onto Woodland Street and continue to West Boylaton Street. Turn left onto West Boylaton Street and proceed for 0.3 mile to a point where there is a large bowling arena on the left and a large concrete block building on the right. Turn into the driveway at the north side of the concrete block building and continue to the end of the building. The measuring point is in the center of the driveway, directly in line with the back wall of the building.

Direction of 90 degrees true North. (Point #2, E-4) (Day) To reach this location, start at the entrance to the transmitter site and proceed East along Shrewsbury Street for approximately 0.95 miles to Woodland Street. Turn left onto Woodland Street and proceed along it slightly less than one mile to West Boylston Street (Routes 12 and 110). Cross West Boylston Street and proceed on Pierce Street 0.6 miles to the intersection with Maple Street. Turn right onto Maple Street, proceeding 0.15 mile to the intersection of Maple and Shrewsbury Streets. Bear left onto Shrewsbury Street and proceed 0.80 miles to the monitor point. The point is in the field to the right of the road, 40 feet behind the fire hydrant next to the road.

Direction of 95 degrees true North. (Point #3, 70) (Night) To reach this location, proceed South from location #47 along West Boylston Street for a distance of 0.3 miles, and turn sharp left onto Pierce Street. Proceed on Pierce Street 0.60 miles to the intersection with Maple Street. Turn right onto Maple Street, proceeding 1.05 miles, then turning left onto Hartwell Street. Proceed 0.15 mile to the monitor point. The point is on the embankment on the right side of the road, directly in front of two Maple trees growing from the same base.

## Special operating conditions or restrictions:

- 3 Direction of 285 degrees true North. (Point #4, 72) (Day) To reach this location, start at the entrance to the transmitter site and proceed west along Shrewsbury Street for slightly over one mile to Main Street (Route 122A). Turn right onto Main Street and proceed northwest for 2.6 miles to Kendall Road on the left. Turn left onto Kendall Road and proceed 0.55 mile southwest along this road to a lane on the left. Turn right, opposite this lane, and proceed 100 feet to the measuring location.

Direction of 293 degrees true North. (Point #5, 285) (Night) To reach this location from the transmitter site, turn right on Shrewsbury Street and proceed to the intersection of Main Street. Turn right on Main Street and proceed approximately 1.35 miles to fork to north. Take the right-hand branch of the fork and proceed approximately 0.1 mile to entrance to Holden General Hospital. Turn right into hospital area, proceed along drive to the southeast corner of the hospital curbing. The measuring location is on the left-hand side of the route just opposite the corner curbing at the southeast side of the hospital grounds.

Direction of 244.5 degrees true North. (Point #6, 238) (Night) To reach this measuring point from location number 285, proceed 0.1 mile west on Boyden Road to the intersection with Main Street. Proceed along Main Street approximately 0.1 mile to the intersection with Reservoir Street. Turn left into Reservoir Street and proceed for 1.6 miles to an intersection where Reservoir Street turns sharp left. Turn left and proceed approximately 1.3 miles to the intersection with South Street at the northern end of Holden reservoir. From this junction proceed 0.15 mile to the measuring location which is in the road just opposite the southernmost tree in a clump of trees between the reservoir and the road.

- 4 Direction of 236 degrees true North. (Point #7, 214) (Night) To reach this measuring point from location number 238, proceed southward along Reservoir Road 0.6 mile from location 238. The measuring location is in the road opposite a large fir tree on the left.

## Ground System:

The ground system consists of 60 - 121.95 meter equally spaced buried copper radials in a semi-circle at east and west towers with 152 parallels between, alternately 121.95 meters and 60.98 meters long, and a copper strap and six parallels connecting systems of east and west towers. 120 - 128.96 meters equally spaced buried copper radials about the south tower, bonded to ground system of east, center and west towers at points of overlap. All radials terminated at property lines. 15.24 meters square copper ground screens at the bases of all towers.

\*\*\* END OF AUTHORIZATION \*\*\*