



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

Authorizing Official:

Official Mailing Address:

TOWER BROADCASTING LLC  
56 GAIL DRIVE  
OWEGO NY 13827

Son Nguyen  
Supervisory Engineer  
Audio Division  
Media Bureau

Grant Date: March 02, 2011

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

Facility Id: 52120

Call Sign: WELM

License File Number: BZ-20101112AXC

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

Callsign: WELM

License No.: BZ-20101112AXC

Name of Licensee: TOWER BROADCASTING LLC

Station Location: ELMIRA, NY

Frequency (kHz): 1410

Station Class: B

Antenna Coordinates:

Day

Latitude: N 42 Deg 07 Min 11 Sec

Longitude: W 76 Deg 48 Min 37 Sec

Night

Latitude: N 42 Deg 07 Min 11 Sec

Longitude: W 76 Deg 48 Min 37 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: 1.0

Antenna Input Power (kW): Day: 5.0 Night: 1.0

Antenna Mode: Day: ND Night: DA

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

Current (amperes): Day: 6.9 Night: 4.65

Resistance (ohms): Day: 105 Night: 50

Non-Directional Antenna: Day

Radiator Height: meters; 103.2 deg

Theoretical Efficiency: 315.4 mV/m/kw at 1km

Antenna Registration Number(s):

Day:

Tower No.	ASRN	Overall Height (m)
1	1008078	

Night:

Tower No.	ASRN	Overall Height (m)
1	1008078	
2	1008079	
3	1008080	

DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Night: 353  
 Standard RMS (mV/m/km): Night: 317.12  
 Augmented RMS (mV/m/km):  
 Q Factor: Night: 17.74

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	103.2
2	1.7520	-164.700	90.0000	166.000	0	103.2
3	1.0000	20.000	180.0000	166.000	0	103.2

\* Tower Reference Switch

- 0 = Spacing and orientation from reference tower
- 1 = Spacing and orientation from previous tower

Night Directional Operation:

Twr. No.	Phase (Deg.)	Antenna Monitor Sample Current Ratio
1	-174	0.38
2	0	1
3	-162	0.85

Antenna Monitor: POTOMAC INSTRUMENTS AM-19 (204)

Sampling System Approved Under Section 73.68 of the Rules.

Monitoring Points:

Night Operation:

Radial (Deg. T)	Distance From Transmitter (kM)	Maximum Field Strength (mV/m)
50	3.56	3.3
88.5	2.09	15
243.5	4.02	6.5
282	4.02	7.7

Special operating conditions or restrictions:

1 MONITOR POINT DESCRIPTIONS

50° - Point located at pole #208 on edge of driveway to 602 Crane Road, 3.56 km from site, max 3.3 mV/m nighttime.

88.5° - Point located on east edge of pavement in center of driveway to 232 Crane Road, 2.09 km from site, max 15.0 mV/m nighttime.

243.5° - Point located on opposite edge of pavement straight across from power pole #307 & 29, near the driveway of 241 Hillcrest Road, 4.02 km from site, max 6.5 mV/m nighttime.

282° - From intersection of Reformatory Road and Vanderhoff Road, proceed left onto Vanderhoff for 0.64 km to point on south edge of pavement across from driveway serving several homes, in front of mail boxes for homes, 4.02 km from site, max 7.7 mV/m nighttime.

- 2 Ground system consists of 120 equally spaced, buried, copper radials about the base of each tower, each 54.9 meters in length. plus 120 radials 10.7 meters long interspersed between the longer radials.

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