

ENGINEERING EXHIBIT

Amendment to Application for Construction Permit

prepared for

The WBEZ Alliance, Inc.

WBEW(FM) Chesterton, Indiana

Facility ID 3248

Ch. 208B1 6.8 kW 151 m

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This material supplies a "hard copy" of the engineering portions of this application as entered August 29, 2006 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.

Section VII Preparer's Certification

I certify that I have prepared Section VII (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name ROBERT J. CLINTON		Relationship to Applicant (e.g., Consulting Engineer) CONSULTANT	
Signature		Date 08-29-2006	
Mailing Address CAVELL, MERTZ, & DAVIS, INC. 7839 ASHTON AVENUE			
City MANASSAS	State or Country (if foreign address) VA		Zip Code 20109-2883
Telephone Number (include area code) 7033929090		E-Mail Address (if available) BCLINTON@CMDCONSULTING.COM	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

Section VII - FM Engineering on Channels 200-220												
TECHNICAL SPECIFICATIONS												
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.												
TECH BOX												
1.	Channel Number: 208											
2.	Class (select one): <input type="radio"/> D <input type="radio"/> A <input checked="" type="radio"/> B1 <input type="radio"/> B <input type="radio"/> C3 <input type="radio"/> C2 <input type="radio"/> C1 <input type="radio"/> C0 <input type="radio"/> C											
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 41 Minutes 37 Seconds 59 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 87 Minutes 3 Seconds 32 <input checked="" type="radio"/> West <input type="radio"/> East											
4.	Antenna Structure Registration Number: 1252175 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA											
5.	Antenna Location Site Elevation Above Mean Sea Level: 201.8 meters											
6.	Overall Tower Height Above Ground Level: 152.1 meters											
7.	Height of Radiation Center Above Ground Level: 147.5 meters(H) 147.5 meters(V)											
8.	Height of Radiation Center Above Average Terrain: 150.7 meters(H) 150.7 meters(V)											
9.	Effective Radiated Power: 6.8 kW(H) 6.8 kW(V)											
10.	Maximum Effective Radiated Power: <input checked="" type="checkbox"/> Not Applicable kW(H) kW(V) (Beam-Tilt Antenna ONLY)											
11.	Directional Antenna Relative Field Values: <input type="checkbox"/> Not applicable (Nondirectional) Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation											
	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value

0	1	10	1	20	1	30	1	40	1	50	1
60	1	70	1	80	1	90	1	100	1	110	0.994
120	0.841	130	0.668	140	0.596	150	0.596	160	0.596	170	0.596
180	0.511	190	0.406	200	0.323	210	0.257	220	0.226	230	0.214
240	0.214	250	0.224	260	0.282	270	0.355	280	0.446	290	0.531
300	0.668	310	0.841	320	1	330	1	340	1	350	1
Additional Azimuths		105	1	135	0.596	318	1				

Relative Field Polar Plot

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

CERTIFICATION

AUXILIARY ANTENNA APPLICANTS ARE NOT REQUIRED TO RESPOND TO ITEMS 12-15.

12. **Main Studio Location.** The proposed main studio location complies with 47 C.F.R. Section 73.1125. ☐ Yes ☒ No

See Explanation in
[Exhibit 13]

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. ☒ Yes ☐ No
Check all that apply:

See Explanation in
[Exhibit 14]

Contour Overlap Requirements.

- a. ☒ 47 C.F.R. Section 73.509

Exhibit Required.

[Exhibit 15]

Spacing Requirements.

- b. ☒ 47 C.F.R. Section 73.207 with respect to station(s)

Grandfathered Short-Spaced.

- c. ☐ 47 C.F.R. Section 73.213(a) with respect to station(s)

Exhibit Required.

[Exhibit 16]

Contour Protection.

- d. ☐ 47 C.F.R. Section 73.215(a) with respect to station(s)

Exhibit Required.

[Exhibit 17]

Television Channel 6 Protection.

- e. ☒ 47 C.F.R. Section 73.525 with respect to station(s)

Exhibit Required.

[Exhibit 18]

14. **Reserved Channels Above 220.**

- a. **Allotment.** The proposed facility complies with the allotment requirements of 47 C.F.R. Section 73.203.

☐ Yes ☐ No

See Explanation in
[Exhibit 19]

- b. **Community Coverage.** The proposed facility complies with 47 C.F.R. Section 73.315.

☐ Yes ☐ No

See Explanation in
[Exhibit 20]

15.	International Borders. The proposed antenna location is not within 320 kilometers of the common border between the United States and Canada or Mexico. If "No," specify the country and provide an exhibit of compliance with all provisions of the relevant International Agreement.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Canada <input type="radio"/> Mexico [Exhibit 21]
16.	Environmental Protection Act. The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Worksheet #7, an Exhibit is required. By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 22]
PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.		

Exhibits

Exhibit 1

Description: EXHIBIT 1

SECTION VII - QUESTION 4 (ASR NUMBER NOW AVAILABLE), QUESTION 6 (OVERALL HEIGHT REDUCED BY 0.3 M TO MATCH ASR), AND QUESTION 16 SET TO 'YES' WITH THE ENVIRONMENTAL STATEMENT UPLOADED AS EXHIBIT 22 - STATEMENT C.

Attachment 1

Exhibit 3

Description: WBEZ ALLIANCE CROSS MEDIA DISCLOSURE

GARY WEITMAN, WHO SERVES ON THE BOARD OF DIRECTORS OF THE WBEZ ALLIANCE, INC., IS A VICE-PRESIDENT OF COMMUNICATIONS FOR THE TRIBUNE COMPANY, WHICH IS A MAJOR PRINT AND ELECTRONIC MEDIA COMPANY AND THE HOLDER OF NUMEROUS FCC LICENSE AND AUTHORIZATIONS. A LISTING OF THOSE LICENSES AND AUTHORIZATIONS CAN BE FOUND IN THE OWNERSHIP REPORT FILED ON JULY 29, 2005 BY WGN CONTINENTAL BROADCASTING COMPANY ON BEHALF OF THE TRIBUNE COMPANY (FILE NO. BOA-2005-729ARR). DETAILED INFORMATION ABOUT THESE HOLDINGS CAN ALSO BE FOUND AT WWW.TRIBUNE.COM, INCLUDING THE COMPANY'S LATEST ANNUAL REPORT TO THE SEC THAT WAS FILED ON DECEMBER 26, 2004 ON FORM 10-K.

MR. WEITMAN DOES NOT OWN 5% OR MORE OF THE STOCK OF THE TRIBUNE COMPANY. HE DOES NOT SERVE ON THE GOVERNING BOARD OF THE TRIBUNE COMPANY OR ON THE TRIBUNE COMPANY'S MANAGEMENT COMMITTEE. IN ADDITION, MR. WEITMAN DOES NOT EXERCISE ANY OVERSIGHT RESPONSIBILITY OVER ANY OF THE COMPANY'S MEDIA HOLDINGS.

Attachment 3

Exhibit 4

Description: WBEZ ALLIANCE CROSS MEDIA DISCLOSURE

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Attachment 4

Exhibit 13**Description:** EXHIBIT 13 - STATEMENT A

EXHIBIT 13 - STATEMENT A - REQUEST FOR WAIVER OF MAIN STUDIO RULE

Attachment 13

Description
EXHIBIT 13 - STATEMENT A

Exhibit 14**Description:** EXHIBIT 14 - STATMENT B

EXHIBIT 14 - STATMENT B - ALLOCATION CONSIDERATIONS

Attachment 14

Description
EXHIBIT 14 - STATMENT B

Exhibit 15**Description:** EXHIBIT 15 - CONTOUR OVERLAP

SEE EXHIBIT 14 - STATEMENT B FOR CONTOUR OVERLAP DISCUSSION

Attachment 15

Exhibit 18**Description:** EXHIBIT 18 - CHANNEL 6 PROTECTION

SEE EXHIBIT 14 - STATEMENT B FOR CHANNEL 6 PROTECTION DISCUSSION

Attachment 18

Exhibit 22**Description:** EXHIBIT 22 - STATEMENT C

EXHIBIT 22 - STATEMENT C - ATTACHED AS A PDF FILE - AMENDMENT PREPARED 08-29-2006

Attachment 22

Description
EXHIBIT 22 - STATEMENT C - AMENDMENT PREPARED 08-29-2006

Exhibit 22 - Statement C
ENVIRONMENTAL CONSIDERATIONS
prepared for
The WBEZ Alliance, Inc.
WBEW(FM) Chesterton, Indiana
Facility ID 3248
Ch. 208B1 6.8 kW (MAX-DA) 151 m

Nature of The Proposal

The WBEZ Alliance, Inc., (“*Alliance*”) is the licensee of WBEW(FM), Ch. 208B1, Chesterton, Indiana. The instant application seeks to modify its Construction Permit for the WBEW facility to relocate WBEW to a proposed new tower structure at a different site location.

Alliance commissioned a review of the various environmental subjects outlined in Section 1.1307(a)(1-8) of the Commission’s Rules, which was performed by Malcolm Pirnie, Inc. of Phoenix, Arizona. The Malcolm Pirnie report and related FCC Form 620 (“New Tower Submission Packet”) indicates that none of the triggering criteria of §1.1307(a)(1-8) apply to the proposal, provided that certain phases of construction are avoided during specific dates as follows:

Tree clearing will be avoided during the period April 15 – September 15 to avoid incidental take of the Indiana bat from an occupied roost tree.

No (surface feature) work should be conducted during State-designated fish spawning season unless a waiver has been granted by the Indiana DNR. The acceptable construction dates for this project, as determined by the Indiana DNR are between June 16 – July 14 and December 1 – March 14.

Given the foregoing, the Malcolm Pirnie report concludes that the proposed WBEW tower construction “will not have a significant environmental effect on any of the environmentally sensitive categories covered by the NEPA Checklist Report...”

Compliance with the Commission’s radiofrequency exposure limits is discussed below. Therefore, the applicant believes that this application may be categorically excluded from environmental processing pursuant to Section 1.1306 of the FCC Rules.

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Human Exposure to RF Electromagnetic Field

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

Alliance proposes to install the WBEW transmitting antenna such that its center of radiation is 147.5 meters above ground level. A maximum effective radiated power ("ERP") of 6.8 kilowatts, circularly polarized, will be employed. Calculations were made per OET 65 to predict power density attributable to the proposed facility at locations two meters above ground level in the immediate vicinity of the tower. A "worst case" relative field value of 100 percent is assumed for the calculation. The "uncontrolled/general population" limit specified in §1.1310 for the FM radio band is 200 µW/cm².

The formula used for calculating FM signal density in this analysis is essentially the same as equation (9) in OET-65.

$$S = (33.4098) (F^2) (ERP) / D^2$$

Where:

<i>S</i>	=	power density in microwatts/cm ²
<i>ERP</i>	=	total (average) ERP in Watts
<i>F</i>	=	relative field factor
<i>D</i>	=	distance in meters

Using this formula and the assumptions above, the proposed facility would contribute a power density of 21.5 µW/cm² at two meters above ground level near antenna support structure, or 10.75 percent of the general population/uncontrolled limit. When the antenna's actual vertical (elevation) pattern is considered, the calculated power density is lower. At ground level

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locations away from the base of the tower, the calculated RF power density is even lower, due to the increasing distance from the transmitting antenna.

There are no other authorized FM, AM, or TV facilities within 2 km of the proposed WBEW transmitter site. Therefore, the total calculated level of RF electromagnetic field at two meters above ground level near the proposed WBEW transmitter is 10.75 percent of the uncontrolled / general population MPE limit. Thus, based on this analysis, the Commission's limit regarding general population / uncontrolled exposure to RF electromagnetic field is not exceeded at ground level locations near the proposed tower site.

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy will not be caused at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs will be posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines will be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with any pertinent stations.

Exhibit 22 - Statement C
ENVIRONMENTAL CONSIDERATIONS
(page 4 of 4)

Conclusion

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.