

FOR
FCC
USE
ONLY

FCC 302-AM
APPLICATION FOR AM
BROADCAST STATION LICENSE

(Please read instructions before filling out form.)

FOR COMMISSION USE ONLY

FILE NO.

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

CBS Corporation

MAILING ADDRESS (Line 1) (Maximum 35 characters)

1725 DeSales Street, NW

MAILING ADDRESS (Line 2) (Maximum 35 characters)

Suite 501

CITY

Washington

STATE OR COUNTRY (if foreign address)

DC

ZIP CODE

20036-4426

TELEPHONE NUMBER (include area code)

202-457-4505

CALL LETTERS

WBBM(AM)(Aux)

OTHER FCC IDENTIFIER (If applicable)

Facility ID 9631

2. A. Is a fee submitted with this application?

Yes No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

Governmental Entity Noncommercial educational licensee Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

| (A) | (B) | (C) | |
|---------------|----------------|---|------------------|
| FEE TYPE CODE | FEE MULTIPLE | FEE DUE FOR FEE TYPE CODE IN COLUMN (A) | FOR FCC USE ONLY |
| M M R | 0 0 0 1 | \$ 700.00 | |

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

| (A) | (B) | (C) | |
|-----|----------------|-----------|------------------|
| | FEE MULTIPLE | FEE DUE | FOR FCC USE ONLY |
| | 0 0 0 1 | \$ | |

ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.

| TOTAL AMOUNT REMITTED WITH THIS APPLICATION | FOR FCC USE ONLY |
|---|------------------|
| \$ | |

| | | |
|--|-------------|------------------------|
| SECTION II - APPLICANT INFORMATION | | |
| 1. NAME OF APPLICANT CBS Radio East Inc. | | |
| MAILING ADDRESS 1725 DeSales Street NW, Suite 501 | | |
| CITY Washington | STATE DC | ZIP CODE 20036-4426 |

2. This application is for:

- Commercial Noncommercial
 AM Directional AM Non-Directional

| | | | | |
|-------------------------------|-------------------------------------|---|--|---|
| Call letters WBBM(AM)(Aux) | Community of License Chicago, IL | Construction Permit File No. BXP-20131104ARE | Modification of Construction Permit File No(s). N/A | Expiration Date of Last Construction Permit 03/25/2017 |
|-------------------------------|-------------------------------------|---|--|---|

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

Yes No

If No, explain in an Exhibit.

Exhibit No.
See Exhibit 1

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

Yes No

If No, state exceptions in an Exhibit.

Exhibit No.

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

Yes No

If Yes, explain in an Exhibit.

Exhibit No.

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

Yes No

If No, explain in an Exhibit.

Does not apply

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

Yes No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

Yes No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

Yes No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

| | | |
|---------------------------------------|-----------------------------------|---|
| Name Jo Ann Haller | Signature <i>Jo Ann Haller</i> | |
| Title Senior Vice President | Date 3/15/2017 | Telephone Number 212-649-9655 |

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

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Exhibit 1
Construction Permit Condition
WBBM(AM)(Aux) 780 kHz Chicago, IL
Facility ID 9631

CBS Radio East Inc., licensee of Radio Station WBBM Chicago, IL, seeks Program Test Authorization and a license "to cover" construction of the WBBM auxiliary antenna pursuant to Construction Permit BXP-20131104ARE. This exhibit is provided to address Condition #3 on the Construction Permit, which states (in part):

Before program tests are authorized, sufficient data shall be submitted to show that adequate filters, traps and other equipment has been installed and adjusted to prevent interaction, intermodulation and/or generation of spurious radiation products which may be caused by common usage of the same antenna system by Stations WBBM, Chicago, IL (Facility ID #9631) and WSCR, Chicago, IL (Facility ID # 25445) and there shall be filed with the license application copies of a firm agreement entered into by the two(2) stations involved clearly fixing the responsibility of each with regard to the installation and maintenance of such equipment.

The attached Engineering Statement provides data demonstrating proper operation of the necessary filters, traps, and other equipment necessary to prevent interaction and intermodulation.

The WBBM auxiliary antenna is also utilized as the main antenna of WSCR(AM) Chicago, IL. CBS Radio East Inc is the licensee of both WBBM and WSCR. It is our understanding that station responsibilities are ultimately shouldered by the licensee. In this case, because both stations are licensed to the same entity, the responsibility for maintaining this equipment is clearly that of the common licensee. In actual practice, should problems with any of the filters, traps, and other equipment arise; common usage of the antenna system will temporarily be discontinued.

ENGINEERING STATEMENT CONCERNING

**APPLICATION FOR
STATION LICENSE**

**WBBM, 780 KHZ
AUXILIARY ANTENNA
CHICAGO, ILLINOIS**

MARCH, 2017

PHASETEK INC.

**ENGINEERING STATEMENT CONCERNING
WBBM, 780 KHZ
AUXILIARY ANTENNA
CHICAGO, ILLINOIS
MARCH, 2017**

SUMMARY

Adjustment of the diplexing equipment was performed for Radio Station WBBM, 780 KHz, Chicago, Illinois, after installation of the equipment at the Transmitter site of Radio Station WSCR, 670 KHz. WBBM holds Construction Permit Number: BXP-20131104ARE to add auxiliary antenna at the WSCR Transmitter site. This report was prepared on behalf of CBS RADIO EAST INC., licensee of Radio Stations WBBM and WSCR.

SITE MODIFICATIONS

The WBBM Transmitter site is that as currently licensed for Radio Station WSCR, 670 KHz. A type accepted transmitter, new matching, and filtering equipment has been installed. The existing main tower remains unchanged. The WSCR auxiliary tower has been modified to incorporate a center shunt drop wire to ground. WBBM does not operate on this tower. The operating impedance has changed for both the WSCR main and auxiliary antennas. Therefore, a 302AM application for direct measurement of power has been done for the existing WSCR antennas as part of this license application. A drawing of the WSCR modified tower is included as figure 3.

SPURIOUS EMISSIONS

Due to the common usage of the Transmitter site by Radio Stations WBBM, 780 KHz, and WSCR, 670 KHz, filtering has been installed and adjusted to prevent interaction and spurious radiation products. Figure 2 shows measurement of any spurious radiation products.

PHASETEK INC.

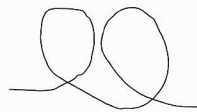
**ENGINEERING STATEMENT CONCERNING
WBBM, 780 KHZ
AUXILIARY ANTENNA
CHICAGO, ILLINOIS
MARCH, 2017**

MEASURING EQUIPMENT AND PERSONNEL

Tower Resistance and Reactance measurements were made with a HP8753ES network analyzer and Tunwall directional coupler. Before use, tests of known impedances were made to verify operation. Schematics are on file at the station that indicate the impedance measurement locations. All Field Intensity Measurements were made with a Potomac Instruments Field Intensity Meter; PI 4100, Serial Number 249, calibrated January 21, 2016. The meter was calibrated by Potomac Instruments, Frederick, Maryland. All measurements were taken by Phasetek Inc. personnel supervised by Kurt Gorman of Phasetek Inc.

CONCLUSION

It is believed that the WBBM auxiliary Antenna System has been constructed and adjusted in accordance with all applicable Commission rules and regulations. The foregoing was prepared on behalf of CBS RADIO EAST INC., under the immediate supervision of Kurt Gorman, Phasetek Inc., Quakertown, Pennsylvania, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



**Kurt Gorman, President
Phasetek Inc.
Quakertown, Pennsylvania**

FIGURE 1

ANTENNA SYSTEM AS ADJUSTED

ENGINEERING STATEMENT CONCERNING

WBBM, 780 KHZ

AUXILIARY ANTENNA

CHICAGO, ILLINOIS

MARCH, 2017

ANTENNA SYSTEM DESCRIPTION

1. The auxiliary antenna system utilizes the existing main tower of Radio Station WSCR, 670 kHz. The tower is guyed and stands 226.0M (211.7^o) above its Base Insulator. There is lighting that is isolated at the base with a ring transformer. ASRN for the tower is 1013848. In addition, the tower supports an FM antenna and the line for this antenna is isolated at the base with an isocoupler.
2. The WSCR main tower's presently Licensed Ground System consists of (100) buried copper Radials, averaging 152.4M in length, and remains unchanged. Copper strap connects the Tower to the main Transmitter grounding point. No changes were made to the presently licensed WSCR auxiliary tower ground system.

WBBM (780 kHz) NON-DIRECTIONAL OPERATION (AUXILIARY ANTENNA)

Impedance = 38.7 -j 102.4 Ohms

Current = 18.33 Amperes

Power = 13,000 Watts

WSCR (670 kHz) NON-DIRECTIONAL OPERATION (MAIN ANTENNA)

Impedance = 88.5 -j 231.3 Ohms

Current = 23.77 Amperes

Power = 50,000 Watts

FIGURE 1 CONTINUED
ANTENNA SYSTEM AS ADJUSTED

ENGINEERING STATEMENT CONCERNING
WBBM, 780 KHZ
AUXILIARY ANTENNA
CHICAGO, ILLINOIS
MARCH, 2017

WSCR (670 kHz) NON-DIRECTIONAL OPERATION (AUXILIARY ANTENNA)

Impedance = 19.0 -j 85.7 Ohms

Current = 51.29 Amperes

Power = 50,000 Watts

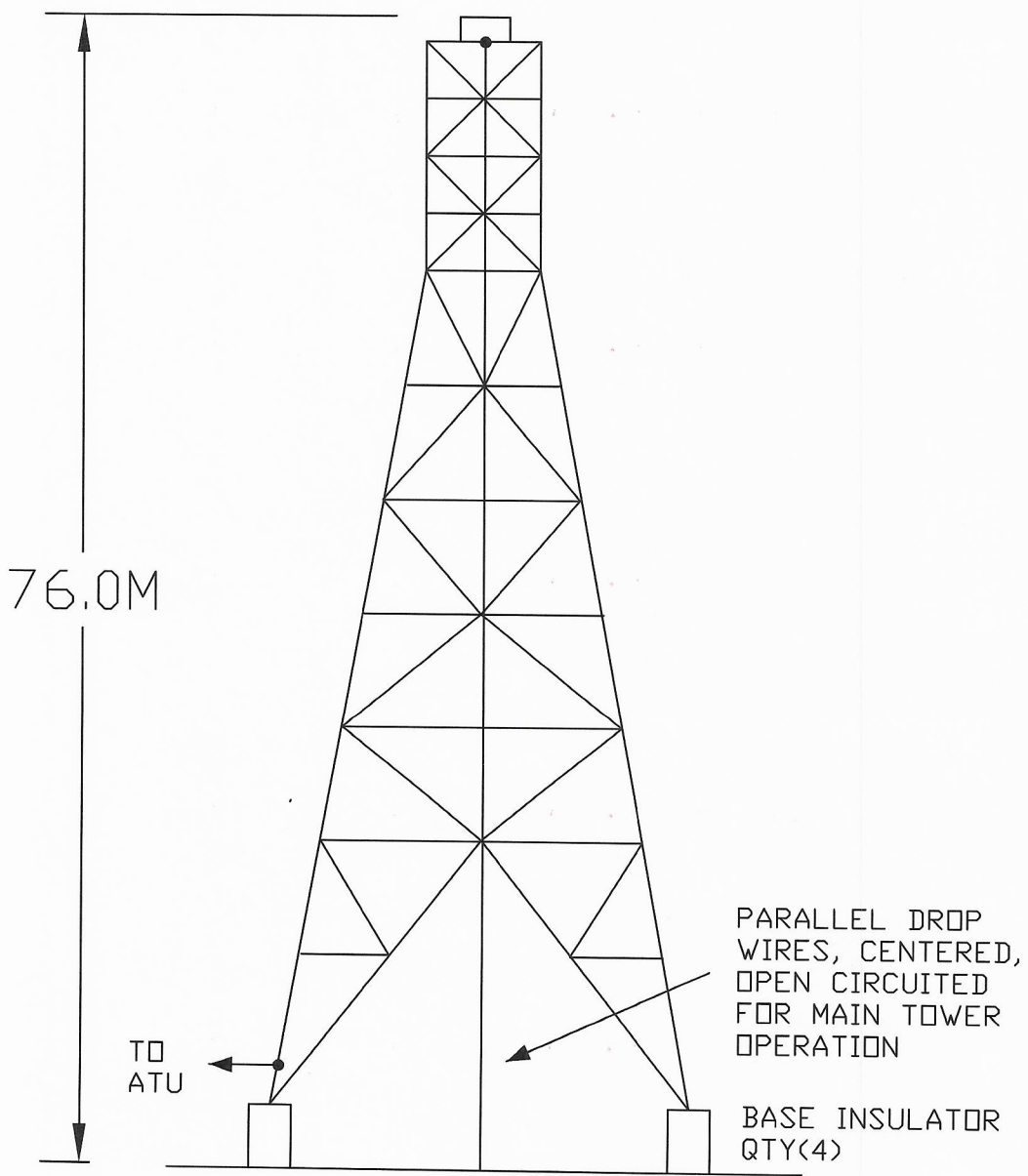
FIGURE 2
WBBM/WSCR SPURIOUS RADIATION MEASUREMENTS
MARCH, 2017
WSCR (670 KHZ), 50 KW (ND) MODE
WBBM (780 KHZ), 13 KW (ND) MODE

| <u>Frequency (kHz)</u> | <u>Field Intensity (mV/M)</u> | <u>Attenuation (dB) relative to</u> | |
|------------------------|-------------------------------|-------------------------------------|-------------|
| | | <u>WSCR</u> | <u>WBBM</u> |
| 670 | 1085 | -- | -- |
| 780 | 1340 | -- | -- |
| 450 | .026 | 92.4 | 94.2 |
| 560 | <.01 | >100.7 | >102.5 |
| 890 | <.01 | >100.7 | >102.5 |
| 1000 | <.01 | >100.7 | >102.5 |
| 1230 | .101 | 80.6 | 82.5 |
| 1340 | .098 | 80.9 | 82.7 |
| 1450 | <.01 | >100.7 | >102.5 |
| 1560 | .069 | 83.9 | 85.8 |
| 1670 | .069 | 83.9 | 85.8 |
| 2010 | .043 | 88.0 | 89.9 |
| 2120 | .037 | 89.3 | 91.2 |
| 2230 | .024 | 93.1 | 94.9 |
| 2340 | .021 | 94.3 | 96.1 |
| 2790 | .010 | 100.7 | 102.5 |
| 2900 | .010 | 100.7 | 102.5 |
| 3010 | .011 | 99.9 | 101.7 |
| 3570 | .010 | 100.7 | 102.5 |
| 3680 | .010 | 100.7 | 102.5 |
| 4350 | .011 | 99.9 | 101.7 |

Above taken with Potomac Instruments, PI 4100, 1.09 km from the Antenna on a bearing of 100°T.

Point coordinates (NAD27): N 41° 56' 00.9", W 88° 03' 38.8"

Above readings meet required attenuation of 80 dB.



TOWER ASRN: 1013849

PHASETEK INC.
FIGURE 3
TOWER ELEVATION
WSCR AUXILIARY
MARCH, 2017

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

| | | | | |
|-------------------------------------|--|--|--|---|
| Type Radiator Guyed Tower | Overall height in meters of radiator above base insulator, or above base, if grounded. 226.0 | Overall height in meters above ground (without obstruction lighting) 227.1 | Overall height in meters above ground (include obstruction lighting) 228.0 | If antenna is either top loaded or sectionalized, describe fully in an Exhibit. <div style="border: 1px solid black; padding: 2px; display: inline-block;">Exhibit No. N/A</div> |
|-------------------------------------|--|--|--|---|

Excitation Series Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

| | |
|--|--|
| North Latitude 41 ° 56 ' 03 " | West Longitude 88 ° 04 ' 22 " |
|--|--|

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits.

Exhibit No.
ENG.

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system.

Exhibit No.
ENG.

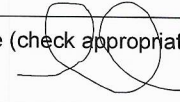
10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

None

11. Give reasons for the change in antenna or common point resistance.

New Construction

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

| | |
|---|---|
| Name (Please Print or Type) Kurt Gorman | Signature (check appropriate box below)  |
| Address (include ZIP Code) Phasetek Inc. 550 California Rd., Unit 11 Quakertown, PA 18951 | Date March 13, 2017 |
| | Telephone No. (Include Area Code) 215-536-6648 |

- Technical Director
 Registered Professional Engineer
 Chief Operator
 Technical Consultant
 Other (specify)