

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON 25, D. C.

Sept. 8, 1955

ADDRESS ALL COMMUNICATIONS
TO THE SECRETARY

RE REPLY REFER TO:
8843

Direccion General de Telecomunicaciones
Secretaria de Comunicaciones y Obras Publicas
Mexico, D. F.

Gentlemen:

In accordance with the Agreement entered into by the Governments of the United States of America and the United States of Mexico for the assignment of television channels, notice is herewith given of the ~~issuing~~ ^{grant} of an application as follows:

1. Construct a new television broadcast station ()
 Modify an existing television broadcast station ()
 Other _____
2. Applicant Big Spring TV. Inc.
 City Big Spring State Texas
3. File No. and/or call letters KBSF-TV NMPOT- 1267
4. Proposed transmitter location:
 Latitude 32° 15' 16" N.
 Longitude 101° 26' 44" W.
5. Channel Number 4
6. ~~Channel~~ Video Carrier Frequency 67.24 - _____ Mc.
7. Effective radiated power (visual) 12.9 kw.
8. Antenna:
 Overall height above ground _____ 497 feet
 Overall height above mean sea level _____ 2977 feet
 Antenna height above average terrain (2-10 miles) _____ 360 feet
 Horizontal directivity pattern:
 (1) Ommidirectional ()
 (2) Other _____

Very truly yours,

Mary Jane Morris

Mary Jane Morris
Secretary

AUGUST 8, 1955

BIG SPRING TELEVISION, INC.
RADIO STATION KBST-TV
BIG SPRING, TEXAS

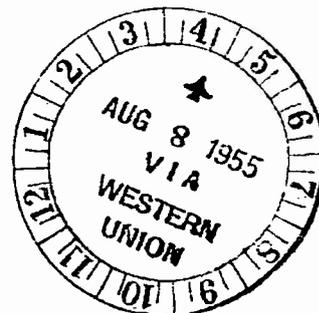
COMMISSION GRANTED KBST-TV BNPCT-3267 EFFECTIVE RADIATED
POWER VISUAL 12.9 KILOWATTS AURAL 6.92 KILOWATTS ANTENNA
HEIGHT ABOVE AVERAGE TERRAIN 380 FEET, CRITICAL HEIGHT
CONDITION REQUIRING SURVEY OF TOWER LOCATION AND HEIGHT NOT
TO EXCEED 2960 FEET ABOVE MEAN SEA LEVEL, EXPIRING FEBRUARY 5, 1956

MARY JANE MERRIS, SECRETARY
FEDERAL COMMUNICATIONS COMMISSION

Appr. Broadcast Bureau 8-8-55
MVD:ob/lic.B 12 pm

cc: Files
Miss Iehl
Mr. Nelson
E L Burke, Atty.
Engr. Dist. # 10

DAY LETTER COLLECT



Nelson

Modified as of August 8, 1955
TELEVISION BROADCAST STATION CONSTRUCTION PERMIT

Subject to the provisions of the Communications Act of 1934, subsequent Acts, and Treaties, and Commission Rules made thereunder, and further subject to conditions set forth in this permit, 1/authority is hereby granted to

BIG SPRING TELEVISION, INC.

to construct a television broadcast station located and described as follows:

1. Station location: State Texas City Big Spring
2. Transmitter location: State Texas County Howard
City or Town Big Spring
Street and number 600 Kentucky Way
North Latitude: Degrees 32 Minutes 15 Seconds 16
West Longitude: Degrees 101 Minutes 26 Seconds 44
3. Main studio location: State Texas County Howard
City or Town Big Spring
Street and number 600 Kentucky Way
4. Transmitter: Visual Aural
Make and type GE TT-10A GE TT-10A
Rated power 6.99 dbk(5 kw) peak. 4.31 dbk(2.7 kw).
5. Antenna:
Make and Type GE TY-60-C, 3 section Batwing

Horizontal field pattern: Omnidirectional

Antenna supporting structure 457 foot tower

Overall height above ground 497 feet.

Obstruction marking specifications in accordance with paragraphs 1, 3, 4, 13, 21 and 22 of FCC Form 715 attached.

6. Operating assignment:
Frequency 66 — 72 Megacycles. (Channel No. 4)
Carrier frequency Visual Aural
67.24 Mc. 71.76 Mc.
Effective radiated power 11.1 dbk(12.9 kw) peak. 8.6 dbk(6.92 kw).
Transmitter output power 7 dbk(5 kw) peak. 4.3 dbk(2.7 kw).
Antenna height above average terrain 380 feet.
Hours of operation - Unlimited.

7. Date of required commencement of construction September 22, 1954
8. Date of required completion of construction February 5, 1956
9. Equipment and program tests shall be conducted only pursuant to sections 3.828 and 3.829 of the Commission Rules.
10. This permit shall be automatically forfeited if the station is not ready for operation within the time specified or within such further time as the Commission may allow unless completion of the station is prevented by causes not under the control of the permittee. See Section 1.314 of the Commission Rules.

Subject to the attached condition FCC Form No. 720.

1/ This construction permit consists of this page and pages 2 & 3.

Dated this 8th day of August, 19 55.

FEDERAL COMMUNICATIONS COMMISSION



ob

F.C.C. Washington, D. C.

Mary Jean Moran
Secretary

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

1. Antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be approximately one-seventh the height of the structure, provided however, that the bands shall not be more than 40 feet nor less than 1-1/2 feet in width. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.
2. There shall be installed at the top of the tower at least two 100- or 111-watt lamps (#100 A21/TS or #111 A21/TS, respectively) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any angle of approach. A light sensitive control device or an astronomic dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.
3. There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 300- or 620-watt lamps (PS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a rod or other construction of not more than 20 feet in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to one-half of the luminous period.
4. At approximately one-half of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
5. At approximately two-fifths of the overall height of the tower one similar flashing 300m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
6. On levels at approximately two thirds and one third of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
7. On levels at approximately four-sevenths and two-sevenths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
8. On levels at approximately three-fourths, one-half and one-fourth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
9. On levels at approximately two-thirds, four-ninths and two-ninths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.
10. On levels at approximately four-fifths, three-fifths, two-fifths, and one-fifth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed heights.
11. At the approximate mid point of the over-all height of the tower there shall be installed at least two 100- or 111-watt lamps (#100 A21/TS or #111 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.
12. On levels at approximately two-thirds and one-third of the over-all height of the tower, there shall be installed at least two 100- or 111-watt lamps (#100 A21/TS or #111 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.
13. On levels at approximately three-fourths and one-fourth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.
14. On levels at approximately four-fifths, three-fifths and one-fifth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.
15. On levels at approximately five-sixths, one-half, and one-sixth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.
16. On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the over-all height of the tower at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.
17. On levels at approximately seven-eighths, five-eighths, three-eighths, and one-eighth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.
18. On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.
19. On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths, and one-tenth of the over-all height of the tower, at least one 100- or 111-watt lamp (#100 A21/TS or #111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.
20. All lighting shall be exhibited from sunset to sunrise unless otherwise specified.
21. All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.
22. During construction of an antenna structure, for which obstruction lighting is required, at least two 100- or 111-watt lamps (#100 A21/TS or #111 A21/TS, respectively) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be installed at each such level. These temporary warning lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.

CRITICAL OBSTRUCTION

The construction of the antenna structure is subject to the following conditions:

1. The height of the uppermost point of the antenna structure, including the required obstruction lighting and any other attachments, shall not exceed **2960** feet above mean sea level.
- 2a. A bench mark shall be established on the tower base. The elevation above mean sea level of the bench mark shall be determined within one foot from a line of spirit levels from a Municipal, State, or Federal bench mark that is a part of the national level net.
- b. The horizontal position of the tower site shall be determined within 1/2 second of latitude and longitude by a ground survey tied to a Municipal, State, or Federal control point that has previously been connected to the national geodetic network.
- c. An affidavit signed by a registered or qualified engineer or surveyor shall be submitted with the license application setting forth the geographic coordinates of the structure and the over-all height (which shall include the obstruction marking) above sea level of the completed structure, and describing the survey and the reference points upon which it is based, together with a plat of the antenna site and vertical plan sketch of the antenna structure portraying pertinent details.

THIS FORM IS A PART OF AND SHALL BE ATTACHED TO THE CURRENT INSTRUMENT OF AUTHORIZATION



ENGINEER'S COPY

TELEPHONE
AREA CODE 202
296-2315

A. D. RING & ASSOCIATES

CONSULTING RADIO ENGINEERS

1771 N STREET, N. W.
WASHINGTON, D. C. 20036

NATIONAL
ASSOCIATION OF
BROADCASTERS
BUILDING

A. D. RING
HOWARD T. HEAD
MARVIN BLUMBERG
OGDEN PRESTHOLDT

June 30, 1970

City of Washington }
District of Columbia }

BROADCAST FACILITIES
DIVISION

ss

JUL 9 1970

Marvin Blumberg, being first duly sworn, upon oath deposes and says that he is a consulting radio engineer, a partner in the firm of A. D. Ring & Associates, with offices at 1771 N Street, N. W., Washington, D. C. He is a registered professional engineer (Reg. No. 4492) in the District of Columbia. His qualifications as an engineer are a matter of record with the Federal Communications Commission.

The firm of A. D. Ring & Associates has been retained by Grayson Enterprises, Inc., licensee of Television Station KWAB-TV, Big Spring, Texas, to determine whether the location of the predicted Grade A and Grade B coverage contours of Station KWAB-TV, as depicted by data presently on file with the Commission, would be changed by calculations made in accordance with the method outlined in Section 73.684(c) of the Commission's Rules, as amended by the Commission's Report and Order in Docket No. 17253 released April 3, 1970.

Station KWAB-TV presently operates on Channel 4 with an effective radiated peak visual power of 12.9 kw from an antenna having an effective height of 380 feet above the average elevation of the surrounding terrain. Station KWAB-TV utilizes a General Electric Type TY-60-C antenna. No beam tilt is employed.

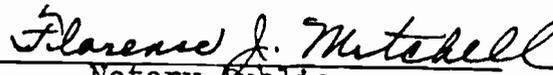
Calculations made in accordance with the method outlined in Section 73.684(c) of the Commission's Rules, as amended, indicate declination angles varying from a minimum of 0.19° to a maximum of 0.37° in the various radial directions. An examination of the vertical plane radiation pattern for the authorized antenna indicates that the relative field over this range of declination angles exceeds 90% of the horizontal field. Therefore, the effective radiated peak visual power in the horizontal plane is employed throughout to determine the distances to the predicted Grade A and Grade B coverage contours, representing no change over the previous prediction method.

A review of the coverage data presently on file confirms that no change is involved in the location of the coverage contours resulting from application of the new Rules and the map showing the extent of these coverage contours is contained in the station's license file at the Commission.

Affiant states that the calculations in this report were made by him personally or under his direction and that all facts contained herein are true of his own knowledge except where stated to be on information or belief, and as to those facts, he believes them to be true.


Marvin Blumberg, Affiant

Subscribed and sworn to before me this 30th day of
June, 1970


Notary Public

My Commission Expires:
April 30, 1971

TRIPPLICATE

BERNARD KOTEEN
WILLIAM C. BURT
ALAN Y. NAFTALIN
PAUL Y. SELIGSON
RAINER K. KRAUS
VICTOR E. FERRALL, JR.
JEREMIAH D. LAMBERT
ANDREW L. FREY*
*ADMITTED IN NEW YORK ONLY

LAW OFFICES
KOTEEN & BURT
1000 VERMONT AVENUE, N.W.
WASHINGTON, D.C. 20005

TELEPHONE
REPUBLIC 7-5566
CABLE ADDRESS
"KOBURT"

February 21, 1966

**Mr. Ben F. Waple, Secretary
Federal Communications Commission
Washington, D. C. 20554**

Dear Mr. Waple:

Transmitted herewith, in triplicate, on behalf of Grayson Enterprises, Incorporated, licensee of television station KWAB-TV in Big Spring, Texas, is an application (FCC Form 301) for modification of the license of station KWAB-TV to reduce the aural power of that station.

The Commission's attention is directed to the fact that no construction permit is either requested or required and, therefore, the Commission is requested to treat this application as an application for modification of license, which, upon being granted, will permit the station to operate immediately with reduced power without the necessity of filing any additional application.

In the event there are any questions concerning this matter, please communicate with this office.

Very truly yours,

Victor E. Ferrall, Jr.

Enclosure

RECEIVED
FEB 21 1966
F. C. C.
OFFICE OF THE SECRETARY

C
O
P
Y

TRIPPLICATE

FCC Form 301 Nov. 1962 Form Approved Budget Bureau No. 52-R014.17 UNITED STATES OF AMERICA FEDERAL COMMUNICATIONS COMMISSION APPLICATION FOR AUTHORITY TO CONSTRUCT A NEW BROADCAST STATION OR MAKE CHANGES IN AN EXISTING BROADCAST STATION

INSTRUCTIONS A. This form is to be used in applying for authority to construct a new AM (standard), commercial FM (frequency modulation), or television broadcast station, or to make changes in existing broadcast stations. This form consists of this part, Section I, and the following sections: Section II, Legal Qualifications of Broadcast Applicant; Section III, Financial Qualifications of Broadcast Applicant; Section IV, Statement of Program Service of Broadcast Applicant; Section V-A, Standard Broadcast Engineering Data; Section V-B, FM Broadcast Engineering Data; Section V-C, Television Broadcast Engineering Data; Section V-G, Antenna and Site Information. B. Prepare three copies of this form and all exhibits. Sign one copy of Section I. Prepare two additional copies (a total of five) of Section V-G and associated exhibits. File all the above with Federal Communications Commission, Washington, D. C. 20554. C. Number exhibits serially in the space provided in the body of the form and list each exhibit in the space provided on page 2 of this Section. Show date of preparation of each exhibit, antenna pattern, and map, and show date when each photograph was taken. D. The name of the applicant stated in Section I hereof shall be the exact corporate name, if a corporation; if a partnership, the names of all partners and the name under which the partnership does business; if an unincorporated association, the name of an executive officer, his office, and the name of the association. In other Sections of the form the name need be only sufficient for identification of the applicant. E. Information called for by this application which is already on file with the Commission (except that called for in Section V-G) need not be refiled in this application provided (1) the information is now on file in another application or FCC Form filed by or on behalf of this applicant; (2) the information is identified fully by reference to the file number (if any, the FCC form number, and the filing date of the application or other form containing the information and the page of paragraph referred to, and (3) after making the reference, the applicant states: "No change since date of filing." Any such reference will be considered to incorporate into this application all information, confidential or otherwise, contained in the application or other form referred to. The incorporated application or other form will thereafter, in its entirety, be open to the public. F. This application shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; by a member who is an officer, if the applicant is an unincorporated association; by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction; if the applicant is an eligible government entity; or by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall, in the event he signs for the applicant, separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true. G. Before filling out this application, the applicant should familiarize himself with the Communications Act of 1934, as amended, Parts 1, 2, 3 and 17 of the Commission's Rules and Regulations and the Standards of Good Engineering Practice. H. BE SURE ALL NECESSARY INFORMATION IS FURNISHED AND ALL PARAGRAPHS ARE FULLY ANSWERED. IF ANY PORTIONS OF THE APPLICATION ARE NOT APPLICABLE, SPECIFICALLY SO STATE. DEFECTIVE OR INCOMPLETE APPLICATIONS MAY BE RETURNED WITHOUT CONSIDERATION.

File No. 39 LCT-556

Name and post office address of applicant (See Instruction D) Grayson Enterprises, Incorporated 7400 College Avenue Lubbock, Texas

Send notices and communications to the following named person at the post office address indicated if different than above W. M. Windsor, above; cc: Koteen & Burt, 1000 Vt. Ave. N. W., Wash. D. C.

1. Requested facilities * Table with columns: Frequency (66-72 mc), Channel No. (4), Power in kilowatts (12.75 ERP vis 2.52 ERP aur.), Minimum hours operation daily (17)

Hours of operation Table with columns: Unlimited (X), Daytime only, Limited, Sharing with (Specify Stations), Other (Specify)

Type of station (as standard, FM, Television) Television Station location City Big Spring State Texas

2. If authority to make changes in an existing station is requested

(a) Present facilities Table with columns: Frequency (66-72 mc), Call (KWAB TV), Channel No. (4), Power in kilowatts (12.75 ERP vis 2.52 ERP vis), Minimum hours operation daily (17)

Hours of operation Table with columns: Unlimited (X), Daytime only, Limited, Sharing with (Specify Stations), Other (Specify)

Station location City Big Spring State Texas

(b) If this application is for changes in an existing authorization, complete Section I and any other sections necessary to show all substantial changes in information filed with the Commission in prior applications or reports. In the spaces below check Sections submitted herewith and as to Sections not submitted herewith refer to the prior application or report containing the requested information in accordance with Instruction E. (If contemplated expenditures are less than \$5,000, complete paragraph 1 of Section III only. Section IV is not required for applications for minor changes not involving change in power, change in frequency, change in hours of operation, or moving from city to city.)

- Section No. Para. No. Reference (File or Form No. and Date) [] Section II No change [] Section III Not applicable [] Section IV Not applicable [X] Section V

have there been any substantial changes in the information incorporated in this application by reference in this paragraph Yes [] No [X]

3. If this application is contingent on the grant of another pending application, state name of other applicant and file number of other application.

Not applicable

RECEIVED FEB 21 1966 OFFICE OF F. C. SECRETARY

*This application is for a modification of license to reduce power.

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

THE APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application, with which it may be in conflict.

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 if set out in full in the application.

CERTIFICATION

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.

Signed and dated this 14th day of February, 1966

EFFECTIVE JANUARY 1, 1964, INCLUDE FILING FEE WITH THIS APPLICATION. SEE PART 1 OF FCC RULES FOR AMOUNT OF FEE.

GRAYSON ENTERPRISES INCORPORATED

(NAME OF APPLICANT)

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U. S. CODE, TITLE 18, SECTION 1001.

By *Jackie D. Burge*
(SIGNATURE)

Title Executive Vice President

If applicant is represented by legal or engineering counsel, state name and post office address:

EXHIBITS furnished as required by this form:

Exhibit No.	Section and Para. No. of Form	Name of officer or employee (1) by whom or (2) under whose direction exhibit was prepared (show which)	Official title
1	§V-C, para. 6	Jackie D. Burge (1)	Chief Engineer

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C			
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Grayson Enterprises, Inc.					
<p>1. Purpose of authorization applied for: (Indicate by check mark)</p> <p>(If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through J, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).)</p> <table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>A. <input type="checkbox"/> Construct a new station</p> <p>B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Change antenna system</p> </td> <td style="width: 50%; border: none;"> <p>F. <input type="checkbox"/> Construct or change auxiliary antenna system</p> <p>G. <input type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter</p> <p>I. <input type="checkbox"/> Other changes (specify)</p> <p>J. <input type="checkbox"/> Change studio location</p> </td> </tr> </table>						<p>A. <input type="checkbox"/> Construct a new station</p> <p>B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Change antenna system</p>	<p>F. <input type="checkbox"/> Construct or change auxiliary antenna system</p> <p>G. <input type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter</p> <p>I. <input type="checkbox"/> Other changes (specify)</p> <p>J. <input type="checkbox"/> Change studio location</p>
<p>A. <input type="checkbox"/> Construct a new station</p> <p>B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Change antenna system</p>	<p>F. <input type="checkbox"/> Construct or change auxiliary antenna system</p> <p>G. <input type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter</p> <p>I. <input type="checkbox"/> Other changes (specify)</p> <p>J. <input type="checkbox"/> Change studio location</p>						
2. Facilities requested			7. (a) Antenna structure <u>No change</u>				
Frequency <u>66</u> — <u>72</u> Mc.		Channel No. <u>4</u>					
Effective Radiated Power (visual) In dbk: <u>11.06</u>	Effective Radiated Power (aural) In dbk: <u>4.074</u>	Antenna height above average terrain <u>380</u> feet					
In kw: <u>12.75</u>	In kw: <u>2.516</u>						
3. Station location (principal community)							
State <u>Texas</u>		City or town <u>Big Spring</u>					
4. Transmitter location							
State <u>Texas</u>		County <u>Howard</u>					
City or town <u>Big Spring</u>		Street Address (or other identifier) <u>2500 Kentucky Way</u>					
5. Main studio location							
State <u>Texas</u>		County <u>Howard</u>					
City or town <u>Big Spring</u>		Street address <u>2500 Kentucky Way</u>					
6. Transmitters <u>See Exhibit No. 1</u>							
Visual							
Make <u>General Electric</u>	Type No. <u>TT 10A</u>	Rated power In dbk: <u>6.99</u> In kw: <u>5.0</u>					
Aural							
Make <u>General Electric</u>	Type No. <u>TT 10A</u>	Rated Power In dbk: <u>0</u> In kw: <u>1 k</u>					
(If the above transmitter has not been accepted for licensing by the F.C.C., attach as Exhibit No. -- a complete showing of transmitter details. Showing should include schematic diagram and full details of frequency control. If changes are to be made in licensed transmitter include schematic diagram and give full details of change.)							
(a) Describe in Exhibit No. -- means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.							
(b) Multiplexer: Make _____ Type No. _____ <u>No Change</u> Rated input power _____ dbk Rated loss: Visual _____ db Aural _____ db							
Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes <input type="checkbox"/> No <input type="checkbox"/>							
Submit as Exhibit No. _____ vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features.							
Overall height in feet above ground (Without obstruction lighting)			Overall height in feet above mean sea level. (Without obstruction lighting)				
Overall height in feet above ground (With obstruction lighting)			Overall height in feet above mean sea level. (With obstruction lighting)				
Height of antenna radiation center in feet above mean sea level. _____ feet							
Geographical coordinates of antenna (to nearest second) North latitude _____ West longitude _____							
How were coordinates determined?							
Indicate by check mark the zone in which structure is located. 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>							
(b) Antenna data <u>No Change</u>							
Visual							
Make		Type No.					
Number of sections		Rated input power in dbk		Power gain in db			
Aural (if separate)							
Make		Type No.					
Number of sections		Rated input power in dbk		Power gain in db			
If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as Exhibit No.							
Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes <input type="checkbox"/> No <input type="checkbox"/>							
Will antenna be altered to provide null fill-in? Yes <input type="checkbox"/> No <input type="checkbox"/>							
If yes, describe fully in Exhibit No.							

8. Transmission line proposed to supply power to the antenna from the transmitter No change					
(a) Visual			(b) Aural (if separate)		
Make	Type No.	Rated input power in dbk:	Make	Type No.	Rated input power in dbk
Size (nominal inside transverse dimensions) in inches	Length in feet	Power loss in db for this length	Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length

9. Proposed operation					
(a) Visual No change			(b) Aural		
Transmitter power output (after vestigial side-band filter, if used) In dbk: In kw:		Multiplexer loss in db:	Input to transmission line in dbk:		Transmitter power output In dbk: 0 In kw: 1
					Multiplexer loss in db: .006
					Input to transmission line in dbk: -.000
Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power In dbk: In kw:	Transmission line power loss in db: .54	Antenna input power in dbk: -.546
				Antenna power gain in db: 4.62	Effective radiated power In dbk: 4.074 In kw: 2.516

10. Modulation monitors No change	
(a) Visual monitor or monitoring equipment	
Make	Type No.
(b) Aural monitor	
Make	Type No.
11. Frequency monitors No change	
(a) Visual monitor	
Make	Type No. Accuracy
(b) Aural monitor	
Make	Type No. Accuracy

14. (a) Attach as Exhibit No. _____ a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:

- Proposed transmitter location—accurately plotted;
- Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
- Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
- At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served.

No change

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. _____ a brief technical description of each. Not applicable

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes No

(b) Attach as Exhibit No. _____ profile graphs with reasonably large scales for the radials in (a) (4) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each. No change

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A contour	Predicted distance in miles to the Grade B contour
0	0	_____ feet	_____ dbk	_____ mi.	_____ mi.
45	_____	_____	_____	_____	_____
90	_____	_____	_____	_____	_____
135	_____	_____	_____	_____	_____
180	_____	No change	_____	_____	_____
225	_____	_____	_____	_____	_____
270	_____	_____	_____	_____	_____
315	_____	_____	_____	_____	_____
(e)	_____	_____	_____	_____	_____
Average	_____	_____	_____	_____	_____

*Radial over principal community if not included above. Do not include in average.
Antenna height above average terrain _____ feet (Must be identical with Paragraph 2)

<p>16. Attach as Exhibit No. <u>map(s)</u> (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:</p> <p>(a) Proposed transmitter location and the radials along which the profile graphs have been prepared;</p> <p>(b) The studio location and boundaries of the principal community;</p> <p>(c) The predicted Grade A and Grade B contours from 12 above;</p> <p>(d) The required minimum field strength contour;</p> <p>(e) Scale of miles. <u>No change</u></p>	<p>17. Attach as Exhibit No. <u>a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.</u></p> <p><u>No change</u></p>
<p>18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's rules, be provided over the entire principal community proposed to be served?</p> <p style="text-align: right;"><u>Not applicable</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>19. Will the main studio be located within the limits of the principal community proposed to be served.</p> <p style="text-align: right;"><u>Not applicable</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules?</p> <p style="text-align: right;"><u>Not applicable</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 10 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.</p> <p style="text-align: center;"><u>Not applicable</u></p>	
<p>21. If this is an application for modification of construction permit state briefly as Exhibit No. <u>the present status of</u> construction and indicate when it is expected that construction will be completed.</p> <p style="text-align: center;"><u>Not applicable</u></p>	
<p>I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)</p> <p>Date <u>February 14, 1966</u></p> <p style="text-align: right;"><u>Jackie D. Bunge</u> Technical Director, Chief Engineer or Consulting Engineer</p>	

Exhibit No. 1
February 14, 1966

This application is for permanent reduction of aural
power.

The change will be accomplished by reducing the voltage
on the final stage of the tower amplifier.

RECEIVED
FEB 21 1966
F. C. C.
OFFICE OF THE SECRETARY

Form BC 125 BROADCAST STATION LICENSE RECORD
June 1984

Class. 7 KDCD-TV

BROADCASTING STATION LICENSE RECORD

RESUMED OPER. 6-8-59

CEASED OPERATION 3-16-71 RESUMED OPERATION 2-2-73

DELETED 10-20-82

Date first licensed 12-17-70 (off. #710)

REINSTATED 11-1-82 Call letters KDCD-TV

Station location MIDLAND, TEXAS

Name of licensee MIDLAND TELECASTING COMPANY

Wilco Bldg., Marlenfeld and West Wall Sts., Midland, Texas (BCT-1163 12-17-70)

X Marlenfeld and Wall streets, Midland, Texas (BCT-5060, 10-13-51)

Transmitter location Southeast corner of Marlenfeld & wall Streets, Midland, Texas

3701 West Wall St., Midland, Texas (BCT-4490 3-16-74)

X Wilco Bldg., Marlenfeld and West Wall Sts., Midland, Texas (BCT-1163 12-17-70)

X 3706 West wall St., Midland, Texas (BCT-5860 10-13-51)

Main studio location Southeast corner of Marlenfeld & Wall Streets, Midland, Texas

CONSTRUCTION PERMIT AND LICENSE RECORD

App No.	Date	Event	Class	Power	Class	Period
						From To
WIRE	1-3-63	RELETATY 4, NO OBJECTION	KOCD-TV			REMAINING SILENT ADDITIONAL PERIOD END 4-11-63
WIRE	4-3-63	RELETATY 4, NO OBJECTION	KOCD-TV			REMAIN SILENT ADD PERIOD END 7-11-63
WIRE	7-11-63	RELETATY 20, NO OBJECTION	KOCD-TV			REMAINING SILENT ADDITIONAL PERIOD ENDING 10-11-63
WIRE	9-11-63	RELETATY 21, NO OBJECTION	KOCD-TV			REMAINING SILENT ADDITIONAL PERIOD END 1-11-64
WIRE	1-11-64	RELETATY 20, NO OBJECTION	KOCD-TV			REMAIN SILENT ADDITIONAL PERIOD END 4-16-64
WIRE	7-11-65	NO OBJECTION	KOCD-TV			SILENT ADDITIONAL PER. END 10-10-65
WIRE	8-1-67	III. (from applicant stepping forward)				EXPIRES 8-1-67
WIRE	12-15-70	RE AMENDED LIC. AMPL. NLCI-1163				
		ALSO ON APPL ON PIA OF IMPCI-5694				
NLCI-1163	12-17-70	Ch. 18	V.O.091 kw	D		12-17-70
		Alt: 390' MSL: 3194' 494-500	A.O.019 kw			8-1-71
		Lic. (NLCI-2815 as mod) for a new station				
WIRE	1-1-71	PENDING RESOLUTION OF FINANCIAL				
		PROBLEMS WITH CO. REMAINS SILENT TEMP. PER. END. 6-11-71				
		ADDNAL PER. PERIOD TO CONTINUED COMPLIANCE WITH				
		POWER LICENSE REQUIREMENTS.				
WIRE	5-11-71	APPL WITH EX. 10				5-11-71
WIRE	8-11-71	APPL WITH EX. 10				10-15-71
WIRE	11-20-71	APPL WITH EX. 10				1-21-72
WIRE	2-11-72	APPL WITH EX. 10				2-21-72
WIRE	3-16-72	Ch. 15	V.O.011 kw DA			3-16-72
		Alt: 390' MSL: 3194' 494-500				3-16-72
		OF CH. 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100				
WIRE	5-15-72					

CONSTRUCTION PERMIT AND LICENSE RECORD

Applicant	Date	Description	Expiration
Wire	1-21-73	Auth. remain silent	2-14-73
Wire	11-26-72	Auth. remain silent	12-1-72
Wire	1-12-73	FIND. COMP. CONST. ACCORD DEPT. 2190 & WIRE LIC. APPL. AUTH. STATION REINSTALL & OPER. ALFORD, TYPE 10208 ANTENNA AND WILCO BLDG. FOR PURPOSE OF TRANS. AURAL SIGNAL TEMP. PER. ENGINE 1-22-73 TREATED AS SUP. TO VIC. EFT. RADIATED POWER MAY NOT EXCEED 20% & ANT. HEIGHT MAY NOT EXCEED THAT AUTH. IN CONT. PERMIT. ADVISE WHEN OPER. COMMENCED UNDER THIS AUTH.	
Wire	3-2-73	Above CP AND LIC. AUTH. GEN. OPER. STATION TEMP END. 3-4-73 WITHOUT MODULATION MONITOR PROVIDED OTHER SUITABLE MEANS ARE AVAILABLE FOR INDICATING THAT AURAL MOD. IS MAINTAINED WITHIN TOLERANCE PRESCRIBED IN SEC. 73.087(B) (7) RULES.	
Wire	4-13-73	RENEWAL OF LICENSE 730	8-1-74
Wire	4-2-73	pending comp. construct. accord. BPCT-2190 and filing lic. applic. extend auth. gtd. reinstall and oper. alford, type 10208 ant. ato Wilco Bldg. for purpose of transmitting aural signal temp. per. ending 3-1-73. ratio of sup. to vic. effective radiated power may not exceed 20 percent and ant. height may not exceed that auth. in BPCT-2190.	
Wire	8-29-73	Pending filing lic. applic. auth. gtd. oper. temp. per. ending 11-26-73 accord construction permit BPCT-2190.	
Wire	10-16-73	pending resolution financial proble., auth. gtd. remain silent temp. per. end. 1-16-75, accord. non-res. shall comply with requirements	
Wire	6-19-75	Above auth. extended to	7-24-75
Wire	6-20-77	Auth. remain silent extended to	8-1-77

Form BC-121 #1
Aug. 1955

APPLICATION RECORD - BROADCASTING

Class. TV

Call
Letters **WOL** **4000-TV**

Name **MIDLAND BROADCASTING COMPANY**

(P.O. ~~338~~ ~~Midland, Texas~~ ~~Station~~ ~~Highway~~ ~~201~~ ~~West~~ ~~Highway~~ ~~Midland, Texas~~)

Station location: **MIDLAND, Texas** P.O. Box **338** (Date **5-24-61**)

File No.	Dated	Application for	Nature	Date
WOL-2814 H & F	9-19-60 9-19-60	OP for a new Class TV B/O station Freq: Ch #18, 494-MC Hce. ERP: Pwr. 0.050 kw. Ayr. 0.328 kw Hours of operation: Unlimited Station location: Midland, Texas S-1: 52 Corner Marientfield & Wall Streets, Midland, Texas T-1: 52 Corner Marientfield & Wall Streets, Midland, Texas (Pwr & Ayr. 02 TT-214) (443) Filed by J. Spillman, Electron Corporation Exec. Earl Zimmerman	GRANTED	5-11-61
Amended H & F	4-7-61 4-10-61	Amended re change in officers, directors and stockholders, (financial)		

Form BC-121 #2
Aug. 1955

APPLICATION RECORD - BROADCASTING

COMM. TV

Call
Letters

Name MIDLAND TELECASTING COMPANY
Midland, Texas

File No	Dated	Application for	ACTION	
			Nature	Date
BMCT- 1507120	7-26-61	Mod. of CP (EPCT-2814, which authorizes a new Comm. TV s/o station) to change ERP from Visual 3.531 kw, Aural 0.324 kw to Visual 0.660 kw, Aural 0.338 kw, Change TL & GA from Southeast corner of Mariential & Hall streets, Midland, Texas to North side of U.S. Highway 80 between Midkiff Rd. & Thomas Road, Midland, Texas; site changed in antenna system and antenna height above average terrain to 367 feet. FILED BY Maurice M. Vaneky, Atty. Electron Conventions, Inc., Dallas, Texas (P.D. 5/15/61)	RETURNED As requested attorney	7-26-61
	8-1-61			

U.S.

Card # 1

BROADCASTING STATION LICENSE RECORD

First D.O. 3-17-55 (started 5-1-55)

COMM. TV A/C

Date first licensed 5-15-57 (App. No. 319)

9

Call letters KTRE-TV

(Sta. Loc. Lufkin, Texas)

STATION ID: LUFKIN-MACONDOCHES, TEXAS

(Lic. 1-13-76)

BUPFORD TELEVISION, INC. OF LUFKIN (AL 11-28-77) (Rev.)

XBUPFORD TELEVISION, INC. (BAL-511 EFF: 1-27-73)

XFOREST CAPITAL COMMUNICATIONS CORP. (BALCT-245 11-13-56 EFF: 1-13-57)

Name of licensee XFOREST CAPITAL BROADCASTING COMPANY

Transmitter location 1.4 miles Northwest of Clawson, near Lufkin, Texas

Main studio location 1.4 miles Northwest of Clawson, near Lufkin, Texas

KTRE-TV

CONSTRUCTION PERMIT AND LICENSE RECORD

Permit No.	Date	Power	Class	Notes	Expiration
<p>(KTRR-TV) history closed (KTRR-TV), this construction filed and revised with new data for KTRR-TV, power 2)</p>					
BPCT-1308	11-17-54	0	7.15.7kw		1-17-55
			4.5.37kw		7-17-55
			195-192	SCS	
<p>CP for a new Comm. TV S/C Station</p>					
<p>WIRE 8-17-55 STA GRANTED OPER COMM BASIS ACCORD CP (BPCT- 2988) FOR PD. ENDING 9-1-55 PENDING RECEIPT OF VERIFIED REQUEST.</p>					
<p>WIRE 8-23-55 Ext. STA KTRR-TV operate Comm. basis Accord. CP (BPCT-2988) pend. filing of lic. appl. Auth. expires 10-18-55.</p>					
<p>BPCT-1372 4-17-56 same same same 1-17-56</p>					
<p>BPCT-1372 4-17-56 same same same 1-17-56</p>					
<p>WIRE 9-27-55 EXT STA Oper. Comm. basis accord. CP BPCT- 3179 pending filing of Lic. Appl. Auth. expires 4-18-56</p>					
<p>WIRE 3-23-56 Pending filing of lic. appli., ext. auth. granted to operate temp. for per. ending 10-1-56 Comm. Basis accord. P (BPCT-3822).</p>					
<p>BPCT-319 7-22-59 same same same 8-1-59/8-1-62</p>					
<p>RENEWAL OF LICENSE</p>					
<p>BPCT-4097 7-18-62 Voluntary transfer of control of licen- see number 1109 from R.W. Northam, Jr., et al. All Stock- holders to Forest Co. Inc. Communications Corp.</p>					
<p>CP: 8-1-62</p>					

AS

CONSTRUCTION PERMIT AND LICENSE RECORD

Appl. No.	Date Issued	Freq.	Power	Time Day	Period From To
BRCT-319	7-24-62	same	same	same	8-1-62 8-1-65
RENEWAL OF LICENSE					
BAICT-245	11-13-64	Voluntary assignment of license to FOREST CAPITAL COMMUNICATIONS CORP.			EFF: -
BRCT-319	7-18-65	50.00	7-27.8 kw		8-1-65
AM: 3000	7-18-65	170-102	4.19, 2 kw		8-1-65
RENEWAL OF LICENSE					
BRMCT-115	2-10-66	Same	Same	Same	2-10-66
51			A-5.5 kw		8-1-68
Mod. of license to reduce Aural EQP.					
BRCT-319	7-29-68	(1) RENEWAL OF LICENSE			8-1-71
BRCT-4270	8-27-69	OP to chg. type transmitters			10-27-69 4-27-70
WIRE	8-3-70	RENEWED LIC. APPL. AUTH. GR. OFF.			
ON PIA ACCORD OF BRCT-4270.					
BRCT-1971	7-27-70	LIC. BRCT-42700 (or chg.)			8-1-71
BRCT-319	7-29-71	RENEWAL OF LICENSE (s)			8-1-74
ERSA	8-19-72				
BAICT-512	4-27-73	Vol. AL			
Wire	4-27-73	Comm. gtd. Vol. assign of lic. to Buford TV, Inc. necessary to consum. within 45 days and immedi. notify Comm.			
		RENEWAL OF LICENSE (S)			
BRCT-119	7-21-77	RENEWAL OF LICENSE (S)			8-1-80
BRCT- 000001K0	7-18-80	RENEWAL OF LICENSE (S)			8-1-83

Card # 1

FORM A-128

FORMERLY FCC FORM 94

APPLICATION RECORD - BROADCASTING

Comm TV b/c

Call

Letters ~~NEW~~ KTC-TVName FOREST CAPITAL BROADCASTING COMPANY
(P.O. Box 701, Lufkin, Texas)

File No.	Dated	Application for	Action	
			Nature	Date
BPOT-1906 Recd & filed	9-30-54 10-12-54	CP for a new Comm TV b/c station; Freq: Ch # 9- 126-198 Mcs. ERP: Vis. 11 kw Aur. 5.6 kw Hours of operation: Unlimited T-L: 1.4 miles NW of Clawson, Texas S-L: 1.4 miles NW of Clawson, Texas (Lufkin, Texas) (Vis & Aur. RCA-TV-2AN) (570') Filed by Paul Dobin, Atty. (Dual-Programming with KPRC-TV, Houston, Tex.)	GRANTED	11-17-54
BPOT-2988 Recd & filed	3-18-55 3-22-55	Mod. of CP (BPOT-1906 which auth. a new comm. TV b/c station) to change ERP from Vis. 10.7 kw, Aur. 5.37 kw, to Vis. 25.1 kw, Aur. 12.5 kw, install new transmitters and antenna system and make other equipment changes. Change in description of transmitter and studio location (not a move) from 1.4 mi. NW of Clawson, near Lufkin, Texas to 1.4 miles NW of Clawson, East of Highway # 69, near Lufkin, Texas. (V. S. A. CP-TT-8-2) (654) Filed by Leonard H. Haffey, Atty.	GRANTED	4-15-55 (Description of T-L & S-L, not attached.)

COMM. TV B/C

Form A-170

APPLICATION RECORD - BROADCASTING

FORMERLY FCC FORM 94

(53)

Letter: KTVB-TV

Name FOREST CAPITAL BROADCASTING COMPANY
Lufkin, Texas

File No.	Dated	Application for	Action	
			Nature	Date
BMPCT-3379 Revised Ext. 2	8-27-55 8-29-55	Mod. of CP (BPCP-1905, as mod., which authorized a new Comm. TV B/C Station) to extend completion date from 10-18-55 to 4-1-56. Filed by Leonard H. Marks, Atty.	STARTED	2-10-56
BMPCT-4172 Revised Ext. 3	1-7-56 1-14-56	Mod. of CP (BPCP-1905, as mod., which authorized a new Comm. TV B/C Sta.) to extend completion date from 4-18-56 to 11-1-56. Filed by Leonard H. Marks, Atty.	STARTED	4-11-56
BMPCT-4176 Revised Ext. 4	8-14-56 1-1-57	Mod. of CP (BPCP-1905, as mod., which authorized a new Comm. TV B/C Sta.) to extend completion date from 11-1-56 to 4-1-57. Filed by Leonard H. Marks, Atty.	STARTED	4-11-56
BMPCT-4607 Revised Ext. # 5	3-20-57 3-27-57	Mod. of CP (BPCP-1905, as mod., which authorized a new Comm. TV B/C Sta.) to extend completion date from 4-1-57 to 7-1-57. Filed by Marcus Gohn, Atty.	DISMISSED Unnecessary - prog. tests author. 3-29-57	4-5-57

Card 3
 FORM HC-171
 AUG. 1955

APPLICATION RECORD - BROADCASTING

Class TV B/C

Call

Letters ETLE-TV

Name FOREST CAPITAL BROADCASTING COMPANY
 Lufkin, Texas

File No.	Date	Application for	Action	
			Nature	Date
310T-000 Recd. & filed	2-22-57 3-27-57	License to cover CP (3PCT-1908 as mod.) which authorized a new commercial TV b/c station. Filed by Leonard H. Marks, Atty.	GRANTED	4-10-57
310T-319 Recd. & filed	5-11-59 5-14-59	RENEWAL OF LICENSE Filed by Leonard H. Marks, Atty.	GRANTED	7-22-59
310T-319 Recd. & filed	5-29-62 5-2-62	RENEWAL OF LICENSE	GRANTED	7-24-62
310T-4057 Recd. & filed	5-1-62 5-21-62	Voluntary transfer of control of licensee corporation from R. W. Wortham, Jr., et al (All Stockholders) to Forest Capital Communications Corp. Entered by White, Atty.	GRANTED EFF:	7-18-62 8-1-62

BROADCASTING STATION LICENSE RECORD

Card # 1

First C.O. 1-15-56 (started 1-15-56)

KWAB-TV 1953-56

PROGRAM TESTS 3-16-57

KWAB-TV 1957-57

Date first licensed 8-30-57 (Official No. 356)

Call letters KWAB-TV

(Station Loc: Big Spring, Tex.)

GRAYSON ENTERPRISES INCORPORATED (BALCT-164 10-11-61 EFF: 11-1-61)

X TEXAS TELECASTING, INC. (WAPCI-214 1-23-57 EFF: 1-23-57)

X BIG SPRING TELEVISION, INC. (BSPCT-148 7-2-58 EFF: 7-13-58)

Name of licensee XBIG SPRING BROADCASTING COMPANY

2500 Kentucky Way, Big Spring, Texas

Transmitter location X 2500 Kentucky Way, Big Spring, Texas

2500 Kentucky Way, Big Spring, Texas

Main studio location X 2500 Kentucky Way, Big Spring, Texas

FCC 63

KWAB-TV

FORM A-170
FORMERLY FCC FORM 94

APPLICATION RECORD - BROADCASTING

COMM. TV

Call Letters ~~NEW~~ **KBST-TV**

Name **BIG SPRING BROADCASTING COMPANY**
(P.O. 702 Johnson Street, P.O. Box 1632, Big Spring, Texas)

File No.	Dated	Application for	Action	
			Nature	Date
BPCT-1749	8-1-53	C.P. for a new Comm. TV B/C Station		
Rec'd	8-3-53	FREQ.: Ch. #4, 66-72 mcs.	GRANTED	7-22-54
Filed	8-3-53	ERP: Via. 1.26 kw, Aur. 0.76 kw	Order Doctet No. 10026	
		Hours of Operation: Unlimited		
		S-L: 600 Kentucky Way, Big Spring, Texas		
		T-L: 600 Kentucky Way, Big Spring, Texas		
		(Vis. & Aur. NCA TT-500A) (1928)		
		(Filed by Eugene L. Burke, Atty.)		
AMENDED	12-3-53	Amended to change ERP from Vis. 1.26 kw, Aur.		
Rec'd	12-7-53	0.764 kw to Vis. 1.35 kw, Aur. 0.764 kw		
Filed	12-8-53			
AMENDED	2-23-54	Amended to change ERP TO Vis. 1.35 kw, Aur.		
Rec'd	2-25-54	0.892 kw; antenna height above average		
Filed	2-25-54	terrain to 323'; & changes in antenna system.		

Card # 2

Form A-110

APPLICATION RECORD - BROADCASTING

Comm-TV

FORMERLY FCC FORM 44
BIG SPRING TELEVISION, INC.Call
Letters WEST-TVName BIG SPRING BROADCASTING COMPANY
Big Spring, Texas

File No.	Dated	Application for	ACTION	
			Nature	Date
BMPOT-2920 Recd. & filed	2-19-55 2-23-55	Mod. of CP (BPOC-1749 which auth. a new comm. TV b/c station) to extend completion date from 2-22-55 to 2-1-55 Filed by Eugene L. Burke, Atty.	GRANTED Issued with BMPOT-2952	4-29-55
BMPOT-2952 Recd. & filed	7-4-55 8-7-55	Mod. of CP (BPOC-1749 as mod, which auth a new comm. TV b/c station) to change ERP from Vls. 1.35 kw, Aur. 0.794 kw, to Vls. 5.14 kw, Aur. 2.57 kw, change type of transmitters and make other equipment change. (Vls & Aur. RCA-TT-2AL) (323) Filed by Eugene L. Burke, Atty.	GRANTED Issued with BMPOT-2920	4-28-55
BAPOT-136 Recd. & Filed	5-31-55 6-3-55	Assignment of CP from Big Spring Broadcasting Company to Big Spring Television, Inc. Filed by Eugene L. Burke, Atty.	GRANTED EFT:	7-6-55 7-18-55
AMENDED Recd. & Filed	6-13-55 6-13-55	Clarification of Exhibit 6 Re: stockholders. Filed by Eugene L. Burke, Atty.		

Card # 3

FORM A-170

FORMERLY FCC FORM 94

APPLICATION RECORD - BROADCASTING

Comm TV B/C

Call
Letters BQBT-TVName BIG SPRING TELEVISION, INC
Big Spring, Texas

File No.	Dated	Application for	ACTION	
			Nature	Date
BQBT-3267 Recd & filed	7-18-55 7-19-55	Mod. of CP (BQBT-1749 as mod, which auth a new comm TV b/c sta.) to change ERP from Vis. 5.13 kw, Aur. 2.57 kw to Vis. 12.75 kw Aur. 5.88 kw, install new transmitters and antenna system and make other equipment changes. (Vis & Aur. 05-TT-10-A) (320) Filed by Eugene L. Burke, Atty.	GRANTED	8-1-55
BQBT-3714 Recd & Filed Ext. #3	1-14-56 1-16-56	Mod. of CP (BQBT-1749, as mod., which auth. a new Comm. TV B/C Station) to extend completion date from 3-5-56 to 5-5-56. Filed by Eugene L. Burke, Atty.	GRANTED	1-23-56
BQBT-3879 Recd & filed Ext # 4	4-12-56 4-13-56	Modification of construction permit (BQBT-1749 as modified, which authorized a new commercial TV b/c station) to extend completion date from 8-5-56 to 11-5-56 Filed by Eugene L. Burke, Atty.	GRANTED	4-20-56

APPLICATION RECORD - BROADCASTING

COMM. TV B/C

KKDY-TV (2-27-57)

Call KXST-TV

Letters

TEXAS TELECASTING, INC.

Applicant X BIG SPRING TELEVISION, INC.
Big Spring, Texas

File No.	Date	Application for	Action	
			Nature	Date
BPCT-4350 Recd. & filed Ext. # 5	10-19-56 10-24-56	Modification of CP(BPCT-1749, as mod., which authorized a new Comm. TV B/C Sta.) to extend completion date from 11-5-56 to 5-5-57. Filed by E.L. Burke, Atty.	GRANTED	10-30-56
BPCT-214 REC'D & FILED	12-19-56 12-27-56	Voluntary assignment of construction permit from Big Spring Television, Inc. to Texas Telecasting, Inc. Filed by Elliot C. Lovett, Atty.	GRANTED EFF:	1-23-57
BPCT-1674 Recd. filed Ext. # 6	3-27-57 4-1-57	Mod. of CP(BPCT-1749, as mod., which authorized a new Comm. TV B/C Sta.) to extend completion date from 5-5-57 to 8-5-57. Filed by Elliot C. Lovett, Atty.	GRANTED	4-11-57

CONSTRUCTION PERMIT AND LICENSE RECORD

Appl. No.	Date Issued	Power	Class	Frequency	Expiration Date
BPCT-1749	7-22-54	Ch. # 4 / 1.35kw	VLM	66-72mc	9-22-54
Mod. of CP(BPCT-1749) to chg. ERP, type of transmitters, make other equipment chg. and ext. completion date. (XPR)					
CP for a new Com. TV B/W Station.					
BPCT-2930	4-29-55	same	7	5.15kw	9-22-54
BPCT-2932	4-29-55	A	2.57kw		9-22-54
Mod. of CP(BPCT-1749) to chg. ERP, type of transmitters, make other equipment chg. and ext. completion date. (XPR)					
Voluntary assignment of CP from Big Spring Broadcasting Co. to Big Spring Television, Inc. 7-1-56.					
BPCT-3267	3-2-56	same	7	12.9 kw	9-22-54
Mod. CP(BPCT-1749, as mod.) to chg. ERP, install new transmitters, make other equip. chgs.					
1-12-56 Pending filing of license application, auth. granted to operate temp. for period ending 2-3-56 comm. basis accord. CP(BPCT-3267).					
BPCT-3279	4-20-56	same	same	same	9-22-54
Mod. of CP(BPCT-1749, as mod.) to extend compl. dt. 11-5-56					
1-1-56 Pending filing of Lic. Appl. ext. authority granted to Op. KSBT-TV Temp. Per. And. 11-5-56 Comm. basis accord.					
BPCT-4260	10-30-56	same	same	same	9-22-54
Mod. of CP(BPCT-1749, as mod.) to extend compl. dt. 5-5-57					
1-1-57 Pending filing of Lic. Appl. ext. authority granted to Op. KSBT-TV Temp. Per. And. 5-5-57 Comm. basis accord.					
Voluntary assignment of CP from Big Spring Television, Inc. to IMAS TELECASTING, INC. 1-1-57					
BPCT-4260	4-11-57	same	same	same	9-22-54
Mod. CP(BPCT-1749, as mod.) to extend completion dt. 8-1-57					

CONSTRUCTION PERMIT AND LICENSE RECORD

WTR#	2-22-57	PENDING PERMITS (CO. APPL. EXT. AUTH. PR. COMM. BASIS ACCORD MUCT-4624 to 2-5-57)			
WTR#	2-1-57	EXT. CTR. CTR. N.M.M. BUREAU CTR.			
WTR#	2-1-57	MUCT-3491 to 2-2-57			
WTR#	2-15-57	PROGRAM PERMITS AUTHORIZED STATE BOARD			
BLCOT-679	8-30-57	CH #4	V-12.9 kw	U	8-30-57
AH 380'		66-72	A-6.92 kw		8-1-59
license to cover CP (MUCT-1749, as specifically stated log.					
BRCOT-366	7-15-59	same	same	same	8-1-59/ 8-1-62
RENEWAL OF LICENSE					
BRCOT-366	10-11-62	VOLUNTARY ASSIGNMENT OF LICENSE TO			
MAYOR & ASSOCIATES INCORPORATED, 11-1-61					
BRCOT-366	7-24-62	CH #4	V-12.9 kw	U	8-1-62
		66-72	A-6.92 kw		8-1-65
RENEWAL OF LICENSE					
BRCOT-366	3-25-66	Voluntary transfer of control of license			
incorporation from Sidney A. Grayson, Nat Lic. No. Irving L.					
Child, Murray Gold, et al to Theodore Hartman, Dr. Ellis					
Caro, and Lee Optical and Associated Companies Retirement					
Pension Plan Trust, REF: 5-3-66					
BRCOT-366	7-3-65	CH #4	V-12.9 kw	U	8-1-65
AH: 380'		66-72	A-6.92 kw		8-1-68
RENEWAL OF LICENSE (Card #1)					
BRCOT-366	1-1-66	same	same	same	8-1-68
Vol. of Lic. to reduce curial exp					
BRCOT-366	7-31-68	(L) RENEWAL OF LICENSE			8-1-71
BRCOT-366	3-19-71	WTR #1			
BRCOT-366	11-4-71	RENEWAL OF LICENSE (L)			8-1-74
BRCOT-366	5-15-72				
BRCOT-366	3-27-80	RENEWAL OF LICENSE (S)			8-1-87
BALCT-	4-21-80	VOL. ASSIGNMENT OF LICENSE TO			
790709 PERMIAN BASIN TELEVISION CORPORATION					
KG					

110007
Modified as of August 8, 1955
TELEVISION BROADCAST STATION CONSTRUCTION PERMIT

Subject to the provisions of the Communications Act of 1934, subsequent Acts, and Treaties, and Commission Rules made thereunder, and further subject to conditions set forth in this permit, 1/authority is hereby granted to

BIG SPRING TELEVISION, INC.

to construct a television broadcast station located and described as follows:

1. Station location: State Texas City Big Spring
2. Transmitter location: State Texas County Howard
City or Town Big Spring
Street and number 600 Kentucky Way
North Latitude: Degrees 32 Minutes 15 Seconds 16
West Longitude: Degrees 101 Minutes 26 Seconds 44
3. Main studio location: State Texas County Howard
City or Town Big Spring
Street and number 600 Kentucky Way
4. Transmitter: Visual Aural
Make and type GE TT-10A GE TT-10A
Rated power 6.99 dbk(5 kw) peak. 4.31 dbk(2.7 kw).
5. Antenna:
Make and Type GE TY-60-C, 3 section Batwing

Horizontal field pattern: Omnidirectional

Antenna supporting structure 457 foot tower

Overall height above ground 497 feet.

Obstruction marking specifications in accordance with paragraphs 1, 3, 4, 13, 21 and 22 of FCC Form 715 attached.

6. Operating assignment:
Frequency 66 — 72 Megacycles. (Channel No. 4)
Carrier frequency 67.24 Mc. 71.74 Mc.
Effective radiated power 11.1 dbk(12.9 kw) peak. 8.4 dbk(6.92 kw).
Transmitter output power 7 dbk(5 kw) peak. 4.3 dbk(2.7 kw).
Antenna height above average terrain 380 feet.
Hours of operation - Unlimited.
7. Date of required commencement of construction September 22, 1954
8. Date of required completion of construction February 5, 1956
9. Equipment and program tests shall be conducted only pursuant to Sections 3.628 and 3.629 of the Commission Rules.
10. This permit shall be automatically forfeited if the station is not ready for operation within the time specified or within such further time as the Commission may allow unless completion of the station is prevented by causes not under the control of the permittee. See Section 1.314 of the Commission Rules.

Subject to the attached condition FCC Form No. 720.

1/ This construction permit consists of this page and pages 2 & 3.

Dated this 8th day of August, 19 55.

FEDERAL COMMUNICATIONS COMMISSION



ob

F.C.C. Washington, D. C.

Mary Jane Morris
Secretary

OBSTRUCTION MARKING
ANTENNA TOWER(S) OR SUPPORTING STRUCTURE(S)

Date 8-3-55
File No. EPC-3267
Call Letters: K3ST-TV

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(g) of the Communications Act of 1934, as amended.

1. Antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be approximately one-seventh the height of the structure, provided however, that the bands shall not be more than 40 feet nor less than 1-1/2 feet in width. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.

2. There shall be installed at the top of the tower at least two 100- or 111-watt lamps (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any angle of approach. A light sensitive control device or an astronomic dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.

3. There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 500- or 820-watt lamps (PS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a red or other construction of not more than 20 feet in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to one-half of the luminous period.

4. At approximately one-half of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

5. At approximately two-fifths of the over-all height of the tower one similar flashing 300m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

6. On levels at approximately two thirds and one third of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall

be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

7. On levels at approximately four-sevenths and two-sevenths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

8. On levels at approximately three-fourths, one-half and one-fourth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

9. On levels at approximately two-thirds, four-ninths and two-ninths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10. On levels at approximately four-fifths, three-fifths, two-fifths, and one-fifth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed heights.

11. At the approximate mid point of the over-all height of the tower there shall be installed at least two 100- or 111-watt lamps (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

12. On levels at approximately two-thirds and one-third of the over-all height of the tower, there shall be installed at least two 100- or 111-watt lamps (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

13. On levels at approximately three-fourths and one-fourth of the over-all height of the tower, at least one 100- or 111-watt lamp

(# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

14. On levels at approximately four-fifths, three-fifths and one-fifth of the over-all height of the tower, at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

15. On levels at approximately five-sixths, one-half, and one-sixth of the over-all height of the tower, at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

16. On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the over-all height of the tower at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

17. On levels at approximately seven-eighths, five-eighths, three-eighths, and one-eighth of the over-all height of the tower, at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

18. On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the over-all height of the tower, at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

19. On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths, and one-tenth of the over-all height of the tower, at least one 100- or 111-watt lamp (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

20. All lighting shall be exhibited from sunset to sunrise unless otherwise specified.

21. All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.

22. During construction of an antenna structure, for which obstruction lighting is required, at least two 100- or 111-watt lamps (# 100 A21/TS or # 111 A21/TS, respectively) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be installed at each such level. These temporary warning lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.

CRITICAL OBSTRUCTION

The construction of the antenna structure is subject to the following conditions:

1. The height of the uppermost point of the antenna structure, including the required obstruction lighting and any other attachments, shall not exceed **2960** feet above mean sea level.
- 2a. A bench mark shall be established on the tower base. The elevation above mean sea level of the bench mark shall be determined within one foot from a line of spirit levels from a Municipal, State, or Federal bench mark that is a part of the national level net.
- b. The horizontal position of the tower site shall be determined within 1/2 second of latitude and longitude by a ground survey tied to a Municipal, State, or Federal control point that has previously been connected to the national geodetic network.
- c. An affidavit signed by a registered or qualified engineer or surveyor shall be submitted with the license application setting forth the geographic coordinates of the structure and the over-all height (which shall include the obstruction marking) above sea level of the completed structure, and describing the survey and the reference points upon which it is based, together with a plat of the antenna site and vertical plan sketch of the antenna structure portraying pertinent details.

THIS FORM IS A PART OF AND SHALL BE ATTACHED TO THE CURRENT INSTRUMENT OF AUTHORIZATION

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON 25, D. C.

Sept. 8, 1955

REPLY TO ALL COMMUNICATIONS

TO THE SECRETARY

BY REPLY NUMBER TO:

8843

Direccion General de Telecomunicaciones
 Secretaria de Comunicaciones y Obras Publicas
 Mexico, D. F.

Gentlemen:

In accordance with the Agreement entered into by the Governments of the United States of America and the United States of Mexico for the assignment of television channels,, notice is herewith given of the ~~granting~~ ^{grant} of an application as follows:

1. Construct a new television broadcast station ()
 Modify an existing television broadcast station ()
 Other _____
2. Applicant Big Spring TV, Inc.
 City Big Spring State Texas
3. File No. and/or call letters KBST-TV IMPCT- 3267
4. Proposed transmitter location:
 Latitude 32° 15' 16" N.
 Longitude 101° 26' 44" W.
5. Channel Number 4
6. ~~Channel~~ ^{Video Carrier} Frequency 67.24 Mc.
7. Effective radiated power (visual) 12.9 kw.
8. Antenna:
 Overall height above ground 497 feet
 Overall height above mean sea level 2957 feet
 Antenna height above average terrain (2-10 miles) 350 feet
 Horizontal directivity pattern:
 (1) Omnidirectional ()
 (2) Other _____

Very truly yours,

Mary Jane Morris

Mary Jane Morris
 Secretary

X

X

AUGUST 8, 1955

BIG SPRING TELEVISION, INC.
RADIO STATION KBST-TV
BIG SPRING, TEXAS

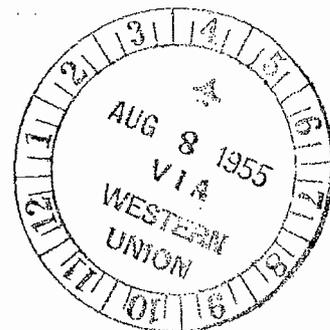
COMMISSION GRANTED KBST-TV BR-CT-3267 EFFECTIVE RADIATED
POWER VISUAL 12.9 KILOWATTS AURAL 6.92 KILOWATTS ANTENNA
HEIGHT ABOVE AVERAGE TERRAIN 380 FEET, CRITICAL HEIGHT
CONDITION REQUIRING SURVEY OF TOWER LOCATION AND HEIGHT NOT
TO EXCEED 2960 FEET ABOVE MEAN SEA LEVEL, EXPIRING FEBRUARY 5, 1956

MARY JANE MORRIS, SECRETARY
FEDERAL COMMUNICATIONS COMMISSION

Appr. Broadcast Bureau 8-8-55
MWB:ob/lic.B 12 pm

cc: Files
Miss Iehl
Mr. Nelson
E L Burke, Atty.
Engr. Dist. # 10

DAY LETTER COLLECT



KB-TV

BMPCT-3267

**BROADCAST FACILITIES
DIVISION (TV)**

JUL 20 1955

BROADCAST BUREAU

TV ENGINEERING APPENDIX V

Application for
Modification of Construction Permit
Ch. 4, ERP 12.75 KW (11.06 dbk) @ 380'
Big Spring, Texas
(BPGT-2952, as granted)

Big Spring Television, Inc.
July 1955





TABLE OF CONTENTS

Exhibit No. E-1	Section V-C of FCC Form 301
Exhibit No. E-2	Section V-G of FCC Form 301
Exhibit No. E-3	Engineering Statement
Exhibit No. E-4	Map showing 74 dbu, Grade A and Grade B contours.
	Instrument Approach Chart
	Vertical Plan Sketch

July 15, 1955



BROADCAST APPLICATION FEDERAL COMMUNICATIONS COMMISSION Section V-C

TELEVISION BROADCAST ENGINEERING DATA Name of applicant
Big Spring Television, Inc.

1. Purpose of authorization applied for: (Indicate by check mark)

(If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).)

A. Construct a new station
 B. Change effective radiated power or antenna height above average terrain
 C. Change transmitter location
 D. Change frequency
 E. Change antenna system
 F. Construct or change auxiliary antenna system
 G. Change transmitter
 H. Install auxiliary or alternate main transmitter
 I. Other changes (specify)
 J. Change studio location

2. Facilities requested

Frequency 66 ——— 72 Mc.	Channel No. 4	
Effective Radiated Power (visual) In dbk: 11.06 In kw: 12.75	Effective Radiated Power (aural) In dbk: 8.382 In kw: 6.88	Antenna height above average terrain 380 feet

3. Station location (principal community)

State Texas	City or town Big Spring
----------------	----------------------------

4. Transmitter location

State Texas	County Howard
City or town Big Spring	Street Address (or other identification) 600 Kentucky Way

5. Main studio location

State Texas	County Howard
City or town Big Spring	Street address 600 Kentucky Way

6. Transmitters

Visual		
Make	Type No.	Rated power
GE	TT-10-A	In dbk: 6.99 In kw: 5.0
Aural		
Make	Type No.	Rated Power
GE	TT-10-A	In dbk: 4.31 In kw: 2.7

If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes.

(a) Describe in Exhibit No. [E-1] means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.

(b) Multiplexer: Make GE Type No. PY 16-B
 Rated input power 16.99 dbk
 Rated loss: Visual .006 db Aural .008 db

7. (a) Antenna structure

Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes No

Will proposed structure be constructed on the top of a building? If "Yes", state height of building (distance from ground to base of proposed structure) in feet. Yes No

Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.) 497'	Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.) 2957'
Height of antenna radiation center in feet above mean sea level. 2937' feet	Geographical coordinates of antenna (to nearest second) North latitude 32° 15' 16" West longitude 101° 26' 44"

How were coordinates determined? From data already on file. No change in site.

Indicate by check mark the zone in which structure is located. 1 2 3

(b) Antenna data

Visual		
Make	Type No.	
GE	TY-60-C	
Number of sections	Rated input power in dbk	Power gain in db
3	16.95	4.62
Aural (if separate)		
Make	Type No.	
- Same as for visual	-	
Number of sections	Rated input power in dbk	Power gain in db

If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as
 Not applicable Exhibit No.

Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes No

Will antenna be altered to provide null fill-in? Yes No

If yes, describe fully in Exhibit No.

Big Spring Television, Inc.

TELEVISION BROADCAST ENGINEERING DATA

8. Transmission line proposed to supply power to the antenna from the transmitter

(a) Visual			(b) Aural (if separate)		
Make Communication Products	Type No. 101-506	Rated input power in dbk 16.8	Make - - Same as for visual - -	Type No.	Rated input power in dbk -
Size (nominal inside transverse dimensions) in inches 3 - 1/8"	Length in feet 510'	Power loss in db for this length .54 db	Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length

9. Proposed operation

(a) Visual				(b) Aural			
Transmitter power output (after vestigial side-band filter, if used) In dbk: 6.99 In kw: 5.0		Multiplexer loss in db: - .006	Input to transmission line in dbk: 6.984	Transmitter power output In dbk: 4.31 In kw: 2.7		Multiplexer loss in db: - .008	Input to transmission line in dbk: 4.302
Transmission line power loss in db: - .54	Antenna input power in dbk: 6.444	Antenna power gain in db: 4.62	Effective radiated power In dbk: 11.06 In kw: 12.75	Transmission line power loss in db: - .54	Antenna input power in dbk: 3.762	Antenna power gain in db: 4.62	Effective radiated power In dbk: 8.382 In kw: 6.88

10. Modulation monitors

(a) Visual monitor or monitoring equipment		
Make GE	Type No. TV-54A / TM-8C	
(b) Aural monitor		
Make GE	Type No. TM-12-A	
11. Frequency monitors		
(a) Visual monitor		
Make GE	Type No. TM-12-A	Accuracy On file
(b) Aural monitor		
Make GE	Type No. TM-12-A	Accuracy On file

14. (a) Attach as Exhibit No. _____ a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:
On file - no change in site.

- Proposed transmitter location—accurately plotted;
- Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
- Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
- At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served.

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. _____ a brief technical description of each. **Data on file.**

On file - no change in site.

(b) Attach as Exhibit No. _____ profile graphs with reasonably large scales for the radials in (a) (5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes No

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A (68 dbu) contour	Predicted distance in miles to the Grade B (47 dbu) contour
0	2615	322	11.06 dbk	13.6 mi.	38.0 mi.
45	2520	417	11.06	15.4	41.3
90	2359	578	11.06	18.0	46.5
135	2581	356	11.06	14.4	38.4
180	2775	162	11.06	9.8	28.5
225	2568	369	11.06	14.8	40.0
270	2472	465	11.06	16.4	43.2
315	2564	373	11.06	14.8	40.0
(*)					
Average	2557				

*Radial over principal community if not included above. Do not include in average.
Antenna height above average terrain **380** feet (must be identical with Paragraph 2)

Big Spring Television, Inc.

Broadcast Application

TELEVISION BROADCAST ENGINEERING DATA

Section V-C, Page 3

16. Attach as Exhibit No. **E-2** map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:

- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
- (b) The studio location and boundaries of the principal community;
- (c) The predicted Grade A and Grade B contours from 12 above;
- (d) The required minimum field strength contour;
- (e) Scale of miles.

17. Attach as Exhibit No. _____ a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown.
Give date photographs were taken.

No change in site - Photos on file.

18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's Rules, be provided over the entire principal community proposed to be served?

Yes No

19. Will the main studio be located within the limits of the principal community proposed to be served.

(No change proposed)

Yes No

20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? (Note: Site already approved by FCC)

Yes No

(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.

Not pertinent - this is an existing CP - site separations already approved.

21. If this is an application for modification of construction permit state briefly as Exhibit No. _____ the present status of construction and indicate when it is expected that construction will be completed.

See applications File Nos. BMPCT-2920, BMPCT-2952, and BAPCT-156. Construction can be completed within 180 days after grant of this application.

I certify that I am the ~~Technical Director, Chief Engineer, or~~ Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

COMMERCIAL RADIO EQUIPMENT COMPANY

By

Edward F. Lorentz

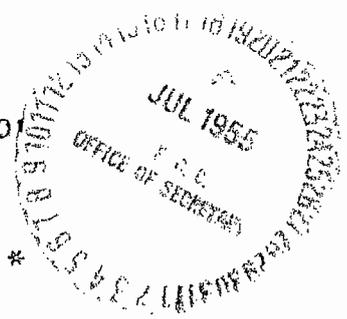
Technical Director, Chief Engineer or Consulting Engineer
Edward F. Lorentz

Date July 15, 1955

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section 7-3 Antenna	
ANTENNA AND SITE INFORMATION <small>(see instruction B Section I)</small>		Name of applicant		Address where applicant can be reached in person			
		Big Spring Television, Inc.		c/o Radio Station KBST Big Spring, Texas			
Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstructions to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data must not be incorporated by reference.							
Legal Counsel		Eugene L. Burke		Purpose of application (Check appropriate box)			
Address		Bowen Building, Washington, D. C.		a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/>			
Consulting Engineer		Commercial Radio Equipment Company		2. Features of surrounding terrain			
Address		International Bldg., Washington, D. C.		List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.			
Class of station		Facilities requested		None			
Commercial TV		Ch. 4, ERP 12.75 KW @ 380'					
1. Location of antenna							
State		County		City or Town			
Texas		Howard		Big Spring			
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town)							
600 Kentucky Way							
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location.							
North latitude		West longitude					
32° 15' 16"		101° 26' 44"					
3. Designation, distance, and bearing to center line of nearest established airway within 5 miles							
Green 5, 1.25 miles, South							
4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.							
		<u>Landing Area</u>		<u>Distance</u>		<u>Direction</u>	
(a)		Webb AFB		4.25 miles		247° True	
(b)		Hamilton		1.5 miles		308° True	
(c)							
5. Description of antenna system (If directional, give spacing and orientation of towers).							
Single 457' guyed steel tower supporting TV antenna.							
Type GE Type TY-60-C TV Transmitting antenna							
Description of tower(s)							
Self-supporting		Guyed		Tubular (pole)			
no		yes		no			
Tower (height figures should not include obstruction lighting)		#1	#2	#3	#4	#5	#6
Height of radiating elements		40'					
Overall height above ground		497'					
Overall height above mean sea level		2957'					
If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. _____ a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. Not applicable							
Submit as Exhibit No. E-1 a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting.							
Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)?							
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission?				Date July 15, 1955			
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				By Edward P. Lorentz			
If the answer is "Yes", give				COMMERCIAL RADIO EQUIPMENT CO.			
Call letters		File number		Edward P. Lorentz			

EXHIBIT NO. E-1

Application for
Modification of Construction Permit
New Commercial TV Broadcasting Station
Channel 4, ERP 12.75 KW (11.06 dbk) at 380
Big Spring, Texas
Big Spring Television, Inc.



ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by Big Spring Television, Inc., permittee of TV Station KBST-TV, to prepare the necessary engineering data to accompany their application for modification of construction permit to change effective radiated power, type transmitter, increase antenna height, and other equipment changes. This report contains Sections V-C and V-G of FCC Form 301 and the data and exhibits required by these sections.

The applicant, by this application for modification of the KBST-TV construction permit, requests a change from a 2 KW transmitter to a 5 KW transmitter, and an increase of 57 feet in overall antenna height above ground. The result of these changes will be an operation on Channel 4 with an Effective Radiated Power of 12.75 kilowatts at an antenna height of 380 feet above average terrain.

Exhibit No. E-2 of this report shows the limits of Grade A, Grade B, and the required minimum field strength contour (74 dbu) coverage which will be provided by the herein proposed operation of KBST-TV. This exhibit very clearly shows that the entire city of Big Spring will be well within the proposed 74 dbu contour. The distances to the contours were determined in accordance with the provisions of Subpart E of Part 3 of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.

Exhibits Nos. E-3 and E-4 of this report are complete with all information required by Section V-G. It is understood that an overall height of 500 feet above ground has been approved by the GAA for this location. This structure will be constructed so as not to exceed 500 feet above ground including the beacon which will be mounted on top of the TV antenna. Exact dimensions will be included in the license application.



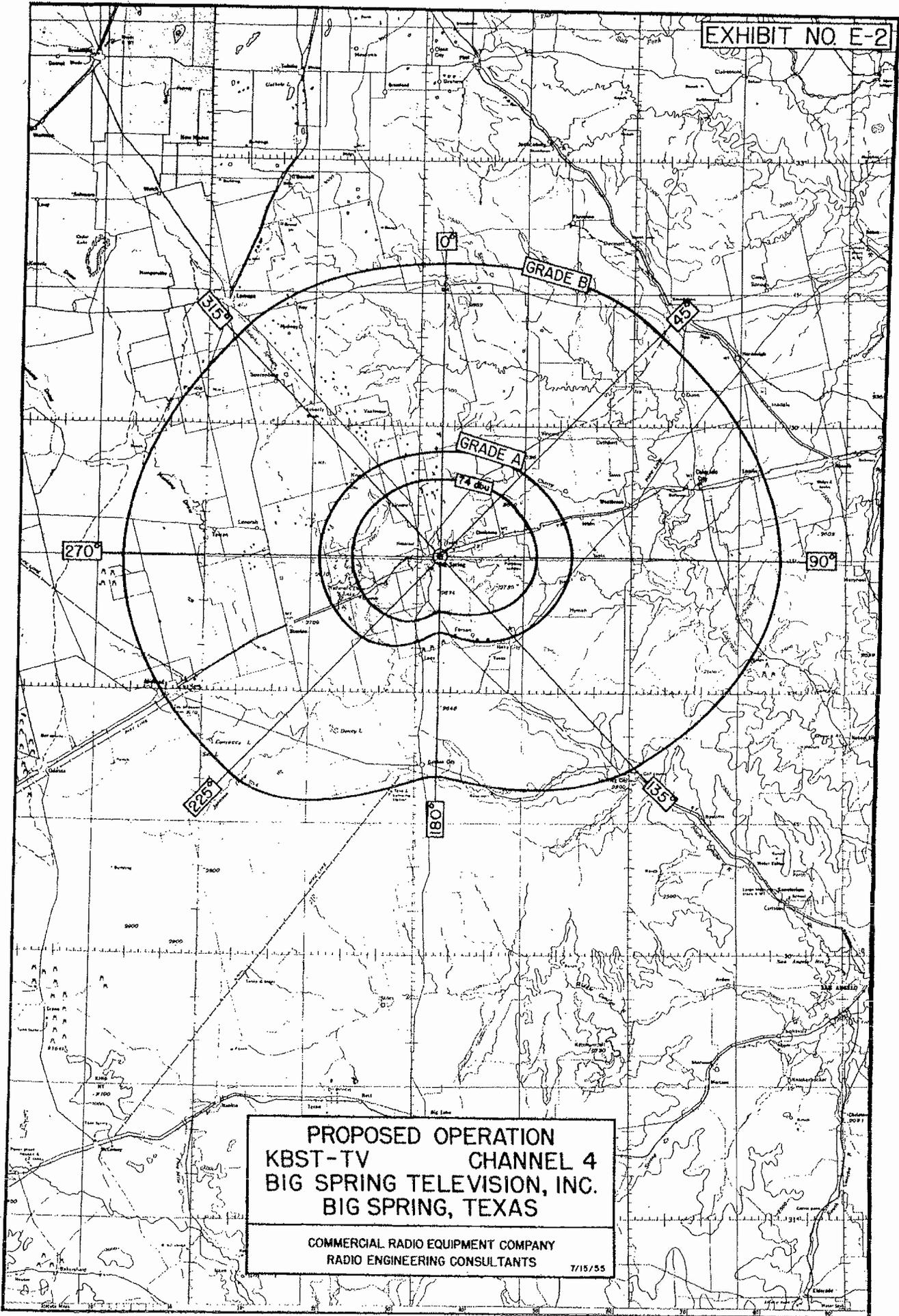
The output of the television transmitters will be determined and maintained by the use of a dummy load and RF Wattmeter. Complete data with regard to the variation of the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

COMMERCIAL RADIO EQUIPMENT COMPANY

By *Edward F. Lorentz*
Edward F. Lorentz

This report dated:
July 15, 1955





PROPOSED OPERATION
KBST-TV CHANNEL 4
BIG SPRING TELEVISION, INC.
BIG SPRING, TEXAS

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS
7/15/55

**INSTRUMENT APPROACH
CHART-RNG**

MINIMUM SAFE ALTITUDES
100 Nautical Miles 5000
25 Nautical Miles 3900

WEBB A.F.B.
BIG SPRING, TEXAS

EXHIBIT NO. E-3

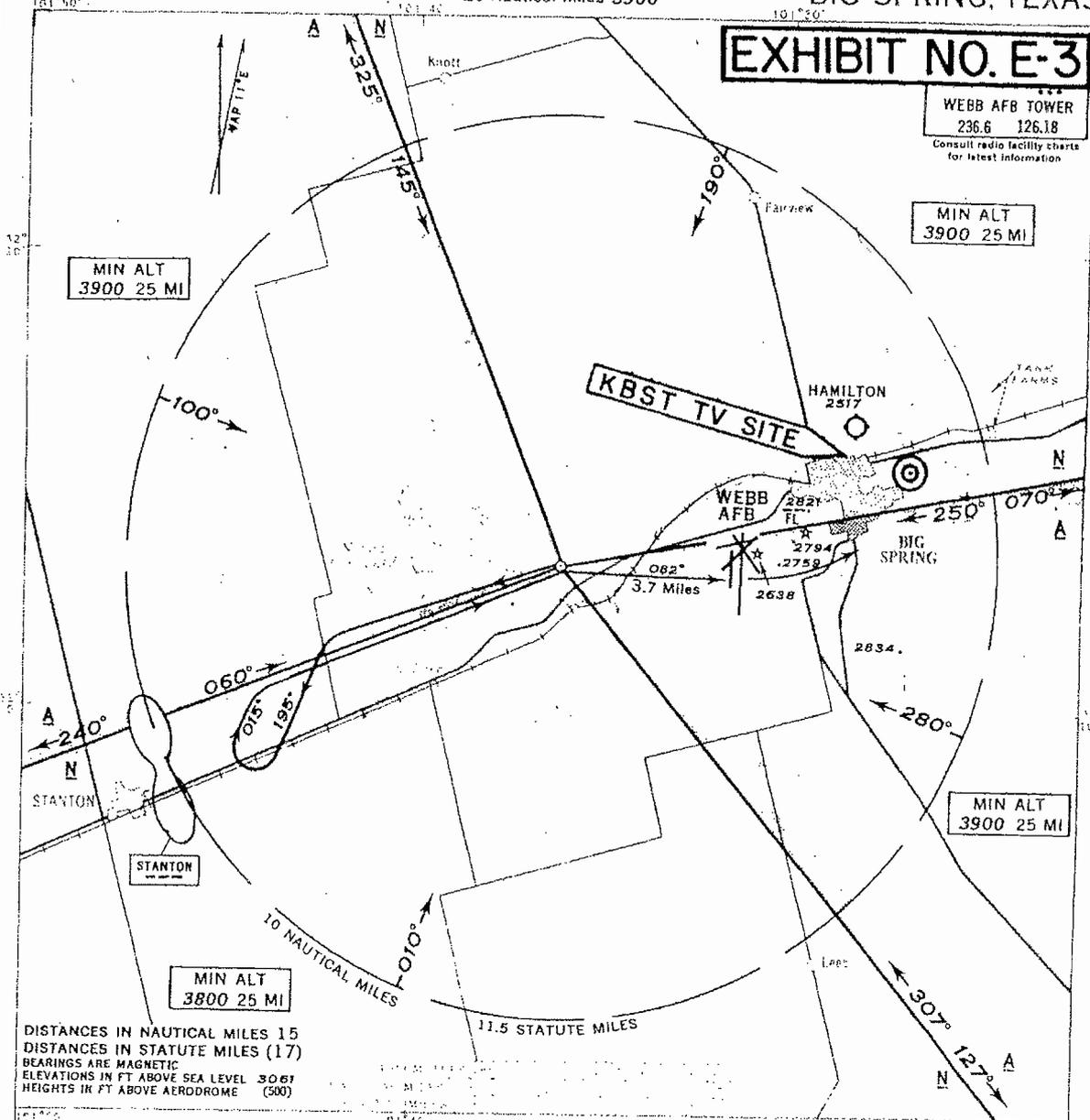
WEBB AFB TOWER
236.6 126.18
Consult radio facility charts
for latest information

MIN ALT
3900 25 MI

MIN ALT
3900 25 MI

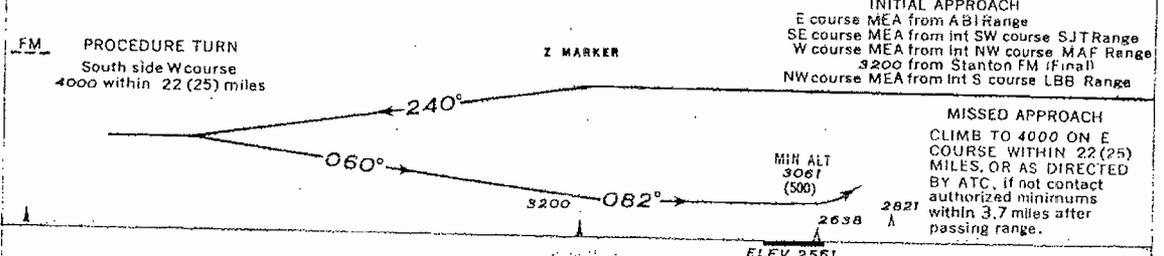
MIN ALT
3900 25 MI

MIN ALT
3800 25 MI



DISTANCES IN NAUTICAL MILES 15
DISTANCES IN STATUTE MILES (17)
BEARINGS ARE MAGNETIC
ELEVATIONS IN FT ABOVE SEA LEVEL 3067
HEIGHTS IN FT ABOVE AERODROME (500)

STANDARD INSTRUMENT APPROACH PROCEDURE



ESTABLISHED BY
EFFECTIVE DATE
LANDING DAY
PRICE FIVE CENTS

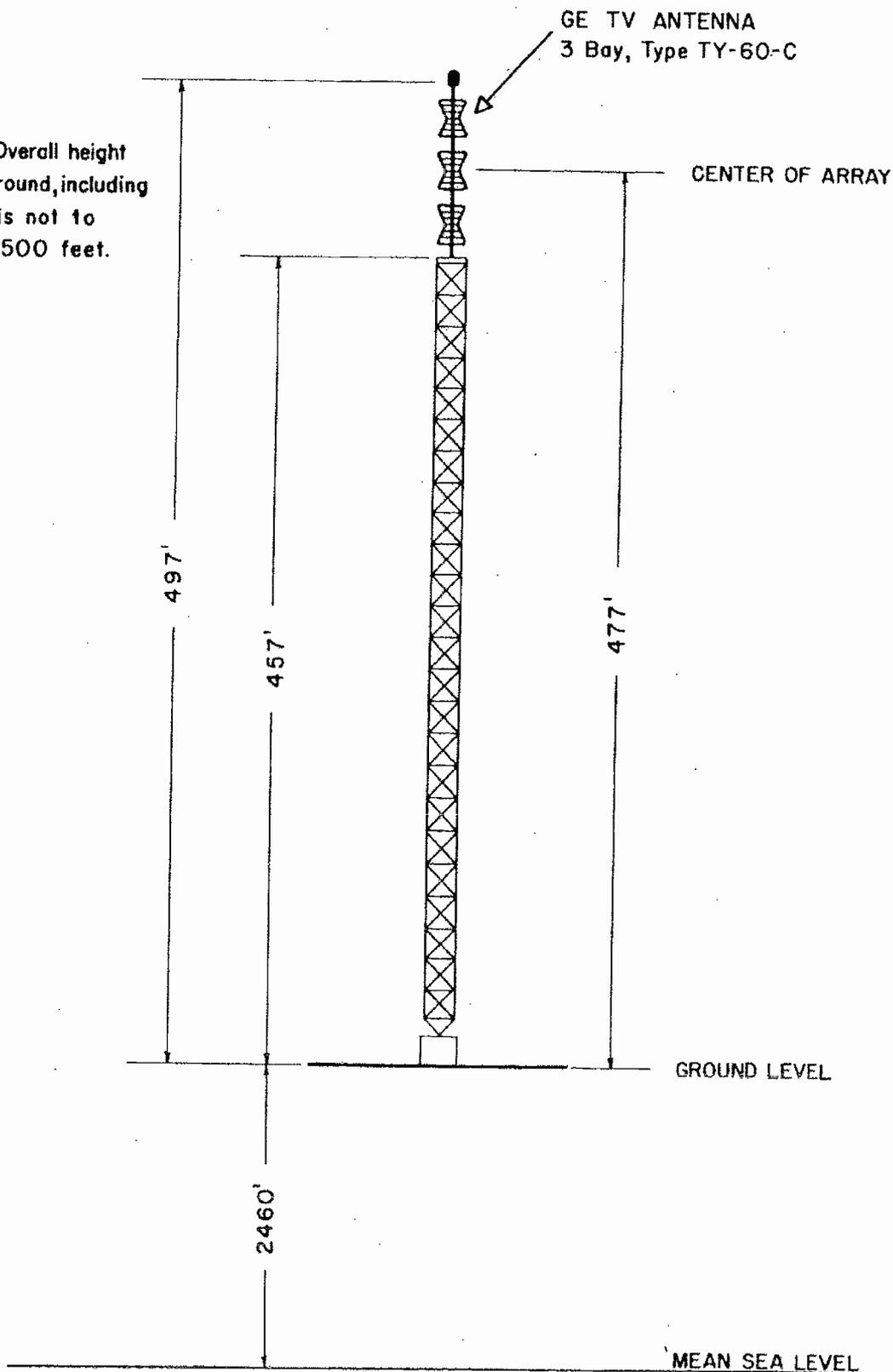
APPROVED FOR PUBLICATION BY THE SECRETARY OF COMMERCE
DATE OF PUBLICATION
02:35 02:09 01:51 01:37 02:28 02:13 02:01 01:51 01:42
26 SEPT. 1952 AL-47-RNG



COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants
WASHINGTON, D. C. 7/15/55 KANSAS CITY

PROPOSED ANTENNA
KBST-TV
BIG SPRING TELEVISION INC.
BIG SPRING, TEXAS

NOTE: Overall height above ground, including beacon, is not to exceed 500 feet.



COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants

WASHINGTON, D. C. 7/15/55 KANSAS CITY

PROPOSED ANTENNA
 KBST-TV
 BIG SPRING TELEVISION INC.
 BIG SPRING, TEXAS

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

TV ENGINEERING APPENDIX IV

Application for
Modification of Construction Permit
KBST-TV
Channel 4, ERP 5.14 KW at 323 Feet
Big Spring, Texas

Big Spring Broadcasting Co.
February 1955

RACY

CONTENTS OF REPORT

Exhibit No. E-1	Section V-G of FCC Form 301
Exhibit No. E-2	Statement in lieu of Section V-G of FCC Form 301
	Engineering Statement
	Portion of a Sectional Aeronautical Chart showing proposed 74 dbu, Grade A and Grade B contours



NOT MET.

5/11/52
BMPET 2952

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C	
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Big Spring Broadcasting Co.			
<p>1. Purpose of authorization applied for: (Indicate by check mark)</p> <p>(If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).)</p> <p>A. <input type="checkbox"/> Construct a new station</p> <p>B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Change antenna system</p> <p>F. <input type="checkbox"/> Construct or change auxiliary antenna system</p> <p>G. <input checked="" type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter modification of CP</p> <p>I. <input type="checkbox"/> Other changes (specify) (BPCT-1749, as amended and granted)</p> <p>J. <input type="checkbox"/> Change studio location</p>					
2. Facilities requested			7. (a) Antenna structure		
Frequency 66 ——— 72 Mc.		Channel No. 4		Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Effective Radiated Power (visual) In dbk: 7.11 In kw: 5.14	Effective Radiated Power (aural) In dbk: 4.10 In kw: 2.57	Antenna height above average terrain 323 feet	Will proposed structure be constructed on the top of a building? If "Yes", state height of building (distance from ground to base of proposed structure) in feet. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
3. Station location (principal community)			Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.)		Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.)
State Texas	City or town Big Spring		440 (No Change)		2900 (No Change)
4. Transmitter location			Height of antenna radiation center in feet above mean sea level. 2880 feet		
State Texas	County Howard		Geographical coordinates of antenna (to nearest second) North latitude 32 15 16 West longitude 101 26 44		
City or town Big Spring	Street Address (or other identification) 600 Kentucky Way		How were coordinates determined? From data already on file. No change in site.		
5. Main studio location			Indicate by check mark the zone in which structure is located. 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>		
State Texas	County Howard		(b) Antenna data No Change		
City or town Big Spring	Street address 600 Kentucky Way		Visual		
6. Transmitters			Make		
Visual	Make RCA	Type No. TT-2AL	Rated power. In dbk: 3.01 In kw: 2.0	Type No. TF-3D	
Aural	Make RCA	Type No. TT-2AL	Rated Power In dbk: 0.0 In kw: 1.0	Number of sections 3	Rated input power in dbk 13.39
If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes. On file			Power gain in db 4.62	Aural (if separate)	
			Make Same as used	Type No.	
			Number of sections for visual	Rated input power in dbk	Power gain in db
(a) Describe in Exhibit No. E-1 means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.			If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as Exhibit No. Not pertinent		
(b) Multiplexer: Make RCA Type No. MI-19390			Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Rated input power 10 dbk			Will antenna be altered to provide null fill-in? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Rated loss: Visual .004 db Aural .004 db			If yes, describe fully in Exhibit No.		

Big Spring Broadcasting Company

TELEVISION BROADCAST ENGINEERING DATA

8. Transmission line proposed to supply power to the antenna from the transmitter

(a) Visual			(b) Aural (if separate)		
Make	Type No.	Rated input power in dbk	Make	Type No.	Rated input power in dbk
RCA	MI-19113-1	17.16	Same as used		
Size (nominal inside transverse dimensions) in inches	Length in feet	Power loss in db for this length	Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length
3-1/8"	450'	.516	for visual		

9. Proposed operation

(a) Visual			(b) Aural				
Transmitter power output (after vestigial side-band filter, if used) In dbk: In kw:	Multiplexer loss in db:	Input to transmission line in dbk:	Transmitter power output In dbk: In kw:	Multiplexer loss in db:	Input to transmission line in dbk:		
In dbk: 3.01 In kw: 2.0	.004	3.006	In dbk: 0.0 In kw: 1.0	.004	-.004		
Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power In dbk: In kw:	Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power In dbk: In kw:
.516	2.49	4.62	In dbk: 7.11 In kw: 5.14	.516	-.52	4.62	In dbk: 4.10 In kw: 2.57

10. Modulation monitors

(a) Visual monitor or monitoring equipment		Type No.
Make	- - No Change - -	
(b) Aural monitor		Type No.
Make	- - No Change - -	

11. Frequency monitors

(a) Visual monitor		
Make	- - No Change - -	Accuracy
(b) Aural monitor		
Make	- - No Change - -	Accuracy

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each.

No change

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes No

14. (a) Attach as Exhibit No. a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:
On file - See BPCT-1749

- Proposed transmitter location—accurately plotted;
- Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
- Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
- At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served. On file - No change in site proposed.

On file - no site change

(b) Attach as Exhibit No. profile graphs with reasonably large scales for the radials in (a) (5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A (66 contour)	Predicted distance in miles to the Grade B (47 contour)
0	2615	265	7.11 dbk	9.8 mi. (dbu)	28.5 mi. (dbu)
45	2520	360	7.11	11.8	33.0
90	2359	521	7.11	13.7	38.2
135	2581	299	7.11	10.4	30.6
180	2775	105	7.11	6.2	20.1
225	2568	312	7.11	10.8	31.6
270	2472	408	7.11	12.4	35.1
315	2564	316	7.11	10.8	31.7
(*)					
Average	2557				

*Radial over principal community if not included above. Do not include in average.

Antenna height above average terrain 323 feet (must be identical with Paragraph 2)

Big Spring broadcasting Company

16. Attach as Exhibit No. E-2 map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:

- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
- (b) The studio location and boundaries of the principal community; No change in site or studio
- (c) The predicted Grade A and Grade B contours from 12 loc above;
- (d) The required minimum field strength contour;
- (e) Scale of miles.

17. Attach as Exhibit No. _____ a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.

No change in site - Photos on file

18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's Rules, be provided over the entire principal community proposed to be served? Yes No

19. Will the main studio be located within the limits of the principal community proposed to be served. (No change proposed) Yes No

20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? (NOTE: Site already approved by FCC) Yes No

(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.

Not pertinent - this is an existing CP - site separations already approved.

21. If this is an application for modification of construction permit state briefly as Exhibit No. _____ the present status of construction and indicate when it is expected that construction will be completed.

Following steps toward construction have been accomplished:

- 1) Zoning clearance for tower erection and land use for studio-transmitter has been obtained from the City Commission.
- 2) Land lease deal has been signed and paid for.
- 3) Final architects' building plans have been submitted.
- 4) CBS Secondary Market plan contract has been signed.
- 5) Tower bids from all major tower companies have been received and final award is about to be made.

It is expected that construction will be completed within 180 days after the grant of this application.

I certify that I am the ~~Technical Director, Chief Engineer, or~~ Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

By Everett L. Dillard
 Technical Director, Chief Engineer, or Consulting Engineer
 COMMERCIAL RADIO EQUIPMENT CO.

Date February 23, 1955

STATEMENT IN LIEU OF
SECTION V-G OF FCC FORM 301

The applicant proposes no changes in either the height or location of the antenna system by this application from that already authorized in Construction Permit, File No. BPOT-1749.

Section V-G of FCC Form 301 is therefore not believed applicable to this application and none is submitted herewith.

February 23, 1955



EXHIBIT NO. E-1

Application for
Modification of Construction Permit
KBST-TV Big Spring, Texas
Channel 4, - ERP 5.14 KW @ 323 Feet

ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by the Big Spring Broadcasting Company, permittee of TV Station KBST-TV, to prepare the necessary engineering data to accompany their application for modification of construction permit to change type transmitter and increase the effective radiated power. This report contains Section V-C of FCC Form 301 and the data and exhibits required thereby. A statement is submitted in lieu of Section V-D of FCC Form 301.

The applicant, by this application for modification of the KBST-TV Construction Permit, requests a change from a 500 watt transmitter to a 2 KW transmitter which will result in operation on Channel 4 with an Effective Radiated Power of 5.14 kilowatts at an antenna height of 323 feet above average terrain.

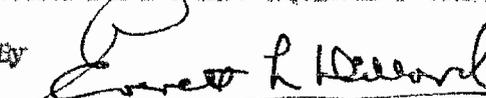
Since no change is proposed in antenna height or in its location, certain of the information requested by Section V-C of FCC Form 301 is already on file with the Commission. In such cases, the pertinent item in Section V-C is answered "No Change" or "On File". This indicates that reference should be made to the engineering data included with application File No. BPCF-1749, as amended for the information or exhibit requested.

Exhibit No. E-2 of this report shows the limits of Grade A and Grade B coverage which will be provided by KBST-TV, operating as proposed. The entire city of Big Spring will be well within the proposed 74 dbu contour, which is also shown. The distances to the contours were determined in accordance with the provisions of Subpart 3 of Part 3 of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.

The output of the television transmitters will be determined and maintained by the use of a dummy load and RF Wattmeter. Complete data with regard to the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

COMMERCIAL RADIO EQUIPMENT COMPANY

By

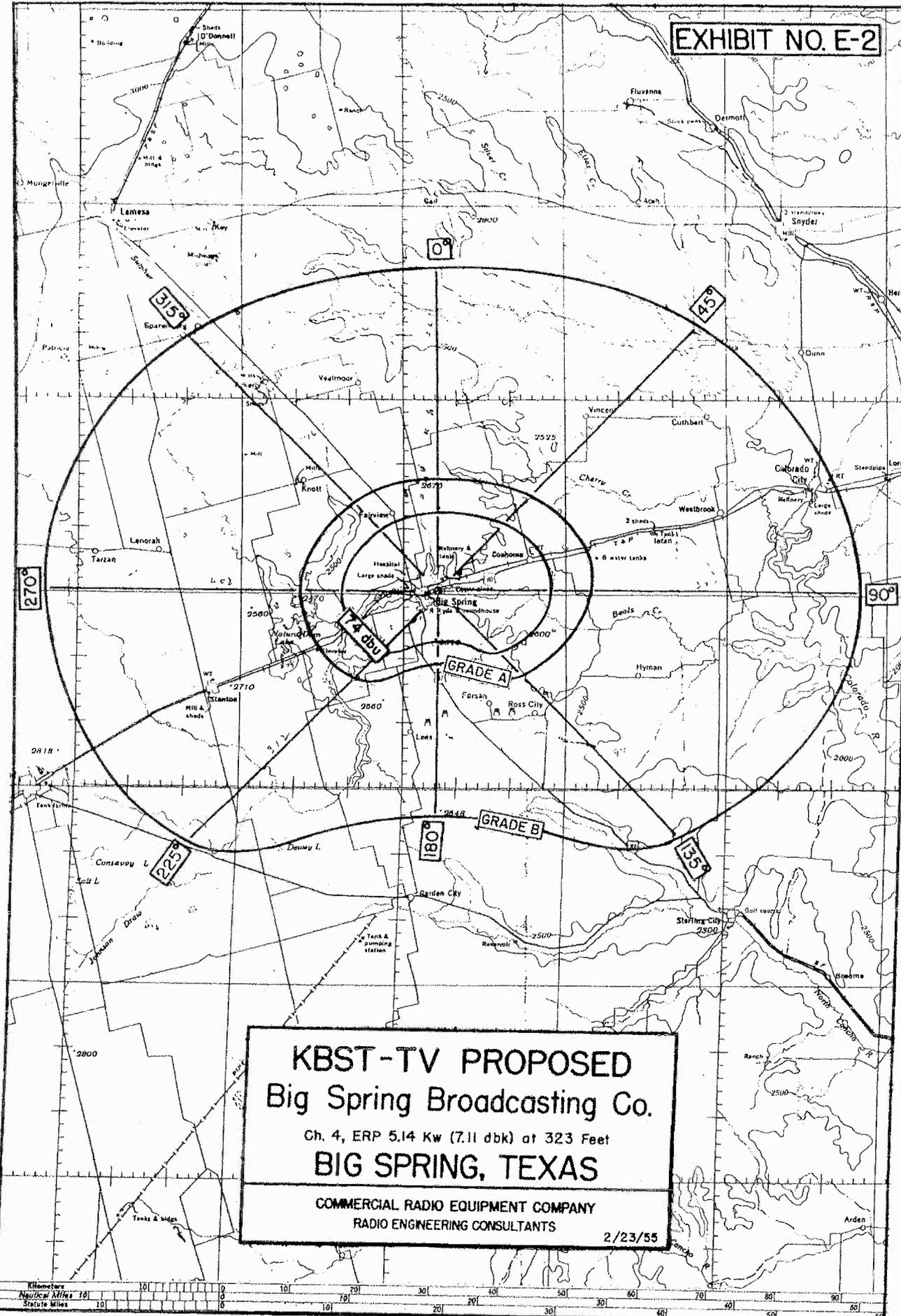

Everett L. Dillard

This report dated:
February 23, 1955

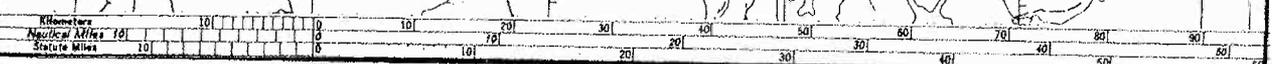
KANSAS CITY, MO.

WASHINGTON, D. C.





KBST-TV PROPOSED
Big Spring Broadcasting Co.
 Ch. 4, ERP 5.14 Kw (7.11 dbk) at 323 Feet
BIG SPRING, TEXAS
 COMMERCIAL RADIO EQUIPMENT COMPANY
 RADIO ENGINEERING CONSULTANTS
 2/23/55



FRANK ROBERSON
FRANK U. FLETCHER
JOHN C. SPEARMAN
RUSSELL ROWELL
COUNSEL
PAUL D. P. SPEARMAN

SPEARMAN AND ROBERSON

ATTORNEYS AT LAW
MUNSEY BUILDING
WASHINGTON 4, D.C.

TELEPHONE
METROPOLITAN 8-0023

March 7, 1956

Miss Mary Jane Morris, Secretary
Federal Communications Commission
Washington 25, D.C.

Re: KSHD-TV 212026
File No. BHPGT-3747

Dear Miss Morris:

Pending your receipt of a notarized request by the applicant, it is respectfully requested that a ten-day special temporary authorization be granted to Moritz M. Zenoff, permittee of KSHD-TV, to begin regular commercial operation utilizing an Adler transmitter Type No. VST-150A, antenna by Prodalin, Type No. ETV-4, giving an effective radiated power in kilowatts of visual 0.430 and aural 0.215, with an average antenna height above average terrain of 199.6 feet. This antenna is to be located at the Fremont Hotel at Second and Fremont Streets, Las Vegas, Nevada.

These facilities are those requested in BHPGT-3747, as amended, and action on that application should precede or be concurrent with your action on this request.

If any questions arise during the course of your consideration of this matter, please communicate with this office.

Very truly yours,

SPEARMAN AND ROBERSON

By *Frank U. Fletcher*
Frank U. Fletcher
Counsel for
MORITZ M. ZENOFF

FUF/mbd

cc: Moritz M. Zenoff

trup. Engr. Cody

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington 25, D.C.

MAR 1956

In re Application of
MORITZ ZENOFF (KSHD-TV)
Las Vegas, Nevada
For Modification of Construction Permit

File No. EPCOT-3747

Amended

AMENDMENT

Please amend the above-styled application in accordance with the details set forth in affidavit of Grant Wrathall, consulting engineer, attached hereto and made a part hereof.

Dated this second day of March, 1956.

BROADCAST FACILITIES
COMMISSION 1741
MAR 8 1956
BROADCAST BUREAU

/s/ Moritz Zenoff
Moritz Zenoff
Applicant

Subscribed and sworn to before me this 5th day of March,
1956.

/s/ Lillian D. Lane
Notary Public

My Commission Expires July 30, 1958

(SEAL)

3-10-62
Engine Copy 832

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C														
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Big Spring Broadcasting Co.		B P C T - 1749														
<p>1. Purpose of authorization applied for: (Indicate by check mark)</p> <p>(If application is for a new station or for any of the changes numbered B through E, complete all paragraphs of this form; if change F is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 3 and the appropriate other paragraphs; for changes G through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2 and 16)</p> <table style="width: 100%;"> <tr> <td style="width: 50%;"> <p>A. <input checked="" type="checkbox"/> Construct a new station</p> <p>B. <input type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Approval of site and antenna</p> </td> <td style="width: 50%;"> <p>F. <input type="checkbox"/> Change antenna system</p> <p>G. <input type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter</p> <p>I. <input type="checkbox"/> Other changes (specify)</p> <p>J. <input type="checkbox"/> Change studio location</p> </td> </tr> </table>					<p>A. <input checked="" type="checkbox"/> Construct a new station</p> <p>B. <input type="checkbox"/> Change effective radiated power or antenna height above average terrain</p> <p>C. <input type="checkbox"/> Change transmitter location</p> <p>D. <input type="checkbox"/> Change frequency</p> <p>E. <input type="checkbox"/> Approval of site and antenna</p>	<p>F. <input type="checkbox"/> Change antenna system</p> <p>G. <input type="checkbox"/> Change transmitter</p> <p>H. <input type="checkbox"/> Install auxiliary or alternate main transmitter</p> <p>I. <input type="checkbox"/> Other changes (specify)</p> <p>J. <input type="checkbox"/> Change studio location</p>												
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2. Facilities requested		4. Transmitters																
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3. (a) Antenna structure		<p>If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes.</p>																
<p>Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station? If "Yes", attach as Exhibit No. complete engineering data thereon.</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		<p>Will proposed structure be constructed on the top of an existing structure? If "Yes", describe and give height above ground of existing structure.</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>																
<p>Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.) <u>440'</u></p>		<p>Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.) <u>2900'</u></p>																
<p>Height of antenna radiation center in feet above mean sea level. <u>2880'</u></p>		5. Modulation monitors																
(b) Antenna data		(a) Visual monitor or monitoring equipment																
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Number of sections	Power gain in db																	
<p>Is directional antenna proposed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If "Yes", attach as Exhibit No. complete engineering data thereon.</p>		8. Transmission line proposed to supply power to the antenna from the transmitter																
		(a) Visual																
		<table style="width: 100%;"> <tr> <td style="width: 33%;">Make <u>RCA</u></td> <td style="width: 33%;">Type No. <u>MI-19313</u></td> <td style="width: 34%;">Description <u>Teflon Insulated Coax</u></td> </tr> </table>			Make <u>RCA</u>	Type No. <u>MI-19313</u>	Description <u>Teflon Insulated Coax</u>											
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Broadcast Application		TELEVISION BROADCAST ENGINEERING DATA		Section V-C, Page 3	
15. Proposed location of transmitter					
State	County	Geographical coordinates (to be determined to nearest second) of the proposed TV antenna structure.			
Texas	Howard				
City or town	Street address	North latitude	West longitude		
Big Spring	600 Kentucky Way	32 ° 15 ' 16 "	101 ° 26 ' 44 "		
How were coordinates determined? Scaled from USGS Topographic Map					
16. Proposed location of main studio					
State	County	Other studios proposed			
Texas	Howard				
City or town	Street address, if known.	None			
Big Spring	Same as Transmitter				
17. State the minimum value of field strength in dbu, predicted in accordance with the method prescribed in the Commission's Rules, that will be provided over the entire city in which the main studio is located.					
83 dbu					
18. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules?					
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and assignments; the location and geographical coordinates of each antenna; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.					
None					
<p>I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)</p> <p style="text-align: center;">COMMERCIAL RADIO EQUIPMENT COMPANY</p> <p style="text-align: center;">By <u>Edward F. Lovertz</u></p> <p style="text-align: center;">Edward F. LOVERTZ <small>Technical Director, Chief Engineer or Consulting Engineer</small></p> <p>Date <u>July 30, 1953</u></p>					

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section V-G (Antenna)													
ANTENNA AND SITE INFORMATION (see instruction B Section I)		Name of applicant Big Spring Broadcasting Co.				15-11-53													
		Address where applicant can be reached in person c/o Radio Station KBST Big Spring, Texas																	
Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstructions to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data must not be incorporated by reference.																			
Legal Counsel Eugene L. Burke		Purpose of application (Check appropriate box)																	
Address Bowen Building, Washington, D. C.		a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/>																	
Consulting Engineer Commercial Radio Equipment Company		2. Features of surrounding terrain																	
Address International Bldg., Washington, D. C.		List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.																	
Class of station Commercial TV		Facilities requested Ch. 4, ERP 1.26 KW @328'				None													
1. Location of antenna																			
State Texas		County Howard		City or Town Big Spring															
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town)																			
600 Kentucky Way																			
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location.																			
North latitude 32 ° 15 ' 16 "				West longitude 101 ° 26 ' 44 "															
3. Designation, distance, and bearing to center line of nearest established airway within 5 miles																			
Green 5, 1.25 miles, South																			
4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.																			
<table border="1"> <thead> <tr> <th>Landing Area</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>(a) Webb AFB</td> <td>4.25 miles</td> <td>247° True</td> </tr> <tr> <td>(b) Hamilton</td> <td>1.5 miles</td> <td>308° True</td> </tr> <tr> <td>(c)</td> <td></td> <td></td> </tr> </tbody> </table>								Landing Area	Distance	Direction	(a) Webb AFB	4.25 miles	247° True	(b) Hamilton	1.5 miles	308° True	(c)		
Landing Area	Distance	Direction																	
(a) Webb AFB	4.25 miles	247° True																	
(b) Hamilton	1.5 miles	308° True																	
(c)																			
5. Description of antenna system (If directional, give spacing and orientation of towers).																			
Single 400' guyed steel tower supporting TV antenna																			
Type RCA Type TF-3D																			
Description of tower(s)																			
Self-supporting No		Guyed Yes		Tubular (Pole) No															
Tower (height figures should not include obstruction lighting)		#1	#2	#3	#4	#5	#6												
Height of radiating elements		40'																	
Overall height above ground		440'																	
Overall height above mean sea level		2900'																	
If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. . a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. Not applicable																			
Submit as Exhibit No. E-7 a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting.																			
Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)?																			
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																			
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission?						Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>													
If the answer is "Yes", give						Date July 30, 1953													
Call letters						COMMERCIAL RADIO EQUIPMENT CO. By Edward J. Lavant Edward J. Lavant, President													
File number						Edward J. Lavant													

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

EXHIBIT NO. E-1

Application for
NEW COMMERCIAL TV BROADCAST STATION
Ch. 4, ERP 1.26 kW (1.05 dbk) @ 328'
Big Spring, Texas
Big Spring Broadcasting Co.

ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by Big Spring Broadcasting Co. to prepare the necessary engineering data to accompany its application for a new television broadcast station in Big Spring, Texas. This report contains Sections V-C and V-G of FCC Form 301 and the exhibits and information required by these sections.

Big Spring Broadcasting Co. by this application requests a Construction Permit for operation on VHF Channel 4 (66-72 Mcs) with a Visual Effective Radiated Power of 1.26 kilowatts (1.05 dbk) with an antenna height of 328 feet above average terrain.

The applicant proposes to make the TV transmitting and studio installation at a location within the city limits of Big Spring known as 600 Kentucky Way. The proposed antenna structure will consist of a 400 ft. guyed steel tower supporting the three section RCA Type TF-3D VHF TV antenna and will have an overall height above ground of 440 feet (See Exhibit No. E-3 of this report).

The proposed television operation is in full accord with the Table of Assignments and Television Engineering Standards contained in Part 3 of the Commission's Rules. Channel 4 is assigned to Big Spring, Texas, in the Table of Assignments. Operation as proposed from the specified transmitter location will provide a signal in excess of 74 dbu to all of the city of Big Spring.

The population of Big Spring, Texas, according to final 1950 U. S. Census data, is 17,286 persons.



TOPOGRAPHIC INFORMATION

Topographic maps are not available for all of the area around Big Spring. Those topo maps which are presently available are shown in Exhibit No. E-2 of this report, with the radials along which Profile Graphs have been prepared shown thereon. Beyond the limits of the topo maps as shown, a study of Sectional Aeronautical Charts of the area indicates that the variation in ground elevation is relatively small. Although the contour intervals as shown on Sectional Charts of the area are in 500 foot levels, a study of this information shows that the variation is less than 500 feet in the area with which we are concerned.

The profile graphs shown in Exhibit No. E-3 of this report have been prepared from the available information as explained above. In view of the relatively level terrain in the Big Spring area, those portions of the radials beyond the available topographic maps have been assumed to be flat and are shown as dashed lines on the Profile Graphs (Exhibit No. E-3).

Exhibit No. E-4, attached to this report, shows the limits of Grade A (68 dbu) and Grade B (47 dbu) coverage which will be rendered by the proposed operation as determined in accordance with the provisions of Subpart E of Part 3 (Rules Governing Television Broadcast Stations) of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.

The output of the television transmitters will be determined and maintained by the use of a Dummy Load and RF Wattmeter. Complete data with regard to the variation of the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

All equipment specified herein was selected by the applicant.

COMMERCIAL RADIO EQUIPMENT COMPANY

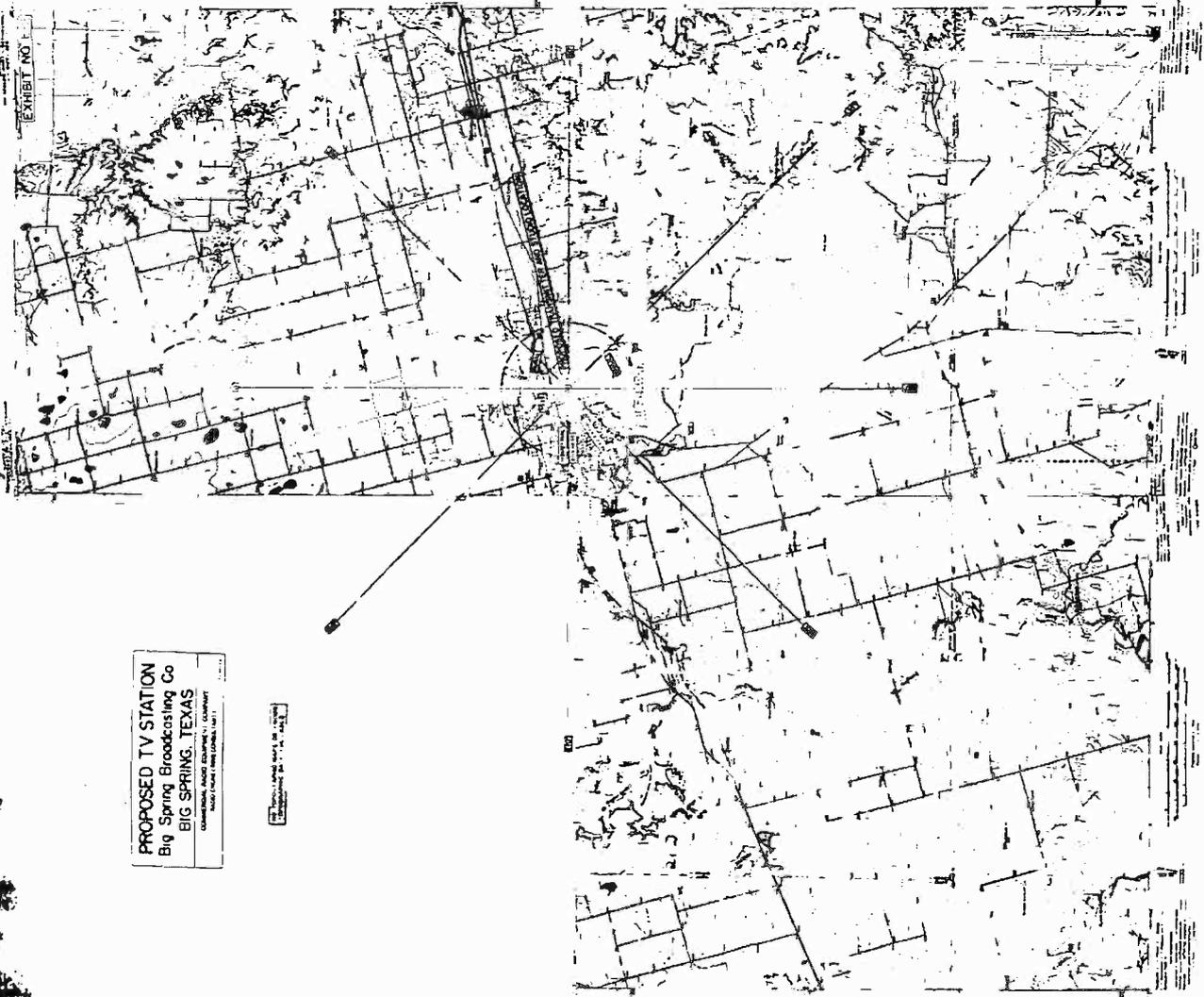
By *Edward F. Lorentz*
Edward F. Lorentz

This report dated:
July 30, 1953



PROPOSED TV STATION
Big Spring Broadcasting Co
BIG SPRING, TEXAS
COMMERCIAL BROADCASTING SERVICE
APPROVED FOR THE LICENSEE

APPROVED FOR THE LICENSEE



PROFILE GRAPHS

DATA TAKEN FROM U.S.G.S.
TOPOGRAPHIC MAPS

EXHIBIT NO. E-3

◀ DENOTES ANTENNA RADIATION CENTER

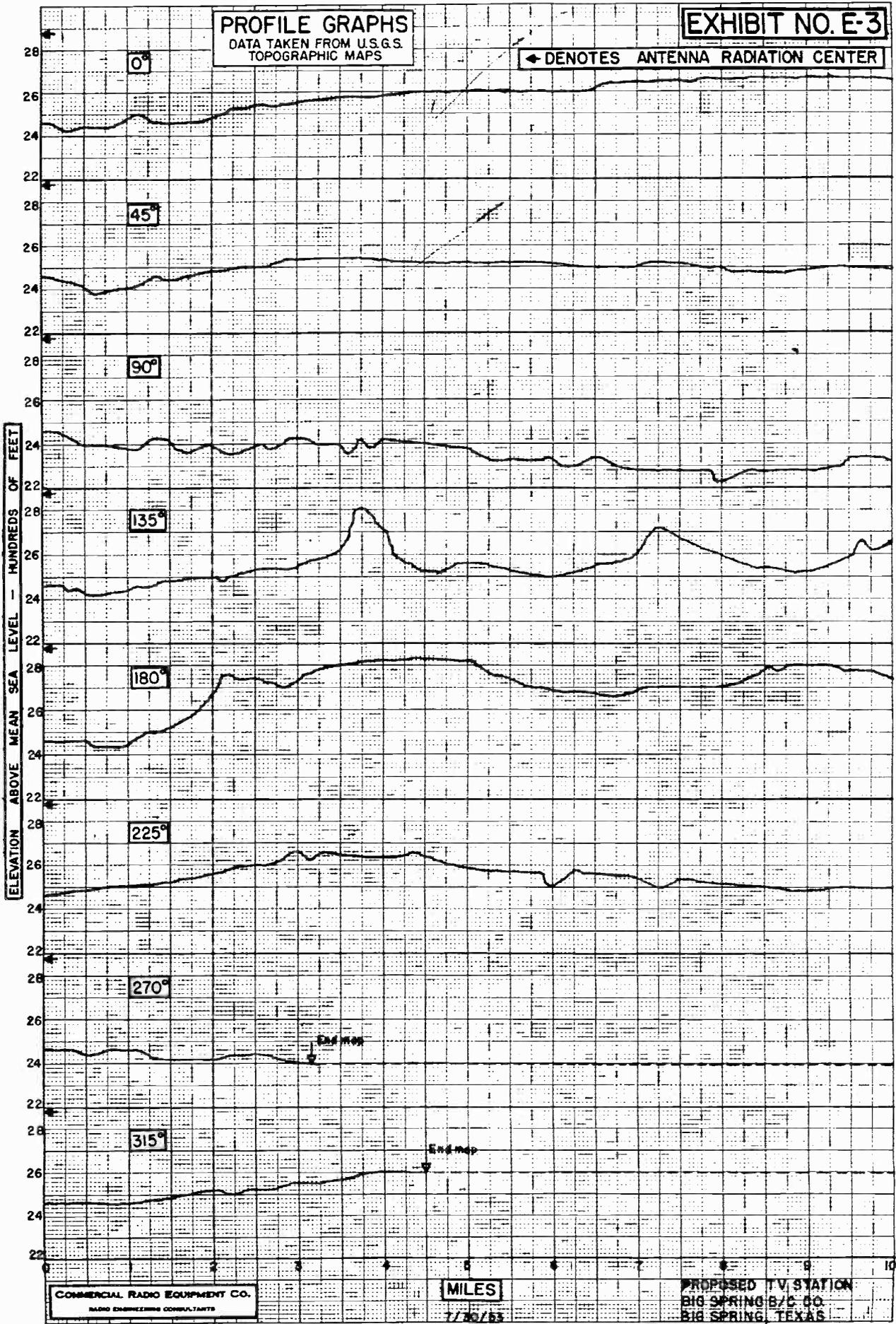
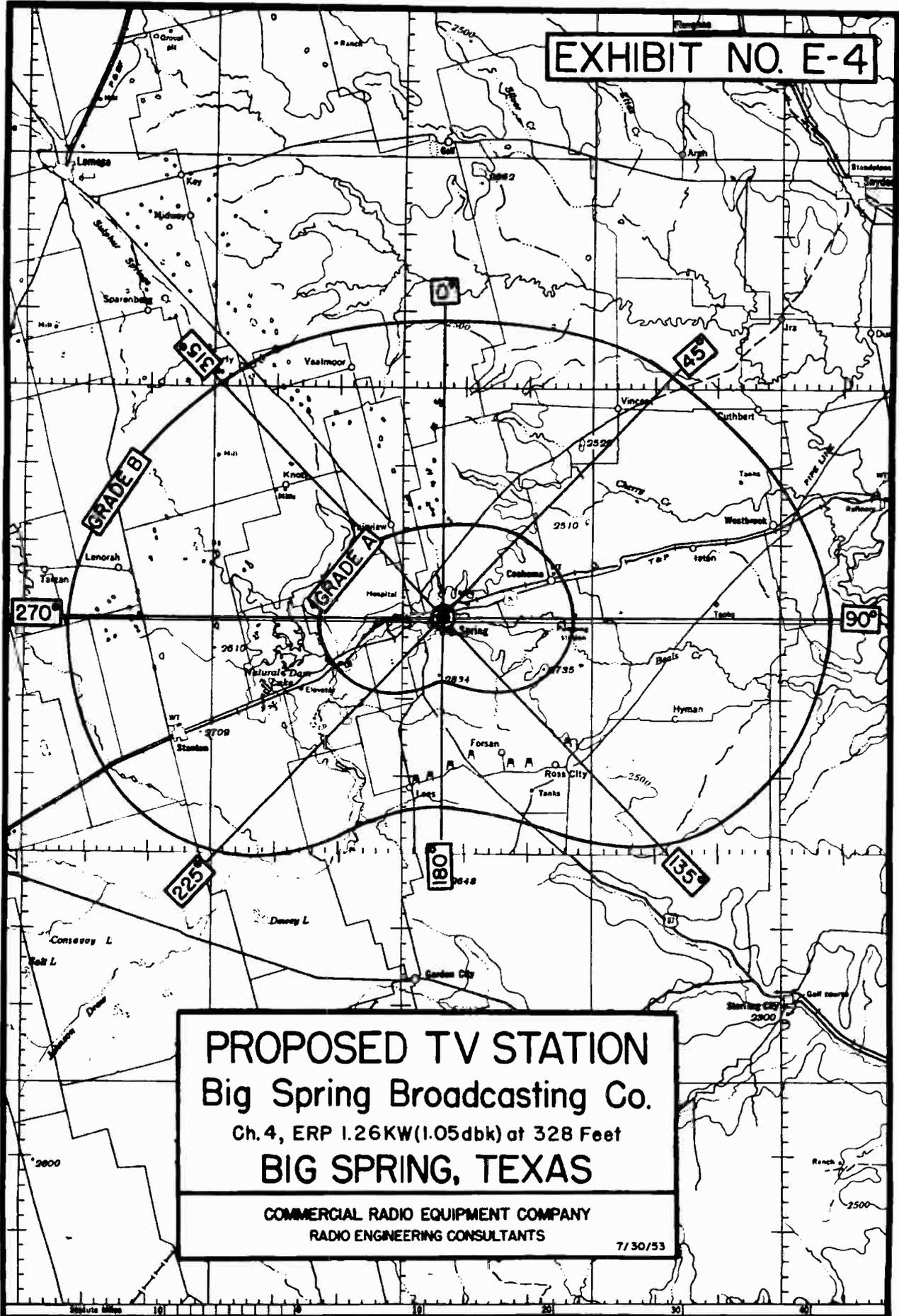


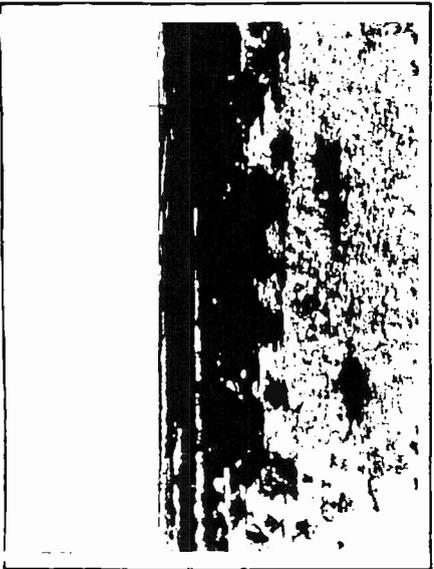
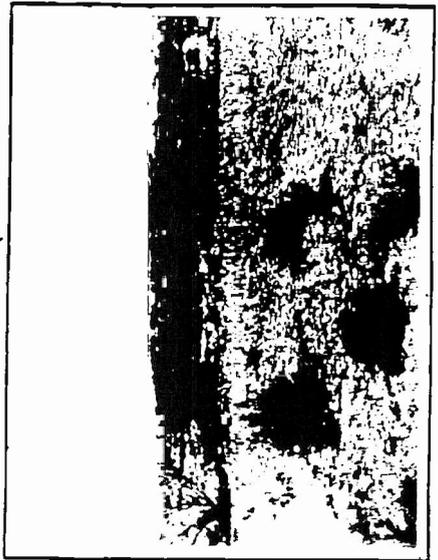
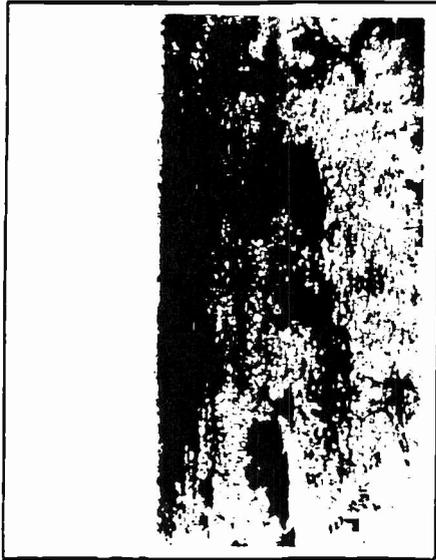
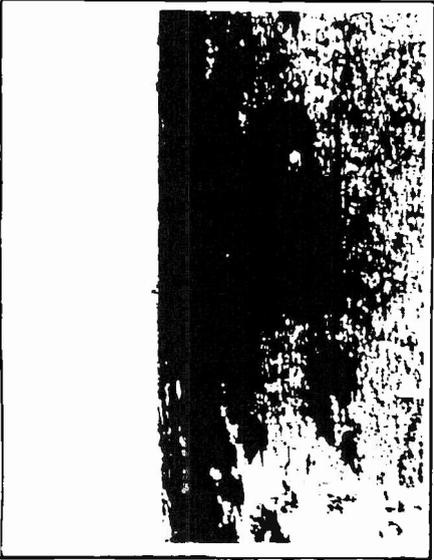
EXHIBIT NO. E-4



PROPOSED TV STATION
Big Spring Broadcasting Co.
Ch. 4, ERP 1.26KW(1.05dbk) at 328 Feet
BIG SPRING, TEXAS

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

7/30/53



← N →
EXHIBIT NO. E-5
PROPOSED TV STATION

 Big Spring Broadcasting Co.
 BIG SPRING, TEXAS
 ← W →

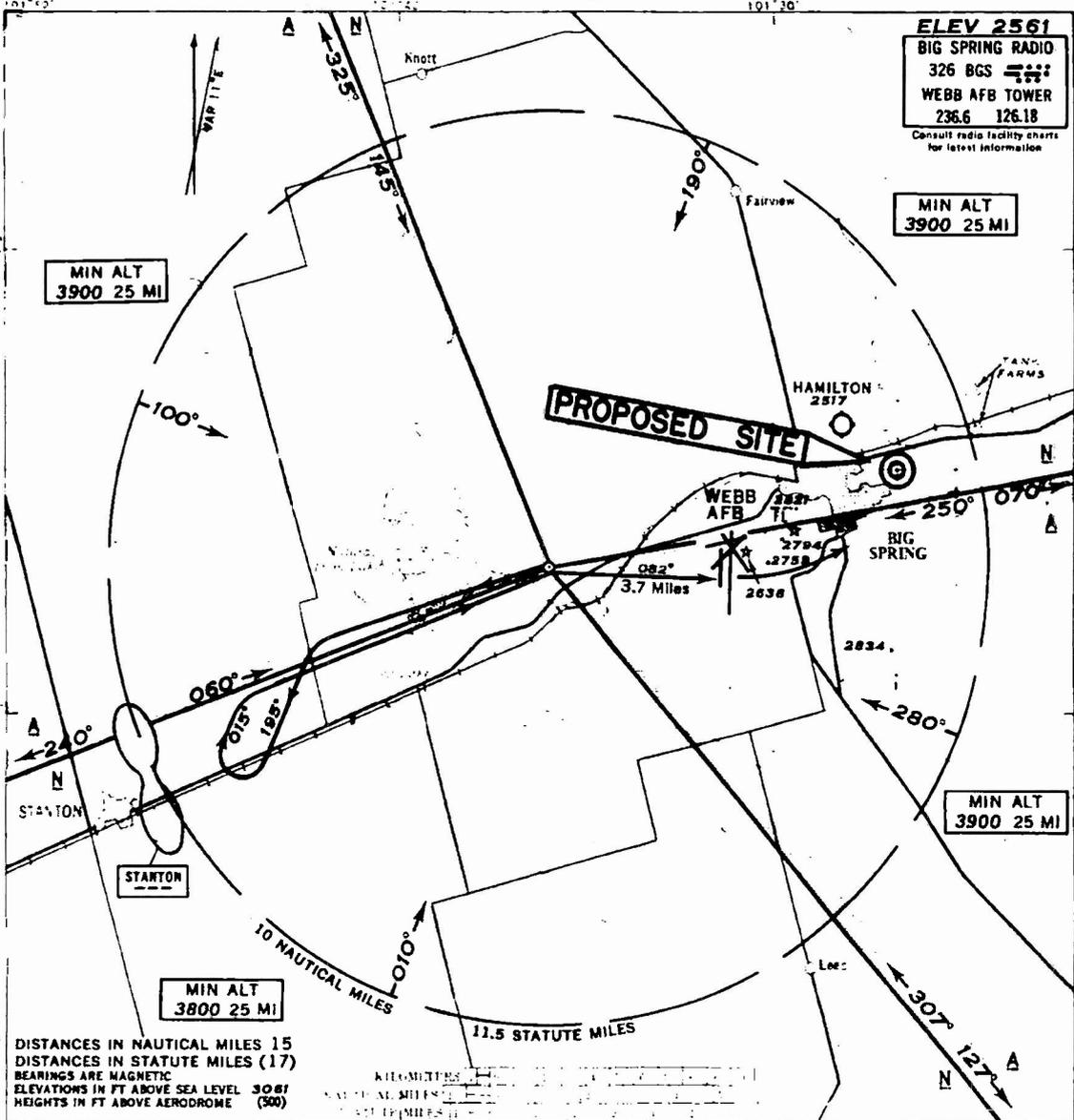
DATE PHOTOGRAPHS WERE TAKEN: _____
 COMMERCIAL RADIO EQUIPMENT COMPANY
 RADIO ENGINEERING CONSULTANTS
 S →



**INSTRUMENT APPROACH
CHART-RNG**

MINIMUM SAFE ALTITUDES
100 Nautical Miles 5000
25 Nautical Miles 3900

**WEBB A.F.B.
BIG SPRING, TEXAS**



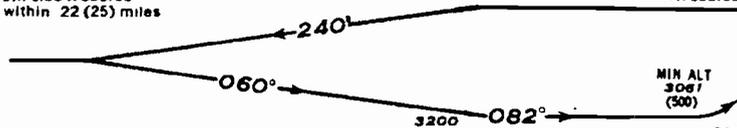
DISTANCES IN NAUTICAL MILES 15
DISTANCES IN STATUTE MILES (17)
BEARINGS ARE MAGNETIC
ELEVATIONS IN FT ABOVE SEA LEVEL 3081
HEIGHTS IN FT ABOVE AERODROME (500)

STANDARD INSTRUMENT APPROACH PROCEDURE

FM PROCEDURE TURN
South side W course
4000 within 22 (25) miles

I MARKER

INITIAL APPROACH
E course MEA from ABI Range
SE course MEA from Int SW course SJT Range
W course MEA from Int NW course MAF Range
3200 from Stanton FM (Final)
NW course MEA from Int S course LBB Range



MISSED APPROACH
CLIMB TO 4000 ON E
COURSE WITHIN 22 (25)
MILES, OR AS DIRECTED
BY ATC, if not contact
authorized minimums
within 3.7 miles after
passing range.

CEILING AND VISIBILITY	MIN. ALT.
TAKE OFF DAY	NIGHT
LANDING DAY	NIGHT
PRICE FIVE CENTS	

TIME IN MINUTES AND SECONDS TO AERODROME DISTANCE 4.3 STAT 3.7 NAUT. MILES									
M.P.H. 100	M.P.H. 140	M.P.H. 160	M.P.H. 180	30 KNOTS	100 KNOTS	110 KNOTS	120 KNOTS	130 KNOTS	
02:35	02:09	01:51	01:37	02:28	02:13	02:01	01:51	01:42	

Compiled and printed to ICAO standards by the U. S. Coast and Geodetic Survey
under authority of the Secretary of Commerce. 26 SEPT. 1952 AL-47-RNG



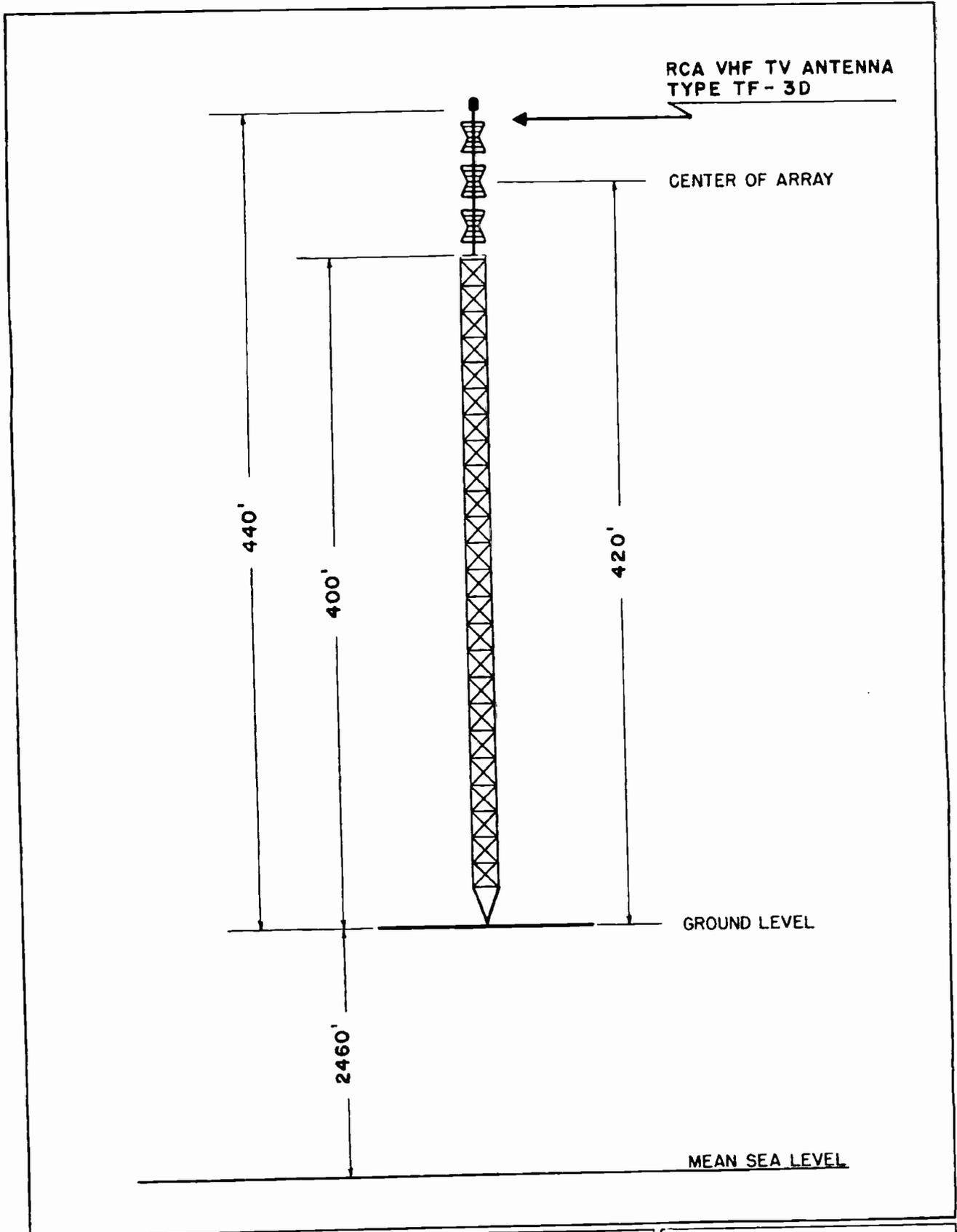
COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants

WASHINGTON, D. C.

KANSAS CITY

7/30/53

EXHIBIT NO. E-6
PROPOSED TV STATION
BIG SPRING B/C CO.
BIG SPRING, TEXAS



COMMERCIAL RADIO EQUIPMENT CO.

Radio Engineering Consultants

WASHINGTON, D. C.

KANSAS CITY

7/30/53

PROPOSED TV STATION

BIG SPRING B/C CO.

BIG SPRING, TEXAS

CONTENTS OF REPORT

	Section V-C of FCC Form 301
	Section V-G of FCC Form 301
Exhibit No. E-1 (Amended)	Engineering Statement
Exhibit No. E-4 (Amended)	Sectional Aeronautical Chart showing Grade A and Grade B Service Contours

Not Ref.

Filed 12/8/53

A-311

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C	
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Big Spring Broadcasting Co.		B-1949	
1. Purpose of authorization applied for: (Indicate by check mark)					
(If application is for a new station or for any of the changes numbered B through E, complete all paragraphs of this form; if change F is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 3 and the appropriate other paragraphs; for changes G through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2 and 16)					
A. <input checked="" type="checkbox"/> Construct a new station		F. <input type="checkbox"/> Change antenna system			
B. <input type="checkbox"/> Change effective radiated power or antenna height above average terrain		G. <input type="checkbox"/> Change transmitter			
C. <input type="checkbox"/> Change transmitter location		H. <input type="checkbox"/> Install auxiliary or alternate main transmitter			
D. <input type="checkbox"/> Change frequency		I. <input type="checkbox"/> Other changes (specify)			
E. <input type="checkbox"/> Approval of site and antenna		J. <input type="checkbox"/> Change studio location			
Amendment to Application for CP (File No. BPUT-1749)					
2. Facilities requested			4. Transmitters		
Frequency		Channel number		(a) Visual	
66 — 72 Mc.		4		Make RCA Type No. TT-500A Rated power In dbk: -3.01 In kw: 0.5	
Effective Radiated Power (visual)		Antenna height above average terrain in feet. (Must agree with height given in Para. 12 of this Section)		(b) Aural	
In dbk: 1.22 In kw: 1.32		328'		Make RCA Type No. TT-500A Rated power In dbk: -5.23 In kw: 0.3	
3. (a) Antenna structure			If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes.		
Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station? If "Yes", attach as Exhibit No. complete engineering data thereon.			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Will proposed structure be constructed on the top of an existing structure? If "Yes", describe and give height above ground of existing structure.			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.)		Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.)		(c) Describe in Exhibit No. E-1 means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.	
440'		2900'		5. Modulation monitors	
Height of antenna radiation center in feet above mean sea level.			2880'		
(b) Antenna data			(a) Visual monitor or monitoring equipment		
Visual			Make RCA Type No. WM-20B / TL-6A		
Make RCA		Type No. TF-3D		(b) Aural monitor	
Number of sections 3 section		Power gain in db 4.62 db		Make GR Type No. 1183-TL	
Aural (if separate)			Accuracy On file		
Make - - Same as for visual - -		Type No. - -		Accuracy On file	
Number of sections		Power gain in db		7. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each. Data on file	
Is directional antenna proposed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		If "Yes", attach as Exhibit No. complete engineering data thereon.		8. Transmission line proposed to supply power to the antenna from the transmitter	
				(a) Visual	
				Make RCA Type No. MI-19313 Description Teflon Insulated Coax	
				Size (nominal inside transverse dimensions) in inches Length in feet Power loss in db for this length	
				3 - 1/8" 450' - 0.346	

*Amended

Big Spring Broadcasting Co.

Broadcast Application		TELEVISION BROADCAST ENGINEERING DATA		Section V-C, Page 2	
8. Transmission line (Continued)				10. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
(b) Aural (if separate)					
Make	Type No.	Description			
-- Same as for visual --				11. (a) Attach as Exhibit No. E-2 a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:	
Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length			
9. Proposed operation				1. Proposed transmitter location--accurately plotted; 2. Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location; 3. Proposed location of main studio; 4. Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature; 5. At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city or cities to be served.	
(a) Visual					
Transmitter power output (after vestigial side-band filter, if used)	Multiplexer loss in db:	Input to transmission line in db:			
In dbk: - 3.01 In kw: 0.5	- 0.043	- 3.053			
Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power		
-0.346	- 3.399	4.62	In dbk: 1.22 In kw: 1.32		
(b) Aural				(b) Attach as Exhibit No. E-3 profile graphs with reasonably large scales for the radials in (a)(5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.	
Transmitter power output	Multiplexer loss in db:	Input to transmission line in dbk:			
In dbk: - 5.23 In kw: 0.3	- 0.043	- 5.273			
Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power	12. From the profile graphs in 11(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data: (Grade A and Grade B contours are those in the absence of interference.)	
- 0.346	- 5.619	4.62	In dbk: 0.999 In kw: 0.796		
Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A (60 dbu) contour	Predicted distance in miles to the Grade B (47 dbu) contour
0	2615 feet	265 feet	1.22 dbk	6.9 mi.	22.0 mi.
45	2520	360	1.22	8.3	25.0
90	2359	521	1.22	10.0	30.0
135	2581	299	1.22	7.5	23.9
180	2775	105	1.22	4.7	14.0
225	2568	312	1.22	7.8	24.4
270	2407	473	1.22	9.5	29.0
315	2591	289	1.22	7.4	23.0
Antenna height above average terrain <u>328</u> feet (Must be identical with Paragraph 2)					
13. Attach as Exhibit No. E-4* map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:			14. Attach as Exhibit No. E-5 a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.		
(a) Proposed transmitter location and the radials along which the profile graphs have been prepared;					
(b) The predicted Grade A and Grade B contours from 12 above;					
(c) Scale of miles.					

15. Proposed location of transmitter

State Texas	County Howard	Geographical coordinates (to be determined to nearest second) of the proposed TV antenna structure.	
City or town Big Spring	Street address 600 Kentucky Way	North latitude 32° 15' 16"	West longitude 101° 26' 44"
How were coordinates determined? Scaled from USGS Topographic map			

16. Proposed location of main studio

State Texas	County Howard	Other studios proposed None
City or town Big Spring	Street address, if known. 600 Kentucky Way	

17. State the minimum value of field strength in dbu, predicted in accordance with the method prescribed in the Commission's Rules, that will be provided over the entire city in which the main studio is located.

83.3 dbu

18. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? Yes No

(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and assignments; the location and geographical coordinates of each antenna; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.

None

I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

COMMERCIAL RADIO EQUIPMENT COMPANY
By Edward F. Lorentz
Technical Director, Chief Engineer or Consulting Engineer

Date November 19, 1953

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section V-G (Antenna)	
ANTENNA AND SITE INFORMATION <small>(see instruction B Section I)</small>		Name of applicant Big Spring Broadcasting Co.					
		Address where applicant can be reached in person c/o Radio Station KBSI Big Spring, Texas					
<small>Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstructions to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data must not be incorporated by reference.</small>							
Legal Counsel Eugene L. Burke		Purpose of application (Check appropriate box)					
Address Bowen Building, Washington, D. C.		a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/>					
Consulting Engineer Commercial Radio Equipment Company		2. Features of surrounding terrain					
Address 1319 F St., N.W., Washington, D. C.		List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.					
Class of station Commercial TV		Facilities requested Ch.4, Eir 1.32 KW @ 320'		None			
1. Location of antenna							
State Texas		County Howard		City or Town Big Spring			
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town)		Submit as Exhibit No. E-6 a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above.					
600 Kentucky Way		The chart used shall be an Instrument Approach Chart (or the landing chart on reverse side thereof), or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. 1/ In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. 1/ These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington 25, D. C.					
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location.		1/ Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.					
North latitude 32° 15' 16"		West longitude 101° 26' 44"					
3. Designation, distance, and bearing to center line of nearest established airway within 5 miles <div style="text-align: right;">Green 5, 1.25 miles, South</div>							
4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.							
		<u>Landing Area</u>		<u>Distance</u>		<u>Direction</u>	
(a) Webb AFB		4.25 miles		247°		True	
(b) Hamilton		1.5 miles		308°		True	
(c) _____		_____		_____		_____	
5. Description of antenna system (If directional, give spacing and orientation of towers). Single 400' guyed steel tower supporting TV antenna.							
Type RCA Type TP-3D							
Description of tower(s)							
Self-supporting NO		Guyed Yes			Tubular (Pole) NO		
Tower (height figures should not include obstruction lighting)		#1	#2	#3	#4	#5	#6
Height of radiating elements		40'					
Overall height above ground		440'					
Overall height above mean sea level		2900'					
If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. _____ a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. not applicable							
Submit as Exhibit No. E-7 a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting.							
Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Date November 19, 1953			
If the answer is "Yes", give				By Edward J. Lorentz			
Call letters		File numbers		COMMERCIAL RADIO EQUIPMENT CO. Edward J. Lorentz <small>Edward J. Lorentz preparing data</small>			

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

EXHIBIT NO. E-1 (Amended)

Amendment to Application for
New Commercial TV Broadcast Station
Ch. 4, ERP 1.32 KW (1.22 dbk) @ 328'
Big Spring, Texas
Big Spring Broadcasting Co.

ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by Big Spring Broadcasting Co. to prepare the necessary engineering data to accompany an amendment to its application for a new commercial television broadcast station in Big Spring, Texas (File No. BPCT-1749). The purpose of this amendment is to bring the application up-to-date by use of the latest equipment ratings as furnished by the manufacturer. This report contains Sections V-C and V-G of FCC Form 301 and the exhibits and information to amend the engineering data now on file with the Commission in TV Engineering Appendix I as follows:

Section V-C of FCC Form 301 Delete forms dated July 30, 1953, and substitute therefor the forms attached hereto dated November 19, 1953.

Section V-G of FCC Form 301 Delete forms dated July 30, 1953, and substitute therefor the form attached hereto dated November 19, 1953.

Exhibit No. E-1 Delete and substitute Exhibit No. E-1 (Amended) of this report.

Exhibit No. E-4 Delete and substitute Exhibit No. E-4 (Amended) of this report.

There is no change in Exhibits Nos. E-2, E-3, E-5, E-6 and E-7 by this amendment; hence they remain correct and applicable to this application as they now appear.



COMMERCIAL-RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

Page 2

EXHIBIT NO. E-1 (Amended)

The applicant, Big Spring Broadcasting Co., by this amendment to its application requests a construction permit for a new television station to operate on VHF Channel 4 (66-72 Mcs) with a visual Effective Radiated Power of 1.32 kilowatts (1.22 dbk) at an antenna height of 328 feet above average terrain.

The applicant proposes to make the TV transmitting and studio installation at a location within the city limits of Big Spring known as 600 Kentucky Way. The proposed antenna structure will consist of a 400 ft. guyed steel tower supporting the three-section RCA Type TF-3D VHF TV antenna and will have an overall height of 440 feet above ground (See Exhibit No. E-7 of this report).

The proposed television operation is in full accord with the Table of Assignments and Technical Standards included in Subpart E (Rules Governing Television Broadcast Stations) of Part 3 of the Commission's Rules. Channel 4 is assigned to Big Spring, Texas, in the Table of Assignments and operation as proposed from the specified transmitter location provides a signal in excess of 74 dbu to all the city of Big Spring.

TOPOGRAPHIC INFORMATION

Topographic maps are not available for all of the area around Big Spring. Those topo maps which are presently available are shown in Exhibit No. E-2 of this report, with the radials along which Profile Graphs have been prepared shown thereon. Beyond the limits of the topo maps as shown, a study of Sectional Aeronautical Charts of the area indicates that the variation in ground elevation is relatively small. Although the contour intervals as shown on Sectional Charts of the area are in 500 foot levels, a study of this information shows that the variation is less than 500 feet in the area with which we are concerned.

The profile graphs shown in Exhibit No. E-3 of this report have been prepared from the available information as explained above. In view of the relatively level terrain in the Big Spring area, those portions of the radials beyond the available topographic maps have been assumed to be flat and are shown as dashed lines on the Profile Graphs (Exhibit No. E-3).

Exhibit No. E-4, attached to this report, shows the limits of Grade A (68 dbu) and Grade B (47 dbu) coverage which will be rendered by the proposed operation as determined in accordance with the provisions of Subpart E of Part 3 (Rules Governing Television Broadcast Stations) of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.



COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

Page 3

EXHIBIT NO. E-1 (Amended)

The output of the television transmitters will be determined and maintained by the use of a Dummy Load and RF Wattmeter. Complete data with regard to the variation of the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed by the manufacturer with the Commission.

All equipment specified herein was selected by the applicant.

COMMERCIAL RADIO EQUIPMENT COMPANY

By *Edward F. Lorentz*
Edward F. Lorentz

This report dated:
November 19, 1953

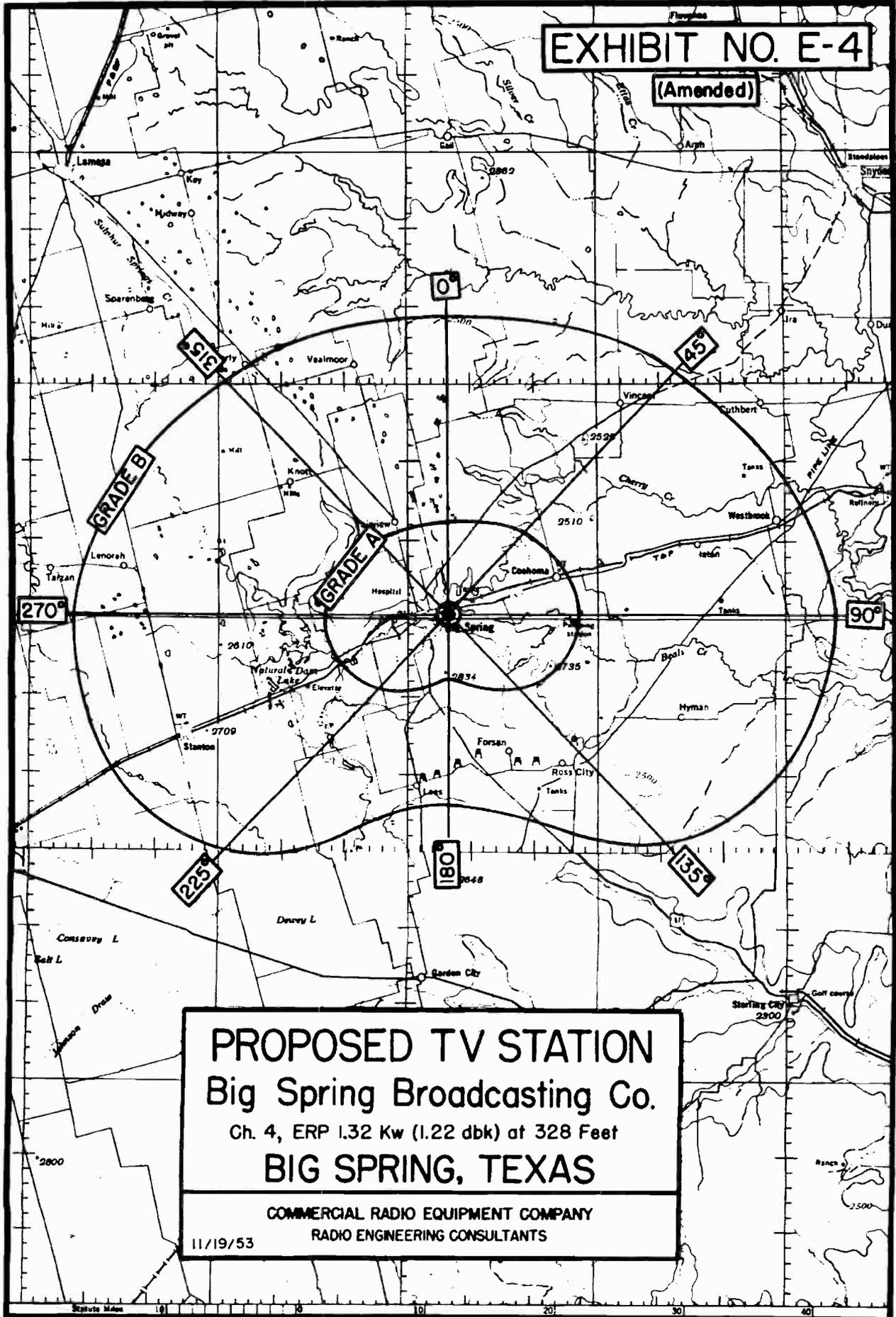


KANSAS CITY, MO.

WASHINGTON, D. C.

EXHIBIT NO. E-4

(Amended)



PROPOSED TV STATION
Big Spring Broadcasting Co.
Ch. 4, ERP 1.32 Kw (1.22 dbk) at 328 Feet
BIG SPRING, TEXAS

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

11/19/53

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section V-G (Antenna)	
ANTENNA AND SITE INFORMATION (see instruction B Section I)		Name of applicant			BPLT-17114 <i>[Signature]</i>		
		Big Spring Broadcasting Co.					
		Address where applicant can be reached in person					
		c/o Radio Station KBST Big Spring, Texas					
Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstruction to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data may not be incorporated by reference.							
Legal Counsel		Purpose of application (Check appropriate box)			a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/>		
Eugene L. Burke							
Address		2. Features of surrounding terrain List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.			None		
bowen Building, Washington, D. C.							
Consulting Engineer		Class of station Commercial TV			Facilities requested Ch. 4, Emission 1.32 Kw @ 328		
Commercial Radio Equipment Company							
Address		1. Location of antenna State: Texas County: Howard City or Town: Big Spring			Submit as Exhibit No. 2-C a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above. The chart used shall be an Instrument Approach Chart (or the landing chart on reverse side thereof), or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. 1/ In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. 1/ These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington 25, D. C. 1/ Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.		
1319 F St., N.W., Washington, D. C.							
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town)		North latitude 32° 15' 16"			West longitude 101° 26' 44"		
600 Kentucky Way							
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location.		3. Designation, distance, and bearing to center line of nearest established airway within 5 miles Green 5, 1.25 miles, South			4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.		
North latitude West longitude 32° 15' 16" 101° 26' 44"							
(a) Webb AFB 4.25 miles 247° True (b) Hamilton 1.5 miles 308° True (c)		5. Description of antenna system (If directional, give spacing and orientation of towers). Single 400' guyed steel tower supporting T/ antenna.			Type RCA Type TR-3D		
Description of tower(s)							
Self-supporting NO Guyed Yes Tubular (Pole) NO		If a combination of Standard, FV, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit 'b' a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. not applicable Submit as Exhibit No. E-7 a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting. Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Tower (height figures should not include obstruction lighting) #1 #2 #3 #4 #5 #6							
Height of radiating elements 40'							
Overall height above ground 440'							
Overall height above mean sea level 2500'		Date November 19, 1953 COMMERCIAL RADIO EQUIPMENT CO. By <i>Edward J. Lorent</i> Edward P. Kofetz <i>preparing logs</i>			Call letters File numbers		
If the answer is "Yes", give							

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section V-G (Antenna)													
ANTENNA AND SITE INFORMATION (see instruction B Section I)		Name of applicant Big Spring Broadcasting Co.				<i>WPC-T-1749</i> <i>as well</i>													
		Address where applicant can be reached in person c/o Radio Station KBST Big Spring, Texas																	
<small>Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstructions to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data must not be incorporated by reference.</small>																			
Legal Counsel Eugene L. Burke		Purpose of application (Check appropriate box) a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/> 2. Features of surrounding terrain List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna. <div style="text-align: center;">None</div>																	
Address Bowen Building, Washington, D. C.																			
Consulting Engineer Commercial Radio Equipment Company		Class of station Commercial TV Facilities requested Ch. 4, ERP 1.32 KW @ 328																	
Address 1319 F St., N.W., Washington, D. C.																			
Class of station Commercial TV		1. Location of antenna <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">State Texas</td> <td style="width:33%;">County Howard</td> <td style="width:33%;">City or Town Big Spring</td> </tr> </table>						State Texas	County Howard	City or Town Big Spring									
State Texas	County Howard							City or Town Big Spring											
Facilities requested Ch. 4, ERP 1.32 KW @ 328																			
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town) 600 Kentucky Way		Submit as Exhibit No. E-6 a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above. The chart used shall be an Instrument Approach Chart (or the landing chart on reverse side thereof), or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. 1/ In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. 1/ These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington 25, D. C. 1/ Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.																	
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location. <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">North latitude 32° 15' 16"</td> <td style="width:50%;">West longitude 101° 26' 44"</td> </tr> </table>								North latitude 32° 15' 16"	West longitude 101° 26' 44"										
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4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Landing Area</th> <th style="text-align: left;">Distance</th> <th style="text-align: left;">Direction</th> </tr> </thead> <tbody> <tr> <td>(a) Webb AFB</td> <td>4.25 miles</td> <td>217° True</td> </tr> <tr> <td>(b) Hamilton</td> <td>1.5 miles</td> <td>308° True</td> </tr> <tr> <td>(c) _____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>						Landing Area	Distance	Direction	(a) Webb AFB	4.25 miles	217° True	(b) Hamilton	1.5 miles	308° True	(c) _____	_____	_____
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(b) Hamilton	1.5 miles	308° True																	
(c) _____	_____	_____																	
5. Description of antenna system (If directional, give spacing and orientation of towers).		Single 400' guyed steel tower supporting TV antenna.																	
Type HCA Type TF-3D		Description of tower(s)																	
Self-supporting NO		Guyed Yes			Tubular (Pole) NO														
Tower (height figures should not include obstruction lighting)		#1	#2	#3	#4	#5	#6												
Height of radiating elements		40'																	
Overall height above ground		440'																	
Overall height above mean sea level		2900'																	
<small>If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. _____ a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. not applicable</small>																			
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Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																			
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Date November 19, 1953 COMMERCIAL RADIO EQUIPMENT CO. By <i>Edward J. Lorentz</i> Edward J. Lorentz, preparing data															
If the answer is "Yes", give		Call letters																	
		File numbers																	

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

FEDERAL BUREAU OF INVESTIGATION
FEB 23 1954
OFFICE OF THE DIRECTOR

CONTENTS OF REPORT

Exhibit No. E-1 (Amended)	Section V-C of FCC Form 301 Engineering Statement
Exhibit No. E-3 (Amended)	Profile Graphs
Exhibit No. E-4 (Amended)	Sectional Aeronautical Chart showing limits of Grade A and Grade B service



Not Ref.

ENGINEER'S COPY

Amended

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C	
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant BIG SPRING BROADCASTING CO.		Doc-1149	
1. Purpose of authorization applied for: (Indicate by check mark)					
(If application is for a new station or for any of the changes numbered B through E, complete all paragraphs of this form; if change F is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 3 and the appropriate other paragraphs; for changes G through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2 and 16)					
A. <input checked="" type="checkbox"/> Construct a new station		F. <input type="checkbox"/> Change antenna system			
B. <input type="checkbox"/> Change effective radiated power or antenna height above average terrain		G. <input type="checkbox"/> Change transmitter			
C. <input type="checkbox"/> Change transmitter location		H. <input type="checkbox"/> Install auxiliary or alternate main transmitter			
D. <input type="checkbox"/> Change frequency		I. <input type="checkbox"/> Other changes (specify)			
E. <input type="checkbox"/> Approval of site and antenna structure		J. <input type="checkbox"/> Change studio location			
2. Facilities requested			4. Transmitters		
Frequency 66 — 72 Mc.		Channel number 4	(a) Visual		
Effective Radiated Power (visual) In dbk: 1.26 In kw: 1.33		Antenna height above average terrain in feet. (Must agree with height given in Para. 12 of this Section) 323'	Make RCA	Type No. TT-500A	Rated power In dbk: -3.01 In kw: 0.5
			(b) Aural		
			Make RCA	Type No. TT-500A	Rated power In dbk: -5.23 In kw: 0.3
3. (a) Antenna structure			If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes.		
Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station? If "Yes", attach as Exhibit No. complete engineering data thereon.			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Will proposed structure be constructed on the top of an existing structure? If "Yes", describe and give height above ground of existing structure.			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.) 440'		Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.) 2900'			
Height of antenna radiation center in feet above mean sea level. 2880'					
(b) Antenna data			5. Modulation monitors		
Visual			(a) Visual monitor or monitoring equipment		
Make RCA		Type No. TF-3D	Make RCA		Type No. WM20B/TM6A
Number of sections 3 Section		Power gain in db 4.62	(b) Aural monitor		
Aural (if separate)			Make GR		
Make Same as Visual		Type No.	Type No. 1183-T1		
Number of sections		Power gain in db	6. Frequency monitors		
Is directional antenna proposed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			(a) Visual monitor		
If "Yes", attach as Exhibit No. complete engineering data thereon.			Make GR		Type No. 1183-T1
			Accuracy On File		
			(b) Aural monitor		
			Make GR		Type No. 1183-T1
			Accuracy On File		
7. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each. Data on File					
8. Transmission line proposed to supply power to the antenna from the transmitter					
(a) Visual					
Make RCA		Type No. MI-19313	Description Teflon Insulated Coax		
Size (nominal inside transverse dimensions) in inches 3 1/8"		Length in feet 450'	Power loss in db for this length -0.346		

*Amended

Broadcast Application			TELEVISION BROADCAST ENGINEERING DATA			Section V-C, Page 2																																																																							
8. Transmission line (Continued)						10. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																																							
(b) Aural (if separate)																																																																													
Make		Type No.		Description		11. (a) Attach as Exhibit No. E-2 a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:																																																																							
Same		as Visual																																																																											
Size (nominal inside transverse dimension) in inches		Length in feet		Power loss in db for this length		<ol style="list-style-type: none"> 1. Proposed transmitter location—accurately plotted; 2. Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location; 3. Proposed location of main studio; 4. Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature; 5. At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city or cities to be served. 																																																																							
9. Proposed operation						(b) Attach as Exhibit No. E-3* profile graphs with reasonably large scales for the radials in (a)(5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.																																																																							
(a) Visual																																																																													
Transmitter power output (after vestigial side-band filter, if used)		Multiplexer loss in db:		Input to transmission line in db:		12. From the profile graphs in 11(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data: (Grade A and Grade B contours are those in the absence of interference.)																																																																							
In dbk: -3.01 In kw: 0.5		-0.004		-3.014																																																																									
Transmission line power loss in db:		Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power		<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Radial bearing (degrees true)</th> <th>Average elevation of radial (2-10 mi.) in feet above mean sea level</th> <th>Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)</th> <th>Effective radiated power in radial direction</th> <th>Predicted distance in miles to the Grade A contour (68 dbu)</th> <th>Predicted distance in miles to the Grade B contour (47 dbu)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>2615</td> <td>265</td> <td>1.26</td> <td>7.0</td> <td>22</td> </tr> <tr> <td>45</td> <td>2520</td> <td>360</td> <td>1.26</td> <td>8.3</td> <td>25</td> </tr> <tr> <td>90</td> <td>2359</td> <td>521</td> <td>1.26</td> <td>10.0</td> <td>30</td> </tr> <tr> <td>135</td> <td>2581</td> <td>299</td> <td>1.26</td> <td>7.5</td> <td>23.9</td> </tr> <tr> <td>180</td> <td>2775</td> <td>105</td> <td>1.26</td> <td>4.75</td> <td>14.0</td> </tr> <tr> <td>225</td> <td>2568</td> <td>312</td> <td>1.26</td> <td>7.8</td> <td>24.4</td> </tr> <tr> <td>270</td> <td>2472</td> <td>408</td> <td>1.26</td> <td>8.8</td> <td>27.0</td> </tr> <tr> <td>315</td> <td>2564</td> <td>316</td> <td>1.26</td> <td>8.0</td> <td>25.0</td> </tr> <tr> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table>						Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A contour (68 dbu)	Predicted distance in miles to the Grade B contour (47 dbu)	0	2615	265	1.26	7.0	22	45	2520	360	1.26	8.3	25	90	2359	521	1.26	10.0	30	135	2581	299	1.26	7.5	23.9	180	2775	105	1.26	4.75	14.0	225	2568	312	1.26	7.8	24.4	270	2472	408	1.26	8.8	27.0	315	2564	316	1.26	8.0	25.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
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In dbk: -5.23 In kw: 0.3		-0.004		-5.234		13. Attach as Exhibit No. E-4* map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:																																																																							
Transmission line power loss in db:		Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power																																																																									
-0.346		-5.58	4.62	In dbk: -0.96 In kw: 0.802		<ol style="list-style-type: none"> (a) Proposed transmitter location and the radials along which the profile graphs have been prepared; (b) The predicted Grade A and Grade B contours from 12 above; (c) Scale of miles. 																																																																							
14. Attach as Exhibit No. E-5 a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.																																																																													

*Amended

15. Proposed location of transmitter

State TEXAS	County HOWARD	Geographical coordinates (to be determined to nearest second) of the proposed TV antenna structure.	
City or town BIG SPRING	Street address 600 Kentucky Way	North latitude 32 ° 15 ' 16 "	West longitude 101 ° 26 ' 44 "
How were coordinates determined? Scale from USGS Topographic Map			

16. Proposed location of main studio

State TEXAS	County HOWARD	Other studios proposed NONE
City or town BIG SPRING	Street address, if known. 600 Kentucky Way	

17. State the minimum value of field strength in dbu, predicted in accordance with the method prescribed in the Commission's Rules, that will be provided over the entire city in which the main studio is located.

85 dbu

18. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? Yes No

(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and assignments; the location and geographical coordinates of each antenna; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.

NONE

I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

COMMERCIAL RADIO EQUIPMENT COMPANY
By Edward F. Lorentz
Technical Director, Chief Engineer or Consulting Engineer

Date February 19, 1954

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

EXHIBIT NO. E-1 (Amended)

Amendment to Application for
New Commercial TV Broadcast Station
Ch. 4, ERP 1.33 KW (1.26 dbk) @ 323'
Big Spring, Texas
Big Spring Broadcasting Co.

FEB 20 1954

ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by Big Spring Broadcasting Co. to prepare an amendment to its application for a new commercial television broadcast station in Big Spring, Texas (File No. BFCT-1749). The purpose of this application is to furnish more complete topographical data and to correct the multiplier loss to the latest manufacturer's rating. This report contains Section V-C of FCC Form 301 and the exhibits and information to amend the engineering data now on file with the Commission in TV Engineering Appendix II, dated November 19, 1953, as follows:

- Section V-C of FCC Form 301 Delete forms dated November 19, 1953, and substitute therefor the forms attached hereto dated February 19, 1954.
- Section V-G of FCC Form 301 Change Facilities Requested to read "Ch. 4, ERP 1.33 KW A 323'."
- Exhibit No. E-1 Delete Exhibit No. E-1 (Amended) dated November 19, 1953, and substitute therefor Exhibit No. E-1 (Amended) attached hereto dated February 19, 1954.
- Exhibit No. E-3 Delete and substitute Exhibit No. E-3 (Amended) of this report.
- Exhibit No. E-4 Delete and substitute Exhibit No. E-4 (Amended) of this report.

There is no change in Exhibits Nos. E-2, E-5, E-6, and E-7 by this amendment; hence, they remain correct and applicable to this application as they now appear.

The applicant, Big Spring Broadcasting Co., by this amendment to its application requests a construction permit for a new television station to operate on VHF Channel 4 (66-72 Mcs) with a visual Effective Radiated Power of 1.33 kilowatts (1.26 dbk) at an antenna height of 323 feet above average terrain.

The applicant proposes to make the TV transmitting and studio installation at a location within the city limits of Big Spring known as 600 Kentucky Way. The proposed antenna structure will consist of a 400 foot guyed steel tower supporting the three-section RCA Type TF-3D VHF TV antenna and will have an overall height above ground of 440 feet (See Exhibit No. E-7).



COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

Page 2

EXHIBIT NO. E-1 (Amended)

The proposed television operation is in full accord with the Table of Assignments and Technical Standards included in Subpart E (Rules Governing Television Broadcast Stations) of Part 3 of the Commission's Rules. Channel 4 is assigned to Big Spring, Texas, in the Table of Assignments, and operation as proposed from the specified transmitter location provides a signal in excess of 74 dbu to all the city of Big Spring.

Topographic Information

Topographic maps are not available for all of the area around Big Spring. Those topo maps which are presently available are shown on Exhibit No. E-2 of this report, with the radials along which Profile Graphs have been prepared shown thereon. Beyond the limits of the topo maps shown, a study of Sectional Aeronautical Charts of the area indicates that the variation in ground elevation is relatively small. Although the contour intervals as shown on Sectional Charts are in 500 foot levels, a study of this information shows that the variation is less than 500 feet in the area with which we are concerned.

The profile graphs shown in Exhibit No. E-3 (Amended) of this report have been prepared from the available information as explained above. In the directions of 270° and 315° True beyond the limits of the topo maps, all available information contained on Sectional Aeronautical Charts was used in completing the profile graphs.

Exhibit No. E-4 (Amended) attached to this report, shows the limits of Grade A (68 dbu) and Grade B (47 dbu) coverage which will be rendered by the proposed operation as determined in accordance with the provisions of Subpart 3 of Part 3 of the Commission's Rules, using propagation curves of Figure 5 of Appendix III.

The output of the television transmitters will be determined and maintained by the use of a Dummy Load and RF Wattmeter. Complete data with regard to the variation of the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

All equipment specified herein was selected by the applicant.

COMMERCIAL RADIO EQUIPMENT COMPANY

By *Edward F. Lorentz*
Edward F. Lorentz

This report dated:
February 19, 1954



PROFILE GRAPHS
DATA TAKEN FROM U.S.G.S.
TOPOGRAPHIC MAPS

EXHIBIT NO. E-3 (Amended)

◀ DENOTES ANTENNA RADIATION CENTER

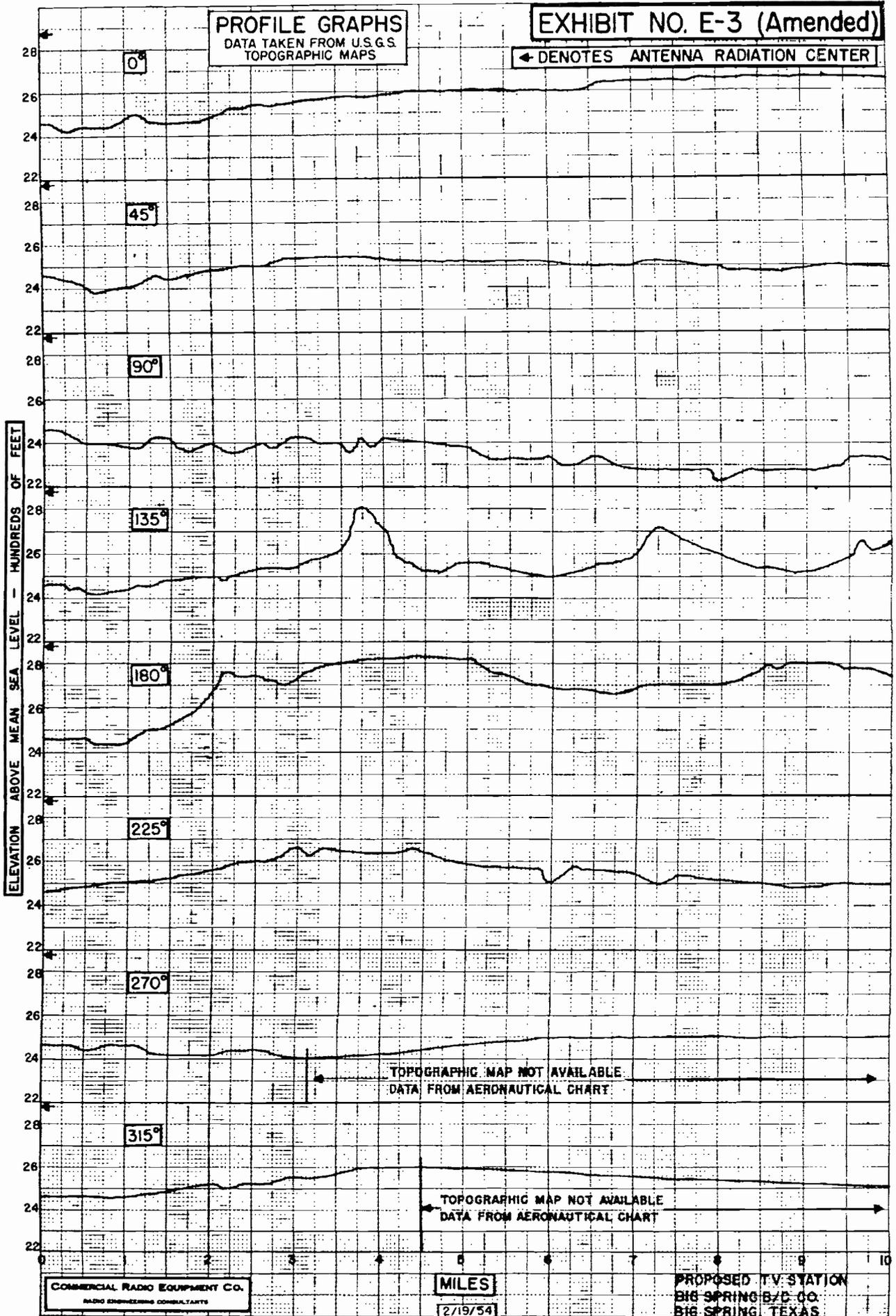
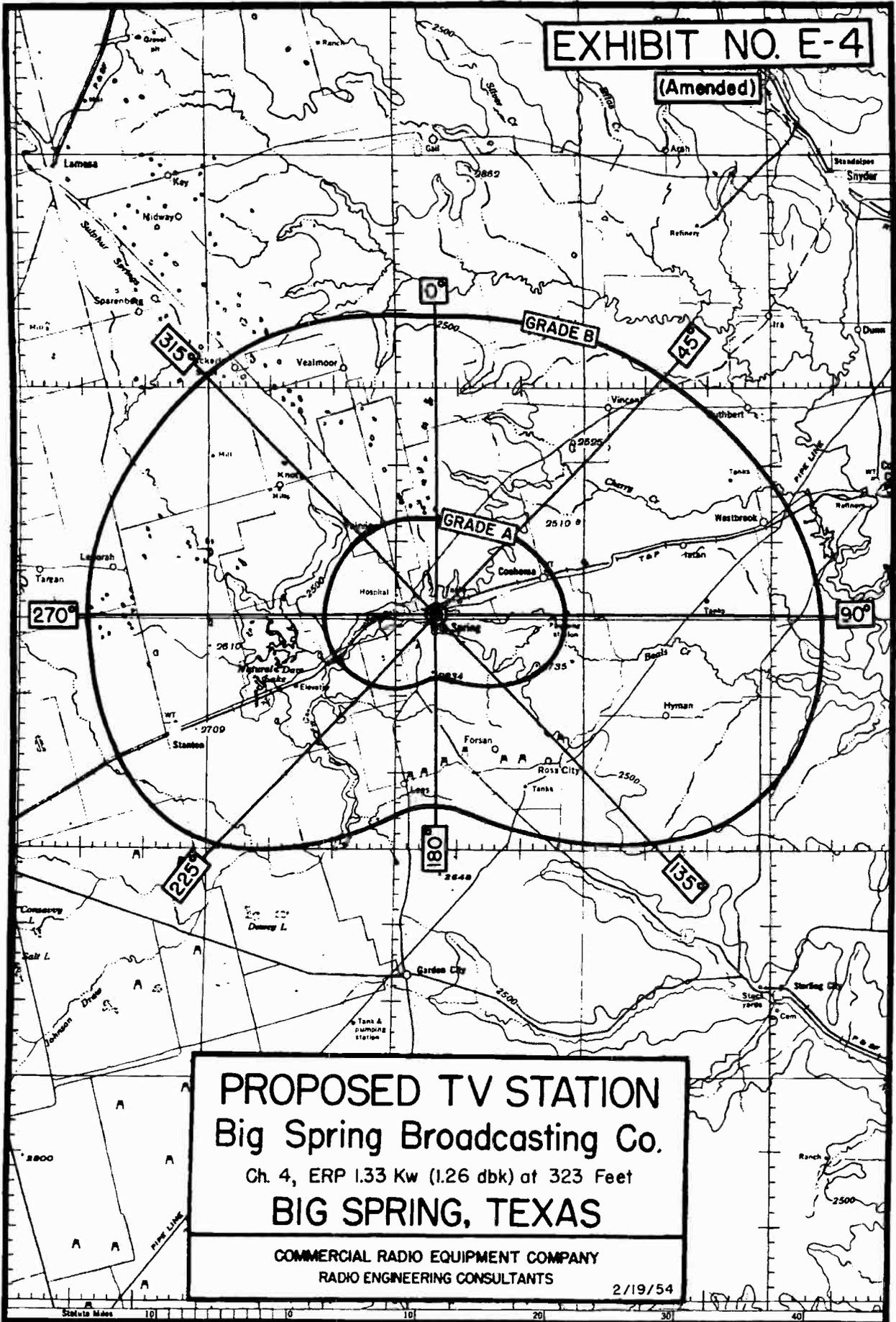


EXHIBIT NO. E-4

(Amended)



PROPOSED TV STATION
Big Spring Broadcasting Co.
Ch. 4, ERP 1.33 Kw (1.26 dbk) at 323 Feet
BIG SPRING, TEXAS

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

2/19/54

Statute Miles 10 20 30 40

TV ENGINEERING APPENDIX IV

Application for
Modification of Construction Permit
KBST-TV
Channel 4, ERP 5.14 KW at 323 Feet
Big Spring, Texas

Big Spring Broadcasting Co.
February 1955

RECEIVED



CONTENTS OF REPORT

Exhibit No. E-1

Section V-C of FCC Form 301

Statement in lieu of Section
V-G of FCC Form 301

Engineering Statement

Exhibit No. E-2

Portion of a Sectional
Aeronautical Chart showing
proposed 74 dbu, Grade A
and Grade B contours



Not Ref.

3/19/55
BMPET-2952

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C	
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Big Spring Broadcasting Co.			
1. Purpose of authorization applied for: (Indicate by check mark) (If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).)					
A. <input type="checkbox"/> Construct a new station		F. <input type="checkbox"/> Construct or change auxiliary antenna system			
B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain		G. <input checked="" type="checkbox"/> Change transmitter			
C. <input type="checkbox"/> Change transmitter location		H. <input type="checkbox"/> Install auxiliary or alternate main transmitter Modification: of CP			
D. <input type="checkbox"/> Change frequency		I. <input type="checkbox"/> Other changes (specify) (BPUT-1749, as amended and granted)			
E. <input type="checkbox"/> Change antenna system		J. <input type="checkbox"/> Change studio location			
2. Facilities requested			7. (a) Antenna structure		
Frequency 66 — 72 Mc.		Channel No. 4		Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Effective Radiated Power (visual) In dbk: 7.11 In kw: 5.14	Effective Radiated Power (aural) In dbk: 4.10 In kw: 2.57	Antenna height above average terrain 323 feet		Will proposed structure be constructed on the top of a building? If "Yes", state height of building (distance from ground to base of proposed structure) in feet. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
3. Station location (principal community)			Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.) 440 (No Change)		
State Texas		City or town Big Spring		Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.) 2900 (No Change)	
4. Transmitter location			Height of antenna radiation center in feet above mean sea level. 2000 feet		
State Texas		County Howard		Geographical coordinates of antenna (to nearest second) North latitude 32 15 16 West longitude 101 26 44	
City or town Big Spring		Street Address (or other identification) 600 Kentucky Way		How were coordinates determined? From data already on file. No change in site.	
5. Main studio location			Indicate by check mark the zone in which structure is located. 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>		
State Texas		County Howard		(b) Antenna data No Change	
City or town Big Spring		Street address 600 Kentucky Way		Visual	
6. Transmitters			Make RCA		
Visual		Type No. TT-2AL		Type No. TF-3D	
Make RCA		Rated power In dbk: 3.01 In kw: 2.0		Number of sections 3	
Aural		Type No. TT-2AL		Rated input power in dbk 13.39	
Make RCA		Rated Power In dbk: 0.0 In kw: 1.0		Power gain in db 4.62	
If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes. On file			Aural (if separate) Make Same as used		
(a) Describe in Exhibit No. E-1 means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.			Type No. for visual		
(b) Multiplexer: Make RCA Type No. MI-19390			Number of sections 3		
Rated input power 10 dbk			Rated input power in dbk 13.39		
Rated loss: Visual 0.04 db Aural 0.04 db			Power gain in db 4.62		
			If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as Not pertinent Exhibit No.		
			Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
			Will antenna be altered to provide rail fill-in? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
			If yes, describe fully in Exhibit No.		

Big Spring Broadcasting Company

TELEVISION BROADCAST ENGINEERING DATA

Section V-C, Page 2

8. Transmission line proposed to supply power to the antenna from the transmitter

(a) Visual			(b) Aural (if separate)		
Make RCA	Type No. MT-19113-1	Rated input power in dbk 17.16	Make Same as used	Type No.	Rated input power in dbk
Size (nominal inside transverse dimensions) in inches 3-1/8"	Length in feet 450'	Power loss in db for this length .516	Size (nominal inside transverse dimension) in inches for visual	Length in feet	Power loss in db for this length

9. Proposed operation

(a) Visual				(b) Aural			
Transmitter power output (after vestigial side-band filter, if used) In dbk: 3.01 In kw: 2.0	Multiplexer loss in db: .004	Input to transmission line in dbk: 3.006		Transmitter power output In dbk: 0.0 In kw: 1.0	Multiplexer loss in db: .004	Input to transmission line in dbk: -.004	
Transmission line power loss in db: .516	Antenna input power in dbk: 2.49	Antenna power gain in db: 4.62	Effective radiated power In dbk: 7.11 In kw: 5.14	Transmission line power loss in db: .516	Antenna input power in dbk: -.52	Antenna power gain in db: 4.62	Effective radiated power In dbk: 4.10 In kw: 2.57

10. Modulation monitors

(a) Visual monitor or monitoring equipment

Make -- No Change --	Type No.
--------------------------------	----------

(b) Aural monitor

Make -- No Change --	Type No.
--------------------------------	----------

11. Frequency monitors

(a) Visual monitor

Make -- No Change --	Type No. --	Accuracy
--------------------------------	-----------------------	----------

(b) Aural monitor

Make -- No Change --	Type No. --	Accuracy
--------------------------------	-----------------------	----------

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each. **No change**

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes No

14. (a) Attach as Exhibit No. a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:
On file - See BRCT-1749

- Proposed transmitter location—accurately plotted;
- Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
- Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
- At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served. **On file - no change in site proposed.**

(b) Attach as Exhibit No. profile graphs with reasonably large scales for the radials in (a) (5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A contour (66 dbu)	Predicted distance in miles to the Grade B contour (47 dbu)
0	2615 feet	265 feet	7.11 dbk	9.8 mi.	28.5 mi.
45	2520	360	7.11	11.8	33.0
90	2359	521	7.11	13.7	38.2
135	2561	299	7.11	10.4	30.6
180	2775	105	7.11	6.2	20.1
225	2568	312	7.11	10.8	31.6
270	2472	408	7.11	12.4	35.1
315	2564	316	7.11	10.8	31.7
(c)					
Average	2557				

*Radial over principal community if not included above. Do not include in average.
Antenna height above average terrain **323** feet (must be identical with Paragraph 2)

Big Spring broadcasting Company

Broadcast Application	TELEVISION BROADCAST ENGINEERING DATA	Section V-C, Page 3
<p>16. Attach as Exhibit No. <u>E-2</u> map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:</p> <p>(a) Proposed transmitter location and the radials along which the profile graphs have been prepared;</p> <p>(b) The studio location and boundaries of the principal community: <u>No change in site or studio</u></p> <p>(c) The predicted Grade A and Grade B contours from 12 LOC above:</p> <p>(d) The required minimum field strength contour;</p> <p>(e) Scale of miles.</p>	<p>17. Attach as Exhibit No. _____ a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.</p> <p style="text-align: center;"><u>No change in site - Photos on file</u></p>	
<p>18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's Rules, be provided over the entire principal community proposed to be served?</p>		<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>19. Will the main studio be located within the limits of the principal community proposed to be served. (No change proposed)</p>		<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? (NOTE: <u>Site already approved by FCC</u>)</p>		<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.</p> <p style="text-align: center;"><u>Not pertinent - this is an existing CP - site</u></p> <p style="text-align: center;"><u>separations already approved.</u></p>		
<p>21. If this is an application for modification of construction permit state briefly as Exhibit No. _____ the present status of construction and indicate when it is expected that construction will be completed.</p> <p>Following steps toward construction have been accomplished:</p> <ol style="list-style-type: none"> 1) Zoning clearance for tower erection and land use for studio-transmitter has been obtained from the City Commission. 2) Land lease deal has been signed and paid for. 3) Final architects' building plans have been submitted. 4) CBS secondary Market plan contract has been signed. 5) Tower bids from all major tower companies have been received and final award is about to be made. <p>It is expected that construction will be completed within 100 days after the grant of this application.</p>		
<p>I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)</p>		
<p>Date <u>February 23, 1955</u></p>	<p>COMMERCIAL RADIO EQUIPMENT CO. By <u>Everett L. Hillard</u> <small>Technical Director, Chief Engineer, Consulting Engineer</small></p>	

STATEMENT IN LIEU OF
SECTION V-G OF FCC FORM 301

The applicant proposes no changes in either the height or location of the antenna system by this application from that already authorized in Construction Permit, File No. BPCT-1749.

Section V-G of FCC Form 301 is therefore not believed applicable to this application and none is submitted herewith.

February 23, 1955



COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

EXHIBIT NO. E-1

Application for
Modification of Construction Permit
KBST-TV Big Spring, Texas
Channel 4, - ERP 5.14 KW @ 323 Feet

ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by the Big Spring Broadcasting Company, permittee of TV Station KBST-TV, to prepare the necessary engineering data to accompany their application for modification of construction permit to change type transmitter and increase the effective radiated power. This report contains Section V-C of FCC Form 301 and the data and exhibits required thereby. A statement is submitted in lieu of Section V-O of FCC Form 301.

The applicant, by this application for modification of the KBST-TV Construction Permit, requests a change from a 500 watt transmitter to a 2 KW transmitter which will result in operation on Channel 4 with an Effective Radiated Power of 5.14 kilowatts at an antenna height of 323 feet above average terrain.

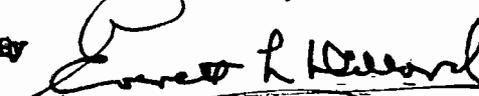
Since no change is proposed in antenna height or in its location, certain of the information requested by Section V-C of FCC Form 301 is already on file with the Commission. In such cases, the pertinent item in Section V-C is answered "No Change" or "On File". This indicates that reference should be made to the engineering data included with application File No. BPCY-1749, as amended for the information or exhibit requested.

Exhibit No. E-2 of this report shows the limits of Grade A and Grade B coverage which will be provided by KBST-TV, operating as proposed. The entire city of Big Spring will be well within the proposed 74 dbu contour, which is also shown. The distances to the contours were determined in accordance with the provisions of Subpart 3 of Part 3 of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.

The output of the television transmitters will be determined and maintained by the use of a dummy load and RF Wattmeter. Complete data with regard to the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

COMMERCIAL RADIO EQUIPMENT COMPANY

By


Everett L. Ballard

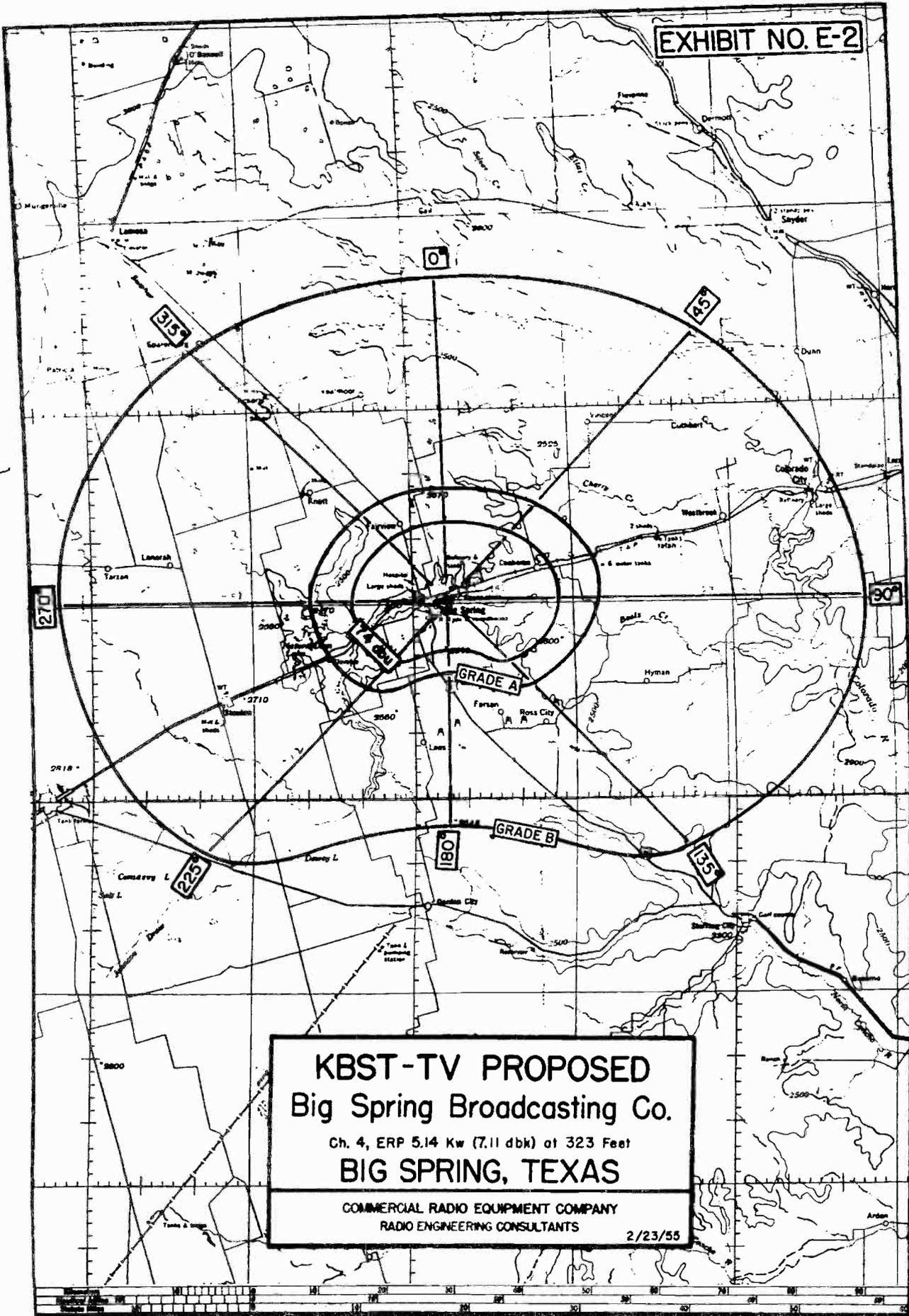
This report dated:
February 23, 1955

KANSAS CITY, MO.

WASHINGTON, D. C.



EXHIBIT NO. E-2



KBST-TV PROPOSED
Big Spring Broadcasting Co.
Ch. 4, ERP 5.14 Kw (7.11 dbk) at 323 Feet
BIG SPRING, TEXAS
COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS
2/23/55

KBST-TV

BMPET-3267

**BROADCAST FACILITIES
DIVISION (TV)**

JUL 20 1955

BROADCAST BUREAU

TV ENGINEERING APPENDIX V

Application for
Modification of Construction Permit
Ch. 4, ERP: 12.75 KW (11.06 dbk) @ 380'
Big Spring, Texas
(BPC-2952, as granted)

Big Spring Television, Inc.
July 1955



COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS



TABLE OF CONTENTS

	Section V-C of FCC Form 301
	Section V-G of FCC Form 301
Exhibit No. E-1	Engineering Statement
Exhibit No. E-2	Map showing 74 dbu, Grade A and Grade B contours.
Exhibit No. E-3	Instrument Approach Chart
Exhibit No. E-4	Vertical Plan Sketch

July 15, 1955



KANSAS CITY, MO.

WASHINGTON, D. C.

1241292001
 KSBT-TV
 Copy
 100107-3267

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION		Section V-C												
TELEVISION BROADCAST ENGINEERING DATA		Name of applicant Big Spring Television, Inc.														
1. Purpose of authorization applied for: (Indicate by check mark) (If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).																
A. <input type="checkbox"/> Construct a new station B. <input checked="" type="checkbox"/> Change effective radiated power or antenna height above average terrain C. <input type="checkbox"/> Change transmitter location D. <input type="checkbox"/> Change frequency E. <input checked="" type="checkbox"/> Change antenna system		F. <input type="checkbox"/> Construct or change auxiliary antenna system G. <input checked="" type="checkbox"/> Change transmitter H. <input type="checkbox"/> Install auxiliary or alternate main transmitter I. <input type="checkbox"/> Other changes (specify) J. <input type="checkbox"/> Change studio location														
2. Facilities requested Frequency <u>66</u> — <u>72</u> Mc. Channel No. <u>4</u>		7. (a) Antenna structure Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Will proposed structure be constructed on the top of a building? If "Yes", state height of building (distance from ground to base of proposed structure) in feet. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Overall height in feet above ground. (Do not include the height of any obstruction lighting which may be required.) <u>497'</u> Overall height in feet above mean sea level. (Do not include the height of any obstruction lighting which may be required.) <u>2957'</u> Height of antenna radiation center in feet above mean sea level. <u>2937'</u> Geographical coordinates of antenna (to nearest second) North latitude <u>32° 15' 16"</u> West longitude <u>101° 26' 44"</u>														
Effective Radiated Power (visual) In dbk: <u>11.06</u> In kw: <u>12.75</u>		Effective Radiated Power (aural) In dbk: <u>8.382</u> In kw: <u>6.388</u>		Antenna height above average terrain <u>380</u> feet												
3. Station location (principal community) State <u>Texas</u> City or town <u>Big Spring</u>																
4. Transmitter location State <u>Texas</u> County <u>Howard</u> City or town <u>Big Spring</u> Street Address (or other identification) <u>600 Kentucky Way</u>																
5. Main studio location State <u>Texas</u> County <u>Howard</u> City or town <u>Big Spring</u> Street address <u>600 Kentucky Way</u>																
6. Transmitters Visual <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Make <u>GE</u></td> <td>Type No. <u>TT-10-A</u></td> <td>Rated power In dbk: <u>6.99</u> In kw: <u>5.0</u></td> </tr> </table> Aural <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Make <u>GE</u></td> <td>Type No. <u>TT-10-A</u></td> <td>Rated Power In dbk: <u>4.31</u> In kw: <u>2.7</u></td> </tr> </table>					Make <u>GE</u>	Type No. <u>TT-10-A</u>	Rated power In dbk: <u>6.99</u> In kw: <u>5.0</u>	Make <u>GE</u>	Type No. <u>TT-10-A</u>	Rated Power In dbk: <u>4.31</u> In kw: <u>2.7</u>						
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Make <u>GE</u>	Type No. <u>TT-10-A</u>	Rated Power In dbk: <u>4.31</u> In kw: <u>2.7</u>														
If the above transmitters are composite or of types for which data have not been filed with the F.C.C., attach as Exhibit No. a complete showing of transmitter details in accordance with the Commission's Rules. The showing should include schematic diagrams, makes and types of tubes, operating constants of the last radio stages, full details of frequency control, vestigial sideband filter (if used), multiplex networks and isolation networks. If changes are to be made in a licensed transmitter, include a schematic diagram and give full details of the changes.																
(a) Describe in Exhibit No. <u>E-1</u> means which will be used for determining and maintaining power output of the transmitters to the values specified in this application.																
(b) Multiplexer: Make <u>GE</u> Type No. <u>PT-16-B</u> Rated input power <u>16.99</u> dbk Rated loss: Visual <u>0.06</u> db Aural <u>0.08</u> db																
(b) Antenna data Visual <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Make <u>GE</u></td> <td>Type No. <u>TY-60-C</u></td> </tr> <tr> <td>Number of sections <u>3</u></td> <td>Rated input power in dbk <u>16.95</u></td> </tr> <tr> <td colspan="2">Power gain in db <u>4.62</u></td> </tr> </table> Aural (if separate) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Make <u>- Same as for visual</u></td> <td>Type No. <u>-</u></td> </tr> <tr> <td>Number of sections</td> <td>Rated input power in dbk</td> </tr> <tr> <td colspan="2">Power gain in db</td> </tr> </table>					Make <u>GE</u>	Type No. <u>TY-60-C</u>	Number of sections <u>3</u>	Rated input power in dbk <u>16.95</u>	Power gain in db <u>4.62</u>		Make <u>- Same as for visual</u>	Type No. <u>-</u>	Number of sections	Rated input power in dbk	Power gain in db	
Make <u>GE</u>	Type No. <u>TY-60-C</u>															
Number of sections <u>3</u>	Rated input power in dbk <u>16.95</u>															
Power gain in db <u>4.62</u>																
Make <u>- Same as for visual</u>	Type No. <u>-</u>															
Number of sections	Rated input power in dbk															
Power gain in db																
If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as <u>Not applicable</u> Exhibit No.																
Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
Will antenna be altered to provide null fill-in? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, describe fully in Exhibit No.																

Big Spring Television, Inc.

TELEVISION BROADCAST ENGINEERING DATA

Section V-C, Page 2

8. Transmission line proposed to supply power to the antenna from the transmitter

(a) Visual			(b) Aural (if separate)		
Make Communication Products	Type No. 101-506	Rated input power in dbk 16.8	Make - - Same as for visual -	Type No.	Rated input power in dbk
Size (nominal inside transverse dimensions) in inches 3 - 1/8"	Length in feet 510'	Power loss in db for this length .54 db	Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length

9. Proposed operation

(a) Visual				(b) Aural			
Transmitter power output (after vestigial side-band filter, if used) In dbk: 6.99 In kw: 5.0	Multiplexer loss in db: - .006	Input to transmission line in dbk: 6.984		Transmitter power output In dbk: 4.31 In kw: 2.7	Multiplexer loss in db: - .008	Input to transmission line in dbk: 4.302	
Transmission line power loss in db: - .54	Antenna input power in dbk: 6.444	Antenna power gain in db: 4.62	Effective radiated power In dbk: 11.06 In kw: 12.75	Transmission line power loss in db: - .54	Antenna input power in dbk: 3.762	Antenna power gain in db: 4.62	Effective radiated power In dbk: 8.382 In kw: 6.38

10. Modulation monitors

(a) Visual monitor or monitoring equipment		(b) Aural monitor	
Make GE	Type No. TV-54A / TM-8C	Make GE	Type No. TM-12-A

11. Frequency monitors

(a) Visual monitor			(b) Aural monitor		
Make GE	Type No. TM-12-A	Accuracy On file	Make GE	Type No. TM-12-A	Accuracy On file

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each. **Data on file.**

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes No

14. (a) Attach as Exhibit No. a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:
On file - no change in site.

1. Proposed transmitter location—accurately plotted;
2. Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
3. Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
4. At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served.

On file - no change in site.
(b) Attach as Exhibit No. profile graphs with reasonably large scales for the radials in (a) (5) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A contour (68 dbu)	Predicted distance in miles to the Grade B contour (47 dbu)
0	2615	322	11.06 dbk	13.6	38.0
45	2520	417	11.06	15.4	41.3
90	2359	578	11.06	18.0	46.5
135	2581	356	11.06	14.4	38.4
180	2775	162	11.06	9.8	28.5
225	2568	369	11.06	14.8	40.0
270	2472	465	11.06	16.4	43.2
315	2564	373	11.06	14.8	40.0
(e)					
Average	2557				

*Radial over principal community if not included above. Do not include in average.

Antenna height above average terrain **380** feet (must be identical with Paragraph 2)

Big Spring Television, Inc.

Broadcast Application	TELEVISION BROADCAST ENGINEERING DATA	Section V-C, Page 3
<p>16. Attach as Exhibit No. E-2 map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:</p> <ul style="list-style-type: none"> (a) Proposed transmitter location and the radials along which the profile graphs have been prepared; (b) The studio location and boundaries of the principal community; (c) The predicted Grade A and Grade B contours from 12 above; (d) The required minimum field strength contour; (e) Scale of miles. 	<p>17. Attach as Exhibit No. a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.</p> <p style="text-align: center;">No change in site - Photos on file.</p>	
<p>18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's Rules, be provided over the entire principal community proposed to be served?</p> <p style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>		
<p>19. Will the main studio be located within the limits of the principal community proposed to be served. (No change proposed)</p> <p style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>		
<p>20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? (Note: Site already approved by FCC)</p> <p style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.</p> <p style="text-align: center; padding: 20px 0;">Not pertinent - this is an existing CP - site separations already approved.</p>		
<p>21. If this is an application for modification of construction permit state briefly as Exhibit No. _____ the present status of construction and indicate when it is expected that construction will be completed.</p> <p style="text-align: center; padding: 20px 0;">See applications File Nos. BMPCT-2920, BMPCT-2952, and BAPCT-156. Construction can be completed within 180 days after grant of this application.</p>		
<p>I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)</p> <p style="text-align: right;">Date <u>July 15, 1955</u></p> <p style="text-align: right;">By <u>Edward J. Lorentz</u> <small>Professional Director, Chief Engineer, Consulting Engineer</small> Edward F. Lorentz</p> <p style="text-align: right;">COMMERCIAL RADIO EQUIPMENT COMPANY</p>		

Broadcast Application		FEDERAL COMMUNICATIONS COMMISSION				Section 1-5 Antenna				
ANTENNA AND SITE INFORMATION <small>(see instruction B Section I)</small>		Name of applicant Big Spring Television, Inc.								
		Address where applicant can be reached in person c/o Radio Station KBST Big Spring, Texas								
When this section is submitted to the Regional Airports Subcommittee of the Air Coordinating Committee for clearance in connection with operations of air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data need not be incorporated by reference.										
Legal Counsel Eugene L. Burke Address Bowen Building, Washington, D. C. Consulting Engineer		Purpose of application (Check appropriate box) a. New antenna construction <input checked="" type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input type="checkbox"/>								
Commercial Radio Equipment Company Address International Bldg., Washington, D. C.		2. Features of surrounding terrain List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna. <div style="text-align: center; font-size: large;">None</div>								
Class of station Commercial TV		Facilities requested Ch. 4, ERP 12.75 KW @ 380'								
1. Location of antenna <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">State Texas</td> <td style="width: 33%;">County Howard</td> <td style="width: 33%;">City or Town Big Spring</td> </tr> </table>								State Texas	County Howard	City or Town Big Spring
State Texas	County Howard	City or Town Big Spring								
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town) <div style="text-align: center; font-size: large;">600 Kentucky Way</div>				Submit as Exhibit No. <u>3</u> a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above. The chart used shall be an Instrument Approach Chart or the landing chart on reverse side thereof, or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. <input checked="" type="checkbox"/> In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. <input checked="" type="checkbox"/> These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington 25, D. C. <input checked="" type="checkbox"/> Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.						
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location. North latitude <div style="font-size: large;">32° 15' 16"</div>		West longitude <div style="font-size: large;">101° 26' 44"</div>								
3. Designation, distance, and bearing to center line of nearest established airway within 5 miles <div style="text-align: center; font-size: large;">Green 5, 1.25 miles, South</div>										
4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.										
		Landing Area		Distance		Direction				
(a) Webb AFB		4.25 miles		247°		True				
(b) Hamilton		1.5 miles		308°		True				
(c)										
5. Description of antenna system (If directional, give spacing and orientation of towers). <div style="text-align: center; font-size: large;">Single 457' guyed steel tower supporting TV antenna.</div>										
Type GE Type TY-60-C TV Transmitting antenna Description of tower(s)										
Self-supporting NO		Guyed yes			Tubular (Pole) no					
Tower (height figures should not include obstruction lighting)		#1	#2	#3	#4	#5	#6			
Height of radiating elements		40'								
Overall height above ground		497'								
Overall height above mean sea level		2957'								
If a combination of Standard, FM, or TV operation is proposed on the same multi-element array either existing or proposed, submit as Exhibit No. <u>2</u> a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. Not applicable										
Submit as Exhibit No. <u>3</u> a vertical plan sketch for the proposed total structure including supporting building if any giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting.										
Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? <div style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></div>										
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission?						Date July 15, 1955 COMMERCIAL RADIO EQUIPMENT CO. By <i>Edward J. Lorentz</i> Edward J. Lorentz				
If the answer is "Yes", give Call letters		File numbers								

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

EXHIBIT NO. E-1

Application for
Modification of Construction Permit
New Commercial TV Broadcasting Station
Channel 4, ERP 12.75 KW (11.06 dbk) at 380
Big Spring, Texas
Big Spring Television, Inc.



ENGINEERING STATEMENT

Commercial Radio Equipment Company has been retained by Big Spring Television, Inc., permittee of TV Station KBST-TV, to prepare the necessary engineering data to accompany their application for modification of construction permit to change effective radiated power, type transmitter, increase antenna height, and other equipment changes. This report contains Sections V-C and V-G of FCC Form 301 and the data and exhibits required by these sections.

The applicant, by this application for modification of the KBST-TV construction permit, requests a change from a 2 KW transmitter to a 5 KW transmitter, and an increase of 57 feet in overall antenna height above ground. The result of these changes will be an operation on Channel 4 with an Effective Radiated Power of 12.75 kilowatts at an antenna height of 380 feet above average terrain.

Exhibit No. E-2 of this report shows the limits of Grade A, Grade B, and the required minimum field strength contour (74 dbu) coverage which will be provided by the herein proposed operation of KBST-TV. This exhibit very clearly shows that the entire city of Big Spring will be well within the proposed 74 dbu contour. The distances to the contours were determined in accordance with the provisions of Subpart E of Part 3 of the Commission's Rules, using the propagation curves of Figure 5 of Appendix III.

Exhibits Nos. E-3 and E-4 of this report are complete with all information required by Section V-G. It is understood that an overall height of 500 feet above ground has been approved by the CAA for this location. This structure will be constructed so as not to exceed 500 feet above ground including the beacon which will be mounted on top of the TV antenna. Exact dimensions will be included in the license application.



COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS

Page 2
EXHIBIT NO. E-1

The output of the television transmitters will be determined and maintained by the use of a dummy load and RF Wattmeter. Complete data with regard to the variation of the power output of the aural and visual transmitters to maintain the outputs at the values specified in the authorizations have been filed with the Commission by the manufacturer.

COMMERCIAL RADIO EQUIPMENT COMPANY

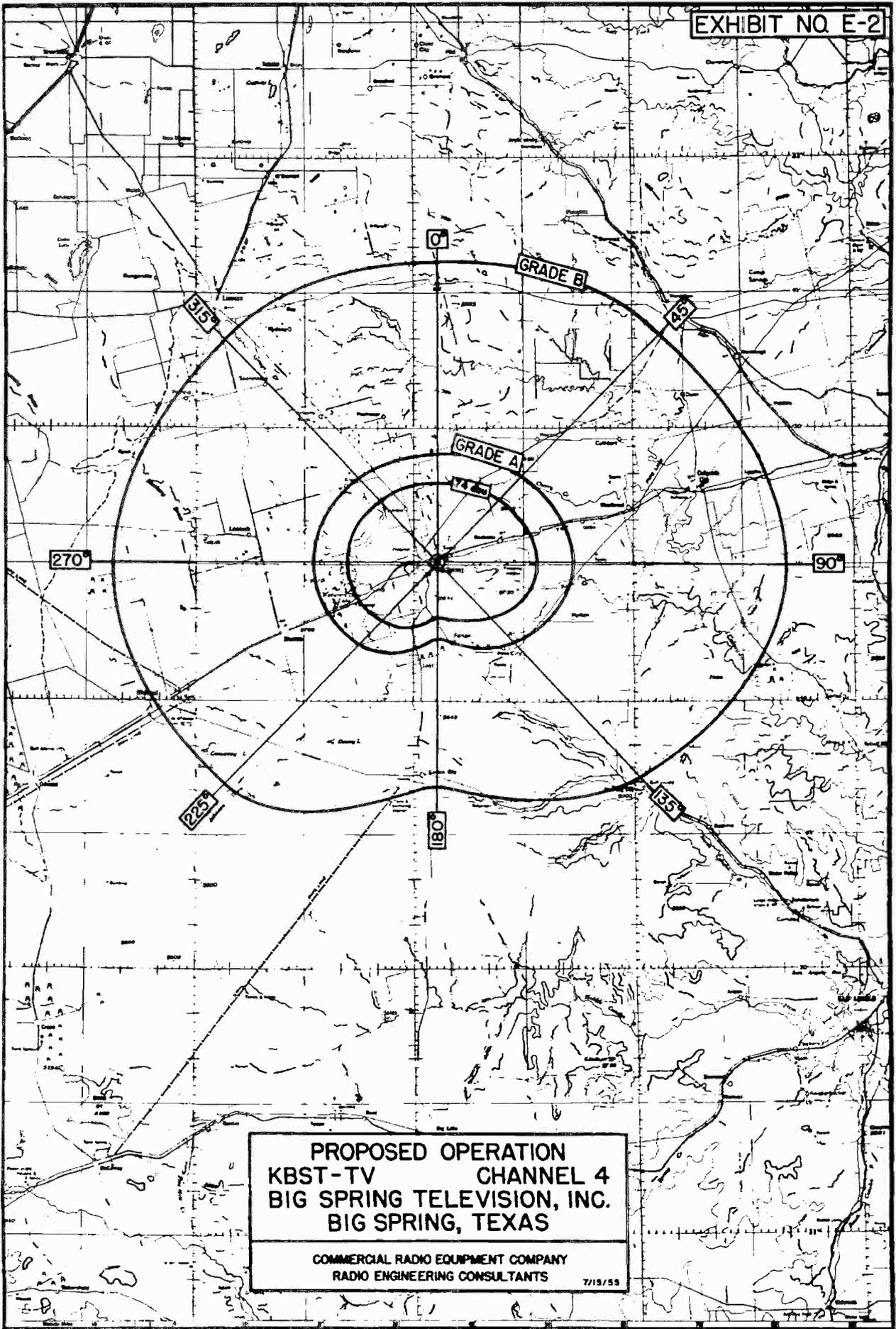
By *Edward F. Lorentz*
Edward F. Lorentz

This report dated:
July 15, 1955



KANSAS CITY, MO.

WASHINGTON, D. C.



**PROPOSED OPERATION
KBST-TV CHANNEL 4
BIG SPRING TELEVISION, INC.
BIG SPRING, TEXAS**

COMMERCIAL RADIO EQUIPMENT COMPANY
RADIO ENGINEERING CONSULTANTS 7/19/53

**INSTRUMENT APPROACH
CHART-RNG**

MINIMUM SAFE ALTITUDES
100 Nautical Miles 5000
25 Nautical Miles 3900

**WEBB A.F.B.
BIG SPRING, TEXAS**

EXHIBIT NO. E-3

WEBB AFB TOWER
236.6 126.18
Consult radio facility charts
for latest information

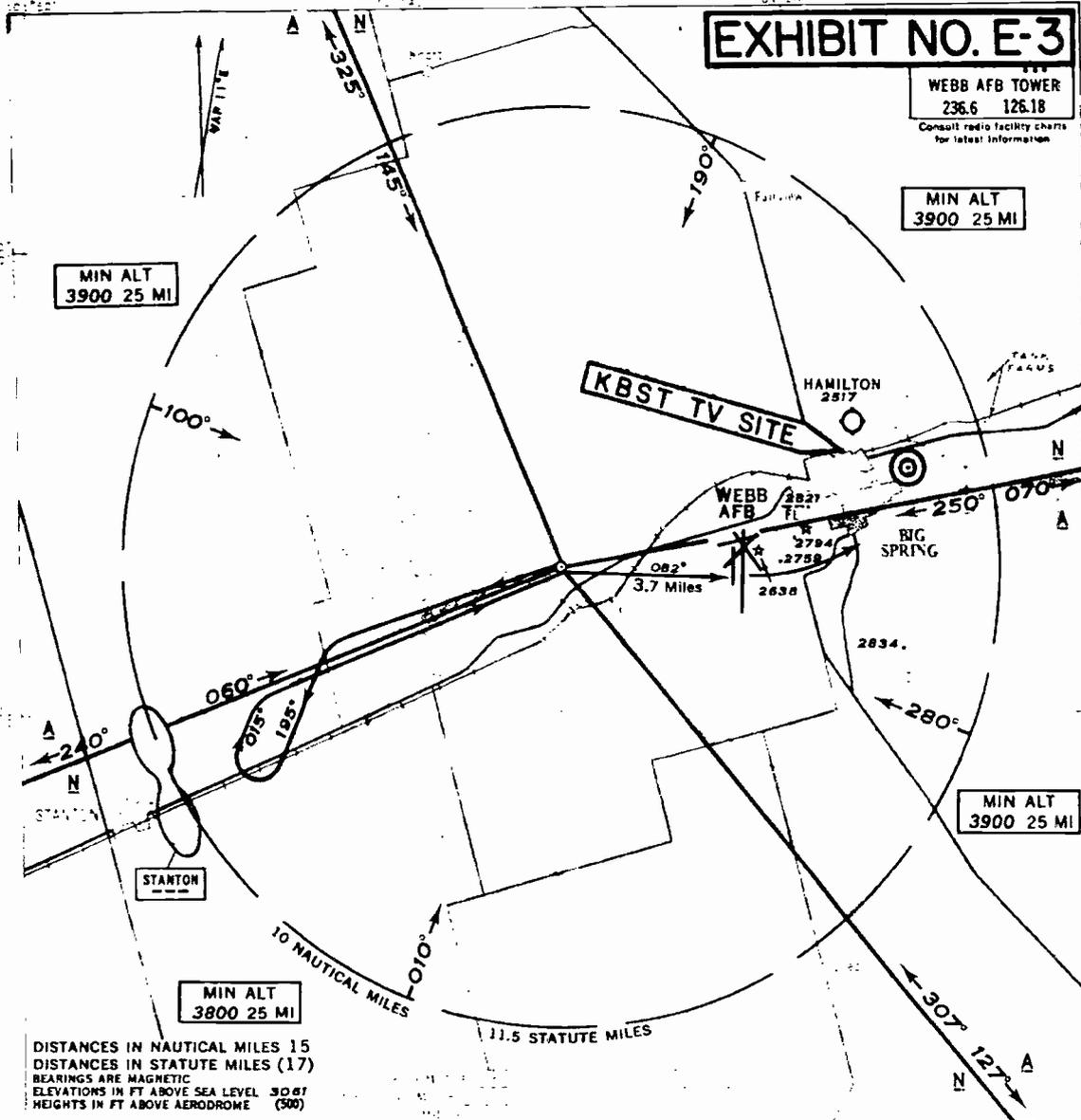
MIN ALT
3900 25 MI

MIN ALT
3900 25 MI

MIN ALT
3900 25 MI

MIN ALT
3800 25 MI

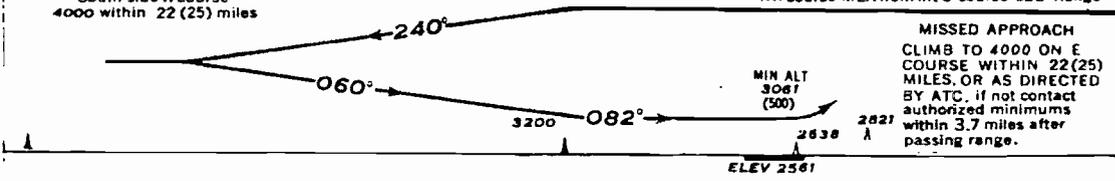
DISTANCES IN NAUTICAL MILES 15
DISTANCES IN STATUTE MILES (17)
BEARINGS ARE MAGNETIC
ELEVATIONS IN FT ABOVE SEA LEVEL 30.87
HEIGHTS IN FT ABOVE AERODROME (500)



STANDARD INSTRUMENT APPROACH PROCEDURE

FM PROCEDURE TURN
South side Wcourse
4000 within 22 (25) miles

INITIAL APPROACH
E course MEA from ABI Range
SE course MEA from int SW course SJT Range
W course MEA from int NW course MAF Range
3200 from Stanton FM (Final)
NW course MEA from int S course LBB Range



TIME	NAME
26 SEPT 1952	
PRICE FIVE CENTS	

02:35	02:09	01:51	01:37	02:28	02:13	02:01	01:51	01:42
26 SEPT. 1952								AL-47-RNG

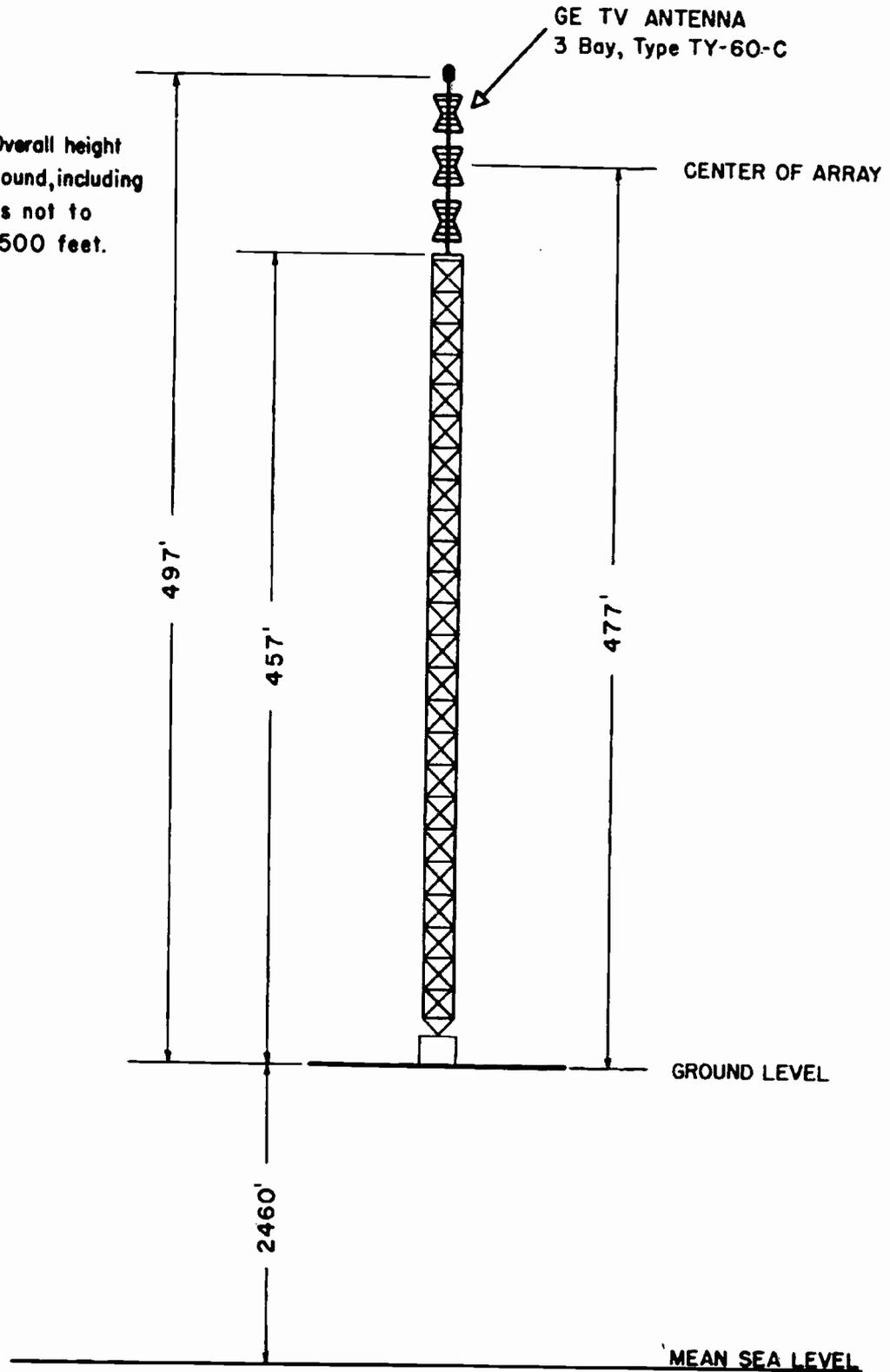


COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants

WASHINGTON, D.C. 7/15/55 KANSAS CITY

PROPOSED ANTENNA
KBST-TV
BIG SPRING TELEVISION INC.
BIG SPRING, TEXAS

NOTE: Overall height above ground, including beacon, is not to exceed 500 feet.



COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants

WASHINGTON, D. C.

7/15/55

KANSAS CITY

PROPOSED ANTENNA
KBST-TV
BIG SPRING TELEVISION INC.
BIG SPRING, TEXAS