

SELLMEYER ENGINEERING
BROADCAST & COMMUNICATION CONSULTING ENGINEERS
P. O. Box 356 McKinney, Texas 75070
MEMBER AFCCE

EXHIBIT E-1

**ENGINEERING STATEMENT IN SUPPORT OF
APPLICATION FOR CONSTRUCTION PERMIT
AND ONE STEP UPGRADE
RANDALL C. WRIGHT
CHANNEL 270C2, 42.7 KW-ERP, 161 MTRS AAT
ELDON, MISSOURI
FACILITY NUMBER: 168951
FM AUCTION 62/MM-FM-402A**

FEBRUARY, 2006

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RANDALL C. WRIGHT
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ONE STEP UPGRADE

ENGINEERING STATEMENT

EXHIBIT E1-1 FM Spacing Study

EXHIBIT E1-2 Vertical Sketch of Antenna System

EXHIBIT E1-3 Tabulation of Distances to Contours

EXHIBIT E1-4 Map Showing Proposed Service Contours

Certification of Engineer

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This Firm has been retained by Randall C. Wright ("Wright") to prepare this Engineering Statement in support of its application for construction permit. The instant application proposes to construct a new Class C2 FM Broadcast Station at Eldon, Missouri. Wright is the winner of Auction 62 MM-FM-402A, channel 270A at Eldon, Missouri. This application proposes a one step upgrade to channel 270C2 at the proposed location using an existing registered tower.

ALLOCATION CONSIDERATIONS

The proposed transmitter site meets the minimum spacings under Section 73.207 of the Rules as shown in the FM spacing study of Exhibit E1-1. It is noted that three apparent short spacings exist in the exhibit. The footnotes explain them as follows:

Note 1 is the applicant's preferred site, near that of the existing tower to be used for the proposed site.

Note 2 is that of an unsuccessful bidder for MM-FM-403A, channel 271A at Cuba, Missouri.

Note 3 is the facility of Station KCKC, Kansas City, Missouri which is presently operating as a Class C0 facility. It is requested that the facility be reclassified as a class C0 facility. Absent such reclassification, the proposed facility can operate under Section 73.215 of the Rules from the proposed site.

PROPOSED TRANSMITTER SITE & ANTENNA SYSTEM

The system will employ a ten element, side mounted antenna employing one half wavelength spacing. A vertical sketch of the proposed tower and antenna system is attached hereto as Exhibit E1-2. The tower is an existing tower bearing ASR number 1007049. The site was previously licensed to station KBMX which operated as a class A facility on channel 270.

PREDICTED COVERAGE CONTOURS

The distances to contours were calculated by a computer program maintained by this Firm which accurately emulates the F(50,50) curves contained in Section 73.333 of the Rules. The height above average terrain for the eight standard radials was calculated from a program which uses linear interpolation of the NGDC thirty second terrain database.

The center of radiation of the antenna was calculated from the tower height and antenna data

determined from the elevation data listed on Exhibit E1-2, the vertical sketch of the proposed antenna system. The ground level and overall height above ground were taken from ASR # 1007049. Details of the tower shown in the vertical sketch of Exhibit E1-2 were furnished by the tower owner.

A tabulation of the distances to the proposed service contours appears herein as Exhibit E1-3. The proposed facility will satisfy all allocation requirements of Section 73.315 of the rules. It will illuminate the entire city limits of Eldon, Missouri with a signal strength in excess of 3.16 mV/m (70 dBu) as demonstrated by the map of Exhibit E1-4.

There is one FM broadcast station, one FM translator station and one television station within 10 kilometers of the proposed site. There are no AM broadcast stations within 3 kilometers of the proposed site. The FM broadcast and translator stations are more than six kilometers distant. The television station is a UHF station on channel 49 located 1.8 kilometers from the proposed site. It is the judgment of the undersigned that the distances and frequencies involved make it very unlikely that any receiver induced interference of significance will occur.

Should any such problems be reported, Wright will undertake the necessary remedies in accordance with the Rules of the Commission.

ANSI RADIATION COMPLIANCE

The proposed facility will operate with 42.7 kilowatts effective radiated power in each plane, using a ten element, one half wavelength spaced antenna, from a height above ground level of 140.5 meters. The power density at six feet above ground level is calculated to be 0.008 mW/cm², 0.8 percent of the allowable maximum for controlled exposure. This is 3.8 percent of the 200 uW/cm² limit for uncontrolled areas.

The power density was calculated using the maximum field toward the ground for the proposed antenna with the model of OST Bulletin 65 edition 97-01. It is evident that the proposed facility will be in compliance with Commission Guidelines. During maintenance periods when it is necessary for work to be performed within hazardous areas, the station will reduce power to the extent required or cease operation for the period necessary. The tower base and transmitter building will be fenced to limit access to authorized personnel. Sufficient warning signs will be posted in the area to warn casual visitors to the site of the potential for radiofrequency radiation exposure.

MAIN STUDIO LOCATION

The main studio will be located within the 70 dBu contour.

ENVIRONMENTAL MATTERS

The facility will be located on an existing tower with the transmitter located in an existing building suitable for the purpose. No new construction is required. Thus the facility is exempt from environmental processing under Section 1.1307 of the Rules.

Upon grant of this application, the applicant is prepared to promptly construct the facilities and place the station in operation.

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EXHIBIT E1-1
FM SPACING STUDY AT PROPOSED SITE
RANDALL C. WRIGHT
CHANNEL 270C2
ELDON, MISSOURI
AUCTION 62/MM-FM-403A
FACILITY NUMBER: 165951

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FM Study for: NEW                      FCC Database Date: 2/10/2006    38-16-46
Location: ELDON, MO                    Channel Class: C2          92-35-06
      [*] by HAAT indicates calculated as missing in database.
Call   City, State                     Chan Class Freq  kW  Latitude  Dist.  Required
Status Proponent                      File Number HAAT Longitude Azm.   Clear (km)
-----
>>>>>>> Study For Channel 270  101.9 mHz <<<<<<<<

NEW    ELDON, MO                        270 A  101.9           38-16-49    0.1  166
APP    Fac. No. 165951    BSFH-20050812ATY  0    92-35-07  345.2 -165.9  SHORT 1
      Use of 73.215 for short spacing requires: 143    -142.9  SHORT

ALLOC  ELDON, MO                        270 A  101.9           38-16-49    0.1  166
VAC    Fac. No. 36262    Docket-1985-260    0    92-35-07  345.2 -165.9  SHORT
      Use of 73.215 for short spacing requires: 143    -142.9  SHORT

NEW    CUBA, MO                        271 A  102.1           38-10-50   98.3  106
APP    Fac. No. 165359    BSFH-20050812ASD  0    91-28-11   96.1   -7.7  SHORT 2
      Use of 73.215 for short spacing requires:  89     +9.3  CLOSE

KCKC   KANSAS CITY, MO                271 C  102.1  100.    39-05-26  187.23 188
LIC    Fac. No. 11279    BLH-20010920AAG 341    94-28-18  299.3  -0.77  SHORT 3
      Use of 73.215 for short spacing requires: 176     +11.2  CLOSE

ALLOC  CUBA, MO                        271 A  102.1           38-03-54  106.25 106
VAC    Fac. No. 36261    Docket-1984-231    0    91-24-12  102.6  +0.25  CLOSE

NEW    CUBA, MO                        271 A  102.1           38-03-54  106.25 106
APP    Fac. No. 165955    BSFH-20050812AUC  0    91-24-12  102.6  +0.25  CLOSE 4

KPLA   COLUMBIA, MO                  268 C1 101.5  41.0    39-00-52   85.9   79  73.215
LIC    Fac. No. 12429    BLH-19980306KB  324    92-16-32   18.2   +6.9  CLOSE

ALLOCR KANSAS CITY, MO                271 C  102.1           39-04-20  195.8  188
DEL    RM-KS184          0    94-35-45  297.3   +7.8  CLOSE

KJPWFM WAYNESVILLE, MO              272 A  102.3  2.65    37-49-09   63.7   55  73.215
LIC    Fac. No. 53876    BLH-19971128KC  150    92-09-06  143.2   +8.7  CLOSE

ALLOCR KANSAS CITY, MO                271 C0 102.1           39-05-26  187.2  176
ADD    RM-KS213          0    94-28-18  299.3  +11.2  CLOSE

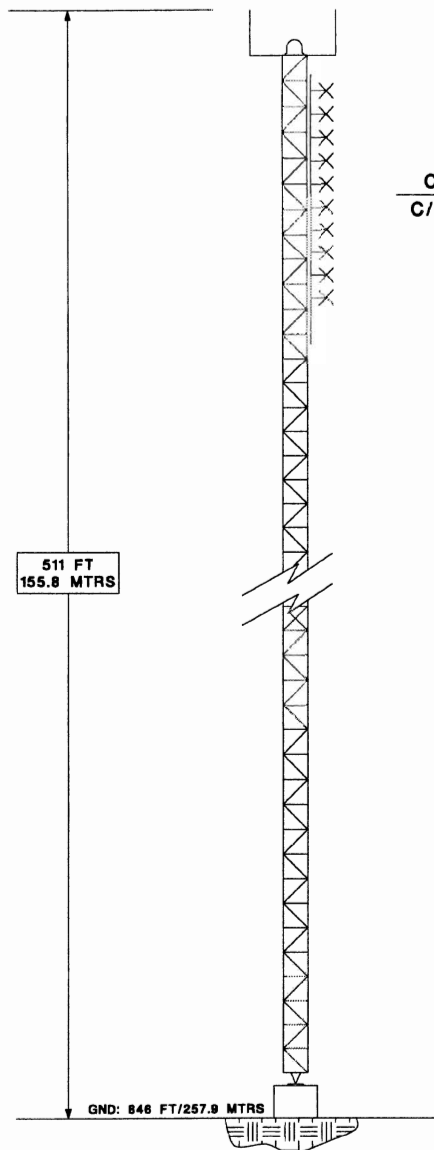
KTXR   SPRINGFIELD, MO              267 C  101.3  97.8    37-11-41  124.3  105
LIC    Fac. No. 63339    BLH-20030124AEU 454    92-56-07  194.5  +19.3  CLEAR

ALLOCR KANSAS CITY, MO                271 C0 102.1           39-04-20  195.8  176
ADD    RM-KS184          0    94-35-45  297.3  +19.8  CLEAR

KQRA   BROOKLINE, MO                 271 A  102.1  4.90    37-12-39  131.5  106
LIC    Fac. No. 79138    BLH-20020607AAT 110    93-13-42  205.7  +25.5  CLEAR

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- 1 APPLICANT, WINNING BIDDER FOR MM-FM-403A, CHAN 270A
- 2 UNSUCCESSFUL BIDDER FOR CUBA, MO. CHAN 271A MM-FM-402A
- 3 STATION OPERATING AS CLASS C0, REQUIRED SPACING IS 176 KILOMETERS; Therefore, no short spacing exists.
- 4 SUCCESSFUL BIDDER FOR CUBA, MO. CHAN 271A, MM-FM-402A



C/R: 461 FT/140.5 MTRS AGL
C/R: 1307 FT/398.4 MTRS AMSL

511 FT
155.8 MTRS

GND: 846 FT/257.9 MTRS

FACILITY # 165951
ASR# 1007049

TOWER LOCATION:
N.L.: 38° 16' 46"
W.L.: 92° 35' 06"
NAD-27

N.L.: 38° 16' 46.0"
W.L.: 92° 35' 07.0"
NAD-83

NOT TO SCALE

PROJECT NO:

SELLMEYER ENGINEERING

P.O. BOX 356
McKinney, Texas 75070

PREP: 20060211, JSS

EXHIBIT E1-2
VERTICAL SKETCH OF ANTENNA SYSTEM
PROPOSED CHAN 270C2
ELDON, MISSOURI
RANDALL C. WRIGHT

CHK:

APPVD:

REV:

DWG NO:

SHT: 1 OF 1

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EXHIBIT E1-3
TABULATION OF DISTANCES TO CONTOURS
RANDALL C. WRIGHT
CHANNEL 270C2
ELDON, MISSOURI
AUCTION 62/MM-FM-403A
FACILITY NUMBER: 165951

DISTANCES TO CONTOURS (Kilometers):

Frequency: 101.9 MHz Channel: 270C2

Coordinates: N.L.: 38° 16' 46"

W.L.: 92° 35' 06"

F(50,50) Curves Number of Contours: 2

<u>AZ</u> <u>(deg)</u>	<u>HAAT</u> <u>(m)</u>	<u>ERP</u> <u>(kW)</u>	<u>CONTOUR</u> <u>70.0</u>	<u>LEVELS (dBu):</u> <u>60.0</u>
.0	127	48.7000	30.0	48.7
45.0	143	48.7000	31.7	51.0
90.0	180	48.7000	35.5	55.3
135.0	177	48.7000	35.2	55.0
180.0	170	48.7000	34.5	54.4
225.0	187	48.7000	36.1	56.0
270.0	165	48.7000	34.0	53.8
315.0	137	48.7000	31.0	50.1

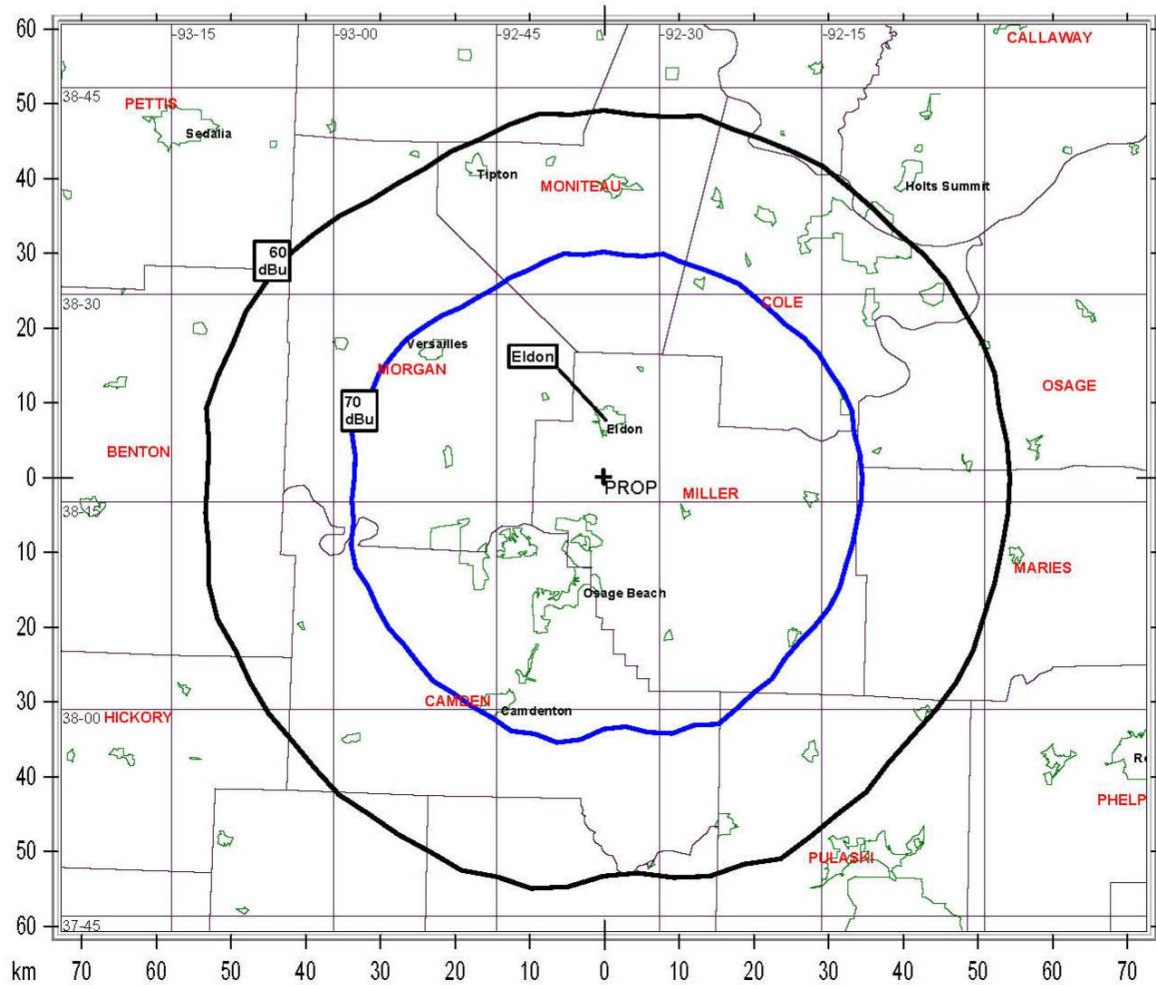
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EXHIBIT E1-4
MAP SHOWING CALCULATED SERVICE CONTOURS
RANDALL C. WRIGHT
CHANNEL 270C2
ELDON, MISSOURI
AUCTION 62/MM-FM-403A
FACILITY NUMBER: 165951



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CERTIFICATION OF ENGINEER

I hereby state that:

I am President of Sellmeyer Engineering

The Firm of Sellmeyer Engineering has been retained by Randall C. Wright to prepare this Engineering Exhibit

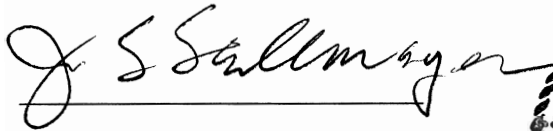
I am a graduate of Arizona State University with the degree of Bachelor of Science in Engineering

I am a Registered Professional Engineer in the States of Ohio and Texas

My qualifications as an Engineer are a matter of record with the Federal Communications Commission

This Engineering Exhibit was prepared by me personally or under my direct supervision, and

All facts stated herein are true and correct to the best of my knowledge and belief.



J. S. Sellmeyer, P. E.

February 11, 2006

P. O. Box 356
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