

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

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**EXHIBIT E-1**

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**ENGINEERING STATEMENT IN SUPPORT OF  
APPLICATION FOR CONSTRUCTION PERMIT  
MJ COMMUNICATIONS, INC.  
CHANNEL 285A, 5.18 KW-ERP, 107 MTRS AAT  
MEXIA, TEXAS  
FACILITY NUMBER: 21494**

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**JULY, 2005**

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

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**ENGINEERING STATEMENT IN SUPPORT OF**  
**APPLICATION FOR CONSTRUCTION PERMIT**  
**SIMMONS-AUSTIN, LS LLC**  
**CHANNEL 285A, 5.18 KW-ERP, 107 METERS AAT**  
**MEXIA, TEXAS**

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FCC FORM 301

ENGINEERING STATEMENT

EXHIBIT E1-1 FM Spacing Study

EXHIBIT E1-2 Vertical Sketch of Antenna System

EXHIBIT E1-3 Map Showing Proposed Site

EXHIBIT E1-4 Map Showing Existing & Proposed Service Contours

EXHIBIT E1-5 Map Showing Existing & Proposed 70 dBu Contours

EXHIBIT E1-6 Tabulation of Distances to Contours

Certification of Engineer

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. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

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

### SECTION III PREPARER'S CERTIFICATION

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

Name	Relationship to Applicant (e.g., Consulting Engineer)	
J. S. SELLMEYER, P. E.	CONSULTING ENGINEER	
Signature	Date	
	JULY 14, 2005	
Mailing Address		
P.O. BOX 356		
City	State or Country (if foreign address)	ZIP Code
McKinney	Texas	75070
Telephone Number (include area code)	E-Mail Address (if available)	
214-495-9764	jack@sellmeyerengineering.com	

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

**SECTION III-B FM Engineering****TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

1. Channel: 285
2. Class: ☒A ☐B1 ☐B ☐C3 ☐C2 ☐C1 ☐C ☐D
3. Antenna Location Coordinates: (NAD 27)  
31 ° 39 ' 17 " ☒N ☐S Latitude  
96 ° 36 ' 43 " ☐E ☒W Longitude
4. One-Step Proposal Allotment Coordinates: (NAD 27) ☐Not applicable  
\_\_\_\_ ° \_\_\_\_ ' \_\_\_\_ " ☐N ☐S Latitude  
\_\_\_\_ ° \_\_\_\_ ' \_\_\_\_ " ☐E ☐W Longitude
5. Antenna Structure Registration Number: PENDING  
☐Not applicable ☒FAA Notification Filed with FAA
6. Overall Tower Height Above Ground Level: 111.3 meters
7. Height of Radiation Center Above Mean Sea Level: 264.0 meters (H) 264.0 meters (V)
8. Height of Radiation Center Above Ground Level: 104.2 meters (H) 104.2 meters (V)
9. Height of Radiation Center Above Average Terrain: 107.0 meters (H) 107.0 meters (V)
10. Effective Radiated Power: 5.18 kW (H) 5.18 kW (V)
11. Maximum Effective Radiated Power: ☒Not applicable \_\_\_\_\_ kW (H) \_\_\_\_\_ kW (V)  
(Beam-Tilt Antenna ONLY)
12. Directional Antenna Relative Field Values: ☒Not applicable (Nondirectional)  
Rotation: \_\_\_\_\_ ° ☐No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

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

**CERTIFICATION**

**AUXILIARY ANTENNA APPLICANTS ARE NOT REQUIRED TO RESPOND TO ITEMS 13-16.  
PROCEED TO ITEM 17.**

13. **Allotment.** The proposed facility complies with the allotment requirements of 47 C.F.R. Section 73.203. ☒ Yes ☐ No 

See Explanation in Exhibit No. E-1
--
14. **Community Coverage.** The proposed facility complies with 47 C.F.R. Section 73.315. ☒ Yes ☐ No 

See Explanation in Exhibit No. E-1
--
15. **Main Studio Location.** The proposed main studio location complies with 47 C.F.R. Section 73.1125. ☒ Yes ☐ No 

See Explanation in Exhibit No. E-1
--
16. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. ☒ Yes ☐ No 

See Explanation in Exhibit No. E-1
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**Separation Requirements.**

- a. ☒ 47 C.F.R. Section 73.207.

**Grandfathered Short-Spaced.**

- b. ☐ 47 C.F.R. Section 73.213(a) with respect to station(s): \_\_\_\_\_  
**Exhibit Required.**

Exhibit No.
-------------

- c. ☐ 47 C.F.R. Section 73.213(b) with respect to station(s): \_\_\_\_\_  
**Exhibit Required.**

Exhibit No.
-------------

- d. ☐ 47 C.F.R. Section 73.213(c) with respect to station(s): \_\_\_\_\_  
**Exhibit Required.**

Exhibit No.
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**Contour Protection.**

- e. ☐ 47 C.F.R. Section 73.215 with respect to station(s): \_\_\_\_\_  
**Exhibit Required.**

Exhibit No.
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17. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.** ☒ Yes ☐ No 

See Explanation in Exhibit No. E-1
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By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

**PREPARER'S CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.**

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

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**ENGINEERING STATEMENT IN SUPPORT OF  
APPLICATION FOR CONSTRUCTION PERMIT  
MJ COMMUNICATIONS, INC.  
CHANNEL 285A, 5.18 KW-ERP, 107 MTRS AAT  
MEXIA, TEXAS  
FACILITY NUMBER: 21494  
JULY, 2005**

=====

This Firm has been retained by MJ Communications, Inc. ("MJ") to prepare this Engineering Statement in support of its application for construction permit. The instant application proposes to relocate the transmitter site and increase the height above average terrain and effective radiated power of FM Broadcast Station KYCX channel 285A in the community of Mexia, Texas.

ALLOCATION CONSIDERATIONS

The transmitter site and antenna system exceeds the minimum spacings under Section 73.207 of the Rules as shown in the FM spacing study of Exhibit E1-1.

PROPOSED TRANSMITTER SITE & ANTENNA SYSTEM

The antenna system will be a four element, side mounted antenna employing full wave spacing. A vertical sketch of the proposed tower and antenna system is attached hereto as Exhibit E1-2. The Federal Aviation Administration Southwest Regional Office has been notified of the proposed construction. Upon receipt of a Determination of No Hazard to Air Navigation, the tower will be promptly registered and the Staff notified of the registration number.

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 elevation at ground level at the proposed site was taken from the Tehuacana, Texas 7.5 minute topographical map, a copy of which is attached as Exhibit E1-3.

The calculated service contours appear herein on the map of Exhibit E1-4. The proposed facility will satisfy all allocation requirements of Section 73.315 of the rules. It will illuminate the entire city limits of Mexia, Texas with a signal strength in excess of 3.16 mV/m (70 dBu) as demonstrated by the map of Exhibit E1-5. A tabulation of the distances to the proposed service contours appears

herein as Exhibit E1-6.

The proposed location meets all of the spacing requirements of Section 73.207 of the Rules as demonstrated by Exhibit E1-1, a spacing study at the proposed transmitter site coordinates.

There are no FM broadcast or television stations within 10 kilometers of the proposed site and no AM broadcast stations within 3 kilometers of the proposed site.

Due to the remote location of the transmitting facility, no receiver induced intermodulation problems are expected to occur. Should any such problems be reported, MJ will undertake the necessary remedies in accordance with the Rules of the Commission.

#### ANSI RADIATION COMPLIANCE

The proposed facility will operate with 5.18 kilowatts effective radiated power in each plane from a height above ground level of 104 meters. The worst case power density at six feet above ground level is calculated to be 3.2 uW/cm<sup>2</sup>, 3.2 percent of the allowable maximum for controlled exposure. This is 16.0 percent of the 200 uW/cm<sup>2</sup> limit for uncontrolled areas.

The power density was calculated using the "worst case" 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 a new tower west of Mexia in rural East Texas adjacent to a stone quarry. No significant disturbance of the land is required to construct and maintain the proposed facilities. The site is in an area which is not affected by any of the environmental factors of 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.

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

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**EXHIBIT E1-1**  
**FM SPACING STUDY AT PROPOSED SITE**  
**RADIO STATION KYCX-FM**  
**CHANNEL 285A**  
**MEXIA, TEXAS**

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FM Study for: KYCXFM          FCC Database Date: 7/7/2005          31-39-17
Location: MEXIA, TX          Channel Class: A          96-36-43
    [*] 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)
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>>>>>> Study For Channel 285 104.9 mHz <<<<<<<

KYCXFM MEXIA, TX          285 A 104.9 2.10 31-42-25 10.2 115
LIC Fac. No. 21494        BLH-19830907AN 107 96-31-23 55.5 -104.8 SHORT
    Use of 73.215 for short spacing requires: 92 -81.8 SHORT

ALLOC MERIDIAN, TX        285 A 104.9          31-59-07 108.4 115
VAC Fac. No. 96570        Docket-1997-124 0 97-41-22 290.0 -6.6 SHORT*
    Use of 73.215 for short spacing requires: 92 +16.4 CLEAR

KKYS BRYAN, TX            284 C2 104.7 50.0 30-42-59 106.51 106
LIC Fac. No. 54903        BLH-19891113KC 87 96-22-20 167.5 +0.51 CLOSE

ALLOCR PILOT POINT, TX    285 C0 104.9          33-37-37 219.6 215
ADD Docket-2001-269 0 96-49-32 354.8 +4.6 CLOSE

KNVR CAMERON, TX          286 C3 105.1 15.0 30-51-30 96.8 89 73.215
CP Fac. No. 84381        BPH-19981202IA 100 97-01-47 204.4 +7.8 CLOSE

KLLI DALLAS, TX           287 C 105.3 97.0 32-35-05 108.3 95
LIC Fac. No. 1087        BLH-20040917ABY 574 96-57-46 342.3 +13.3 CLOSE

ALLOCR PILOT POINT, TX    285 C1 104.9          33-33-37 213.8 200
DEL Docket-2001-269 0 96-57-34 351.3 +13.8 CLOSE

KZMPFM PILOT POINT, TX    285 C1 104.9 15.7 33-33-37 213.8 200 73.215
LIC Fac. No. 15854        BLH-19991109ACA 535 96-57-34 351.3 +13.8 CLOSE

KKDAFM DALLAS, TX         283 C 104.5 99.0 32-35-19 108.9 95 73.215
LIC Fac. No. 59702        BLH-20020408AAN 508 96-58-05 342.1 +13.9 CLOSE

ALLOC HICO, TX            285 A 104.9          31-58-54 139.2 115
VAC RM-10120 0 98-01-54 285.5 +24.2 CLEAR

ALLOCR LUFKIN, TX         286 C 105.1          31-22-08 189.4 165
DEL RM-11030 0 94-38-45 99.1 +24.4 CLEAR

ALLOCR LUFKIN, TX         286 C 105.1          31-22-08 189.4 165
DEL RM-10790 0 94-38-45 99.1 +24.4 CLEAR

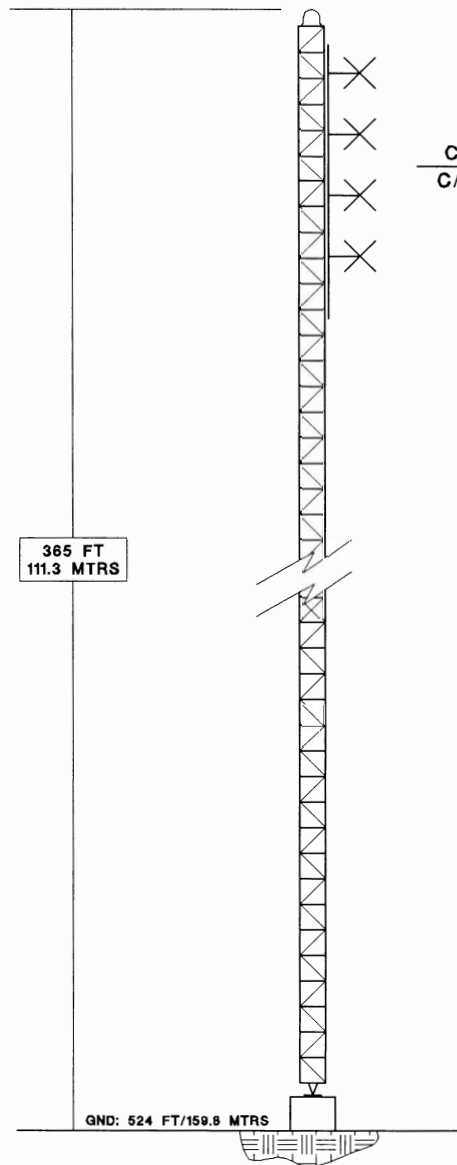
KYKS LUFKIN, TX           286 C 105.1 100. 31-22-08 189.4 165
LIC Fac. No. 25582        BLH-19900827KA 325 94-38-45 99.1 +24.4 CLEAR

ALLOCR LUFKIN, TX         286 C0 105.1          31-22-08 189.4 152
ADD RM-11030 0 94-38-45 99.1 +37.4 CLEAR

```

**\* NOTE: ALLOTMENT CHANGED TO CHAN-237A IN MM DOCKET NO. 01-47**





C/R: 342 FT/104.2 MTRS AGL  
C/R: 866 FT/264.0 MTRS AMSL

FACILITY # 21494  
ASR# PENDING

TOWER LOCATION:  
N.L.: 31° 39' 17"  
W.L.: 96° 36' 43"  
NAD-27

N.L.: 31° 39' 17.60"  
W.L.: 96° 36' 43.95"  
NAD-83

NOT TO SCALE

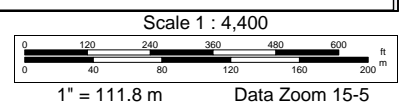
PROJECT NO:		SELLMEYER ENGINEERING  P.O. BOX 356 McKinney, Texas 75070	
PREP: 20050711, JSS			
CHK:		EXHIBIT E1-2 VERTICAL SKETCH OF TOWER PROPOSED KYCX-FM, CHAN 285A SIMMONS-AUSTIN, LS, LLC MEXIA, TEXAS	
APPVD:			
		REV:	DWG NO:
			SHT: 1 OF 1

EXHIBIT E1-3  
MAP SHOWING PROPOSED  
TRANSMITTER SITE  
KYCX-FM  
CHAN 285A, 5.18 KW ERP, 107 MTRS AAT

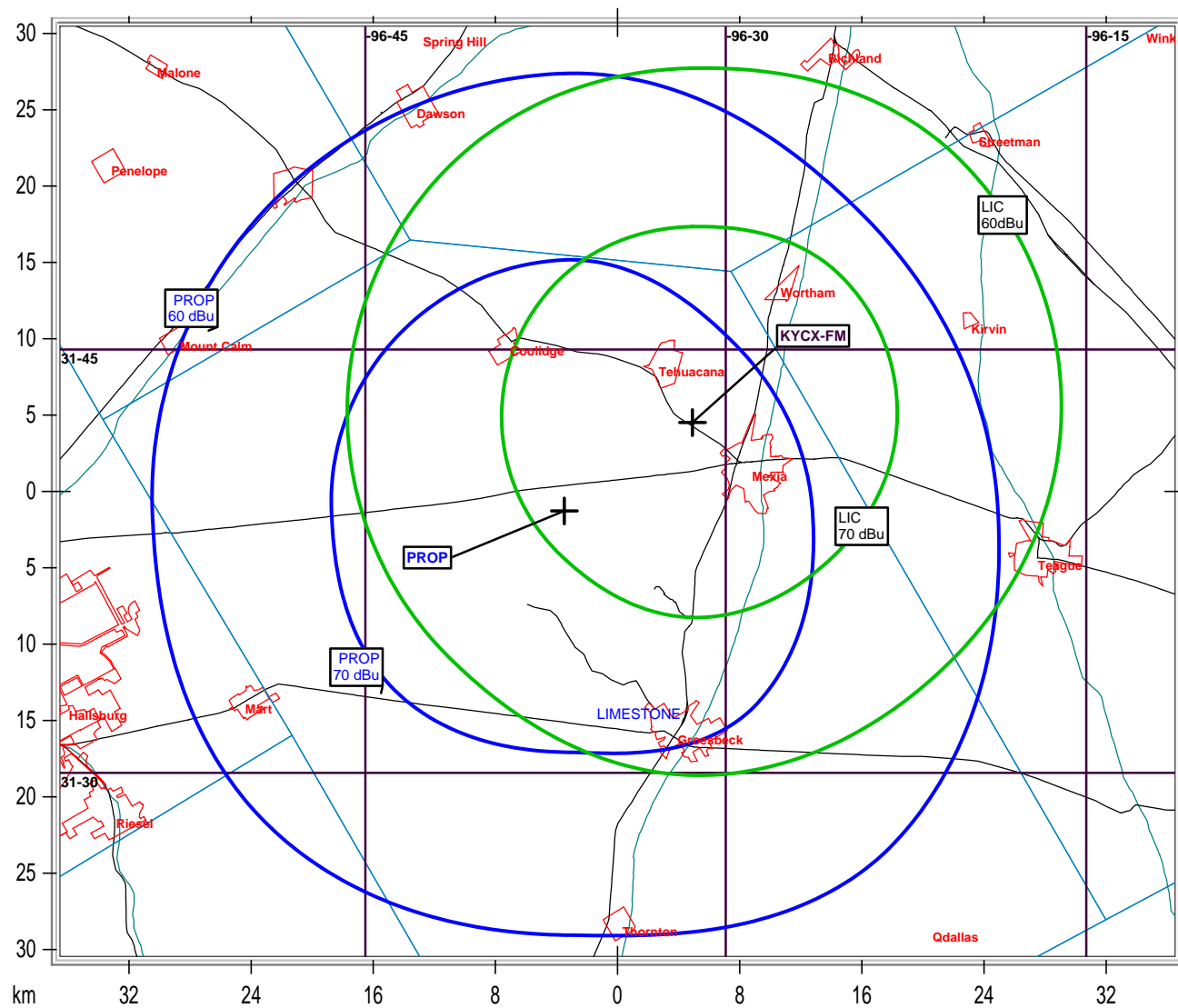
PROPOSED SITE  
34° 39' 17"  
96° 36' 43"  
(NAD-27)

SELLMEYER ENGINEERING  
P.O. BOX 356  
McKinney, Texas 75070

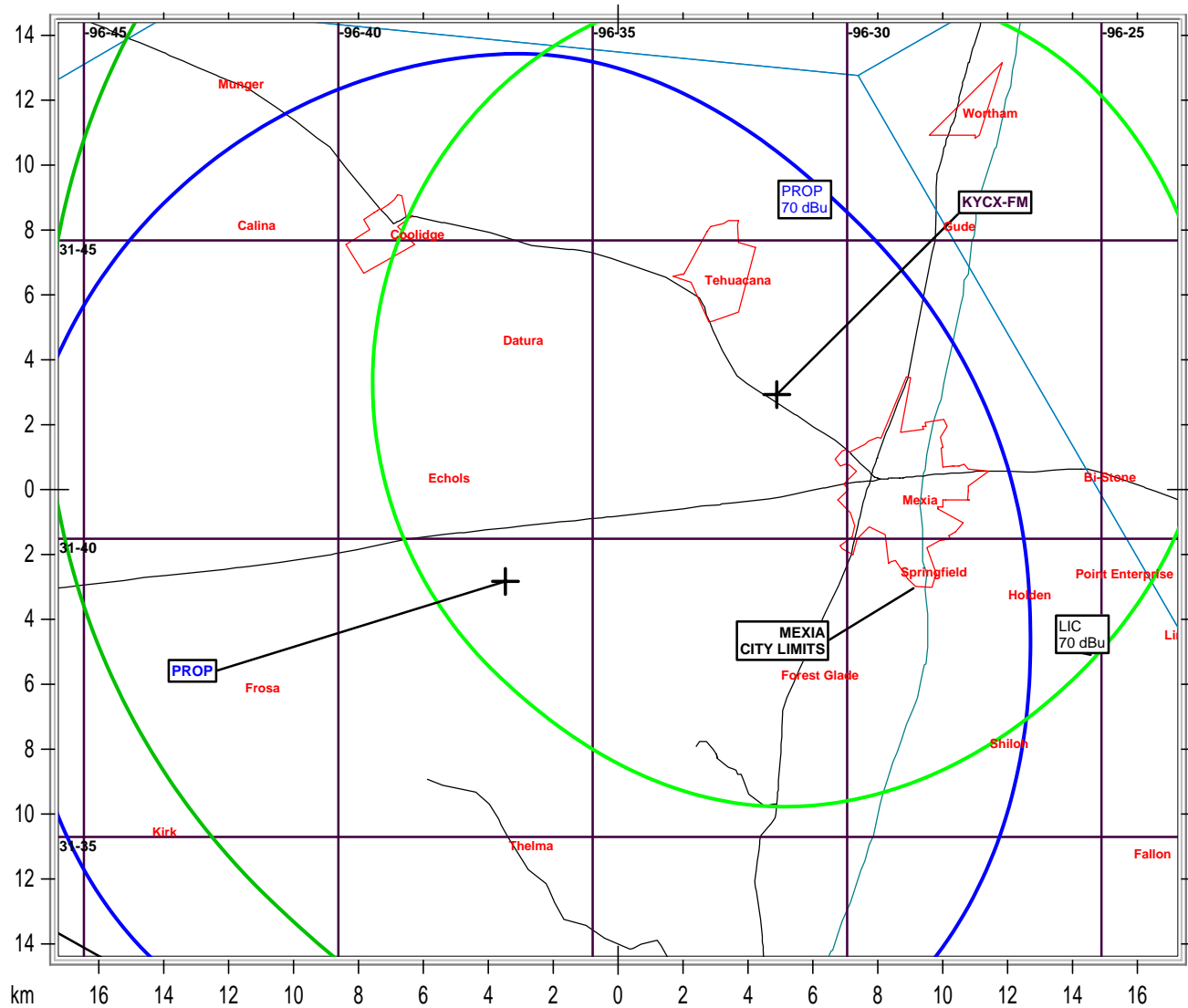
TEHUACANA, TEXAS  
7.5 MINUTE  
USGS TOPO MAP



MAP SHOWING LICENSED & PROPOSED CONTOURS-KYCX-FM



MAP SHOWING LICENSED & PROPOSED 70 dBu CONTOURS-KYCX-FM



**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
P. O. Box 356 McKinney, Texas 75070  
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**EXHIBIT E1-6**  
**TABULATION OF DISTANCES TO CONTOURS**  
**RADIO STATION KYCX-FM**  
**CHAN 285A, 5.18 KW, 107 MTRS AAT**  
**MEXIA, TEXAS**

**LICENSED SITE:**

DISTANCES TO CONTOURS (Kilometers):

Frequency: 104.9000 MHz

Coordinates: N 31 42 25 W 96 31 23

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

AZ (degs)	HAAT (m)	ERP (kW)	CONTOUR 70.0	LEVELS (dBu) 60.0
.0	106	2.1000	12.7	22.9
45.0	122	2.1000	13.5	24.4
90.0	117	2.1000	13.3	24.0
135.0	106	2.1000	12.7	23.0
180.0	105	2.1000	12.6	22.9
225.0	98	2.1000	12.2	22.1
270.0	100	2.1000	12.3	22.3
315.0	109	2.1000	12.8	23.2

**PROPOSED SITE:**

DISTANCES TO CONTOURS (Kilometers):

Frequency: 104.9000 MHz

Coordinates: N 31 39 17 W 96 36 43

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

AZ (degs)	HAAT (m)	ERP (kW)	CONTOUR 70.0	LEVELS (dBu) 60.0
.0	110	5.1800	16.4	28.6
45.0	100	5.1800	15.5	27.4
90.0	110	5.1800	16.4	28.6
135.0	129	5.1800	17.8	30.6
180.0	102	5.1800	15.7	27.6
225.0	108	5.1800	16.2	28.3
270.0	97	5.1800	15.2	27.0
315.0	102	5.1800	15.6	27.6

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

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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 MJ Communications, Inc. 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.

July 14, 2005

P. O. Box 356  
McKinney, Texas 75070  
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