

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 MODIFICATION OF CONSTRUCTION PERMIT
FILE NO: BPH-20050718AFW
SIMMONS AUSTIN, L.S., LLC.
CHANNEL 285A, 2.85 KW-ERP, 147 MTRS AAT
MEXIA, TEXAS
FACILITY NUMBER: 21494**

SECTION 73.215

NOVEMBER, 2005

SELLMEYER ENGINEERING
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ENGINEERING STATEMENT IN SUPPORT OF
APPLICATION FOR MODIFICATIONS OF CONSTRUCTION PERMIT
SIMMONS-AUSTIN, LS, LLC
CHANNEL 285A, 2.85 KW-ERP, 147 METERS AAT
MEXIA, TEXAS

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 Map Showing 73.215 Contours

EXHIBIT E1-7 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	
	NOVEMBER 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 ° 38 ' 39 " ☒ N ☐ S Latitude

96 ° 36 ' 51 " ☐ 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: 145.7 meters

7. Height of Radiation Center Above Mean Sea Level: 304.2 meters (H) 304.2 meters (V)

8. Height of Radiation Center Above Ground Level: 145.7 meters (H) 145.7 meters (V)

9. Height of Radiation Center Above Average Terrain: 147 meters (H) 147 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
--

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.

Contour Protection.

e. ☒ 47 C.F.R. Section 73.215 with respect to station(s): KKYS
Exhibit Required.

Exhibit No. E-1

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
--

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.

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APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
SIMMONS AUSTIN, L.S., LLC
CHANNEL 285A, 2.85 KW-ERP, 147 MTRS AAT
MEXIA, TEXAS
FACILITY NUMBER: 21494
NOVEMBER, 2005
SECTION 73.215**

=====

This Firm has been retained by Simmons Austin, L.S., LLC ("Simmons") to prepare this Engineering Statement in support of its application for modification of construction permit file number BPH-20050718AFW. The instant application proposes to relocate the transmitter site and increase the height above average terrain of FM Broadcast Station KWGW channel 285A in the community of Mexia, Texas.

This application requests processing under Section 73.215 of the Rules with respect to Station KKYS, Bryan, Texas.

ALLOCATION CONSIDERATIONS

The transmitter site and antenna system exceeds the minimum spacings under Section 73.207 of the Rules, with the exception of Station KKYS, Bryan, Texas 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) AND F(50,10) 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 map showing the 73.215 contours of the proposed facility and those of Station KKYS, Bryan, Texas appears herein as Exhibit E1-6. A tabulation of the distances to the proposed service and interfering contours appears herein as Exhibit E1-7.

The proposed location meets all of the spacing requirements of Section 73.207 of the Rules, with the exception of a minor short spacing to Station KKYS, 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, Simmons will undertake the necessary remedies in accordance with the Rules of the Commission.

ANSI RADIATION COMPLIANCE

The proposed facility will operate with 2.85 kilowatts effective radiated power in each plane from a height above ground level of 146 meters. The worst case power density at six feet above ground level is calculated to be 9 uW/cm², 0.9 percent of the allowable maximum for controlled exposure. This is 4.5 percent of the 200 uW/cm² 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.

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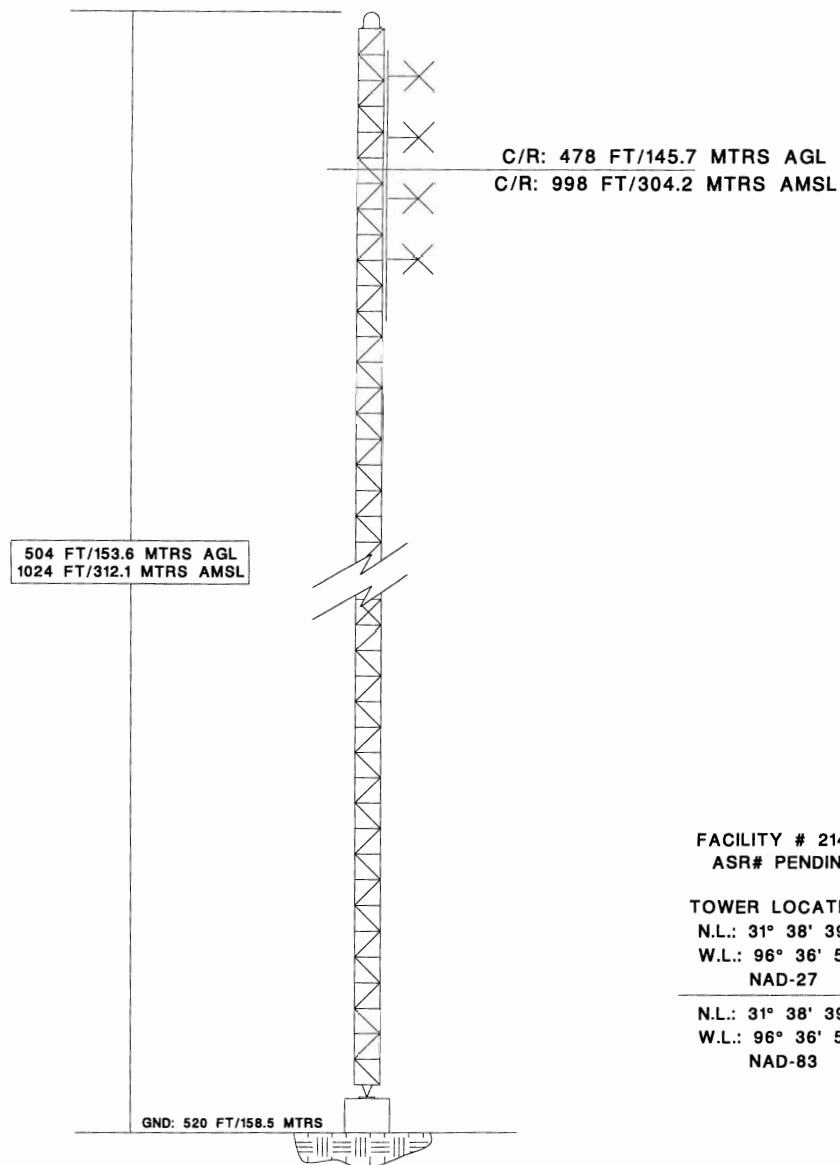
EXHIBIT E1-1
FM SPACING STUDY AT PROPOSED SITE
RADIO STATION KWGW-FM
CHANNEL 285A
MEXIA, TEXAS

FM Study for: KWGW FCC Database Date: 11/11/2005 31-38-39
Location: MEXIA, TX Channel Class: A 96-36-51

[*] 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 285 104.9 mHz <<<<<<<<

KWGW	MEXIA, TX	285 A	104.9	5.18	31-39-17	1.2	115	
CP	Fac. No. 21494	BPH-20050718AFW	107		96-36-43	10.2	-113.8	SHORT
	Use of 73.215 for short spacing requires:				92	-90.8		SHORT
KWGW	MEXIA, TX	285 A	104.9	2.10	31-42-25	11.1	115	
LIC	Fac. No. 21494	BLH-19830907AN	107		96-31-23	51.1	-103.9	SHORT
	Use of 73.215 for short spacing requires:				92	-80.9		SHORT
KKYS	BRYAN, TX	284 C2	104.7	50.0	30-42-59	105.42	106	
LIC	Fac. No. 54903	BLH-19891113KC	87		96-22-20	167.3	-0.58	SHORT
	Use of 73.215 for short spacing requires:				89	+16.4		CLEAR
ALLOCR	PILOT POINT, TX	285 C0	104.9		33-37-37	220.7	215	
ADD		Dockt-2001-269	0		96-49-32	354.9	+5.7	CLOSE
KNVR	CAMERON, TX	286 C3	105.1	15.0	30-51-30	95.7	89	73.215
CP	Fac. No. 84381	BPH-19981202IA	100		97-01-47	204.5	+6.7	CLOSE
KLLI	DALLAS, TX	287 C	105.3	97.0	32-35-05	109.4	95	
LIC	Fac. No. 1087	BLH-20040917ABY	574		96-57-46	342.6	+14.4	CLOSE
ALLOCR	PILOT POINT, TX	285 C1	104.9		33-33-37	214.9	200	
DEL		Dockt-2001-269	0		96-57-34	351.4	+14.9	CLOSE
KKDAFM	DALLAS, TX	283 C	104.5	99.0	32-35-19	109.9	95	73.215
LIC	Fac. No. 59702	BLH-20020408AAN	508		96-58-05	342.4	+14.9	CLOSE
KZMPFM	PILOT POINT, TX	285 C1	104.9	15.7	33-33-37	214.9	200	73.215
LIC	Fac. No. 15854	BLH-19991109ACA	535		96-57-34	351.4	+14.9	CLOSE
ALLOC	HICO, TX	285 A	104.9		31-58-54	139.3	115	
VAC		RM-10120	0		98-01-54	286.0	+24.3	CLEAR
ALLOCR	LUFKIN, TX	286 C	105.1		31-22-08	189.4	165	
DEL		RM-11030	0		94-38-45	98.8	+24.4	CLEAR
ALLOCR	LUFKIN, TX	286 C	105.1		31-22-08	189.4	165	
DEL		RM-10790	0		94-38-45	98.8	+24.4	CLEAR
KYKS	LUFKIN, TX	286 C	105.1	100.	31-22-08	189.5	165	
LIC	Fac. No. 25582	BLH-19900827KA	325		94-38-45	98.8	+24.5	CLEAR
ALLOC	MARBLE FALLS, TX	285 C2	104.9		30-36-33	203.0	166	
USE	Fac. No. 95972	Dockt-1997-124	0		98-22-10	236.0	+37.0	CLEAR
ALLOCR	LUFKIN, TX	286 C0	105.1		31-22-08	189.4	152	
ADD		RM-11030	0		94-38-45	98.8	+37.4	CLEAR
ALLOCR	LUFKIN, TX	286 C0	105.1		31-22-08	189.4	152	
ADD		RM-10790	0		94-38-45	98.8	+37.4	CLEAR



NOT TO SCALE

PROJECT NO:		SELLMEYER ENGINEERING	
		P.O. BOX 356 McKinney, Texas 75070	
PREP: 20051111, JSS		EXHIBIT E1-2 VERTICAL SKETCH OF TOWER PROPOSED KWGW, CHAN 285A SIMMONS-AUSTIN, LS, LLC MEXIA, TEXAS	
CHK:			
APPVD:			
		REV:	DWG NO:
			SHT: 1 OF 1

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TEHUACANA, TEXAS USGS 7.5 MINUTE TOPOGRAPHICAL MAP

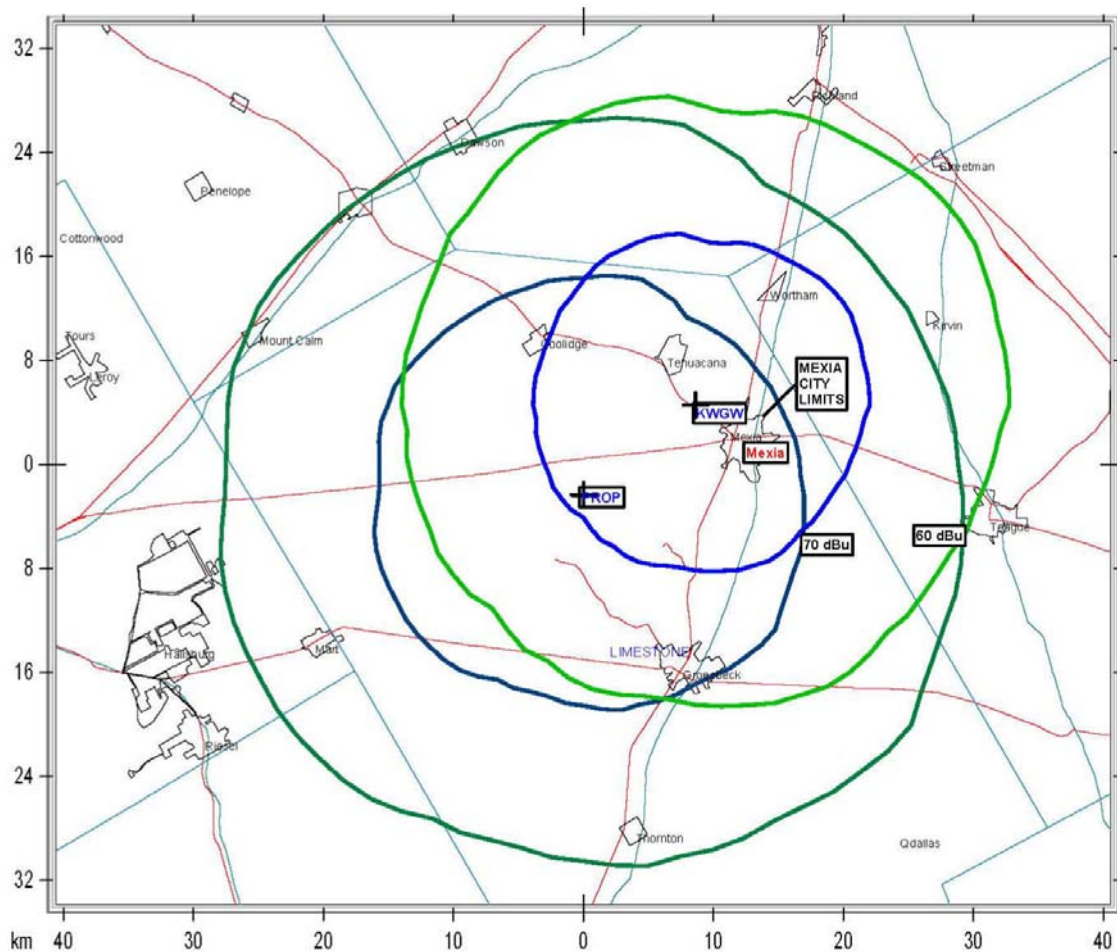
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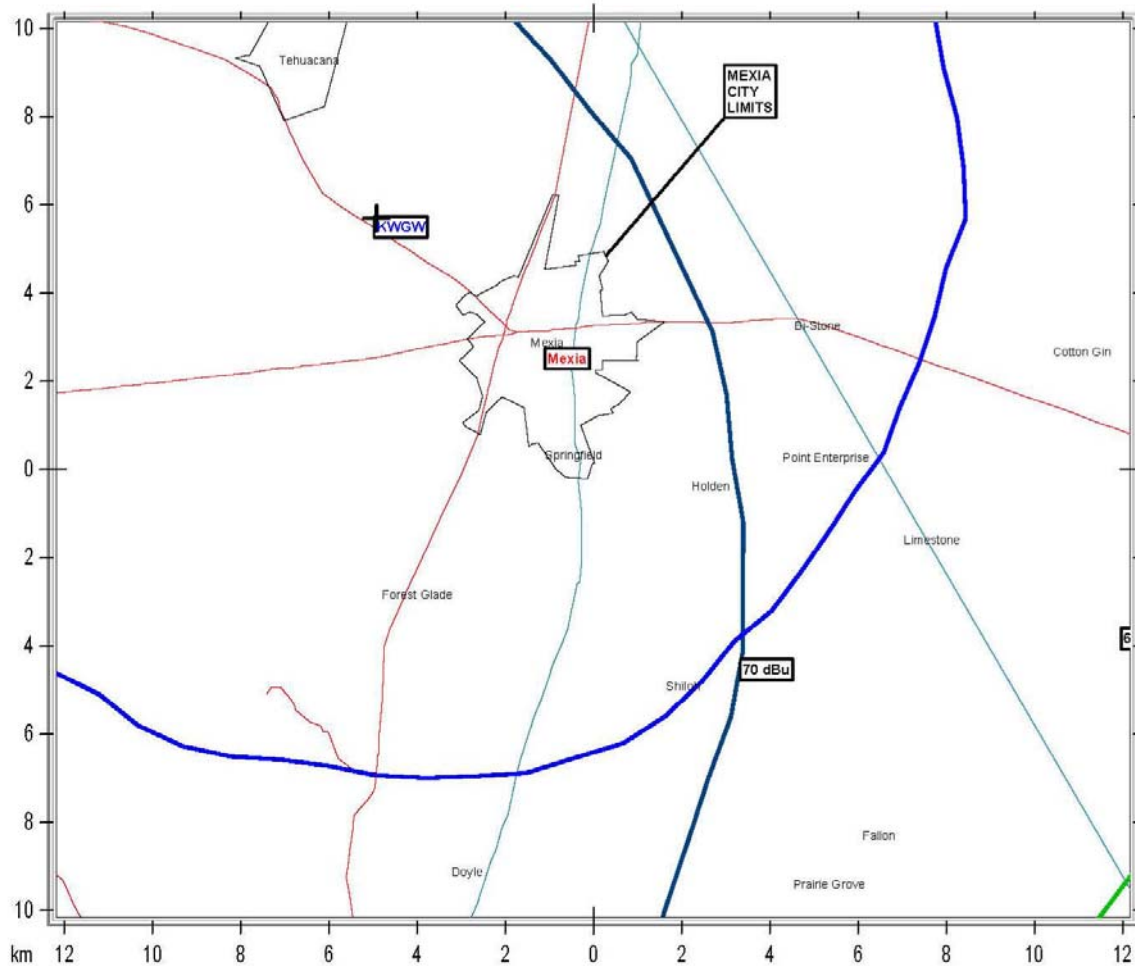
EXHIBIT E1-4 MAP SHOWING EXISTING & PROPOSED CONTOURS RADIO STATION KWGW CHANNEL; 285A, 2.85 KW ERP, 147 MTRS AAT MEXIA, TEXAS



LIGHT CONTOURS: LICENSED
DARK CONTOURS: PROPOSED

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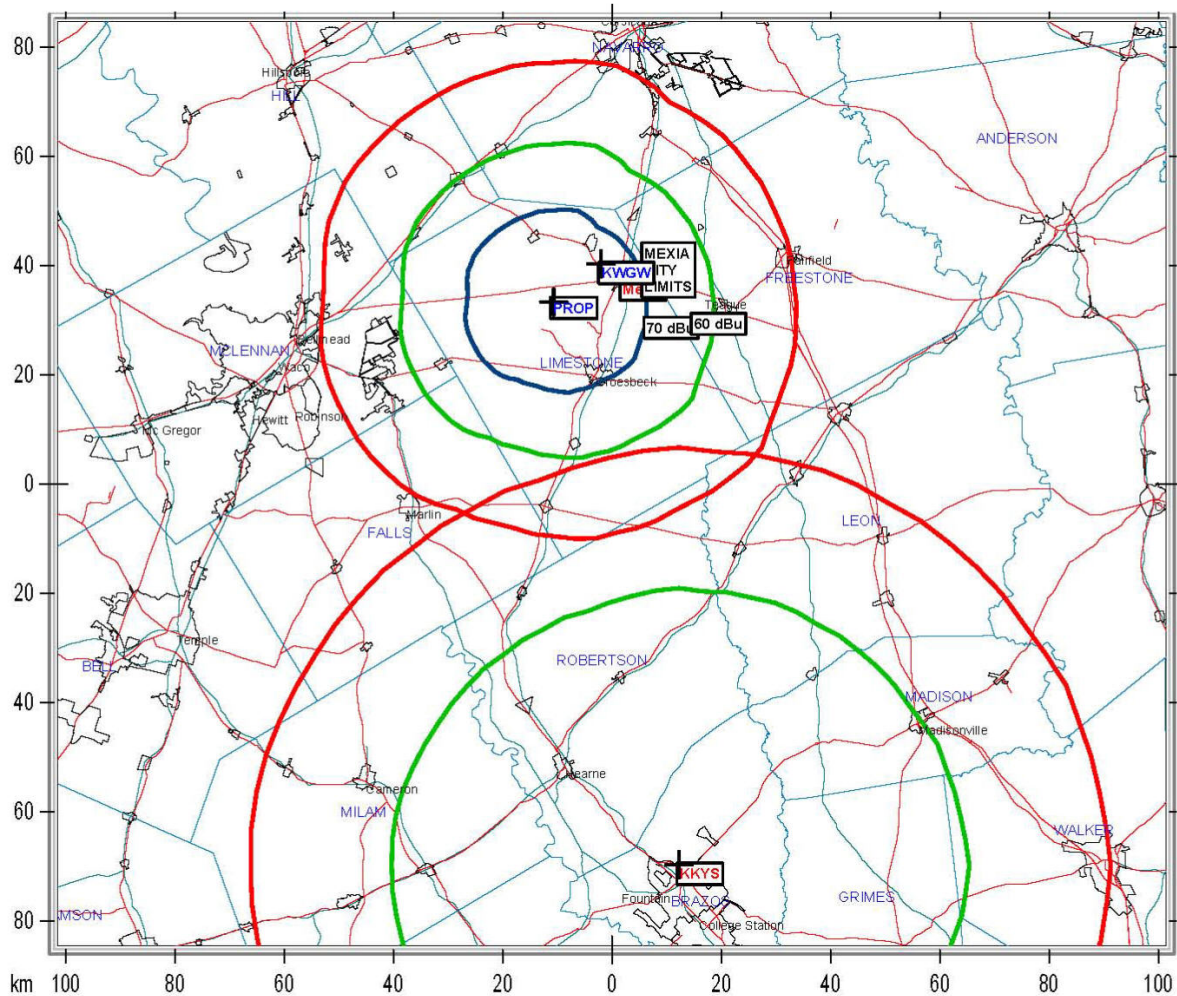
EXHIBIT E1-5
MAP SHOWING 70 dBu CONTOUR DETAIL
RADIO STATION KWGW
CHANNEL; 285A, 2.85 KW ERP, 147 MTRS AAT
MEXIA, TEXAS



LIGHT BLUE CONTOUR: 70 dBu LICENSED
DARK BLUE CONTOUR: 70 dBu PROPOSED

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EXHIBIT E1-6
MAP SHOWING 73.215 CONTOURS
RADIO STATION KWGW
CHANNEL; 285A, 2.85 KW ERP, 147 MTRS AAT
MEXIA, TEXAS



RED CONTOURS: 54 dBu, 10%
GRN CONTOURS: 60 dBu, 50%
KKYS FACILITIES ASSUMED TO BE 50 KW ERP @ 150 MTRS AAT

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EXHIBIT E1-7
TABULATION OF DISTANCES TO CONTOURS
RADIO STATION KWGW
CHANNEL; 285A, 2.85 KW ERP, 147 MTRS AAT
MEXIA, TEXAS

LICENSED SITE

DISTANCES TO CONTOURS (Kilometers):

Frequency: 104.9 MHz

Coordinates: N.L.: 31° 42' 25"

W.L.: 96° 31' 23"

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

AZ (degs)	HAAT (m)	ERP (kW)	CONTOUR LEVELS (dBu):	
--------------	-------------	-------------	-----------------------	--

.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

AVERAGE: 108

PROPOSED SITE

DISTANCES TO CONTOURS (Kilometers):

Frequency: 104.9 MHz

Coordinates: N.L.: 31° 38' 39"

W.L.: 96° 36' 51"

F(50,50) Curves Number of Contours: 3

AZ (degs)	HAAT (m)	ERP (kW)	CONTOUR LEVELS (dBu):	
--------------	-------------	-------------	-----------------------	--

.0	149	2.8500	16.4	28.5	43.2
45.0	142	2.8500	16.0	27.9	42.3
90.0	153	2.8500	16.7	28.8	43.6
135.0	164	2.8500	17.4	29.8	44.9
180.0	141	2.8500	15.9	27.8	42.2
225.0	148	2.8500	16.4	28.4	43.1
270.0	136	2.8500	15.5	27.3	41.5
315.0	144	2.8500	16.1	28.1	42.6

AVERAGE: 147

STATION KKYS

Frequency: 104.7000 MHz

Coordinates: N 30 42 59 W 96 22 20

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

AZ (degs)	HAAT (m)	ERP (kW)	CONTOUR LEVELS (dBu):	
--------------	-------------	-------------	-----------------------	--

.0	138	50.0000	50.5	76.2
45.0	145	50.0000	51.5	77.3
90.0	160	50.0000	53.4	79.5
135.0	157	50.0000	53.1	79.2
180.0	142	50.0000	51.1	76.9
225.0	162	50.0000	53.7	79.9
270.0	157	50.0000	53.1	79.2
315.0	138	50.0000	50.6	76.3

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P. O. Box 356 McKinney, Texas 75070
MEMBER AFCCE

CERTIFICATION OF ENGINEER

I hereby state that:

I am President of Sellmeyer Engineering

The Firm of Sellmeyer Engineering has been retained by Simmons Austin, L.S., LLC. to prepare this Engineering Exhibit

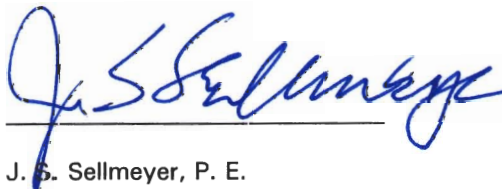
I am a graduate of Arizona State University with the degree of Bachelor of Science in Engineering

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.

November 14, 2005

P. O. Box 356
McKinney, Texas 75070
214-495-9764

