

**SELLMEYER ENGINEERING**  
BROADCAST AND COMMUNICATION CONSULTING ENGINEERS  
P.O. Box 356 McKinney, Texas 75070  
MEMBER AFCCE  
(214) 495-9764

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ENGINEERING STATEMENT  
APPLICATION FOR CONSTRUCTION PERMIT  
AUXILIARY TRANSMISSION SYSTEM  
RADIO STATION WRR  
CITY OF DALLAS, TEXAS  
DALLAS, TEXAS  
DECEMBER 23, 2002

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This Firm has been retained by the City of Dallas, Texas, licensee of Station WRR, Dallas, Texas to prepare this Engineering Statement in support of its application for construction permit. The instant application proposes a minor change in the effective radiated power and height above average terrain for the auxiliary transmission system of Station WRR.

PROPOSED TRANSMITTER SITE & ANTENNA SYSTEM

The main transmitter site and antenna system exceeds the minimum spacings under Section 73.207 of the Rules. The existing auxiliary site and tower will be used for the proposed facilities. The antenna system will be a six element, side mounted antenna employing full wave spacing. A vertical sketch of the proposed tower and antenna system is attached hereto as Exhibit E1-1. The tower is registered under registration number 1047056. The tower is an existing self supporting tower.

COVERAGE CALCULATIONS

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 elevation at ground level at the existing site was taken from the tower registration records for the tower. The center of radiation of the antenna was calculated from the elevation data listed on Exhibit E1-1, the vertical sketch of the proposed antenna system.

Since this is a registered existing tower, the topographic map is not being resubmitted.

The proposed facility will satisfy all allocation requirements of Section 73.315 of the rules. It will illuminate the entire city limits of Dallas, Texas with a signal strength in excess of 3.16 mV/M (70 dBu). The proposed site is the same site as the existing WRR auxiliary transmission site as shown in Exhibit E1-2.

Exhibit E1-3 is a map showing the proposed 60 dBu service contours of the proposed auxiliary and the main transmitter sites plotted at forty five degree intervals. The 60 dBu auxiliary service contour is entirely contained within the 60 dBu contour of the main transmitter site.

WRR-20021223

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Exhibit E1-4 is a tabulation of the distances to the proposed auxiliary and main transmitter service contours calculated and plotted at five degree intervals.

There is no change in the main studio location or in the main transmitter site.

The site has been licensed and operating since approximately 1948 with power levels higher than proposed without significant receiver induced intermodulation problems. The licensee will undertake correction of any such problems which may appear in accordance with the Rules of the Commission.

### ANSI RADIATION COMPLIANCE

The proposed facility will operate with 60 kilowatts effective radiated power in each plane from a height above ground level of 128.3 meters. The power density at six feet above ground level is calculated to be 133 uW/Sq. cM. or 13.3 percent of the allowable maximum for controlled exposure. This is 66.7 percent of the allowable level for uncontrolled areas.

The power density was calculated using a field of 0.74, the maximum field in the direction of the ground area surrounding the tower. This value was obtained from a plot of the vertical pattern for the antenna which was supplied by the antenna manufacturer. Calculations were performed in accordance with Formula 7 from Section II 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 is 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.

### ENVIRONMENTAL MATTERS

The facility is located on an existing tower in Dallas, Texas. The site is in an area which is not affected by any of the environmental factors of Section 1.1307 of the Rules.

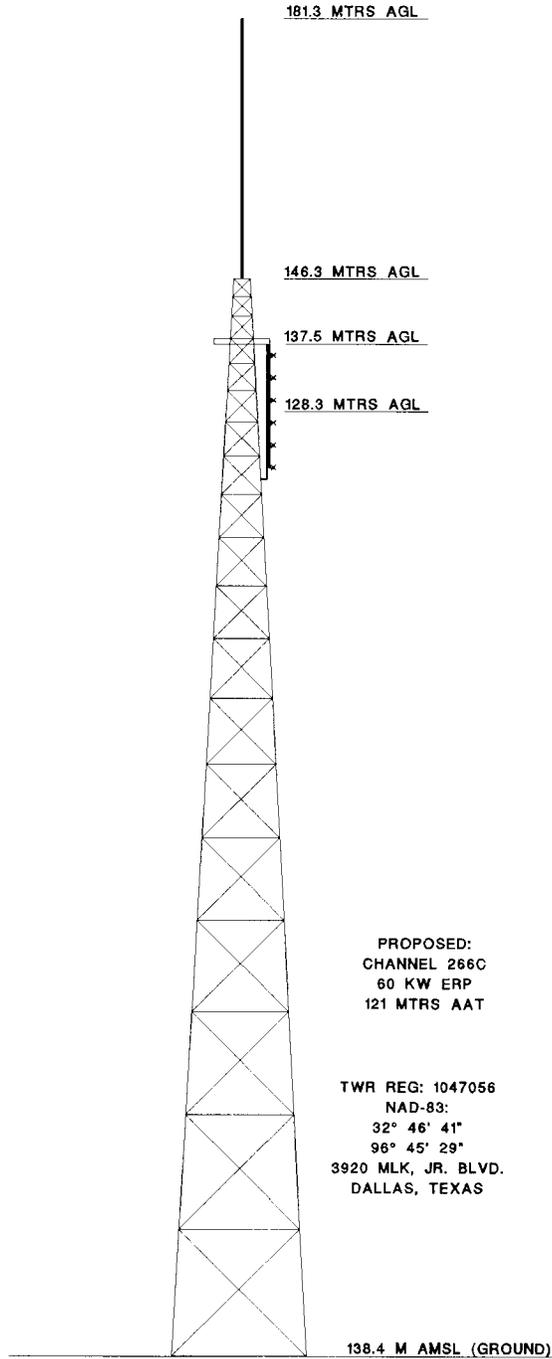
Upon grant of this application, the applicant is prepared to promptly construct the facilities and place the station in operation.

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EXHIBIT E1-1  
VERTICAL SKETCH OF ANTENNA SYSTEM  
RADIO STATION WRR  
CHANNEL 266C, 60 KW ERP, 121 MTRS AAT  
DALLAS, TEXAS

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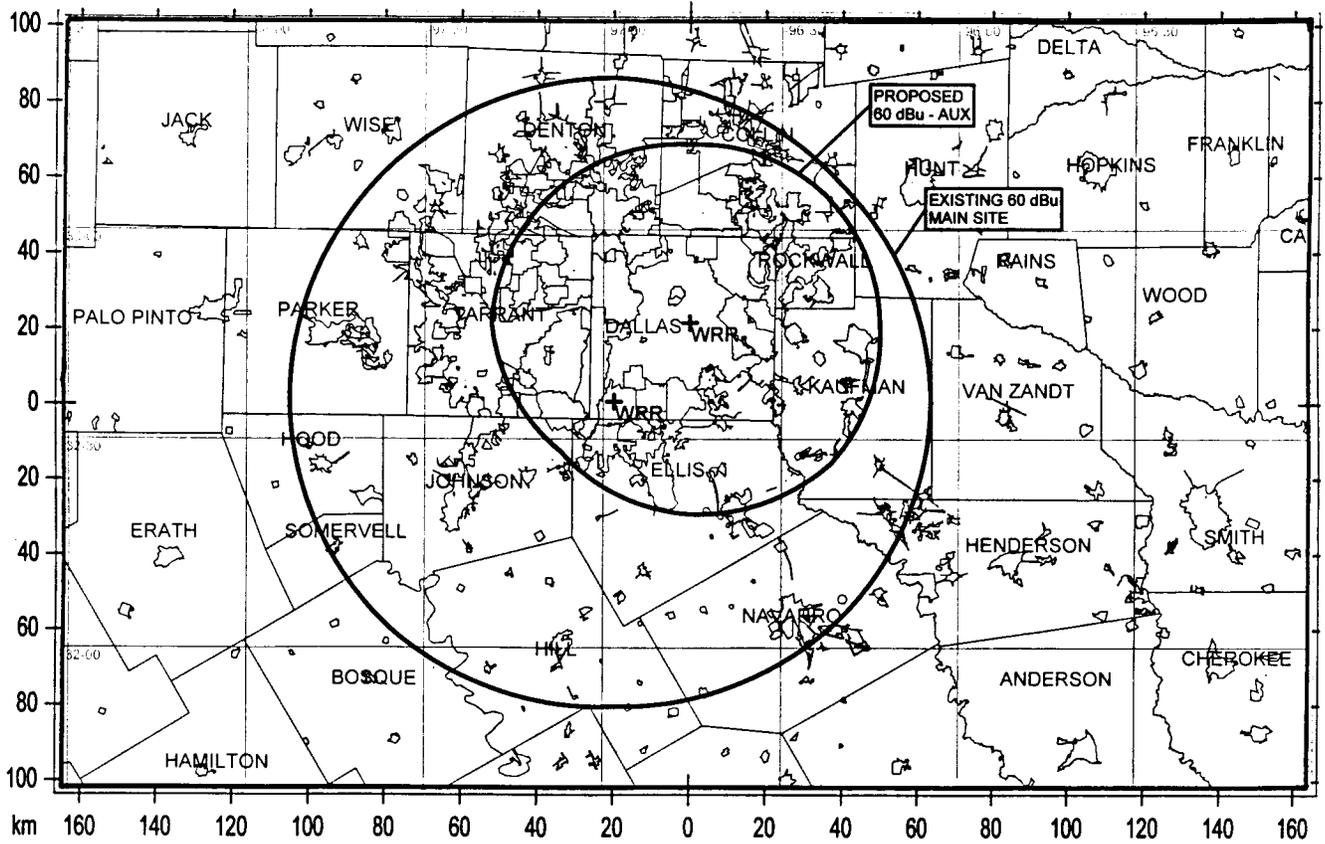




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EXHIBIT E1-3  
MAP SHOWING MAIN & AUXILIARY SERVICE CONTOURS  
AUXILIARY TRANSMISSION SYSTEM  
RADIO STATION WRR  
CHANNEL 266C, 60 KW ERP, 121 MTRS AAT  
DALLAS, TEXAS

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EXHIBIT E1-4  
 TABULATION OF DISTANCES TO CONTOURS  
 AUXILIARY TRANSMISSION SYSTEM  
 RADIO STATION WRR  
 CHANNEL 260C, 60 KW ERP, 121 MTRS AAT  
 DALLAS, TEXAS

PROPOSED AUXILIARY TRANSMISSION SYSTEM  
 DISTANCES TO CONTOURS (Kilometers):

Frequency: 101.1000 MHz  
 Coordinates: N.L.: 32° 46' 41" W.L.: 96° 45' 28"  
 Number of Contours: 2

AZ	HAAT	ERP	CONTOUR LEVELS (dBu):	
			F (50, 50)	f (50, 50)
(degs)	(m)	(kW)	70.0	60.0
.0	104	60.0000	28.8	47.0
45.0	113	60.0000	29.9	48.5
90.0	119	60.0000	30.6	49.4
135.0	140	60.0000	32.9	52.4
180.0	129	60.0000	31.7	50.9
225.0	108	60.0000	29.3	47.7
270.0	136	60.0000	32.5	51.9
315.0	119	60.0000	30.6	49.5

HAAT: 121 Mtrs

EXISTING MAIN TRANSMISSION SYSTEM  
 DISTANCES TO CONTOURS (Kilometers):

Frequency: 101.1000 MHz  
 Coordinates: N.L.: 32° 35' 22" W.L.: 96° 58' 10"  
 Number of Contours: 2

AZ	HAAT	ERP	CONTOUR LEVELS (dBu):	
			F (50, 50)	f (50, 50)
(degs)	(m)	(kW)	70.0	60.0
.0	493	98.0000	61.5	86.1
45.0	447	98.0000	58.7	83.0
90.0	449	98.0000	58.8	83.1
135.0	450	98.0000	58.9	83.2
180.0	420	98.0000	57.2	81.0
225.0	468	98.0000	59.9	84.5
270.0	479	98.0000	60.6	85.2
315.0	484	98.0000	61.0	85.6

HAAT: 460 Mtrs

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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 The City of Dallas, Texas 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.

December 23, 2002

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McKinney, Texas 75070  
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