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 STATION LICENSE
AUXILIARY TRANSMISSION SITE
NORTH TEXAS PUBLIC BROADCASTING, INC.
RADIO STATION KERA-FM
CHANNEL 211-C0
FACILITY NO.: 49323
FILE NO.: BXPED-20051122ABK
DALLAS, TEXAS

DECEMBER, 2005

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This Firm has been retained by North Texas Public Broadcasting, Inc. to prepare this application for station license for an off site auxiliary transmission facility.

The proposed transmission facility will be located on the Richland Towers South Transmission Site located at 2133 Tar Road, Cedar Hill, Texas. The proposed site is four kilometers south of the KERA-FM main transmission facility. The existing eight level, three around FM Panel Antenna manufactured by Dielectric Communications is fed through a constant impedance combining filter. The transmitter and combining filter are located within the main transmitter building near the tower.

The geographic coordinates for the towers are:

N.L.: 32° 32' 35"
W.L.: 96° 57' 32"
NAD-27 Reference
ASR# 1059733

The vertical field pattern appears herein as Exhibit E1-1. Transmitter power output requirements are tabulated as part of this exhibit.

The facilities were evaluated to determine the potential radiofrequency exposure at ground level to workers and the general public as described in OET Bulletin 65, Editions 97-01. The radiation center of the master antenna system is 430 meters above ground level and the maximum effective radiated power is 32 kilowatts in each plane. The vertical pattern of the antenna system has a maximum relative field toward the ground not exceeding 0.1. Thus the power density two meters above ground level near the base of the towers was determined to be less than 0.0002 mW/cm^2 or 0.08 percent of the limit of 0.2 mW/cm^2, for an uncontrolled environment. A facility producing less than 5 percent of the guideline value for an uncontrolled environment is exempt from further study.

J. S. Sellmeyer, P. E.
Sellmeyer Engineering
P. O. Box 356
McKinney, Texas 75070
214-495-9764
December 5, 2005

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EXHIBIT E1-1A
RADIO STATION KERA-FM
AUXILIARY ANTENNA SYSTEM
TABULATION OF POWER OUTPUT CALCULATIONS

The RMS gain of the antenna at 90.1 mHz is (channel 211) is 3.8 (5.80 dB). The antenna has a beam tilt of 0.75 degree. The height above average terrain of the proposed auxiliary antenna is 474 meters.

The gain and loss calculations for the system are as follows:

PARAMETER	POWER (kW)	POWER (dBk)	POWER (kW)	POWER (dBk)
	HORIZONTAL PLANE		MAIN LOBE	
ERP:	31.003 KW*	14.914 dBk	31.996 KW*	15.051 dBk
GAIN:		5.680 dB		5.800 dB
ANT INPUT:	8.416 KW	9.234 dBK	8.416 KW	9.251 dB
LINE LOSS:		0.692 dB		0.692 dB
COMB OUT:	9.870 KW	9.926 dBK	9.870 KW	9.943 dBK
COMB LOSS:		0.345 dB		0.345 dB
COMB INPUT:	10.686 KW	10.271 dBK	10.686 KW	10.288 dBK
LINE LOSS:		0.088 dB		0.088 dB
TPO:	10.904KW	10.359 dBK	10.904 KW	10.376 dBK

* Rounds to 31 kW

* Rounds to 32 kW

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EXHIBIT E1-1B
RADIO STATION KERA-FM
AUXILIARY ANTENNA SYSTEM
TABULATION OF ANTENNA VERTICAL PATTERN

Dielectric

Proposal Number	DCA-9124	Revision:	3
Date	13-Mar-01		
Call Letters		Channel	90.1
Location	Dallas, TX		
Customer	Richland Towers		
Antenna Type	TAC-8FMB-3/24		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: 08C075075-90

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.221	2.4	0.938	10.6	0.171	30.5	0.111	51.0	0.080	71.5	0.093
-9.5	0.200	2.6	0.920	10.8	0.183	31.0	0.113	51.5	0.086	72.0	0.093
-9.0	0.173	2.8	0.902	11.0	0.193	31.5	0.112	52.0	0.090	72.5	0.092
-8.5	0.141	3.0	0.883	11.5	0.215	32.0	0.107	52.5	0.094	73.0	0.091
-8.0	0.109	3.2	0.862	12.0	0.229	32.5	0.100	53.0	0.096	73.5	0.090
-7.5	0.093	3.4	0.840	12.5	0.235	33.0	0.091	53.5	0.097	74.0	0.088
-7.0	0.113	3.6	0.817	13.0	0.234	33.5	0.080	54.0	0.096	74.5	0.087
-6.5	0.163	3.8	0.792	13.5	0.225	34.0	0.067	54.5	0.094	75.0	0.085
-6.0	0.230	4.0	0.766	14.0	0.210	34.5	0.052	55.0	0.092	75.5	0.082
-5.5	0.304	4.2	0.739	14.5	0.190	35.0	0.036	55.5	0.088	76.0	0.079
-5.0	0.383	4.4	0.711	15.0	0.165	35.5	0.020	56.0	0.083	76.5	0.076
-4.5	0.464	4.6	0.682	15.5	0.137	36.0	0.004	56.5	0.078	77.0	0.074
-4.0	0.544	4.8	0.653	16.0	0.106	36.5	0.012	57.0	0.071	77.5	0.071
-3.5	0.622	5.0	0.622	16.5	0.074	37.0	0.027	57.5	0.064	78.0	0.068
-3.0	0.697	5.2	0.591	17.0	0.043	37.5	0.042	58.0	0.057	78.5	0.065
-2.8	0.726	5.4	0.560	17.5	0.021	38.0	0.056	58.5	0.049	79.0	0.062
-2.6	0.753	5.6	0.528	18.0	0.032	38.5	0.068	59.0	0.041	79.5	0.059
-2.4	0.780	5.8	0.496	18.5	0.057	39.0	0.078	59.5	0.033	80.0	0.056
-2.2	0.805	6.0	0.463	19.0	0.081	39.5	0.086	60.0	0.025	80.5	0.054
-2.0	0.829	6.2	0.431	19.5	0.102	40.0	0.093	60.5	0.017	81.0	0.052
-1.8	0.852	6.4	0.399	20.0	0.120	40.5	0.097	61.0	0.012	81.5	0.049
-1.6	0.873	6.6	0.367	20.5	0.132	41.0	0.100	61.5	0.012	82.0	0.047
-1.4	0.893	6.8	0.336	21.0	0.141	41.5	0.100	62.0	0.017	82.5	0.045
-1.2	0.912	7.0	0.305	21.5	0.144	42.0	0.098	62.5	0.024	83.0	0.044
-1.0	0.929	7.2	0.274	22.0	0.144	42.5	0.095	63.0	0.031	83.5	0.042
-0.8	0.944	7.4	0.245	22.5	0.138	43.0	0.089	63.5	0.038	84.0	0.040
-0.6	0.957	7.6	0.216	23.0	0.129	43.5	0.082	64.0	0.045	84.5	0.038
-0.4	0.969	7.8	0.190	23.5	0.117	44.0	0.074	64.5	0.052	85.0	0.037
-0.2	0.979	8.0	0.164	24.0	0.101	44.5	0.064	65.0	0.058	85.5	0.035
0.0	0.987	8.2	0.141	24.5	0.083	45.0	0.053	65.5	0.064	86.0	0.033
0.2	0.993	8.4	0.122	25.0	0.064	45.5	0.042	66.0	0.069	86.5	0.031
0.4	0.997	8.6	0.106	25.5	0.043	46.0	0.030	66.5	0.074	87.0	0.029
0.6	1.000	8.8	0.096	26.0	0.022	46.5	0.017	67.0	0.078	87.5	0.027
0.8	1.000	9.0	0.093	26.5	0.006	47.0	0.006	67.5	0.081	88.0	0.025
1.0	0.998	9.2	0.095	27.0	0.022	47.5	0.010	68.0	0.085	88.5	0.023
1.2	0.995	9.4	0.103	27.5	0.042	48.0	0.022	68.5	0.087	89.0	0.022
1.4	0.990	9.6	0.113	28.0	0.060	48.5	0.033	69.0	0.089	89.5	0.020
1.6	0.982	9.8	0.118	28.5	0.076	49.0	0.044	69.5	0.091	90.0	0.019
1.8	0.973	10.0	0.132	29.0	0.089	49.5	0.055	70.0	0.092		
2.0	0.962	10.2	0.148	29.5	0.099	50.0	0.064	70.5	0.093		
2.2	0.950	10.4	0.159	30.0	0.107	50.5	0.072	71.0	0.093		

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EXHIBIT E1-1C
RADIO STATION KERA-FM
AUXILIARY ANTENNA SYSTEM
PLOT OF ANTENNA VERTICAL PATTERN

Dielectric

Proposal Number	DCA-9124	Revision:	3
Date	13-Mar-01		
Call Letters		Channel	90.1
Location	Dallas, TX		
Customer	Richland Towers		
Antenna Type	TAC-8FMB-3/24		

ELEVATION PATTERN

RMS Gain at Main Lobe	3.75 (5.74 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	3.70 (5.68 dB)	Frequency	90.10 MHz
Calculated / Measured	Calculated	Drawing #	08C075075-90

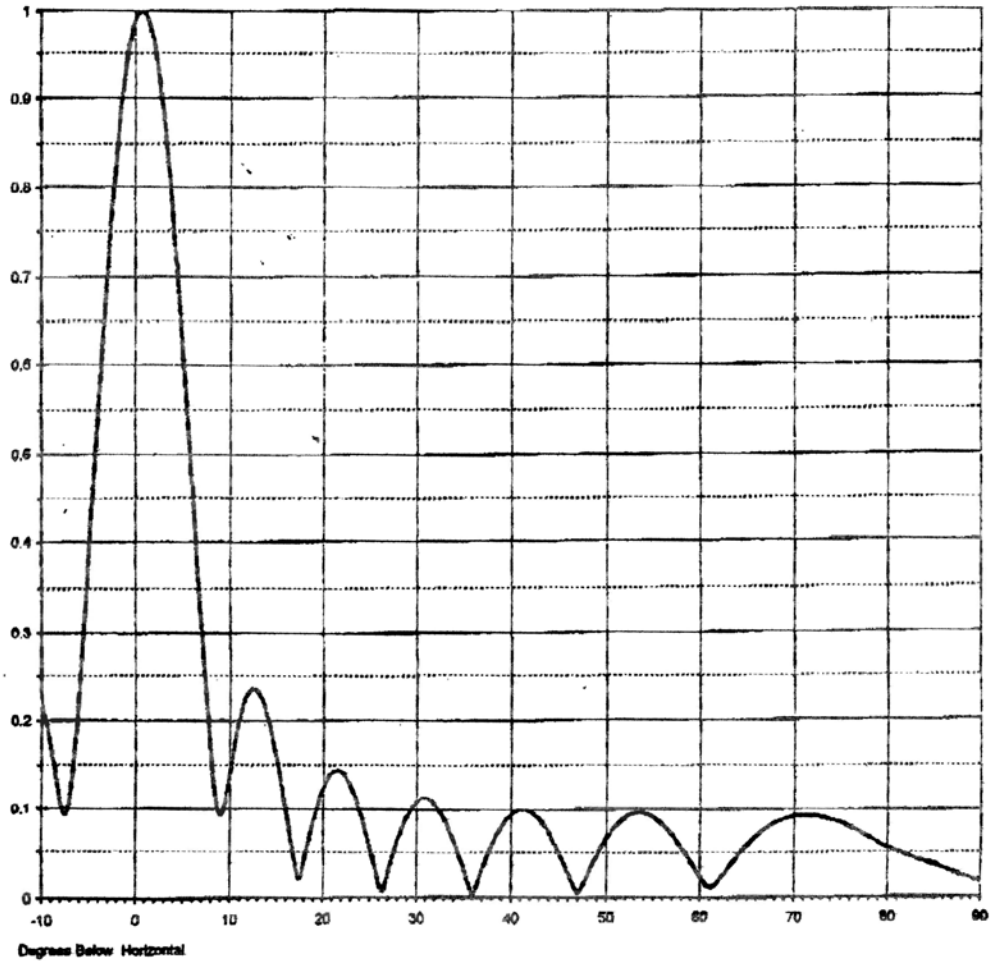

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EXHIBIT E1-1D
RADIO STATION KERA-FM
AUXILIARY ANTENNA SYSTEM
EXPANDED PLOT OF ANTENNA VERTICAL PATTERN

Dielectric

Proposal Number	DCA-9124	Revision:	3
Date	13-Mar-01		
Call Letters		Channel	90.1
Location	Dallas, TX		
Customer	Richland Towers		
Antenna Type	TAC-8FMB-3/24		

ELEVATION PATTERN

RMS Gain at Main Lobe	3.75 (5.74 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	3.70 (5.68 dB)	Frequency	90.10 MHz
Calculated / Measured	Calculated	Drawing #	08C075075