VIR JAMES P. C.
TIMOTHY C. CUTFORTH P.E., DIRECTOR OF ENGINEERING
BROADCAST ENGINEERING CONSULTANTS
965 S. IRVING ST. · DENVER, CO · 80219
(303) 937-1900

DIRECTIONAL ANTENNAS
AM - FM - TV
APPLICATIONS
PROOFS
FIELD MEASUREMENTS
AUDIO AND RF ENGINEERING
EMERGENCY REPAIR

ENGINEERING STATEMENT

Concerning an amendment to an application for Modified Construction Permit for AM Broadcast Station KTXV Frankston, Texas.

The FCC staff has determined that the nighttime pattern on file does not fully protect the night secondary service area of Class A WLS Chicago, Illinois. Further study found that the nighttime pattern as filed had a typographical error on the tech box entry for tower 5 in that the tower orientation had the tower spacing entered in that location by mistake. The night pattern is the same as the day pattern except for the reduced power but the incorrectly typed tower orientation for tower 5 nighttime made it appear as a different array from the daytime array. This filing corrects the tech box entry and the night pattern field tabulation which had the incorrect number. The interference study is correct as on file and the distances to night coverage are correct as on file. The proposed KTXV nighttime pattern fully protects the nighttime secondary service area at the proposed power when the pattern is correctly described.

The applicant has retained Vir James P. C., Consulting Broadcast Engineers, to supply the necessary engineering studies and exhibits required for this amendment.

CONCLUSION

The engineering herein presented for the amended proposed KTXV on 890 kHz has been prepared in accordance with the applicable FCC Rules in effect as of this date. At the time of preparation, there are no known proposed, authorized or existing stations which would conflict with the proposed operation or which would require additional interference study.

Respectfully submitted,

Timothy C. Cutforth, P.E.
Director of Engineering
Vir James Engineers
20 November 2002

MARCH 2002

EXHIBIT E-3.02-N
Page 1 of 5
Amended
021120

PROPOSED KTXV
JEFFREY N. EUSTIS
890 kHz 2 kW/0.008 kW DA-2
FRANKSTON, TEXAS

STANDARD PATTERN TABULATION

Twr.No.	Field	Phasing	Spacing	Azimuth	Height
1	1.000	+0.0	0.0	0.0	63.5
2	0.400	+12.0	255.0	24.0	63.5
3	0.280	+136.0	254.4	4.8	63.5
4	0.700	+124.0	85.0	284.0	63.5
5	0.420	+131.0	273.3	225.6	63.5
6	0.600	+7.0	240.0	208.0	63.5

Theo. RMS= 25.38 mV/m/km RSS= 37.11 Q= 10.00

STANDARD HORIZONTAL PLANE PATTERN

Azimuth	mV/m/km	Azimuth	mV/m/km
0	11.5	180	12.7
5	12.5	185	14.1
10	14.1	190	15.1
15	16.1	195	15.5
20	18.0	200	15.3
25	19.6	205	14.6
30	20.5	210	13.7
35	20.5	215	12.7
40	19.6	220	11.8
45	17.8	225	11.2
50	15.4	230	10.9
55	13.1	235	10.7
60	11.7	240	10.7
65	11.5	245	10.6
70	12.1	250	10.6
75	13.0	255	10.6
80	15.2	260	10.7
85	20.8	265	11.6
90	30.7	270	13.7
95	43.5	275	17.1
100	57.3	280	21.2
105	69.8	285	24.8
110	79.0	290	27.1
115	83.2	295	27.5
120	81.6	300	26.1
125	74.6	305	23.1
130	63.4	310	19.4
135	49.9	315	15.9
140	36.2	320	13.3
145	24.4	325	11.8
150	16.2	330	11.2
155	12.0	335	11.0
160	10.8	340	11.0
165	10.5	345	11.0
170	10.7	350	10.9
175	11.4	355	11.1

MARCH 2002

EXHIBIT E-3.02-N
Page 2 of 5
Amended
021120

PROPOSED KTXV
JEFFREY N. EUSTIS
890 kHz 2 kW/0.008 kW DA-2
FRANKSTON, TEXAS

STANDARD PATTERN TABULATION

Standard Vertical Pattern
(mV/m at one kilometer)

Azimuth	VA= 35	VA= 40	VA= 45	VA= 50	VA= 55	VA= 60
180	8.3	7.7	7.3	7.4	8.1	9.2
185	8.3	7.7	7.1	6.9	7.3	8.3
190	8.4	7.7	7.0	6.6	6.8	7.6
195	8.5	7.7	7.0	6.5	6.4	7.1
200	8.5	7.8	7.0	6.4	6.2	6.7
205	8.5	7.8	7.0	6.4	6.1	6.5
210	8.5	7.8	7.1	6.4	6.0	6.3
215	8.5	7.8	7.1	6.4	6.0	6.2
220	8.4	7.7	7.0	6.4	6.0	6.2
225	8.4	7.7	7.0	6.4	6.1	6.3
230	8.4	7.7	7.1	6.5	6.2	6.4
235	8.3	7.7	7.1	6.6	6.3	6.5
240	8.3	7.7	7.1	6.7	6.5	6.7
245	8.3	7.8	7.2	6.9	6.7	6.9
250	8.4	7.9	7.4	7.1	7.0	7.2
255	8.6	8.1	7.7	7.5	7.4	7.5
260	9.0	8.6	8.2	7.9	7.8	7.8
265	9.8	9.3	8.8	8.4	8.2	8.2
270	11.1	10.3	9.6	9.1	8.7	8.5
275	12.6	11.5	10.5	9.7	9.2	8.9
280	14.2	12.7	11.3	10.3	9.6	9.2
285	15.5	13.6	12.0	10.8	10.0	9.5
290	16.3	14.2	12.4	11.1	10.3	9.7
295	16.4	14.3	12.6	11.3	10.5	9.9
300	15.9	14.0	12.4	11.3	10.5	10.0
305	14.8	13.2	12.0	11.1	10.5	10.0
310	13.4	12.3	11.4	10.8	10.3	10.0
315	12.1	11.3	10.8	10.4	10.1	9.9
320	10.9	10.5	10.1	9.9	9.8	9.7
325	10.1	9.8	9.6	9.5	9.5	9.5
330	9.5	9.3	9.1	9.1	9.2	9.2
335	9.2	8.9	8.7	8.7	8.8	9.0
340	9.1	8.7	8.4	8.4	8.5	8.7
345	9.1	8.6	8.3	8.1	8.2	8.4
350	9.1	8.6	8.2	7.9	7.9	8.2
355	9.1	8.6	8.1	7.8	7.7	7.9

MARCH 2002

EXHIBIT E-3.02-N
Page 3 of 5
Amended
021120

PROPOSED KTXV
JEFFREY N. EUSTIS
890 kHz 2 kW/0.008 kW DA-2
FRANKSTON, TEXAS

STANDARD PATTERN TABULATION

Standard Vertical Pattern
(mV/m at one kilometer)

Azimuth	VA= 35	VA= 40	VA= 45	VA= 50	VA= 55	VA= 60
0	9.2	8.7	8.2	7.7	7.6	7.8
5	9.1	8.7	8.2	7.7	7.5	7.7
10	9.1	8.7	8.2	7.7	7.4	7.6
15	9.1	8.7	8.3	7.8	7.4	7.6
20	9.2	8.7	8.3	7.8	7.5	7.7
25	9.2	8.8	8.4	7.9	7.6	7.8
30	9.2	8.8	8.4	8.0	7.7	8.0
35	9.3	8.9	8.5	8.1	7.9	8.3
40	9.3	9.0	8.7	8.3	8.2	8.8
45	9.4	9.2	8.8	8.5	8.7	9.4
50	9.6	9.4	9.1	8.9	9.3	10.2
55	9.9	9.7	9.5	9.6	10.3	11.2
60	10.3	10.1	10.1	10.7	11.6	12.5
65	10.9	10.9	11.4	12.3	13.3	14.1
70	12.0	12.6	13.5	14.6	15.5	15.9
75	14.5	15.5	16.6	17.6	18.1	17.9
80	18.8	19.9	20.8	21.3	21.1	20.1
85	24.9	25.5	25.8	25.4	24.3	22.4
90	32.5	32.1	31.3	29.8	27.6	24.6
95	40.7	39.1	36.9	34.1	30.7	26.7
100	48.7	45.6	42.1	38.0	33.4	28.5
105	55.4	51.1	46.3	41.1	35.6	30.0
110	60.1	54.9	49.2	43.2	37.1	30.9
115	62.2	56.5	50.4	44.1	37.6	31.2
120	61.3	55.7	49.8	43.6	37.3	30.9
125	57.6	52.7	47.4	41.8	36.0	30.1
130	51.5	47.8	43.6	38.9	34.0	28.8
135	43.9	41.5	38.6	35.2	31.3	27.0
140	35.5	34.5	33.0	30.9	28.2	24.9
145	27.4	27.6	27.3	26.4	24.8	22.5
150	20.3	21.2	21.9	22.0	21.5	20.2
155	14.8	16.0	17.1	18.0	18.3	17.8
160	11.1	12.1	13.3	14.5	15.4	15.6
165	9.2	9.6	10.5	11.7	12.9	13.6
170	8.5	8.3	8.7	9.7	10.9	11.9
175	8.3	7.8	7.7	8.2	9.3	10.4

MARCH 2002

EXHIBIT E-3.02-N
Page 4 of 5
Amended
021120

PROPOSED KTXV
JEFFREY N. EUSTIS
890 kHz 2 kW/0.008 kW DA-2
PRANKSTON, TEXAS

STANDARD PATTERN TABULATION

Standard Vertical Pattern
(mV/m at one kilometer)

Azimuth	VA= 5	VA= 10	VA= 15	VA= 20	VA= 25	VA= 30
180	12.5	12.0	11.2	10.3	9.6	8.9
185	13.8	13.1	12.1	10.9	9.9	9.0
190	14.8	14.0	12.9	11.5	10.2	9.2
195	15.3	14.5	13.3	11.9	10.5	9.4
200	15.1	14.3	13.2	11.9	10.6	9.4
205	14.4	13.8	12.8	11.6	10.4	9.4
210	13.5	13.0	12.2	11.2	10.2	9.3
215	12.5	12.1	11.5	10.8	9.9	9.2
220	11.7	11.4	10.9	10.4	9.7	9.1
225	11.2	10.9	10.6	10.1	9.6	9.0
230	10.8	10.6	10.3	9.9	9.5	8.9
235	10.7	10.5	10.2	9.9	9.4	8.9
240	10.6	10.4	10.2	9.8	9.4	8.9
245	10.6	10.4	10.2	9.8	9.4	8.9
250	10.6	10.4	10.1	9.8	9.4	8.9
255	10.5	10.4	10.1	9.8	9.4	9.0
260	10.7	10.6	10.4	10.1	9.8	9.4
265	11.6	11.5	11.3	11.0	10.7	10.3
270	13.7	13.5	13.3	12.9	12.4	11.8
275	17.1	16.8	16.3	15.6	14.8	13.7
280	21.0	20.5	19.7	18.6	17.3	15.8
285	24.5	23.8	22.7	21.2	19.5	17.5
290	26.8	26.0	24.6	22.9	20.8	18.6
295	27.2	26.4	25.0	23.2	21.0	18.7
300	25.8	25.0	23.7	22.0	20.1	18.0
305	22.9	22.2	21.2	19.8	18.2	16.5
310	19.2	18.8	18.0	17.1	15.9	14.7
315	15.8	15.5	15.0	14.4	13.7	12.9
320	13.2	13.0	12.7	12.4	11.9	11.4
325	11.8	11.6	11.4	11.1	10.8	10.4
330	11.2	11.0	10.8	10.5	10.2	9.8
335	11.0	10.8	10.6	10.3	10.0	9.6
340	10.9	10.8	10.6	10.3	9.9	9.5
345	10.9	10.8	10.6	10.3	9.9	9.5
350	10.9	10.8	10.6	10.3	10.0	9.6
355	11.0	10.8	10.6	10.3	10.0	9.6

MARCH 2002

EXHIBIT E-3.02-N
Page 5 of 5
Amended
021120

PROPOSED KTXV
JEFFREY N. EUSTIS
890 kHz 2 kW/0.008 kW DA-2
FRANKSTON, TEXAS

STANDARD PATTERN TABULATION

Standard Vertical Pattern
(mV/m at one kilometer)

Azimuth	VA= 5	VA= 10	VA= 15	VA= 20	VA= 25	VA= 30
0	11.4	11.2	10.8	10.4	10.0	9.6
5	12.4	12.0	11.4	10.7	10.1	9.6
10	13.9	13.3	12.3	11.3	10.3	9.6
15	15.8	14.9	13.6	12.2	10.8	9.8
20	17.7	16.6	15.0	13.1	11.3	10.0
25	19.2	17.9	16.1	13.9	11.7	10.1
30	20.0	18.7	16.6	14.2	11.9	10.2
35	20.0	18.7	16.6	14.1	11.8	10.1
40	19.1	17.8	15.8	13.5	11.4	10.0
45	17.4	16.2	14.4	12.5	10.9	9.9
50	15.1	14.1	12.8	11.4	10.4	9.9
55	12.9	12.3	11.5	10.8	10.4	10.1
60	11.6	11.3	11.0	10.8	10.7	10.5
65	11.5	11.4	11.4	11.3	11.2	11.0
70	12.1	12.1	12.0	11.9	11.8	11.8
75	13.0	13.0	13.0	13.1	13.3	13.7
80	15.2	15.4	15.7	16.2	16.8	17.7
85	20.9	21.2	21.7	22.4	23.2	24.1
90	30.7	31.0	31.3	31.8	32.2	32.4
95	43.5	43.4	43.3	43.1	42.6	41.8
100	57.1	56.7	55.9	54.7	53.2	51.2
105	69.5	68.6	67.2	65.1	62.5	59.2
110	78.6	77.4	75.3	72.6	69.1	64.9
115	82.7	81.3	79.0	75.9	72.0	67.4
120	81.2	79.8	77.6	74.6	70.8	66.4
125	74.2	73.2	71.4	68.9	65.7	61.9
130	63.2	62.5	61.3	59.6	57.4	54.7
135	49.8	49.5	49.0	48.2	47.2	45.7
140	36.2	36.3	36.4	36.4	36.4	36.1
145	24.5	24.8	25.2	25.8	26.4	27.0
150	16.2	16.5	16.9	17.5	18.3	19.3
155	12.1	12.1	12.2	12.5	13.0	13.7
160	10.8	10.7	10.5	10.4	10.4	10.5
165	10.5	10.3	10.1	9.8	9.5	9.3
170	10.6	10.4	10.1	9.7	9.3	8.9
175	11.3	10.9	10.4	9.9	9.4	8.8