

VIR JAMES P. C.

TIMOTHY C. CUTFORTH P.E., DIRECTOR OF ENGINEERING
BROADCAST ENGINEERING CONSULTANTS
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DIRECTIONAL ANTENNAS
AM - FM - TV
APPLICATIONS
PROOFS
FIELD MEASUREMENTS
AUDIO AND RF ENGINEERING
EMERGENCY REPAIR

ENGINEERING STATEMENT

Concerning an application for Construction Permit for a new Educational FM station authorized to serve Montrose, Colorado.

United Ministries, Inc. herein requests a new FM facility to serve Montrose, Colorado

The applicant is now applying for Channel 220A with an effective radiated power of 0.15 kW vertically polarized using a directional antenna and an antenna height above average terrain of -65m.

United Ministries, Inc. has retained the services of Vir James P.C., Consulting Radio Engineers, to prepare the engineering portions of this FM application.

PROPOSED SITE

The proposed Montrose operation will be located on a new tower southwest of Montrose.

ALLOCATIONS

The proposed Montrose operation will not cause prohibited overlap with existing or known proposed fm facilities. See attached allocations exhibit. The proposed meets the separation requirements to KJYE 222C with 96.3km to the required minimum 95km.

The proposed Montrose 220A operation will not be in conflict with the proposed Olathe 218A facility proposed by this applicant.

PROPOSED FACILITY

The applicant proposes to side-mount the FM antenna on a vertical, steel, guyed tower. A type accepted transmitter will be used. The transmitter will be located in a building at the base of the tower. The main studio will be located within 25 miles of the city of license.

The facility will comply with FCC RF power level standards under OET-65 by virtue of the height of the antenna above ground level and the low power. Any area where the power density exceeds OET65 public exposure recommendations will be fenced and posted with warning signs. No employee will be allowed to climb the tower when energized. Power will be reduced or operation will cease as necessary when maintenance is needed on this tower as required to protect all employees.

The distances to the 70 dBu (3.16 mV/m) and the 60 dBu (1 mV/m) contours and all interference contours shown in this application were obtained in accordance with FCC Section 73.313, as amended

CHANNEL 6 TV PROTECTION

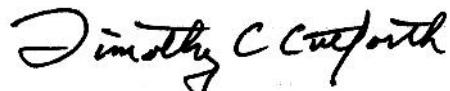
Although this proposal cannot cause CH6TV interference at the power proposed and the location proposed, the applicant requests a waiver of section 73.515 protection requirements. The waiver is justified in the public interest due to the HARD ANALOG SUNSET date set for February 2009. After that date it will not be possible to cause interference to the analog audio of Channel 6 Television stations therefore the requirements of 73.515 will be moot after that date. The proposed transmitter is more than 50 km outside of the KREZ Channel 6 TV Grade B contour and will not cause any interference to analog CH6 TV KREZ.

SUMMARY

The proposed operation meets all standards for grant to serve Montrose, Colorado. Hence, the proposed operation of Channel 220A in Montrose, Colorado will neither cause nor receive interference with respect to existing or proposed FM stations and will provide a valuable service to the Montrose market area.

This application for an FM Construction Permit has been prepared in accordance with the appropriate parts of Section 73 of the FCC Rules and Regulations.

Respectfully submitted



Timothy C. Cutforth, P.E.
15 October 2007

Vir James Engineers

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Project: MONTROSE

Source Coordinates: 38-28-29 North 107-54-41 West

This program uses the 2000 US Census Database: PL 94-171

Group level centroid retrieval methodology

Distance to the Contours are interpolated between Azimuths

CONTOUR OF STUDY is 60 dBu.

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City of Study: MONTROSE CITY -----

MONTROSE CITY, Montrose County, CO

Total City Persons: 12,344

Total Contour Persons: 11,726

Persons in Contour: 95.0%

Area within Contour by Sectoring: 175.5 sq. km

Land Area in City from Census: 28.9 sq. km

Land Area in Contour from Census: 23.0 sq. km 79.3%

Vir James Engineers
 Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz
 Site Coordinates: 38-28-29 North 107-54-41 West
 NGDC 30-Second Database for Continental US.
 DEM-30 Database for AK, HI, and PR.
 Site Elevation AMSL: (5801 feet), 1768 meters
 Antenna HAAT: -65 meters
 Antenna Center Above Sea Level: 1810 meters
 TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

0	96	0.1500	6.3	11.2	0.9	16.0	38.0
1	94	0.1500	6.2	11.1	0.9	15.8	37.5
2	91	0.1500	6.1	10.9	0.9	15.5	36.9
3	88	0.1500	6.0	10.7	0.9	15.2	36.2
4	85	0.1500	5.9	10.5	0.9	14.9	35.5
5	84	0.1500	5.9	10.5	0.9	14.8	35.3
6	83	0.1500	5.9	10.4	0.9	14.7	35.1
7	81	0.1500	5.8	10.3	1.0	14.5	34.6
8	78	0.1500	5.7	10.1	0.9	14.3	33.9
9	74	0.1500	5.5	9.9	0.9	13.9	33.0
10	67	0.1500	5.3	9.4	0.9	13.3	31.2
11	59	0.1500	5.0	8.8	0.8	12.5	29.2
12	53	0.1500	4.7	8.3	0.9	11.9	27.7
13	48	0.1500	4.5	7.9	0.8	11.3	26.4
14	44	0.1500	4.2	7.5	0.8	10.8	25.2
15	38	0.1500	3.9	7.0	0.7	10.0	23.3
16	30	0.1500	3.5	6.2	0.7	8.9	20.8
17	21	0.1500	3.5	6.2	0.7	8.9	20.8
18	12	0.1500	3.5	6.2	0.7	8.9	20.8
19	2	0.1500	3.5	6.2	0.7	8.9	20.8
20	-6	0.1500	3.5	6.2	0.7	8.9	20.8
21	-9	0.1500	3.5	6.2	0.7	8.9	20.8
22	-7	0.1500	3.5	6.2	0.7	8.9	20.8
23	-4	0.1500	3.5	6.2	0.7	8.9	20.8
24	-4	0.1500	3.5	6.2	0.7	8.9	20.8
25	-8	0.1500	3.5	6.2	0.7	8.9	20.8
26	-12	0.1500	3.5	6.2	0.7	8.9	20.8
27	-15	0.1500	3.5	6.2	0.7	8.9	20.8
28	-18	0.1500	3.5	6.2	0.7	8.9	20.8
29	-22	0.1500	3.5	6.2	0.7	8.9	20.8
30	-27	0.1500	3.5	6.2	0.7	8.9	20.8
31	-33	0.1500	3.5	6.2	0.7	8.9	20.8
32	-38	0.1500	3.5	6.2	0.7	8.9	20.8
33	-44	0.1500	3.5	6.2	0.7	8.9	20.8
34	-51	0.1500	3.5	6.2	0.7	8.9	20.8
35	-57	0.1500	3.5	6.2	0.7	8.9	20.8

Vir James Engineers

Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 38-28-29 North 107-54-41 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (5801 feet), 1768 meters

Antenna HAAT: -65 meters

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AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
36	-60	0.1500	3.5	6.2	0.7	8.9	20.8
37	-62	0.1500	3.5	6.2	0.7	8.9	20.8
38	-61	0.1500	3.5	6.2	0.7	8.9	20.8
39	-58	0.1500	3.5	6.2	0.7	8.9	20.8
40	-53	0.1500	3.5	6.2	0.7	8.9	20.8
41	-49	0.1500	3.5	6.2	0.7	8.9	20.8
42	-50	0.1500	3.5	6.2	0.7	8.9	20.8
43	-56	0.1500	3.5	6.2	0.7	8.9	20.8
44	-64	0.1500	3.5	6.2	0.7	8.9	20.8
45	-73	0.1500	3.5	6.2	0.7	8.9	20.8
46	-81	0.1500	3.5	6.2	0.7	8.9	20.8
47	-85	0.1500	3.5	6.2	0.7	8.9	20.8
48	-88	0.1500	3.5	6.2	0.7	8.9	20.8
49	-90	0.1500	3.5	6.2	0.7	8.9	20.8
50	-91	0.1500	3.5	6.2	0.7	8.9	20.8
51	-89	0.1500	3.5	6.2	0.7	8.9	20.8
52	-86	0.1500	3.5	6.2	0.7	8.9	20.8
53	-81	0.1500	3.5	6.2	0.7	8.9	20.8
54	-78	0.1500	3.5	6.2	0.7	8.9	20.8
55	-77	0.1500	3.5	6.2	0.7	8.9	20.8
56	-77	0.1500	3.5	6.2	0.7	8.9	20.8
57	-79	0.1500	3.5	6.2	0.7	8.9	20.8
58	-82	0.1500	3.5	6.2	0.7	8.9	20.8
59	-86	0.1500	3.5	6.2	0.7	8.9	20.8
60	-90	0.1500	3.5	6.2	0.7	8.9	20.8
61	-93	0.1500	3.5	6.2	0.7	8.9	20.8
62	-96	0.1500	3.5	6.2	0.7	8.9	20.8
63	-98	0.1500	3.5	6.2	0.7	8.9	20.8
64	-99	0.1500	3.5	6.2	0.7	8.9	20.8
65	-100	0.1500	3.5	6.2	0.7	8.9	20.8
66	-101	0.1500	3.5	6.2	0.7	8.9	20.8
67	-102	0.1500	3.5	6.2	0.7	8.9	20.8
68	-103	0.1500	3.5	6.2	0.7	8.9	20.8
69	-103	0.1500	3.5	6.2	0.7	8.9	20.8
70	-104	0.1500	3.5	6.2	0.7	8.9	20.8
71	-104	0.1500	3.5	6.2	0.7	8.9	20.8

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			50,50	50,50	50,10	50,10	50,10

72	-104	0.1500	3.5	6.2	0.7	8.9	20.8
73	-105	0.1500	3.5	6.2	0.7	8.9	20.8
74	-106	0.1500	3.5	6.2	0.7	8.9	20.8
75	-106	0.1500	3.5	6.2	0.7	8.9	20.8
76	-105	0.1500	3.5	6.2	0.7	8.9	20.8
77	-104	0.1500	3.5	6.2	0.7	8.9	20.8
78	-103	0.1500	3.5	6.2	0.7	8.9	20.8
79	-101	0.1500	3.5	6.2	0.7	8.9	20.8
80	-97	0.1500	3.5	6.2	0.7	8.9	20.8
81	-91	0.1500	3.5	6.2	0.7	8.9	20.8
82	-87	0.1500	3.5	6.2	0.7	8.9	20.8
83	-85	0.1500	3.5	6.2	0.7	8.9	20.8
84	-85	0.1500	3.5	6.2	0.7	8.9	20.8
85	-84	0.1500	3.5	6.2	0.7	8.9	20.8
86	-83	0.1500	3.5	6.2	0.7	8.9	20.8
87	-85	0.1500	3.5	6.2	0.7	8.9	20.8
88	-88	0.1500	3.5	6.2	0.7	8.9	20.8
89	-91	0.1500	3.5	6.2	0.7	8.9	20.8
90	-94	0.1500	3.5	6.2	0.7	8.9	20.8
91	-97	0.1500	3.5	6.2	0.7	8.9	20.8
92	-100	0.1500	3.5	6.2	0.7	8.9	20.8
93	-103	0.1500	3.5	6.2	0.7	8.9	20.8
94	-105	0.1500	3.5	6.2	0.7	8.9	20.8
95	-108	0.1500	3.5	6.2	0.7	8.9	20.8
96	-110	0.1500	3.5	6.2	0.7	8.9	20.8
97	-112	0.1500	3.5	6.2	0.7	8.9	20.8
98	-113	0.1500	3.5	6.2	0.7	8.9	20.8
99	-112	0.1500	3.5	6.2	0.7	8.9	20.8
100	-112	0.1500	3.5	6.2	0.7	8.9	20.8
101	-110	0.1500	3.5	6.2	0.7	8.9	20.8
102	-109	0.1500	3.5	6.2	0.7	8.9	20.8
103	-108	0.1500	3.5	6.2	0.7	8.9	20.8
104	-106	0.1500	3.5	6.2	0.7	8.9	20.8
105	-103	0.1500	3.5	6.2	0.7	8.9	20.8
106	-101	0.1500	3.5	6.2	0.7	8.9	20.8
107	-98	0.1500	3.5	6.2	0.7	8.9	20.8

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			50,50	50,50	50,10	50,10	50,10
108	-93	0.1500	3.5	6.2	0.7	8.9	20.8
109	-88	0.1500	3.5	6.2	0.7	8.9	20.8
110	-85	0.1500	3.5	6.2	0.7	8.9	20.8
111	-83	0.1500	3.5	6.2	0.7	8.9	20.8
112	-82	0.1500	3.5	6.2	0.7	8.9	20.8
113	-82	0.1500	3.5	6.2	0.7	8.9	20.8
114	-82	0.1500	3.5	6.2	0.7	8.9	20.8
115	-81	0.1500	3.5	6.2	0.7	8.9	20.8
116	-80	0.1500	3.5	6.2	0.7	8.9	20.8
117	-79	0.1500	3.5	6.2	0.7	8.9	20.8
118	-79	0.1500	3.5	6.2	0.7	8.9	20.8
119	-79	0.1500	3.5	6.2	0.7	8.9	20.8
120	-79	0.1500	3.5	6.2	0.7	8.9	20.8
121	-79	0.1500	3.5	6.2	0.7	8.9	20.8
122	-78	0.1500	3.5	6.2	0.7	8.9	20.8
123	-76	0.1500	3.5	6.2	0.7	8.9	20.8
124	-76	0.1500	3.5	6.2	0.7	8.9	20.8
125	-75	0.1500	3.5	6.2	0.7	8.9	20.8
126	-74	0.1500	3.5	6.2	0.7	8.9	20.8
127	-75	0.1500	3.5	6.2	0.7	8.9	20.8
128	-78	0.1500	3.5	6.2	0.7	8.9	20.8
129	-83	0.1500	3.5	6.2	0.7	8.9	20.8
130	-84	0.1500	3.5	6.2	0.7	8.9	20.8
131	-82	0.1500	3.5	6.2	0.7	8.9	20.8
132	-76	0.1500	3.5	6.2	0.7	8.9	20.8
133	-67	0.1500	3.5	6.2	0.7	8.9	20.8
134	-60	0.1500	3.5	6.2	0.7	8.9	20.8
135	-53	0.1500	3.5	6.2	0.7	8.9	20.8
136	-48	0.1500	3.5	6.2	0.7	8.9	20.8
137	-44	0.1500	3.5	6.2	0.7	8.9	20.8
138	-40	0.1500	3.5	6.2	0.7	8.9	20.8
139	-38	0.1500	3.5	6.2	0.7	8.9	20.8
140	-37	0.1500	3.5	6.2	0.7	8.9	20.8
141	-37	0.1500	3.5	6.2	0.7	8.9	20.8
142	-37	0.1500	3.5	6.2	0.7	8.9	20.8
143	-39	0.1500	3.5	6.2	0.7	8.9	20.8

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			50,50	50,50	50,10	50,10	50,10

144	-41	0.1500	3.5	6.2	0.7	8.9	20.8
145	-43	0.1500	3.5	6.2	0.7	8.9	20.8
146	-47	0.1500	3.5	6.2	0.7	8.9	20.8
147	-52	0.1500	3.5	6.2	0.7	8.9	20.8
148	-57	0.1500	3.5	6.2	0.7	8.9	20.8
149	-61	0.1500	3.5	6.2	0.7	8.9	20.8
150	-64	0.1500	3.5	6.2	0.7	8.9	20.8
151	-65	0.1500	3.5	6.2	0.7	8.9	20.8
152	-65	0.1500	3.5	6.2	0.7	8.9	20.8
153	-64	0.1500	3.5	6.2	0.7	8.9	20.8
154	-65	0.1500	3.5	6.2	0.7	8.9	20.8
155	-68	0.1500	3.5	6.2	0.7	8.9	20.8
156	-72	0.1500	3.5	6.2	0.7	8.9	20.8
157	-79	0.1500	3.5	6.2	0.7	8.9	20.8
158	-85	0.1500	3.5	6.2	0.7	8.9	20.8
159	-91	0.1500	3.5	6.2	0.7	8.9	20.8
160	-97	0.1500	3.5	6.2	0.7	8.9	20.8
161	-103	0.1500	3.5	6.2	0.7	8.9	20.8
162	-108	0.1500	3.5	6.2	0.7	8.9	20.8
163	-113	0.1500	3.5	6.2	0.7	8.9	20.8
164	-117	0.1500	3.5	6.2	0.7	8.9	20.8
165	-119	0.1500	3.5	6.2	0.7	8.9	20.8
166	-122	0.1500	3.5	6.2	0.7	8.9	20.8
167	-125	0.1500	3.5	6.2	0.7	8.9	20.8
168	-129	0.1500	3.5	6.2	0.7	8.9	20.8
169	-132	0.1500	3.5	6.2	0.7	8.9	20.8
170	-135	0.1500	3.5	6.2	0.7	8.9	20.8
171	-138	0.1500	3.5	6.2	0.7	8.9	20.8
172	-143	0.1500	3.5	6.2	0.7	8.9	20.8
173	-147	0.1500	3.5	6.2	0.7	8.9	20.8
174	-152	0.1500	3.5	6.2	0.7	8.9	20.8
175	-157	0.1500	3.5	6.2	0.7	8.9	20.8
176	-162	0.1500	3.5	6.2	0.7	8.9	20.8
177	-164	0.1500	3.5	6.2	0.7	8.9	20.8
178	-165	0.1500	3.5	6.2	0.7	8.9	20.8
179	-166	0.1500	3.5	6.2	0.7	8.9	20.8

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			50,50	50,50	50,10	50,10	50,10
180	-171	0.1500	3.5	6.2	0.7	8.9	20.8
181	-176	0.1500	3.5	6.2	0.7	8.9	20.8
182	-181	0.1500	3.5	6.2	0.7	8.9	20.8
183	-186	0.1500	3.5	6.2	0.7	8.9	20.8
184	-191	0.1500	3.5	6.2	0.7	8.9	20.8
185	-197	0.1500	3.5	6.2	0.7	8.9	20.8
186	-202	0.1500	3.5	6.2	0.7	8.9	20.8
187	-208	0.1500	3.5	6.2	0.7	8.9	20.8
188	-211	0.1500	3.5	6.2	0.7	8.9	20.8
189	-214	0.1500	3.5	6.2	0.7	8.9	20.8
190	-217	0.1500	3.5	6.2	0.7	8.9	20.8
191	-220	0.1500	3.5	6.2	0.7	8.9	20.8
192	-223	0.1500	3.5	6.2	0.7	8.9	20.8
193	-225	0.1500	3.5	6.2	0.7	8.9	20.8
194	-226	0.1500	3.5	6.2	0.7	8.9	20.8
195	-225	0.1500	3.5	6.2	0.7	8.9	20.8
196	-222	0.1500	3.5	6.2	0.7	8.9	20.8
197	-218	0.1500	3.5	6.2	0.7	8.9	20.8
198	-212	0.1500	3.5	6.2	0.7	8.9	20.8
199	-208	0.1500	3.5	6.2	0.7	8.9	20.8
200	-206	0.1500	3.5	6.2	0.7	8.9	20.8
201	-204	0.1500	3.5	6.2	0.7	8.9	20.8
202	-203	0.1500	3.5	6.2	0.7	8.9	20.8
203	-203	0.1500	3.5	6.2	0.7	8.9	20.8
204	-206	0.1500	3.5	6.2	0.7	8.9	20.8
205	-213	0.1500	3.5	6.2	0.7	8.9	20.8
206	-223	0.1500	3.5	6.2	0.7	8.9	20.8
207	-232	0.1500	3.5	6.2	0.7	8.9	20.8
208	-239	0.1500	3.5	6.2	0.7	8.9	20.8
209	-243	0.1500	3.5	6.2	0.7	8.9	20.8
210	-245	0.1500	3.5	6.2	0.7	8.9	20.8
211	-247	0.1500	3.5	6.2	0.7	8.9	20.8
212	-248	0.1500	3.5	6.2	0.7	8.9	20.8
213	-249	0.1500	3.5	6.2	0.7	8.9	20.8
214	-250	0.1500	3.5	6.2	0.7	8.9	20.8
215	-250	0.1500	3.5	6.2	0.7	8.9	20.8

Vir James Engineers

Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 38-28-29 North 107-54-41 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (5801 feet), 1768 meters

Antenna HAAT: -65 meters

Antenna Center Above Sea Level: 1810 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

216	-250	0.1500	3.5	6.2	0.7	8.9	20.8
217	-250	0.1500	3.5	6.2	0.7	8.9	20.8
218	-248	0.1500	3.5	6.2	0.7	8.9	20.8
219	-245	0.1500	3.5	6.2	0.7	8.9	20.8
220	-244	0.1500	3.5	6.2	0.7	8.9	20.8
221	-243	0.1500	3.5	6.2	0.7	8.9	20.8
222	-243	0.1500	3.5	6.2	0.7	8.9	20.8
223	-243	0.1500	3.5	6.2	0.7	8.9	20.8
224	-243	0.1500	3.5	6.2	0.7	8.9	20.8
225	-245	0.1500	3.5	6.2	0.7	8.9	20.8
226	-246	0.1500	3.5	6.2	0.7	8.9	20.8
227	-246	0.1500	3.5	6.2	0.7	8.9	20.8
228	-246	0.1500	3.5	6.2	0.7	8.9	20.8
229	-244	0.1500	3.5	6.2	0.7	8.9	20.8
230	-241	0.1500	3.5	6.2	0.7	8.9	20.8
231	-238	0.1500	3.5	6.2	0.7	8.9	20.8
232	-235	0.1500	3.5	6.2	0.7	8.9	20.8
233	-232	0.1500	3.5	6.2	0.7	8.9	20.8
234	-231	0.1500	3.5	6.2	0.7	8.9	20.8
235	-230	0.1500	3.5	6.2	0.7	8.9	20.8
236	-229	0.1500	3.5	6.2	0.7	8.9	20.8
237	-228	0.1500	3.5	6.2	0.7	8.9	20.8
238	-227	0.1500	3.5	6.2	0.7	8.9	20.8
239	-224	0.1500	3.5	6.2	0.7	8.9	20.8
240	-219	0.1500	3.5	6.2	0.7	8.9	20.8
241	-214	0.1500	3.5	6.2	0.7	8.9	20.8
242	-210	0.1500	3.5	6.2	0.7	8.9	20.8
243	-207	0.1500	3.5	6.2	0.7	8.9	20.8
244	-205	0.1500	3.5	6.2	0.7	8.9	20.8
245	-202	0.1500	3.5	6.2	0.7	8.9	20.8
246	-197	0.1500	3.5	6.2	0.7	8.9	20.8
247	-190	0.1500	3.5	6.2	0.7	8.9	20.8
248	-182	0.1500	3.5	6.2	0.7	8.9	20.8
249	-174	0.1500	3.5	6.2	0.7	8.9	20.8
250	-169	0.1500	3.5	6.2	0.7	8.9	20.8
251	-164	0.1500	3.5	6.2	0.7	8.9	20.8

Vir James Engineers

Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 38-28-29 North 107-54-41 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (5801 feet), 1768 meters

Antenna HAAT: -65 meters

Antenna Center Above Sea Level: 1810 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
252	-158	0.1500	3.5	6.2	0.7	8.9	20.8
253	-151	0.1500	3.5	6.2	0.7	8.9	20.8
254	-144	0.1500	3.5	6.2	0.7	8.9	20.8
255	-137	0.1500	3.5	6.2	0.7	8.9	20.8
256	-128	0.1500	3.5	6.2	0.7	8.9	20.8
257	-120	0.1500	3.5	6.2	0.7	8.9	20.8
258	-112	0.1500	3.5	6.2	0.7	8.9	20.8
259	-105	0.1500	3.5	6.2	0.7	8.9	20.8
260	-101	0.1500	3.5	6.2	0.7	8.9	20.8
261	-99	0.1500	3.5	6.2	0.7	8.9	20.8
262	-98	0.1500	3.5	6.2	0.7	8.9	20.8
263	-95	0.1500	3.5	6.2	0.7	8.9	20.8
264	-90	0.1500	3.5	6.2	0.7	8.9	20.8
265	-86	0.1500	3.5	6.2	0.7	8.9	20.8
266	-82	0.1500	3.5	6.2	0.7	8.9	20.8
267	-79	0.1500	3.5	6.2	0.7	8.9	20.8
268	-75	0.1500	3.5	6.2	0.7	8.9	20.8
269	-71	0.1500	3.5	6.2	0.7	8.9	20.8
270	-68	0.1500	3.5	6.2	0.7	8.9	20.8
271	-64	0.1500	3.5	6.2	0.7	8.9	20.8
272	-61	0.1500	3.5	6.2	0.7	8.9	20.8
273	-57	0.1500	3.5	6.2	0.7	8.9	20.8
274	-53	0.1500	3.5	6.2	0.7	8.9	20.8
275	-51	0.1500	3.5	6.2	0.7	8.9	20.8
276	-50	0.1500	3.5	6.2	0.7	8.9	20.8
277	-48	0.1500	3.5	6.2	0.7	8.9	20.8
278	-45	0.1500	3.5	6.2	0.7	8.9	20.8
279	-43	0.1500	3.5	6.2	0.7	8.9	20.8
280	-39	0.1500	3.5	6.2	0.7	8.9	20.8
281	-35	0.1500	3.5	6.2	0.7	8.9	20.8
282	-30	0.1500	3.5	6.2	0.7	8.9	20.8
283	-25	0.1500	3.5	6.2	0.7	8.9	20.8
284	-19	0.1500	3.5	6.2	0.7	8.9	20.8
285	-12	0.1500	3.5	6.2	0.7	8.9	20.8
286	-7	0.1500	3.5	6.2	0.7	8.9	20.8
287	-5	0.1500	3.5	6.2	0.7	8.9	20.8

Vir James Engineers

Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 38-28-29 North 107-54-41 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (5801 feet), 1768 meters

Antenna HAAT: -65 meters

Antenna Center Above Sea Level: 1810 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

288	-4	0.1500	3.5	6.2	0.7	8.9	20.8
289	-1	0.1500	3.5	6.2	0.7	8.9	20.8
290	4	0.1500	3.5	6.2	0.7	8.9	20.8
291	9	0.1500	3.5	6.2	0.7	8.9	20.8
292	12	0.1500	3.5	6.2	0.7	8.9	20.8
293	15	0.1500	3.5	6.2	0.7	8.9	20.8
294	18	0.1500	3.5	6.2	0.7	8.9	20.8
295	23	0.1500	3.5	6.2	0.7	8.9	20.8
296	29	0.1500	3.5	6.2	0.7	8.9	20.8
297	34	0.1500	3.7	6.6	0.7	9.5	22.1
298	39	0.1500	4.0	7.1	0.7	10.1	23.7
299	43	0.1500	4.2	7.4	0.8	10.6	24.9
300	47	0.1500	4.4	7.8	0.8	11.2	26.1
301	49	0.1500	4.5	8.0	0.8	11.4	26.7
302	51	0.1500	4.6	8.2	0.9	11.6	27.2
303	53	0.1500	4.7	8.3	0.9	11.9	27.7
304	57	0.1500	4.9	8.7	0.9	12.3	28.7
305	61	0.1500	5.0	9.0	0.8	12.7	29.7
306	65	0.1500	5.2	9.3	0.9	13.1	30.7
307	68	0.1500	5.3	9.5	0.9	13.4	31.5
308	71	0.1500	5.4	9.7	0.9	13.6	32.2
309	74	0.1500	5.5	9.9	0.9	13.9	33.0
310	77	0.1500	5.6	10.0	0.9	14.2	33.7
311	80	0.1500	5.7	10.2	1.0	14.4	34.4
312	82	0.1500	5.8	10.4	1.0	14.6	34.9
313	84	0.1500	5.9	10.5	0.9	14.8	35.3
314	86	0.1500	6.0	10.6	0.9	15.0	35.8
315	88	0.1500	6.0	10.7	0.9	15.2	36.2
316	90	0.1500	6.1	10.8	0.9	15.4	36.7
317	92	0.1500	6.2	10.9	0.9	15.6	37.1
318	94	0.1500	6.2	11.1	0.9	15.8	37.5
319	96	0.1500	6.3	11.2	0.9	16.0	38.0
320	97	0.1500	6.3	11.2	0.9	16.1	38.2
321	98	0.1500	6.4	11.3	0.9	16.2	38.4
322	97	0.1500	6.3	11.2	0.9	16.1	38.2
323	97	0.1500	6.3	11.2	0.9	16.1	38.2

Vir James Engineers

Project: MONTROSE Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 38-28-29 North 107-54-41 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (5801 feet), 1768 meters

Antenna HAAT: -65 meters

Antenna Center Above Sea Level: 1810 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
324	97	0.1500	6.3	11.2	0.9	16.1	38.2
325	97	0.1500	6.3	11.2	0.9	16.1	38.2
326	99	0.1500	6.4	11.3	0.9	16.3	38.6
327	102	0.1500	6.5	11.5	1.0	16.6	39.2
328	106	0.1500	6.6	11.7	0.9	17.0	39.9
329	110	0.1500	6.8	11.9	0.9	17.4	40.6
330	113	0.1500	6.8	12.1	0.9	17.7	41.1
331	115	0.1500	6.9	12.2	0.9	17.9	41.4
332	117	0.1500	7.0	12.3	0.9	18.0	41.7
333	118	0.1500	7.0	12.3	0.9	18.1	41.9
334	118	0.1500	7.0	12.3	0.9	18.1	41.9
335	118	0.1500	7.0	12.3	0.9	18.1	41.9
336	117	0.1500	7.0	12.3	0.9	18.0	41.7
337	115	0.1500	6.9	12.2	0.9	17.9	41.4
338	114	0.1500	6.9	12.1	0.9	17.8	41.2
339	113	0.1500	6.8	12.1	0.9	17.7	41.1
340	113	0.1500	6.8	12.1	0.9	17.7	41.1
341	112	0.1500	6.8	12.0	0.9	17.6	40.9
342	112	0.1500	6.8	12.0	0.9	17.6	40.9
343	112	0.1500	6.8	12.0	0.9	17.6	40.9
344	111	0.1500	6.8	12.0	0.9	17.5	40.7
345	111	0.1500	6.8	12.0	0.9	17.5	40.7
346	111	0.1500	6.8	12.0	0.9	17.5	40.7
347	110	0.1500	6.8	11.9	0.9	17.4	40.6
348	111	0.1500	6.8	12.0	0.9	17.5	40.7
349	111	0.1500	6.8	12.0	0.9	17.5	40.7
350	111	0.1500	6.8	12.0	0.9	17.5	40.7
351	111	0.1500	6.8	12.0	0.9	17.5	40.7
352	112	0.1500	6.8	12.0	0.9	17.6	40.9
353	110	0.1500	6.8	11.9	0.9	17.4	40.6
354	108	0.1500	6.7	11.8	0.9	17.2	40.2
355	107	0.1500	6.7	11.8	0.9	17.1	40.0
356	104	0.1500	6.6	11.6	1.0	16.8	39.5
357	102	0.1500	6.5	11.5	1.0	16.6	39.2
358	99	0.1500	6.4	11.3	0.9	16.3	38.6
359	97	0.1500	6.3	11.2	0.9	16.1	38.2

Vir James Engineers

Project: KOTO Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 37-55-59 North 107-49-59 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
0	-75	8.900	9.9	17.5	1.7	26.1	77.5
1	-57	8.900	9.9	17.5	1.7	26.1	77.5
2	-39	8.900	9.9	17.5	1.7	26.1	77.5
3	-20	8.900	9.9	17.5	1.7	26.1	77.5
4	2	8.900	9.9	17.5	1.7	26.1	77.5
5	25	8.900	9.9	17.5	1.7	26.1	77.5
6	43	8.900	11.7	20.9	2.1	31.3	81.8
7	62	8.900	14.0	24.8	2.5	38.4	86.1
8	83	8.900	16.2	28.3	2.8	44.2	90.1
9	105	8.900	18.4	31.6	3.1	49.0	93.9
10	116	8.900	19.4	33.0	3.3	50.8	95.7
11	112	8.900	19.1	32.5	3.2	50.2	95.1
12	96	8.900	17.5	30.3	3.0	47.2	92.4
13	73	8.900	15.1	26.7	2.7	41.6	88.3
14	47	8.900	12.2	21.8	2.2	33.0	82.8
15	23	8.900	9.9	17.5	1.7	26.1	77.5
16	0	8.900	9.9	17.5	1.7	26.1	77.5
17	-25	8.900	9.9	17.5	1.7	26.1	77.5
18	-55	8.900	9.9	17.5	1.7	26.1	77.5
19	-84	8.900	9.9	17.5	1.7	26.1	77.5
20	-109	8.900	9.9	17.5	1.7	26.1	77.5
21	-124	8.900	9.9	17.5	1.7	26.1	77.5
22	-132	8.900	9.9	17.5	1.7	26.1	77.5
23	-139	8.900	9.9	17.5	1.7	26.1	77.5
24	-152	8.900	9.9	17.5	1.7	26.1	77.5
25	-170	8.900	9.9	17.5	1.7	26.1	77.5
26	-188	8.900	9.9	17.5	1.7	26.1	77.5
27	-205	8.900	9.9	17.5	1.7	26.1	77.5
28	-219	8.900	9.9	17.5	1.7	26.1	77.5
29	-231	8.900	9.9	17.5	1.7	26.1	77.5
30	-245	8.900	9.9	17.5	1.7	26.1	77.5
31	-260	8.900	9.9	17.5	1.7	26.1	77.5
32	-279	8.900	9.9	17.5	1.7	26.1	77.5
33	-301	8.900	9.9	17.5	1.7	26.1	77.5
34	-330	8.900	9.9	17.5	1.7	26.1	77.5
35	-359	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

Project: KOTO Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 37-55-59 North 107-49-59 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

36	-382	8.900	9.9	17.5	1.7	26.1	77.5
37	-395	8.900	9.9	17.5	1.7	26.1	77.5
38	-403	8.900	9.9	17.5	1.7	26.1	77.5
39	-410	8.900	9.9	17.5	1.7	26.1	77.5
40	-414	8.900	9.9	17.5	1.7	26.1	77.5
41	-409	8.900	9.9	17.5	1.7	26.1	77.5
42	-390	8.900	9.9	17.5	1.7	26.1	77.5
43	-367	8.900	9.9	17.5	1.7	26.1	77.5
44	-343	8.900	9.9	17.5	1.7	26.1	77.5
45	-322	8.900	9.9	17.5	1.7	26.1	77.5
46	-304	8.900	9.9	17.5	1.7	26.1	77.5
47	-293	8.900	9.9	17.5	1.7	26.1	77.5
48	-284	8.900	9.9	17.5	1.7	26.1	77.5
49	-274	8.900	9.9	17.5	1.7	26.1	77.5
50	-255	8.900	9.9	17.5	1.7	26.1	77.5
51	-229	8.900	9.9	17.5	1.7	26.1	77.5
52	-193	8.900	9.9	17.5	1.7	26.1	77.5
53	-151	8.900	9.9	17.5	1.7	26.1	77.5
54	-109	8.900	9.9	17.5	1.7	26.1	77.5
55	-81	8.900	9.9	17.5	1.7	26.1	77.5
56	-60	8.900	9.9	17.5	1.7	26.1	77.5
57	-48	8.900	9.9	17.5	1.7	26.1	77.5
58	-39	8.900	9.9	17.5	1.7	26.1	77.5
59	-30	8.900	9.9	17.5	1.7	26.1	77.5
60	-26	8.900	9.9	17.5	1.7	26.1	77.5
61	-29	8.900	9.9	17.5	1.7	26.1	77.5
62	-44	8.900	9.9	17.5	1.7	26.1	77.5
63	-66	8.900	9.9	17.5	1.7	26.1	77.5
64	-101	8.900	9.9	17.5	1.7	26.1	77.5
65	-135	8.900	9.9	17.5	1.7	26.1	77.5
66	-170	8.900	9.9	17.5	1.7	26.1	77.5
67	-200	8.900	9.9	17.5	1.7	26.1	77.5
68	-224	8.900	9.9	17.5	1.7	26.1	77.5
69	-245	8.900	9.9	17.5	1.7	26.1	77.5
70	-263	8.900	9.9	17.5	1.7	26.1	77.5
71	-280	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

Project: KOTO Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 37-55-59 North 107-49-59 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

72	-290	8.900	9.9	17.5	1.7	26.1	77.5
73	-296	8.900	9.9	17.5	1.7	26.1	77.5
74	-296	8.900	9.9	17.5	1.7	26.1	77.5
75	-294	8.900	9.9	17.5	1.7	26.1	77.5
76	-283	8.900	9.9	17.5	1.7	26.1	77.5
77	-262	8.900	9.9	17.5	1.7	26.1	77.5
78	-238	8.900	9.9	17.5	1.7	26.1	77.5
79	-215	8.900	9.9	17.5	1.7	26.1	77.5
80	-197	8.900	9.9	17.5	1.7	26.1	77.5
81	-185	8.900	9.9	17.5	1.7	26.1	77.5
82	-180	8.900	9.9	17.5	1.7	26.1	77.5
83	-184	8.900	9.9	17.5	1.7	26.1	77.5
84	-187	8.900	9.9	17.5	1.7	26.1	77.5
85	-189	8.900	9.9	17.5	1.7	26.1	77.5
86	-180	8.900	9.9	17.5	1.7	26.1	77.5
87	-165	8.900	9.9	17.5	1.7	26.1	77.5
88	-149	8.900	9.9	17.5	1.7	26.1	77.5
89	-134	8.900	9.9	17.5	1.7	26.1	77.5
90	-124	8.900	9.9	17.5	1.7	26.1	77.5
91	-131	8.900	9.9	17.5	1.7	26.1	77.5
92	-139	8.900	9.9	17.5	1.7	26.1	77.5
93	-146	8.900	9.9	17.5	1.7	26.1	77.5
94	-156	8.900	9.9	17.5	1.7	26.1	77.5
95	-172	8.900	9.9	17.5	1.7	26.1	77.5
96	-190	8.900	9.9	17.5	1.7	26.1	77.5
97	-205	8.900	9.9	17.5	1.7	26.1	77.5
98	-212	8.900	9.9	17.5	1.7	26.1	77.5
99	-218	8.900	9.9	17.5	1.7	26.1	77.5
100	-231	8.900	9.9	17.5	1.7	26.1	77.5
101	-239	8.900	9.9	17.5	1.7	26.1	77.5
102	-246	8.900	9.9	17.5	1.7	26.1	77.5
103	-253	8.900	9.9	17.5	1.7	26.1	77.5
104	-263	8.900	9.9	17.5	1.7	26.1	77.5
105	-271	8.900	9.9	17.5	1.7	26.1	77.5
106	-275	8.900	9.9	17.5	1.7	26.1	77.5
107	-274	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

Project: KOTO Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 37-55-59 North 107-49-59 West

NGDC 30-Second Database for Continental US.

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Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

108	-274	8.900	9.9	17.5	1.7	26.1	77.5
109	-273	8.900	9.9	17.5	1.7	26.1	77.5
110	-280	8.900	9.9	17.5	1.7	26.1	77.5
111	-293	8.900	9.9	17.5	1.7	26.1	77.5
112	-308	8.900	9.9	17.5	1.7	26.1	77.5
113	-320	8.900	9.9	17.5	1.7	26.1	77.5
114	-329	8.900	9.9	17.5	1.7	26.1	77.5
115	-333	8.900	9.9	17.5	1.7	26.1	77.5
116	-336	8.900	9.9	17.5	1.7	26.1	77.5
117	-335	8.900	9.9	17.5	1.7	26.1	77.5
118	-335	8.900	9.9	17.5	1.7	26.1	77.5
119	-337	8.900	9.9	17.5	1.7	26.1	77.5
120	-344	8.900	9.9	17.5	1.7	26.1	77.5
121	-351	8.900	9.9	17.5	1.7	26.1	77.5
122	-356	8.900	9.9	17.5	1.7	26.1	77.5
123	-358	8.900	9.9	17.5	1.7	26.1	77.5
124	-356	8.900	9.9	17.5	1.7	26.1	77.5
125	-347	8.900	9.9	17.5	1.7	26.1	77.5
126	-336	8.900	9.9	17.5	1.7	26.1	77.5
127	-326	8.900	9.9	17.5	1.7	26.1	77.5
128	-320	8.900	9.9	17.5	1.7	26.1	77.5
129	-319	8.900	9.9	17.5	1.7	26.1	77.5
130	-321	8.900	9.9	17.5	1.7	26.1	77.5
131	-327	8.900	9.9	17.5	1.7	26.1	77.5
132	-331	8.900	9.9	17.5	1.7	26.1	77.5
133	-338	8.900	9.9	17.5	1.7	26.1	77.5
134	-342	8.900	9.9	17.5	1.7	26.1	77.5
135	-341	8.900	9.9	17.5	1.7	26.1	77.5
136	-328	8.900	9.9	17.5	1.7	26.1	77.5
137	-310	8.900	9.9	17.5	1.7	26.1	77.5
138	-295	8.900	9.9	17.5	1.7	26.1	77.5
139	-287	8.900	9.9	17.5	1.7	26.1	77.5
140	-289	8.900	9.9	17.5	1.7	26.1	77.5
141	-301	8.900	9.9	17.5	1.7	26.1	77.5
142	-320	8.900	9.9	17.5	1.7	26.1	77.5
143	-343	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

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TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

144	-365	8.900	9.9	17.5	1.7	26.1	77.5
145	-382	8.900	9.9	17.5	1.7	26.1	77.5
146	-396	8.900	9.9	17.5	1.7	26.1	77.5
147	-400	8.900	9.9	17.5	1.7	26.1	77.5
148	-401	8.900	9.9	17.5	1.7	26.1	77.5
149	-401	8.900	9.9	17.5	1.7	26.1	77.5
150	-405	8.900	9.9	17.5	1.7	26.1	77.5
151	-409	8.900	9.9	17.5	1.7	26.1	77.5
152	-409	8.900	9.9	17.5	1.7	26.1	77.5
153	-405	8.900	9.9	17.5	1.7	26.1	77.5
154	-390	8.900	9.9	17.5	1.7	26.1	77.5
155	-373	8.900	9.9	17.5	1.7	26.1	77.5
156	-357	8.900	9.9	17.5	1.7	26.1	77.5
157	-341	8.900	9.9	17.5	1.7	26.1	77.5
158	-323	8.900	9.9	17.5	1.7	26.1	77.5
159	-310	8.900	9.9	17.5	1.7	26.1	77.5
160	-302	8.900	9.9	17.5	1.7	26.1	77.5
161	-302	8.900	9.9	17.5	1.7	26.1	77.5
162	-301	8.900	9.9	17.5	1.7	26.1	77.5
163	-295	8.900	9.9	17.5	1.7	26.1	77.5
164	-297	8.900	9.9	17.5	1.7	26.1	77.5
165	-305	8.900	9.9	17.5	1.7	26.1	77.5
166	-319	8.900	9.9	17.5	1.7	26.1	77.5
167	-338	8.900	9.9	17.5	1.7	26.1	77.5
168	-361	8.900	9.9	17.5	1.7	26.1	77.5
169	-387	8.900	9.9	17.5	1.7	26.1	77.5
170	-401	8.900	9.9	17.5	1.7	26.1	77.5
171	-411	8.900	9.9	17.5	1.7	26.1	77.5
172	-420	8.900	9.9	17.5	1.7	26.1	77.5
173	-413	8.900	9.9	17.5	1.7	26.1	77.5
174	-397	8.900	9.9	17.5	1.7	26.1	77.5
175	-379	8.900	9.9	17.5	1.7	26.1	77.5
176	-362	8.900	9.9	17.5	1.7	26.1	77.5
177	-354	8.900	9.9	17.5	1.7	26.1	77.5
178	-339	8.900	9.9	17.5	1.7	26.1	77.5
179	-320	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

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Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
180	-300	8.900	9.9	17.5	1.7	26.1	77.5
181	-280	8.900	9.9	17.5	1.7	26.1	77.5
182	-260	8.900	9.9	17.5	1.7	26.1	77.5
183	-242	8.900	9.9	17.5	1.7	26.1	77.5
184	-226	8.900	9.9	17.5	1.7	26.1	77.5
185	-202	8.900	9.9	17.5	1.7	26.1	77.5
186	-186	8.900	9.9	17.5	1.7	26.1	77.5
187	-181	8.900	9.9	17.5	1.7	26.1	77.5
188	-177	8.900	9.9	17.5	1.7	26.1	77.5
189	-164	8.900	9.9	17.5	1.7	26.1	77.5
190	-152	8.900	9.9	17.5	1.7	26.1	77.5
191	-140	8.900	9.9	17.5	1.7	26.1	77.5
192	-123	8.900	9.9	17.5	1.7	26.1	77.5
193	-107	8.900	9.9	17.5	1.7	26.1	77.5
194	-89	8.900	9.9	17.5	1.7	26.1	77.5
195	-68	8.900	9.9	17.5	1.7	26.1	77.5
196	-49	8.900	9.9	17.5	1.7	26.1	77.5
197	-31	8.900	9.9	17.5	1.7	26.1	77.5
198	-10	8.900	9.9	17.5	1.7	26.1	77.5
199	18	8.900	9.9	17.5	1.7	26.1	77.5
200	51	8.900	12.8	22.7	2.3	34.6	83.8
201	79	8.900	15.7	27.6	2.7	43.2	89.4
202	100	8.900	17.9	30.9	3.0	48.1	93.1
203	115	8.900	19.4	32.9	3.2	50.7	95.5
204	124	8.900	20.1	34.0	3.3	52.1	96.9
205	122	8.900	20.0	33.8	3.3	51.8	96.6
206	112	8.900	19.1	32.5	3.2	50.2	95.1
207	98	8.900	17.7	30.6	3.0	47.6	92.8
208	83	8.900	16.2	28.3	2.8	44.2	90.1
209	70	8.900	14.8	26.2	2.6	40.7	87.7
210	56	8.900	13.3	23.7	2.4	36.4	84.9
211	43	8.900	11.7	20.9	2.1	31.3	81.8
212	33	8.900	10.3	18.3	1.8	27.3	78.6
213	31	8.900	10.0	17.8	1.8	26.5	77.9
214	36	8.900	10.7	19.1	1.9	28.5	79.7
215	45	8.900	12.0	21.4	2.2	32.1	82.3

Vir James Engineers

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----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

216	54	8.900	13.1	23.3	2.4	35.7	84.4
217	59	8.900	13.7	24.2	2.5	37.4	85.5
218	58	8.900	13.6	24.1	2.4	37.0	85.3
219	50	8.900	12.6	22.5	2.3	34.2	83.5
220	37	8.900	10.9	19.4	2.0	28.8	80.0
221	23	8.900	9.9	17.5	1.7	26.1	77.5
222	13	8.900	9.9	17.5	1.7	26.1	77.5
223	3	8.900	9.9	17.5	1.7	26.1	77.5
224	-9	8.900	9.9	17.5	1.7	26.1	77.5
225	-17	8.900	9.9	17.5	1.7	26.1	77.5
226	-13	8.900	9.9	17.5	1.7	26.1	77.5
227	8	8.900	9.9	17.5	1.7	26.1	77.5
228	40	8.900	11.3	20.2	2.0	29.9	81.0
229	73	8.900	15.1	26.7	2.7	41.6	88.3
230	97	8.900	17.6	30.5	3.0	47.4	92.6
231	114	8.900	19.3	32.8	3.2	50.5	95.4
232	126	8.900	20.3	34.3	3.4	52.4	97.2
233	135	8.900	20.9	35.4	3.5	53.6	98.6
234	142	8.900	21.4	36.2	3.6	54.6	99.6
235	147	8.900	21.7	36.8	3.6	55.2	100.3
236	150	8.900	21.9	37.1	3.6	55.6	100.7
237	152	8.900	22.0	37.3	3.7	55.9	101.0
238	152	8.900	22.0	37.3	3.7	55.9	101.0
239	154	8.900	22.2	37.6	3.7	56.2	101.3
240	159	8.900	22.5	38.1	3.7	56.9	102.0
241	169	8.900	23.1	39.3	3.9	58.3	103.4
242	183	8.900	24.0	40.7	4.0	60.1	105.3
243	198	8.900	24.9	41.8	4.1	61.9	107.1
244	212	8.900	25.7	42.9	4.2	63.5	108.7
245	224	8.900	26.4	43.8	4.3	64.8	110.1
246	238	8.900	27.2	44.8	4.4	66.3	111.6
247	254	8.900	28.0	45.9	4.5	67.9	113.5
248	269	8.900	28.8	46.9	4.6	69.4	115.2
249	284	8.900	29.6	47.9	4.7	70.8	116.8
250	298	8.900	30.3	48.9	4.7	72.1	118.3
251	314	8.900	31.0	49.9	4.8	73.7	120.6

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AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

252	329	8.900	31.7	50.8	4.9	75.1	122.7
253	341	8.900	32.3	51.6	5.0	76.3	124.4
254	350	8.900	32.7	52.1	5.0	77.1	125.6
255	356	8.900	33.0	52.5	5.0	77.7	126.4
256	364	8.900	33.3	52.9	5.1	78.5	127.5
257	371	8.900	33.6	53.3	5.1	79.2	128.4
258	377	8.900	33.9	53.7	5.1	79.7	129.2
259	383	8.900	34.1	54.0	5.1	80.3	130.0
260	388	8.900	34.3	54.3	5.1	80.8	130.6
261	393	8.900	34.5	54.6	5.2	81.2	131.2
262	396	8.900	34.6	54.7	5.2	81.5	131.6
263	399	8.900	34.8	54.9	5.2	81.8	132.0
264	401	8.900	34.8	55.0	5.2	82.0	132.2
265	407	8.900	35.1	55.4	5.2	82.5	132.9
266	413	8.900	35.4	55.7	5.2	83.1	133.6
267	418	8.900	35.6	56.0	5.3	83.6	134.1
268	422	8.900	35.7	56.3	5.3	83.9	134.6
269	426	8.900	35.9	56.5	5.3	84.3	135.0
270	430	8.900	36.1	56.7	5.3	84.7	135.5
271	435	8.900	36.3	57.0	5.3	85.1	136.0
272	441	8.900	36.5	57.3	5.3	85.7	136.7
273	447	8.900	36.8	57.7	5.4	86.2	137.3
274	454	8.900	37.1	58.1	5.4	86.8	138.1
275	462	8.900	37.5	58.6	5.4	87.5	139.0
276	473	8.900	38.0	59.3	5.4	88.4	140.2
277	484	8.900	38.5	60.0	5.4	89.3	141.4
278	496	8.900	39.0	60.7	5.5	90.3	142.7
279	506	8.900	39.5	61.3	5.5	91.1	143.5
280	515	8.900	39.9	61.8	5.5	91.8	144.2
281	525	8.900	40.3	62.4	5.5	92.5	145.0
282	538	8.900	40.8	63.1	5.6	93.4	145.9
283	550	8.900	41.3	63.7	5.6	94.3	146.8
284	562	8.900	41.8	64.4	5.6	95.2	147.7
285	579	8.900	42.5	65.2	5.6	96.3	148.9
286	599	8.900	43.3	66.3	5.7	97.7	150.2
287	619	8.900	44.1	67.1	5.7	98.8	151.3

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Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

288	630	8.900	44.5	67.5	5.7	99.4	151.8
289	629	8.900	44.4	67.4	5.7	99.3	151.8
290	617	8.900	44.0	67.0	5.7	98.7	151.2
291	597	8.900	43.3	66.2	5.7	97.6	150.1
292	578	8.900	42.5	65.2	5.6	96.3	148.8
293	559	8.900	41.7	64.2	5.6	94.9	147.5
294	539	8.900	40.9	63.1	5.6	93.5	146.0
295	514	8.900	39.8	61.8	5.5	91.7	144.1
296	484	8.900	38.5	60.0	5.4	89.3	141.4
297	454	8.900	37.1	58.1	5.4	86.8	138.1
298	430	8.900	36.1	56.7	5.3	84.7	135.5
299	413	8.900	35.4	55.7	5.2	83.1	133.6
300	397	8.900	34.7	54.8	5.2	81.6	131.7
301	373	8.900	33.7	53.5	5.1	79.3	128.7
302	344	8.900	32.4	51.8	5.0	76.6	124.8
303	315	8.900	31.1	50.0	4.8	73.8	120.7
304	290	8.900	29.9	48.3	4.7	71.4	117.4
305	273	8.900	29.0	47.2	4.6	69.8	115.6
306	262	8.900	28.4	46.4	4.5	68.7	114.4
307	252	8.900	27.9	45.7	4.5	67.7	113.3
308	244	8.900	27.5	45.2	4.4	66.9	112.3
309	235	8.900	27.0	44.5	4.4	66.0	111.3
310	226	8.900	26.5	43.9	4.3	65.0	110.3
311	220	8.900	26.1	43.5	4.3	64.4	109.7
312	217	8.900	26.0	43.3	4.3	64.0	109.3
313	213	8.900	25.7	43.0	4.2	63.6	108.9
314	205	8.900	25.3	42.4	4.2	62.7	107.9
315	193	8.900	24.6	41.5	4.1	61.3	106.5
316	183	8.900	24.0	40.7	4.0	60.1	105.3
317	170	8.900	23.2	39.4	3.9	58.4	103.6
318	152	8.900	22.0	37.3	3.7	55.9	101.0
319	127	8.900	20.3	34.4	3.4	52.5	97.4
320	96	8.900	17.5	30.3	3.0	47.2	92.4
321	61	8.900	13.9	24.6	2.5	38.1	85.9
322	26	8.900	9.9	17.5	1.7	26.1	77.5
323	-5	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

Project: KOTO Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 37-55-59 North 107-49-59 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10381 feet), 3164 meters

Antenna HAAT: -68 meters

Antenna Center Above Sea Level: 3229 meters

TV/FM Channel: 219

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

324	-36	8.900	9.9	17.5	1.7	26.1	77.5
325	-71	8.900	9.9	17.5	1.7	26.1	77.5
326	-106	8.900	9.9	17.5	1.7	26.1	77.5
327	-139	8.900	9.9	17.5	1.7	26.1	77.5
328	-165	8.900	9.9	17.5	1.7	26.1	77.5
329	-178	8.900	9.9	17.5	1.7	26.1	77.5
330	-180	8.900	9.9	17.5	1.7	26.1	77.5
331	-172	8.900	9.9	17.5	1.7	26.1	77.5
332	-161	8.900	9.9	17.5	1.7	26.1	77.5
333	-146	8.900	9.9	17.5	1.7	26.1	77.5
334	-129	8.900	9.9	17.5	1.7	26.1	77.5
335	-108	8.900	9.9	17.5	1.7	26.1	77.5
336	-89	8.900	9.9	17.5	1.7	26.1	77.5
337	-71	8.900	9.9	17.5	1.7	26.1	77.5
338	-58	8.900	9.9	17.5	1.7	26.1	77.5
339	-52	8.900	9.9	17.5	1.7	26.1	77.5
340	-49	8.900	9.9	17.5	1.7	26.1	77.5
341	-47	8.900	9.9	17.5	1.7	26.1	77.5
342	-41	8.900	9.9	17.5	1.7	26.1	77.5
343	-36	8.900	9.9	17.5	1.7	26.1	77.5
344	-32	8.900	9.9	17.5	1.7	26.1	77.5
345	-32	8.900	9.9	17.5	1.7	26.1	77.5
346	-35	8.900	9.9	17.5	1.7	26.1	77.5
347	-41	8.900	9.9	17.5	1.7	26.1	77.5
348	-47	8.900	9.9	17.5	1.7	26.1	77.5
349	-54	8.900	9.9	17.5	1.7	26.1	77.5
350	-62	8.900	9.9	17.5	1.7	26.1	77.5
351	-70	8.900	9.9	17.5	1.7	26.1	77.5
352	-74	8.900	9.9	17.5	1.7	26.1	77.5
353	-76	8.900	9.9	17.5	1.7	26.1	77.5
354	-79	8.900	9.9	17.5	1.7	26.1	77.5
355	-83	8.900	9.9	17.5	1.7	26.1	77.5
356	-89	8.900	9.9	17.5	1.7	26.1	77.5
357	-88	8.900	9.9	17.5	1.7	26.1	77.5
358	-85	8.900	9.9	17.5	1.7	26.1	77.5
359	-81	8.900	9.9	17.5	1.7	26.1	77.5

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
0	860	0.7500	28.8	49.8	1.9	74.1	121.4
1	858	0.7500	28.7	49.8	1.9	74.1	121.3
2	854	0.7500	28.7	49.6	1.9	73.9	121.2
3	852	0.7500	28.6	49.6	1.9	73.8	121.1
4	851	0.7500	28.6	49.6	1.9	73.8	121.1
5	851	0.7500	28.6	49.6	1.9	73.8	121.1
6	859	0.7500	28.8	49.8	1.9	74.1	121.4
7	869	0.7500	28.9	50.1	1.9	74.4	121.7
8	878	0.7500	29.1	50.3	1.9	74.8	122.1
9	892	0.7500	29.3	50.7	1.9	75.2	122.6
10	907	0.7500	29.6	51.0	1.9	75.7	123.1
11	923	0.7500	29.8	51.3	1.9	76.2	123.6
12	939	0.7500	30.1	51.6	1.9	76.6	124.1
13	956	0.7500	30.4	52.0	1.9	77.1	124.6
14	974	0.7500	30.7	52.3	1.9	77.6	125.1
15	991	0.7500	31.0	52.6	1.9	78.1	125.6
16	1006	0.7500	31.2	52.9	1.9	78.5	126.0
17	1022	0.7500	31.4	53.2	1.9	78.9	126.4
18	1043	0.7500	31.8	53.5	1.9	79.5	127.0
19	1069	0.7500	32.2	54.0	1.9	80.2	127.7
20	1093	0.7500	32.6	54.4	1.9	80.8	128.3
21	1108	0.7500	32.8	54.7	1.9	81.2	128.7
22	1112	0.7500	32.8	54.7	1.9	81.3	128.8
23	1105	0.7500	32.7	54.6	1.9	81.1	128.6
24	1091	0.7500	32.5	54.4	1.9	80.8	128.3
25	1076	0.7500	32.3	54.1	1.9	80.4	127.9
26	1059	0.7500	32.0	53.8	1.9	79.9	127.4
27	1045	0.7500	31.8	53.6	1.9	79.6	127.1
28	1038	0.7500	31.7	53.5	1.9	79.4	126.9
29	1040	0.7500	31.7	53.5	1.9	79.4	126.9
30	1047	0.7500	31.8	53.6	1.9	79.6	127.1
31	1056	0.7500	32.0	53.8	1.9	79.9	127.4
32	1064	0.7500	32.1	53.9	1.9	80.1	127.6
33	1071	0.7500	32.2	54.0	1.9	80.2	127.8
34	1079	0.7500	32.3	54.2	1.9	80.5	128.0
35	1090	0.7500	32.5	54.4	1.9	80.7	128.3

Vir James Engineers
 Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz
 Site Coordinates: 39-25-30 North 107-22-46 West
 NGDC 30-Second Database for Continental US.
 DEM-30 Database for AK, HI, and PR.
 Site Elevation AMSL: (%10285 feet), 3135 meters
 Antenna HAAT: 811 meters
 Antenna Center Above Sea Level: 3261 meters
 TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
36	1102	0.7500	32.7	54.6	1.9	81.1	128.6
37	1115	0.7500	32.9	54.8	1.9	81.4	128.9
38	1126	0.7500	33.0	54.9	1.9	81.7	129.2
39	1134	0.7500	33.1	55.1	1.9	81.9	129.4
40	1137	0.7500	33.2	55.1	1.9	82.0	129.5
41	1137	0.7500	33.2	55.1	1.9	82.0	129.5
42	1135	0.7500	33.2	55.1	1.9	81.9	129.4
43	1135	0.7500	33.2	55.1	1.9	81.9	129.4
44	1135	0.7500	33.2	55.1	1.9	81.9	129.4
45	1136	0.7500	33.2	55.1	1.9	81.9	129.5
46	1137	0.7500	33.2	55.1	1.9	82.0	129.5
47	1138	0.7500	33.2	55.1	1.9	82.0	129.5
48	1141	0.7500	33.2	55.2	1.9	82.1	129.6
49	1144	0.7500	33.3	55.2	1.9	82.2	129.7
50	1147	0.7500	33.3	55.3	1.9	82.2	129.8
51	1151	0.7500	33.4	55.3	1.9	82.3	129.9
52	1154	0.7500	33.4	55.4	1.9	82.4	129.9
53	1156	0.7500	33.5	55.4	1.9	82.5	130.0
54	1158	0.7500	33.5	55.4	1.9	82.5	130.0
55	1160	0.7500	33.5	55.5	1.9	82.6	130.1
56	1163	0.7500	33.6	55.5	1.9	82.6	130.2
57	1166	0.7500	33.6	55.6	1.9	82.7	130.2
58	1168	0.7500	33.6	55.6	1.9	82.8	130.3
59	1169	0.7500	33.6	55.6	1.9	82.8	130.3
60	1169	0.7500	33.6	55.6	1.9	82.8	130.3
61	1169	0.7500	33.6	55.6	1.9	82.8	130.3
62	1170	0.7500	33.7	55.6	1.9	82.8	130.3
63	1171	0.7500	33.7	55.6	1.9	82.8	130.4
64	1172	0.7500	33.7	55.6	1.9	82.9	130.4
65	1173	0.7500	33.7	55.7	1.9	82.9	130.4
66	1173	0.7500	33.7	55.7	1.9	82.9	130.4
67	1172	0.7500	33.7	55.6	1.9	82.9	130.4
68	1171	0.7500	33.7	55.6	1.9	82.8	130.4
69	1171	0.7500	33.7	55.6	1.9	82.8	130.4
70	1173	0.7500	33.7	55.7	1.9	82.9	130.4
71	1178	0.7500	33.8	55.7	1.9	83.0	130.5

Vir James Engineers
 Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz
 Site Coordinates: 39-25-30 North 107-22-46 West
 NGDC 30-Second Database for Continental US.
 DEM-30 Database for AK, HI, and PR.
 Site Elevation AMSL: (%10285 feet), 3135 meters
 Antenna HAAT: 811 meters
 Antenna Center Above Sea Level: 3261 meters
 TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
72	1185	0.7500	33.9	55.8	1.9	83.2	130.7
73	1192	0.7500	34.0	55.9	1.9	83.4	130.9
74	1200	0.7500	34.1	56.1	1.9	83.6	131.1
75	1204	0.7500	34.1	56.1	1.9	83.7	131.2
76	1203	0.7500	34.1	56.1	1.9	83.6	131.2
77	1196	0.7500	34.0	56.0	1.9	83.5	131.0
78	1184	0.7500	33.9	55.8	1.9	83.2	130.7
79	1172	0.7500	33.7	55.6	1.9	82.9	130.4
80	1159	0.7500	33.5	55.5	1.9	82.5	130.1
81	1147	0.7500	33.3	55.3	1.9	82.2	129.8
82	1140	0.7500	33.2	55.2	1.9	82.0	129.6
83	1135	0.7500	33.2	55.1	1.9	81.9	129.4
84	1136	0.7500	33.2	55.1	1.9	81.9	129.5
85	1140	0.7500	33.2	55.2	1.9	82.0	129.6
86	1143	0.7500	33.3	55.2	1.9	82.1	129.6
87	1144	0.7500	33.3	55.2	1.9	82.2	129.7
88	1147	0.7500	33.3	55.3	1.9	82.2	129.8
89	1151	0.7500	33.4	55.3	1.9	82.3	129.9
90	1154	0.7500	33.4	55.4	1.9	82.4	129.9
91	1157	0.7500	33.5	55.4	1.9	82.5	130.0
92	1161	0.7500	33.5	55.5	1.9	82.6	130.1
93	1165	0.7500	33.6	55.5	1.9	82.7	130.2
94	1166	0.7500	33.6	55.6	1.9	82.7	130.2
95	1161	0.7500	33.5	55.5	1.9	82.6	130.1
96	1155	0.7500	33.4	55.4	1.9	82.4	130.0
97	1149	0.7500	33.4	55.3	1.9	82.3	129.8
98	1143	0.7500	33.3	55.2	1.9	82.1	129.6
99	1135	0.7500	33.2	55.1	1.9	81.9	129.4
100	1127	0.7500	33.0	55.0	1.9	81.7	129.2
101	1119	0.7500	32.9	54.8	1.9	81.5	129.0
102	1111	0.7500	32.8	54.7	1.9	81.3	128.8
103	1102	0.7500	32.7	54.6	1.9	81.1	128.6
104	1094	0.7500	32.6	54.4	1.9	80.8	128.4
105	1086	0.7500	32.4	54.3	1.9	80.6	128.1
106	1077	0.7500	32.3	54.1	1.9	80.4	127.9
107	1069	0.7500	32.2	54.0	1.9	80.2	127.7

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

108	1059	0.7500	32.0	53.8	1.9	79.9	127.4
109	1050	0.7500	31.9	53.7	1.9	79.7	127.2
110	1041	0.7500	31.7	53.5	1.9	79.5	126.9
111	1033	0.7500	31.6	53.4	1.9	79.2	126.7
112	1025	0.7500	31.5	53.2	1.9	79.0	126.5
113	1016	0.7500	31.4	53.1	1.9	78.8	126.3
114	1006	0.7500	31.2	52.9	1.9	78.5	126.0
115	995	0.7500	31.0	52.7	1.9	78.2	125.7
116	982	0.7500	30.8	52.4	1.9	77.9	125.3
117	967	0.7500	30.6	52.2	1.9	77.4	124.9
118	953	0.7500	30.3	51.9	1.9	77.0	124.5
119	938	0.7500	30.1	51.6	1.9	76.6	124.0
120	925	0.7500	29.9	51.4	1.9	76.2	123.7
121	914	0.7500	29.7	51.1	1.9	75.9	123.3
122	904	0.7500	29.5	51.0	1.9	75.6	123.0
123	895	0.7500	29.4	50.7	1.9	75.3	122.7
124	884	0.7500	29.2	50.5	1.9	75.0	122.3
125	870	0.7500	28.9	50.1	1.9	74.5	121.8
126	855	0.7500	28.7	49.7	1.9	73.9	121.2
127	842	0.7500	28.5	49.3	1.9	73.5	120.7
128	829	0.7500	28.2	49.0	1.9	73.0	120.2
129	818	0.7500	28.0	48.7	1.9	72.6	119.8
130	807	0.7500	27.8	48.4	1.9	72.2	119.3
131	792	0.7500	27.6	47.9	1.9	71.7	118.7
132	775	0.7500	27.3	47.5	1.9	71.0	118.0
133	757	0.7500	26.9	46.9	1.9	70.3	117.3
134	741	0.7500	26.6	46.5	1.9	69.7	116.6
135	726	0.7500	26.4	46.0	1.9	69.1	115.9
136	716	0.7500	26.2	45.7	1.9	68.7	115.5
137	714	0.7500	26.1	45.6	1.9	68.6	115.4
138	718	0.7500	26.2	45.8	1.9	68.8	115.6
139	723	0.7500	26.3	45.9	1.9	69.0	115.8
140	724	0.7500	26.3	45.9	1.9	69.0	115.9
141	724	0.7500	26.3	45.9	1.9	69.0	115.9
142	721	0.7500	26.3	45.8	1.9	68.9	115.7
143	714	0.7500	26.1	45.6	1.9	68.6	115.4

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
144	699	0.7500	25.9	45.1	1.9	68.0	114.8
145	678	0.7500	25.5	44.5	1.9	67.1	113.8
146	654	0.7500	25.0	43.7	1.9	66.1	112.7
147	630	0.7500	24.6	42.9	1.9	65.1	111.6
148	610	0.7500	24.2	42.2	1.8	64.2	110.6
149	590	0.7500	23.7	41.4	1.8	63.2	109.3
150	576	0.7500	23.4	40.9	1.8	62.5	108.2
151	565	0.7500	23.2	40.4	1.8	61.9	107.3
152	558	0.7500	23.0	40.1	1.8	61.5	106.7
153	554	0.7500	22.9	40.0	1.8	61.3	106.4
154	551	0.7500	22.8	39.8	1.8	61.1	106.1
155	550	0.7500	22.8	39.8	1.8	61.0	106.1
156	554	0.7500	22.9	40.0	1.8	61.3	106.4
157	561	0.7500	23.1	40.3	1.8	61.6	107.0
158	566	0.7500	23.2	40.5	1.8	61.9	107.4
159	568	0.7500	23.2	40.5	1.8	62.0	107.5
160	565	0.7500	23.2	40.4	1.8	61.9	107.3
161	551	0.7500	22.8	39.8	1.8	61.1	106.1
162	533	0.7500	22.4	39.1	1.8	60.1	104.6
163	514	0.7500	21.9	38.3	1.8	59.0	103.0
164	497	0.7500	21.5	37.5	1.8	58.0	101.5
165	480	0.7500	21.1	36.8	1.8	56.8	99.9
166	463	0.7500	20.7	36.0	1.8	55.6	98.2
167	443	0.7500	20.2	35.2	1.8	54.2	96.3
168	423	0.7500	19.8	34.4	1.8	53.0	94.2
169	403	0.7500	19.3	33.6	1.8	51.7	92.1
170	385	0.7500	18.9	32.9	1.8	50.4	90.4
171	371	0.7500	18.6	32.3	1.8	49.4	89.0
172	358	0.7500	18.2	31.8	1.8	48.4	87.7
173	349	0.7500	18.0	31.4	1.8	47.8	86.7
174	342	0.7500	17.8	31.1	1.8	47.2	86.1
175	337	0.7500	17.7	30.9	1.8	46.9	85.6
176	334	0.7500	17.6	30.8	1.8	46.6	85.3
177	333	0.7500	17.6	30.7	1.8	46.6	85.2
178	334	0.7500	17.6	30.8	1.8	46.6	85.3
179	334	0.7500	17.6	30.8	1.8	46.6	85.3

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

180	336	0.7500	17.7	30.9	1.8	46.8	85.5
181	337	0.7500	17.7	30.9	1.8	46.9	85.6
182	337	0.7500	17.7	30.9	1.8	46.9	85.6
183	339	0.7500	17.7	31.0	1.8	47.0	85.8
184	340	0.7500	17.8	31.0	1.8	47.1	85.9
185	343	0.7500	17.9	31.2	1.8	47.3	86.2
186	348	0.7500	18.0	31.4	1.8	47.7	86.7
187	352	0.7500	18.1	31.6	1.8	48.0	87.0
188	357	0.7500	18.2	31.8	1.8	48.4	87.6
189	362	0.7500	18.3	32.0	1.8	48.7	88.1
190	365	0.7500	18.4	32.1	1.8	49.0	88.4
191	369	0.7500	18.5	32.3	1.8	49.2	88.8
192	374	0.7500	18.6	32.5	1.8	49.6	89.3
193	383	0.7500	18.8	32.8	1.8	50.3	90.2
194	391	0.7500	19.0	33.1	1.8	50.8	90.9
195	399	0.7500	19.2	33.4	1.8	51.4	91.7
196	408	0.7500	19.4	33.8	1.8	52.0	92.7
197	420	0.7500	19.7	34.3	1.8	52.8	93.9
198	430	0.7500	19.9	34.7	1.8	53.4	94.9
199	436	0.7500	20.1	34.9	1.8	53.8	95.6
200	437	0.7500	20.1	35.0	1.8	53.9	95.7
201	436	0.7500	20.1	34.9	1.8	53.8	95.6
202	435	0.7500	20.0	34.9	1.8	53.7	95.4
203	435	0.7500	20.0	34.9	1.8	53.7	95.4
204	434	0.7500	20.0	34.8	1.8	53.7	95.3
205	432	0.7500	20.0	34.8	1.8	53.5	95.1
206	429	0.7500	19.9	34.6	1.8	53.4	94.8
207	427	0.7500	19.9	34.6	1.8	53.2	94.6
208	427	0.7500	19.9	34.6	1.8	53.2	94.6
209	430	0.7500	19.9	34.7	1.8	53.4	94.9
210	436	0.7500	20.1	34.9	1.8	53.8	95.6
211	444	0.7500	20.2	35.2	1.8	54.3	96.4
212	453	0.7500	20.5	35.6	1.8	54.9	97.3
213	463	0.7500	20.7	36.0	1.8	55.6	98.2
214	473	0.7500	21.0	36.5	1.8	56.3	99.2
215	481	0.7500	21.1	36.8	1.8	56.9	100.0

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
216	487	0.7500	21.3	37.1	1.8	57.3	100.6
217	494	0.7500	21.5	37.4	1.8	57.8	101.2
218	502	0.7500	21.7	37.8	1.8	58.3	102.0
219	509	0.7500	21.8	38.1	1.8	58.7	102.6
220	515	0.7500	22.0	38.3	1.8	59.1	103.1
221	519	0.7500	22.1	38.5	1.8	59.3	103.4
222	521	0.7500	22.1	38.6	1.8	59.4	103.6
223	519	0.7500	22.1	38.5	1.8	59.3	103.4
224	512	0.7500	21.9	38.2	1.8	58.9	102.8
225	504	0.7500	21.7	37.8	1.8	58.4	102.1
226	495	0.7500	21.5	37.4	1.8	57.9	101.3
227	487	0.7500	21.3	37.1	1.8	57.3	100.6
228	480	0.7500	21.1	36.8	1.8	56.8	99.9
229	478	0.7500	21.1	36.7	1.8	56.7	99.7
230	482	0.7500	21.2	36.9	1.8	56.9	100.1
231	489	0.7500	21.3	37.2	1.8	57.4	100.7
232	498	0.7500	21.6	37.6	1.8	58.1	101.6
233	509	0.7500	21.8	38.1	1.8	58.7	102.6
234	520	0.7500	22.1	38.5	1.8	59.4	103.5
235	530	0.7500	22.3	39.0	1.8	59.9	104.4
236	537	0.7500	22.5	39.2	1.8	60.3	105.0
237	540	0.7500	22.6	39.4	1.8	60.5	105.2
238	543	0.7500	22.6	39.5	1.8	60.7	105.5
239	546	0.7500	22.7	39.6	1.8	60.8	105.7
240	550	0.7500	22.8	39.8	1.8	61.0	106.1
241	554	0.7500	22.9	40.0	1.8	61.3	106.4
242	559	0.7500	23.0	40.2	1.8	61.5	106.8
243	566	0.7500	23.2	40.5	1.8	61.9	107.4
244	570	0.7500	23.3	40.6	1.8	62.1	107.7
245	572	0.7500	23.3	40.7	1.8	62.3	107.9
246	572	0.7500	23.3	40.7	1.8	62.3	107.9
247	574	0.7500	23.4	40.8	1.8	62.4	108.0
248	579	0.7500	23.5	41.0	1.8	62.6	108.4
249	588	0.7500	23.7	41.4	1.8	63.1	109.1
250	599	0.7500	23.9	41.8	1.8	63.7	110.0
251	612	0.7500	24.2	42.3	1.8	64.3	110.7

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10
252	623	0.7500	24.4	42.6	1.9	64.8	111.2
253	629	0.7500	24.5	42.8	1.9	65.0	111.5
254	635	0.7500	24.7	43.0	1.9	65.3	111.8
255	645	0.7500	24.8	43.4	1.9	65.7	112.3
256	659	0.7500	25.1	43.8	1.9	66.3	112.9
257	674	0.7500	25.4	44.3	1.9	67.0	113.6
258	683	0.7500	25.6	44.6	1.9	67.4	114.0
259	689	0.7500	25.7	44.8	1.9	67.6	114.3
260	695	0.7500	25.8	45.0	1.9	67.9	114.6
261	703	0.7500	25.9	45.3	1.9	68.2	114.9
262	712	0.7500	26.1	45.6	1.9	68.6	115.3
263	720	0.7500	26.3	45.8	1.9	68.9	115.7
264	731	0.7500	26.5	46.2	1.9	69.3	116.2
265	743	0.7500	26.7	46.5	1.9	69.8	116.7
266	754	0.7500	26.9	46.9	1.9	70.2	117.1
267	763	0.7500	27.0	47.1	1.9	70.6	117.5
268	770	0.7500	27.2	47.3	1.9	70.8	117.8
269	777	0.7500	27.3	47.5	1.9	71.1	118.1
270	784	0.7500	27.4	47.7	1.9	71.4	118.4
271	798	0.7500	27.7	48.1	1.9	71.9	119.0
272	813	0.7500	27.9	48.5	1.9	72.4	119.6
273	826	0.7500	28.2	48.9	1.9	72.9	120.1
274	836	0.7500	28.4	49.2	1.9	73.3	120.5
275	834	0.7500	28.3	49.1	1.9	73.2	120.4
276	830	0.7500	28.3	49.0	1.9	73.0	120.2
277	827	0.7500	28.2	48.9	1.9	72.9	120.1
278	824	0.7500	28.1	48.8	1.9	72.8	120.0
279	819	0.7500	28.1	48.7	1.9	72.6	119.8
280	813	0.7500	27.9	48.5	1.9	72.4	119.6
281	808	0.7500	27.9	48.4	1.9	72.2	119.4
282	806	0.7500	27.8	48.3	1.9	72.2	119.3
283	807	0.7500	27.8	48.4	1.9	72.2	119.3
284	809	0.7500	27.9	48.4	1.9	72.3	119.4
285	805	0.7500	27.8	48.3	1.9	72.1	119.2
286	797	0.7500	27.7	48.1	1.9	71.8	118.9
287	790	0.7500	27.5	47.9	1.9	71.6	118.6

Vir James Engineers

Project: KLXV Curves: VHF Low Band for 88 mHz to 108 mHz

Site Coordinates: 39-25-30 North 107-22-46 West

NGDC 30-Second Database for Continental US.

DEM-30 Database for AK, HI, and PR.

Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

Antenna Center Above Sea Level: 3261 meters

TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

288	787	0.7500	27.5	47.8	1.9	71.5	118.5
289	790	0.7500	27.5	47.9	1.9	71.6	118.6
290	798	0.7500	27.7	48.1	1.9	71.9	119.0
291	808	0.7500	27.9	48.4	1.9	72.2	119.4
292	816	0.7500	28.0	48.6	1.9	72.5	119.7
293	819	0.7500	28.1	48.7	1.9	72.6	119.8
294	818	0.7500	28.0	48.7	1.9	72.6	119.8
295	818	0.7500	28.0	48.7	1.9	72.6	119.8
296	820	0.7500	28.1	48.7	1.9	72.7	119.8
297	826	0.7500	28.2	48.9	1.9	72.9	120.1
298	837	0.7500	28.4	49.2	1.9	73.3	120.5
299	851	0.7500	28.6	49.6	1.9	73.8	121.1
300	868	0.7500	28.9	50.0	1.9	74.4	121.7
301	886	0.7500	29.2	50.5	1.9	75.0	122.4
302	904	0.7500	29.5	51.0	1.9	75.6	123.0
303	921	0.7500	29.8	51.3	1.9	76.1	123.5
304	938	0.7500	30.1	51.6	1.9	76.6	124.0
305	955	0.7500	30.4	51.9	1.9	77.1	124.5
306	974	0.7500	30.7	52.3	1.9	77.6	125.1
307	992	0.7500	31.0	52.6	1.9	78.1	125.6
308	1008	0.7500	31.2	52.9	1.9	78.6	126.0
309	1019	0.7500	31.4	53.1	1.9	78.9	126.3
310	1025	0.7500	31.5	53.2	1.9	79.0	126.5
311	1028	0.7500	31.5	53.3	1.9	79.1	126.6
312	1027	0.7500	31.5	53.3	1.9	79.1	126.6
313	1025	0.7500	31.5	53.2	1.9	79.0	126.5
314	1024	0.7500	31.5	53.2	1.9	79.0	126.5
315	1023	0.7500	31.5	53.2	1.9	79.0	126.5
316	1021	0.7500	31.4	53.2	1.9	78.9	126.4
317	1020	0.7500	31.4	53.1	1.9	78.9	126.4
318	1019	0.7500	31.4	53.1	1.9	78.9	126.3
319	1020	0.7500	31.4	53.1	1.9	78.9	126.4
320	1023	0.7500	31.5	53.2	1.9	79.0	126.5
321	1027	0.7500	31.5	53.3	1.9	79.1	126.6
322	1031	0.7500	31.6	53.3	1.9	79.2	126.7
323	1032	0.7500	31.6	53.4	1.9	79.2	126.7

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Site Elevation AMSL: (%10285 feet), 3135 meters

Antenna HAAT: 811 meters

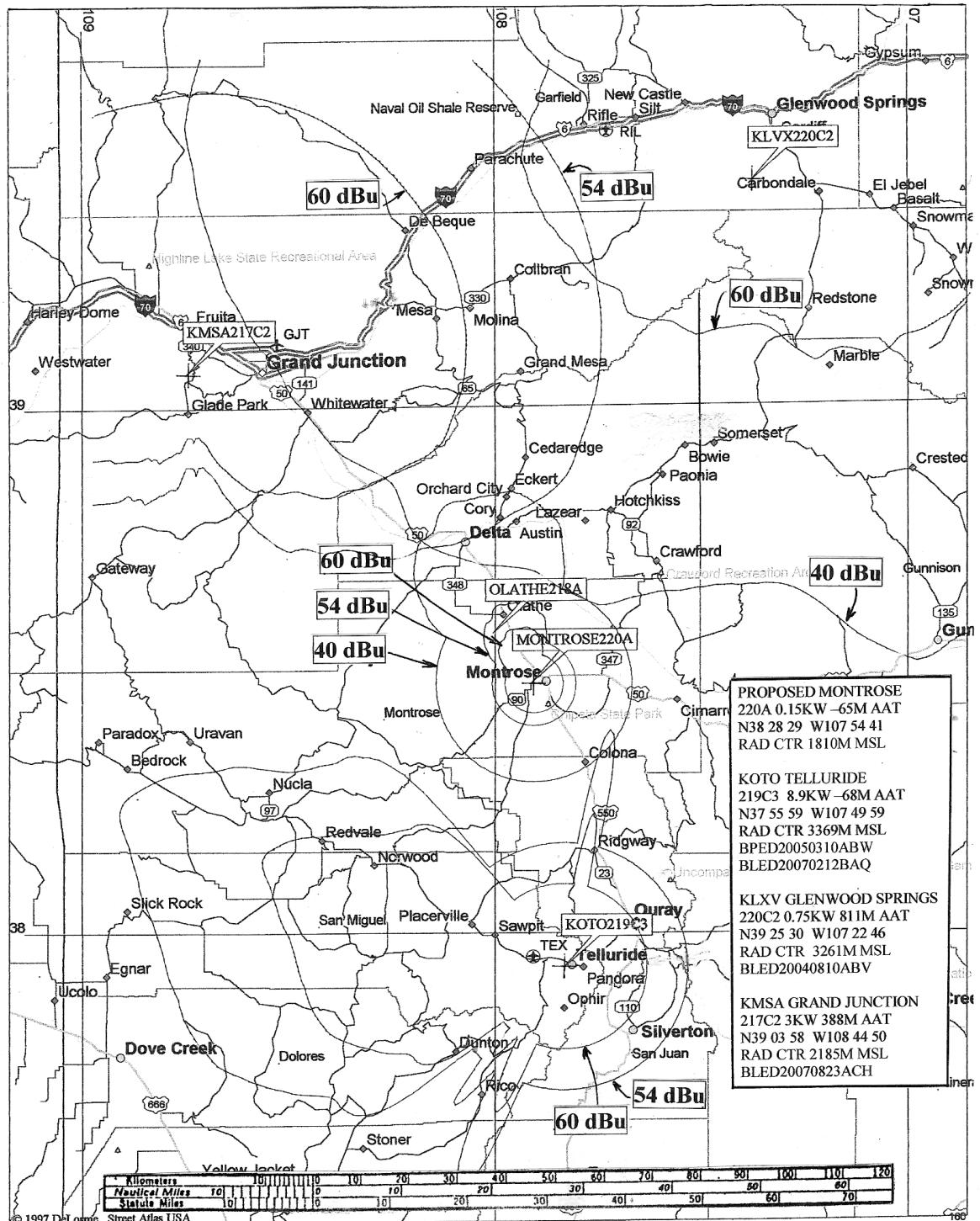
Antenna Center Above Sea Level: 3261 meters

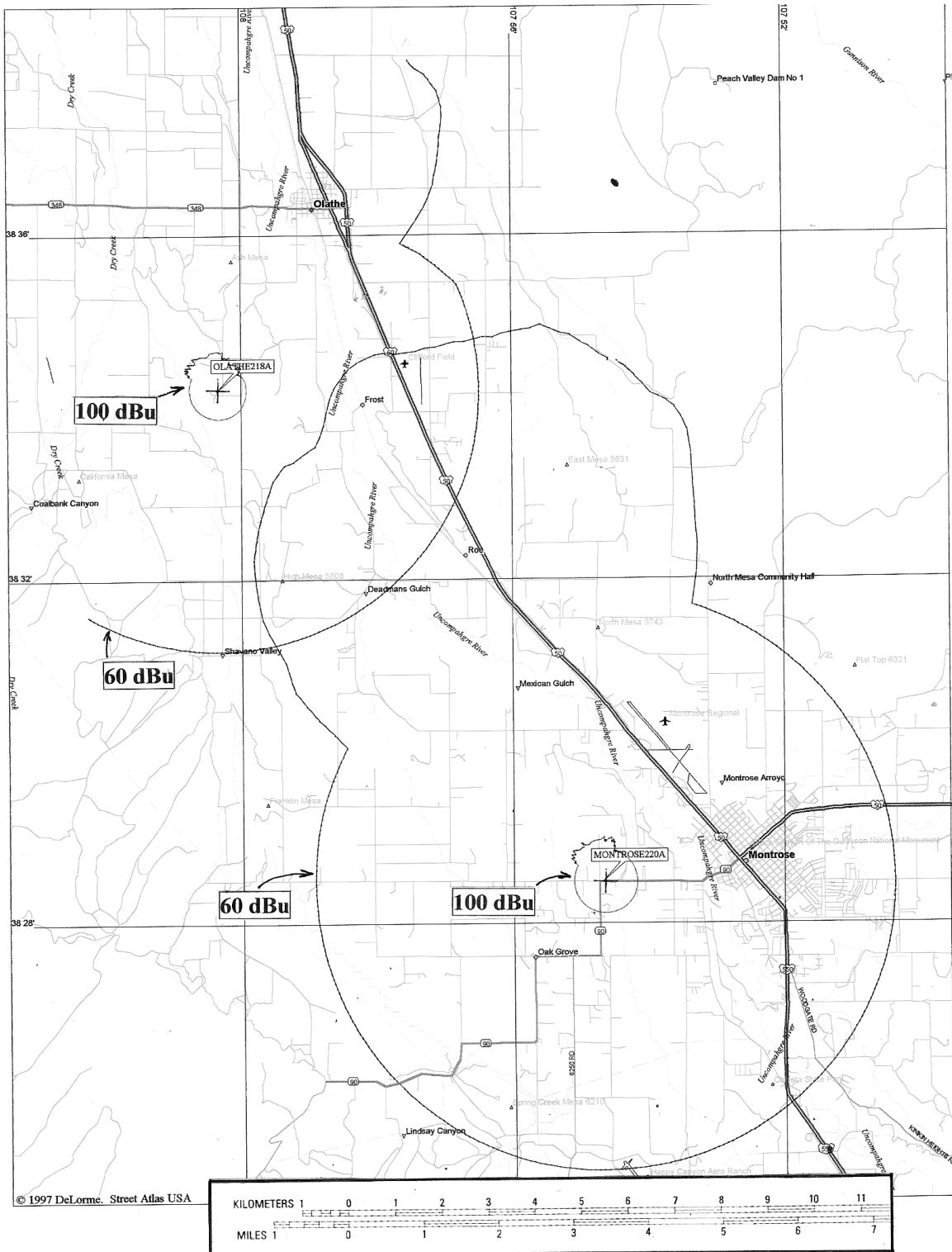
TV/FM Channel: 220

----- DISTANCES TO CONTOURS IN KILOMETERS -----

AZM (deg)	HAAT (m)	ERP (kW)	70 dB (km)	60 dB (km)	100 dB (km)	54 dB (km)	40 dB (km)
			50,50	50,50	50,10	50,10	50,10

324	1027	0.7500	31.5	53.3	1.9	79.1	126.6
325	1016	0.7500	31.4	53.1	1.9	78.8	126.3
326	1003	0.7500	31.1	52.8	1.9	78.4	125.9
327	989	0.7500	30.9	52.6	1.9	78.0	125.5
328	977	0.7500	30.7	52.3	1.9	77.7	125.2
329	962	0.7500	30.5	52.1	1.9	77.3	124.7
330	946	0.7500	30.2	51.8	1.9	76.8	124.3
331	929	0.7500	29.9	51.4	1.9	76.4	123.8
332	912	0.7500	29.7	51.1	1.9	75.9	123.3
333	897	0.7500	29.4	50.8	1.9	75.4	122.8
334	885	0.7500	29.2	50.5	1.9	75.0	122.3
335	882	0.7500	29.2	50.4	1.9	74.9	122.2
336	885	0.7500	29.2	50.5	1.9	75.0	122.3
337	894	0.7500	29.4	50.7	1.9	75.3	122.7
338	906	0.7500	29.6	51.0	1.9	75.7	123.1
339	922	0.7500	29.8	51.3	1.9	76.2	123.6
340	937	0.7500	30.1	51.6	1.9	76.6	124.0
341	946	0.7500	30.2	51.8	1.9	76.8	124.3
342	953	0.7500	30.3	51.9	1.9	77.0	124.5
343	961	0.7500	30.5	52.0	1.9	77.3	124.7
344	969	0.7500	30.6	52.2	1.9	77.5	124.9
345	972	0.7500	30.6	52.3	1.9	77.6	125.0
346	970	0.7500	30.6	52.2	1.9	77.5	125.0
347	963	0.7500	30.5	52.1	1.9	77.3	124.8
348	951	0.7500	30.3	51.9	1.9	77.0	124.4
349	941	0.7500	30.1	51.7	1.9	76.7	124.1
350	932	0.7500	30.0	51.5	1.9	76.4	123.9
351	924	0.7500	29.9	51.3	1.9	76.2	123.6
352	916	0.7500	29.7	51.2	1.9	76.0	123.4
353	908	0.7500	29.6	51.0	1.9	75.8	123.1
354	901	0.7500	29.5	50.9	1.9	75.5	122.9
355	895	0.7500	29.4	50.7	1.9	75.3	122.7
356	885	0.7500	29.2	50.5	1.9	75.0	122.3
357	875	0.7500	29.0	50.2	1.9	74.6	122.0
358	866	0.7500	28.9	50.0	1.9	74.3	121.6
359	862	0.7500	28.8	49.9	1.9	74.2	121.5





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