

TECHNICAL EXHIBIT
APPLICATION FOR FM CONSTRUCTION PERMIT
STATION WMXV(FM) (FACILITY ID 10698)
CANTON, GEORGIA

FEBRUARY 3, 2003

CH 289C2 20 KW 238 M

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Technical Narrative

This Technical Exhibit supports a minor change application from FM station WMXV on channel 289C2 (105.7 MHz) at Canton, Georgia (Facility ID 10698). Station WMXV is currently authorized to operate on channel 289C2 with a non-directional antenna system (BLH-20000418AAV). The effective radiated power (ERP) is 16.5 kilowatts (kW), horizontal and vertical polarization (H&V). The antenna height above average terrain (HAAT) is 252 meters. The transmitter site coordinates are 34-03-55, 84-27-14 (NAD-27).

Station WMXV proposes to relocate its transmitting facilities to an existing tower approximately 0.1 kilometer to the north of the present tower. The coordinates for the proposed site are 34-03-58, 84-27-15 (NAD-27). It is proposed to sidemount an ERI SHPX-4AC-HW 4-bay non-directional, circularly polarized, half-wave spaced antenna system on the existing tower. The center of radiation for the proposed antenna system will be 44 meters AGL, 546 meters above mean sea level (AMSL). The proposed antenna HAAT will be 238 meters based on use of a 3 second digitized terrain database. The proposed ERP will be 20 kW, H&V. The proposed transmitting facilities (20 kW, 238 m) are considered equivalent to maximum Class C2 facilities (50 kW, 150 m).

Figure 3 is a sketch of the proposed WMXV antenna system on the existing structure. The Federal Aviation Administration (FAA) has not been notified since there is no proposed change to the overall height of the existing structure and the overall height is less than 61 meters (200 feet) AGL. The existing tower is not registered with the FCC since the

overall height is only 48 meters (157.5 feet) AGL, and there is no proposed change to the overall structure height.

The proposed WMXV transmitter site is more than 800 kilometers from the closest point of the Canadian border. The proposed site is more than 1400 kilometers from the closest point of the Mexican border.

The closest FCC monitoring station is at Powder Springs, Georgia, approximately 33.6 kilometers to the southwest. The predicted F(50,10) FM signal at the FCC monitoring station is approximately 3.27 mV/m (70.3 dBu), less than the FCC's maximum permitted level of 10 mV/m.

The closest point of the National Radio Quiet Zone (VA/WV) is more than 500 kilometers to the northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1900 kilometers to the west-northwest. The closest radio astronomy site operating on TV channel 37 is at Green Bank, West Virginia, approximately 637 kilometers to the northeast. These separations are considered sufficient to not be a concern for coordination purposes.

There are no authorized AM stations within 5 kilometers (3 miles) of the proposed WMXV site. There are no other authorized full service FM stations within 15 kilometers of the proposed site. The following are the closest authorized full service TV stations to the proposed WMXV site.

<u>Station</u>	<u>Channel</u>	<u>Distance</u>
WATC(TV), Atlanta, GA	NTSC-57	0.1 km
WATC-DT, Atlanta, GA	DTV-41	0.1

Although no prohibited electro-magnetic interference is anticipated, the applicant recognizes its responsibility to remedy problems which may result from its proposed operation.

Predicted Coverage

Figure 1 is a map showing the predicted 3.16 mV/m (70 dBu) and 1 mV/m (60 dBu) contours. The map shows the Canton, Georgia limits. As shown, the predicted 3.16 mV/m (70 dBu) contour encompasses the Canton limits. The estimated population (2000 US Census) within the predicted 1 mV/m (60 dBu) contour is 3,114,210 people.

Allocation Study

Figure 2 contains a tabulation of actual and required separation distances with respect to other pertinent stations as specified in Section 73.207(b) of the Commission's Rules. The FCC's FM database was used as the basis for the separation study. The study indicates that there are no short-spacing.

Radiofrequency Electromagnetic Field Exposure

The proposed WMXV facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The proposed WMXV antenna is a 4-bay half wave spaced system. The FM antenna center of radiation is located 44 meters above ground level (see Figure 3). For angles greater than 25 degrees a relative field value of 0.2 is assumed for the FM antenna's downward radiation (see Figure 4). Using the assumed relative field value (0.2) along with the combined ERP of 40 kW (20 kW horizontal polarization & 20 kW vertical polarization), the calculated power density at a point 2 meters above ground level is approximately 0.0303 mW/cm², or about 15% of the FCC's recommended limit of 0.2 mW/cm² for FM channels, applicable to general population/"uncontrolled" exposure areas. The calculated power density is about 3% of the FCC's limit for a "controlled" environment.

Access to the transmission system will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with

respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RF protective clothing and/or RF exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WMXV operation appears to be otherwise categorically excluded from environmental processing.

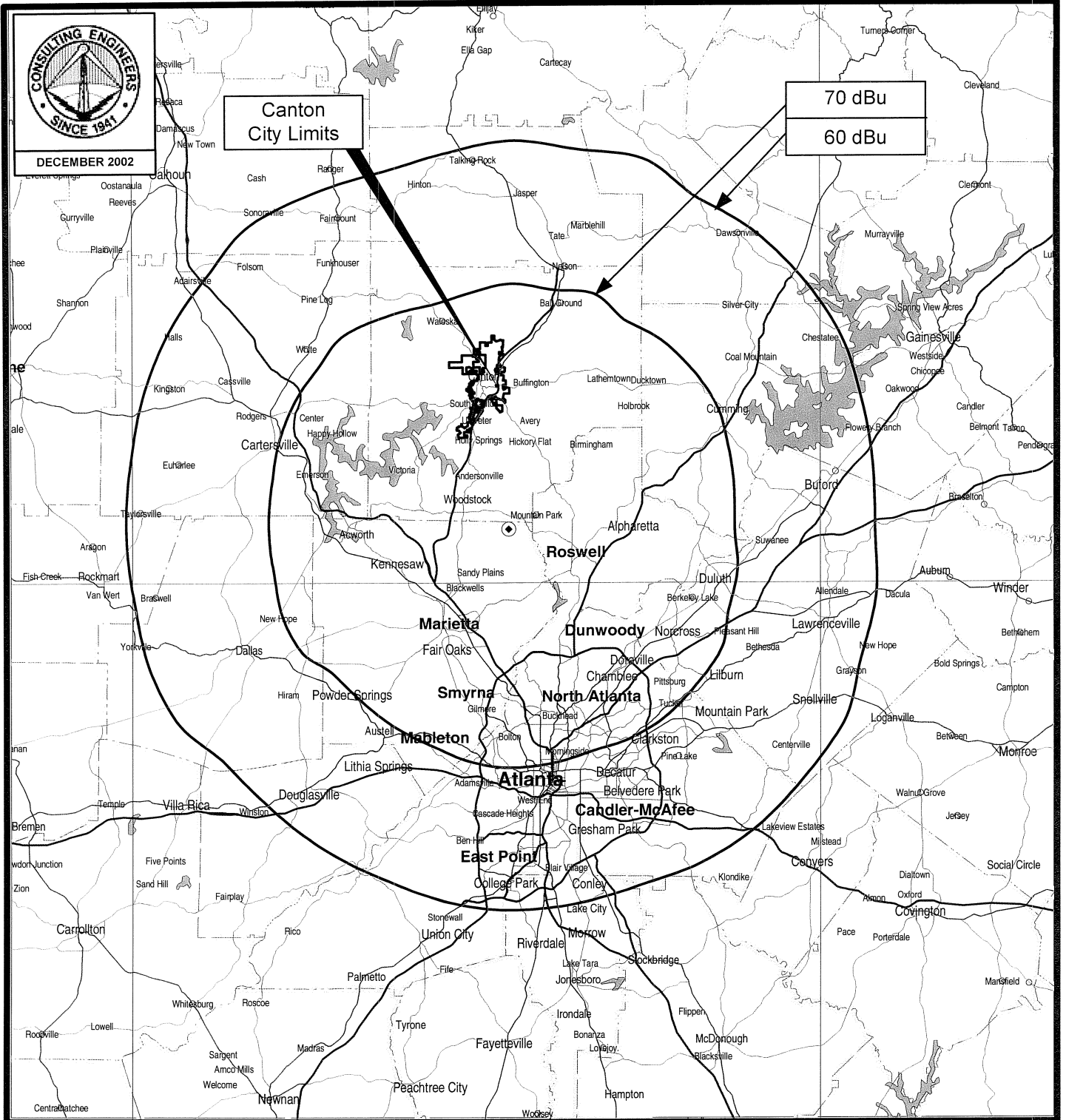
If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

John A. Lundin

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February 3, 2003

Figure 1



PREDICTED COVERAGE CONTOURS

STATION WMXV(FM)
CANTON, GEORGIA
CH 289C2 20 KW 238 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

FIGURE 2

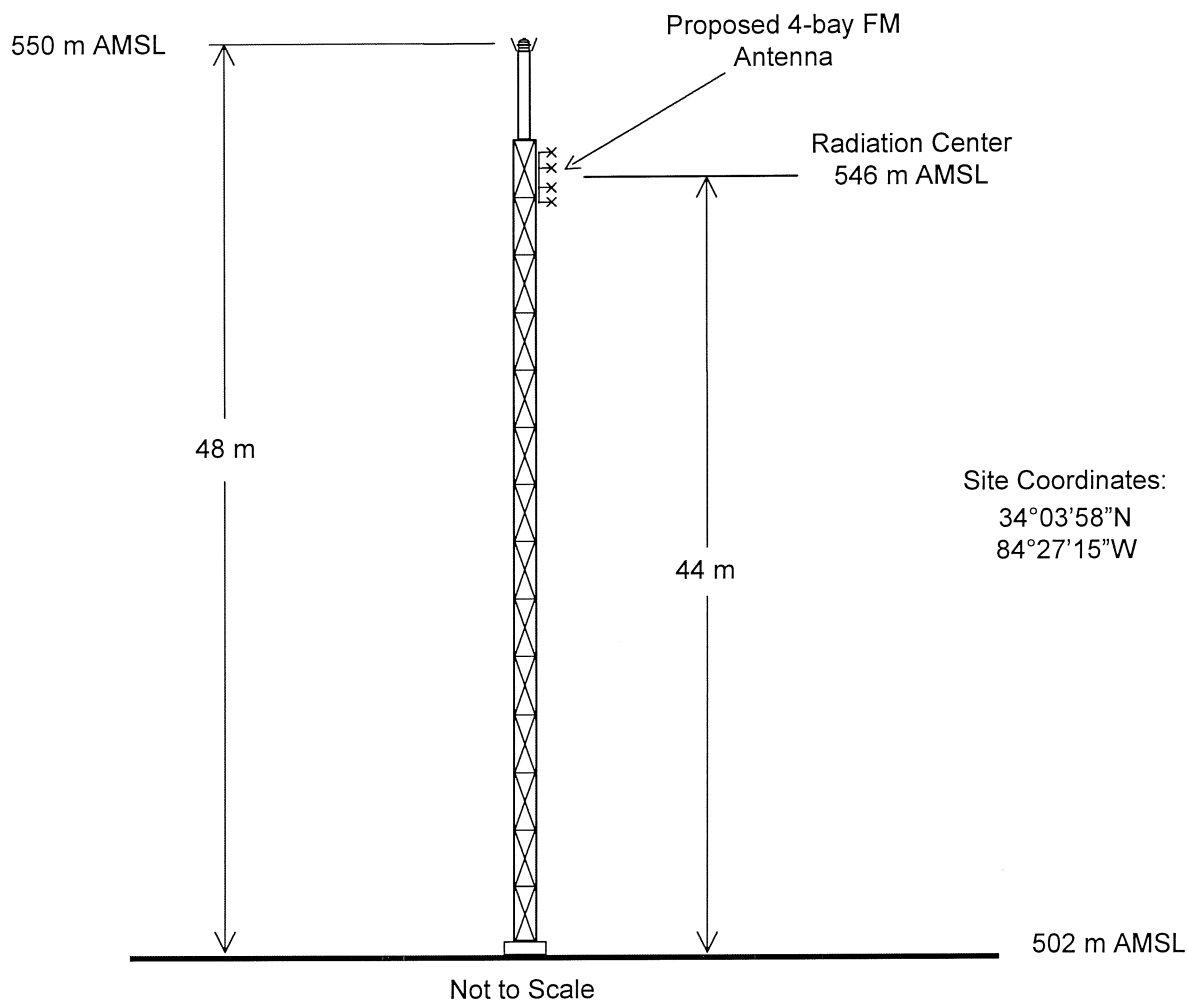
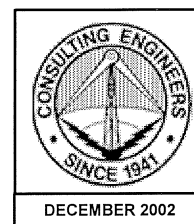
CDBS FM SEPARATION STUDY

Job Title: Proposed WMXV(FM), Canton, GA
Channel: 289 C2

Separation Buffer: 75 km
Coordinates: 34-03-58 084-27-15

Call FID	City St	File Status Num.	Chan. Freq.	ERP-kW HAAT-m	DA ID	Latitude Longitude	73. 215	Bearing deg-True	Distance (km)	Required (km)
WPCH 29735	ATLANTA GA LIC	BLH 20000413ABM	235C1 94.9	100.0 298	ND 28457	33-48-27 084-20-27	N	160.0	30.54	27.0 Clear
WHEL 26854	HELEN GA LIC	BLH 19931210KB	286A 105.1	1.7 187	DA 14598	34-44-55 083-43-43	Y	41.0	100.90	55.0 Clear
WMAX-FM 63406	BOWDON GA LIC	BLH 20020220AAB	287C1 105.3	61.0 367	ND	33-24-41 084-49-48	N	205.6	80.54	79.0 Clear
WRXR-FM 72375	ROSSVILLE GA LIC	BLH 19941122KB	288A 105.5	1.55 197	ND	34-57-26 085-17-33	N	322.5	125.29	106.0 Clear
WAYS 68679	MACON GA LIC	BLH 20010208AAB	288C3 105.5	6.1 201	DA 31638	32-53-48 083-32-05	N	146.5	155.32	117.0 Clear
WMXV 10698	CANTON GA LIC	BLH 20000418AAV	289C2 105.7	16.5 252	ND	34-03-55 084-27-14	Y	164.7	0.10	
	GLENVILLE NC ADD C	RM spm108	289A 105.7			35-09-38 083-07-28		44.6	172.09	166.0 Clear
WOFB-FM 51113	ROCKWOOD TN LIC	BLH 19941028KC	289A 105.7	0.93 255	ND	35-51-55 084-42-54	Y	353.3	201.01	166.0 Clear
WZNY 59250	AUGUSTA GA LIC	BLH 19981209KA	289C 105.7	100.0 371	ND	33-25-15 081-50-19	Y	105.8	252.71	249.0 Clear
WZHT 8649	TROY AL LIC	BLH 19980717KE	289C 105.7	100.0 558	ND	31-58-28 086-09-44	N	214.9	281.56	249.0 Clear
	TROY AL ADD C	RM 10114	289C0 105.7			31-52-03 086-14-58		214.9	296.01	239.0 Clear
WRHY 10701	CENTRE AL APP	BPH 20020920AAF	290A 105.9	0.37 385	ND	34-01-25 085-40-41	Y	267.9	113.11	106.0 Clear
WRHY 10701	CENTRE AL LIC	BLH 19930414KB	290A 105.9	6.0 100	ND	34-12-14 085-46-20	N	277.6	122.54	106.0 Clear
WNGC 60810	TOCCOA GA CP	BPH 20000911AAR	291C1 106.1	100.0 299	ND	34-22-40 083-39-25	N	64.5	81.19	79.0 Clear
WNGC 60810	TOCCOA GA LIC	BLH 20000911ACX	291C1 106.1	100.0 299	ND	34-22-40 083-39-25	N	64.5	81.19	79.0 Clear

Figure 3



PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION WMXV(FM)
CANTON, GEORGIA
CH 289C2 20 KW 238 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

ELECTRONICS RESEARCH, INC.
108 MARKET STREET
NEWBURGH, IN. 47630

FIGURE #4

-----THEORETICAL-----
VERTICAL PLANE RELATIVE FIELD

4 ERI TYPE SHP, SHPX, LP, OR LPX ELEMENTS
0 DEGREE(S) BEAM TILT
0 PERCENT FIRST NULL FILL

MAY 24, 1983

ELEMENT SPACING:
0.5 WAVELENGTH

POWER GAIN IS 1.307 IN THE HORIZONTAL PLANE(1.307 IN THE MAX.)

