

APPLICATION FOR STATION LICENSE
CUMULUS LICENSING LLC
WXFX (FM) RADIO STATION
CH 236C2 - 95.1 MHZ - 5.4 KW
PRATTVILLE, ALABAMA
January 2007

EXHIBIT A

WXFX Transmission System Calculations

Effective Radiated Power:	
Horizontal/Vertical	5.40 kilowatt
Antenna:	Shively 6014-8/3
	8 bay full wavelength spaced antenna
Horizontal gain	4.208 ¹
Transmission Line:	Shively 1413-1X ²
(1,350 feet)	4 1/8 rigid inch Air Dielectric
	81.45% Efficiency
Power Divider:	Shivley Power Divider:
	Insertion Loss : 0.05 dB
	98.85% Efficiency
Antenna Combiner:	Shivley Balanced Combiner ³
	Insertion Loss : 0.13 dB
	97.051% Efficiency
	Dielectric filter
	Insertion Loss : 0.46 dB
	89.95% Efficiency
Required Transmitter Power Output To Reach Effective Radiated Power:	1.8257 kilowatts

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- 1) See Exhibit C for the vertical elevation pattern of the Shively antenna system, on Channel 236.
 - 2) The output of the combiner is fed into a two way power divider, into two separate runs of 4 inch transmission line. Each line feeds half of the eight bay antenna system.
 - 3) The Shively combiner was already in place at the transmitter site. In order to couple the WXFX transmitter to the system (into the wide band port), a Dielectric filter had to be installed. The loss of each portion of the combiner (Shively and Dielectric) is accounted for in the transmission line calculations.

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EXHIBIT A (Continued)

WXFX Transmission System Calculations

Facilities Authorized:	Channel 236C2 - 95.1 MHz
Effective Radiated Power:	5.4 kilowatt (H/V)
Geographic Coordinates:	North Latitude 32° 24' 13" West Longitude 86° 11' 47"
Antenna Center of Radiation:	Above Ground 342.0 meters Above MSL 397.0 meters HAAT 334.0 meters
Antenna Structure Registration #:	1042484