

# T Z SAWYER TECHNICAL CONSULTANTS

2130 HUTCHISON GROVE COURT, SUITE 100  
FALLS CHURCH, VIRGINIA 22043  
TELEPHONE (703) 848-2130 / (202) 642-2130

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## ENGINEERING STATEMENT IN SUPPORT OF MODIFICATION OF POST REPACK CONSTRUCTION PERMIT

WEZK-LD, KNOXVILLE, TENNESSEE  
POST REPACK CHANNEL 16  
FACILITY ID: 61017

WEZK-LD seeks a minor modification of its construction permit to increase its antenna height by 5 meters (16 feet) to 279 meters above ground and 662 meters above mean sea level. No other changes are proposed. The change is prompted by the requirement of the tower owner to adjust the antenna elevation slightly on the existing leased tower.

The antenna horizontal plane radiation pattern and the vertical field elevation pattern as previously provided remain unchanged.

No additional interference to other facilities is expected to occur as a result as confirmed by the FCC's TVStudy program. A summary output report from the program is included herein. A negligible increase in service area will result from this minor 5-meter increase in antenna elevation.

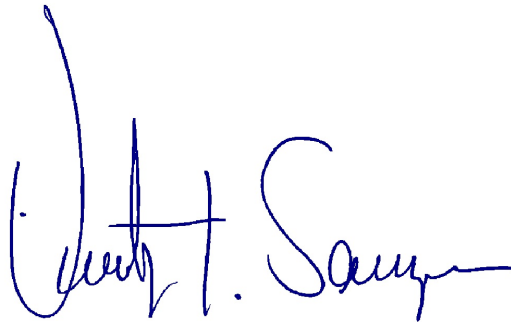
### WEZK-LD - Operation Environmental Impact:

Operation of the proposed facility will not involve the exposure of workers or the general public to levels of radiofrequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. The calculated power density level 2-meters above ground near the base of the tower is predicted to be  $0.001632 \text{ mW/cm}^2$  or less, using an antenna relative field value of 0.5 for all depression angles greater than 30 degrees below the horizon and a maximum ERP of 15-kilowatts. The computed power density is 0.10% of the Commission's guidelines for a worker/controlled area ( $\text{MPE}=1.6167 \text{ mW/cm}^2$ ) and 0.50% for a public/uncontrolled area ( $\text{MPE } 0.3233 \text{ mW/cm}^2$ ). As these levels are far below the guidelines (less than 1%), no further study is necessary.

The general public or workers will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines at ground level and 2-meters above. This is a restricted access site in which the public does not have access. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with other co-located facilities and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

Respectfully submitted,

Timothy Z. Sawyer, Consulting Engineer  
T Z Sawyer Technical Consultants  
2130 Hutchison Grove Court, Suite 100  
Falls Church, VA 22043  
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WEZK-LP/LD MOD OF CONSTRUCTION PERMIT - FCC TV STUDY SUMMARY REPORT

No IX check failures found

Study build station data: LMS TV 2020-01-10  
Proposal: WEZK-LP D16 LD APP KNOXVILLE, TN  
File number: WEZK MOD OF CP  
Facility ID: 61017  
Station data: User record  
Record ID: 194  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WTNZ	D15	DT	LIC	KNOXVILLE, TN	BLANK0000081278	2.7
Yes	WPXA-TV	D16	DT	LIC	ROME, GA	BLANK0000081827	199.5
Yes	WXII-TV	D16	DT	LIC	WINSTON-SALEM, NC	BLANK0000081027	321.8
Yes	WAPK-CD	D16	DC	LIC	BRISTOL VA/KINGSPORT, TN	BLANK0000070481	167.6
Yes	WHNS	D17	DT	LIC	GREENVILLE, SC	BLANK0000083635	145.7

No non-directional AM stations found within 0.8 km  
No directional AM stations found within 3.2 km

Record parameters as studied:  
Channel: D16  
Mask: Full Service  
Latitude: 36 0 36.00 N (NAD83)  
Longitude: 83 55 57.00 W  
Height AMSL: 662.2 m  
HAAT: 351 m  
Peak ERP: 15.0 kW  
Antenna: AND-ALP4L1-HSM (ID 1003563) 135.0 deg  
Elev Pattnr: Generic

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.749 kW	299.6 m	41.7 km
45.0	4.60	342.2	53.9
90.0	10.0	374.2	59.6
135.0	15.0	385.0	62.3
180.0	10.0	382.8	60.0
225.0	4.60	361.7	54.8
270.0	0.749	331.8	43.2
315.0	1.56	334.0	47.5

Distance to Canadian border: 639.1 km  
Distance to Mexican border: 1663.3 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 197.0 degrees Distance: 249.4 km  
Proposal is not within the West Virginia quiet zone area  
Conditions at Table Mountain receiving zone:  
Bearing: 290.2 degrees Distance: 1913.4 km

No land mobile station failures found  
Proposal is not within the Offshore Radio Service protected area

WEZK-LP/LD MOD OF CONSTRUCTION PERMIT - FCC TV STUDY SUMMARY REPORT

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

Proposal causes no interference to BLANK0000081278 LIC

Proposal causes 0.07% interference to BLANK0000081827 LIC scenario 5

Proposal causes no interference to BLANK0000081027 LIC

Proposal causes 0.28% interference to BLANK0000070481 LIC scenario 1

Proposal causes no interference to BLANK0000083635 LIC

---- Below is IX received by proposal WEZK MOD OF CP ----

Proposal receives 7.27% interference from scenario 1

-----No IX check failures found.-----