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## DIGITAL LPTV FACILITY MINOR CHANGE APPLICATION

W36FK-LD

FCC FACILITY ID: 68082

ALTOONA, PENNSYLVANIA

MARCH 2024

### ENGINEERING NARRATIVE

#### Minor Change Application:

W36FK-LD, seeks to modify its existing licensed facility (LMS: 0000164321) to specific a new transmission site and antenna system. The proposed antenna is a SCA PR-TV 110/345, a directional, horizontally polarized, paralector antenna, one paralector is at 110 degrees true the other at 345 degrees True. Thus, forming a generally southeast and north northwest service areas. A full-service filter mask is to be employed.

The facility requested is not contingent upon a grant or channel move of any other known facility at the time of filing.

Maximum Effective Radiated Power (ERP) is 3.0 kilowatts, with the main lobes of the directional antenna at 110 and 345 degrees True. The radiated field is horizontally polarization only.

#### Modification Compliance:

Pursuant to 47 CFR §74.787(b) the instant application is considered a “minor” change because;

- There is no change in transmitting antenna location such that the protected service contour resulting from the change does not overlap some portion of the protected service contour of the authorized facilities of the existing station’s license as illustrated in Figure 1, Present & Proposed Service Contours.
- There is no change in transmitting antenna location greater than 30 miles (48km) from the reference coordinates of the existing station construction permit antenna location, as noted below:

#### CALCULATED DISTANCE BETWEEN EXISTING LICENSE AND PROPOSED SITES

SITE	LAT (NAD83)	LON (NAD83)	(KM)	(MI)
CURRENT/EXISTING	41-11-17.7 N	079-22-13.9 W	47.593	29.573
PROPOSED CP APP	40-47-22.3 N	079-09-47.4 W		

#### FCC Tower Registration (ASR) 1277720, FAA Notification is not required.

The proposed antenna mounting structure is 86.9 meters in overall height (AGL). This is an existing guyed steel uniform cross-section tower used for communications purposes. No changes in the supporting structure are required that would require notification to the FAA, or a revision of the FCC ASR data . The antenna is to be side-mounted on this tower at the 45.0 meter above ground level.

Antenna Elevations:

The ground elevation at the site is 432.5 meters above mean sea level (AMSL). The center of radiation of the proposed antenna is 45.0 meters above ground level (AGL). Thus, the center of radiation is 477.5 meters above mean sea level (AMSL), as tabulated below:

ALL ELEVATIONS IN METERS

GROUND ELEVATION	432.5
SUPPORTING STRUCTURE OVERALL HEIGHT AGL	86.9
ANTENNA HEIGHT AGL	45.0
ANTENNA RCAMSL	477.5

FCC TVStudy Results:

The results of a interference study of the proposal using the FCC TVStudy program (Version 2.2.5), shows that no prohibitive interference will occur from the proposal. A copy of the summary report has been included in this application. The applicant accepts any incoming interference that is predicted to exist to the proposed facility by any authorized or pending, primary or secondary TV station at the time this application is submitted.

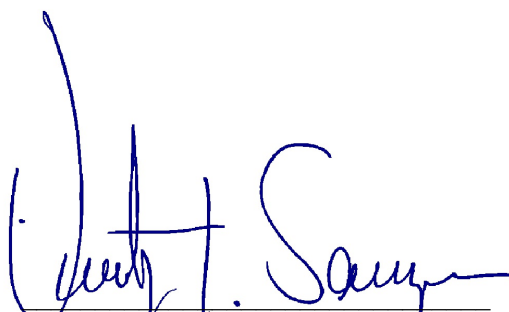
Canadian Coordination:

Coordination with Canada is NOT required as the 25.86 dBu f(50,10) contour does not cross the Canadian border.

Environmental Evaluation Statement:

The environmental evaluation statement concerning this proposal has been included in this application and can be found as a separate file upload within the application. A grant of this proposal would NOT be an action which would have a significant environmental effect as demonstrated in the environmental evaluation statement.

March 20, 2024



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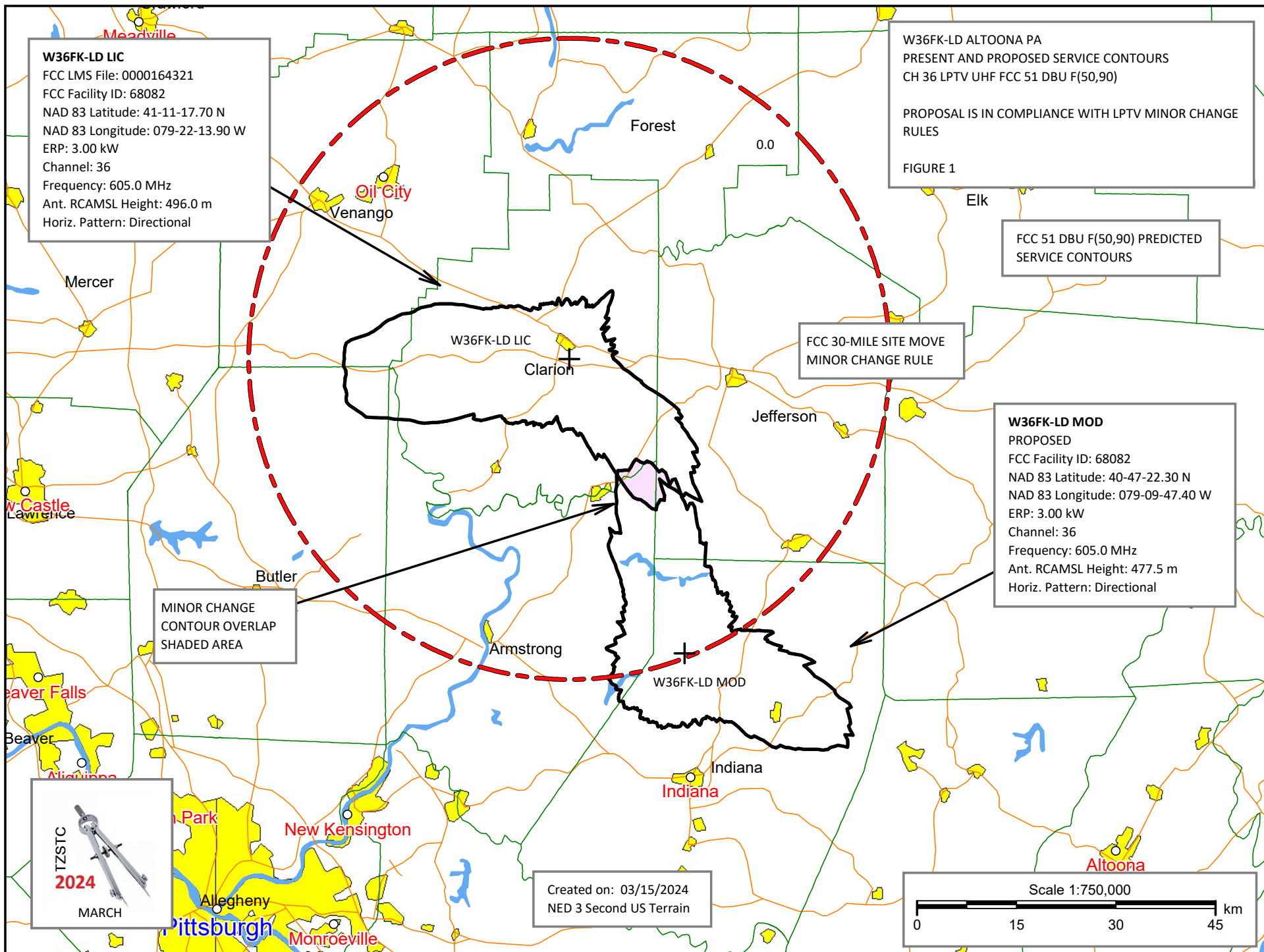
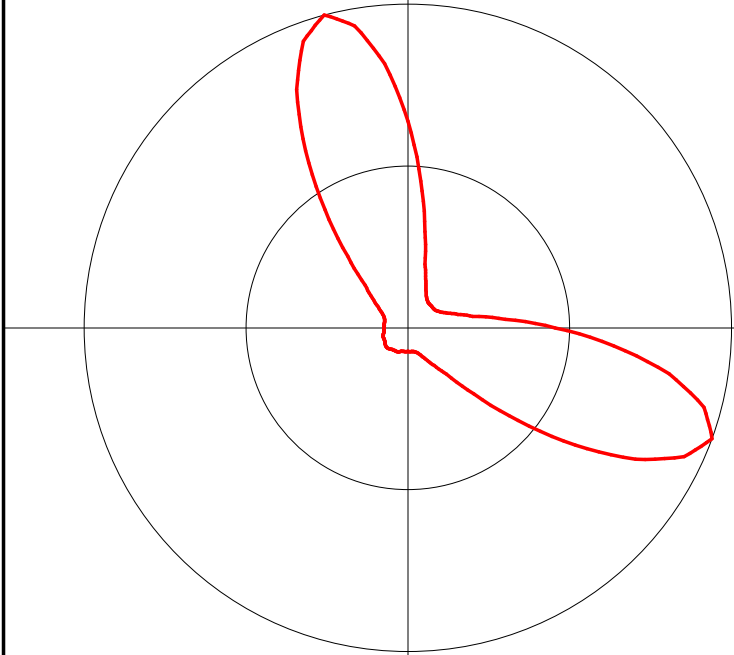


FIGURE 2 W36FK SCA PRTV 110/345 ANT PATTERN  
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
10.0	0.812
20.0	0.445
30.0	0.186
40.0	0.112
50.0	0.081
60.0	0.074
70.0	0.073
80.0	0.074
90.0	0.079
100.0	0.081
110.0	0.086
120.0	0.089
130.0	0.082
140.0	0.081
150.0	0.075
160.0	0.074
170.0	0.074
180.0	0.076
190.0	0.092
200.0	0.142
210.0	0.288
220.0	0.631
230.0	0.942
240.0	0.947
250.0	0.638
260.0	0.302
270.0	0.16
280.0	0.114
290.0	0.1
300.0	0.099
310.0	0.104
320.0	0.132
330.0	0.203
340.0	0.455
350.0	0.819

Rotation Angle = 110



### Figure 3 - W36FK-LD FCC TVSTUDY SUMMARY REPORT

Proposal: W36FK-LD D36 LD APP Altoona, PA  
File number: W36FK-LD MOD FINAL  
Facility ID: 68082  
Station data: User record  
Record ID: 760  
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
No	WIIC-LD	N29+	TX	LIC	PITTSBURGH, PA	BLTTL19981230JB	77.6 km
No	WENY-TV	D35	DT	LIC	ELMIRA, NY	BLANK0000104138	229.7
No	WVIZ	D35	DT	LIC	CLEVELAND, OH	BLANK0000082429	221.7
No	WJAC-TV	D35	DT	LIC	JOHNSTOWN, PA	BLANK0000080232	48.9
No	WGAL	D35	LD	LIC	LANCASTER, PA	BLANK0000120645	199.9
No	WPXW-TV	D35	DT	LIC	MANASSAS, VA	BLANK0000098055	268.3
No	WTAP-TV	D35	DT	LIC	PARKERSBURG, WV	BLANK0000105709	259.5
No	WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000152125	268.3
No	WKAS	D36	DT	LIC	ASHLAND, KY	BLANK0000087441	393.0
No	WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	417.8
No	WNLO	D36	DT	LIC	BUFFALO, NY	BLANK0000137113	212.5
No	WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000221185	433.7
No	WSPX-TV	D36	DT	LIC	SYRACUSE, NY	BLANK0000081964	353.4
No	WQHS-DT	D36	DT	LIC	CLEVELAND, OH	BLANK0000079885	222.6
No	WRGT-TV	D36	DT	LIC	DAYTON, OH	BLANK0000233417	447.8
No	WMNT-CD	D36	DC	LIC	TOLEDO, OH	BLANK0000067041	377.5
No	W36EY-D	D36-	DC	LIC	BERWICK, PA	BLANK0000105623	249.0
No	WITF-TV	D36	DT	LIC	HARRISBURG, PA	BLANK0000223452	199.9
No	WSWB	D36	LD	LIC	SCRANTON, PA	BLCDDT00091217AEX	326.2
No	DW36BE-D	D36	LD	APP	STATE COLLEGE, PA	BLDDTT00091023AIW	107.4
No	WWLM-CD	D36	DC	LIC	WASHINGTON, PA	BLANK0000189896	112.3
No	WSVF-CD	D36	DC	LIC	HARRISONBURG, VA	BLANK0000120243	268.5
No	WRID-LD	D36	LD	LIC	RICHMOND, VA	BLANK0000190917	392.0
No	WFXR	D36	DT	LIC	ROANOKE, VA	BLANK0000080996	408.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36  
Mask: Full Service  
Latitude: 40 47 22.30 N (NAD83)  
Longitude: 79 9 47.40 W  
Height AMSL: 477.5 m  
HAAT: 0.0 m  
Peak ERP: 3.00 kW  
Antenna: SCA-PR-TV PRTV 110/345 110.0 deg  
Elev Pattn: Generic

50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.22 kW	51.2 m	23.2 km
45.0	0.029	63.0	10.2
90.0	0.621	36.3	16.2
135.0	0.249	90.5	20.8
180.0	0.016	95.1	10.7
225.0	0.024	98.8	12.0
270.0	0.016	88.6	10.4
315.0	0.104	58.1	13.3

Database HAAT does not agree with computed HAAT  
Database HAAT: 0 m Computed HAAT: 73 m

Proposal 25.86 dBu contour does not cross Canadian border

Distance to Canadian border: 193.9 km

Distance to Mexican border: 2321.0 km

Conditions at FCC monitoring station: Laurel MD  
Bearing: 131.4 degrees Distance: 269.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 276.7 degrees Distance: 2196.7 km

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%

---- Below is IX received by proposal W36FK-LD MOD FINAL ----

Proposal receives 6.21% interference from scenario 1

No IX check failures found.

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W36FK-LD  
LPTV CHANNEL 36 OPERATION  
FACILITY ID: 68082  
ALTOONA, PENNSYLVANIA  
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## ENVIRONMENTAL EVALUATION STATEMENT

A grant of this proposal would NOT be an action which would have a significant environmental effect as demonstrated in this environmental evaluation statement. Any changes in equipment, or construction, if necessary will not trigger any event with regards to Section 106 of the National Historical Preservation Act (NHPA).

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are not known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will not involve the use of high intensity white lights. Furthermore, operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

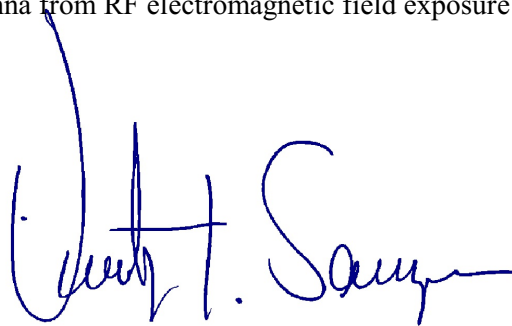
CALCULATED POWER DENSITY AT 2 METERS AGL (0.5 ANTENNA RELATIVE FIELD VALUE) ERP MAX (H ONLY)

CR AGL 45.0 ERP MAX 3.0 KW	MPE ( $\mu\text{W}/\text{CM}^2$ )	CALCULATED VALUE ( $\mu\text{W}/\text{CM}^2$ )	% OF MPE	PASS/FAIL
CONTROLLED AREA	2016.7	13.5479	0.67%	PASS
PUBLIC AREA	403.3		3.36%	PASS

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with any 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.

March 20,2024

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