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DIGITAL LPTV FACILITY
MINOR CHANGE APPLICATION
W33EM-LD
FCC FACILITY ID: 68024
PITTSBURGH, PENNSYLVANIA

FEBRUARY 2023

ENGINEERING NARRATIVE

Minor Change Application:
W33EM-LD seeks to modify its existing LICENSE permit (LMS: 0000164350) to specific a new transmission site and antenna system parameters. The proposed antenna is a SCA, "PR-TV CUS" horizontally polarized directional UHF parabolic antenna system. 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 2-kilowatts, horizontal 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 facility of the station 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	40-00-46.70 N	078-53-20.70 W	46.40	28.83
PROPOSED LIC MOD	40-17-01.75 N	079-18-13.43 W		

FCC Tower Registration - FAA Notification Not Required.
American Tower Corporation Site ATC #413509

The proposed antenna mounting structure is 60.4 meters in overall height above ground level (AGL) and does NOT require FAA notice or FCC Tower Registration (ASR). This is an existing communication tower that does not require FAA notification. The antenna is to be side-mounted on the self-supporting structure at the 33.5 meter AGL level.

A tower-airport slope study as well as the site brochure (provided by American Tower) is contained within this statement as Figure 2.

Antenna Elevations:
The ground elevation at the site is 502.0 meters above mean sea level (AMSL). The center of radiation of the proposed antenna is 33.5 meters above ground level (AGL). Thus, the center of radiation is 535.5 meters above mean sea level (AMSL), as tabulated below:

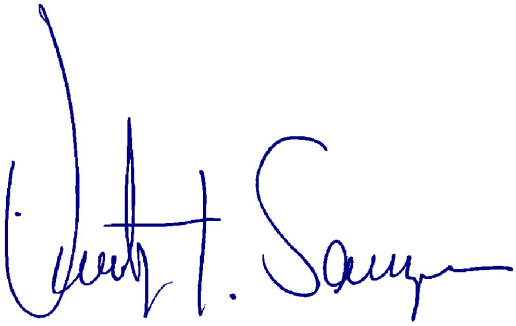
ALL ELEVATIONS IN METERS

GROUND ELEVATION	502.0
SUPPORTING STRUCTURE OVERALL HEIGHT AGL	60.4
ANTENNA HEIGHT AGL	33.5
ANTENNA RCAMSL	535.5

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. A cell size of 1.0 kilometer, with 0.1 profile spacing (10 points per kilometer) is requested.

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.

February 24, 2023



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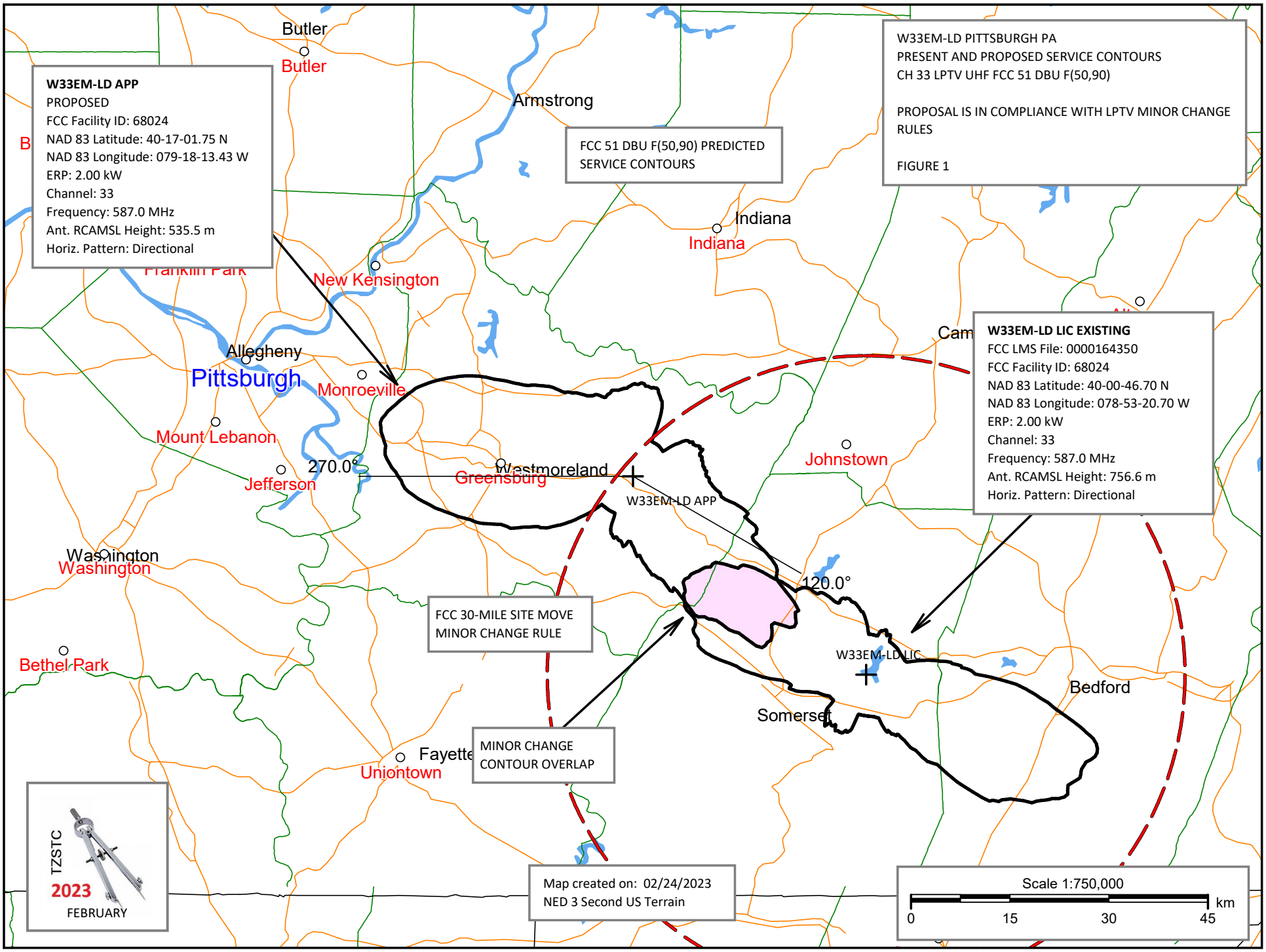

W33EM-LD PITTSBURGH PA
PRESENT AND PROPOSED SERVICE CONTOURS
CH 33 LPTV UHF FCC 51 DBU F(50,90)
PROPOSAL IS IN COMPLIANCE WITH LPTV MINOR CHANGE RULES
FIGURE 1
W33EM-LD APP
PROPOSED
FCC Facility ID: 68024
NAD 83 Latitude: 40-17-01.75 N
NAD 83 Longitude: 079-18-13.43 W
ERP: 2.00 kW
Channel: 33
Frequency: 587.0 MHz
Ant. RCAMSL Height: 535.5 m
Horiz. Pattern: Directional
FCC 51 DBU F(50,90) PREDICTED SERVICE CONTOURS
W33EM-LD LIC EXISTING
FCC LMS File: 0000164350
FCC Facility ID: 68024
NAD 83 Latitude: 40-00-46.70 N
NAD 83 Longitude: 078-53-20.70 W
ERP: 2.00 kW
Channel: 33
Frequency: 587.0 MHz
Ant. RCAMSL Height: 756.6 m
Horiz. Pattern: Directional
FCC 30-MILE SITE MOVE MINOR CHANGE RULE
MINOR CHANGE CONTOUR OVERLAP
Map created on: 02/24/2023
NED 3 Second US Terrain
Scale 1:750,000
0 15 30 45 km
TZSTC
2023
FEBRUARY
Butler
Armstrong
Indiana
Franklin Park
New Kensington
Allegheny
Pittsburgh
Monroeville
Mount Lebanon
Jefferson
270.0°
Westmoreland
Greensburg
W33EM-LD APP
Johnstown
120.0°
Washington
Bethel Park
W33EM-LD LIC
Bedford
Somerset
Fayette
Uniontown

TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates	
Latitude	40-17-01.7 north
Longitude	079-18-13.4 west
Measurements (Meters)	
Overall Structure Height (AGL)	60.4
Support Structure Height (AGL)	58.2
Site Elevation (AMSL)	502
Structure Type	
LTOWER - Lattice Tower	

Tower Construction Notifications
Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW

AMERICAN TOWER®

Site Brochure

Asset Number: 413509 Asset Name:LONGBRIDGE PA

Lat / Long: 40.28382, -79.30373 | **Address:** 100 QUARRY ROAD, LATROBE, Pennsylvania, 15650-2678

Geographic Region

County Westmoreland

MTA Pittsburgh

BTA Pittsburgh, PA

MSA/RSA Pittsburgh, PA

Find This Asset

Driving Directions

From Latrobe RT 30 E to cross over Longbridge as soon as you cross make Left to cross over RT30 and take road up hill to Hanson Asphalt Plant follow through plant to access road

Specifications

Asset Class Wireless

Structure Type Self Support

Ground Elevation 1647 ft.(AMSL)

Structure Height 191 ft.(AGL)

Appurtenance Height 8 ft.

Construction Date 03/20/2006

FAA Number Not Required

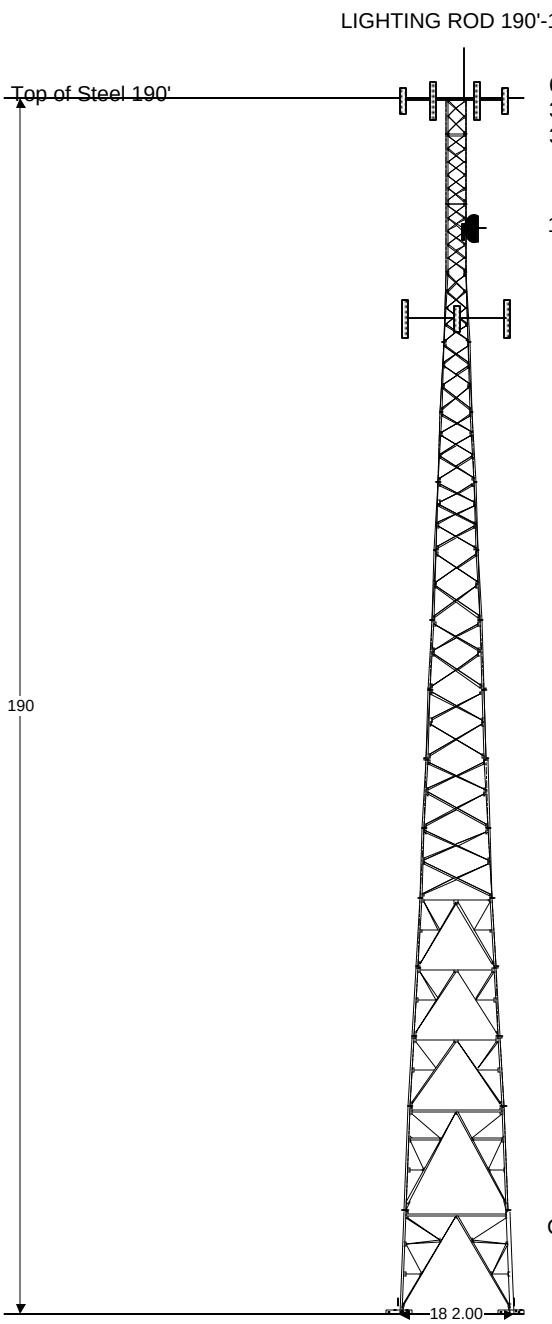
FCC Number Not Required

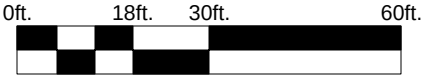
Utility Providers

Telco N/A

Power N/A


02/21/2019 09:52





American Tower Corporation	LONGBRIDGE PA			
	TOWER ELEVATION			
Mike Hoffman	SIZE B	DATE 12-4-15	DWG NO 413509	REV 1
	SCALE 1" = 30ft		SHEET 1 of 1	

W33EM-LD SCA PR-TV CUS DIRECTIONAL ANTENNA DATA

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.000
10.0	0.818
20.0	0.457
30.0	0.205
40.0	0.130
50.0	0.102
60.0	0.097
70.0	0.095
80.0	0.097
90.0	0.099
100.0	0.111
110.0	0.160
120.0	0.305
130.0	0.638
140.0	0.947
150.0	0.939
160.0	0.626
170.0	0.286
180.0	0.140
190.0	0.093
200.0	0.080
210.0	0.078
220.0	0.084
230.0	0.085
240.0	0.090
250.0	0.088
260.0	0.089
270.0	0.087
280.0	0.085
290.0	0.081
300.0	0.078
310.0	0.083
320.0	0.111
330.0	0.184
340.0	0.442
350.0	0.809

FIGURE 4 - W33EM-LD TVSTUDY SUMMARY REPORT

CELL SIZE 1.0 KM
USE OF PROFILE SPACING 0.1 IS REQUESTED

Study build station data: LMS TV 2023-02-24

```
    Proposal: W33EM-LD D33 LD APP Pittsburgh, PA
 File number: W33EM APP
 Facility ID: 68024
Station data: User record
   Record ID: 691
     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	58.7 km
No	WBPA-LD	N30+	TX	LIC	PITTSBURGH, PA	BLANK0000007299	64.6
No	DWWBP-LP	N31+	TX	APP	FREEDOM, PA	BLTTL20040909ABD	92.0
No	WOUB-TV	D32	DT	LIC	ATHENS, OH	BLANK0000068360	265.8
No	WYFX-LD	D32	LD	LIC	YOUNGSTOWN, OH	BLANK0000082699	142.0
No	WMVH-CD	D32	DC	LIC	CHARLEROI, PA	BLANK0000079929	53.3
No	WMVH-CD	D32	DC	CP	CHARLEROI, PA	BLANK0000127551	53.3
No	WHP-TV	D32	DT	LIC	HARRISBURG, PA	BLANK0000080028	206.5
No	WKHU-CD	D32	DC	LIC	KITTANNING, PA	BLANK0000079958	59.4
No	WKHU-CD	D32	DC	CP	KITTANNING, PA	BLANK0000127549	59.4
No	WCAV	D32	DT	LIC	CHARLOTTESVILLE, VA	BLANK0000092578	265.2
No	W32FY-D	D32	LD	LIC	CLARKSBURG, WV	BLANK0000179434	140.8
No	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLANK0000178029	241.3
No	WOWZ-LD	D33	LD	LIC	SALISBURY, MD	BLANK0000184175	364.9
No	WUNL-TV	D33	DT	LIC	WINSTON-SALEM, NC	BLANK0000121301	444.3
No	WSKG-TV	D33	LD	CP	BINGHAMTON, NY	BLANK0000054938	334.2
No	WGRZ	D33	DT	CP	BUFFALO, NY	BLANK0000035664	277.6
No	WGRZ	D33	DT	LIC	BUFFALO, NY	BLANK0000137137	277.6
No	WQIZ-LD	D33+	LD	LIC	ASHLAND, OH	BLANK0000136481	259.6
No	WQIZ-LD	N33+	TX	LIC	ASHLAND, OH	BLTTL20020211ABL	259.6
No	WHIO-TV	D33	DT	LIC	DAYTON, OH	BLANK0000204188	425.3
Yes	WFMJ-TV	D33	DT	LIC	YOUNGSTOWN, OH	BLANK0000089155	143.3
No	WPSG	D33	DT	LIC	PHILADELPHIA, PA	BLANK0000129342	346.0
No	WQPX-TV	D33	DT	LIC	SCRANTON, PA	BLANK0000080158	326.8
No	DW33AD	N33	TX	APP	CONCORD, VA	BLTTL19821108IO	328.1
No	WTVZ-TV	D33	DT	CP	NORFOLK, VA	BLANK0000117232	456.5
No	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLANK0000125150	456.5
No	WOCW-LD	D33+	LD	LIC	CHARLESTON, WV	BLANK0000074740	292.9
No	W33EJ-D	D33	LD	LIC	MOOREFIELD, WV	BLANK0000081241	148.5
No	WDTV	D33	DT	LIC	WESTON, WV	BLANK0000197623	140.8
No	WRC-TV	D34	DT	LIC	WASHINGTON, DC	BLANK0000153860	241.9
No	WKBW-TV	D34	DT	LIC	BUFFALO, NY	BLANK0000134785	267.7
No	WIVM-LD	D34	LD	LIC	CANTON, OH	BLANK0000121314	174.8
No	WPXI	D34	LD	LIC	PITTSBURGH, PA	BLANK0000106623	111.4
No	WHSV-TV	D34	LD	LIC	HARRISONBURG, VA	BLANK0000120242	215.1
Yes	WNPB-TV	D34	DT	LIC	MORGANTOWN, WV	BLANK0000106559	76.1
No	W34FE-D	D34	LD	LIC	PARKERSBURG, WV	BLANK0000201163	214.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

```
    Channel: D33
       Mask: Full Service
   Latitude:  40 17  1.75 N (NAD83)
  Longitude:  79 18 13.43 W
Height AMSL: 535.5 m
       HAAT: 0.0 m
   Peak ERP: 2.00 kW
    Antenna: SCA PR-TV CUS 135.0 deg
Elev Pattrn: Generic
```

50.6 dBu contour:

Azimuth	ERP	HAAT	Distance

```
  0.0 deg  0.014 kW   174.3 m   14.3 km
 45.0      0.015      -85.9      6.1
 90.0      0.017      100.9     11.4
135.0       2.00       91.2     32.1
180.0      0.025       75.8     10.8
225.0      0.020       -6.8      6.5
270.0       1.34      171.1     36.1
315.0      0.039      206.5     20.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m   Computed HAAT: 91 m

Proposal 25.60 dBu contour does not cross Canadian border
Distance to Canadian border: 243.3 km

Distance to Mexican border: 2276.2 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 119.6 degrees   Distance: 246.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 278.1 degrees   Distance: 2192.2 km


Study cell size: 1.00 km
Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Proposal causes 0.07% interference to BLANK0000089155 LIC scenario 2
Proposal causes no interference to BLANK0000106559 LIC

---- Below is IX received by proposal W33EM APP ----

Proposal receives 2.47% interference from scenario 1

No IX check failures found.
```

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W33EM-LD
LPTV CHANNEL 33 OPERATION
FACILITY ID: 68024
PITTSBURGH, PENNSYLVANIA
FEBRUARY 2023

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 33.5 M ERP MAX 2.0 KW	MPE ($\mu W/CM^2$)	CALCULATED VALUE ($\mu W/CM^2$)	% OF MPE	PASS/FAIL
CONTROLLED AREA	1956.7	16.8304	0.86%	PASS
PUBLIC AREA	391.3		4.30%	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.

February 25,2023

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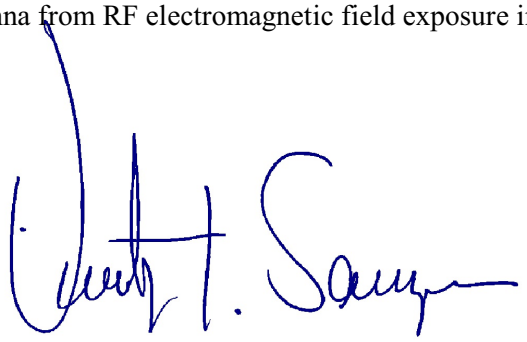

Timothy Z. Sawyer, Consulting Engineer