

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of FOX TELEVISION STATIONS, INC., licensee of WWOR-DT, Channel 38 in Secaucus, New Jersey, in support of this modification, which specifies operation with a maximized DTV facility on the Empire State Building.

The station still proposes to mount a standard omnidirectional antenna at the top of the Empire State Building, site of the present WWOR-DT facility. Exhibit B provides an elevation pattern for the previously proposed antenna. Exhibit C is a map upon which the revised service contours are plotted. As shown, the city of license is still completely contained within the proposed 48 dBu service contour. An interference study is included in Exhibit D, and it is important to note that the study utilized a cell size of 1.0 kilometers and an increment spacing of 0.1 kilometers. A new power density calculation is provided in Exhibit E.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station authorized to operate at or near the WWOR-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

Since no change in overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. The Commission issued Antenna Structure Registration Number 1007048 to this tower.

EXHIBIT A

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

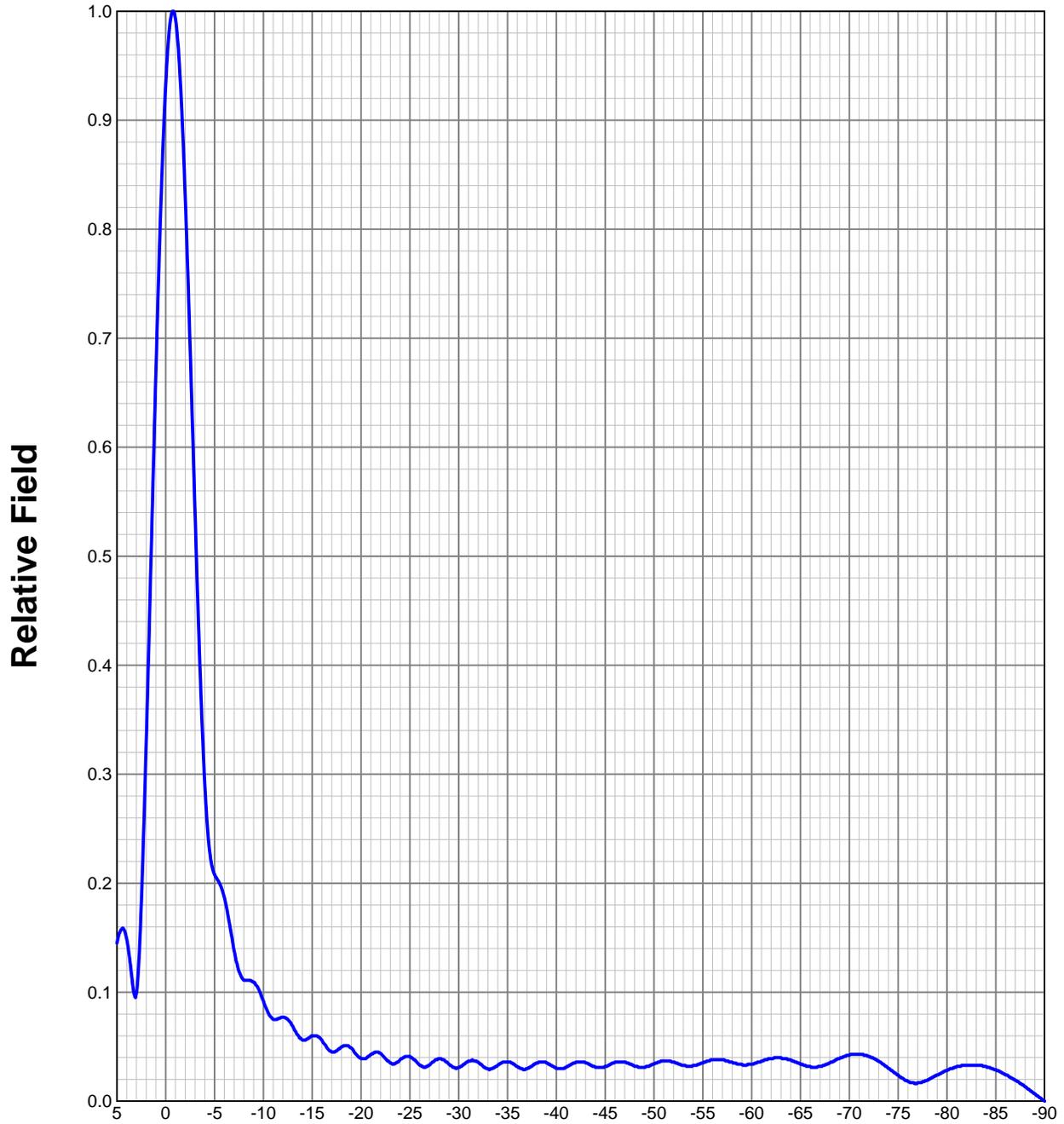
  
KEVIN T. FISHER

November 28, 2012

EXHIBIT B

### ELEVATION PATTERN

Type:	ATW18HS3H		Channel:	38
Directivity:	Numeric	dBd	Location:	
Main Lobe:	18.00	12.55	Beam Tilt:	-0.75
Horizontal:	15.67	11.95	Polarization:	Horizontal



Preliminary, subject to final design and review.

**CONTOUR POPULATION**

**41 DBU : 20,147,492**

**48 DBU : 19,033,924**



**EXHIBIT C**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED WWOR-DT**  
**CHANNEL 38 - SECAUCUS, NEW JERSEY**

INTERFERENCE STUDY  
PROPOSED WWOR-DT  
CHANNEL 38 – SECAUCUS, NEW JERSEY

The instant application specifies an ERP of 355 kw (omnidirectional) at 439 meters above average terrain, which we have determined to be allowable under the FCC's interference standards with respect to various post-transition digital television facilities.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "SunDTV" computer program, which mimics the FCC's interference program. In conducting our study, we employed a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed WWOR-DT to other pertinent stations are summarized in Exhibit D-2.

As shown, the proposed WWOR-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted WWOR-DT facility) to the service population of any potentially affected post-transition DTV station.

A Longley-Rice interference study also reveals that the proposed facility does not cause significant (0.5%) interference within the protected service contour of any potentially affected Class A low power television station.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

WWOR\_DT\_summary  
Summary Study

Percent allowed new interference: 0.500  
 Percent allowed new interference to non Class A LPTV: 2.000  
 Census data selected 2000  
 Data Base Selected  
 ./data\_files/pt\_tvdb.sff

WARNING WARNING WARNING

The following list of station records has been excluded from the analysis due to the fact that they have the same state, city and channel as the proposed station - This could cause the program to not find a potential fail situation

You can force the program to include these records by setting the state of the proposed record to ZZ and re-running the analysis

WWOR-TV 38 SECAUCUS NJ BMPCDT 20080620AHC

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 11-28-2012 Time: 07:09:13

Record Selected for Analysis

WWOR-TV- USERRECORD-01 SECAUCUS NJ US  
 Channel 38 ERP 355. kW HAAT 439. m RCAMSL 00452 m  
 Latitude 040-44-54 Longitude 0073-59-10  
 Status APP Zone 1 Border Site number: 01  
 Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.10 km

Facility (site # 01) meets maximum height/power limits

Site number	1			
Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50, 90) (km)	
0.0	355.000	416.4	97.8	
45.0	355.000	442.7	99.8	
90.0	355.000	439.6	99.5	
135.0	355.000	441.0	99.6	
180.0	355.000	437.1	99.3	
225.0	355.000	452.0	100.5	
270.0	355.000	441.3	99.7	
315.0	355.000	438.3	99.4	

WWOR\_DT\_summary

Contour overlap to Class A station  
 WDVB-CA 39 EDISON NJ BPTTA 20090309AAZ  
 Offset Proposed Offset Class A - Required D/U ratio: -14.0

Contour overlap to Class A station  
 WDVB-CA 39 EDISON NJ BSTA 20111018ASY  
 Offset Proposed Offset Class A - Required D/U ratio: -14.0

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

WWOR-TV- 38 SECAUCUS NJ USERRECORD01 Site # 01

and station

SHORT TO: WWOR-TV 38 SECAUCUS NJ DTVPLN DTVP1370  
 40 -42-43 74 -00-49  
 Req. separation 196.3 Actual separation 4.7 Short 191.6 km

SHORT TO: WPHA-CD 38 PHILADELPHIA PA BLDTA 20120329AKJ  
 040-02-30 0075-14-11  
 Req. separation 196.3 Actual separation 132.0 Short 64.3 km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE from Site # 01

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance  
 Distance to border = 395.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Channel	Proposed Station	ARN
38	Call City/State WWOR-TV- SECAUCUS NJ	USERRECORD01

WWOR\_DT\_summary

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
24	W24BB	EAST STROUDSBURG PA	131.3	LIC	BLTTL	19911219JM
38	WMAR-TV	BALTIMORE MD	275.8	LIC	BLCDT	20090619ACA
38	WPHA-CD	PHILADELPHIA PA	131.8	LIC	BLDTA	20120329AKJ
39	WCTX	NEW HAVEN CT	114.6	LIC	BLCDT	20040507AAZ
39	WDVB-CA	EDISON NJ	36.2	CP	BPTTA	20090309AAZ
39	WDVB-CA	EDISON NJ	36.2	APP	BSTA	20111018ASY
39	WLVT-TV	ALLENTOWN PA	124.3	LIC	BLEDT	20090605ABD

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Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION

PROPOSED WWOR-DT  
CHANNEL 38 – SECAUCUS, NEW JERSEY

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Secaucus facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 355 kw (H, V), an antenna radiation center of 437 meters above ground, and assuming a vertical relative field value of 20 percent at the steeper elevation angles for the proposed ERI antenna, maximum power density two meters above ground of 0.0050 mw/cm<sup>2</sup> is calculated to occur near the base of the building. Since this is only 1.2 percent of the 0.41 mw/cm<sup>2</sup> reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 38 (614-620 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational ground-level exposure to nonionizing electromagnetic radiation.

Our firm will conduct power density measurements of the upper levels of the Empire State Building once the proposed WWOR-DT facility becomes operational. These measurements will be used to confirm that RF levels in all locations remain compliant with the FCC's human exposure guidelines.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.