

## Exhibit 18

### TV Channel 6 Study

The proposed site is 103.33 km from WLNE, a TV channel 6 station in New Bedford, MA. This is well within the guidelines of 196 km shown in Table A, §73.525 of the Commission's rules for channel 211. This exhibit demonstrates that the proposed station will not cause interference in an area containing more than the 3,000 persons as specified in §73.525(c). This is possible because the proposed site is of low power, is vertically polarized, and lies just outside the 47 dBu contour of the affected TV station.

The affected population in the area of interference was determined as follows:

1) A chart was prepared tabulating the data from §73.599 Figure 1 for channel 211. It shows each protected contour of the TV station, the associated undesired/desired ratio, and the resultant interfering contour (= TV6 protected contour + U/D ratio) for the proposed FM station to create "just perceptible" interference.

2) Since the proposed FM antenna is vertically polarized, a power correction is made for the polarization.

The correct ERP for all further calculations in this section is 0.0625 kW ( $= H + V/40 = 0 + 2.5/40$ ).

3) A map was prepared showing the predicted TV6 protected contours in the area of interest and the associated predicted FM interfering contours over the same area. The only contour plotted is the 47 dBu protected TV contour and the corresponding 67.3 dBu interfering FM contour. Contours are calculated according to the procedures specified in §73.684 for the TV protected contours and §73.313 for the FM station interference contours.

4) The closed curve created represents the area inside the 47 dBu protected contour and also inside the 67.3 dBu interfering contour designates the "area of just perceptible interference". In this case, the area is over the open water of Cape Cod Bay. The contours do not overlap over land.

5) C.F.R. §73.525(e)(2)(iv) provides for higher precision than the assumption of uniform population density underlying §73.525(e)(2)(ii) and (iii), allowing "more detailed population data" to be used. Increasing the spatial resolution to the census block group level, the census block group centroids were plotted by latitude and longitude. The "area of interference" curve generated above was plotted on that same map. Since the "area" is offshore, none of the centroids were found to be inside the area of interference. These grouped block centroids total 0 persons. This is well within the 3,000 maximum count required by §73.525(c)(2).

**Since it has been demonstrated that the population in the "area of interference" is less than the statutory limit of 3,000, the Commission may properly grant the proposed construction permit.**

# Channel-Six TV Protection Study

WLNETV LI 06+ 1C Dom 100.000 kW 283 M HAAT V C  
New Bedford MA 308M COR AMSL  
Lat= 41 35 48, Lng= 71 11 24  
Freedom Broadcasting Of So BLCT19920604KF  
Fac ID# 22591, Cutoff Date= 930119  
Dist.=103.3319 km, Azi=242.4°, Rev Azi=61.7°

Direct line HAAT Grade B, 47 dBu= 101.25 km & Grade A= 52.54 km

Distance from reference to Grade B = 2.08 km

Cutoff Dist from Full Service= 196

Maximum Co-located power= 26.3 kW

WLNETV Signal Contour at Reference location = 46.2 dBu

CH. 211, U/D ratio = 20.3 dB, Maximum FM signal = 67.3 dBu , add 6 dB if within angle.

TV/FM D to U values

47.0	67.3		55.0	66.3		63.0	67.9		71.0	72.7		79.0	79.0		87.0	85.6
48.0	67.0		56.0	66.4		64.0	68.4		72.0	73.5		80.0	79.8		88.0	86.4
49.0	66.6		57.0	66.5		65.0	68.8		73.0	74.2		81.0	80.6		89.0	87.3
50.0	66.3		58.0	66.6		66.0	69.4		74.0	75.0		82.0	81.4		90.0	88.2
51.0	66.2		59.0	66.8		67.0	70.0		75.0	75.8		83.0	82.2		91.0	88.2
52.0	66.2		60.0	67.0		68.0	70.6		76.0	76.6		84.0	83.0		92.0	88.2
53.0	66.1		61.0	67.3		69.0	71.3		77.0	77.4		85.0	83.9		93.0	88.2
54.0	66.2		62.0	67.5		70.0	72.0		78.0	78.2		86.0	84.7		94.0	88.2

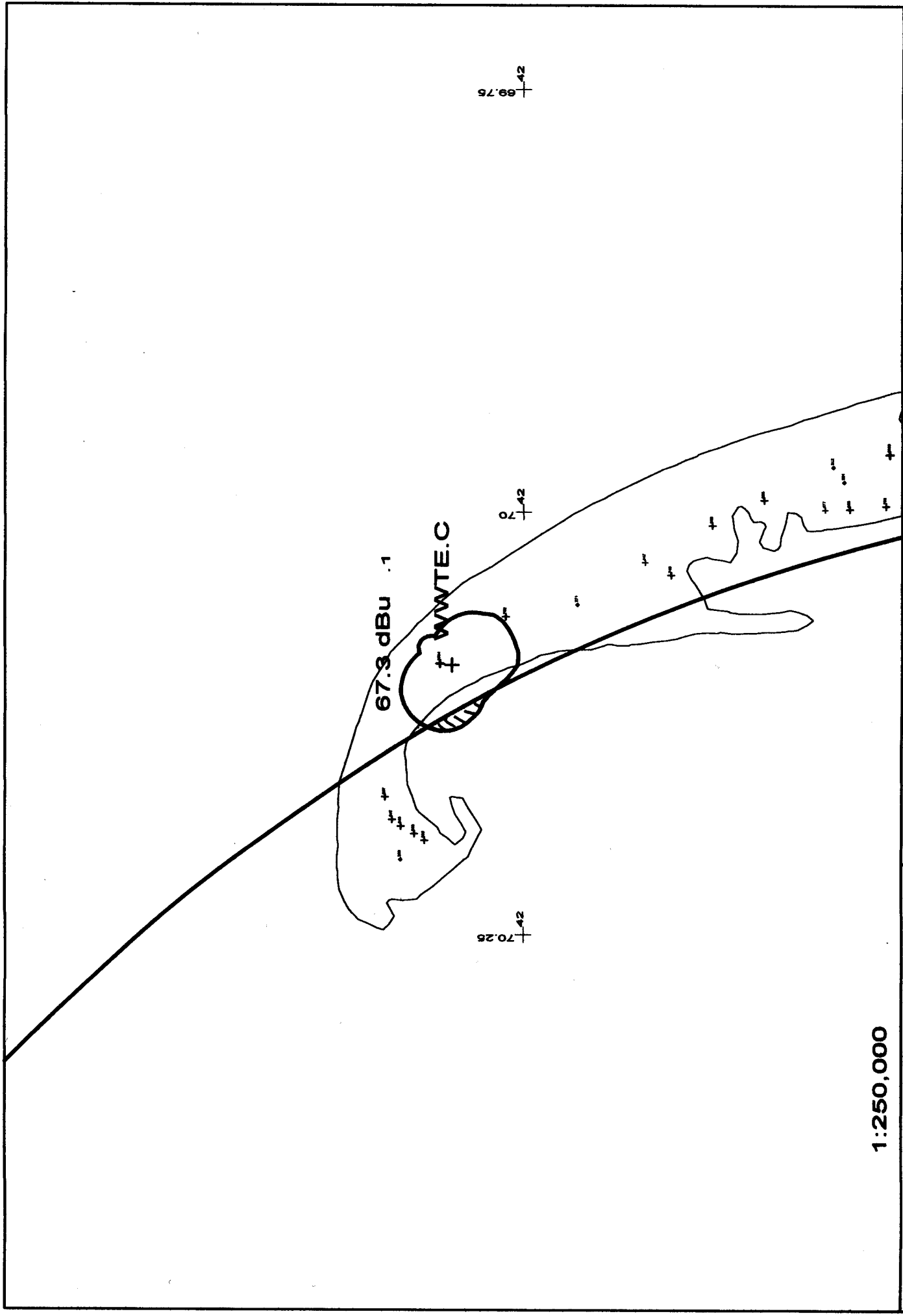
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## TV6 Interpolation

Channel 211 - 90.1 MHz

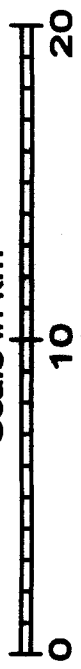
Report Radius 196 km.

TV Contour	Undesired/Desired Ratio	Total
47	20.3	67.3



1:250,000

Scale in km



WWTE.C 211A .0625kW 26M AMSL  
N. Lat. 42 01 53 W. Lng. 70 05 26

MA Wellfleet TV6  
Bob Moore - 01/06

69.75 42

70.26 42

70 42