

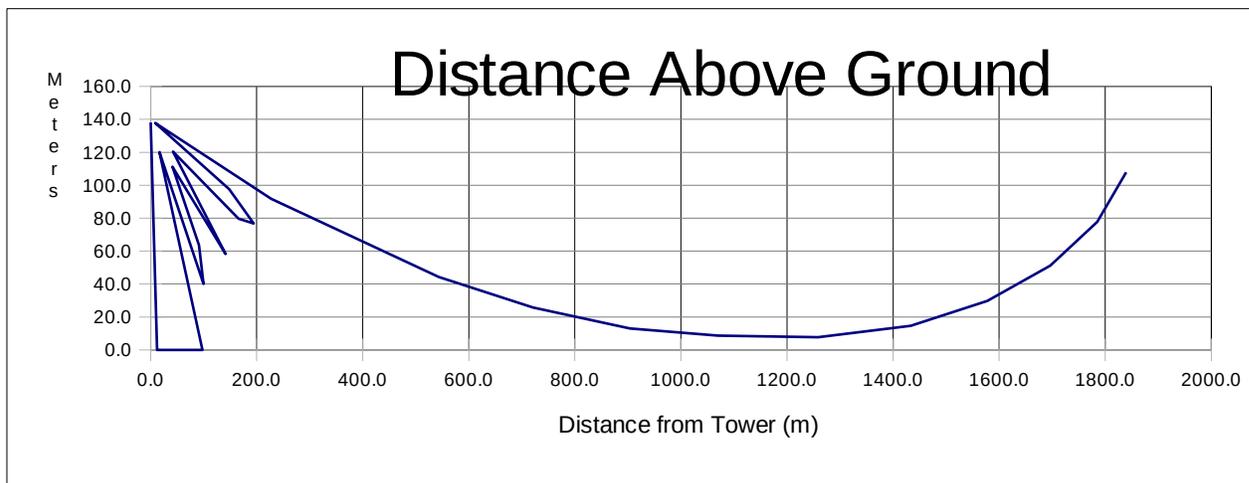
Engineering Report  
Exhibit 13 Figure 3 Page 1  
2<sup>nd</sup> Adjacent Protection Calculations  
W260, Bridgeton, NJ  
January 2016

In a letter granting Jersey Shore Broadcasting Corporation's application BPFT-950830TD (September 26, 1996 1800B3-JDB) the FCC stated that the Ratio method is suitable for translator applicants to demonstrate lack of interference for application purposes.

The 54 db $\mu$ V F(50,50) and the 55.5 db $\mu$ V F(50,50) contour of second adjacent Class B station WRNB, Media, PA encompasses the 94 db $\mu$ V F(50,10) proposed contour. For a protection ratio of 40 db the interfering contour would be 95.5 dbuV.

The 54 db $\mu$ V F(50,50) and the 63 db $\mu$ V F(50,50) contour of second adjacent Class B station WJBR-FM, Wilmington, DE encompasses the 94 db $\mu$ V F(50,10) proposed contour. For a protection ratio of 40 db the interfering contour would be 103 dbuV. Since the WRNB protection is more stringent, WRNB will be used in the following analysis.

Since the distance to this contour is below the minimum distances for the F(50,10) and F(50,50) curves the signal level existing on the ground in the vicinity of the translator was calculated using inverse distance, with an adjustment for ground reflections, as has been accepted by the FCC in recent applications. Below is a graph and tabulation of these calculations showing the location above ground at which the proposed translator will produce an interfering contour. This table and chart shows that the potentially interfering signal is more than 11 meters from the ground at its closest approach.



**Graph of elevation of 95.5 dbuV contour above ground with distance**

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Engineering Report  
Exhibit 13 Figure 3 Page 2  
2<sup>nd</sup> Adjacent Protection Calculations  
W260, Bridgeton, NJ  
January 2016

The proposed 95.5 db $\mu$ V potentially interfering signal does not reach the ground except within the immediate vicinity of the tower. Figure 4 is a satellite photo showing that except for the unattended transmitter building, there are no structures or roadways within 150 meters of the tower. There are no multi-story occupied buildings in the area.

Study for Center of Radiation 140 m AGL ERP 250 Watts  
Antenna PSI-FML-5A-DA Custom - Unequal Power Distribution

**Engineering Report**  
**Exhibit 13 Figure 3 Page 3**  
**2<sup>nd</sup> Adjacent Protection Calculations**  
**W260, Bridgeton, NJ**  
**January 2016**

Distance above Ground Level of Interfering Contour

Depression Angle (Degrees)	Slant Distance To 95.5 dBµV (meters)	Horiz Distance To 95.5 dBµV (meters)	Relative Field	ERP Watts	95.5 dBµV Above Gnd (meters)	
1	1839.85	1839.6	0.990	245.025	107.9	
2	1785.96	1784.9	0.961	230.880	77.7	
3	1698.61	1696.3	0.914	208.849	51.1	
4	1581.53	1577.7	0.851	181.050	29.7	
5	1438.43	1433.0	0.774	149.769	14.6	
6	1265.59	1258.7	0.681	115.940	7.7	Min Height above Gnd
7	1077.89	1069.9	0.580	84.100	8.6	
8	912.49	903.6	0.491	60.270	13.0	
9	730.36	721.4	0.393	38.612	25.7	
10	551.96	543.6	0.297	22.052	44.2	
12	232.30	227.2	0.125	3.906	91.7	
14	9.29	9.0	0.005	0.006	137.8	
16	154.25	148.3	0.083	1.722	97.5	
18	204.43	194.4	0.110	3.025	76.8	
20	176.55	165.9	0.095	2.256	79.6	
25	46.46	42.1	0.025	0.156	120.4	
30	163.54	141.6	0.088	1.936	58.2	--On Transmitter Field
35	50.18	41.1	0.027	0.182	111.2	
40	118.94	91.1	0.064	1.024	63.5	
45	141.24	99.9	0.076	1.444	40.1	
50	26.02	16.7	0.014	0.049	120.1	
55	280.62	98.0	0.151	5.700	0.0	
60	490.63	80.8	0.264	17.424	0.0	
65	585.41	65.3	0.315	24.806	0.0	
70	564.96	51.0	0.304	23.104	0.0	
75	462.75	37.5	0.249	15.500	0.0	
80	319.65	24.7	0.172	7.396	0.0	
85	161.68	12.2	0.087	1.892	0.0	
90	1.86	0.0	0.001	0.000	138.1	--On Transmitter Field