

W232AL

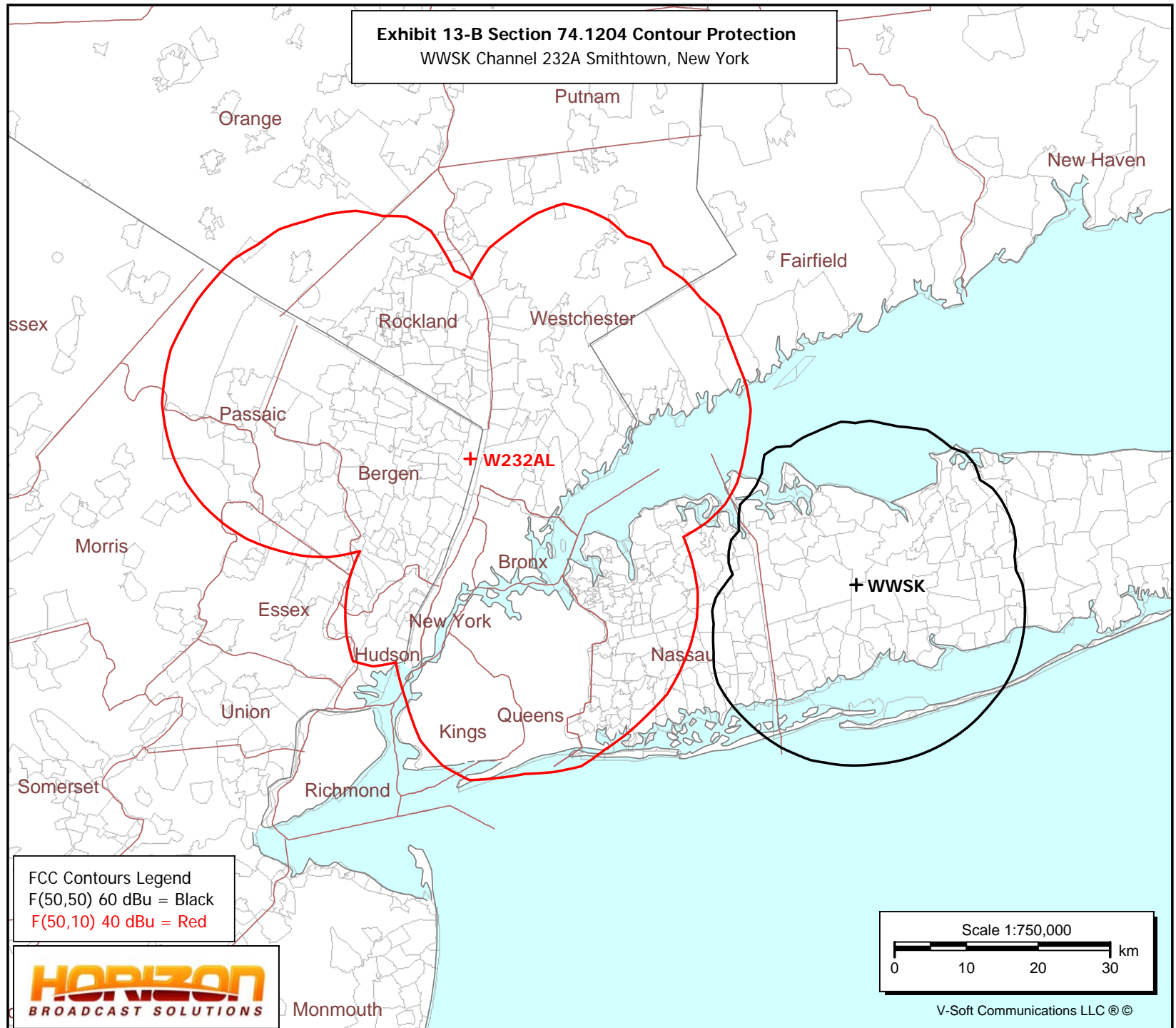
Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

WWSK

Smithtown, NY
BLH20011127AAK
Latitude: 40-48-08 N
Longitude: 073-17-12 W
ERP: 2.60 kW
HAAT: 96.0 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 125.0 m
Elevation: 30.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Exhibit 13-B Section 74.1204 Contour Protection

WWSK Channel 232A Smithtown, New York



W232AL CP Mod
Pomona, NY
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

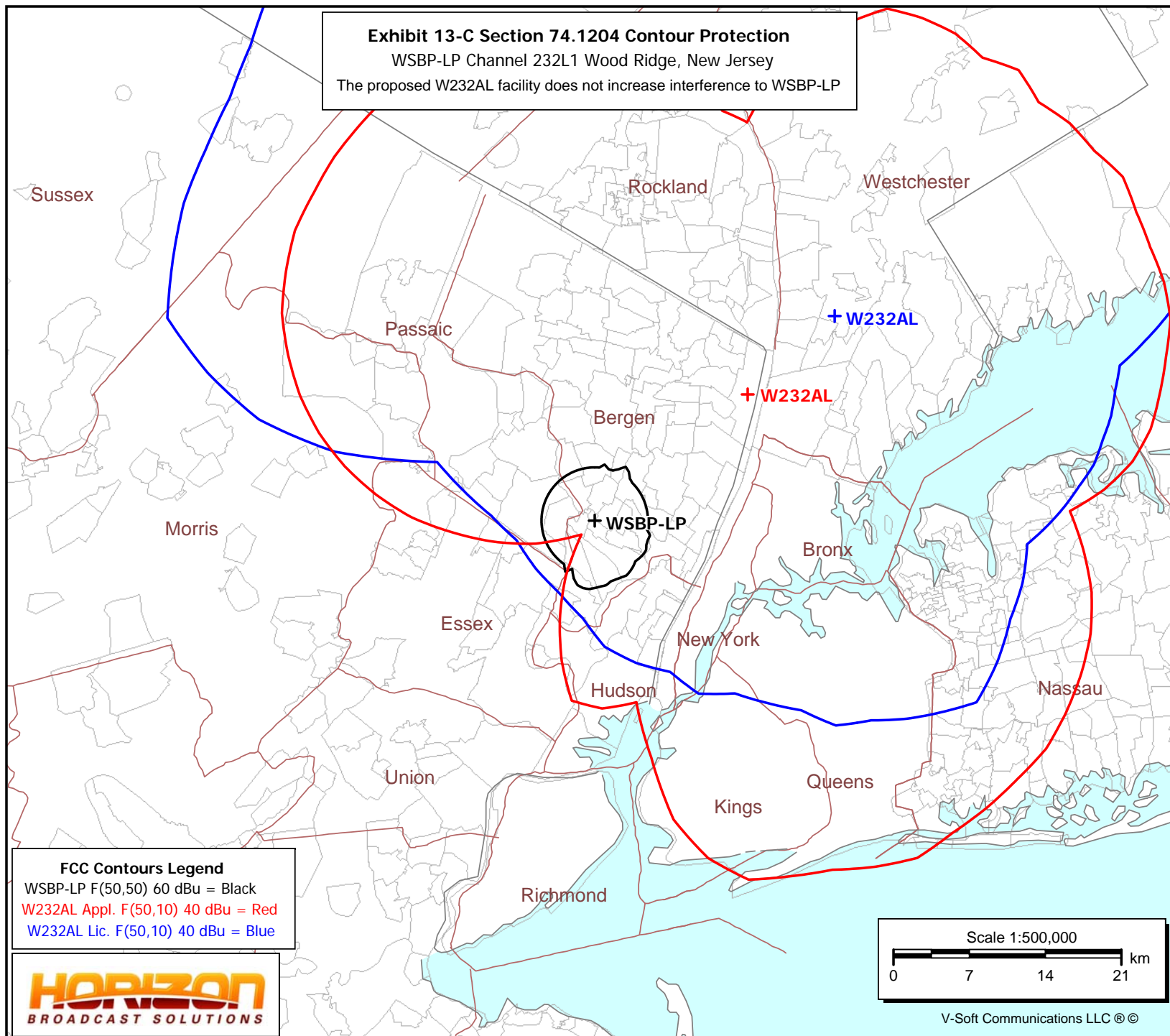
W232AL Licensed
Pomona, NY
BLFT20140829AAT
Latitude: 41-01-32 N
Longitude: 073-49-39 W
ERP: 0.25 kW
HAAT: 0.0 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 131.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

WSBP-LP
Wood Ridge, NJ
BLL20151120ARE
Latitude: 40-51-22.60 N
Longitude: 074-05-24.90 W
ERP: 0.058 kW
HAAT: 20.38 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 51.0 m
Elevation: 37.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

FCC Contours Legend
WSBP-LP F(50,50) 60 dBu = Black
W232AL Appl. F(50,10) 40 dBu = Red
W232AL Lic. F(50,10) 40 dBu = Blue

HORIZON
BROADCAST SOLUTIONS

Exhibit 13-C Section 74.1204 Contour Protection
WSBP-LP Channel 232L1 Wood Ridge, New Jersey
The proposed W232AL facility does not increase interference to WSBP-LP



W232AL

Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

W232CY

Parsippany, NJ
BLFT20170221ABT
Latitude: 40-51-48 N
Longitude: 074-21-09 W
ERP: 0.05 kW
HAAT: 0.0 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 61.0 m
Elevation: 53.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

Exhibit 13-D Section 74.1204 Contour Protection

W232CY Channel 232D Parsippany, New Jersey

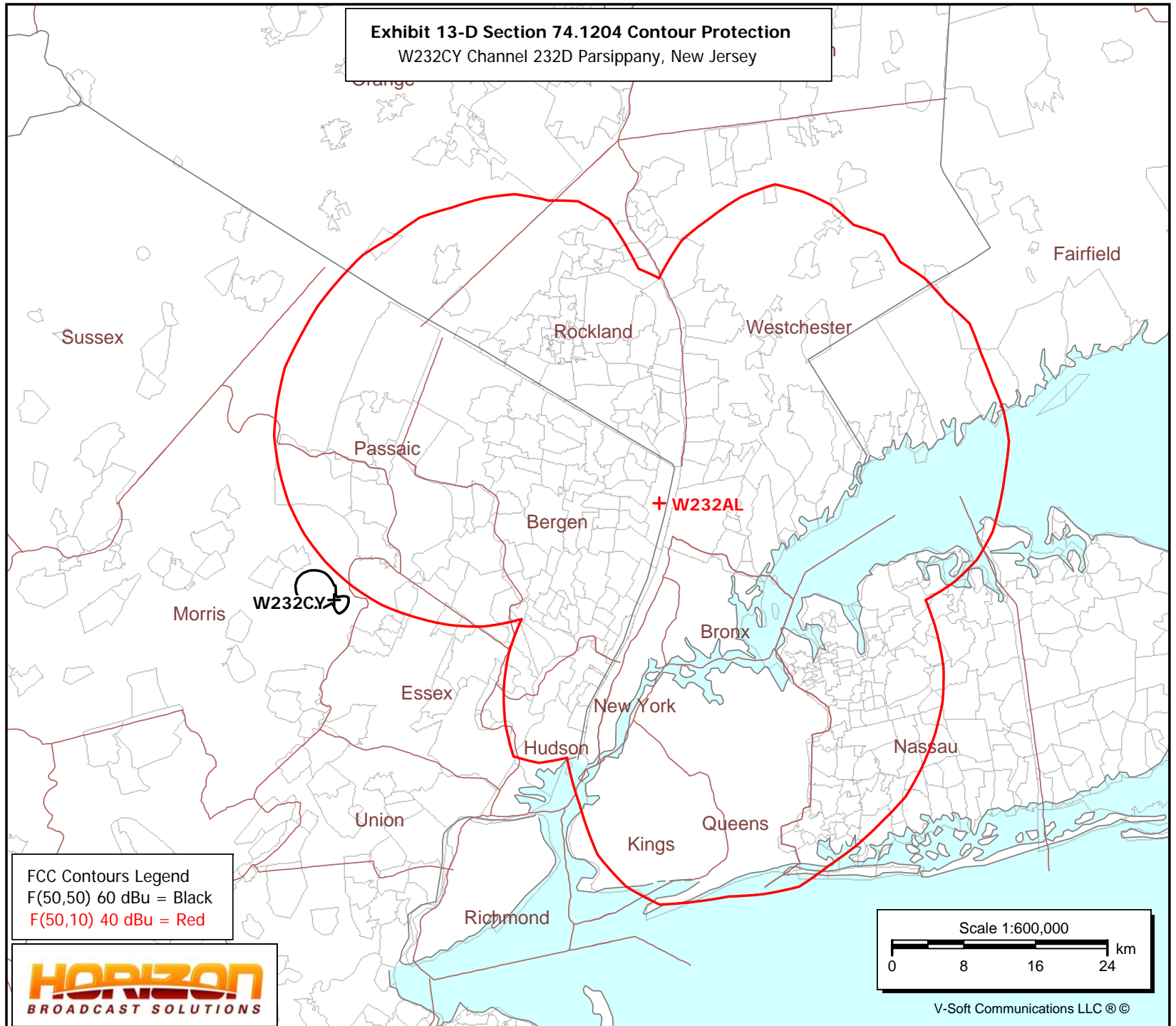


Exhibit 13-E Section 74.1204 Contour Protection
WNSH Channel 234B Newark, New Jersey

The proposed W232AL interfering contour will overlap with the protected contour of second adjacent full power FM station WNSH, Channel 234B, Newark, New Jersey. Bridgelight has specified WNSH HD-4 as the originating primary station to be re-broadcast by W232AL. Title 47 CFR Section 73.1203(d) states: *A fill-in FM translator operating on the first, second or third adjacent channel to its primary station's channel will be exempt from the provisions of paragraphs (a) and (b) of this section to the extent that it may cause limited interference to its primary station's signal, provided it does not disrupt the existing service of its primary station or cause such interference within the boundaries of the principal community of its primary station.*

The proposed W232AL transmit location and area of potential interference to WNSH is limited to a small area near Alpine, New Jersey. No interference occurs in Newark, New Jersey, the WNSH community of license. A map showing the proposed W232AL interfering contour and the Newark corporate boundaries is included with this exhibit.

Bridgelight has specified W232AL to serve as a fill-in FM translator for WNSH, and no interference occurs within the WNSH community of license, it is believed the proposed W232AL facility is exempt from providing an interference study pursuant to Section 73.1203(d).

W232AL CP Mod

Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

WNSH

Newark, NJ
BLH20120404ABJ
Latitude: 40-47-17 N
Longitude: 074-15-19 W
ERP: 23.50 kW
HAAT: 207.0 m
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 274.0 m
Elevation: 189.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WNSH.A

Newark, NJ
BPH20190213ABC
Latitude: 40-47-54 N
Longitude: 074-05-23 W
ERP: 40.00 kW
HAAT: 166.0 m
Channel: 234
Frequency: 94.7 MHz
AMSL Height: 195.4 m
Elevation: 1.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

Exhibit 13-E Section 74.1204 Contour Protection

WNSH Channel 234B Newark, New Jersey
(Second adjacent interferences does not occur in Newark, NJ.)

W232AL FCC F(50,10)
94 dBu contour

W232AL

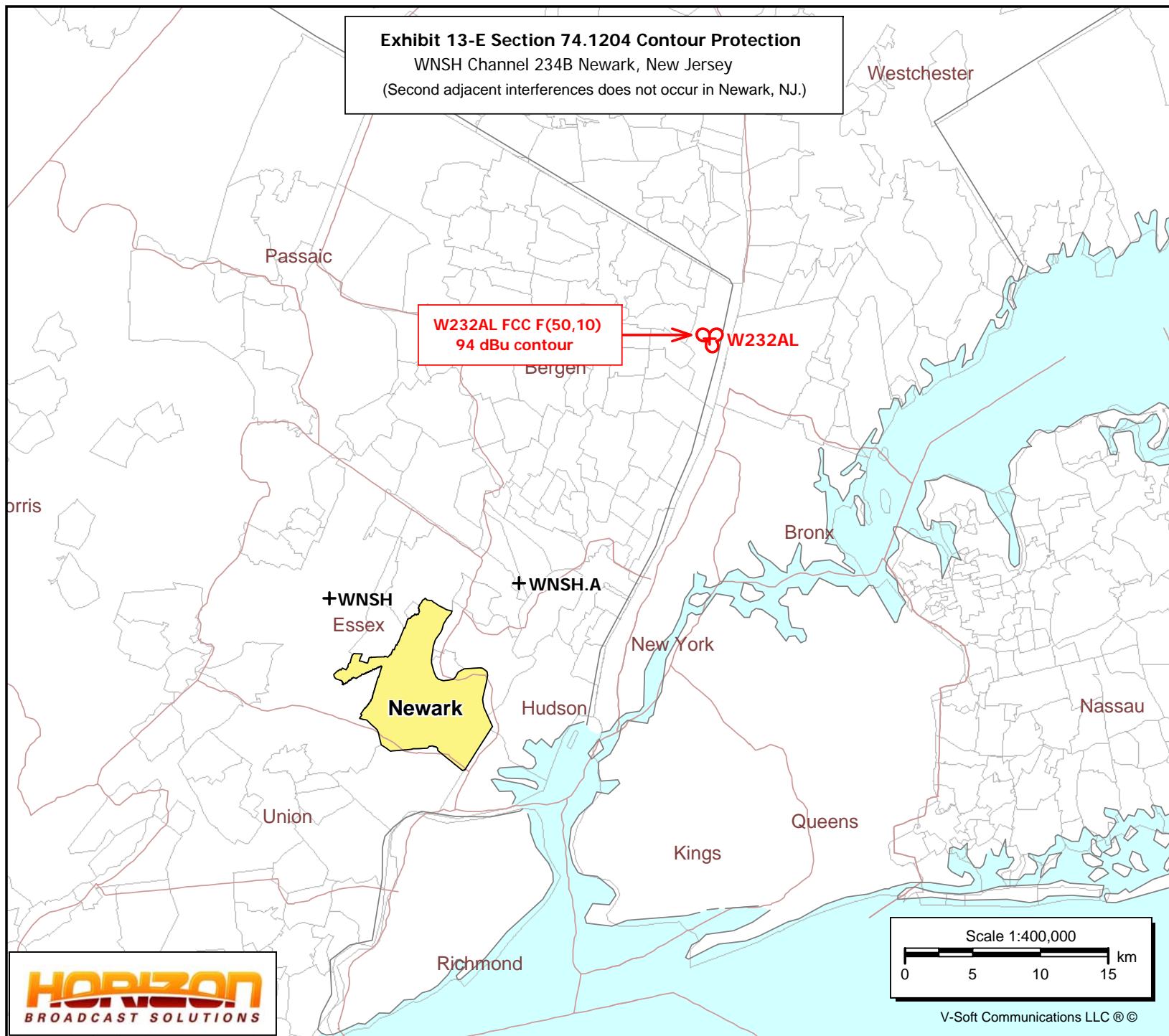


Exhibit 13-F
Section 74.1204
Contour Protection to WNYC-FM

This comprehensive exhibit has been prepared to demonstrate that the proposed modification of construction permit BLFT-20170623ABN for W232AL, Pomona, New York will not cause prohibited interference to WNYC-FM, Channel 230B, New York, NY. This statement demonstrates that a lack of population and/or other factors allow this proposal to be compliant with Section 74.1204. The process commonly called “Living Way,” allows for the use of U/D Analysis, also known as “signal strength ratio methodology.” In this instant case the facilities to be protected are second adjacent and are to be afforded protection from signals 40 dB stronger than they present in the location of the proposed antenna location. The WNYC-FM F(50,50) protected contour at the proposed W232AL application site is 74.4 dBu. Therefore, the proposed W232AL F(50,10) interfering contour with respect to KGGO is the 114.4 dBu contour. Using the FCC's FM propagation curves program, the 114.4 dBu contour was calculated to extend 99 meters from the transmit antenna. A copy of the Kathrein-Scala CA2-FM antenna vertical elevation pattern is attached. Using the data provided in the vertical elevation pattern, the ERP was calculated for every ten degrees of elevation. The respective contour distance for the W232AL interfering contour was then calculated using the FCC's FM propagation curves program. The contour distance ranges from 99 meters at 0 degrees to 6 meters at 90 degrees. The attached spreadsheet then plotted the interfering curve from the antenna into free space. The interfering does not reach the ground. The interfering contour comes to within approximately 55 meters of ground level at approximately 55 meters from the tower base. There are no high rise buildings in the area around the tower. Therefore, it is believed that the proposed modification to

W232AL will not cause prohibited interference to WNYC-FM as the interfering contours does not reach the ground.

W232AL CP Mod

Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

Exhibit 13-F Section 74.1204 Contour Protection

WNYC-FM Channel 230B New York, New York
The WNYC-FM F(50,50) contour at W232AL is 74.4 dBu

WNYC-FM

BLH20110815ADD
Latitude: 40-44-54 N
Longitude: 073-59-10 W
ERP: 5.20 kW
HAAT: 415.0 m
Channel: 230
Frequency: 93.9 MHz
AMSL Height: 429.0 m
Elevation: 16.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WNYC-FM F(50,50)
74.4 dBu contour

+ W232AL

Bergen

HORIZON
BROADCAST SOLUTIONS

Scale 1:150,000

0 2 4 6 km

V-Soft Communications LLC ©

Select Contour Type:

F(50,50) Service Contour -- FM and NTSC (analog) TV
F(50,10) Interfering Contour
F(50,90) Digital TV Service Contour

Select Channel Range:
(not TV Virtual Channel)

FM Radio or TV Transmit Channels 2-6
TV Transmit Channels 7-13
TV Transmit Channels 14-69

Find This:

Field Strength, given a Distance (in km)
Distance, Given a Field Strength (in dBu)
FM ERP, given Distance and Field Strength [F(50,50) Service Contour]

.055
ERP (kW)

Distance (km)

217
HAAT (meters)

114.4
Field (dBu)

Find Result

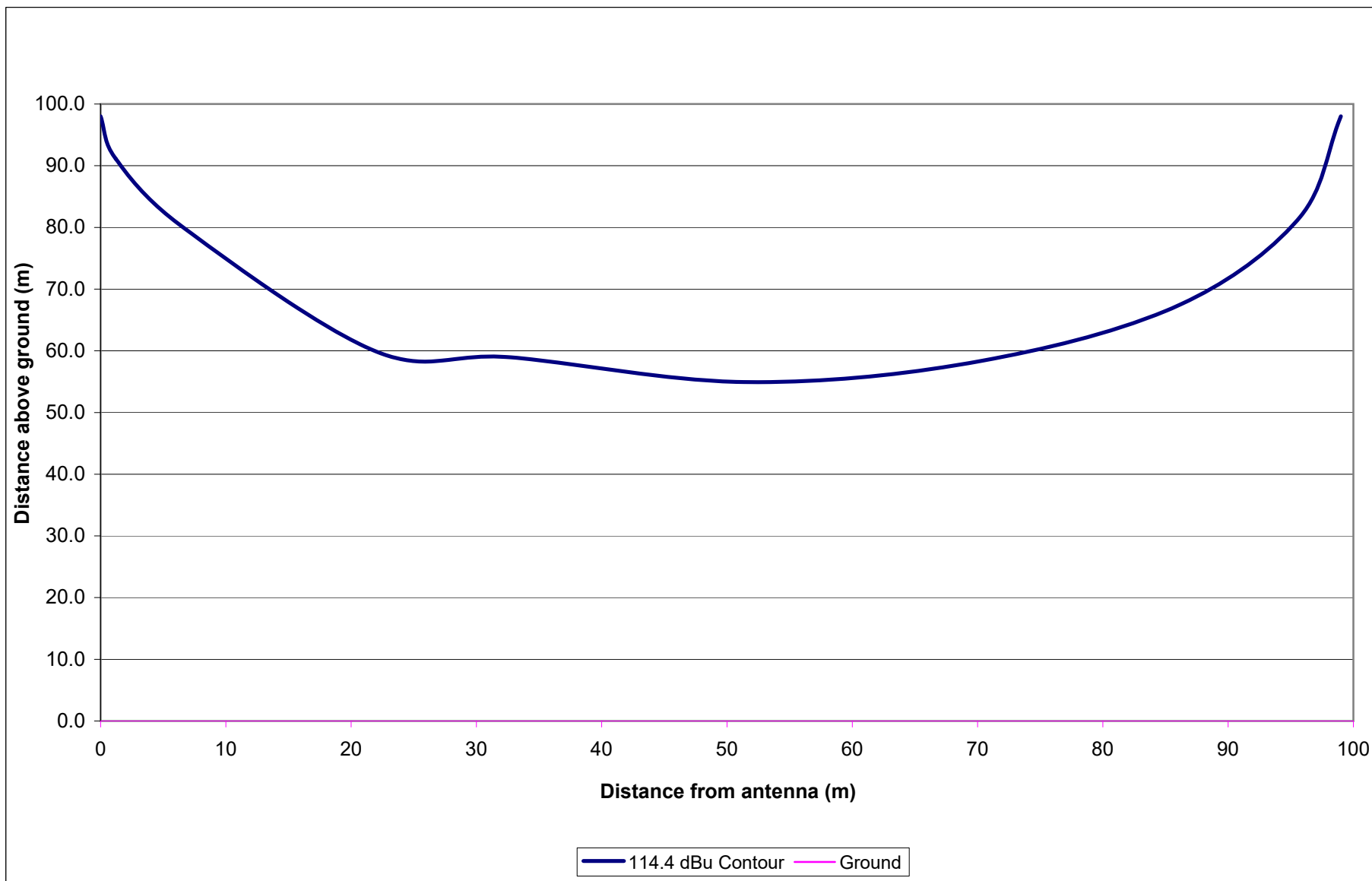
Clear Form

Results:

Calculated Distance = **0.099 km**

Free Space equation used to compute distance.

W232AL - Alpine, NJ
Section 74.1204 Contour Protection to WNYC-FM, Channel 230B, New York, NY
(114.4 dBu F(50,10) interfering contour shown)

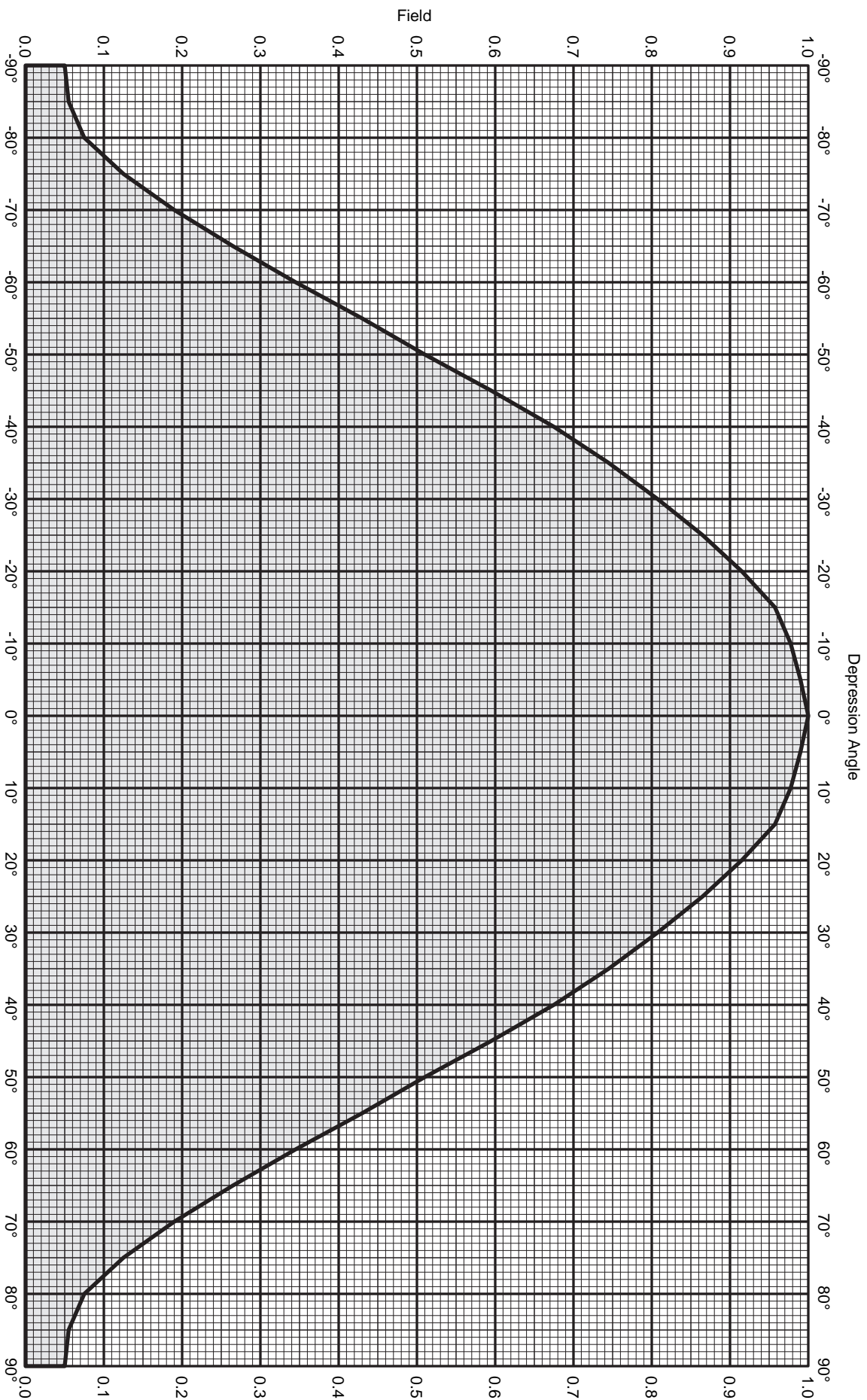


The W232AL interfering contour with respect to WNYC-FM does not reach the ground.

Angle of Elevation (Degrees)	Relative Field	ERP (watts)	ERP (dBk)	114.4 dBu Contour (Meters)
-----	-----	-----	-----	-----
0	1.000	55	-12.596	99
-10	0.978	52.6	-12.790	97
-20	0.915	46.9	-13.368	91
-30	0.808	35.9	-14.448	80
-40	0.675	25.1	-16.01	67
-50	0.510	14.3	-18.445	51
-60	0.450	11.1	-19.532	44
-70	0.190	2.0	-27.021	19
-80	0.075	0.3	-35.095	7
-90	0.050	0.2	-38.617	6

Angle of Elevation (Degrees)	Relative Field	ERP (dBk)	ERP (watts)	114.4 dBu Contour (Meters)
0	1.000	-12.596	55	99
10	0.978	-12.790	52.6	97
20	0.915	-13.368	46.9	91
30	0.808	-14.448	35.9	80
40	0.675	-16.01	25.1	67
50	0.510	-18.445	14.3	51
60	0.450	-19.532	11.1	44
70	0.190	-27.021	2.00	19
80	0.075	-35.095	0.3	7
90	0.050	-38.617	0.2	6

Θ (°)	Θ (radians)	R (m)	x'	y'	y = 98 - y'	Gnd
0	0	99	99	0	98.0	0
10	0.175	97	95.5	16.8	81.2	0
20	0.349	91	85.5	31.1	66.9	0
30	0.524	80	69.3	40	58	0
40	0.698	67	51.3	43.1	54.9	0
50	0.873	51	32.8	39.1	58.9	0
60	1.047	44	22.0	38.1	59.9	0
70	1.222	19	6.5	17.9	80.1	0
80	1.396	7	1.2	6.9	91.1	0
90	1.571	6	0.0	6	98	0



CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt



SCALA DIVISION

Post Office Box 4580
Medford, OR 97501 (USA)
Phone: (541) 779-6500
Fax: (541) 779-3991
<http://www.kathrein-scala.com>



CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.050	-26.02	-22.02	0.01	-45	0.595	-4.51	-0.51	0.89
-89	0.051	-25.85	-21.85	0.01	-44	0.611	-4.28	-0.28	0.94
-88	0.052	-25.68	-21.68	0.01	-43	0.627	-4.05	-0.05	0.99
-87	0.053	-25.51	-21.51	0.01	-42	0.643	-3.84	0.16	1.04
-86	0.054	-25.35	-21.35	0.01	-41	0.659	-3.62	0.38	1.09
-85	0.055	-25.19	-21.19	0.01	-40	0.675	-3.41	0.59	1.14
-84	0.059	-24.58	-20.58	0.01	-39	0.689	-3.24	0.76	1.19
-83	0.063	-24.01	-20.01	0.01	-38	0.703	-3.06	0.94	1.24
-82	0.067	-23.48	-19.48	0.01	-37	0.717	-2.89	1.11	1.29
-81	0.071	-22.97	-18.97	0.01	-36	0.731	-2.72	1.28	1.34
-80	0.075	-22.50	-18.50	0.01	-35	0.745	-2.56	1.44	1.39
-79	0.085	-21.41	-17.41	0.02	-34	0.757	-2.41	1.59	1.44
-78	0.095	-20.45	-16.45	0.02	-33	0.770	-2.27	1.73	1.49
-77	0.105	-19.58	-15.58	0.03	-32	0.783	-2.13	1.87	1.54
-76	0.115	-18.79	-14.79	0.03	-31	0.795	-1.99	2.01	1.59
-75	0.125	-18.06	-14.06	0.04	-30	0.808	-1.86	2.14	1.64
-74	0.138	-17.20	-13.20	0.05	-29	0.819	-1.73	2.27	1.68
-73	0.151	-16.42	-12.42	0.06	-28	0.831	-1.61	2.39	1.73
-72	0.164	-15.70	-11.70	0.07	-27	0.842	-1.49	2.51	1.78
-71	0.177	-15.04	-11.04	0.08	-26	0.854	-1.38	2.62	1.83
-70	0.190	-14.42	-10.42	0.09	-25	0.865	-1.26	2.74	1.88
-69	0.205	-13.76	-9.76	0.11	-24	0.875	-1.16	2.84	1.92
-68	0.220	-13.15	-9.15	0.12	-23	0.885	-1.06	2.94	1.97
-67	0.235	-12.58	-8.58	0.14	-22	0.895	-0.96	3.04	2.01
-66	0.250	-12.04	-8.04	0.16	-21	0.905	-0.87	3.13	2.06
-65	0.265	-11.54	-7.54	0.18	-20	0.915	-0.77	3.23	2.10
-64	0.281	-11.03	-7.03	0.20	-19	0.924	-0.69	3.31	2.14
-63	0.297	-10.54	-6.54	0.22	-18	0.932	-0.61	3.39	2.18
-62	0.313	-10.09	-6.09	0.25	-17	0.940	-0.53	3.47	2.22
-61	0.329	-9.66	-5.66	0.27	-16	0.949	-0.45	3.55	2.26
-60	0.345	-9.24	-5.24	0.30	-15	0.957	-0.38	3.62	2.30
-59	0.362	-8.83	-4.83	0.33	-14	0.961	-0.34	3.66	2.32
-58	0.379	-8.43	-4.43	0.36	-13	0.965	-0.30	3.70	2.34
-57	0.396	-8.05	-4.05	0.39	-12	0.970	-0.27	3.73	2.36
-56	0.413	-7.68	-3.68	0.43	-11	0.974	-0.23	3.77	2.38
-55	0.430	-7.33	-3.33	0.46	-10	0.978	-0.20	3.80	2.40
-54	0.446	-7.01	-3.01	0.50	-9	0.980	-0.18	3.82	2.41
-53	0.462	-6.71	-2.71	0.54	-8	0.982	-0.15	3.85	2.42
-52	0.478	-6.41	-2.41	0.57	-7	0.985	-0.13	3.87	2.44
-51	0.494	-6.13	-2.13	0.61	-6	0.988	-0.11	3.89	2.45
-50	0.510	-5.85	-1.85	0.65	-5	0.990	-0.09	3.91	2.46
-49	0.527	-5.56	-1.56	0.70	-4	0.992	-0.07	3.93	2.47
-48	0.544	-5.29	-1.29	0.74	-3	0.994	-0.05	3.95	2.48
-47	0.561	-5.02	-1.02	0.79	-2	0.996	-0.03	3.97	2.49
-46	0.578	-4.76	-0.76	0.84	-1	0.998	-0.02	3.98	2.50
					0	1.000	0.00	4.00	2.51



CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	4.00	2.51	45	0.595	-4.51	-0.51	0.89
1	0.998	-0.02	3.98	2.50	46	0.578	-4.76	-0.76	0.84
2	0.996	-0.03	3.97	2.49	47	0.561	-5.02	-1.02	0.79
3	0.994	-0.05	3.95	2.48	48	0.544	-5.29	-1.29	0.74
4	0.992	-0.07	3.93	2.47	49	0.527	-5.56	-1.56	0.70
5	0.990	-0.09	3.91	2.46	50	0.510	-5.85	-1.85	0.65
6	0.988	-0.11	3.89	2.45	51	0.494	-6.13	-2.13	0.61
7	0.985	-0.13	3.87	2.44	52	0.478	-6.41	-2.41	0.57
8	0.982	-0.15	3.85	2.42	53	0.462	-6.71	-2.71	0.54
9	0.980	-0.18	3.82	2.41	54	0.446	-7.01	-3.01	0.50
10	0.978	-0.20	3.80	2.40	55	0.430	-7.33	-3.33	0.46
11	0.974	-0.23	3.77	2.38	56	0.413	-7.68	-3.68	0.43
12	0.970	-0.27	3.73	2.36	57	0.396	-8.05	-4.05	0.39
13	0.965	-0.30	3.70	2.34	58	0.379	-8.43	-4.43	0.36
14	0.961	-0.34	3.66	2.32	59	0.362	-8.83	-4.83	0.33
15	0.957	-0.38	3.62	2.30	60	0.345	-9.24	-5.24	0.30
16	0.949	-0.45	3.55	2.26	61	0.329	-9.66	-5.66	0.27
17	0.940	-0.53	3.47	2.22	62	0.313	-10.09	-6.09	0.25
18	0.932	-0.61	3.39	2.18	63	0.297	-10.54	-6.54	0.22
19	0.924	-0.69	3.31	2.14	64	0.281	-11.03	-7.03	0.20
20	0.915	-0.77	3.23	2.10	65	0.265	-11.54	-7.54	0.18
21	0.905	-0.87	3.13	2.06	66	0.250	-12.04	-8.04	0.16
22	0.895	-0.96	3.04	2.01	67	0.235	-12.58	-8.58	0.14
23	0.885	-1.06	2.94	1.97	68	0.220	-13.15	-9.15	0.12
24	0.875	-1.16	2.84	1.92	69	0.205	-13.76	-9.76	0.11
25	0.865	-1.26	2.74	1.88	70	0.190	-14.42	-10.42	0.09
26	0.854	-1.38	2.62	1.83	71	0.177	-15.04	-11.04	0.08
27	0.842	-1.49	2.51	1.78	72	0.164	-15.70	-11.70	0.07
28	0.831	-1.61	2.39	1.73	73	0.151	-16.42	-12.42	0.06
29	0.819	-1.73	2.27	1.68	74	0.138	-17.20	-13.20	0.05
30	0.808	-1.86	2.14	1.64	75	0.125	-18.06	-14.06	0.04
31	0.795	-1.99	2.01	1.59	76	0.115	-18.79	-14.79	0.03
32	0.783	-2.13	1.87	1.54	77	0.105	-19.58	-15.58	0.03
33	0.770	-2.27	1.73	1.49	78	0.095	-20.45	-16.45	0.02
34	0.757	-2.41	1.59	1.44	79	0.085	-21.41	-17.41	0.02
35	0.745	-2.56	1.44	1.39	80	0.075	-22.50	-18.50	0.01
36	0.731	-2.72	1.28	1.34	81	0.071	-22.97	-18.97	0.01
37	0.717	-2.89	1.11	1.29	82	0.067	-23.48	-19.48	0.01
38	0.703	-3.06	0.94	1.24	83	0.063	-24.01	-20.01	0.01
39	0.689	-3.24	0.76	1.19	84	0.059	-24.58	-20.58	0.01
40	0.675	-3.41	0.59	1.14	85	0.055	-25.19	-21.19	0.01
41	0.659	-3.62	0.38	1.09	86	0.054	-25.35	-21.35	0.01
42	0.643	-3.84	0.16	1.04	87	0.053	-25.51	-21.51	0.01
43	0.627	-4.05	-0.05	0.99	88	0.052	-25.68	-21.68	0.01
44	0.611	-4.28	-0.28	0.94	89	0.051	-25.85	-21.85	0.01
					90	0.050	-26.02	-22.02	0.01

W232AL

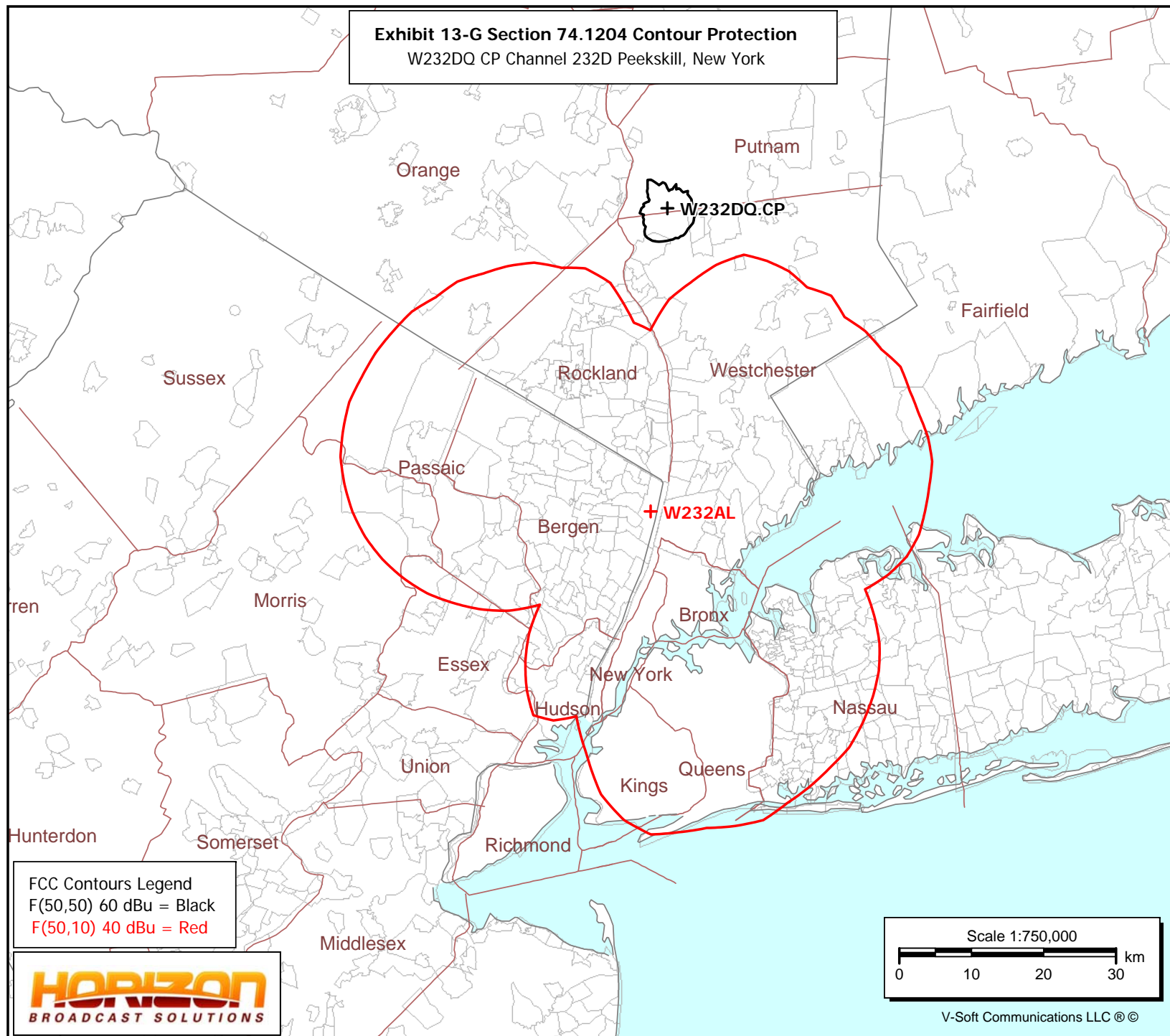
Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

W232DQ.CP

Peekskill, NY
BNPFT20180424ABH
Latitude: 41-20-17.70 N
Longitude: 073-53-40.50 W
ERP: 0.001 kW
HAAT: 153.14 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 313.0 m
Elevation: 213.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 13-G Section 74.1204 Contour Protection

W232DQ CP Channel 232D Peekskill, New York



W232AL

Alpine, NJ
BPFT20170623ABN
Latitude: 40-57-38.60 N
Longitude: 073-55-22.50 W
ERP: 0.055 kW
HAAT: 217.21 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 257.0 m
Elevation: 159.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

Exhibit 13-H Section 74.1204 Contour Protection

WJLK Channel 232A Asbury Park, New Jersey
WYBC-FM Channel 232A New Haven, Connecticut

WJLK

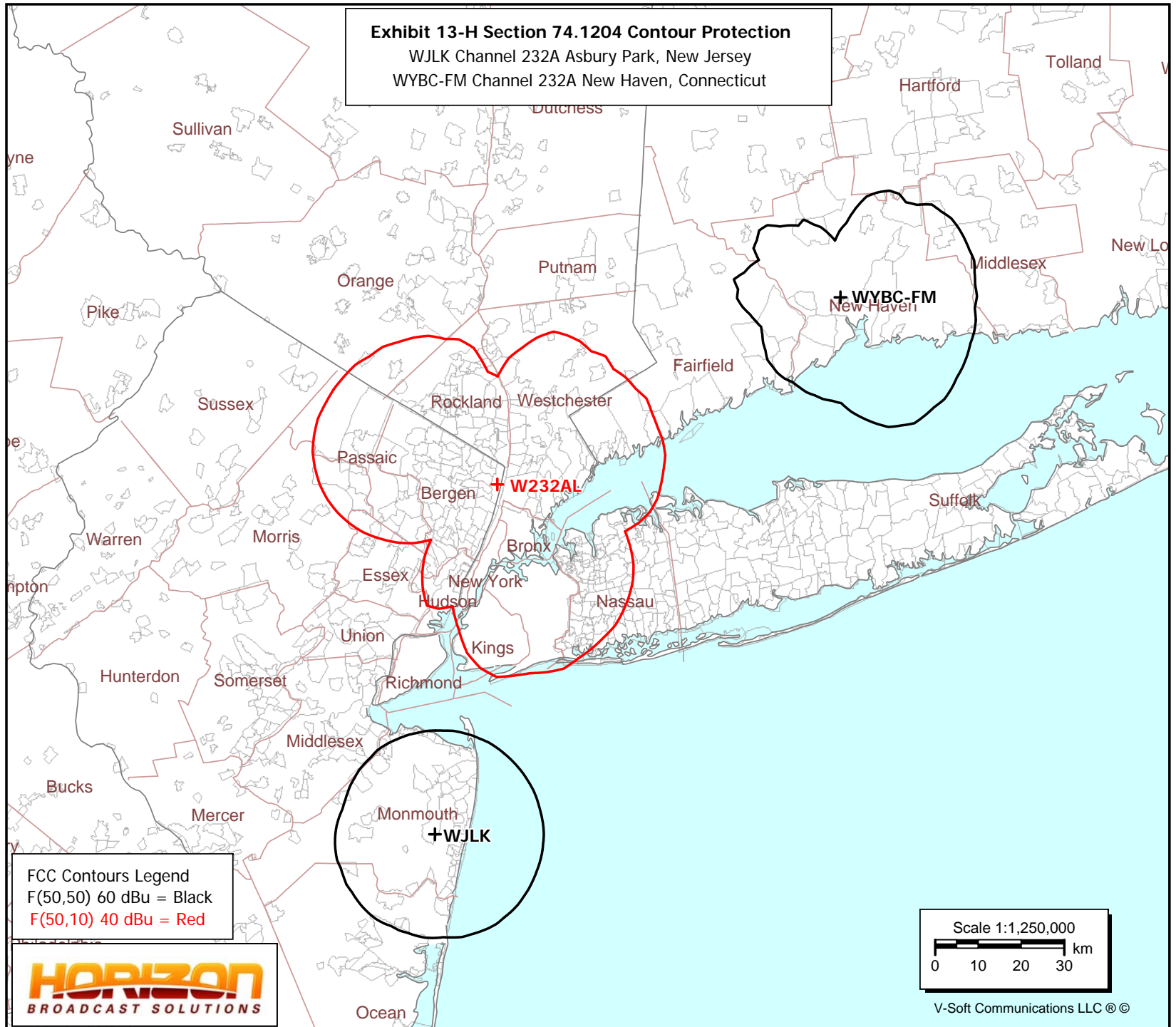
Asbury Park, NJ
BMLH20110615AAQ
Latitude: 40-13-45 N
Longitude: 074-05-25 W
ERP: 1.30 kW
HAAT: 152.0 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 171.0 m
Elevation: 35.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WYBC-FM

New Haven, CT
BLH20010918AAT
Latitude: 41-20-59 N
Longitude: 072-58-23 W
ERP: 3.00 kW
HAAT: 144.0 m
Channel: 232
Frequency: 94.3 MHz
AMSL Height: 215.0 m
Elevation: 136.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

FCC Contours Legend
F(50,50) 60 dBu = Black
F(50,10) 40 dBu = Red

HORIZON
BROADCAST SOLUTIONS



Scale 1:1,250,000
0 10 20 30 km

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