

Exhibit 18.1

Tabulation of Proposed WVRS Allocation

Munn-Reese, Inc.
Coldwater, MI 49036

REFERENCE		Timber Ridge Ministries, Inc.								DISPLAY DATES	
39 11 02.0 N.		CH# 211A - 90.1 MHz, Pwr= 0.25 kW DA, HAAT= 421.1 M, COR= 805 M								DATA 08-26-14	
78 23 15.0 W.		Average Protected F(50-50)= 27.72 km								SEARCH 08-26-14	
		Standard Directional									
CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
211A Gore	WVRS	LIC _CX VA	0.0 0.0	0.00 BLED20110831ACG	39 11 02.0 78 23 15.0	0.009 462	42.3 805	11.9 Timber Ridge Ministries, I	-66.9*	-88.5*	
211B Washington	WCSP-FM	LIC DCN DC	101.4 282.3	120.01 BLED19980127KA	38 57 44.0 77 01 36.0	36.000 173	105.8 234	39.3 National Cable Satellite C	0.8	32.4	
210B Culpeper	WPER	LIC DCX VA	137.1 317.5	76.44 BLED20060327AIO	38 40 42.0 77 47 18.0	41.000 127	59.8 256	37.8 Positive Alternative Radio	1.0	14.8	
212A Front Royal	WXDM	LIC _CX VA	141.4 321.5	33.30 BLED20121203BCG	38 56 58.7 78 08 49.5	0.190 -65	9.5 200	6.6 Christendom Educational Co	8.4	3.1	
209A Winchester	WHFW	LIC DCX VA	96.8 277.0	24.30 BLED20130621AAM	39 09 27.7 78 06 27.2	0.185 53	1.0 256	6.6 Holy Family Communications	10.1	17.5	
212B Grantsville	WAIJ	LIC DEN MD	313.9 133.5	83.66 BLED19841001DW	39 42 14.0 79 05 31.0	10.000 171	43.3 922	28.7 He's Alive, Incorporated	13.5	13.3	
213B Williamsport	WCRH	LIC _CN MD	34.3 214.6	64.09 BLED19820129AE	39 39 34.0 77 57 56.0	10.000 268	5.0 463	50.2 Cedar Ridge Children's Hom	41.0	13.5	
208B Petersburg	WVDS	LIC DCX WV	270.4 89.8	79.00 BLED20130314ABH	39 11 05.8 79 18 15.3	10.000 320	5.7 1218	61.3 West Virginia Educational	47.2	16.6	
211B1 Waynesboro	WPVA	LIC _C_ VA	198.4 18.1	136.09 BLED19990723KA	38 01 16.0 78 52 38.0	2.500 293	97.6 723	37.8 Positive Alternative Radio	19.2	34.1	
214B Harrisonburg	WMRA	LIC _CN VA	215.4 35.1	84.39 BLED19950105KE	38 33 50.0 78 56 60.0	10.500 318	5.5 852	57.0 James Madison University B	64.0	26.7	
209A Shepherdstown	WSHC	LIC _CN WV	61.0 241.4	57.16 BLED19921001KD	39 25 53.0 77 48 18.0	0.950 -3	1.6 149	10.0 Shepherd College Board Of	42.0	46.9	
211B1 Clarksburg	WCKU	LIC _CX WV	275.6 94.3	173.22 BLED20090603AGE	39 19 09.0 80 23 31.0	4.000 215	98.0 568	37.7 Educational Media Foundati	49.7	59.0	

Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone= - Zone 1, Co to 3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.
 < = Station meets FCC minimum distance spacing for its class.
 < = Contour Overlap

Protection to WCSP-FM - Washington, DC
Timber Ridge Ministries, Inc.

Exhibit 18.2

Protection to WCSP-FM - Washington, DC

FMCommander Single Allocation Study - 08-26-2014 - NED 03 SEC
WVRS's Overlaps (In= 0.84 km, Out= 32.37 km)

WVRS CH 211 A DA
Lat= 39 11 02.0, Lng= 78 23 15.0
0.25 kW 421.1 M HAAT, 805 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WCSP-FM CH 211 B DA BLED19980127KA
Lat= 38 57 44.0, Lng= 77 01 36.0
36.0 kW 173 M HAAT, 234 M COR
Prot.= 60 dBu, Intef.= 40 dBu

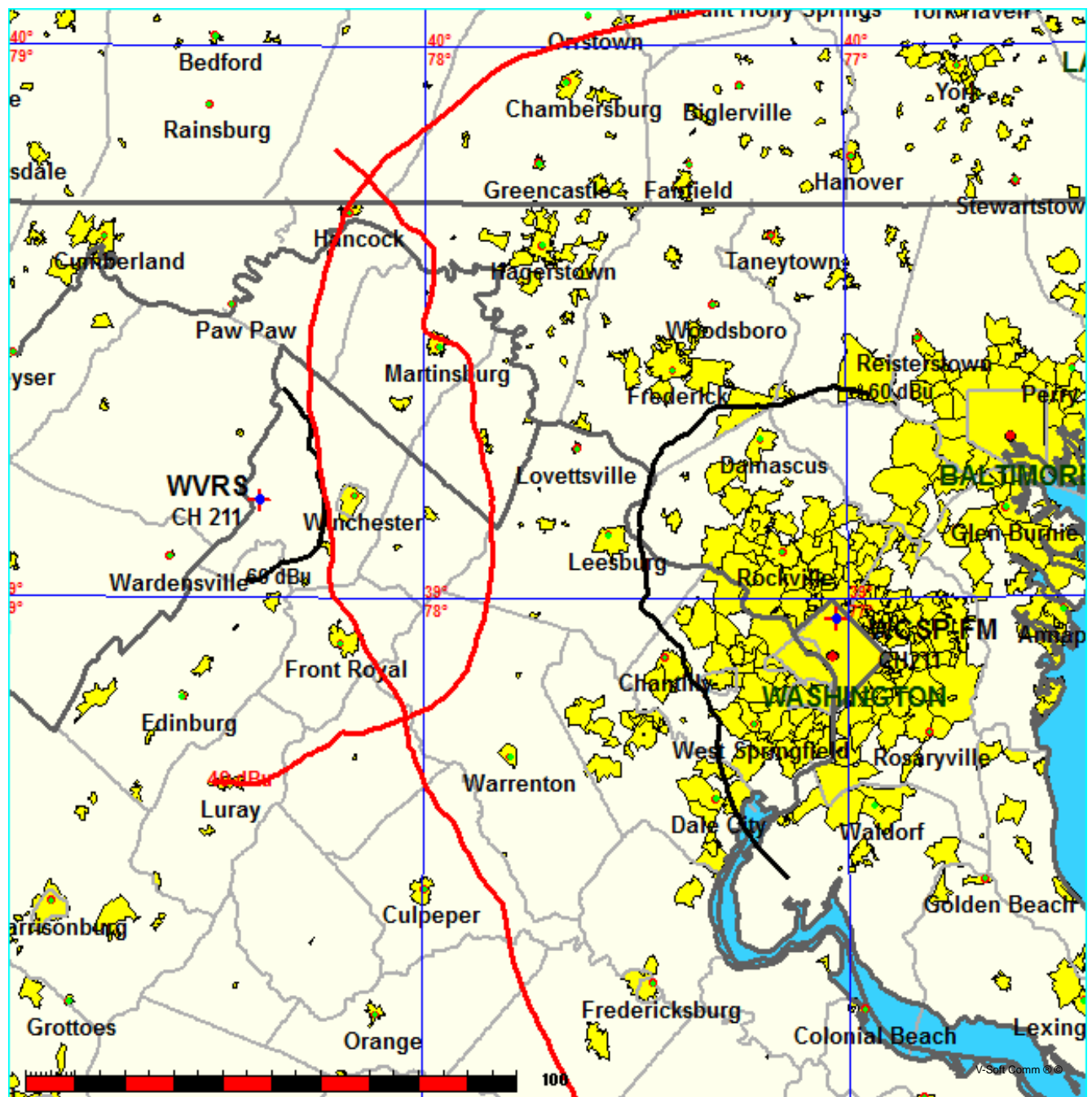


Exhibit 18.2

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Protection to WCSP-FM – Washington, DC

08-26-2014 Terrain Data: NED 03 SEC FMOVER Analysis

WVRS

WCSP-FM BLED19980127KA

Channel = 211A
Max ERP = 0.25 kW
RCAMSL = 805 M
N. Lat. 39 11 02.0
W. Lng. 78 23 15.0
Protected
60 dBu

Channel = 211B
Max ERP = 36 kW
RCAMSL = 234 M
N. Lat. 38 57 44.0
W. Lng. 77 01 36.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
041.0	000.0271	0427.5	015.3	289.0	016.9190	0141.8	113.2	39.72	
042.0	000.0260	0406.6	014.8	288.7	016.7008	0141.2	113.2	39.65	
043.0	000.0249	0387.2	014.3	288.5	016.4989	0141.0	113.2	39.59	
044.0	000.0238	0379.9	014.0	288.3	016.3688	0141.0	113.1	39.58	
045.0	000.0227	0384.4	014.0	288.2	016.3000	0141.0	112.9	39.60	
046.0	000.0217	0392.6	013.9	288.1	016.2475	0141.1	112.7	39.62	
047.0	000.0207	0406.9	014.0	288.1	016.2229	0141.1	112.5	39.66	
048.0	000.0197	0425.0	014.1	288.1	016.2132	0141.1	112.2	39.71	
049.0	000.0188	0440.9	014.2	288.0	016.1852	0141.1	111.9	39.75	
050.0	000.0178	0455.2	014.2	288.0	016.1405	0141.2	111.7	39.79	
051.0	000.0173	0470.3	014.3	287.9	016.1121	0141.2	111.5	39.83	
052.0	000.0167	0483.5	014.3	287.9	016.0709	0141.1	111.3	39.86	
053.0	000.0161	0495.8	014.3	287.8	016.0221	0141.1	111.0	39.89	
054.0	000.0156	0505.9	014.3	287.7	015.9636	0141.1	110.8	39.91	
055.0	000.0151	0512.3	014.2	287.6	015.8893	0141.1	110.7	39.92	
056.0	000.0145	0517.7	014.2	287.5	015.8102	0141.1	110.5	39.93	
057.0	000.0140	0523.5	014.1	287.4	015.7311	0141.0	110.4	39.94	
058.0	000.0135	0524.6	014.0	287.3	015.6342	0141.2	110.3	39.93	
059.0	000.0130	0524.3	013.8	287.1	015.5326	0141.4	110.2	39.93	
060.0	000.0125	0523.7	013.6	287.0	015.4299	0141.8	110.2	39.93	
061.0	000.0122	0524.3	013.5	286.9	015.3393	0142.1	110.1	39.93	
062.0	000.0118	0526.5	013.4	286.7	015.2533	0142.5	110.0	39.94	
063.0	000.0114	0529.9	013.4	286.6	015.1702	0142.9	109.9	39.95	
064.0	000.0111	0533.5	013.3	286.5	015.0872	0143.3	109.8	39.96	
065.0	000.0107	0534.2	013.2	286.4	014.9956	0143.4	109.7	39.95	
066.0	000.0104	0532.8	013.0	286.2	014.8982	0143.6	109.7	39.93	
067.0	000.0100	0532.0	012.9	286.1	014.8037	0143.6	109.6	39.92	
068.0	000.0097	0532.8	012.8	286.0	014.7132	0143.8	109.6	39.90	
069.0	000.0094	0532.4	012.6	285.8	014.6201	0144.0	109.6	39.89	
070.0	000.0090	0532.6	012.5	285.7	014.5287	0144.3	109.6	39.88	
071.0	000.0091	0531.9	012.5	285.6	014.4666	0144.4	109.4	39.89	
072.0	000.0091	0532.0	012.5	285.5	014.4052	0144.3	109.3	39.89	
073.0	000.0092	0530.0	012.5	285.4	014.3389	0144.0	109.2	39.89	
074.0	000.0092	0529.1	012.5	285.3	014.2737	0143.8	109.0	39.89	
075.0	000.0093	0529.9	012.6	285.2	014.2109	0143.7	108.9	39.89	
076.0	000.0093	0531.4	012.6	285.1	014.1482	0143.6	108.8	39.90	
077.0	000.0094	0530.1	012.6	285.0	014.0798	0143.5	108.7	39.90	
078.0	000.0094	0527.3	012.6	284.9	014.0084	0143.4	108.6	39.89	
079.0	000.0095	0526.6	012.6	284.8	013.9398	0143.3	108.5	39.89	
080.0	000.0095	0523.5	012.6	284.7	013.8673	0143.2	108.4	39.88	

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI

Exhibit 18.2

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Protection to WCSP-FM – Washington, DC

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
081.0	000.0097	0520.1	012.6	284.6	013.7992	0143.2	108.3	39.88	
082.0	000.0098	0519.3	012.7	284.5	013.7335	0143.2	108.2	39.89	
083.0	000.0100	0520.7	012.7	284.4	013.6691	0143.2	108.0	39.90	
084.0	000.0101	0522.5	012.8	284.3	013.6041	0143.2	107.9	39.91	
085.0	000.0103	0520.2	012.8	284.2	013.5331	0143.4	107.8	39.92	
086.0	000.0104	0518.2	012.9	284.1	013.4618	0143.6	107.7	39.92	
087.0	000.0106	0517.8	012.9	284.0	013.3911	0143.7	107.5	39.93	
088.0	000.0107	0518.0	013.0	283.9	013.3199	0143.7	107.4	39.93	
089.0	000.0109	0516.5	013.0	283.8	013.2464	0143.6	107.3	39.93	
090.0	000.0110	0515.7	013.1	283.7	013.1727	0143.7	107.2	39.93	
091.0	000.0111	0513.1	013.1	283.5	013.0955	0143.8	107.2	39.92	
092.0	000.0112	0512.8	013.1	283.4	013.0196	0143.8	107.1	39.91	
093.0	000.0113	0512.4	013.1	283.3	012.9430	0143.8	107.0	39.90	
094.0	000.0114	0510.8	013.1	283.2	012.8654	0143.7	107.0	39.88	
095.0	000.0115	0509.9	013.2	283.1	012.7879	0143.7	106.9	39.86	
096.0	000.0116	0510.2	013.2	282.9	012.7106	0143.7	106.9	39.85	
097.0	000.0117	0509.4	013.2	282.8	012.6325	0143.9	106.8	39.84	
098.0	000.0118	0510.2	013.3	282.7	012.5545	0144.1	106.8	39.83	
099.0	000.0119	0510.3	013.3	282.6	012.4761	0144.3	106.7	39.82	
100.0	000.0120	0511.4	013.3	282.5	012.3974	0144.5	106.7	39.81	
101.0	000.0122	0511.2	013.4	282.3	012.3185	0144.8	106.6	39.81	
102.0	000.0124	0511.2	013.5	282.2	012.2390	0145.3	106.6	39.81	
103.0	000.0126	0511.6	013.5	282.1	012.1589	0145.8	106.5	39.82	
104.0	000.0128	0511.6	013.6	281.9	012.0784	0146.3	106.4	39.82	
105.0	000.0130	0513.4	013.7	281.8	011.9969	0146.7	106.4	39.81	
106.0	000.0132	0514.3	013.7	281.7	011.9151	0146.9	106.3	39.80	
107.0	000.0134	0513.6	013.8	281.6	011.8334	0146.9	106.3	39.78	
108.0	000.0136	0513.2	013.8	281.4	011.7514	0147.0	106.3	39.76	
109.0	000.0138	0513.4	013.9	281.3	011.6689	0147.3	106.2	39.74	
110.0	000.0140	0512.6	014.0	281.2	011.5868	0147.9	106.2	39.74	
111.0	000.0142	0513.4	014.0	281.0	011.5041	0148.5	106.2	39.73	
112.0	000.0144	0515.1	014.1	280.9	011.4204	0149.1	106.2	39.72	
113.0	000.0146	0516.9	014.2	280.7	011.3364	0149.4	106.2	39.70	
114.0	000.0148	0518.2	014.2	280.6	011.2528	0149.8	106.2	39.69	
115.0	000.0149	0517.8	014.3	280.5	011.1708	0150.3	106.2	39.67	
116.0	000.0151	0519.5	014.3	280.3	011.0867	0150.8	106.2	39.65	
117.0	000.0153	0520.9	014.4	280.2	011.0028	0151.1	106.2	39.63	
118.0	000.0155	0522.2	014.5	280.0	010.9191	0151.1	106.2	39.59	
119.0	000.0157	0522.3	014.5	279.9	010.8513	0151.2	106.3	39.56	
120.0	000.0159	0522.3	014.6	279.8	010.7914	0151.3	106.3	39.53	
121.0	000.0163	0520.5	014.7	279.6	010.7294	0151.2	106.3	39.50	
122.0	000.0167	0520.4	014.8	279.5	010.6652	0151.0	106.3	39.46	
123.0	000.0171	0519.4	014.8	279.3	010.6024	0151.1	106.4	39.43	
124.0	000.0175	0520.5	015.0	279.2	010.5365	0151.4	106.4	39.42	
125.0	000.0179	0520.7	015.1	279.0	010.4719	0152.0	106.4	39.40	
126.0	000.0183	0519.1	015.1	278.9	010.4099	0152.6	106.4	39.39	
127.0	000.0187	0519.1	015.2	278.7	010.3458	0153.0	106.5	39.37	
128.0	000.0192	0520.3	015.4	278.6	010.2794	0153.4	106.5	39.34	
129.0	000.0196	0521.7	015.5	278.4	010.2129	0153.8	106.5	39.32	
130.0	000.0200	0522.4	015.6	278.3	010.1473	0154.3	106.6	39.30	
131.0	000.0200	0522.1	015.6	278.1	010.0965	0154.4	106.7	39.25	
132.0	000.0200	0523.0	015.6	278.0	010.0441	0154.5	106.9	39.20	
133.0	000.0200	0523.6	015.6	277.9	009.9930	0154.6	107.0	39.14	
134.0	000.0200	0525.0	015.6	277.8	009.9408	0155.0	107.2	39.10	
135.0	000.0200	0525.8	015.7	277.7	009.8910	0155.3	107.3	39.06	

Protection to WCSP-FM – Washington, DC

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
136.0	000.0200	0526.0	015.7	277.5	009.8436	0155.7	107.5	39.01	
137.0	000.0200	0525.0	015.6	277.4	009.7997	0156.1	107.7	38.96	
138.0	000.0200	0524.2	015.6	277.3	009.7566	0156.4	107.9	38.91	
139.0	000.0200	0524.9	015.6	277.2	009.7106	0156.9	108.0	38.87	
140.0	000.0200	0524.8	015.6	277.1	009.6674	0157.4	108.2	38.83	
141.0	000.0196	0522.1	015.5	277.1	009.6476	0157.7	108.5	38.76	
142.0	000.0192	0520.8	015.4	277.0	009.6251	0158.1	108.8	38.71	
143.0	000.0187	0521.3	015.3	276.9	009.5994	0158.6	109.1	38.66	
144.0	000.0183	0524.1	015.2	276.9	009.5699	0159.3	109.3	38.61	
145.0	000.0179	0526.7	015.2	276.8	009.5420	0160.0	109.5	38.57	
146.0	000.0175	0529.6	015.1	276.7	009.5150	0160.7	109.8	38.53	
147.0	000.0171	0529.6	015.0	276.7	009.4966	0161.2	110.0	38.48	
148.0	000.0167	0529.7	014.9	276.6	009.4791	0161.7	110.3	38.43	
149.0	000.0163	0533.2	014.8	276.6	009.4545	0162.4	110.5	38.40	
150.0	000.0159	0534.1	014.8	276.5	009.4379	0162.9	110.8	38.35	
151.0	000.0155	0535.6	014.7	276.5	009.4197	0163.4	111.1	38.30	
152.0	000.0152	0537.4	014.6	276.5	009.4017	0164.0	111.3	38.26	
153.0	000.0148	0539.1	014.5	276.4	009.3856	0164.4	111.6	38.22	
154.0	000.0145	0541.7	014.5	276.4	009.3684	0164.9	111.8	38.17	
155.0	000.0142	0546.3	014.4	276.3	009.3469	0165.3	112.0	38.13	
156.0	000.0138	0549.4	014.4	276.3	009.3308	0165.7	112.3	38.08	
157.0	000.0135	0547.7	014.3	276.3	009.3287	0165.8	112.6	38.03	
158.0	000.0132	0547.2	014.2	276.3	009.3247	0165.9	112.8	37.97	
159.0	000.0129	0545.9	014.0	276.3	009.3241	0165.9	113.1	37.92	
160.0	000.0125	0543.1	013.9	276.3	009.3282	0165.8	113.4	37.86	

Protection to WCSP-FM – Washington, DC

08-26-2014 Terrain Data: NED 03 SEC FMOVer Analysis

WCSP-FM BLED19980127KA

WVRS

Channel = 211B
 Max ERP = 36 kW
 RCAMSL = 234 M
 N. Lat. 38 57 44.0
 W. Lng. 77 01 36.0
 Protected
 60 dBu

Channel = 211A
 Max ERP = 0.25 kW
 RCAMSL = 805 M
 N. Lat. 39 11 02.0
 W. Lng. 78 23 15.0
 Interfering
 40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
222.0	006.4719	0162.7	036.1	118.5	000.0156	0522.3	106.8	22.38	
223.0	006.2300	0159.9	035.5	118.1	000.0155	0522.2	106.4	22.48	
224.0	005.9927	0157.8	035.0	117.7	000.0154	0521.8	105.9	22.57	
225.0	005.7600	0153.6	034.2	117.2	000.0154	0521.1	105.5	22.62	
226.0	005.4756	0151.2	033.5	116.8	000.0153	0520.5	105.2	22.68	
227.0	005.1984	0149.8	032.9	116.4	000.0152	0520.1	104.8	22.75	
228.0	004.9284	0147.4	032.2	115.9	000.0151	0519.4	104.5	22.78	
229.0	004.6656	0146.2	031.6	115.5	000.0150	0518.7	104.2	22.83	
230.0	004.4100	0146.5	031.2	115.2	000.0150	0518.0	103.9	22.89	
231.0	004.4100	0146.0	031.2	115.0	000.0150	0517.8	103.4	23.00	
232.0	004.4100	0146.3	031.2	114.9	000.0149	0517.8	102.9	23.14	
233.0	004.4100	0147.1	031.3	114.8	000.0149	0517.8	102.4	23.28	
234.0	004.4100	0146.7	031.3	114.7	000.0149	0517.9	101.9	23.40	
235.0	004.4100	0146.6	031.3	114.5	000.0149	0518.1	101.4	23.52	
236.0	004.4100	0146.4	031.2	114.3	000.0148	0518.2	101.0	23.64	
237.0	004.4100	0144.1	031.0	114.1	000.0148	0518.1	100.6	23.72	
238.0	004.4100	0143.1	030.9	113.8	000.0147	0518.2	100.2	23.82	
239.0	004.4100	0143.5	030.9	113.7	000.0147	0518.1	099.8	23.94	
240.0	004.4100	0142.8	030.9	113.5	000.0147	0517.6	099.4	24.03	
241.0	004.4100	0141.9	030.8	113.3	000.0146	0517.1	099.0	24.11	
242.0	004.4100	0140.2	030.6	113.0	000.0146	0516.9	098.7	24.18	
243.0	004.4100	0141.0	030.7	112.8	000.0145	0516.6	098.2	24.30	
244.0	004.4100	0144.5	031.0	112.8	000.0145	0516.6	097.6	24.47	
245.0	004.4100	0149.6	031.6	112.8	000.0145	0516.6	096.8	24.69	
246.0	004.4100	0150.8	031.7	112.6	000.0145	0516.3	096.3	24.81	
247.0	004.4100	0152.5	031.9	112.5	000.0145	0516.0	095.8	24.94	
248.0	004.4100	0154.7	032.1	112.4	000.0145	0515.8	095.2	25.09	
249.0	004.4100	0154.4	032.1	112.1	000.0144	0515.4	094.8	25.18	
250.0	004.4100	0154.4	032.1	111.9	000.0144	0514.9	094.5	25.26	
251.0	004.4100	0155.0	032.1	111.6	000.0143	0514.3	094.0	25.36	
252.0	004.4100	0155.8	032.2	111.4	000.0143	0514.0	093.6	25.47	
253.0	004.4100	0156.2	032.3	111.2	000.0143	0513.7	093.2	25.57	
254.0	004.4100	0158.7	032.5	111.0	000.0142	0513.4	092.6	25.72	
255.0	004.4100	0156.2	032.3	110.6	000.0142	0513.0	092.5	25.73	
256.0	004.4100	0154.8	032.1	110.3	000.0141	0512.6	092.3	25.76	
257.0	004.4100	0154.4	032.1	110.0	000.0140	0512.6	092.0	25.83	
258.0	004.4100	0153.5	032.0	109.7	000.0140	0512.7	091.8	25.87	
259.0	004.4100	0154.2	032.1	109.4	000.0139	0513.2	091.5	25.97	
260.0	004.4100	0155.0	032.1	109.1	000.0139	0513.6	091.1	26.07	
261.0	004.6397	0155.1	032.6	108.9	000.0138	0513.2	090.4	26.25	
262.0	004.8753	0155.6	033.0	108.7	000.0138	0513.0	089.8	26.44	
263.0	005.1166	0156.4	033.5	108.6	000.0137	0513.0	089.1	26.64	
264.0	005.3639	0157.7	034.0	108.4	000.0137	0513.0	088.3	26.86	
265.0	005.6169	0159.2	034.6	108.2	000.0137	0513.0	087.6	27.08	
266.0	005.8758	0161.3	035.2	107.9	000.0136	0513.3	086.8	27.32	

Munn-Reese, Inc.

Broadcast Engineering Consultants
 Coldwater, MI

Exhibit 18.2

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Protection to WCSP-FM – Washington, DC

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
267.0	006.1405	0161.5	035.6	107.7	000.0135	0513.3	086.2	27.49	
268.0	006.4110	0161.8	035.9	107.4	000.0135	0513.5	085.6	27.66	
269.0	006.6874	0162.2	036.3	107.0	000.0134	0513.5	085.1	27.83	
270.0	006.9696	0161.6	036.6	106.7	000.0133	0513.9	084.6	27.96	
271.0	007.3224	0162.1	037.1	106.4	000.0133	0514.2	084.0	28.15	
272.0	007.6840	0169.7	038.3	106.2	000.0132	0514.2	082.6	28.58	
273.0	008.0542	0179.2	039.6	105.9	000.0132	0514.3	081.2	29.04	
274.0	008.4332	0175.8	039.6	105.5	000.0131	0513.7	081.0	29.07	
275.0	008.8209	0172.5	039.7	105.0	000.0130	0513.4	080.8	29.09	
276.0	009.2173	0168.1	039.6	104.5	000.0129	0512.4	080.7	29.05	
277.0	009.6224	0158.2	038.9	103.9	000.0128	0511.6	081.4	28.79	
278.0	010.0362	0154.5	038.8	103.5	000.0127	0511.5	081.4	28.75	
279.0	010.4588	0152.1	038.9	103.0	000.0126	0511.6	081.2	28.77	
280.0	010.8900	0151.2	039.1	102.5	000.0125	0511.5	081.0	28.82	
281.0	011.4921	0148.6	039.2	102.0	000.0124	0511.3	080.8	28.84	
282.0	012.1104	0146.1	039.4	101.6	000.0123	0510.9	080.7	28.84	
283.0	012.7449	0143.7	039.5	101.1	000.0122	0511.1	080.5	28.85	
284.0	013.3956	0143.7	039.9	100.6	000.0121	0511.7	080.2	28.96	
285.0	014.0625	0143.5	040.3	100.0	000.0120	0511.4	079.8	29.03	
286.0	014.7456	0143.7	040.7	099.5	000.0119	0511.0	079.5	29.12	
287.0	015.4449	0141.8	040.8	099.0	000.0119	0510.3	079.4	29.11	
288.0	016.1604	0141.1	041.1	098.5	000.0118	0510.7	079.2	29.16	
289.0	016.8921	0141.7	041.6	097.9	000.0118	0510.0	078.9	29.23	
290.0	017.6400	0142.3	042.0	097.3	000.0117	0509.5	078.6	29.30	
291.0	018.5072	0144.0	042.6	096.7	000.0117	0509.8	078.2	29.43	
292.0	019.3952	0145.3	043.2	096.0	000.0116	0510.2	077.8	29.54	
293.0	020.3040	0144.7	043.5	095.4	000.0115	0510.2	077.7	29.54	
294.0	021.2337	0142.1	043.5	094.9	000.0115	0509.7	077.9	29.45	
295.0	022.1841	0141.4	043.8	094.3	000.0114	0510.5	077.9	29.45	
296.0	023.1553	0141.9	044.3	093.7	000.0114	0511.2	077.7	29.49	
297.0	024.1474	0142.8	044.7	093.0	000.0113	0512.4	077.6	29.54	
298.0	025.1603	0142.4	045.0	092.4	000.0113	0513.4	077.6	29.53	
299.0	026.1939	0142.2	045.4	091.7	000.0112	0512.6	077.7	29.47	
300.0	027.2484	0140.0	045.4	091.2	000.0111	0512.7	078.0	29.34	
301.0	028.0688	0138.9	045.5	090.7	000.0111	0513.8	078.3	29.25	
302.0	028.9014	0139.2	045.8	090.1	000.0110	0515.5	078.4	29.22	
303.0	029.7461	0137.8	045.9	089.5	000.0110	0516.6	078.8	29.09	
304.0	030.6030	0138.9	046.3	088.9	000.0109	0516.6	078.9	29.01	
305.0	031.4721	0138.7	046.5	088.3	000.0108	0517.2	079.2	28.89	
306.0	032.3533	0139.7	046.9	087.7	000.0107	0518.3	079.4	28.82	
307.0	033.2468	0140.3	047.2	087.1	000.0106	0517.8	079.6	28.68	
308.0	034.1523	0140.9	047.5	086.5	000.0105	0518.1	079.9	28.55	
309.0	035.0701	0141.6	047.9	085.9	000.0104	0518.6	080.2	28.43	
310.0	036.0000	0143.0	048.3	085.2	000.0103	0519.6	080.5	28.32	
311.0	036.0000	0145.1	048.6	084.6	000.0102	0521.2	080.9	28.19	
312.0	036.0000	0147.0	048.8	084.1	000.0101	0522.6	081.3	28.04	
313.0	036.0000	0146.5	048.8	083.7	000.0101	0522.0	082.0	27.78	
314.0	036.0000	0148.1	049.0	083.2	000.0100	0521.1	082.5	27.56	
315.0	036.0000	0150.0	049.3	082.7	000.0099	0520.2	083.0	27.34	
316.0	036.0000	0149.3	049.2	082.4	000.0099	0519.3	083.7	27.05	
317.0	036.0000	0147.2	048.9	082.2	000.0098	0519.2	084.6	26.76	
318.0	036.0000	0144.4	048.5	082.1	000.0098	0519.2	085.5	26.46	
319.0	036.0000	0143.6	048.4	081.8	000.0098	0519.3	086.2	26.19	
320.0	036.0000	0143.1	048.3	081.6	000.0097	0519.2	087.0	25.94	
321.0	036.0000	0141.5	048.1	081.4	000.0097	0519.3	087.8	25.66	
322.0	036.0000	0140.3	047.9	081.2	000.0097	0519.6	088.6	25.40	
323.0	036.0000	0140.3	047.9	080.9	000.0096	0520.2	089.4	25.17	
324.0	036.0000	0141.4	048.1	080.6	000.0096	0521.7	090.0	24.98	

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI

Protection to WCSP-FM – Washington, DC

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
325.0	036.0000	0143.3	048.3	080.2	000.0095	0522.6	090.6	24.78	
326.0	036.0000	0144.7	048.5	079.9	000.0095	0524.2	091.3	24.59	
327.0	036.0000	0146.1	048.7	079.5	000.0095	0525.3	092.0	24.40	
328.0	036.0000	0148.8	049.1	079.1	000.0095	0526.3	092.7	24.22	
329.0	036.0000	0149.6	049.2	078.9	000.0095	0527.0	093.4	24.00	
330.0	036.0000	0148.4	049.0	078.8	000.0094	0527.3	094.3	23.76	
331.0	036.0000	0147.8	049.0	078.7	000.0094	0527.5	095.1	23.52	
332.0	036.0000	0143.6	048.4	078.8	000.0094	0527.2	096.1	23.24	
333.0	036.0000	0140.7	048.0	078.9	000.0095	0526.9	097.0	22.98	
334.0	036.0000	0137.9	047.6	079.0	000.0095	0526.5	097.9	22.72	
335.0	036.0000	0135.5	047.2	079.1	000.0095	0526.4	098.8	22.48	
336.0	036.0000	0133.1	046.9	079.1	000.0095	0526.3	099.7	22.24	
337.0	036.0000	0131.6	046.7	079.1	000.0095	0526.3	100.6	22.01	
338.0	036.0000	0129.1	046.3	079.2	000.0095	0526.1	101.4	21.77	
339.0	036.0000	0127.0	046.0	079.3	000.0095	0526.0	102.3	21.54	
340.0	036.0000	0126.0	045.9	079.3	000.0095	0526.0	103.1	21.32	
341.0	036.0000	0122.4	045.4	079.5	000.0095	0525.5	104.0	21.07	

Protection to WPER(FM) - Culpepper, VA
Timber Ridge Ministries, Inc.

Exhibit 18.3

Protection to WPER(FM) - Culpepper, VA

FMCommander Single Allocation Study - 08-26-2014 - NED 03 SEC
WVRS's Overlaps (In= 1.04 km, Out= 14.77 km)

WVRS CH 211 A DA
Lat= 39 11 02.0, Lng= 78 23 15.0
0.25 kW 421.1 M HAAT, 805 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WPER CH 210 B DA BLED20060327AIO
Lat= 38 40 42.0, Lng= 77 47 18.0
41.0 kW 127 M HAAT, 256 M COR
Prot.= 60 dBu, Intef.= 54 dBu

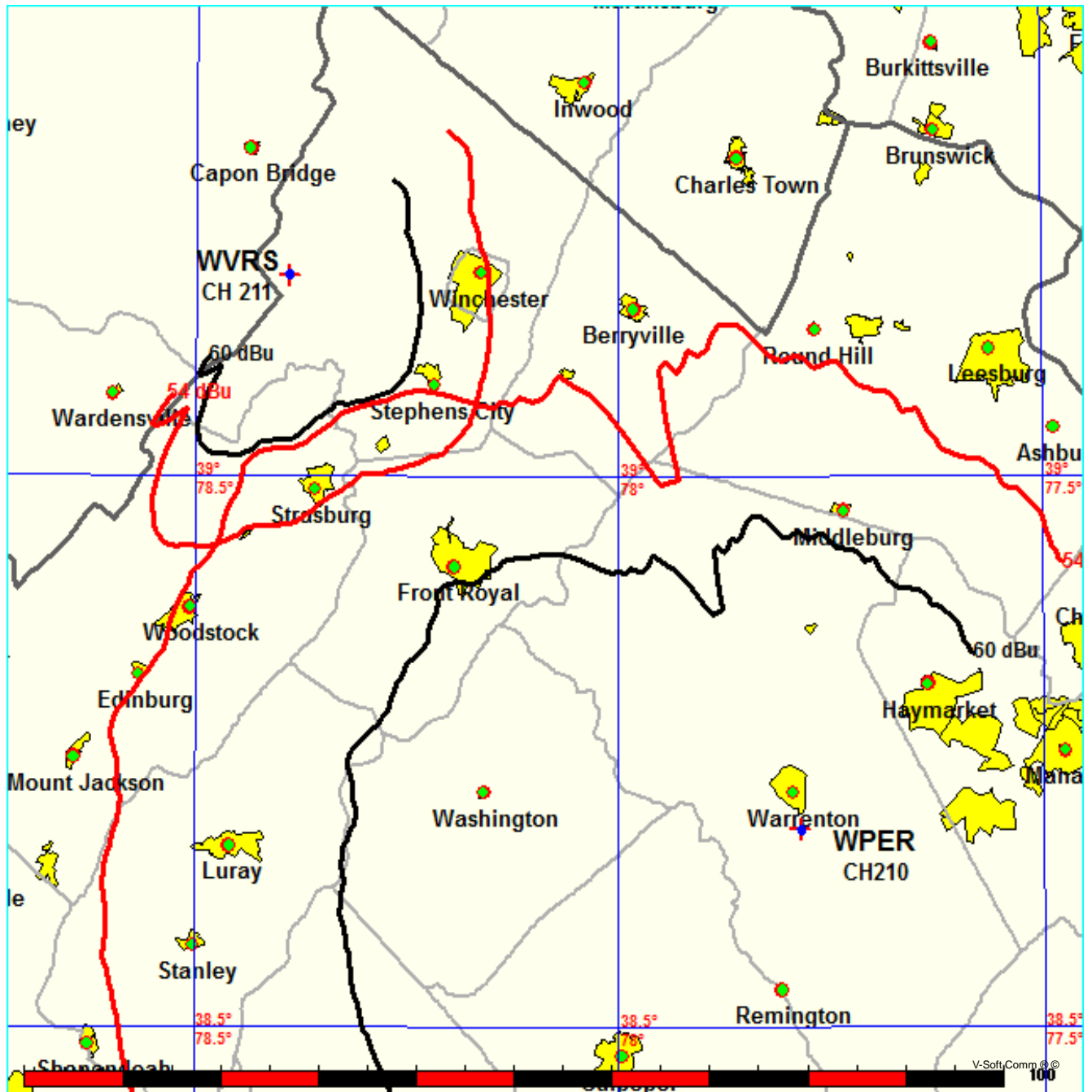


Exhibit 18.3

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Protection to WPER(FM) – Culpepper, VA

08-26-2014 Terrain Data: NED 03 SEC FMOver Analysis

WVRS

WPER BLED20060327AIO

Channel = 211A
Max ERP = 0.25 kW
RCAMSL = 805 M
N. Lat. 39 11 02.0
W. Lng. 78 23 15.0
Protected
60 dBu

Channel = 210B
Max ERP = 41 kW
RCAMSL = 256 M
N. Lat. 38 40 42.0
W. Lng. 77 47 18.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
077.0	000.0094	0530.1	012.6	326.4	030.8387	0054.6	071.0	48.72	
078.0	000.0094	0527.3	012.6	326.3	030.8489	0054.6	070.8	48.78	
079.0	000.0095	0526.6	012.6	326.2	030.8573	0054.6	070.6	48.83	
080.0	000.0095	0523.5	012.6	326.2	030.8686	0054.6	070.4	48.88	
081.0	000.0097	0520.1	012.6	326.1	030.8767	0054.7	070.2	48.94	
082.0	000.0098	0519.3	012.7	326.1	030.8828	0054.7	070.0	49.00	
083.0	000.0100	0520.7	012.7	326.0	030.8873	0054.7	069.8	49.06	
084.0	000.0101	0522.5	012.8	326.0	030.8920	0054.8	069.5	49.12	
085.0	000.0103	0520.2	012.8	325.9	030.9014	0054.9	069.3	49.18	
086.0	000.0104	0518.2	012.9	325.9	030.9110	0055.0	069.1	49.24	
087.0	000.0106	0517.8	012.9	325.8	030.9197	0055.1	068.9	49.31	
088.0	000.0107	0518.0	013.0	325.7	030.9284	0055.2	068.7	49.37	
089.0	000.0109	0516.5	013.0	325.7	030.9392	0055.4	068.5	49.44	
090.0	000.0110	0515.7	013.1	325.6	030.9500	0055.8	068.2	49.53	
091.0	000.0111	0513.1	013.1	325.5	030.9652	0056.3	068.0	49.61	
092.0	000.0112	0512.8	013.1	325.4	030.9786	0056.6	067.8	49.69	
093.0	000.0113	0512.4	013.1	325.3	030.9928	0056.8	067.6	49.76	
094.0	000.0114	0510.8	013.1	325.2	031.0086	0057.0	067.5	49.82	
095.0	000.0115	0509.9	013.2	325.1	031.0244	0057.1	067.3	49.88	
096.0	000.0116	0510.2	013.2	325.0	031.0395	0057.2	067.1	49.94	
097.0	000.0117	0509.4	013.2	324.8	031.0562	0057.3	066.9	50.00	
098.0	000.0118	0510.2	013.3	324.7	031.0721	0057.3	066.7	50.05	
099.0	000.0119	0510.3	013.3	324.6	031.0891	0057.2	066.5	50.09	
100.0	000.0120	0511.4	013.3	324.5	031.1059	0057.1	066.3	50.14	
101.0	000.0122	0511.2	013.4	324.4	031.1218	0057.1	066.1	50.19	
102.0	000.0124	0511.2	013.5	324.3	031.1381	0057.2	065.9	50.25	
103.0	000.0126	0511.6	013.5	324.1	031.1548	0057.2	065.7	50.30	
104.0	000.0128	0511.6	013.6	324.0	031.1724	0057.1	065.5	50.35	
105.0	000.0130	0513.4	013.7	323.9	031.1891	0057.1	065.3	50.41	
106.0	000.0132	0514.3	013.7	323.8	031.2073	0057.2	065.1	50.47	
107.0	000.0134	0513.6	013.8	323.6	031.2276	0057.3	064.9	50.53	
108.0	000.0136	0513.2	013.8	323.5	031.2482	0057.3	064.7	50.58	
109.0	000.0138	0513.4	013.9	323.3	031.2691	0057.8	064.5	50.67	
110.0	000.0140	0512.6	014.0	323.2	031.2914	0058.6	064.3	50.78	
111.0	000.0142	0513.4	014.0	323.0	031.3138	0059.2	064.2	50.88	
112.0	000.0144	0515.1	014.1	322.9	031.3360	0059.7	064.0	50.97	
113.0	000.0146	0516.9	014.2	322.7	031.3589	0060.2	063.8	51.06	
114.0	000.0148	0518.2	014.2	322.6	031.3828	0060.7	063.6	51.15	
115.0	000.0149	0517.8	014.3	322.4	031.4086	0061.9	063.5	51.28	
116.0	000.0151	0519.5	014.3	322.2	031.4335	0063.0	063.3	51.42	
117.0	000.0153	0520.9	014.4	322.0	031.4593	0064.1	063.1	51.55	
118.0	000.0155	0522.2	014.5	321.8	031.4858	0065.2	063.0	51.68	

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI

Protection to WPER(FM) – Culpepper, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
119.0	000.0157	0522.3	014.5	321.6	031.5137	0066.1	062.8	51.79	
120.0	000.0159	0522.3	014.6	321.4	031.5423	0066.9	062.7	51.90	
121.0	000.0163	0520.5	014.7	321.3	031.5702	0067.9	062.5	52.02	
122.0	000.0167	0520.4	014.8	321.1	031.5978	0068.8	062.3	52.14	
123.0	000.0171	0519.4	014.8	320.9	031.6268	0070.2	062.2	52.30	
124.0	000.0175	0520.5	015.0	320.7	031.6554	0071.6	062.0	52.46	
125.0	000.0179	0520.7	015.1	320.5	031.6854	0072.8	061.8	52.60	
126.0	000.0183	0519.1	015.1	320.2	031.7169	0074.2	061.7	52.75	
127.0	000.0187	0519.1	015.2	320.0	031.7485	0074.9	061.5	52.86	
128.0	000.0192	0520.3	015.4	319.8	031.7803	0075.3	061.3	52.94	
129.0	000.0196	0521.7	015.5	319.6	031.8130	0075.7	061.2	53.03	
130.0	000.0200	0522.4	015.6	319.3	031.8467	0076.8	061.0	53.17	
131.0	000.0200	0522.1	015.6	319.1	031.8834	0078.5	061.0	53.30	
132.0	000.0200	0523.0	015.6	318.8	031.9198	0079.0	060.9	53.36	
133.0	000.0200	0523.6	015.6	318.6	031.9566	0079.0	060.9	53.38	
134.0	000.0200	0525.0	015.6	318.3	031.9934	0079.4	060.8	53.43	
135.0	000.0200	0525.8	015.7	318.1	032.0305	0081.0	060.8	53.56	
136.0	000.0200	0526.0	015.7	317.8	032.0678	0082.1	060.8	53.64	
137.0	000.0200	0525.0	015.6	317.5	032.1051	0082.3	060.8	53.66	
138.0	000.0200	0524.2	015.6	317.3	032.1424	0082.6	060.8	53.68	
139.0	000.0200	0524.9	015.6	317.0	032.1798	0083.2	060.8	53.73	
140.0	000.0200	0524.8	015.6	316.8	032.2171	0083.5	060.8	53.75	
141.0	000.0196	0522.1	015.5	316.5	032.2526	0083.1	061.0	53.67	
142.0	000.0192	0520.8	015.4	316.3	032.2877	0083.6	061.2	53.67	
143.0	000.0187	0521.3	015.3	316.1	032.3224	0084.8	061.3	53.72	
144.0	000.0183	0524.1	015.2	315.8	032.3572	0085.6	061.4	53.75	
145.0	000.0179	0526.7	015.2	315.6	032.3915	0086.4	061.5	53.77	
146.0	000.0175	0529.6	015.1	315.3	032.4253	0087.0	061.6	53.78	
147.0	000.0171	0529.6	015.0	315.1	032.4574	0087.5	061.7	53.78	
148.0	000.0167	0529.7	014.9	314.9	032.4887	0088.3	061.9	53.78	
149.0	000.0163	0533.2	014.8	314.7	032.5211	0089.0	062.0	53.80	
150.0	000.0159	0534.1	014.8	314.5	032.5514	0089.7	062.2	53.80	
151.0	000.0155	0535.6	014.7	314.3	032.5817	0090.3	062.3	53.80	
152.0	000.0152	0537.4	014.6	314.1	032.6116	0091.0	062.4	53.80	
153.0	000.0148	0539.1	014.5	313.9	032.6407	0091.7	062.6	53.80	
154.0	000.0145	0541.7	014.5	313.7	032.6697	0092.0	062.7	53.78	
155.0	000.0142	0546.3	014.4	313.5	032.6997	0092.5	062.9	53.78	
156.0	000.0138	0549.4	014.4	313.3	032.7279	0093.1	063.0	53.78	
157.0	000.0135	0547.7	014.3	313.1	032.7516	0093.6	063.2	53.75	
158.0	000.0132	0547.2	014.2	313.0	032.7754	0094.1	063.4	53.72	
159.0	000.0129	0545.9	014.0	312.8	032.7976	0094.8	063.6	53.70	
160.0	000.0125	0543.1	013.9	312.7	032.8177	0095.3	063.9	53.66	
161.0	000.0129	0544.0	014.0	312.4	032.8530	0095.6	063.9	53.67	
162.0	000.0132	0546.2	014.1	312.2	032.8899	0095.9	063.9	53.70	
163.0	000.0135	0550.2	014.3	311.9	032.9288	0096.0	063.9	53.71	
164.0	000.0138	0548.7	014.4	311.7	032.9623	0096.0	064.0	53.70	
165.0	000.0142	0546.2	014.4	311.5	032.9946	0095.8	064.0	53.66	
166.0	000.0145	0544.7	014.5	311.2	033.0277	0095.3	064.1	53.61	
167.0	000.0148	0543.1	014.6	311.0	033.0608	0095.4	064.2	53.59	
168.0	000.0152	0542.9	014.7	310.8	033.0952	0095.9	064.3	53.61	
169.0	000.0155	0540.3	014.8	310.6	033.1263	0096.5	064.4	53.61	
170.0	000.0159	0539.0	014.8	310.3	033.1589	0096.9	064.5	53.61	
171.0	000.0167	0537.9	015.0	310.1	033.2024	0097.1	064.5	53.63	
172.0	000.0176	0536.3	015.2	309.8	033.3869	0097.1	064.5	53.64	
173.0	000.0184	0534.1	015.4	309.5	033.5967	0097.6	064.6	53.68	
174.0	000.0193	0533.9	015.6	309.2	033.8224	0097.3	064.6	53.68	

Protection to WPER(FM) – Culpepper, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
175.0	000.0202	0531.7	015.8	308.9	034.0331	0097.6	064.7	53.70	
176.0	000.0212	0530.8	016.0	308.6	034.2525	0096.9	064.8	53.67	
177.0	000.0221	0528.5	016.2	308.3	034.4605	0096.7	064.9	53.65	
178.0	000.0231	0528.4	016.4	308.0	034.6873	0096.8	065.0	53.66	
179.0	000.0241	0527.2	016.6	307.7	034.9014	0097.1	065.1	53.67	
180.0	000.0251	0522.8	016.7	307.5	035.0805	0097.3	065.2	53.66	
181.0	000.0257	0517.8	016.7	307.3	035.2065	0097.4	065.4	53.61	
182.0	000.0264	0514.7	016.7	307.1	035.3490	0097.7	065.7	53.59	
183.0	000.0270	0512.7	016.8	306.9	035.5000	0098.6	065.9	53.60	
184.0	000.0277	0507.1	016.8	306.8	035.6064	0099.3	066.1	53.58	
185.0	000.0283	0501.5	016.8	306.7	035.7096	0100.2	066.3	53.58	
186.0	000.0290	0497.6	016.9	306.5	035.8259	0101.1	066.6	53.57	
187.0	000.0296	0497.8	017.0	306.3	035.9844	0102.0	066.8	53.58	
188.0	000.0303	0495.6	017.0	306.1	036.1133	0103.3	067.0	53.60	
189.0	000.0310	0493.1	017.1	306.0	036.2345	0104.6	067.3	53.61	
190.0	000.0317	0494.8	017.2	305.8	036.4016	0106.1	067.5	53.66	
191.0	000.0333	0501.4	017.6	305.4	036.7111	0107.2	067.6	53.72	
192.0	000.0350	0507.3	018.0	305.0	037.0133	0108.5	067.7	53.79	
193.0	000.0368	0508.3	018.2	304.7	037.2504	0110.1	067.9	53.85	
194.0	000.0386	0510.0	018.5	304.4	037.4910	0110.4	068.1	53.83	
195.0	000.0404	0509.7	018.7	304.1	037.7017	0109.6	068.4	53.73	
196.0	000.0423	0511.6	019.0	303.8	037.9378	0109.4	068.6	53.68	

Exhibit 18.3

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Protection to WPER(FM) – Culpepper, VA

08-26-2014 Terrain Data: NED 03 SEC FMOver Analysis

WPER BLED20060327AIO

WVRS

Channel = 210B
Max ERP = 41 kW
RCAMSL = 256 M
N. Lat. 38 40 42.0
W. Lng. 77 47 18.0
Protected
60 dBu

Channel = 211A
Max ERP = 0.25 kW
RCAMSL = 805 M
N. Lat. 39 11 02.0
W. Lng. 78 23 15.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
258.0	041.0000	0129.7	047.6	175.2	000.0204	0531.5	066.5	36.34	
259.0	041.0000	0129.3	047.5	175.3	000.0205	0531.4	065.6	36.63	
260.0	041.0000	0130.9	047.7	175.5	000.0207	0531.0	064.8	36.95	
261.0	041.0000	0129.2	047.5	175.4	000.0206	0531.2	064.0	37.22	
262.0	041.0000	0127.2	047.2	175.2	000.0204	0531.6	063.1	37.48	
263.0	041.0000	0125.8	047.0	175.1	000.0203	0531.6	062.3	37.74	
264.0	041.0000	0124.4	046.8	174.9	000.0201	0531.9	061.5	38.00	
265.0	041.0000	0125.1	046.9	175.0	000.0202	0531.7	060.7	38.30	
266.0	041.0000	0125.4	047.0	175.0	000.0203	0531.7	059.8	38.59	
267.0	041.0000	0124.1	046.8	174.8	000.0201	0532.0	059.0	38.84	
268.0	041.0000	0123.2	046.7	174.7	000.0200	0532.2	058.2	39.10	
269.0	041.0000	0119.1	046.1	174.1	000.0194	0533.7	057.4	39.28	
270.0	041.0000	0118.7	046.0	173.9	000.0193	0533.9	056.7	39.54	
271.0	041.0000	0115.1	045.5	173.3	000.0187	0534.1	055.9	39.67	
272.0	041.0000	0114.1	045.4	173.1	000.0185	0534.1	055.2	39.88	
273.0	041.0000	0113.8	045.3	172.9	000.0183	0534.2	054.4	40.12	
274.0	041.0000	0116.9	045.8	173.2	000.0186	0534.2	053.5	40.49	
275.0	041.0000	0116.4	045.7	173.0	000.0184	0534.2	052.7	40.70	
276.0	041.0000	0117.2	045.8	172.9	000.0184	0534.2	051.9	40.98	
277.0	041.0000	0119.8	046.2	173.1	000.0185	0534.1	051.1	41.32	
278.0	041.0000	0123.0	046.6	173.4	000.0188	0534.1	050.2	41.68	
279.0	041.0000	0122.8	046.6	173.1	000.0185	0534.1	049.4	41.90	
280.0	041.0000	0121.4	046.4	172.6	000.0181	0534.6	048.7	42.06	
281.0	041.0000	0118.0	045.9	171.8	000.0174	0536.7	048.1	42.15	
282.0	041.0000	0113.8	045.3	170.8	000.0165	0538.2	047.5	42.14	
283.0	041.0000	0111.4	044.9	170.0	000.0159	0539.0	046.9	42.20	
284.0	041.0000	0107.9	044.4	169.0	000.0155	0540.3	046.4	42.31	
285.0	041.0000	0105.9	044.1	168.2	000.0153	0542.3	045.9	42.48	
286.0	041.0000	0103.0	043.6	167.3	000.0149	0543.1	045.4	42.57	
287.0	041.0000	0103.3	043.6	166.8	000.0148	0543.3	044.7	42.79	
288.0	041.0000	0103.5	043.7	166.4	000.0146	0543.8	044.0	43.01	
289.0	041.0000	0103.8	043.7	165.9	000.0145	0544.8	043.4	43.25	
290.0	041.0000	0103.4	043.7	165.3	000.0143	0545.9	042.8	43.43	
291.0	041.0000	0102.3	043.5	164.5	000.0140	0547.7	042.3	43.59	
292.0	041.0000	0101.6	043.4	163.7	000.0137	0549.3	041.7	43.76	
293.0	041.0000	0102.3	043.5	163.2	000.0136	0550.2	041.1	43.98	
294.0	041.0000	0098.5	042.8	161.8	000.0131	0545.2	040.9	43.81	
295.0	041.0000	0097.8	042.7	161.0	000.0129	0544.0	040.5	43.88	
296.0	041.0000	0096.6	042.5	160.0	000.0126	0543.1	040.1	43.92	
297.0	041.0000	0096.4	042.5	159.2	000.0128	0545.1	039.6	44.24	
298.0	041.0000	0098.2	042.8	158.7	000.0130	0546.8	038.9	44.63	
299.0	041.0000	0099.2	043.0	158.0	000.0132	0547.2	038.2	44.97	
300.0	041.0000	0100.2	043.1	157.3	000.0134	0547.2	037.6	45.31	

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI

Protection to WPER(FM) – Culpepper, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
301.0	040.1841	0100.9	043.1	156.3	000.0137	0549.5	037.2	45.63	
302.0	039.3764	0103.8	043.4	155.7	000.0139	0548.7	036.5	45.98	
303.0	038.5769	0108.4	044.0	155.1	000.0141	0546.8	035.6	46.39	
304.0	037.7856	0109.5	044.0	154.1	000.0145	0542.1	035.2	46.59	
305.0	037.0025	0108.5	043.6	152.7	000.0149	0538.9	035.2	46.70	
306.0	036.2276	0104.5	042.8	151.1	000.0155	0535.6	035.5	46.64	
307.0	035.4609	0098.3	041.6	149.2	000.0162	0533.7	036.3	46.43	
308.0	034.7024	0096.8	041.2	147.9	000.0167	0529.7	036.5	46.43	
309.0	033.9521	0097.5	041.1	146.8	000.0172	0530.0	036.3	46.63	
310.0	033.2100	0097.1	040.9	145.6	000.0176	0528.5	036.3	46.71	
311.0	033.0626	0095.4	040.5	144.4	000.0181	0525.0	036.5	46.71	
312.0	032.9155	0096.0	040.6	143.3	000.0186	0521.8	036.2	46.85	
313.0	032.7687	0094.0	040.2	142.1	000.0191	0520.8	036.5	46.84	
314.0	032.6222	0091.2	039.7	140.9	000.0196	0522.3	036.9	46.80	
315.0	032.4761	0088.0	039.0	139.8	000.0200	0525.0	037.5	46.69	
316.0	032.3303	0085.0	038.4	138.7	000.0200	0524.6	038.0	46.44	
317.0	032.1848	0083.2	038.1	137.6	000.0200	0524.7	038.4	46.29	
318.0	032.0397	0081.4	037.6	136.7	000.0200	0525.3	038.8	46.13	
319.0	031.8949	0078.8	037.1	135.7	000.0200	0525.8	039.4	45.89	
320.0	031.7504	0074.9	036.2	134.9	000.0200	0525.9	040.3	45.53	
321.0	031.6062	0069.1	035.0	134.2	000.0200	0525.5	041.6	44.97	
322.0	031.4624	0064.3	033.8	133.6	000.0200	0524.2	042.8	44.47	
323.0	031.3189	0059.3	032.6	133.1	000.0200	0523.6	044.1	43.96	
324.0	031.1757	0057.1	032.0	132.5	000.0200	0523.4	044.8	43.69	
325.0	031.0329	0057.2	032.0	131.8	000.0200	0522.3	044.9	43.61	
326.0	030.8904	0054.8	031.3	131.3	000.0200	0521.7	045.7	43.30	
327.0	030.7482	0055.8	031.5	130.6	000.0200	0522.1	045.6	43.34	
328.0	030.6063	0053.0	030.7	130.2	000.0200	0522.2	046.6	43.00	
329.0	030.4648	0052.6	030.6	129.7	000.0199	0522.5	046.9	42.86	
330.0	030.3236	0053.0	030.7	129.0	000.0196	0521.7	047.0	42.75	
331.0	030.1827	0055.2	031.2	128.1	000.0192	0520.3	046.6	42.75	
332.0	030.0422	0056.0	031.4	127.4	000.0189	0520.1	046.7	42.66	
333.0	029.9020	0052.1	030.3	127.4	000.0189	0520.1	047.9	42.21	
334.0	029.7621	0049.3	029.5	127.3	000.0189	0519.6	048.9	41.84	
335.0	029.6225	0045.7	028.4	127.3	000.0189	0519.8	050.1	41.43	
336.0	029.4833	0040.2	026.7	127.7	000.0190	0520.4	051.8	40.87	
337.0	029.3444	0034.6	024.9	128.2	000.0192	0520.3	053.6	40.29	
338.0	029.2058	0028.4	023.5	128.5	000.0194	0520.7	055.1	39.81	
339.0	029.0675	0025.1	023.5	128.2	000.0192	0520.3	055.3	39.68	
340.0	028.9296	0024.7	023.4	127.8	000.0191	0520.3	055.5	39.57	
341.0	028.3812	0030.4	023.5	127.5	000.0189	0520.2	055.7	39.46	
342.0	027.8380	0041.0	026.6	125.2	000.0180	0520.1	053.4	40.05	
343.0	027.3001	0051.3	029.5	122.9	000.0170	0519.1	051.4	40.49	
344.0	026.7674	0053.2	029.8	122.2	000.0167	0520.5	051.5	40.43	
345.0	026.2400	0050.6	029.0	122.4	000.0168	0520.1	052.5	40.10	
346.0	025.7178	0052.9	029.5	121.6	000.0165	0520.4	052.5	40.03	
347.0	025.2009	0056.5	030.3	120.6	000.0161	0521.0	052.3	40.00	
348.0	024.6892	0055.3	029.8	120.5	000.0161	0521.1	053.0	39.75	
349.0	024.1828	0057.0	030.1	119.9	000.0159	0522.5	053.2	39.65	
350.0	023.6816	0061.9	031.1	118.8	000.0156	0522.2	052.9	39.66	
351.0	022.7560	0067.3	031.9	117.6	000.0154	0521.6	052.8	39.63	
352.0	021.8489	0068.7	031.9	117.3	000.0154	0521.1	053.3	39.44	
353.0	020.9602	0070.1	031.9	117.0	000.0153	0520.9	053.8	39.25	
354.0	020.0900	0069.9	031.6	117.0	000.0153	0520.8	054.4	39.01	
355.0	019.2382	0068.0	030.8	117.3	000.0154	0521.1	055.3	38.73	
356.0	018.4049	0065.3	030.0	117.7	000.0155	0521.8	056.2	38.45	

Protection to WPER(FM) – Culpepper, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
357.0	017.5900	0065.3	029.7	117.7	000.0155	0521.8	056.8	38.24	
358.0	016.7936	0066.5	029.6	117.5	000.0154	0521.4	057.3	38.04	
359.0	016.0156	0069.5	029.8	117.1	000.0153	0521.0	057.6	37.89	
000.0	015.2561	0072.4	030.0	116.6	000.0152	0520.4	058.0	37.73	
001.0	014.6618	0072.5	029.8	116.6	000.0152	0520.4	058.5	37.52	
002.0	014.0792	0071.4	029.3	116.8	000.0153	0520.6	059.2	37.30	
003.0	013.5085	0074.7	029.6	116.3	000.0152	0520.1	059.5	37.15	
004.0	012.9496	0077.9	029.9	115.9	000.0151	0519.4	059.9	36.97	
005.0	012.4025	0080.0	030.0	115.6	000.0151	0519.0	060.4	36.79	
006.0	011.8672	0078.9	029.5	115.9	000.0151	0519.4	061.0	36.58	
007.0	011.3437	0078.2	029.1	116.1	000.0152	0519.7	061.7	36.38	
008.0	010.8320	0078.0	028.7	116.3	000.0152	0519.9	062.2	36.19	
009.0	010.3322	0080.1	028.8	116.1	000.0151	0519.6	062.7	36.01	
010.0	009.8441	0081.7	028.8	116.0	000.0151	0519.5	063.2	35.84	
011.0	009.4464	0084.1	028.9	115.8	000.0151	0519.2	063.7	35.66	
012.0	009.0569	0085.7	028.9	115.7	000.0151	0519.0	064.1	35.48	
013.0	008.6756	0085.1	028.5	115.9	000.0151	0519.4	064.7	35.31	
014.0	008.3025	0083.3	027.9	116.3	000.0152	0519.9	065.3	35.13	
015.0	007.9376	0087.0	028.2	115.9	000.0151	0519.4	065.7	34.96	
016.0	007.5809	0090.6	028.5	115.6	000.0151	0519.0	066.2	34.78	
017.0	007.2324	0089.4	028.0	116.0	000.0151	0519.5	066.7	34.62	

Protection to WXDM(FM) - Front Royal, VA
Timber Ridge Ministries, Inc.

Exhibit 18.4 Protection to WXDM(FM) - Front Royal, VA

FMCommander Single Allocation Study - 08-26-2014 - NED 03 SEC
WVRS's Overlaps (In= 8.39 km, Out= 3.12 km)

WVRS CH 211 A DA
Lat= 39 11 02.0, Lng= 78 23 15.0
0.25 kW 421.1 M HAAT, 805 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WXDM CH 212 A BLED20121203BCG
Lat= 38 56 58.7, Lng= 78 08 49.5
0.19 kW -65.1 M HAAT, 200 M COR
Prot.= 60 dBu, Intef.= 54 dBu

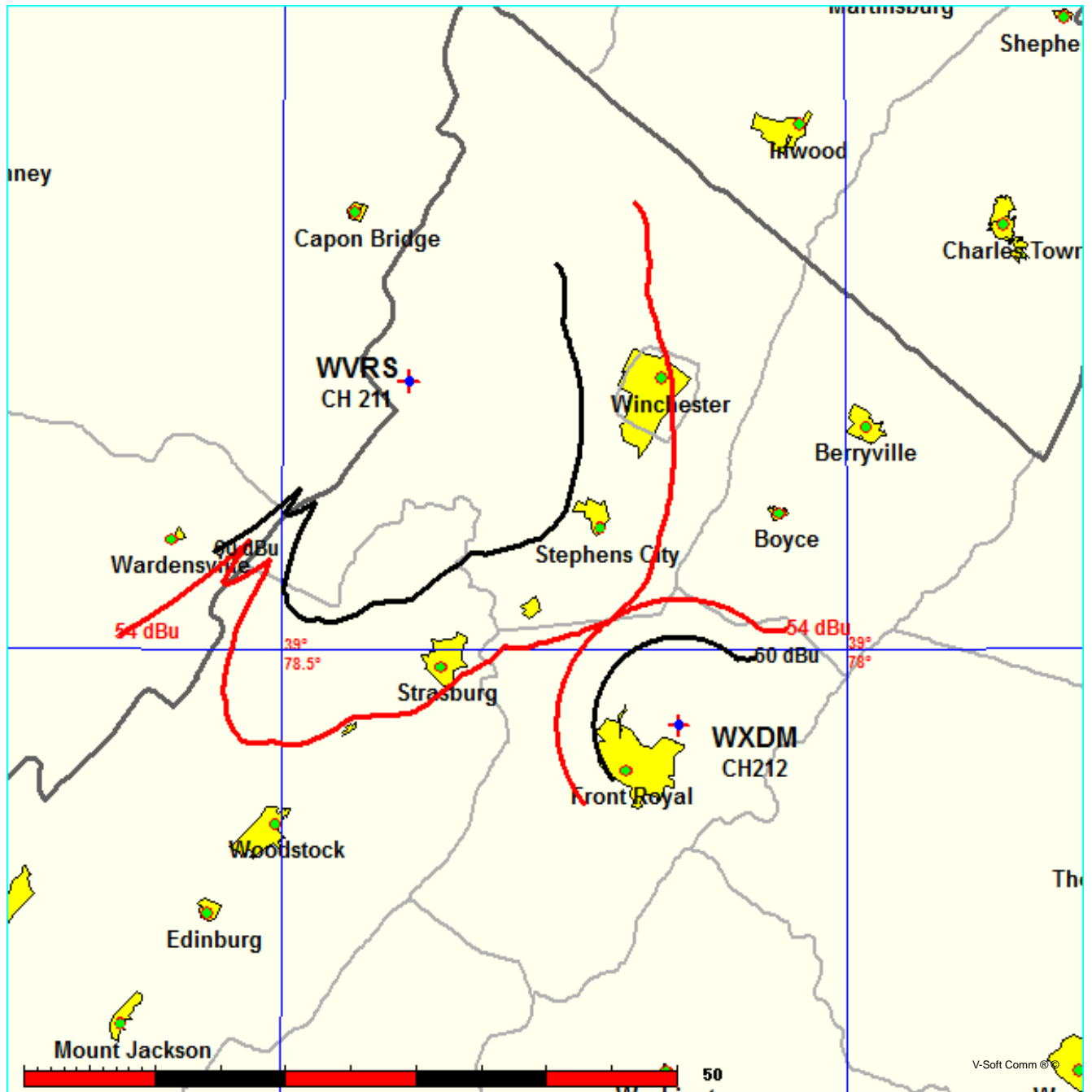


Exhibit 18.4

Page 1 of 6

Protection to WXDM(FM) – Front Royal, VA

08-26-2014 Terrain Data: NED 03 SEC FMOver Analysis

WVRS

WXDM BLED20121203BCG

Channel = 211A
Max ERP = 0.25 kW
RCAMSL = 805 M
N. Lat. 39 11 02.0
W. Lng. 78 23 15.0
Protected
60 dBu

Channel = 212A
Max ERP = 0.19 kW
RCAMSL = 200 M
N. Lat. 38 56 58.7
W. Lng. 78 08 49.5
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
081.0	000.0097	0520.1	012.6	343.6	000.1900	-0002.0	029.2	35.44	
082.0	000.0098	0519.3	012.7	343.6	000.1900	-0002.0	029.0	35.56	
083.0	000.0100	0520.7	012.7	343.7	000.1900	-0001.9	028.7	35.68	
084.0	000.0101	0522.5	012.8	343.8	000.1900	-0001.7	028.5	35.80	
085.0	000.0103	0520.2	012.8	343.7	000.1900	-0001.8	028.3	35.93	
086.0	000.0104	0518.2	012.9	343.7	000.1900	-0001.8	028.1	36.06	
087.0	000.0106	0517.8	012.9	343.7	000.1900	-0001.8	027.8	36.19	
088.0	000.0107	0518.0	013.0	343.7	000.1900	-0001.8	027.6	36.32	
089.0	000.0109	0516.5	013.0	343.7	000.1900	-0001.9	027.4	36.46	
090.0	000.0110	0515.7	013.1	343.6	000.1900	-0002.0	027.1	36.59	
091.0	000.0111	0513.1	013.1	343.5	000.1900	-0002.1	026.9	36.73	
092.0	000.0112	0512.8	013.1	343.4	000.1900	-0002.1	026.7	36.86	
093.0	000.0113	0512.4	013.1	343.3	000.1900	-0002.2	026.5	37.00	
094.0	000.0114	0510.8	013.1	343.2	000.1900	-0002.3	026.2	37.14	
095.0	000.0115	0509.9	013.2	343.0	000.1900	-0002.4	026.0	37.28	
096.0	000.0116	0510.2	013.2	342.9	000.1900	-0002.5	025.8	37.43	
097.0	000.0117	0509.4	013.2	342.7	000.1900	-0002.5	025.6	37.57	
098.0	000.0118	0510.2	013.3	342.6	000.1900	-0002.5	025.4	37.72	
099.0	000.0119	0510.3	013.3	342.4	000.1900	-0002.6	025.1	37.87	
100.0	000.0120	0511.4	013.3	342.3	000.1900	-0002.6	024.9	38.02	
101.0	000.0122	0511.2	013.4	342.1	000.1900	-0002.6	024.7	38.17	
102.0	000.0124	0511.2	013.5	342.0	000.1900	-0002.5	024.4	38.33	
103.0	000.0126	0511.6	013.5	341.8	000.1900	-0002.5	024.2	38.50	
104.0	000.0128	0511.6	013.6	341.6	000.1900	-0002.1	024.0	38.66	
105.0	000.0130	0513.4	013.7	341.5	000.1900	-0001.9	023.7	38.83	
106.0	000.0132	0514.3	013.7	341.3	000.1900	-0001.9	023.5	39.00	
107.0	000.0134	0513.6	013.8	341.1	000.1900	-0001.7	023.3	39.16	
108.0	000.0136	0513.2	013.8	340.8	000.1900	-0001.2	023.0	39.33	
109.0	000.0138	0513.4	013.9	340.6	000.1900	0000.0	022.8	39.49	
110.0	000.0140	0512.6	014.0	340.3	000.1900	0000.7	022.6	39.65	
111.0	000.0142	0513.4	014.0	340.0	000.1900	0000.5	022.4	39.82	
112.0	000.0144	0515.1	014.1	339.7	000.1900	-0000.2	022.1	39.99	
113.0	000.0146	0516.9	014.2	339.4	000.1900	-0001.1	021.9	40.16	
114.0	000.0148	0518.2	014.2	339.1	000.1900	-0001.0	021.7	40.33	
115.0	000.0149	0517.8	014.3	338.7	000.1900	-0001.0	021.5	40.49	
116.0	000.0151	0519.5	014.3	338.3	000.1900	-0001.6	021.3	40.66	
117.0	000.0153	0520.9	014.4	338.0	000.1900	-0002.3	021.0	40.83	
118.0	000.0155	0522.2	014.5	337.5	000.1900	-0002.9	020.8	40.99	
119.0	000.0157	0522.3	014.5	337.1	000.1900	-0002.9	020.6	41.15	
120.0	000.0159	0522.3	014.6	336.6	000.1900	-0002.9	020.4	41.30	
121.0	000.0163	0520.5	014.7	336.1	000.1900	-0002.6	020.2	41.47	
122.0	000.0167	0520.4	014.8	335.7	000.1900	-0002.2	020.0	41.65	

Munn-Reese, Inc.

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Coldwater, MI

Protection to WXDM(FM) – Front Royal, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
123.0	000.0171	0519.4	014.8	335.2	000.1900	-0002.3	019.8	41.82	
124.0	000.0175	0520.5	015.0	334.7	000.1900	-0002.6	019.5	42.01	
125.0	000.0179	0520.7	015.1	334.2	000.1900	-0003.3	019.3	42.18	
126.0	000.0183	0519.1	015.1	333.6	000.1900	-0003.5	019.1	42.34	
127.0	000.0187	0519.1	015.2	333.1	000.1900	-0004.0	018.9	42.51	
128.0	000.0192	0520.3	015.4	332.5	000.1900	-0004.4	018.7	42.69	
129.0	000.0196	0521.7	015.5	331.9	000.1900	-0003.1	018.5	42.87	
130.0	000.0200	0522.4	015.6	331.2	000.1900	-0002.9	018.3	43.04	
131.0	000.0200	0522.1	015.6	330.4	000.1900	-0002.6	018.2	43.11	
132.0	000.0200	0523.0	015.6	329.6	000.1900	-0002.8	018.1	43.19	
133.0	000.0200	0523.6	015.6	328.8	000.1900	-0002.3	018.0	43.26	
134.0	000.0200	0525.0	015.6	328.0	000.1900	-0001.9	017.9	43.34	
135.0	000.0200	0525.8	015.7	327.1	000.1900	-0000.4	017.8	43.40	
136.0	000.0200	0526.0	015.7	326.3	000.1900	0000.0	017.8	43.45	
137.0	000.0200	0525.0	015.6	325.4	000.1900	-0000.9	017.7	43.47	
138.0	000.0200	0524.2	015.6	324.5	000.1900	-0001.1	017.7	43.49	
139.0	000.0200	0524.9	015.6	323.6	000.1900	-0002.1	017.7	43.52	
140.0	000.0200	0524.8	015.6	322.7	000.1900	-0002.9	017.7	43.53	
141.0	000.0196	0522.1	015.5	321.9	000.1900	-0000.5	017.8	43.42	
142.0	000.0192	0520.8	015.4	321.0	000.1900	-0001.2	017.9	43.32	
143.0	000.0187	0521.3	015.3	320.2	000.1900	-0001.0	018.0	43.23	
144.0	000.0183	0524.1	015.2	319.3	000.1900	-0000.4	018.1	43.17	
145.0	000.0179	0526.7	015.2	318.5	000.1900	0001.5	018.2	43.10	
146.0	000.0175	0529.6	015.1	317.7	000.1900	0001.9	018.3	43.02	
147.0	000.0171	0529.6	015.0	317.0	000.1900	0004.5	018.4	42.90	
148.0	000.0167	0529.7	014.9	316.2	000.1900	0002.6	018.6	42.78	
149.0	000.0163	0533.2	014.8	315.5	000.1900	0001.1	018.7	42.69	
150.0	000.0159	0534.1	014.8	314.8	000.1900	0000.5	018.8	42.57	
151.0	000.0155	0535.6	014.7	314.1	000.1900	0001.2	019.0	42.45	
152.0	000.0152	0537.4	014.6	313.4	000.1900	0001.5	019.1	42.34	
153.0	000.0148	0539.1	014.5	312.8	000.1900	0004.1	019.3	42.21	
154.0	000.0145	0541.7	014.5	312.2	000.1900	0007.0	019.4	42.09	
155.0	000.0142	0546.3	014.4	311.5	000.1900	0008.6	019.6	41.99	
156.0	000.0138	0549.4	014.4	310.9	000.1900	0007.8	019.7	41.87	
157.0	000.0135	0547.7	014.3	310.4	000.1900	0007.7	019.9	41.69	
158.0	000.0132	0547.2	014.2	309.9	000.1900	0006.8	020.1	41.52	
159.0	000.0129	0545.9	014.0	309.5	000.1900	0006.6	020.4	41.34	
160.0	000.0125	0543.1	013.9	309.1	000.1900	0005.7	020.6	41.15	
161.0	000.0129	0544.0	014.0	308.4	000.1900	0003.5	020.7	41.13	
162.0	000.0132	0546.2	014.1	307.6	000.1900	0002.7	020.7	41.11	
163.0	000.0135	0550.2	014.3	306.8	000.1900	0001.3	020.7	41.10	
164.0	000.0138	0548.7	014.4	306.1	000.1900	0000.9	020.8	41.03	
165.0	000.0142	0546.2	014.4	305.4	000.1900	0001.7	020.9	40.94	
166.0	000.0145	0544.7	014.5	304.8	000.1900	0001.6	021.0	40.86	
167.0	000.0148	0543.1	014.6	304.1	000.1900	0002.7	021.1	40.77	
168.0	000.0152	0542.9	014.7	303.4	000.1900	0003.4	021.2	40.69	
169.0	000.0155	0540.3	014.8	302.8	000.1900	0003.7	021.4	40.58	
170.0	000.0159	0539.0	014.8	302.2	000.1900	0004.7	021.5	40.48	
171.0	000.0167	0537.9	015.0	301.4	000.1900	0004.2	021.6	40.43	
172.0	000.0176	0536.3	015.2	300.5	000.1900	0004.5	021.6	40.37	
173.0	000.0184	0534.1	015.4	299.7	000.1900	0004.8	021.7	40.29	
174.0	000.0193	0533.9	015.6	298.8	000.1900	0005.8	021.8	40.22	
175.0	000.0202	0531.7	015.8	298.0	000.1900	0004.1	022.0	40.12	
176.0	000.0212	0530.8	016.0	297.2	000.1900	0003.1	022.1	40.02	
177.0	000.0221	0528.5	016.2	296.5	000.1900	0004.7	022.2	39.90	
178.0	000.0231	0528.4	016.4	295.7	000.1900	0003.8	022.4	39.79	

Protection to WXDM(FM) – Front Royal, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
179.0	000.0241	0527.2	016.6	294.9	000.1900	0004.8	022.6	39.66	
180.0	000.0251	0522.8	016.7	294.4	000.1900	0004.8	022.8	39.50	
181.0	000.0257	0517.8	016.7	294.0	000.1900	0005.8	023.0	39.31	
182.0	000.0264	0514.7	016.7	293.6	000.1900	0005.9	023.3	39.13	
183.0	000.0270	0512.7	016.8	293.2	000.1900	0005.7	023.5	38.96	
184.0	000.0277	0507.1	016.8	293.0	000.1900	0006.2	023.8	38.76	
185.0	000.0283	0501.5	016.8	292.7	000.1900	0006.4	024.1	38.57	
186.0	000.0290	0497.6	016.9	292.5	000.1900	0007.0	024.4	38.38	
187.0	000.0296	0497.8	017.0	292.0	000.1900	0007.6	024.6	38.20	
188.0	000.0303	0495.6	017.0	291.7	000.1900	0008.3	024.9	38.02	
189.0	000.0310	0493.1	017.1	291.5	000.1900	0009.3	025.2	37.83	
190.0	000.0317	0494.8	017.2	291.0	000.1900	0010.8	025.4	37.66	
191.0	000.0333	0501.4	017.6	290.1	000.1900	0011.3	025.7	37.50	
192.0	000.0350	0507.3	018.0	289.2	000.1900	0011.3	025.9	37.34	
193.0	000.0368	0508.3	018.2	288.5	000.1900	0013.5	026.2	37.16	
194.0	000.0386	0510.0	018.5	287.9	000.1900	0016.6	026.5	36.97	
195.0	000.0404	0509.7	018.7	287.4	000.1900	0017.5	026.8	36.78	
196.0	000.0423	0511.6	019.0	286.8	000.1900	0022.1	027.2	36.58	
197.0	000.0442	0511.3	019.2	286.3	000.1900	0026.3	027.5	36.39	
198.0	000.0461	0506.3	019.3	286.1	000.1900	0027.2	027.8	36.19	
199.0	000.0481	0499.7	019.4	286.1	000.1900	0027.3	028.2	36.00	
200.0	000.0502	0492.7	019.4	286.0	000.1900	0027.3	028.5	35.81	

Exhibit 18.4

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Protection to WXDM(FM) – Front Royal, VA

08-26-2014 Terrain Data: NED 03 SEC FMOver Analysis

WXDM BLED20121203BCG

WVRS

Channel = 212A
Max ERP = 0.19 kW
RCAMSL = 200 M
N. Lat. 38 56 58.7
W. Lng. 78 08 49.5
Protected
60 dBu

Channel = 211A
Max ERP = 0.25 kW
RCAMSL = 805 M
N. Lat. 39 11 02.0
W. Lng. 78 23 15.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
262.0	000.1900	-0015.1	006.6	152.2	000.0151	0537.8	030.5	48.91	
263.0	000.1900	-0016.8	006.6	152.1	000.0151	0537.6	030.4	48.97	
264.0	000.1900	-0018.1	006.6	152.0	000.0152	0537.4	030.3	49.03	
265.0	000.1900	-0018.1	006.6	151.9	000.0152	0537.3	030.2	49.09	
266.0	000.1900	-0025.0	006.6	151.8	000.0152	0537.0	030.1	49.15	
267.0	000.1900	-0034.1	006.6	151.7	000.0153	0536.7	029.9	49.21	
268.0	000.1900	-0042.6	006.6	151.6	000.0153	0536.4	029.8	49.27	
269.0	000.1900	-0051.3	006.6	151.5	000.0153	0536.2	029.7	49.34	
270.0	000.1900	-0059.8	006.6	151.4	000.0154	0536.0	029.6	49.40	
271.0	000.1900	-0060.8	006.6	151.3	000.0154	0535.9	029.5	49.46	
272.0	000.1900	-0040.4	006.6	151.2	000.0154	0535.8	029.4	49.53	
273.0	000.1900	-0024.5	006.6	151.1	000.0155	0535.7	029.3	49.59	
274.0	000.1900	-0022.0	006.6	151.0	000.0155	0535.6	029.2	49.66	
275.0	000.1900	-0022.7	006.6	150.9	000.0156	0535.6	029.1	49.72	
276.0	000.1900	-0012.6	006.6	150.7	000.0156	0535.5	029.1	49.79	
277.0	000.1900	-0000.4	006.6	150.6	000.0157	0535.4	029.0	49.85	
278.0	000.1900	0008.7	006.6	150.5	000.0157	0535.2	028.9	49.91	
279.0	000.1900	0017.8	006.6	150.3	000.0158	0534.9	028.8	49.97	
280.0	000.1900	0024.7	006.6	150.2	000.0158	0534.4	028.7	50.03	
281.0	000.1900	0025.6	006.6	150.0	000.0159	0534.1	028.6	50.09	
282.0	000.1900	0025.1	006.6	149.9	000.0159	0534.2	028.5	50.16	
283.0	000.1900	0025.3	006.6	149.7	000.0160	0534.2	028.4	50.22	
284.0	000.1900	0027.0	006.6	149.6	000.0161	0534.1	028.3	50.29	
285.0	000.1900	0027.4	006.6	149.4	000.0161	0533.9	028.3	50.35	
286.0	000.1900	0027.3	006.6	149.2	000.0162	0533.7	028.2	50.41	
287.0	000.1900	0019.9	006.6	149.0	000.0163	0533.3	028.1	50.47	
288.0	000.1900	0015.9	006.6	148.9	000.0163	0532.8	028.0	50.53	
289.0	000.1900	0011.5	006.6	148.7	000.0164	0532.1	027.9	50.58	
290.0	000.1900	0011.2	006.6	148.5	000.0165	0531.4	027.9	50.63	
291.0	000.1900	0010.8	006.6	148.3	000.0165	0530.6	027.8	50.68	
292.0	000.1900	0007.7	006.6	148.1	000.0166	0530.0	027.7	50.73	
293.0	000.1900	0006.1	006.6	147.9	000.0167	0529.7	027.7	50.78	
294.0	000.1900	0005.8	006.6	147.7	000.0168	0529.6	027.6	50.84	
295.0	000.1900	0004.9	006.6	147.5	000.0169	0529.3	027.5	50.89	
296.0	000.1900	0003.7	006.6	147.3	000.0169	0529.2	027.5	50.95	
297.0	000.1900	0003.4	006.6	147.1	000.0170	0529.4	027.4	51.01	
298.0	000.1900	0004.0	006.6	146.9	000.0171	0529.8	027.4	51.08	
299.0	000.1900	0005.9	006.6	146.7	000.0172	0530.1	027.3	51.14	
300.0	000.1900	0004.2	006.6	146.5	000.0173	0530.2	027.3	51.19	
301.0	000.1900	0004.2	006.6	146.3	000.0174	0530.1	027.2	51.25	
302.0	000.1900	0004.8	006.6	146.0	000.0175	0529.7	027.2	51.29	
303.0	000.1900	0003.6	006.6	145.8	000.0175	0529.1	027.1	51.33	
304.0	000.1900	0003.0	006.6	145.6	000.0176	0528.5	027.1	51.37	

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI

Protection to WXDM(FM) – Front Royal, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
305.0	000.1900	0001.6	006.6	145.4	000.0177	0527.9	027.0	51.41	
306.0	000.1900	0001.0	006.6	145.1	000.0178	0527.1	027.0	51.44	
307.0	000.1900	0001.7	006.6	144.9	000.0179	0526.5	026.9	51.48	
308.0	000.1900	0003.4	006.6	144.7	000.0180	0525.8	026.9	51.51	
309.0	000.1900	0005.4	006.6	144.4	000.0181	0525.1	026.9	51.55	
310.0	000.1900	0007.0	006.6	144.2	000.0182	0524.5	026.8	51.58	
311.0	000.1900	0007.9	006.6	144.0	000.0183	0523.9	026.8	51.61	
312.0	000.1900	0007.9	006.6	143.7	000.0184	0523.0	026.8	51.63	
313.0	000.1900	0003.1	006.6	143.5	000.0185	0522.1	026.8	51.65	
314.0	000.1900	0001.2	006.6	143.2	000.0186	0521.6	026.8	51.68	
315.0	000.1900	0000.4	006.6	143.0	000.0187	0521.3	026.7	51.71	
316.0	000.1900	0001.9	006.6	142.7	000.0188	0521.2	026.7	51.74	
317.0	000.1900	0004.5	006.6	142.5	000.0189	0520.8	026.7	51.77	
318.0	000.1900	0002.1	006.6	142.2	000.0190	0520.9	026.7	51.80	
319.0	000.1900	0000.2	006.6	142.0	000.0192	0520.8	026.7	51.83	
320.0	000.1900	-0001.0	006.6	141.8	000.0193	0520.7	026.7	51.86	
321.0	000.1900	-0001.2	006.6	141.5	000.0194	0520.9	026.7	51.89	
322.0	000.1900	-0000.9	006.6	141.3	000.0195	0521.3	026.7	51.92	
323.0	000.1900	-0002.8	006.6	141.0	000.0196	0522.1	026.7	51.95	
324.0	000.1900	-0001.1	006.6	140.8	000.0197	0522.8	026.7	51.98	
325.0	000.1900	-0001.1	006.6	140.5	000.0198	0523.7	026.7	52.02	
326.0	000.1900	0000.0	006.6	140.3	000.0199	0524.3	026.7	52.05	
327.0	000.1900	-0000.4	006.6	140.0	000.0200	0524.8	026.7	52.07	
328.0	000.1900	-0002.0	006.6	139.8	000.0200	0525.0	026.7	52.07	
329.0	000.1900	-0002.6	006.6	139.5	000.0200	0525.0	026.8	52.06	
330.0	000.1900	-0002.6	006.6	139.3	000.0200	0525.0	026.8	52.04	
331.0	000.1900	-0002.7	006.6	139.0	000.0200	0524.9	026.8	52.03	
332.0	000.1900	-0003.4	006.6	138.8	000.0200	0524.8	026.8	52.01	
333.0	000.1900	-0004.0	006.6	138.6	000.0200	0524.4	026.8	51.99	
334.0	000.1900	-0003.3	006.6	138.3	000.0200	0524.1	026.9	51.96	
335.0	000.1900	-0002.4	006.6	138.1	000.0200	0524.0	026.9	51.94	
336.0	000.1900	-0002.4	006.6	137.9	000.0200	0524.4	026.9	51.93	
337.0	000.1900	-0002.9	006.6	137.6	000.0200	0524.7	027.0	51.91	
338.0	000.1900	-0002.2	006.6	137.4	000.0200	0525.0	027.0	51.89	
339.0	000.1900	-0000.9	006.6	137.2	000.0200	0525.0	027.1	51.86	
340.0	000.1900	0000.5	006.6	136.9	000.0200	0525.1	027.1	51.84	
341.0	000.1900	-0001.7	006.6	136.7	000.0200	0525.2	027.2	51.81	
342.0	000.1900	-0002.6	006.6	136.5	000.0200	0525.5	027.2	51.79	
343.0	000.1900	-0002.4	006.6	136.3	000.0200	0525.9	027.2	51.76	
344.0	000.1900	-0001.3	006.6	136.1	000.0200	0525.9	027.3	51.73	
345.0	000.1900	0000.4	006.6	135.8	000.0200	0525.9	027.4	51.69	
346.0	000.1900	0000.2	006.6	135.6	000.0200	0525.8	027.4	51.66	
347.0	000.1900	0003.4	006.6	135.4	000.0200	0525.7	027.5	51.62	
348.0	000.1900	0001.7	006.6	135.2	000.0200	0525.7	027.5	51.58	
349.0	000.1900	0000.7	006.6	135.0	000.0200	0525.8	027.6	51.54	
350.0	000.1900	0002.4	006.6	134.8	000.0200	0526.0	027.7	51.51	
351.0	000.1900	0003.4	006.6	134.6	000.0200	0526.0	027.7	51.47	
352.0	000.1900	0004.8	006.6	134.4	000.0200	0525.9	027.8	51.42	
353.0	000.1900	0006.6	006.6	134.3	000.0200	0525.6	027.9	51.38	
354.0	000.1900	0006.2	006.6	134.1	000.0200	0525.2	027.9	51.33	
355.0	000.1900	0004.0	006.6	133.9	000.0200	0524.8	028.0	51.27	
356.0	000.1900	0003.7	006.6	133.7	000.0200	0524.4	028.1	51.22	
357.0	000.1900	0003.8	006.6	133.5	000.0200	0524.2	028.2	51.17	
358.0	000.1900	0003.6	006.6	133.4	000.0200	0523.9	028.3	51.12	
359.0	000.1900	0003.1	006.6	133.2	000.0200	0523.6	028.3	51.07	
000.0	000.1900	0003.6	006.6	133.0	000.0200	0523.6	028.4	51.02	

Protection to WXDM(FM) – Front Royal, VA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
001.0	000.1900	0003.8	006.6	132.9	000.0200	0523.6	028.5	50.97	
002.0	000.1900	0003.9	006.6	132.7	000.0200	0523.5	028.6	50.92	
003.0	000.1900	0004.7	006.6	132.6	000.0200	0523.5	028.7	50.86	
004.0	000.1900	0005.2	006.6	132.4	000.0200	0523.4	028.8	50.81	
005.0	000.1900	0007.2	006.6	132.3	000.0200	0523.3	028.9	50.76	
006.0	000.1900	0007.4	006.6	132.2	000.0200	0523.2	029.0	50.70	
007.0	000.1900	0007.8	006.6	132.0	000.0200	0523.0	029.0	50.65	
008.0	000.1900	0008.0	006.6	131.9	000.0200	0522.6	029.1	50.58	
009.0	000.1900	0009.3	006.6	131.8	000.0200	0522.1	029.2	50.52	
010.0	000.1900	0009.9	006.6	131.6	000.0200	0521.7	029.3	50.46	
011.0	000.1900	0009.9	006.6	131.5	000.0200	0521.6	029.4	50.40	
012.0	000.1900	0011.7	006.6	131.4	000.0200	0521.5	029.5	50.35	
013.0	000.1900	0012.1	006.6	131.3	000.0200	0521.7	029.6	50.29	
014.0	000.1900	0011.5	006.6	131.2	000.0200	0521.9	029.7	50.24	
015.0	000.1900	0012.3	006.6	131.1	000.0200	0522.0	029.8	50.19	
016.0	000.1900	0013.4	006.6	131.0	000.0200	0522.1	029.9	50.13	
017.0	000.1900	0013.3	006.6	130.9	000.0200	0522.2	030.0	50.08	
018.0	000.1900	0013.3	006.6	130.8	000.0200	0522.1	030.2	50.02	
019.0	000.1900	0012.3	006.6	130.7	000.0200	0522.1	030.3	49.96	
020.0	000.1900	0012.9	006.6	130.7	000.0200	0522.1	030.4	49.91	
021.0	000.1900	0014.4	006.6	130.6	000.0200	0522.1	030.5	49.85	

Exhibit 18.5

WVRS(FM) Proposed Directional Antenna Pattern

WVRS

12-16-2013

RMS(V)= .671

Graph is Relative Field

Azi	Field	dBk	kW
000	0.778	-08.200	0.151
010	0.618	-10.200	0.095
020	0.491	-12.200	0.060
030	0.390	-14.200	0.038
040	0.336	-15.500	0.028
050	0.267	-17.500	0.018
060	0.224	-19.000	0.013
070	0.190	-20.458	0.009
080	0.195	-20.223	0.010
090	0.210	-19.586	0.011
100	0.219	-19.208	0.012
110	0.237	-18.539	0.014
120	0.252	-18.000	0.016
130	0.283	-17.000	0.020
140	0.283	-17.000	0.020
150	0.252	-18.000	0.016
160	0.224	-19.000	0.013
170	0.252	-18.000	0.016
180	0.317	-16.000	0.025
190	0.356	-15.000	0.032
200	0.448	-13.000	0.050
210	0.564	-11.000	0.079
220	0.710	-09.000	0.126
230	0.893	-07.000	0.200
240	1.000	-06.021	0.250
250	1.000	-06.021	0.250
260	1.000	-06.021	0.250
270	1.000	-06.021	0.250
280	1.000	-06.021	0.250
290	1.000	-06.021	0.250
300	1.000	-06.021	0.250
310	1.000	-06.021	0.250
320	1.000	-06.021	0.250
330	1.000	-06.021	0.250
340	1.000	-06.021	0.250
350	0.980	-06.200	0.240

