

MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

EXHIBIT B

Interference Study for New FM Translator
Using Proposed Site as Reference

The proposed new FM translator on Channel 282D, operating with an effective radiated power of 0.099 kilowatt, will not cause interference to any existing, applied for, or proposed facility. As noted on Exhibit B1, the proposed new translator on Channel 282 is within the predicted 60 dBu contour of third adjacent station WJJS, Channel 285C2, Roanoke, Virginia and FM translator station W279AC, Channel 279D, Roanoke, Virginia. Due to the relationship between the proposed new translator and WJJS and W279AC, a 40 db ratio of the protected and interfering contours applies.

New Translator vs WJJS

The WJJS contour at the new translator's antenna site is in excess of 91 dBu (50/50). The corresponding interfering contour for the new translator is 131 dBu (50/10) (Exhibit B2). As shown in the tabulation of desired to undesired contours (Exhibit B3), the new translator's interfering contour (131 dBu, FCC 50/10) will not reach ground level. Since the new translator's antenna will be mounted 70.0 meters (230 feet) above ground and there are no structures of comparable height in the vicinity of the proposed new translator antenna, this contour never reaches any potentially occupied space. As such, WJJS will not receive interference from the proposed translator.

New Translator vs W279AC

The W279AC contour at the new translator's antenna site is in excess of 68.8 dBu (50/50). The corresponding interfering contour for the new translator is 108.8 dBu (50/10) (Exhibit B4). As shown in the tabulation of desired to undesired contours (Exhibit B5), the new translator's interfering contour (108.8 dBu, FCC 50/10) will not reach ground level. Since the new translator's antenna will be mounted 70.0 meters (230 feet) above ground and there are no structures of comparable height in the vicinity of the proposed new translator antenna, this contour never reaches any potentially occupied space. As such, WJJS will not receive interference from the proposed translator.

Based on the foregoing, it is believed that the proposed new FM translator on Channel 298 is in compliance with §74.1204(d) of the Commission's rules. If a waiver of the rule is needed to address WJJS and W279AC, one is respectfully requested.

MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

EXHIBIT B1

Clearance Study for New Translator
Using Proposed Site as Reference

REFERENCE		Mahon Communications, Inc.								DISPLAY DATES	
37 16 06.0 N.		CH# 282D - 104.3 MHz, Pwr= 0.099 kW, HAAT= 0.0 M, COR= 352 M								DATA 11-28-17	
79 54 46.0 W.		Average Protected F(50-50)= 5.6 km								SEARCH 11-30-17	
		Omni-directional									
CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
285C2 Roanoke	WJJS	LIC VA	ZCX	353.5 173.5	11.71 BLH20040723ADP	37 22 23.0 79 55 40.0	14.500 282	6.1 699	58.8 Capstar Tx, Llc	0.0	-47.8*
281C Winston-salem	WTQR	LIC NC	NC	202.4 22.1	107.11 BLH20110809ABB	36 22 36.4 80 22 08.6	100.000 528	133.9 850	89.6 Clear Channel Broadcasting	-32.3*	9.5
283C Bluefield	WHAJ	LIC WV	EY	269.4 88.7	112.93 BLH20000330ACB	37 15 05.0 81 11 20.0	100.000 472	136.4 1276	91.5 Alpha Media Licensee Llc	-30.1*	11.5
282D Roanoke	1761687!	APP VA	C	0.0 0.0	0.00 BNPFT20170726ABI	37 16 06.0 79 54 46.0	0.099	18.5 352	5.6 Mahon Communications, Inc.	-24.1	-24.1
279D Roanoke	W279AC	LIC VA	DC	262.6 82.5	15.22 BMLFT20100706EHK	37 15 02.0 80 05 00.0	0.233 229	1.0 722	25.3 Positive Alternative Radio	7.9	-10.8*
282B Harrisonburg	WKCY-FM	LIC VA	CN	28.1 208.6	142.55 BLH19920218KC	38 23 47.0 79 08 28.0	50.000 125	140.4 787	67.5 Capstar Tx, Llc	-3.5	44.7
283D Rocky Mount	W283CQ	LIC VA	DC	177.3 357.4	32.43 BLFT20170310AAO	36 58 37.0 79 53 45.0	0.250	18.6 450	11.0 Wyti, Inc.	9.7	12.1
282D Gretna	1763135	APP VA	C	126.3 306.6	64.19 BNPFT20170731ABR	36 55 31.0 79 19 50.0	0.250	29.9 309	8.9 3 Daughters Media, Inc.	25.9	27.1
282C1 Bunn	WFXX	LIC NC	CX	129.1 310.2	214.28 BLH20120508AAW	36 02 20.0 78 03 45.0	100.000 299	169.3 375	70.0 Radio One Licenses, Llc	36.7	118.1
280A Big Island	WHTU	LIC VA	ZCX	64.4 244.7	52.67 BLH20120124AFP	37 28 19.0 79 22 28.0	0.200 518	0.2 841	13.6 Wvjtt, Llc	46.6	37.6
283D Lynchburg	1762407	APP VA	C	81.2 261.6	67.41 BNPFT20170727AAZ	37 21 32.4 79 09 32.2	0.155	22.5 417	15.0 Tri-county Broadcasting, I	38.1	44.3
280D Mountain Lake	1763263	APP VA	DC	279.5 99.1	55.95 BNPFT20170731ACP	37 20 59.0 80 32 14.0	0.016	0.2 1340	14.9 Edward A. Baker D/b/a Dubl	49.1	40.3

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM,
M= Margin in KM
In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd
adjacent.
All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E),
Beamtlt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
Reference station has protected zone issue: AM tower

New Translator - Roanoke, VA - BNPFT20170726ABI
Latitude: 37-16-06 N - Longitude: 079-54-46 W
Channel: 282 - Frequency: 104.3 MHz
ERP: 0.099 kW - AMSL Height: 352.0 m

WJJS - Roanoke, VA - BLH20040723ADP
Latitude: 37-22-23 N - Longitude: 079-55-40 W
Channel: 285 - Frequency: 104.9 MHz
ERP: 14.50 kW - AMSL Height: 699.0 m

GRAHAM BROCK, INC.
BROADCAST TECHNICAL CONSULTANTS

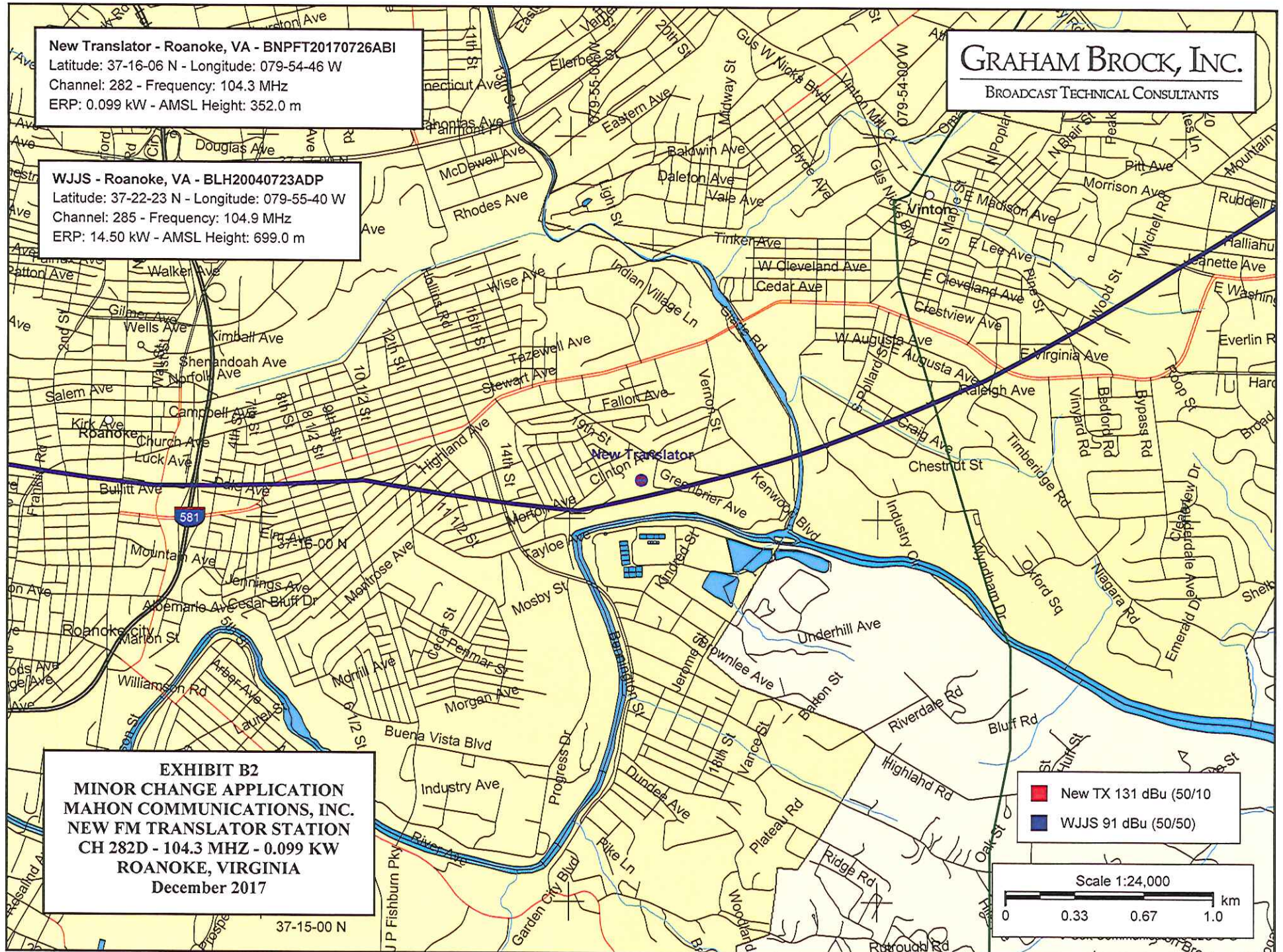


EXHIBIT B2
MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

EXHIBIT B3

NEW Translator, Roanoke, VA, Showing Protection to WJJS
 74.1204(d) Study - Using FCC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.099
 Translator or LPFM Antenna Height AG = 70 Meters
 1761687 Antenna Model = SWR FMEC-3HW

Protected Station's Contour = 91 dBu
 Translator's or LPFM's full Interference contour 131

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.099 kW
 Distance between stations = 11.7 km
 Protected Station= WJJS, 14.5 kW, 699 M Meters COR AMSL

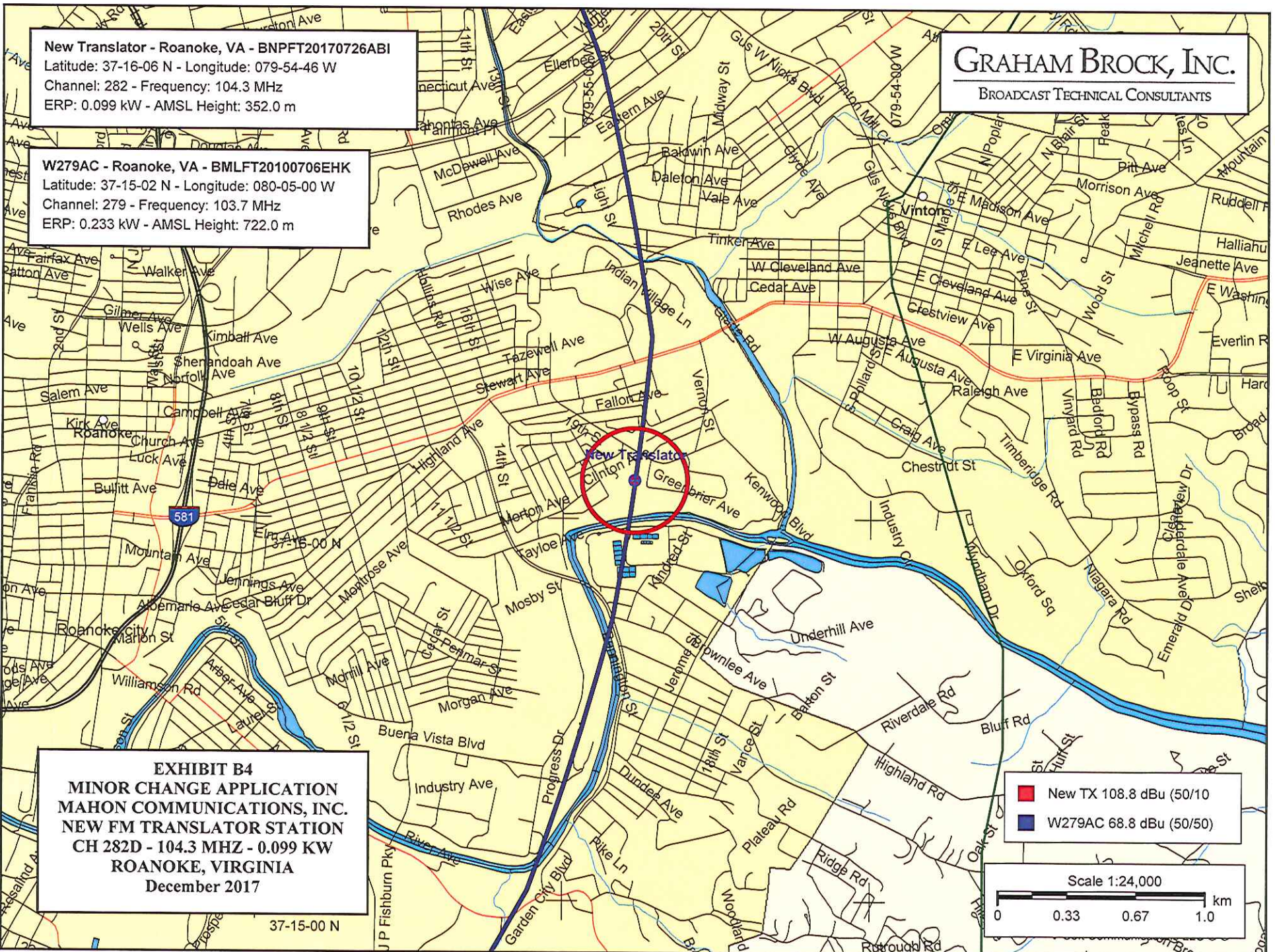
Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.0990	019.6706	019.6706	070.000
05.00	0.972	1.0	0.0935	019.1198	019.0471	068.334
10.00	0.891	1.0	0.0786	017.5265	017.2602	066.957
15.00	0.767	1.0	0.0582	015.0874	014.5733	066.095
20.00	0.615	1.0	0.0374	012.0974	011.3679	065.862
25.00	0.452	1.0	0.0202	008.8911	008.0581	066.242
30.00	0.293	1.0	0.0085	005.7635	004.9913	067.118
35.00	0.151	1.0	0.0023	002.9703	002.4331	068.296
40.00	0.035	1.0	0.0001	000.6885	000.5274	069.557
45.00	0.052	1.0	0.0003	001.0229	000.7233	069.277
50.00	0.109	1.0	0.0012	002.1441	001.3782	068.358
55.00	0.141	1.0	0.0020	002.7736	001.5908	067.728
60.00	0.151	1.0	0.0023	002.9703	001.4851	067.428
65.00	0.146	1.0	0.0021	002.8719	001.2137	067.397
70.00	0.131	1.0	0.0017	002.5768	000.8813	067.579
75.00	0.11	1.0	0.0012	002.1638	000.5600	067.910
80.00	0.085	1.0	0.0007	001.6720	000.2903	068.353
85.00	0.059	1.0	0.0003	001.1606	000.1011	068.844
90.00	0.033	1.0	0.0001	000.6491	000.0000	069.351

X-Field™ By V-Soft Communications@LLC

New Translator - Roanoke, VA - BNPFT20170726ABI
Latitude: 37-16-06 N - Longitude: 079-54-46 W
Channel: 282 - Frequency: 104.3 MHz
ERP: 0.099 kW - AMSL Height: 352.0 m

W279AC - Roanoke, VA - BMLFT20100706EHK
Latitude: 37-15-02 N - Longitude: 080-05-00 W
Channel: 279 - Frequency: 103.7 MHz
ERP: 0.233 kW - AMSL Height: 722.0 m

GRAHAM BROCK, INC.
BROADCAST TECHNICAL CONSULTANTS



MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

EXHIBIT B5

New Translator Roanoke, VA, Showing Protection to W279AC
 74.1204(d) Study - Using FCC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.099
 Translator or LPFM Antenna Height AG = 70 Meters
 1761687 Antenna Model = SWR FMEC-3HW

Protected Station's Contour = 68.8 dBu
 Translator's or LPFM's full Interference contour 108.8

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.099 kW
 Distance between stations = 15.2 km
 Protected Station= W279AC, .233 kW, 722 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.0990	253.4064	253.4064	070.000
05.00	0.972	1.0	0.0935	246.3110	245.3737	048.533
10.00	0.891	1.0	0.0786	225.7851	222.3549	030.793
15.00	0.767	1.0	0.0582	194.3627	187.7400	019.695
20.00	0.615	1.0	0.0374	155.8449	146.4463	016.698
25.00	0.452	1.0	0.0202	114.5397	103.8082	021.593
30.00	0.293	1.0	0.0085	074.2481	064.3007	032.876
35.00	0.151	1.0	0.0023	038.2644	031.3443	048.052
40.00	0.035	1.0	0.0001	008.8692	006.7942	064.299
45.00	0.052	1.0	0.0003	013.1771	009.3176	060.682
50.00	0.109	1.0	0.0012	027.6213	017.7546	048.841
55.00	0.141	1.0	0.0020	035.7303	020.4941	040.731
60.00	0.151	1.0	0.0023	038.2644	019.1322	036.862
65.00	0.146	1.0	0.0021	036.9973	015.6357	036.469
70.00	0.131	1.0	0.0017	033.1962	011.3538	038.806
75.00	0.11	1.0	0.0012	027.8747	007.2145	043.075
80.00	0.085	1.0	0.0007	021.5395	003.7403	048.788
85.00	0.059	1.0	0.0003	014.9510	001.3031	055.106
90.00	0.033	1.0	0.0001	008.3624	000.0000	061.638

X-Field™ By V-Soft Communications©LLC

MINOR CHANGE APPLICATION
MAHON COMMUNICATIONS, INC.
NEW FM TRANSLATOR STATION
CH 282D - 104.3 MHZ - 0.099 KW
ROANOKE, VIRGINIA
December 2017

EXHIBIT B6

N. Lat. = 37° 16' 06" - Protected and Interfering Contour Data
W. Lng. = 79° 54' 46" - New FM Translator, Roanoke, Virginia

HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	131-F1	108.8-F1	100-F1	60-F5	54-F1	40-F1
000	378.1	-26.1	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
010	417.1	-65.1	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
020	441.4	-89.4	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
030	361.2	-9.2	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
040	347.8	4.2	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
050	521.1	-169.1	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
060	496.2	-144.2	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
070	394.6	-42.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
080	354.6	-2.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
090	312.5	39.5	0.0990	-10.04	1.000	0.02	0.25	0.70	6.40	9.16	21.39
100	304.5	47.5	0.0990	-10.04	1.000	0.02	0.25	0.70	7.03	10.12	23.60
110	300.3	51.7	0.0990	-10.04	1.000	0.02	0.25	0.70	7.36	10.57	24.65
120	285.4	66.6	0.0990	-10.04	1.000	0.02	0.25	0.70	8.40	11.88	27.83
130	307.5	44.5	0.0990	-10.04	1.000	0.02	0.25	0.70	6.80	9.77	22.80
140	336.4	15.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
150	359.5	-7.5	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
160	359.0	-7.0	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
170	382.6	-30.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
180	377.3	-25.3	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
190	393.0	-41.0	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
200	389.8	-37.8	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
210	416.6	-64.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
220	430.5	-78.5	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
230	409.4	-57.4	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
240	367.3	-15.3	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
250	396.5	-44.5	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
260	383.9	-31.9	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
270	323.4	28.6	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
280	316.2	35.8	0.0990	-10.04	1.000	0.02	0.25	0.70	6.09	8.69	20.28
290	338.5	13.5	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
300	382.9	-30.9	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
310	374.3	-22.3	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
320	388.7	-36.7	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
330	386.8	-34.8	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
340	352.8	-0.8	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52
350	377.0	-25.0	0.0990	-10.04	1.000	0.02	0.25	0.70	5.62	7.97	18.52

AMSL= 352.0