

W281AJ Translator Allocation Situation

Channel 281 250 watts ERP 90.0 m AG

37° 45' 27.6" NL 81° 11' 17.6" WL

Introduction

West Virginia Radio Corporation proposes to construct an FM translator to rebroadcast AM facility WJLS, 560 kHz, Class B, Beckley, WV (Facility ID: 52335). The proposed translator will be located on an existing tower Registration Number 1047776. Figure 1 demonstrates the 25 mile and 2 mv/m limits for the translator 60 dbu. The translator 60 dbu is entirely contained within these distance limits.

General Allocation Considerations

Table 1 is an FM Class A distance allocation study with LPFM and Class D translators included. This distance study is based on a maximum FM Class A protected contour of 28 km. The average HAAT of the proposed translator is 90 meters. The power of the translator is 250 watts ERP. For these values, the maximum distance to the 60 dbu of the translator is 20.9 km. Thus, if an FM facility is protected by this distance study, the translator, at a lessor contour, will also protect the facility. All listed licensed stations, applications, and construction permits are included within this study. Figure 1 demonstrates that the 60 dbu of the proposed translator is within 25 miles of the WJLS and is within the daytime 2 mv/m contour of the AM facility. All short-spaced facilities are plotted in Figures 2 through 3. FCC (50,50) curves are used for the protected contours, interfering contours use the FCC (50,10) curves. Figure 2 demonstrates complete protection of all co-channel facilities. Figure 3 demonstrates protection to all 2nd adjacent facilities. Figure 4 is an image of the proposed site.

Detailed Second Adjacent Channel Protection

W281AJ will be located at the 90 meter level on the tower with registration number 1047776. FM facility WCIR-FM (Facility ID: 61273) and WHAJ-FM (Facility ID: 504) are located within 69 km and 95 km respectively of the proposed translator site. As WCIR and WHAJ are 2nd adjacent to the proposed Channel 281 translator, they must be protected to a signal level 40 db greater than their signal level. There may be no population residing or normally using any interfered with area.

Figure 3 demonstrates the protected signal level of WCIR and WHAJ very near the proposed W281AJ translator site. The signal level of WCIR is 74.5 dBμV/m and the signal level of WHAJ is 72.5 dBμV/m near the W281AJ translator site. As WHAJ has the lessor of the two signals, the translator signal cannot exceed 112.5 dBμV/m for W281AJ in any normally populated area.

Table 2¹ is a chart of calculated signal levels from the proposed Shively 6815 0.76 wave spaced antenna at 10 meters above ground. The signal level at this height has a maximum value of 109.72 dBμV/m, less than the 112.5 dBμV/m required for protection of both 2nd adjacent facilities.

¹ Shively Antenna Design Spreadsheet provided by Shively Labs.

There are no multi-storied buildings near the translator site. All 2nd adjacent facilities are protected by this proposal.

Protection of Translator Input Channels

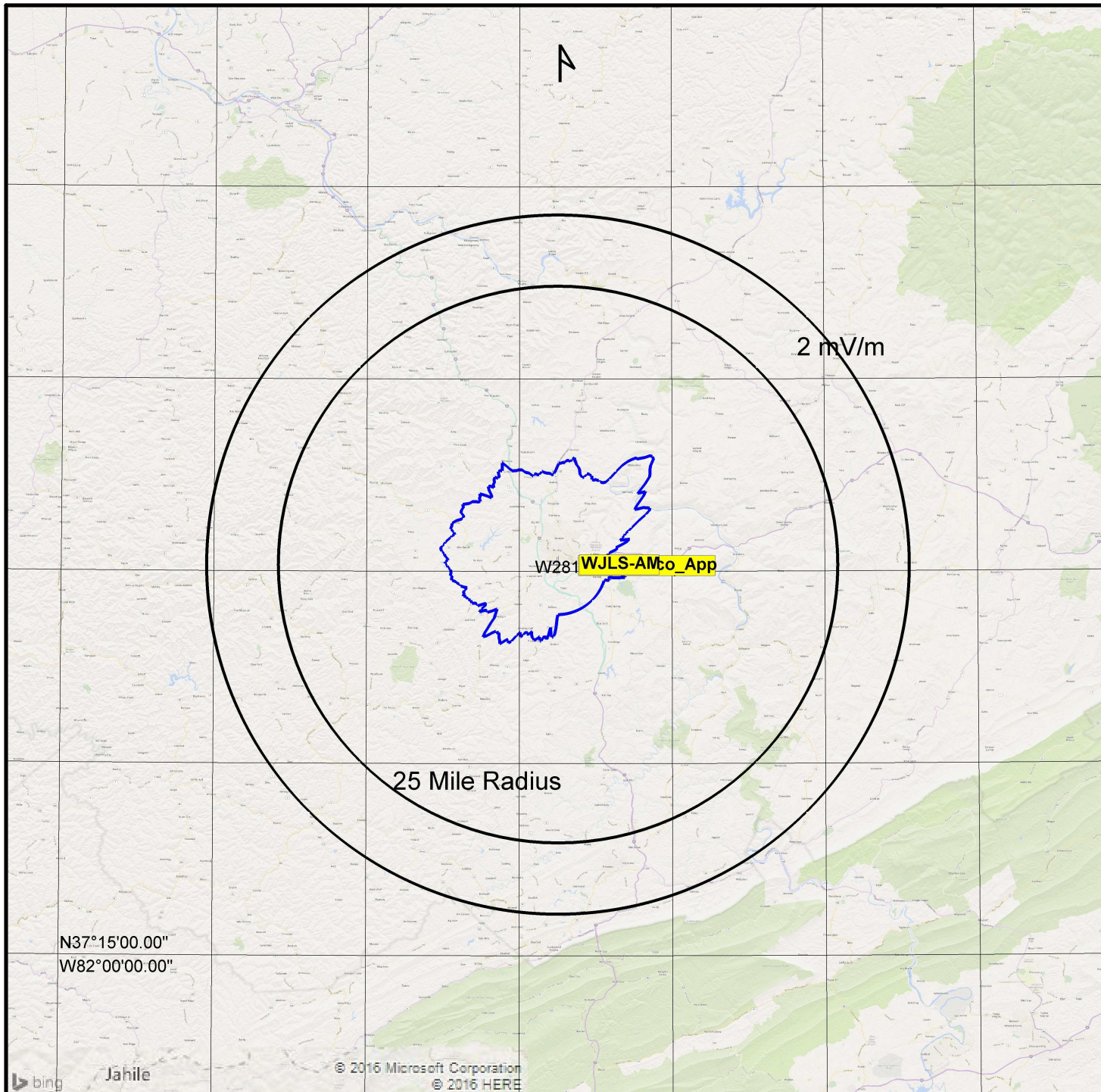
Table 3 is an analysis of all translators within 60 km of the proposed site. The proposed translator will cause no interference to any translator input channel.

Conclusion

A grant of the proposed translator will cause no interference to any existing or proposed FM Facility, Low Power FM facility, FM translator, or FM translator input channel West Virginia Radio Corporation will provide measurements or other documentation should the Commission require.

Table 1

Client: W281AJ																
FM Study for Proposed Site: 37-45-27.6, 81-11-17.6																
Desired Class: A																
Distance to Canadian Border greater than 320 km. Needs no Canadian coordination.																
Distance to Canadian Border: 447.74 km																
Distance to Mexican Border greater than 320 km. Needs no Mexican coordination.																
Distance to Mexican Border: 1997.07 km																
Channel 281 Frequency 104.1 MHz																
Channel	Facility/Application ID	City	State	Country	Callsign	Licensee	Facility Status	Class	Service	Latitude	Longitude	Distance Between Facilities	Direction True North	Required Distance	Spacing Status	Separation Distance
278	81543	BLACKSBURG	VA	US	W278AJ	CUMULUS LICENSING LLC	LIC	D	FX	37-11-12.000000	80-28-54.000000	89.01	135.4		OK	89.01
278	13856	MARION	VA	US	910312MF	COPE II BROADCASTING PARTNERS	USE	A	FA	36-54-28.000000	81-23-25.000000	96.01	190.75		31 OK	65.01
278	30154	MARION	VA	US	WZVA	T.E.C.O. BROADCASTING, INC.	LIC	A	FM	36-54-10.000000	81-22-56.000000	96.42	190.27		31 OK	65.42
278	139546	COVINGTON	VA	US	W278BF	WVJT, LLC	LIC	D	FX	37-47-35.000000	79-55-59.000000	110.65	87.97		OK	110.65
278	81543	BLACKSBURG	VA	US	W278AJ	CUMULUS LICENSING LLC	CP	D	FX	37-11-11.600000	80-28-53.800000	89.02	135.4		OK	89.02
279	61273	BECKLEY	WV	US	WCIR-FM	SOUTHERN COMMUNICATIONS CORPORATION	LIC	B	FM	37-56-51.000000	81-18-32.000000	23.59	333.25	69	****SHORT****	-45.41
279	61273	BECKLEY	WV	US	WCIR-FM	SOUTHERN COMMUNICATIONS CORPORATION	USE	B	FA	37-56-51.000000	81-18-32.000000	23.59	333.25	69	****SHORT****	-45.41
279	70360	ROANOKE	VA	US	W279AC	POSITIVE ALTERNATIVE RADIO, INC.	LIC	D	FX	37-15-2.000000	80-5-0.000000	112.75	119.95		OK	112.75
279	140546	EAST LIVERPOOL	OH	US	W279DA	CAPSTAR TX, LLC	CP MOD	D	FX	38-23-34.700000	82-28-31.400000	133.15	301.98		OK	133.15
280	64430	WHITESBURG	KY	US	WXKQ-FM	T.C.W. BROADCASTING, INC.	USE	A	FA	37-4-27.000000	82-48-44.000000	162.55	242.18		72 OK	90.55
280	71481	ERWIN	TN	US	WXIS	JET BROADCASTING, INC.	USE	A	FA	36-8-15.000000	82-23-0.000000	208.95	210.63		72 OK	136.95
280	64430	WHITESBURG	KY	US	WXKQ-FM	T.C.W. BROADCASTING, INC.	LIC	A	FM	37-6-38.000000	82-44-15.000000	154.79	242.36		72 OK	82.79
280	64430	WHITESBURG	KY	US	WXKQ-FM	T.C.W. BROADCASTING, INC.	LIC	A	FS	37-8-46.000000	82-46-1.000000	155.31	244.09		72 OK	83.31
280	71481	ERWIN	TN	US	WXIS	JET BROADCASTING, INC.	LIC	A	FM	36-8-17.000000	82-23-1.000000	208.91	210.64		72 OK	136.91
280	18534	VIENNA	WV	US	WNRJ	DAILEY CORPORATION	LIC	A	FM	39-20-35.000000	81-29-53.000000	178.05	351.27		72 OK	106.05
280	28340	BIG ISLAND	VA	US	WHTU	WVJT, LLC	LIC	A	FM	37-28-19.000000	79-22-28.000000	163.25	101.2		72 OK	91.25
280	141353	BOONE	NC	US	W280ES	POSITIVE ALTERNATIVE RADIO, INC.	CP MOD	D	FX	36-13-58.000000	81-41-54.000000	175.21	195.02		OK	175.21
281	71665	ROMNEY	WV	US	WVSB	WEST VA. SCHS. FOR DEAF AND BLIND	LIC	A	FM	39-18-56.000000	78-43-4.000000	276.23	51.24	115	OK	161.23
281	58392	WINSTON-SALEM	NC	US	WTQR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	USE	C	FA	36-22-28.000000	80-22-31.000000	169.68	154.78	226	****SHORT****	-56.32
281	71665	ROMNEY	WV	US	WVSB	WEST VA. SCHS. FOR DEAF AND BLIND	USE	A	FA	39-22-0.000000	78-44-50.000000	277.79	49.99	115	OK	162.79
281	17065	BRIDGEPORT	WV	US	WETT	WITHERS BROADCASTING COMPANY OF BRIDGEPORT, LLC	USE	A	FA	39-16-48.000000	80-16-54.000000	186.57	25.07	115	OK	71.57
281	132019	ZANESVILLE	OH	US	WJFZ-LP	ZANESVILLE CHRISTIAN MEDIA	LIC	L1	FL	39-56-21.000000	82-2-16.000000	253.15	343.06		OK	253.15
281	156094	WAYNESBURG	PA	US	W281AG	BROADCAST COMMUNICATIONS, INC.	LIC	D	FX	39-52-12.000000	80-8-1.000000	251.75	21.34		OK	251.75
281	17065	BRIDGEPORT	WV	US	WETT	WITHERS BROADCASTING COMPANY OF BRIDGEPORT, LLC	LIC	A	FM	39-17-59.000000	80-17-30.000000	188.18	24.55	115	OK	73.18
281	140388	RIPLEY	WV	US	W281AJ	POSITIVE ALTERNATIVE RADIO, INC.	LIC	D	FX	38-46-4.000000	81-41-9.000000	120.28	338.77		OK	120.28
281	54813	NEW BOSTON	OH	US	WNKE	NORTHERN KENTUCKY UNIVERSITY	LIC	C0	FM	38-41-0.000000	83-0-46.000000	189.96	302.74	215	****SHORT****	-25.04
281	58392	WINSTON-SALEM	NC	US	WTQR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	C	FM	36-22-36.400000	80-22-8.600000	169.68	154.57	226	****SHORT****	-56.32
281	58392	WINSTON-SALEM	NC	US	WTQR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	C	FS	36-22-36.400000	80-22-8.600000	169.68	154.57	226	****SHORT****	-56.32
281	138712	DURHAM	NC	US	W281BM	CSN INTERNATIONAL	CP	D	FX	35-57-42.000000	78-59-54.000000	279.03	135.58		OK	279.03
281	193527	FOREST CITY	NC	US	WOVE-LP	THE COMMUNITY EMPOWERMENT PROJECT COMMUNITY DEVELOPMENT CORP	CP	L1	FL	35-19-51.800000	81-52-51.300000	276.32	192.97		OK	276.32
281	67211	GATLINBURG	TN	US	W229BE	BRISTOL BROADCASTING COMPANY, INC.	CP	D	FX	35-52-42.000000	83-33-18.000000	296.8	225.36		OK	296.8
282	41811	HARRISONBURG	VA	US	WKCY-FM	CAPSTAR TX, LLC	LIC	B	FM	38-23-47.000000	79-8-28.000000	193.1	68.46	113	OK	80.1
282	41811	HARRISONBURG	VA	US	WKCY-FM	CAPSTAR TX, LLC	USE	B	FA	38-23-40.000000	79-8-26.000000	193.07	68.53	113	OK	80.07
282	659473	SURGOINSVILLE	TN	US			RSV	A	FA	36-33-11.000000	82-51-23.000000	199.58	227.95		72 OK	127.58
282	73872	SURGOINSVILLE	TN	US	WEYE	POSITIVE ALTERNATIVE RADIO, INC.	LIC	A	FM	36-32-5.000000	82-47-52.000000	197.15	226.5		72 OK	125.15
282	197311	IVYDALE	WV	US	WULL-LP	IVYDALE COMMUNITY ACTION NETWORK, INC	CP	L1	FL	38-32-8.000000	81-2-6.000000	87.38	8.84		OK	87.38
282	191934	CAIRO	WV	US	WVPV-LP	TOWN OF CAIRO	LIC	L1	FL	39-12-50.000000	81-9-38.000000	161.66	0.86		OK	161.66
282	140602	ELKHORN CITY	KY	US	W282BZ	EAST KENTUCKY RADIO NETWORK, INC.	LIC	D	FX	37-18-24.000000	82-20-4.000000	113	243.71		OK	113
283	504	BLUEFIELD	WV	US	WHAJ	ALPHA MEDIA LICENSEE LLC	USE	C	FA	37-15-21.000000	81-10-55.000000	55.7	179.43	95	****SHORT****	-39.3
283	504	BLUEFIELD	WV	US	WHAJ	ALPHA MEDIA LICENSEE LLC	LIC	C	FM	37-15-5.000000	81-11-20.000000	56.19	180.06	95	****SHORT****	-38.81
283	140607	PRESTONSBURG	KY	US	W283AP	EAST KENTUCKY BROADCASTING CORPORATION	LIC	D	FX	37-39-57.000000	82-48-12.000000	142.78	265.91		OK	142.78
283	157126	CROSS LANES	WV	US	W283AQ	WEST VIRGINIA RADIO CORPORATION OF CHARLESTON	LIC	D	FX	38-23-53.000000	81-41-6.000000	83.38	328.48		OK	83.38
283	194654	HUNTINGTON	WV	US	WASP-LP	SPRING VALLEY HIGH SCHOOL (STUDENTS)	LIC	L1	FL	38-22-38.000000	82-30-56.800000	135.28	300.55		OK	135.28
284	62295	SPENCER	WV	US	WVRC-FM	STAR COMMUNICATIONS, INC.	LIC	A	FM	38-47-40.000000	81-17-36.000000	115.45	355.43	31	OK	84.45
284	17226	SPENCER	WV	US	881221MC	DONALD L. MILLS	USE	A	FA	38-49-31.000000	81-19-21.000000	119.09	354.34	31	OK	88.09
228	143018	BECKLEY	WV	US	W228CF	SOUTHERN COMMUNICATIONS CORPORATION	LIC	D	FX	37-45-18.000000	81-14-12.000000	4.28	266.03		OK	4.28

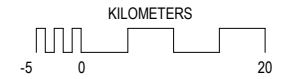


W281AJ

Sites

Site: W281AJ_co_App
N37°45'27.60" W81°11'17.60" 724.5 m
W281AJco Tx.Ht.AGL: 90.0 m Total ERPd: 0.25 kW
Model: 1 Isotropic-horizontal/0.0° 104.1000 MHz

Site: WJLS-AM
N37°45'32.00" W81°11'12.00"

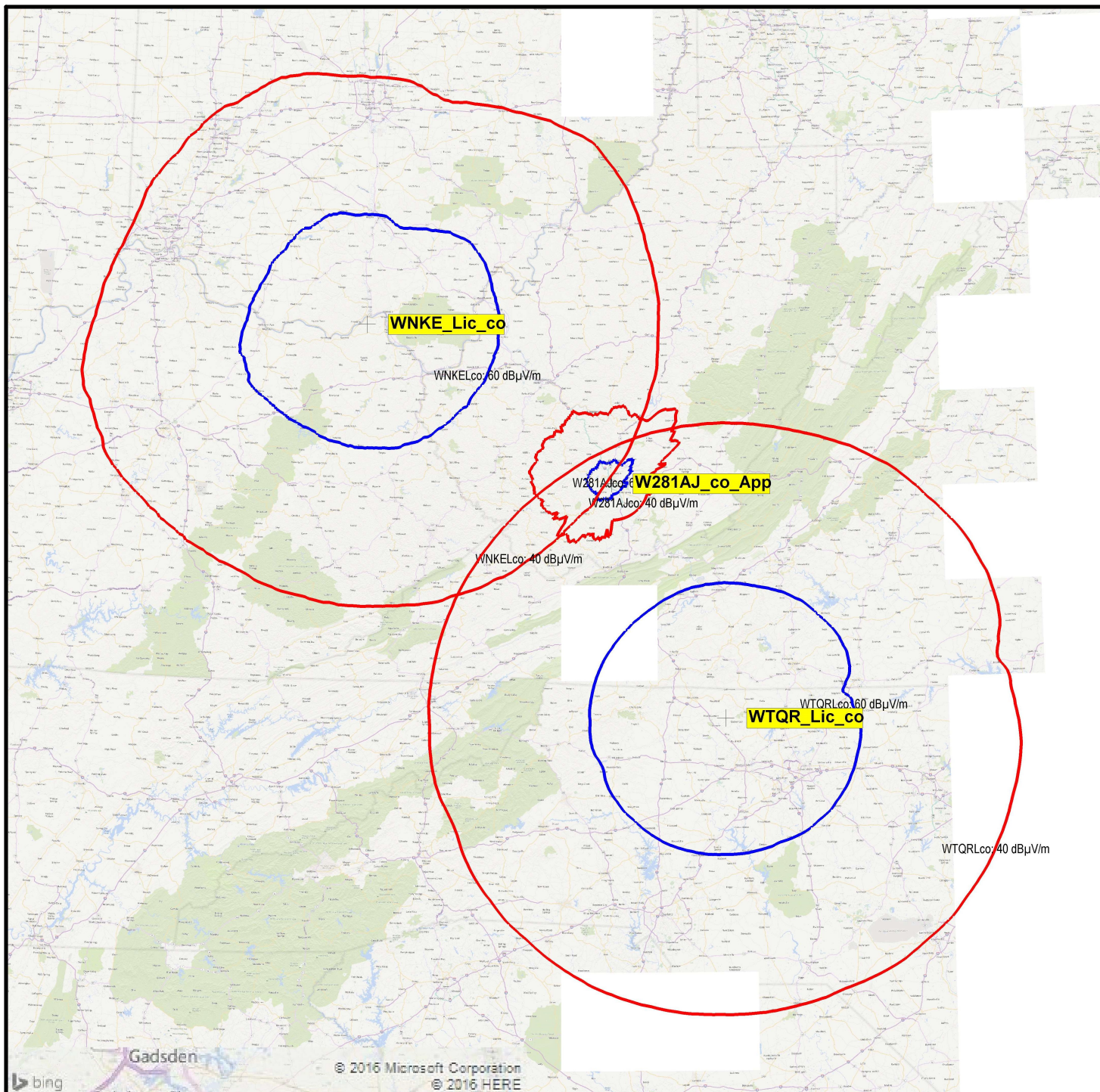


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W281AJ
60 dbu Within 25 Mile Radius

Figure 1



W281AJ

Sites

Site: W281AJ_co_App
N37°45'27.60" W81°11'17.60" 724.5 m
W281AJ_co Tx.Ht.AGL: 90.0 m Total ERPd: 0.25 kW
Model: 1 Isotropic-horizontal/0.0° 104.1000 MHz

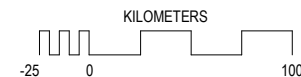
Site: WNKE_Lic_co
N38°41'00.00" W83°00'46.00" 323.0 m
WNKE_co Tx.Ht.AGL: 353.0 m Total ERPd: 100.00 kW
Model: 1 Use file-horizontal/0.0° 104.1000 MHz

Site: WTQR_Lic_co
N36°22'36.40" W80°22'08.60" 707.0 m
WTQR_co Tx.Ht.AGL: 143.0 m Total ERPd: 100.00 kW
Model: 1 Isotropic-horizontal/0.0° 104.1000 MHz

Interference contour study

Propagation models:
service contour : FCC-FCC 50.0% time
cochannel interference : FCC-FCC 10.0% time

■ = 60.0 dBuV/m service contour
■ = 40.0 dBuV/m cochannel interference



W281AJ

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Figure 2
Contour Protection to
Co-Channel Stations