

ENGINEERING NARRATIVE
IN SUPPORT OF APPLICATION FOR CONSTRUCTION PERMIT
WGSJ-CD Minor Mod For Channel Sharing With WGSC-CD CH 8
Prepared for
BEACH TV OF SOUTH CAROLINA, INC.
WGSC-CD CH 8 Facility ID 4349 0.14 kW DA RC 188 M AMSL
MURRELLS INLET, SOUTH CAROLINA

Summary

Beach TV of South Carolina, Inc. ("BTV") specifies herein its proposed CH 8 Channel Sharing transmission facilities. The proposed facility is based on the licensed facilities of WGSC-CD currently authorized at FCC Tower Registration #1044153 which is a lease tower site utilized by multiple FM and TV stations. The existing VHF panel type antenna will be employed. The community boundary for Murrells Inlet, South Carolina is located wholly inside the 48.0 dBu F(50,90) noise limited contour and the Grade B contour. Figure 1 depicts the presently licensed and proposed WGSJ licensed and proposed Channel Sharing contours.

Attached herein is the TVStudy version 2.2.2 output which demonstrates that the proposed facility complies with FCC DTV allocation requirements in that there is no impermissible increase in interference to any other station as shown in the allocation study below.

Environmental

The proposed site is an existing site.

The antenna system is a Kathrein panel type K523157, horizontally polarized, with the RC AGL of 181.9 meters. The antenna is side

mounted on the tower and not accessible to the public. The H.Pol. maximum ERP at any azimuth is 0.14 kilowatts. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 1.0 has been used to calculate the power density 2 meters above ground. The maximum power density is 0.145 uW/cm squared. This value is 0.07% of the General Population exposure per section 1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Worker Safety Guidelines.

OET-69 Bulletin, TVStudy Output

Study created: 2017.07.11 20:51:36

Study build station data: LMS TV 2017-06-21 (6)

Proposal: WGSC-CD D8 DC BL MURRELLS INLET, SC
File number: DTVBL4349
Facility ID: 4349
Station data: LMS TV 2017-06-21 (6)
Record ID: DTVBL4349
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WOLO-TV	D7	DT	BL	COLUMBIA, SC	DTVBL60963	168.8 km
WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	288.6
WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000025034	343.3
WNTV	D8	DT	BL	GREENVILLE, SC	DTVBL61010	343.3
WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	235.6
WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	95.6
WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	95.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D8
Mask: Full Service
Latitude: 33 35 27.91 N (NAD83)
Longitude: 79 2 53.93 W
Height AMSL: 188.0 m
HAAT: 0.0 m
Peak ERP: 0.140 kW
Antenna: KAT-K523157 CUSTOM (ID 1000604) 310.0 deg

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.134 kW	182.3 m	32.7 km
45.0	0.046	181.9	26.2
90.0	0.000	187.0	4.6
135.0	0.008	187.7	17.9
180.0	0.000	186.6	10.1
225.0	0.078	184.7	29.4
270.0	0.118	182.5	31.9
315.0	0.103	182.0	30.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 184 m

Distance to Canadian border: 945.6 km

Distance to Mexican border: 1917.2 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 274.9 degrees Distance: 525.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 295.0 degrees Distance: 2428.3 km

Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

**IX check failure, 0.54% interference to BLANK0000025038 CP, scenario 1
**IX check failure, 0.54% interference to BLANK0000025038 CP, scenario 2
**IX check failure, 0.54% interference to DTVBL61005 BL, scenario 1
**IX check failure, 0.54% interference to DTVBL61005 BL, scenario 2

OET-69 Bulletin, tvix Study

tvstudy v2.2.2
Database: 127.0.0.1, Study: DTVBL4349, Model: Longley-Rice
Start: 2017.07.11 20:52:01

Study created: 2017.07.11 20:51:36

Study build station data: LMS TV 2017-06-21 (6)

Proposal: WGSC-CD D8 DC BL MURRELLS INLET, SC
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WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000025034	343.3
WNTV	D8	DT	BL	GREENVILLE, SC	DTVBL61010	343.3

WTVB	D9	DT	BL	DURHAM, NC	DTVBL8617	235.6
WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	95.6
WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	95.6

No non-directional AM stations found within 0.8 km

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HAAT: 0.0 m
Peak ERP: 0.140 kW
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48.0 dBu contour:

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45.0	0.046	181.9	26.2
90.0	0.000	187.0	4.6
135.0	0.008	187.7	17.9
180.0	0.000	186.6	10.1
225.0	0.078	184.7	29.4
270.0	0.118	182.5	31.9
315.0	0.103	182.0	30.9

Database HAAT does not agree with computed HAAT

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Distance to Canadian border: 945.6 km

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Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 295.0 degrees Distance: 2428.3 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

Interference to DTVBL60963 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL60963 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 5
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 7
Proposal causes no interference.

Interference to DTVBL23947 BL, scenario 8
Proposal causes no interference.

Interference to DTVBL50782 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL50782 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL50782 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL50782 BL, scenario 4
Proposal causes no interference.

Interference to BLANK0000025034 CP, scenario 1
Proposal causes no interference.

Interference to DTVBL61010 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL8617 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL8617 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL8617 BL, scenario 3

Proposal causes no interference.

Interference to DTVBL8617 BL, scenario 4
Proposal causes no interference.

Interference to BLANK0000025038 CP, scenario 1
**IX: 0.54% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	
Undesireds:	WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	95.6 km
	WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	199.5
	WJCT	D9	DT	APP	JACKSONVILLE, FL	BLANK0000025061	343.1
	WMUM-TV	D9	DT	BL	COCHRAN, GA	DTVBL23935	336.4
	WTVI	D9	DT	BL	CHARLOTTE, NC	DTVBL10645	278.2
	WTVB	D9	DT	BL	DURHAM, NC	DTVBL8617	323.2
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDDT20090624ABZ	165.5
Service area		Terrain-limited		IX-free, before		IX-free, after	
34614.3	1,091,463	34614.3	1,091,463	34437.5	1,088,414	34425.5	1,082,577
				Percent	New IX		
				0.04	0.54		
Undesired			Total IX	Unique IX, before		Unique IX, after	
WGSC-CD D8 DC BL			12.1	5,837		12.1 5,837	
WTVB D9 DT BL			56.2	2,005		56.2 2,005	
WIS D10 DT LIC			120.6	1,044		120.6 1,044	

Interference to BLANK0000025038 CP, scenario 2
**IX: 0.54% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	
Undesireds:	WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	95.6 km
	WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	199.5
	WJCT	D9	DT	BL	JACKSONVILLE, FL	DTVBL73130	343.1
	WMUM-TV	D9	DT	BL	COCHRAN, GA	DTVBL23935	336.4
	WTVI	D9	DT	BL	CHARLOTTE, NC	DTVBL10645	278.2
	WTVB	D9	DT	BL	DURHAM, NC	DTVBL8617	323.2
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDDT20090624ABZ	165.5
Service area		Terrain-limited		IX-free, before		IX-free, after	
						Percent New IX	

34614.3	1,091,463	34614.3	1,091,463	34437.5	1,088,414	34425.5	1,082,577	0.04	0.54
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Undesired		Total IX	Unique IX, before	Unique IX, after
WGSC-CD D8 DC BL	12.1	5,837		12.1 5,837
WTVD D9 DT BL	56.2	2,005	56.2 2,005	56.2 2,005
WIS D10 DT LIC	120.6	1,044	120.6 1,044	120.6 1,044

Interference to DTVBL61005 BL, scenario 1

**IX: 0.54% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	
Undesireds:	WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	95.6 km
	WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	199.5
	WJCT	D9	DT	APP	JACKSONVILLE, FL	BLANK0000025061	343.1
	WMUM-TV	D9	DT	BL	COCHRAN, GA	DTVBL23935	336.4
	WTVI	D9	DT	BL	CHARLOTTE, NC	DTVBL10645	278.2
	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	323.2
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	165.5
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX		
	34232.6 1,077,795	34232.6 1,077,795	34091.9 1,075,949	34079.9 1,070,112	0.04 0.54		

Undesired		Total IX	Unique IX, before	Unique IX, after
WGSC-CD D8 DC BL	12.1	5,837		12.1 5,837
WTVD D9 DT BL	28.1	951	28.1 951	28.1 951
WIS D10 DT LIC	112.6	895	112.6 895	112.6 895

Interference to DTVBL61005 BL, scenario 2

**IX: 0.54% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	
Undesireds:	WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	95.6 km
	WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	199.5
	WJCT	D9	DT	BL	JACKSONVILLE, FL	DTVBL73130	343.0
	WMUM-TV	D9	DT	BL	COCHRAN, GA	DTVBL23935	336.4
	WTVI	D9	DT	BL	CHARLOTTE, NC	DTVBL10645	278.2
	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	323.2
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	165.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
34232.6 1,077,795	34232.6 1,077,795	34091.9 1,075,949	34079.9 1,070,112	0.04 0.54

Undesired	Total IX	Unique IX, before	Unique IX, after
WGSC-CD D8 DC BL	12.1 5,837		12.1 5,837
WTVD D9 DT BL	28.1 951	28.1 951	28.1 951
WIS D10 DT LIC	112.6 895	112.6 895	112.6 895

Interference to proposal, scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	
Undesireds: WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	288.6 km
WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	95.6

Service area	Terrain-limited	IX-free	Percent IX
1986.3 202,787	1986.3 202,787	1986.3 202,787	0.00 0.00

Interference to proposal, scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	
Undesireds: WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	288.6 km
WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	95.6

Service area	Terrain-limited	IX-free	Percent IX
1986.3 202,787	1986.3 202,787	1986.3 202,787	0.00 0.00

Interference to proposal, scenario 3

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	
Undesireds: WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	288.6 km
WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
WITV	D9	DT	CP	CHARLESTON, SC	BLANK0000025038	95.6

Service area	Terrain-limited	IX-free	Percent IX
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1986.3	202,787	1986.3	202,787	1986.3	202,787	0.00	0.00
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Interference to proposal, scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WGSC-CD	D8	DC	BL	MURRELLS INLET, SC	DTVBL4349	
Undesireds:	WVAN-TV	D8	DT	BL	SAVANNAH, GA	DTVBL23947	288.6 km
	WNCN	D8	DT	BL	GOLDSBORO, NC	DTVBL50782	236.5
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	95.6

	Service area		Terrain-limited		IX-free		Percent IX
1986.3	202,787	1986.3	202,787	1986.3	202,787	0.00	0.00

Conclusion

Based on the information supplied herein, and accompanying application for construction permit, it is believed that the proposed facilities meet all applicable FCC requirements for Channel Sharing Operation.

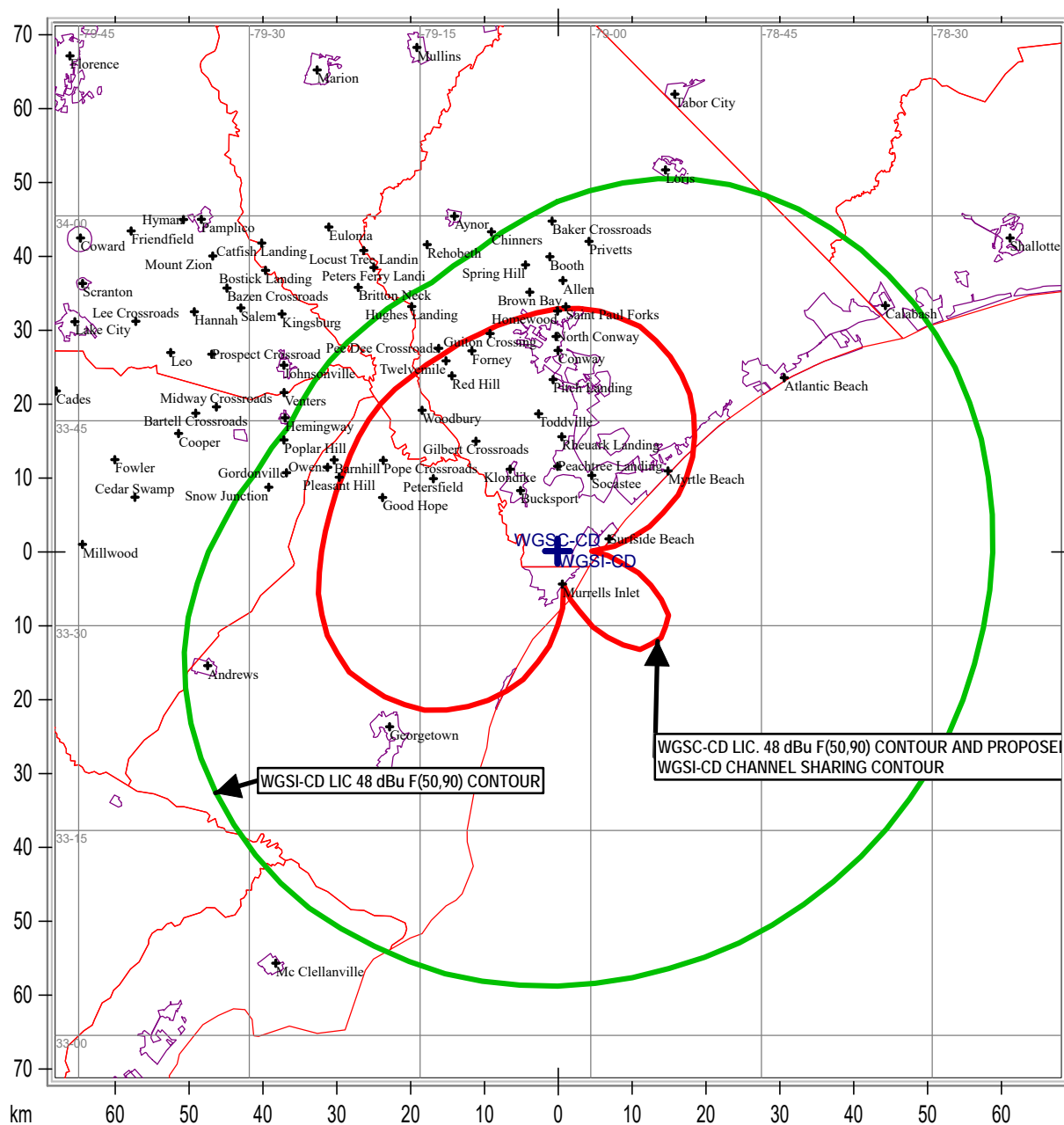
The foregoing was prepared on behalf of Beach TV of South Carolina, Inc. by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By _____

Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
July 11, 2017

WGSI-CD AND WGSC-CD LICENSE FACILITIES AND WGSI-CD PROPOSED



Communications Technologies, Inc. Marlton, New Jersey

County Borders City Borders Lat/Lon Grid