

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
COMCAST CABLEVISION OF CAROLINA, INC.
WALTERBORO, SC
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 28, 2018

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

No great circle interference cases were identified during the interference study of the proposed earth station.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 06/28/2018.

<u>Company</u>
Comsearch

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 06/28/2018
Job Number: 180628COMSGE12

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E3720
Licensee Code COCAC
Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.

Site Information

WALTERBORO, SC
Venue Name
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 19.68 m / 64.6 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 70° W to 136° West Longitude
Azimuth Range 160.8° to 249.4°
Corresponding Elevation Angles 50.0° / 20.4°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Receive - S40451
Manufacturer SCIENTIFIC-ATLANTA, INC
Model 4.5M PRIME FOCUS
Gain / Diameter 43.6 dBi / 4.5 m
3-dB / 15-dB Beamwidth 1.20° / 2.60°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 352.3 km / 218.9 mi
Precipitation Scatter Contour Radius 578.5 km / 359.4 mi

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Coordination Values

WALTERBORO, SC

Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.
Latitude (NAD 83) 32° 54' 48.4" N
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Antenna Model SCIENTIFIC-ATLANTA, INC 4.5M PRIME FOCUS
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.25	109.30	-10.40	277.04
5	0.23	113.94	-10.40	279.53
10	0.25	118.56	-10.40	276.69
15	0.24	122.31	-10.40	277.34
20	0.23	120.05	-10.40	279.09
25	0.22	117.60	-10.40	280.11
30	0.20	114.97	-10.40	282.61
35	0.00	112.11	-10.40	282.75
40	0.21	109.33	-10.40	281.06
45	0.20	106.34	-10.40	282.73
50	0.00	103.22	-10.40	282.75
55	0.00	100.11	-10.40	282.75
60	0.00	96.95	-10.40	282.75
65	0.00	93.75	-10.40	282.75
70	0.00	90.54	-10.40	282.75
75	0.00	87.33	-10.40	282.75
80	0.00	84.13	-10.40	282.75
85	0.00	80.96	-10.40	282.75
90	0.00	77.83	-10.40	282.75
95	0.00	74.75	-10.40	282.75
100	0.00	71.75	-10.40	282.75
105	0.00	68.85	-10.40	282.75
110	0.00	66.06	-10.40	282.75
115	0.00	63.40	-10.40	282.75
120	0.00	60.91	-10.40	282.75
125	0.00	58.60	-10.40	282.75
130	0.00	56.51	-10.40	282.75
135	0.00	54.66	-10.40	282.75
140	0.00	53.08	-10.40	282.75
145	0.00	51.81	-10.40	282.75
150	0.00	50.86	-10.40	282.75
155	0.00	50.25	-10.40	282.75
160	0.00	50.01	-10.40	282.75
165	0.00	50.13	-10.40	282.75
170	0.00	50.61	-10.40	282.75
175	0.00	51.38	-10.40	282.75
180	0.00	51.71	-10.40	282.75
185	0.00	51.39	-10.40	282.75

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Coordination Values

WALTERBORO, SC

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Antenna Centerline (AGL) 2.74 m / 9.0 ft
Antenna Model SCIENTIFIC-ATLANTA, INC 4.5M PRIME FOCUS
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	50.42	-10.40	282.75
195	0.00	48.88	-10.18	284.17
200	0.00	46.81	-9.76	286.79
205	0.00	44.32	-9.13	290.89
210	0.00	41.47	-7.99	298.41
215	0.00	38.32	-7.06	304.64
220	0.00	34.95	-6.38	309.37
225	0.00	31.38	-4.95	320.02
230	0.00	27.85	-3.54	330.18
235	0.00	24.78	-2.31	339.20
240	0.00	22.36	-1.35	346.40
245	0.00	20.84	-0.74	351.00
250	0.00	20.40	-0.56	352.33
255	0.00	21.12	-0.85	350.16
260	0.00	22.88	-1.55	344.84
265	0.00	25.48	-2.59	337.13
270	0.00	28.68	-3.87	327.77
275	0.00	32.30	-5.32	317.40
280	0.00	36.23	-6.65	307.52
285	0.00	40.36	-7.54	301.39
290	0.00	44.64	-9.26	290.06
295	0.00	49.03	-10.21	283.97
300	0.00	53.50	-10.40	282.75
305	0.00	58.04	-10.40	282.75
310	0.00	62.62	-10.40	282.75
315	0.00	67.23	-10.40	282.75
320	0.00	71.87	-10.40	282.75
325	0.00	76.53	-10.40	282.75
330	0.00	81.21	-10.40	282.75
335	0.00	85.89	-10.40	282.75
340	0.00	90.57	-10.40	282.75
345	0.00	95.26	-10.40	282.75
350	0.00	99.94	-10.40	282.75
355	0.36	104.65	-10.40	263.78

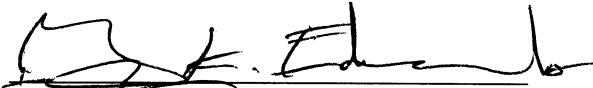
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Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: June 28, 2018

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Earth Station Data Sheet

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FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
COMCAST CABLEVISION OF CAROLINA, INC.
WALTERBORO, SC
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 28, 2018

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

No great circle interference cases were identified during the interference study of the proposed earth station.

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3. SUPPLEMENTAL SHOWING

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Coordination data for this earth station was sent to the below listed carriers with a letter dated 06/28/2018.

Company
Comsearch

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4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 06/28/2018
Job Number: 180628COMSGE13

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E3720
Licensee Code COCAC
Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.

Site Information

WALTERBORO, SC
Venue Name
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 19.68 m / 64.6 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 70° W to 136° West Longitude
Azimuth Range 160.8° to 249.4°
Corresponding Elevation Angles 50.0° / 20.4°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Receive - S40452
Manufacturer SCIENTIFIC-ATLANTA, INC
Model 8345 4.5 METER
Gain / Diameter 43.3 dBi / 4.5 m
3-dB / 15-dB Beamwidth 1.20° / 2.50°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
 Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 293.7 km / 182.5 mi
Precipitation Scatter Contour Radius 578.5 km / 359.4 mi

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Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.25	109.30	-10.56	276.04
5	0.23	113.94	-13.85	258.89
10	0.25	118.56	-16.12	243.62
15	0.24	122.31	-17.63	236.48
20	0.23	120.05	-16.72	242.68
25	0.22	117.60	-15.74	248.83
30	0.20	114.97	-14.68	257.16
35	0.00	112.11	-12.39	270.55
40	0.21	109.33	-10.57	280.02
45	0.20	106.34	-9.97	285.47
50	0.00	103.22	-9.70	287.20
55	0.00	100.11	-9.70	287.20
60	0.00	96.95	-9.70	287.20
65	0.00	93.75	-9.70	287.20
70	0.00	90.54	-9.70	287.20
75	0.00	87.33	-9.70	287.20
80	0.00	84.13	-9.70	287.20
85	0.00	80.96	-9.70	287.20
90	0.00	77.83	-9.70	287.20
95	0.00	74.75	-9.70	287.20
100	0.00	71.75	-9.70	287.20
105	0.00	68.85	-9.70	287.20
110	0.00	66.06	-9.70	287.20
115	0.00	63.40	-9.70	287.20
120	0.00	60.91	-9.70	287.20
125	0.00	58.60	-9.70	287.20
130	0.00	56.51	-9.70	287.20
135	0.00	54.66	-9.70	287.20
140	0.00	53.08	-9.70	287.20
145	0.00	51.81	-9.70	287.20
150	0.00	50.86	-9.71	287.15
155	0.00	50.25	-9.71	287.14
160	0.00	50.01	-9.81	286.46
165	0.00	50.13	-10.70	280.87
170	0.00	50.61	-10.70	280.87
175	0.00	51.38	-10.70	280.87
180	0.00	51.71	-10.70	280.87
185	0.00	51.39	-12.26	271.31

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Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	50.42	-12.70	268.69
195	0.00	48.88	-12.70	268.69
200	0.00	46.81	-12.70	268.69
205	0.00	44.32	-12.70	268.69
210	0.00	41.47	-12.64	269.03
215	0.00	38.32	-11.54	275.65
220	0.00	34.95	-10.70	280.87
225	0.00	31.38	-10.08	284.77
230	0.00	27.85	-8.70	293.68
235	0.00	24.78	-8.70	293.68
240	0.00	22.36	-8.70	293.68
245	0.00	20.84	-8.70	293.68
250	0.00	20.40	-8.70	293.68
255	0.00	21.12	-8.70	293.68
260	0.00	22.88	-8.70	293.68
265	0.00	25.48	-8.70	293.68
270	0.00	28.68	-8.70	293.68
275	0.00	32.30	-9.70	287.20
280	0.00	36.23	-9.70	287.20
285	0.00	40.36	-9.70	287.20
290	0.00	44.64	-9.70	287.20
295	0.00	49.03	-9.70	287.20
300	0.00	53.50	-9.70	287.20
305	0.00	58.04	-9.70	287.20
310	0.00	62.62	-9.70	287.20
315	0.00	67.23	-9.70	287.20
320	0.00	71.87	-9.70	287.20
325	0.00	76.53	-9.70	287.20
330	0.00	81.21	-9.70	287.20
335	0.00	85.89	-9.70	287.20
340	0.00	90.57	-9.70	287.20
345	0.00	95.26	-9.70	287.20
350	0.00	99.94	-9.70	287.20
355	0.36	104.65	-9.70	268.04

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Job Number: 180628COMSGE14

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E3720
Licensee Code COCAC
Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.

Site Information

WALTERBORO, SC
Venue Name
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 19.68 m / 64.6 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 70° W to 136° West Longitude
Azimuth Range 160.8° to 249.4°
Corresponding Elevation Angles 50.0° / 20.4°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Receive - S40301
Manufacturer SCIENTIFIC-ATLANTA, INC
Model 8006
Gain / Diameter 39.5 dBi / 3.0 m
3-dB / 15-dB Beamwidth 1.70° / 3.40°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 351.6 km / 218.4 mi
Precipitation Scatter Contour Radius 578.5 km / 359.4 mi

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			Horizon Gain (dBi)	Coordination Distance (km)
0	0.25	109.30	-10.50	276.41
5	0.23	113.94	-14.44	255.56
10	0.25	118.56	-19.77	225.54
15	0.24	122.31	-21.50	218.31
20	0.23	120.05	-21.50	219.73
25	0.22	117.60	-18.62	234.00
30	0.20	114.97	-15.47	252.76
35	0.00	112.11	-12.61	269.22
40	0.21	109.33	-10.50	280.44
45	0.20	106.34	-10.50	282.11
50	0.00	103.22	-10.50	282.12
55	0.00	100.11	-10.50	282.12
60	0.00	96.95	-10.50	282.12
65	0.00	93.75	-10.50	282.12
70	0.00	90.54	-10.50	282.12
75	0.00	87.33	-10.50	282.12
80	0.00	84.13	-10.50	282.12
85	0.00	80.96	-10.50	282.12
90	0.00	77.83	-10.50	282.12
95	0.00	74.75	-10.50	282.12
100	0.00	71.75	-10.50	282.12
105	0.00	68.85	-10.50	282.12
110	0.00	66.06	-10.50	282.12
115	0.00	63.40	-10.50	282.12
120	0.00	60.91	-10.50	282.12
125	0.00	58.60	-10.50	282.12
130	0.00	56.51	-10.50	282.12
135	0.00	54.66	-10.50	282.12
140	0.00	53.08	-10.50	282.12
145	0.00	51.81	-10.50	282.12
150	0.00	50.86	-10.50	282.12
155	0.00	50.25	-10.50	282.12
160	0.00	50.01	-10.50	282.12
165	0.00	50.13	-10.50	282.12
170	0.00	50.61	-10.50	282.12
175	0.00	51.38	-10.50	282.12
180	0.00	51.71	-10.50	282.12
185	0.00	51.39	-10.50	282.12

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

WALTERBORO, SC

Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Ground Elevation (AMSL) 19.68 m / 64.6 ft
Antenna Centerline (AGL) 2.74 m / 9.0 ft
Antenna Model SCIENTIFIC-ATLANTA, INC 8006
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	50.42	-10.50	282.12
195	0.00	48.88	-10.28	283.54
200	0.00	46.81	-9.86	286.15
205	0.00	44.32	-9.36	289.36
210	0.00	41.47	-8.79	293.07
215	0.00	38.32	-7.83	299.46
220	0.00	34.95	-6.48	308.67
225	0.00	31.38	-5.05	319.31
230	0.00	27.85	-3.64	329.46
235	0.00	24.78	-2.41	338.46
240	0.00	22.36	-1.45	345.65
245	0.00	20.84	-0.84	350.25
250	0.00	20.40	-0.66	351.57
255	0.00	21.12	-0.95	349.40
260	0.00	22.88	-1.65	344.09
265	0.00	25.48	-2.69	336.39
270	0.00	28.68	-3.97	327.05
275	0.00	32.30	-5.42	316.69
280	0.00	36.23	-6.99	305.15
285	0.00	40.36	-8.57	294.53
290	0.00	44.64	-9.43	288.95
295	0.00	49.03	-10.31	283.34
300	0.00	53.50	-10.50	282.12
305	0.00	58.04	-10.50	282.12
310	0.00	62.62	-10.50	282.12
315	0.00	67.23	-10.50	282.12
320	0.00	71.87	-10.50	282.12
325	0.00	76.53	-10.50	282.12
330	0.00	81.21	-10.50	282.12
335	0.00	85.89	-10.50	282.12
340	0.00	90.57	-10.50	282.12
345	0.00	95.26	-10.50	282.12
350	0.00	99.94	-10.50	282.12
355	0.36	104.65	-10.50	263.18

COMSEARCH

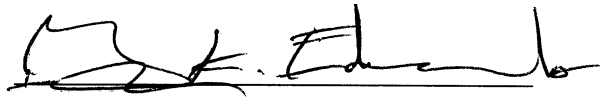
Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: _



Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: June 28, 2018

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
COMCAST CABLEVISION OF CAROLINA, INC.
WALTERBORO, SC
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 28, 2018

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2. SUMMARY OF RESULTS 4
3. SUPPLEMENTAL SHOWING 5
4. EARTH STATION COORDINATION DATA..... 6
5. CERTIFICATION..... 10

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Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

No great circle interference cases were identified during the interference study of the proposed earth station.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 06/28/2018.

Company
Comsearch

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 06/28/2018
Job Number: 180628COMSGE15

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E3720
Licensee Code COCAC
Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.

Site Information

WALTERBORO, SC
Venue Name
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 19.68 m / 64.6 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 70° W to 136° West Longitude
Azimuth Range 160.8° to 249.4°
Corresponding Elevation Angles 50.0° / 20.4°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Receive - FCC32
Manufacturer Patriot
Model 3.8 meter
Gain / Diameter 42.9 dBi / 3.8 m
3-dB / 15-dB Beamwidth 1.40° / 2.80°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 351.0 km / 218.1 mi
Precipitation Scatter Contour Radius 578.5 km / 359.4 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

WALTERBORO, SC

Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Ground Elevation (AMSL) 19.68 m / 64.6 ft
Antenna Centerline (AGL) 2.74 m / 9.0 ft
Antenna Model Patriot 3.8 meter
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.25	109.30	-10.00	279.54
5	0.23	113.94	-10.00	282.05
10	0.25	118.56	-10.00	279.19
15	0.24	122.31	-10.00	279.84
20	0.23	120.05	-10.00	281.60
25	0.22	117.60	-10.00	282.63
30	0.20	114.97	-10.00	285.14
35	0.00	112.11	-10.00	285.28
40	0.21	109.33	-10.00	283.59
45	0.20	106.34	-10.00	285.26
50	0.00	103.22	-10.00	285.28
55	0.00	100.11	-10.00	285.28
60	0.00	96.95	-10.00	285.28
65	0.00	93.75	-10.00	285.28
70	0.00	90.54	-10.00	285.28
75	0.00	87.33	-10.00	285.28
80	0.00	84.13	-10.00	285.28
85	0.00	80.96	-10.00	285.28
90	0.00	77.83	-10.00	285.28
95	0.00	74.75	-10.00	285.28
100	0.00	71.75	-10.00	285.28
105	0.00	68.85	-10.00	285.28
110	0.00	66.06	-10.00	285.28
115	0.00	63.40	-10.00	285.28
120	0.00	60.91	-10.00	285.28
125	0.00	58.60	-10.00	285.28
130	0.00	56.51	-10.00	285.28
135	0.00	54.66	-10.00	285.28
140	0.00	53.08	-10.00	285.28
145	0.00	51.81	-10.00	285.28
150	0.00	50.86	-10.00	285.28
155	0.00	50.25	-10.00	285.28
160	0.00	50.01	-10.00	285.28
165	0.00	50.13	-10.00	285.28
170	0.00	50.61	-10.00	285.28
175	0.00	51.38	-10.00	285.28
180	0.00	51.71	-10.00	285.28
185	0.00	51.39	-10.00	285.28

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

WALTERBORO, SC

Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Ground Elevation (AMSL) 19.68 m / 64.6 ft
Antenna Centerline (AGL) 2.74 m / 9.0 ft
Antenna Model Patriot 3.8 meter
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	50.42	-10.00	285.28
195	0.00	48.88	-10.00	285.28
200	0.00	46.81	-9.76	286.81
205	0.00	44.32	-9.17	290.65
210	0.00	41.47	-8.44	295.38
215	0.00	38.32	-7.59	301.09
220	0.00	34.95	-6.58	307.93
225	0.00	31.38	-5.42	316.73
230	0.00	27.85	-4.12	325.98
235	0.00	24.78	-2.85	335.21
240	0.00	22.36	-1.74	343.45
245	0.00	20.84	-0.97	349.22
250	0.00	20.40	-0.74	350.96
255	0.00	21.12	-1.12	348.12
260	0.00	22.88	-1.99	341.60
265	0.00	25.48	-3.15	332.99
270	0.00	28.68	-4.44	323.69
275	0.00	32.30	-5.73	314.51
280	0.00	36.23	-6.98	305.25
285	0.00	40.36	-8.15	297.33
290	0.00	44.64	-9.24	290.14
295	0.00	49.03	-10.00	285.28
300	0.00	53.50	-10.00	285.28
305	0.00	58.04	-10.00	285.28
310	0.00	62.62	-10.00	285.28
315	0.00	67.23	-10.00	285.28
320	0.00	71.87	-10.00	285.28
325	0.00	76.53	-10.00	285.28
330	0.00	81.21	-10.00	285.28
335	0.00	85.89	-10.00	285.28
340	0.00	90.57	-10.00	285.28
345	0.00	95.26	-10.00	285.28
350	0.00	99.94	-10.00	285.28
355	0.36	104.65	-10.00	266.21

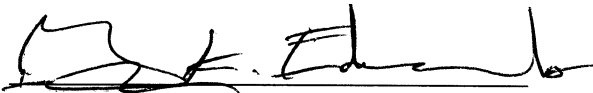
COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: June 28, 2018

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
COMCAST CABLEVISION OF CAROLINA, INC.
WALTERBORO, SC
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 28, 2018

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

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COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

No great circle interference cases were identified during the interference study of the proposed earth station.

COMSEARCH
Earth Station Data Sheet
19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 06/28/2018.

Company
Comsearch

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 06/28/2018
Job Number: 180628COMSGE16

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E3720
Licensee Code COCAC
Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.

Site Information

WALTERBORO, SC
Venue Name
Latitude (NAD 83) 32° 54' 48.4" N
Longitude (NAD 83) 80° 41' 21.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 19.68 m / 64.6 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 70° W to 136° West Longitude
Azimuth Range 160.8° to 249.4°
Corresponding Elevation Angles 50.0° / 20.4°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Receive - P40242
Manufacturer Patriot
Model 2.4 meter
Gain / Diameter 38.0 dBi / 2.4 m
3-dB / 15-dB Beamwidth 2.30° / 4.60°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 354.8 km / 220.4 mi
Precipitation Scatter Contour Radius 578.5 km / 359.4 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

WALTERBORO, SC

Licensee Name COMCAST CABLEVISION OF CAROLINA, INC.
Latitude (NAD 83) 32° 54' 48.4" N
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Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.25	109.30	-10.00	279.54
5	0.23	113.94	-10.00	282.05
10	0.25	118.56	-10.00	279.19
15	0.24	122.31	-10.00	279.84
20	0.23	120.05	-10.00	281.60
25	0.22	117.60	-10.00	282.63
30	0.20	114.97	-10.00	285.14
35	0.00	112.11	-10.00	285.28
40	0.21	109.33	-10.00	283.59
45	0.20	106.34	-10.00	285.26
50	0.00	103.22	-10.00	285.28
55	0.00	100.11	-10.00	285.28
60	0.00	96.95	-10.00	285.28
65	0.00	93.75	-10.00	285.28
70	0.00	90.54	-10.00	285.28
75	0.00	87.33	-10.00	285.28
80	0.00	84.13	-10.00	285.28
85	0.00	80.96	-10.00	285.28
90	0.00	77.83	-10.00	285.28
95	0.00	74.75	-10.00	285.28
100	0.00	71.75	-10.00	285.28
105	0.00	68.85	-10.00	285.28
110	0.00	66.06	-10.00	285.28
115	0.00	63.40	-10.00	285.28
120	0.00	60.91	-10.00	285.28
125	0.00	58.60	-10.00	285.28
130	0.00	56.51	-10.00	285.28
135	0.00	54.66	-10.00	285.28
140	0.00	53.08	-10.00	285.28
145	0.00	51.81	-10.00	285.28
150	0.00	50.86	-10.00	285.28
155	0.00	50.25	-10.00	285.28
160	0.00	50.01	-10.00	285.28
165	0.00	50.13	-10.00	285.28
170	0.00	50.61	-10.00	285.28
175	0.00	51.38	-10.00	285.28
180	0.00	51.71	-10.00	285.28
185	0.00	51.39	-10.00	285.28

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

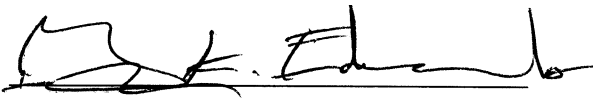
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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	50.42	-10.00	285.28
195	0.00	48.88	-9.78	286.71
200	0.00	46.81	-9.36	289.36
205	0.00	44.32	-8.86	292.61
210	0.00	41.47	-8.29	296.37
215	0.00	38.32	-7.66	300.57
220	0.00	34.95	-6.98	305.23
225	0.00	31.38	-5.55	315.77
230	0.00	27.85	-4.14	325.84
235	0.00	24.78	-2.87	335.10
240	0.00	22.36	-1.42	345.85
245	0.00	20.84	-0.50	352.77
250	0.00	20.40	-0.24	354.77
255	0.00	21.12	-0.67	351.49
260	0.00	22.88	-1.73	343.52
265	0.00	25.48	-3.19	332.72
270	0.00	28.68	-4.47	323.45
275	0.00	32.30	-5.92	313.17
280	0.00	36.23	-7.25	303.41
285	0.00	40.36	-8.07	297.84
290	0.00	44.64	-8.93	292.19
295	0.00	49.03	-9.81	286.52
300	0.00	53.50	-10.00	285.28
305	0.00	58.04	-10.00	285.28
310	0.00	62.62	-10.00	285.28
315	0.00	67.23	-10.00	285.28
320	0.00	71.87	-10.00	285.28
325	0.00	76.53	-10.00	285.28
330	0.00	81.21	-10.00	285.28
335	0.00	85.89	-10.00	285.28
340	0.00	90.57	-10.00	285.28
345	0.00	95.26	-10.00	285.28
350	0.00	99.94	-10.00	285.28
355	0.36	104.65	-10.00	266.21

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: June 28, 2018