



**COMSEARCH**<sup>®</sup>  
A CommScope Company

October 15, 2018

Re: AT&T Corp - ROARING CRK, PA  
Call Sign: WA33  
C-Band Transmit-Receive Earth Station  
Job Number: 181015COMSGE09

\*\*\*\* Expedited Response Requested by October 29, 2018 \*\*\*\*

\*\*\*\*\* Revision Notice \*\*\*\*\*

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached revised coordination data on behalf of AT&T Corp - for modifications to their existing C-Band Transmit-Receive Earth Stations in ROARING CRK, PA.

AT&T plans to add a C-band transmit/receive earth station to their existing teleport. Please update your database with the attached information. This proposed antenna will be co-located with existing large diameter C-band transmit/receive earth stations operating under similar parameters.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that were not previously reported, please contact us by October 29, 2018, as our client would like to expedite the filing of this earth station with the FCC.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Gary K. Edwards  
Senior Manager  
gedwards@comsearch.com

Enclosure(s)

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

Date: 10/15/2018  
Job Number: 181015COMSGE09

**Administrative Information**

Status ENGINEER PROPOSAL  
Call Sign WA33  
Licensee Code P1175P  
Licensee Name AT&T Corp -

**Site Information ROARING CRK, PA**

Venue Name  
Latitude (NAD 83) 40° 53' 37.8" N  
Longitude (NAD 83) 76° 26' 20.6" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 295.96 m / 971.0 ft

**Link Information**

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 4.6° W to 148.2° West Longitude  
Azimuth Range 102.1° to 257.8°  
Corresponding Elevation Angles 5.0° / 5.0°  
Antenna Centerline (AGL) 5.49 m / 18.0 ft

**Antenna Information**

|                          |                          | <b>Receive - FCC32</b> |       | <b>Transmit - FCC32</b> |         |
|--------------------------|--------------------------|------------------------|-------|-------------------------|---------|
| Manufacturer             |                          | Gen Dynamics           |       | Gen Dynamics            |         |
| Model                    |                          | Satcom                 |       | Satcom                  |         |
| Gain / Diameter          |                          | 51.9 dBi / 11.1 m      |       | 55.6 dBi / 11.1 m       |         |
| 3-dB / 15-dB Beamwidth   |                          | 0.40° / 0.90°          |       | 0.30° / 0.60°           |         |
| Max Available RF Power   | (dBW/4 kHz)<br>(dBW/MHz) |                        |       | -2.7                    | 21.3    |
| Maximum EIRP             | (dBW/4 kHz)<br>(dBW/MHz) |                        |       | 52.9                    | 76.9    |
| Interference Objectives: | Long Term                | -156.0 dBW/MHz         | 20%   | -154.0 dBW/4 kHz        | 20%     |
|                          | Short Term               | -146.0 dBW/MHz         | 0.01% | -131.0 dBW/4 kHz        | 0.0025% |

**Frequency Information**

|  | <b>Receive 4.0 GHz</b>              | <b>Transmit 6.1 GHz</b>             |
|--|-------------------------------------|-------------------------------------|
| Emission / Frequency Range (MHz)       | 54K6G7W - 72M0G7W / 3625.0 - 4200.0 | 54K6G7W - 72M0G7W / 5850.0 - 6425.0 |
| Max Great Circle Coordination Distance | 714.9 km / 444.2 mi                 | 429.1 km / 266.6 mi                 |
| Precipitation Scatter Contour Radius   | 621.4 km / 386.1 mi                 | 101.8 km / 63.2 mi                  |

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

**Coordination Values****ROARING CRK, PA**

|                                    |                         |       |  |                  |         |
|------------------------------------|-------------------------|-------|--|------------------|---------|
| Licensee Name                      | AT&T Corp -             |       |  |                  |         |
| Latitude (NAD 83)                  | 40° 53' 37.8" N         |       |  |                  |         |
| Longitude (NAD 83)                 | 76° 26' 20.6" W         |       |  |                  |         |
| Ground Elevation (AMSL)            | 295.96 m / 971.0 ft     |       |  |                  |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft        |       |  |                  |         |
| Antenna Model                      | Gen Dynamics 11.1 meter |       |  |                  |         |
| Antenna Mode                       | Receive 4.0 GHz         |       |  | Transmit 6.1 GHz |         |
| Interference Objectives: Long Term | -156.0 dBW/MHz          | 20%   |  | -154.0 dBW/4 kHz | 20%     |
| Short Term                         | -146.0 dBW/MHz          | 0.01% |  | -131.0 dBW/4 kHz | 0.0025% |
| Max Available RF Power             |                         |       |  | -2.7 (dBW/4 kHz) |         |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 4.0 GHz    |                            | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 0           | 0.00                  | 102.08                     | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 5           | 1.50                  | 97.11                      | -10.00             | 205.56                     | -10.00             | 104.66                     |
| 10          | 2.37                  | 92.12                      | -10.00             | 186.03                     | -10.00             | 100.00                     |
| 15          | 2.57                  | 87.12                      | -10.00             | 181.49                     | -10.00             | 100.00                     |
| 20          | 2.27                  | 82.13                      | -10.00             | 188.34                     | -10.00             | 100.00                     |
| 25          | 2.08                  | 77.14                      | -10.00             | 192.61                     | -10.00             | 100.00                     |
| 30          | 1.97                  | 72.15                      | -10.00             | 195.23                     | -10.00             | 100.00                     |
| 35          | 1.63                  | 67.16                      | -10.00             | 204.62                     | -10.00             | 101.55                     |
| 40          | 1.32                  | 62.18                      | -10.00             | 210.61                     | -10.00             | 109.27                     |
| 45          | 1.01                  | 57.21                      | -10.00             | 220.05                     | -10.00             | 117.42                     |
| 50          | 1.13                  | 52.22                      | -10.00             | 216.15                     | -10.00             | 114.12                     |
| 55          | 1.06                  | 47.25                      | -9.86              | 219.09                     | -9.86              | 116.44                     |
| 60          | 1.50                  | 42.24                      | -8.64              | 211.87                     | -8.64              | 108.73                     |
| 65          | 1.12                  | 37.29                      | -7.29              | 230.56                     | -7.29              | 122.57                     |
| 70          | 0.59                  | 32.39                      | -5.76              | 270.10                     | -5.76              | 149.29                     |
| 75          | 0.44                  | 27.47                      | -3.97              | 295.60                     | -3.97              | 169.37                     |
| 80          | 0.29                  | 22.59                      | -1.85              | 331.15                     | -1.85              | 193.55                     |
| 85          | 0.00                  | 17.81                      | 0.74               | 362.27                     | 0.74               | 210.39                     |
| 90          | 0.35                  | 12.96                      | 4.19               | 370.07                     | 4.19               | 210.28                     |
| 95          | 0.00                  | 8.67                       | 8.55               | 425.97                     | 8.55               | 245.15                     |
| 100         | 0.21                  | 5.20                       | 14.10              | 714.89                     | 14.10              | 429.11                     |
| 105         | 0.62                  | 5.21                       | 14.08              | 546.51                     | 14.08              | 312.57                     |
| 110         | 1.05                  | 8.44                       | 8.85               | 352.51                     | 8.85               | 191.17                     |
| 115         | 1.64                  | 11.62                      | 5.37               | 298.25                     | 5.37               | 155.13                     |
| 120         | 2.06                  | 14.83                      | 2.72               | 262.43                     | 2.72               | 133.16                     |
| 125         | 2.04                  | 18.26                      | 0.46               | 247.23                     | 0.46               | 126.50                     |
| 130         | 1.71                  | 21.80                      | -1.46              | 245.58                     | -1.46              | 127.37                     |
| 135         | 1.58                  | 25.06                      | -2.98              | 240.54                     | -2.98              | 125.27                     |
| 140         | 1.77                  | 27.91                      | -4.14              | 227.38                     | -4.14              | 116.41                     |
| 145         | 2.20                  | 30.34                      | -5.05              | 210.97                     | -5.05              | 103.60                     |
| 150         | 2.40                  | 32.69                      | -5.86              | 205.16                     | -5.86              | 100.00                     |
| 155         | 2.70                  | 34.65                      | -6.49              | 195.66                     | -6.49              | 100.00                     |
| 160         | 3.31                  | 35.98                      | -6.90              | 180.33                     | -6.90              | 100.00                     |
| 165         | 3.15                  | 37.61                      | -7.38              | 181.32                     | -7.38              | 100.00                     |
| 170         | 3.37                  | 38.48                      | -7.63              | 175.11                     | -7.63              | 100.00                     |
| 175         | 3.27                  | 39.24                      | -7.84              | 176.33                     | -7.84              | 100.00                     |
| 180         | 3.12                  | 39.61                      | -7.95              | 179.24                     | -7.95              | 100.00                     |
| 185         | 2.85                  | 39.65                      | -7.96              | 185.09                     | -7.96              | 100.00                     |

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

**Coordination Values****ROARING CRK, PA**

|                                    |                                   |       |                  |
|------------------------------------|-----------------------------------|-------|------------------|
| Licensee Name                      | AT&T Corp - Extended C-Band Sites |       |                  |
| Latitude (NAD 83)                  | 40° 53' 37.8" N                   |       |                  |
| Longitude (NAD 83)                 | 76° 26' 20.6" W                   |       |                  |
| Ground Elevation (AMSL)            | 295.96 m / 971.0 ft               |       |                  |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft                  |       |                  |
| Antenna Model                      | Gen Dynamics 11.1 meter           |       |                  |
| Antenna Mode                       | Receive 4.0 GHz                   |       | Transmit 6.1 GHz |
| Interference Objectives: Long Term | -156.0 dBW/MHz                    | 20%   | -154.0 dBW/4 kHz |
| Short Term                         | -146.0 dBW/MHz                    | 0.01% | -131.0 dBW/4 kHz |
| Max Available RF Power             |                                   |       | -2.7 (dBW/4 kHz) |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 4.0 GHz    |                            | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 190         | 2.85                  | 38.99                      | -7.77              | 186.04                     | -7.77              | 100.00                     |
| 195         | 2.43                  | 38.29                      | -7.58              | 196.29                     | -7.58              | 100.00                     |
| 200         | 2.23                  | 36.96                      | -7.19              | 202.54                     | -7.19              | 100.00                     |
| 205         | 2.06                  | 35.22                      | -6.67              | 206.36                     | -6.67              | 101.29                     |
| 210         | 2.25                  | 32.81                      | -5.90              | 205.66                     | -5.90              | 100.00                     |
| 215         | 2.08                  | 30.43                      | -5.08              | 213.50                     | -5.08              | 105.86                     |
| 220         | 1.77                  | 27.91                      | -4.14              | 227.46                     | -4.14              | 116.48                     |
| 225         | 1.55                  | 25.08                      | -2.98              | 241.27                     | -2.98              | 125.82                     |
| 230         | 1.15                  | 22.21                      | -1.66              | 264.22                     | -1.66              | 139.46                     |
| 235         | 0.89                  | 19.09                      | -0.02              | 289.29                     | -0.02              | 156.39                     |
| 240         | 1.02                  | 15.56                      | 2.20               | 297.68                     | 2.20               | 159.70                     |
| 245         | 1.79                  | 11.51                      | 5.48               | 293.40                     | 5.48               | 151.31                     |
| 250         | 2.15                  | 7.68                       | 9.87               | 318.40                     | 9.87               | 161.88                     |
| 255         | 2.20                  | 3.99                       | 16.98              | 538.81                     | 16.98              | 305.29                     |
| 260         | 1.87                  | 3.82                       | 17.44              | 712.20                     | 17.44              | 427.09                     |
| 265         | 0.87                  | 8.29                       | 9.04               | 365.37                     | 9.04               | 200.04                     |
| 270         | 0.34                  | 13.03                      | 4.12               | 370.55                     | 4.12               | 210.73                     |
| 275         | 0.23                  | 17.81                      | 0.73               | 358.70                     | 0.73               | 207.80                     |
| 280         | 0.26                  | 22.66                      | -1.88              | 334.75                     | -1.88              | 196.29                     |
| 285         | 0.34                  | 27.55                      | -4.00              | 307.92                     | -4.00              | 179.56                     |
| 290         | 0.31                  | 32.48                      | -5.79              | 299.32                     | -5.79              | 175.52                     |
| 295         | 0.00                  | 37.47                      | -7.34              | 302.76                     | -7.34              | 180.97                     |
| 300         | 0.00                  | 42.42                      | -8.69              | 293.76                     | -8.69              | 175.75                     |
| 305         | 0.00                  | 47.38                      | -9.89              | 285.98                     | -9.89              | 171.09                     |
| 310         | 0.00                  | 52.35                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 315         | 0.00                  | 57.32                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 320         | 0.00                  | 62.29                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 325         | 0.00                  | 67.27                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 330         | 0.00                  | 72.25                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 335         | 0.00                  | 77.23                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 340         | 0.00                  | 82.21                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 345         | 0.00                  | 87.19                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 350         | 0.00                  | 92.17                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 355         | 0.00                  | 97.15                      | -10.00             | 285.28                     | -10.00             | 170.66                     |



**COMSEARCH**<sup>®</sup>  
A CommScope Company

October 15, 2018

Re: AT&T Corp -  
ROARING CRK, PA  
Call Sign: WA33  
C-Band Transmit-Receive Earth Station  
Job Number: 181015COMSGE10

\*\*\*\* Expedited Response Requested by October 29, 2018 \*\*\*\*

\*\*\*\*\* Revision Notice \*\*\*\*\*

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached revised coordination data on behalf of AT&T Corp - for modifications to their existing C-Band Transmit-Receive Earth Stations in ROARING CRK, PA.

AT&T plans to add a C-band transmit/receive earth station to their existing teleport. Please update your database with the attached information. This proposed antenna will be co-located with existing large diameter C-band transmit/receive earth stations operating under similar parameters.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that were not previously reported, please contact us by October 29, 2018, as our client would like to expedite the filing of this earth station with the FCC.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Gary K. Edwards  
Senior Manager  
gedwards@comsearch.com

Enclosure(s)

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

Date: 10/15/2018  
Job Number: 181015COMSGE10

**Administrative Information**

Status ENGINEER PROPOSAL  
Call Sign WA33  
Licensee Code P1175P  
Licensee Name AT&T Corp -

**Site Information ROARING CRK, PA**

Venue Name  
Latitude (NAD 83) 40° 53' 37.8" N  
Longitude (NAD 83) 76° 26' 20.6" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 295.96 m / 971.0 ft

**Link Information**

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 4.6° W to 148.2° West Longitude  
Azimuth Range 102.1° to 257.8°  
Corresponding Elevation Angles 5.0° / 5.0°  
Antenna Centerline (AGL) 5.49 m / 18.0 ft

**Antenna Information**

|                          |                          | <b>Receive - FCC32</b> |       | <b>Transmit - FCC32</b> |         |
|--------------------------|--------------------------|------------------------|-------|-------------------------|---------|
| Manufacturer             |                          | Gen Dynamics           |       | Gen Dynamics            |         |
| Model                    |                          | Satcom                 |       | Satcom                  |         |
| Gain / Diameter          |                          | 53.5 dBi / 13.1 m      |       | 57.3 dBi / 13.1 m       |         |
| 3-dB / 15-dB Beamwidth   |                          | 0.38° / 0.76°          |       | 0.26° / 0.52°           |         |
| Max Available RF Power   | (dBW/4 kHz)<br>(dBW/MHz) |                        |       | -2.7<br>21.3            |         |
| Maximum EIRP             | (dBW/4 kHz)<br>(dBW/MHz) |                        |       | 54.6<br>78.6            |         |
| Interference Objectives: | Long Term                | -156.0 dBW/MHz         | 20%   | -154.0 dBW/4 kHz        | 20%     |
|                          | Short Term               | -146.0 dBW/MHz         | 0.01% | -131.0 dBW/4 kHz        | 0.0025% |

**Frequency Information**

|  | <b>Receive 4.0 GHz</b>              | <b>Transmit 6.1 GHz</b>             |
|--|-------------------------------------|-------------------------------------|
| Emission / Frequency Range (MHz)       | 54K6G7W - 72M0G7W / 3625.0 - 4200.0 | 54K6G7W - 72M0G7W / 5850.0 - 6425.0 |
| Max Great Circle Coordination Distance | 743.1 km / 461.7 mi                 | 448.0 km / 278.3 mi                 |
| Precipitation Scatter Contour Radius   | 621.4 km / 386.1 mi                 | 101.8 km / 63.2 mi                  |

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

**Coordination Values****ROARING CRK, PA**

|                                    |                         |       |  |                  |         |
|------------------------------------|-------------------------|-------|--|------------------|---------|
| Licensee Name                      | AT&T Corp -             |       |  |                  |         |
| Latitude (NAD 83)                  | 40° 53' 37.8" N         |       |  |                  |         |
| Longitude (NAD 83)                 | 76° 26' 20.6" W         |       |  |                  |         |
| Ground Elevation (AMSL)            | 295.96 m / 971.0 ft     |       |  |                  |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft        |       |  |                  |         |
| Antenna Model                      | Gen Dynamics 13.1 meter |       |  |                  |         |
| Antenna Mode                       | Receive 4.0 GHz         |       |  | Transmit 6.1 GHz |         |
| Interference Objectives: Long Term | -156.0 dBW/MHz          | 20%   |  | -154.0 dBW/4 kHz | 20%     |
| Short Term                         | -146.0 dBW/MHz          | 0.01% |  | -131.0 dBW/4 kHz | 0.0025% |
| Max Available RF Power             |                         |       |  | -2.7 (dBW/4 kHz) |         |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 4.0 GHz    |                            | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 0           | 0.00                  | 102.08                     | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 5           | 1.50                  | 97.11                      | -10.00             | 205.56                     | -10.00             | 104.66                     |
| 10          | 2.37                  | 92.12                      | -10.00             | 186.03                     | -10.00             | 100.00                     |
| 15          | 2.57                  | 87.12                      | -10.00             | 181.49                     | -10.00             | 100.00                     |
| 20          | 2.27                  | 82.13                      | -10.00             | 188.34                     | -10.00             | 100.00                     |
| 25          | 2.08                  | 77.14                      | -10.00             | 192.61                     | -10.00             | 100.00                     |
| 30          | 1.97                  | 72.15                      | -10.00             | 195.23                     | -10.00             | 100.00                     |
| 35          | 1.63                  | 67.16                      | -10.00             | 204.62                     | -10.00             | 101.55                     |
| 40          | 1.32                  | 62.18                      | -10.00             | 210.61                     | -10.00             | 109.27                     |
| 45          | 1.01                  | 57.21                      | -10.00             | 220.05                     | -10.00             | 117.42                     |
| 50          | 1.13                  | 52.22                      | -10.00             | 216.15                     | -10.00             | 114.12                     |
| 55          | 1.06                  | 47.25                      | -9.86              | 219.09                     | -9.86              | 116.44                     |
| 60          | 1.50                  | 42.24                      | -8.64              | 211.87                     | -8.64              | 108.73                     |
| 65          | 1.12                  | 37.29                      | -7.29              | 230.56                     | -7.29              | 122.57                     |
| 70          | 0.59                  | 32.39                      | -5.76              | 270.10                     | -5.76              | 149.29                     |
| 75          | 0.44                  | 27.47                      | -3.97              | 295.60                     | -3.97              | 169.37                     |
| 80          | 0.29                  | 22.59                      | -1.85              | 331.15                     | -1.85              | 193.55                     |
| 85          | 0.00                  | 17.81                      | 0.74               | 362.27                     | 0.74               | 210.39                     |
| 90          | 0.35                  | 12.96                      | 4.19               | 370.07                     | 4.19               | 210.28                     |
| 95          | 0.00                  | 8.67                       | 8.55               | 425.97                     | 8.55               | 245.15                     |
| 100         | 0.21                  | 5.20                       | 14.10              | 743.11                     | 14.10              | 448.01                     |
| 105         | 0.62                  | 5.21                       | 14.08              | 561.79                     | 14.08              | 322.71                     |
| 110         | 1.05                  | 8.44                       | 8.85               | 352.51                     | 8.85               | 191.17                     |
| 115         | 1.64                  | 11.62                      | 5.37               | 298.25                     | 5.37               | 155.13                     |
| 120         | 2.06                  | 14.83                      | 2.72               | 262.43                     | 2.72               | 133.16                     |
| 125         | 2.04                  | 18.26                      | 0.46               | 247.23                     | 0.46               | 126.50                     |
| 130         | 1.71                  | 21.80                      | -1.46              | 245.58                     | -1.46              | 127.37                     |
| 135         | 1.58                  | 25.06                      | -2.98              | 240.54                     | -2.98              | 125.27                     |
| 140         | 1.77                  | 27.91                      | -4.14              | 227.38                     | -4.14              | 116.41                     |
| 145         | 2.20                  | 30.34                      | -5.05              | 210.97                     | -5.05              | 103.60                     |
| 150         | 2.40                  | 32.69                      | -5.86              | 205.16                     | -5.86              | 100.00                     |
| 155         | 2.70                  | 34.65                      | -6.49              | 195.66                     | -6.49              | 100.00                     |
| 160         | 3.31                  | 35.98                      | -6.90              | 180.33                     | -6.90              | 100.00                     |
| 165         | 3.15                  | 37.61                      | -7.38              | 181.32                     | -7.38              | 100.00                     |
| 170         | 3.37                  | 38.48                      | -7.63              | 175.11                     | -7.63              | 100.00                     |
| 175         | 3.27                  | 39.24                      | -7.84              | 176.33                     | -7.84              | 100.00                     |
| 180         | 3.12                  | 39.61                      | -7.95              | 179.24                     | -7.95              | 100.00                     |
| 185         | 2.85                  | 39.65                      | -7.96              | 185.09                     | -7.96              | 100.00                     |

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5662 <http://www.comsearch.com>

**Coordination Values****ROARING CRK, PA**

|                                    |                         |       |  |                  |         |
|------------------------------------|-------------------------|-------|--|------------------|---------|
| Licensee Name                      | AT&T Corp -             |       |  |                  |         |
| Latitude (NAD 83)                  | 40° 53' 37.8" N         |       |  |                  |         |
| Longitude (NAD 83)                 | 76° 26' 20.6" W         |       |  |                  |         |
| Ground Elevation (AMSL)            | 295.96 m / 971.0 ft     |       |  |                  |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft        |       |  |                  |         |
| Antenna Model                      | Gen Dynamics 13.1 meter |       |  |                  |         |
| Antenna Mode                       | Receive 4.0 GHz         |       |  | Transmit 6.1 GHz |         |
| Interference Objectives: Long Term | -156.0 dBW/MHz          | 20%   |  | -154.0 dBW/4 kHz | 20%     |
| Short Term                         | -146.0 dBW/MHz          | 0.01% |  | -131.0 dBW/4 kHz | 0.0025% |
| Max Available RF Power             |                         |       |  | -2.7 (dBW/4 kHz) |         |

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 4.0 GHz    |                            | Transmit 6.1 GHz   |                            |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
|             |                       |                            | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 190         | 2.85                  | 38.99                      | -7.77              | 186.04                     | -7.77              | 100.00                     |
| 195         | 2.43                  | 38.29                      | -7.58              | 196.29                     | -7.58              | 100.00                     |
| 200         | 2.23                  | 36.96                      | -7.19              | 202.54                     | -7.19              | 100.00                     |
| 205         | 2.06                  | 35.22                      | -6.67              | 206.36                     | -6.67              | 101.29                     |
| 210         | 2.25                  | 32.81                      | -5.90              | 205.66                     | -5.90              | 100.00                     |
| 215         | 2.08                  | 30.43                      | -5.08              | 213.50                     | -5.08              | 105.86                     |
| 220         | 1.77                  | 27.91                      | -4.14              | 227.46                     | -4.14              | 116.48                     |
| 225         | 1.55                  | 25.08                      | -2.98              | 241.27                     | -2.98              | 125.82                     |
| 230         | 1.15                  | 22.21                      | -1.66              | 264.22                     | -1.66              | 139.46                     |
| 235         | 0.89                  | 19.09                      | -0.02              | 289.29                     | -0.02              | 156.39                     |
| 240         | 1.02                  | 15.56                      | 2.20               | 297.68                     | 2.20               | 159.70                     |
| 245         | 1.79                  | 11.51                      | 5.48               | 293.40                     | 5.48               | 151.31                     |
| 250         | 2.15                  | 7.68                       | 9.87               | 318.40                     | 9.87               | 161.88                     |
| 255         | 2.20                  | 3.99                       | 16.98              | 555.17                     | 16.98              | 316.11                     |
| 260         | 1.87                  | 3.82                       | 17.44              | 740.37                     | 17.44              | 445.91                     |
| 265         | 0.87                  | 8.29                       | 9.04               | 365.37                     | 9.04               | 200.04                     |
| 270         | 0.34                  | 13.03                      | 4.12               | 370.55                     | 4.12               | 210.73                     |
| 275         | 0.23                  | 17.81                      | 0.73               | 358.70                     | 0.73               | 207.80                     |
| 280         | 0.26                  | 22.66                      | -1.88              | 334.75                     | -1.88              | 196.29                     |
| 285         | 0.34                  | 27.55                      | -4.00              | 307.92                     | -4.00              | 179.56                     |
| 290         | 0.31                  | 32.48                      | -5.79              | 299.32                     | -5.79              | 175.52                     |
| 295         | 0.00                  | 37.47                      | -7.34              | 302.76                     | -7.34              | 180.97                     |
| 300         | 0.00                  | 42.42                      | -8.69              | 293.76                     | -8.69              | 175.75                     |
| 305         | 0.00                  | 47.38                      | -9.89              | 285.98                     | -9.89              | 171.09                     |
| 310         | 0.00                  | 52.35                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 315         | 0.00                  | 57.32                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 320         | 0.00                  | 62.29                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 325         | 0.00                  | 67.27                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 330         | 0.00                  | 72.25                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 335         | 0.00                  | 77.23                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 340         | 0.00                  | 82.21                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 345         | 0.00                  | 87.19                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 350         | 0.00                  | 92.17                      | -10.00             | 285.28                     | -10.00             | 170.66                     |
| 355         | 0.00                  | 97.15                      | -10.00             | 285.28                     | -10.00             | 170.66                     |