

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**WML Services, LLC**  
**ATLANTA, GA**  
**Satellite Earth Station**

Prepared By:  
COMSEARCH  
21515 Ridgetop Circle, Suite 300  
Sterling, VA 20166  
March 22, 2023

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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**

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

### 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 03/09/2023.

#### Company

Alabama Great Southern Railroad Company  
Baldwin County Sheriffs Office  
Barrow County Emergency Services  
Bartow, County of  
CableLabs  
Calhoun County 911 District  
Cellco Partnership - AL/SC  
Cellco Partnership - Georgia/Western NC  
Central of Georgia Railway Company  
Clayton, County of  
Cobb, County of  
Conterra Ultra Broadband, LLC  
Conyers, City of  
Coweta County  
DeKalb County Police Department  
Diverse Power Inc  
Douglas County Sheriff Office  
Fayette County  
Floyd County  
Fulton, County of  
Georgia System Operations Corporation  
Greene County E911  
Gwinnett County Government  
Hall County 9-1-1  
Henry County Emergency Communications  
Jackson County Emergency Services  
Jackson Electric Membership Corporation  
Macon-Bibb County Government  
Metropolitan Atlanta Rapid Transit Auth  
Monroe, County of (GA)  
New Cingular Wireless PCS LLC - AL, MS  
New Cingular Wireless PCS LLC - Georgia  
Norfolk Southern Railway Company  
Oconee County Sheriffs Office  
Olympic Wireless, LLC  
One Ring Networks, Inc.  
Polk County  
PowerSouth Energy Cooperative  
Public Service Telephone Company  
Public Service Towers, Inc.

Southern Company Services, Inc.  
T-Mobile License LLC  
Walton County Georgia

## **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: 03/22/2023  
Job Number: 230309COMSGE08

### Administrative Information

Status: ENGINEER PROPOSAL  
Call Sign:  
Licensee Code: WMLSER  
Licensee Name: WML Services, LLC

### Site Information

#### ATLANTA, GA

Venue Name: CAMP ANT 15  
Latitude (NAD 83): 33° 41' 26.0" N  
Longitude (NAD 83): 84° 37' 19.0" W  
Climate Zone: A  
Rain Zone: 1  
Ground Elevation (AMSL): 251.5 m / 825.1 ft

### Link Information

Satellite Type: Geostationary  
Mode: TO - Transmit-Only  
Modulation: Digital  
Satellite Arc: 15° W to 95° West Longitude  
Azimuth Range: 101.6° to 198.3°  
Corresponding Elevation Angles: 8.2° / 49.3°  
Antenna Centerline (AGL): 5.49 m / 18.0 ft

### Antenna Information

#### Transmit - FCC32

Manufacturer: Andrews  
Model: ES93C-1  
Gain / Diameter: 53.7 dBi / 9.3 m  
3-dB / 15-dB Beamwidth: 0.32° / 0.65°

Max Available RF Power (dBW/4 kHz): -17.8  
(dBW/MHz): 6.2

Maximum EIRP (dBW/4 kHz): 35.9  
(dBW/MHz): 59.9

Interference Objectives: Long Term: -154.0 dBW/4 kHz 20%  
Short Term: -131.0 dBW/4 kHz 0.0025%

### Frequency Information

#### Transmit 6.1 GHz

Emission / Frequency Range (MHz): 36M0G7F / 5925.0 - 6425.0

Max Great Circle Coordination Distance: 189.0 km / 117.4 mi  
Precipitation Scatter Contour Radius: 100.0 km / 62.1 mi



# COMSEARCH

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### Coordination Values

### ATLANTA, GA

Licensee Name WML Services, LLC  
Latitude (NAD 83) 33° 41' 26.0" N  
Longitude (NAD 83) 84° 37' 19.0" W  
Ground Elevation (AMSL) 251.5 m / 825.1 ft  
Antenna Centerline (AGL) 5.49 m / 18.0 ft  
Antenna Model Andrews 9.3 meter  
Antenna Mode Transmit 6.1 GHz  
Interference Objectives: Long Term -154.0 dBW/4 kHz 20%  
Short Term -131.0 dBW/4 kHz 0.0025%  
Max Available RF Power -17.8 (dBW/4 kHz)

| Azimuth (°) | Horizon<br>Elevation (°) | Antenna<br>Discrimination (°) | Transmit 6.1 GHz      |                               |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|
|             |                          |                               | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) |
| 0           | 0.55                     | 101.54                        | -10.00                | 100.00                        |
| 5           | 0.80                     | 96.59                         | -10.00                | 100.00                        |
| 10          | 0.59                     | 91.63                         | -10.00                | 100.00                        |
| 15          | 0.49                     | 86.68                         | -10.00                | 100.00                        |
| 20          | 0.34                     | 81.73                         | -10.00                | 111.75                        |
| 25          | 0.00                     | 76.79                         | -10.00                | 122.77                        |
| 30          | 0.00                     | 71.84                         | -10.00                | 122.77                        |
| 35          | 0.53                     | 66.87                         | -10.00                | 100.00                        |
| 40          | 0.74                     | 61.91                         | -10.00                | 100.00                        |
| 45          | 0.76                     | 56.96                         | -10.00                | 100.00                        |
| 50          | 1.13                     | 51.99                         | -10.00                | 100.00                        |
| 55          | 0.99                     | 47.08                         | -9.82                 | 100.00                        |
| 60          | 0.89                     | 42.17                         | -8.63                 | 100.00                        |
| 65          | 1.06                     | 37.24                         | -7.28                 | 100.00                        |
| 70          | 0.98                     | 32.38                         | -5.76                 | 100.00                        |
| 75          | 0.86                     | 27.58                         | -4.01                 | 100.00                        |
| 80          | 0.74                     | 22.85                         | -1.97                 | 109.02                        |
| 85          | 0.85                     | 18.17                         | 0.52                  | 111.06                        |
| 90          | 0.93                     | 13.72                         | 3.57                  | 116.14                        |
| 95          | 1.64                     | 9.35                          | 7.73                  | 109.09                        |
| 100         | 0.60                     | 7.80                          | 9.69                  | 188.99                        |
| 105         | 1.58                     | 7.45                          | 10.19                 | 118.63                        |
| 110         | 0.68                     | 11.24                         | 5.73                  | 133.70                        |
| 115         | 0.53                     | 15.29                         | 2.39                  | 131.16                        |
| 120         | 0.75                     | 19.11                         | -0.03                 | 113.88                        |
| 125         | 0.65                     | 23.05                         | -2.07                 | 112.91                        |
| 130         | 0.31                     | 27.04                         | -3.80                 | 129.95                        |
| 135         | 0.24                     | 30.75                         | -5.20                 | 132.49                        |
| 140         | 0.42                     | 34.14                         | -6.33                 | 114.80                        |
| 145         | 0.63                     | 37.31                         | -7.29                 | 100.07                        |
| 150         | 0.45                     | 40.50                         | -8.19                 | 107.71                        |
| 155         | 0.47                     | 43.26                         | -8.90                 | 104.13                        |
| 160         | 0.84                     | 45.38                         | -9.42                 | 100.00                        |
| 165         | 0.54                     | 47.59                         | -9.94                 | 100.00                        |
| 170         | 0.50                     | 49.11                         | -10.00                | 100.00                        |
| 175         | 0.43                     | 50.09                         | -10.00                | 104.46                        |
| 180         | 0.00                     | 50.83                         | -10.00                | 122.77                        |
| 185         | 0.56                     | 49.96                         | -10.00                | 100.00                        |

# COMSEARCH

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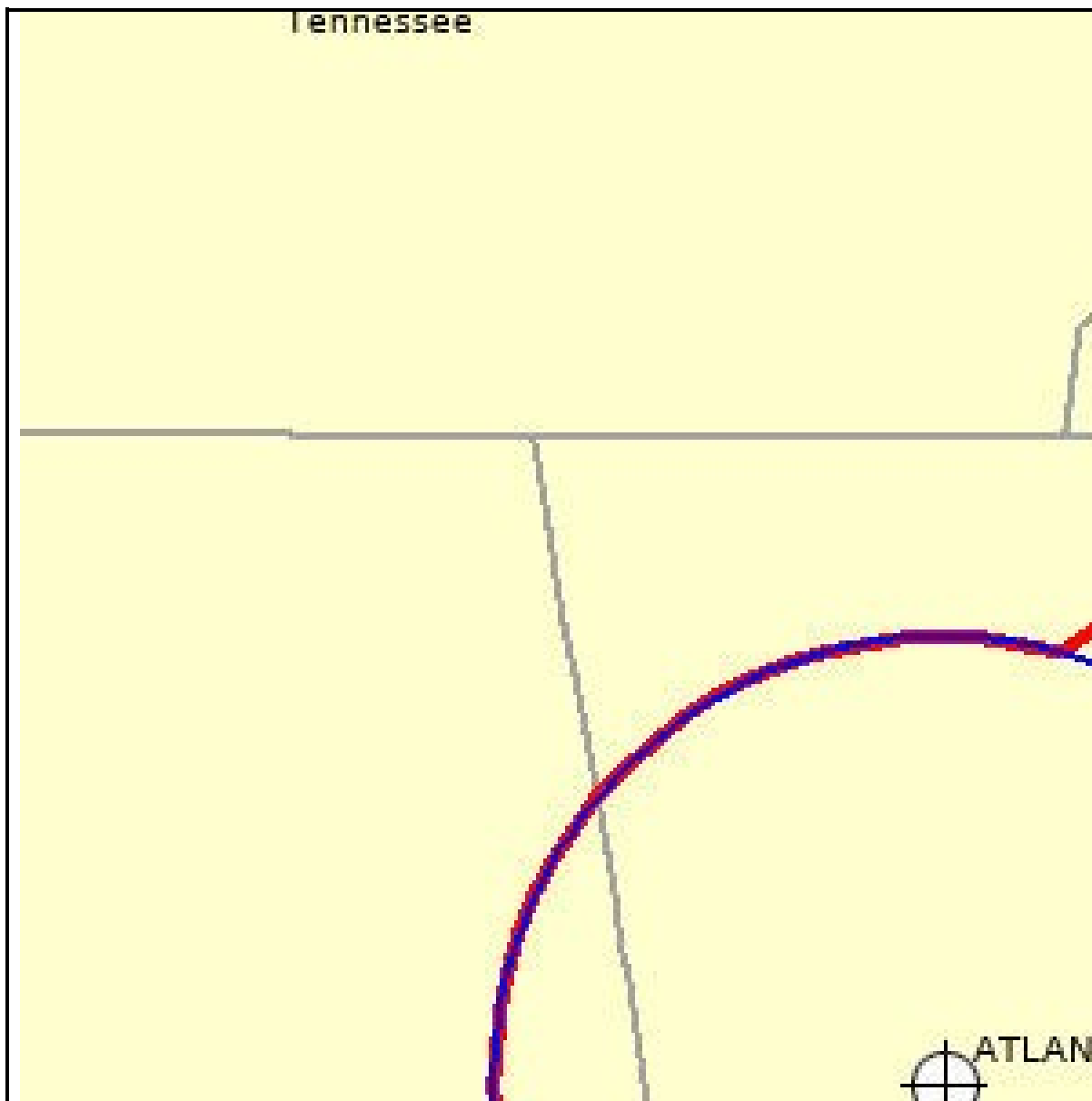
### Coordination Values

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| Azimuth (°) | Horizon<br>Elevation (°) | Antenna<br>Discrimination (°) | Transmit 6.1 GHz      |                               |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|
|             |                          |                               | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) |
| 190         | 0.34                     | 49.44                         | -10.00                | 111.17                        |
| 195         | 0.25                     | 49.09                         | -10.00                | 118.29                        |
| 200         | 0.00                     | 49.29                         | -10.00                | 122.77                        |
| 205         | 0.97                     | 48.65                         | -10.00                | 100.00                        |
| 210         | 0.69                     | 49.62                         | -10.00                | 100.00                        |
| 215         | 0.32                     | 51.03                         | -10.00                | 113.01                        |
| 220         | 0.00                     | 52.69                         | -10.00                | 122.77                        |
| 225         | 0.00                     | 54.35                         | -10.00                | 122.77                        |
| 230         | 0.00                     | 56.29                         | -10.00                | 122.77                        |
| 235         | 0.00                     | 58.47                         | -10.00                | 122.77                        |
| 240         | 0.00                     | 60.86                         | -10.00                | 122.77                        |
| 245         | 0.00                     | 63.43                         | -10.00                | 122.77                        |
| 250         | 0.30                     | 66.01                         | -10.00                | 114.98                        |
| 255         | 0.33                     | 68.88                         | -10.00                | 111.93                        |
| 260         | 0.62                     | 71.76                         | -10.00                | 100.00                        |
| 265         | 0.55                     | 74.89                         | -10.00                | 100.00                        |
| 270         | 0.56                     | 78.06                         | -10.00                | 100.00                        |
| 275         | 0.58                     | 81.29                         | -10.00                | 100.00                        |
| 280         | 0.65                     | 84.55                         | -10.00                | 100.00                        |
| 285         | 0.73                     | 87.84                         | -10.00                | 100.00                        |
| 290         | 0.77                     | 91.15                         | -10.00                | 100.00                        |
| 295         | 0.85                     | 94.46                         | -10.00                | 100.00                        |
| 300         | 0.96                     | 97.77                         | -10.00                | 100.00                        |
| 305         | 0.88                     | 101.02                        | -10.00                | 100.00                        |
| 310         | 0.86                     | 104.23                        | -10.00                | 100.00                        |
| 315         | 0.82                     | 107.36                        | -10.00                | 100.00                        |
| 320         | 0.88                     | 110.44                        | -10.00                | 100.00                        |
| 325         | 0.98                     | 113.45                        | -10.00                | 100.00                        |
| 330         | 0.97                     | 116.29                        | -10.00                | 100.00                        |
| 335         | 0.95                     | 118.96                        | -10.00                | 100.00                        |
| 340         | 0.96                     | 121.36                        | -10.00                | 100.00                        |
| 345         | 0.82                     | 116.41                        | -10.00                | 100.00                        |
| 350         | 0.52                     | 111.44                        | -10.00                | 100.00                        |
| 355         | 0.51                     | 106.49                        | -10.00                | 100.00                        |

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**WML Services, LLC**



**Legend:**

Scale: 1:3,000,000

Great Circle: 6.1 GHz 

Precipitation Scatter: 6.1 GHz 

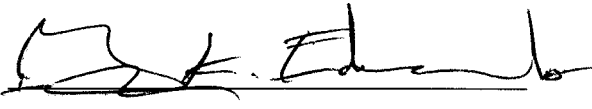
Earth Station Site: 



**COMSEARCH®**  
21515 Ridgetop Circle, Suite  
300  
Sterling, VA 20166

## 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  
21515 Ridgetop Circle, Suite 300  
Sterling, VA 20166

DATED: March 22, 2023