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Calculated Radio Frequency Emissions Report



North Smithfield Relo
51 Industrial Drive, North Smithfield, RI 02896

September 27, 2024

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the installation of AT&T, T-Mobile and Verizon's antenna arrays to be mounted at 127', 115', 116', 118', 135', 138.8' and 139.6' on a proposed monopole tower located at 51 Industrial Drive in North Smithfield, RI. The coordinates of the tower are 41° 59' 38.10" N, 71° 34' 15.88" W.

AT&T is proposing the following:

- 1) Install nine (9) multi-band antennas, three (3) per sector to support its commercial LTE and 5G network.

T-Mobile is proposing the following:

- 2) Install nine (9) multi-band antennas, three (3) per sector to support its commercial LTE and 5G network.

Verizon is proposing the following:

- 3) Install twelve (12) multi-band antennas, four (4) per sector to support its commercial LTE and 5G network.

This report considers the planned antenna configuration for AT&T¹, T-Mobile² and Verizon³ to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the documents referenced in Attachment A of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and presents the Maximum Exposure Limit.

¹ As referenced to AT&T's LE OAA790463 Exhibit A, dated 07/18/2024

² As referenced to T-Mobile's Radio Frequency Design Sheet updated 08/21/2024

³ As referenced to Verizon's Radio Frequency Design Sheet updated 07/26/2024.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

$$R = \text{Radial Distance} = \sqrt{(H^2 + V^2)}$$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 2.0

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Antenna Inventory

Table 1 below outlines AT&T, T-Mobile and Verizon's proposed antenna configuration for the site. The associated antenna model data and antenna patterns for these specific antenna models are included in Attachments C, D and E.

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
AT&T	Alpha 90°	739	240	15.7	8917	OPA65R-BU8D	75	0	8	127
		850	240	16.6	10970		63			
		763	160	15.6	5809.2		74			
		1900	240	18.1	15496	TPA-65R-BU8D	17.1	0	8	127
		2100	240	18.3	16226		18.3			
		3500	200	19.1	16257		-	0	3	127
	Beta 210°	3700	200	18.9	15525	AIR6472	-			
		739	120	15.7	8917		75	0	8	127
		850	120	16.6	10970		63			
		763	160	15.6	5809		74			
T-Mobile	Alpha 30°	1900	160	18.1	15496	TPA-65R-BU8D	17.1	0	8	127
		2100	240	18.3	16226		18.3			
		3500	200	19.1	16257		-			
		3700	200	18.9	15525	AIR6472	-	0	3	127
		739	120	15.7	8917		75			
	Beta 150°	850	120	16.6	10970	OPA65R-BU8D	63	0	8	127
		763	160	15.6	5809		74			
		1900	160	18.1	15496		17.1			
		2100	240	18.3	16226	TPA-65R-BU8D	18.3	0	8	127
		3500	200	19.1	16257		-			
Verizon	Gamma 320°	3700	200	18.9	15525	AIR6472	-	0	3	127
		739	120	15.7	8917		75			
		850	120	16.6	10970		63			
		763	160	15.6	5809	TPA-65R-BU8D	74	0	8	127
		1900	160	18.1	15496		17.1			
	Gamma 270°	2100	240	18.3	16226	AIR6472	18.3	0	8	127
		3500	200	19.1	16257		-			
		3700	200	18.9	15525		-			
		739	120	15.7	8917	OVA65R-BU8D	75	0	8	115
		850	120	16.4	10984.3		63			
Verizon	Alpha 90°	1900	140	18.7	10378	APNVLL19P_43-C-A20	65	0	6.32	116
		2100	140	19.4	12193		65			
		2500	320	24.8	96638		60	0	2.76	118
		600	240	15.8	9124.5	APNVLL19P_43-C-A20	70			
		700	160	16.4	6984.3		60			
	Beta 215°	1900	140	18.7	10378	APNVLL19P_43-C-A20	65	0	6.32	116
		2100	140	19.4	12193		65			
		2500	320	24.8	96638		60	0	2.76	118
		600	240	15.8	9124.5	APXVVA11L24M-U-J20	70			
		700	160	16.4	6984.3		60			
Verizon	Gamma 330°	1900	140	18.7	10378	APXVLL19P_43-C-A20	65	0	6.32	116
		2100	140	19.4	12193		65			
		2500	320	24.8	96638		60	0	2.76	118
		700	160	14.4	4407	NIH1-85B-R2B	83	0	6.07	137
		850	160	14.4	4407		87			
Verizon	Alpha 90°	1900	160	17.6	9207	NIH1-85B-R2B	79	0	6.07	137
		2100	240	17.9	14798		78			
		3500	20	12.52	357		-	0	1	139.6
		3700	320	25.5	113540	MT6413-77A	-			
		700	160	14.4	4407		-			
Verizon	Beta 215°	700	160	14.4	4407	NIH1-85B-R2B	83	0	6.07	137
		850	160	14.4	4407		87			
		1900	160	17.6	9207		79			
		2100	240	17.9	14798	R0440CC	78	0	1	139.6
		3500	20	12.52	357		-			
Verizon	Gamma 330°	700	160	14.4	4407	NIH1-85B-R2B	83	0	6.07	137
		850	160	14.4	4407		87			
		1900	160	17.6	9207		79			
		2100	240	17.9	14798	R0440CC	78	0	1	139.6
		3500	20	12.52	357		-			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	138.8
		700	160	14.4	4407		-			

Table 1: Proposed Antenna Inventory^{4,5,6,7}

⁴ Antenna heights are in reference to AT&T's LE OAA790463 Exhibit A, dated 07/18/2024.

⁵ Antenna heights are in reference referenced to T-Mobile's Radio Frequency Design Sheet updated 08/21/2024.

⁶ Antenna heights are in reference to Verizon's Radio Frequency Design Sheet updated 07/26/2024.

⁷ Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

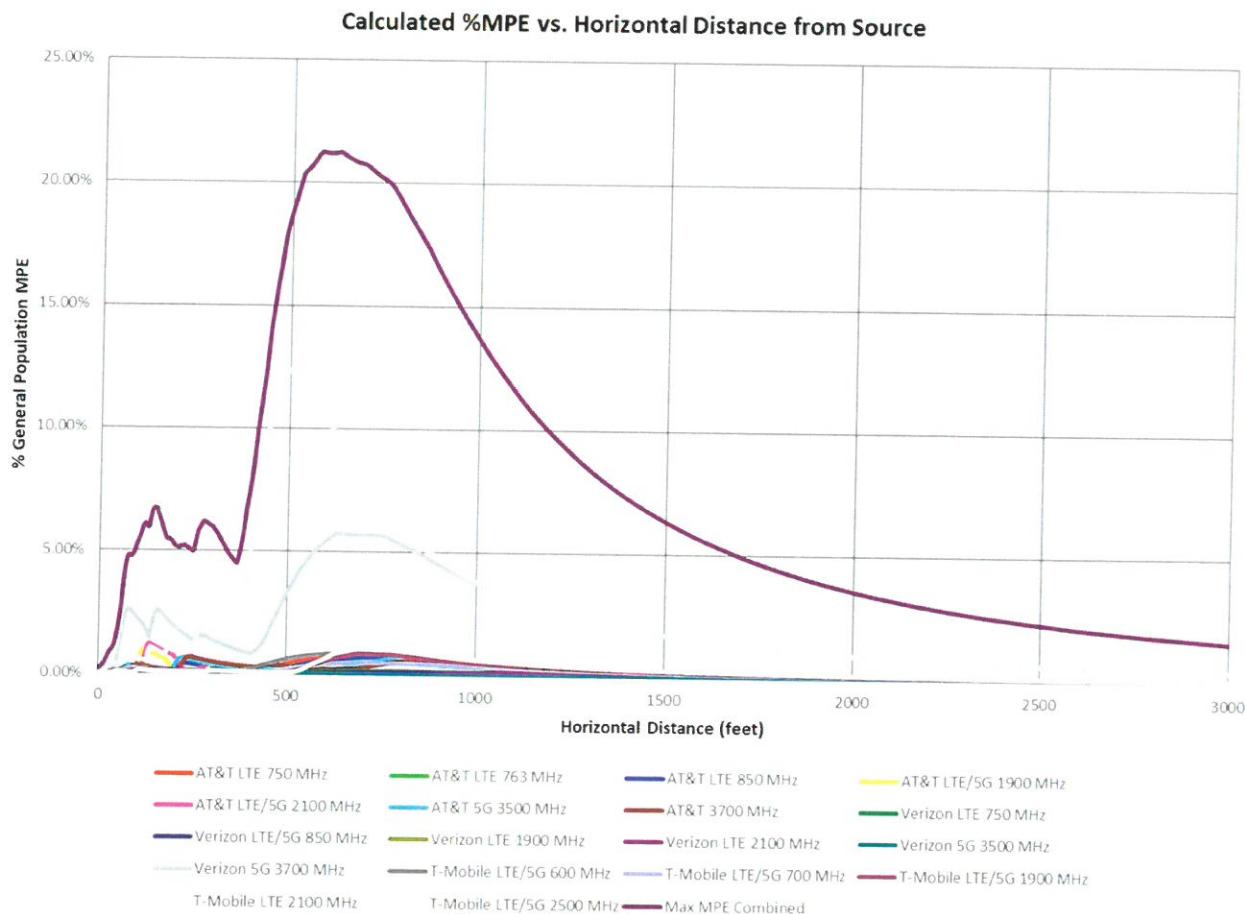


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (21.26% of the General Population limit) is calculated to occur at a horizontal distance of 576 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 576 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	% MPE
AT&T 3700 MHz	1	200.0	127.0	576	0.002638	1.000	0.26%
AT&T 5G 3500 MHz	1	200.0	127.0	576	0.001753	1.000	0.18%
AT&T LTE 750 MHz	1	240.0	127.0	576	0.003502	0.500	0.70%
AT&T LTE 763 MHz	1	160.0	127.0	576	0.002386	0.509	0.47%
AT&T LTE 850 MHz	1	240.0	127.0	576	0.002959	0.567	0.52%
AT&T LTE/5G 1900 MHz	1	240.0	127.0	576	0.001364	1.000	0.14%
AT&T LTE/5G 2100 MHz	1	240.0	127.0	576	0.001424	1.000	0.14%
T-Mobile LTE 2100 MHz	1	240.0	116.0	576	0.004772	1.000	0.48%
T-Mobile LTE/5G 1900 MHz	1	240.0	116.0	576	0.004363	1.000	0.44%
T-Mobile LTE/5G 2500 MHz	1	320.0	118.0	576	0.112956	1.000	11.30%
T-Mobile LTE/5G 600 MHz	1	240.0	115.0	576	0.003229	0.400	0.81%
T-Mobile LTE/5G 700 MHz	1	160.0	115.0	576	0.001796	0.467	0.38%
Verizon 5G 3500 MHz	1	20.0	139.6	576	0.000350	1.000	0.04%
Verizon 5G 3700 MHz	1	320.0	138.8	576	0.051130	1.000	5.11%
Verizon LTE 1900 MHz	1	160.0	137.0	576	0.000381	1.000	0.04%
Verizon LTE 2100 MHz	1	240.0	137.0	576	0.000627	1.000	0.06%
Verizon LTE 750 MHz	1	160.0	137.0	576	0.000711	0.500	0.14%
Verizon LTE/5G 850 MHz	1	160.0	137.0	576	0.000351	0.567	0.06%
						Total	21.26%

Table 2: Maximum Percent of General Population Exposure Values⁸⁹¹⁰

⁸ Frequencies listed are representative of the operating band and are not the specific operating frequency.

⁹ The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

¹⁰ In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna.

6. Conclusion

The above analysis verifies that RF exposure levels from the site with AT&T, T-Mobile and Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **21.26%** of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 576 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

September 27, 2024

Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure¹¹

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure¹²

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

¹¹ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

¹² General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

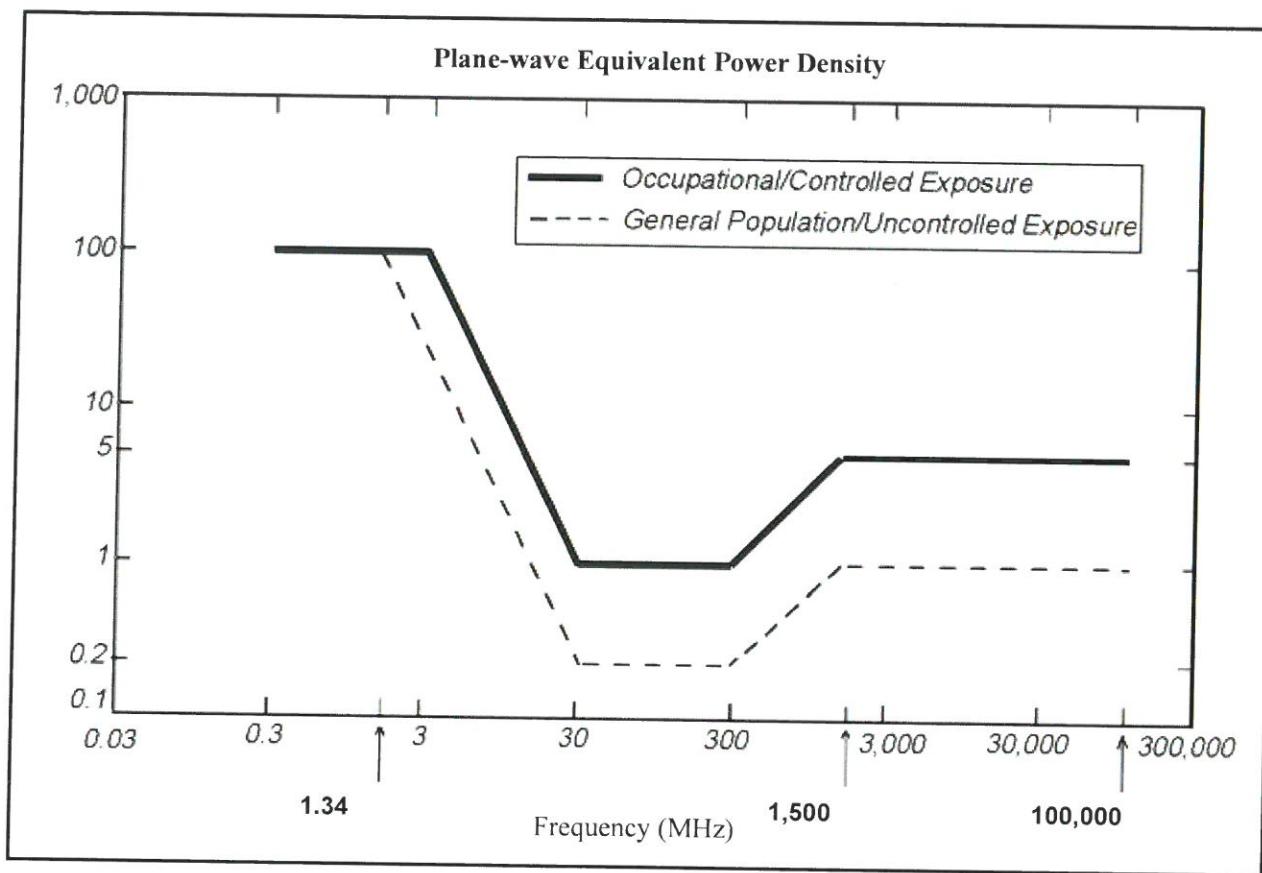
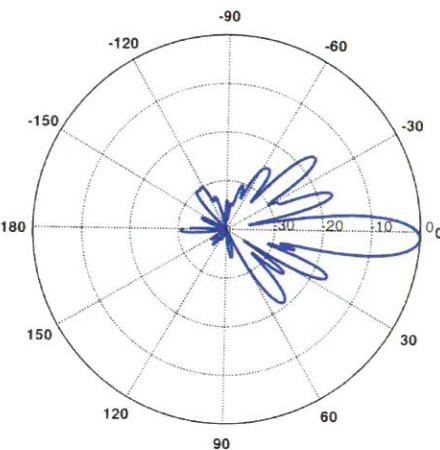
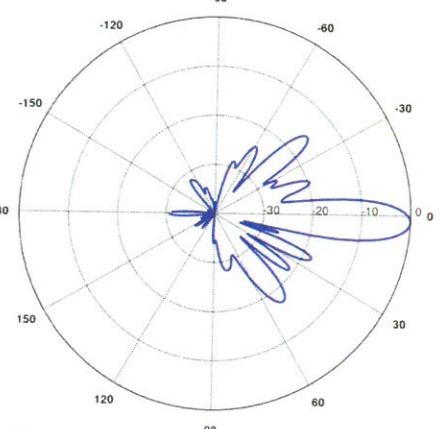
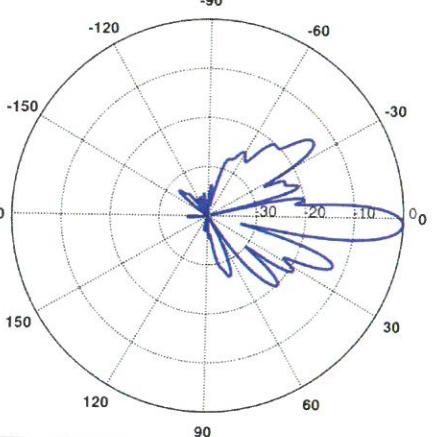


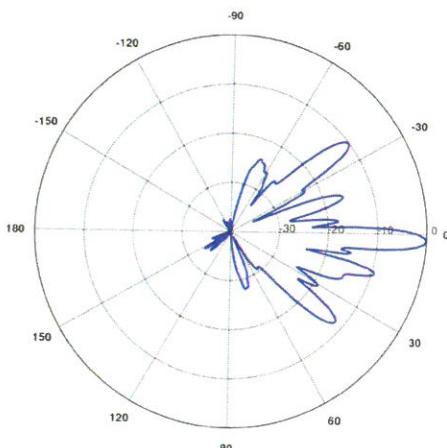
Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Model Data Sheets and Electrical Patterns

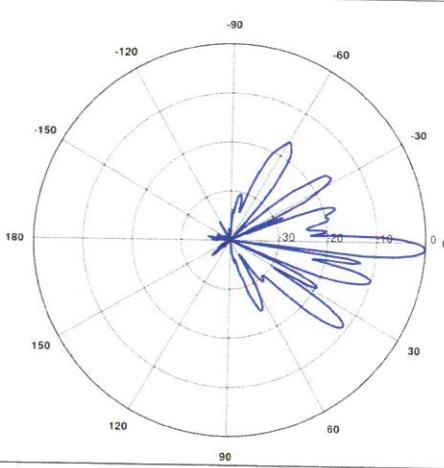
<p>739 MHz</p> <p>Manufacturer: CCI Model #: OPA-65R-BU8D Frequency Band: 698-806 MHz Gain: 15.7 dBi Vertical Beamwidth: 9.5° Horizontal Beamwidth: 75° Polarization: Dual Linear 45° Dimensions (L x W x D): 96" x 20.7" x 7.7"</p>	
<p>763 MHz</p> <p>Manufacturer: CCI Model #: TPA-65R-BU8D Frequency Band: 698-806 MHz Gain: 15.6 dBi Vertical Beamwidth: 9.5° Horizontal Beamwidth: 73° Polarization: Dual Linear 45° Dimensions (L x W x D): 96" x 21" x 7.8"</p>	
<p>885 MHz</p> <p>Manufacturer: CCI Model #: OPA65R-BU8D Frequency Band: 824-896 MHz Gain: 16.4 dBi Vertical Beamwidth: 8° Horizontal Beamwidth: 63° Polarization: Dual Linear 45° Dimensions (L x W x D): 96" x 20.7" x 7.7"</p>	

1900 MHz

Manufacturer: CCI
Model #: TPA-65R-BU8D
Frequency Band: 1850-1990 MHz
Gain: 18.1 dBi
Vertical Beamwidth: 5.2°
Horizontal Beamwidth: 66°
Polarization: Dual Linear 45°
Dimensions (L x W x D): 96" x 21" x 7.8"

**2100 MHz**

Manufacturer: CCI
Model #: TPA-65R-BU8D
Frequency Band: 1920-2180 MHz
Gain: 18.3 dBi
Vertical Beamwidth: 4.8°
Horizontal Beamwidth: 66°
Polarization: Dual Linear 45°
Dimensions (L x W x D): 96" x 21" x 7.8"



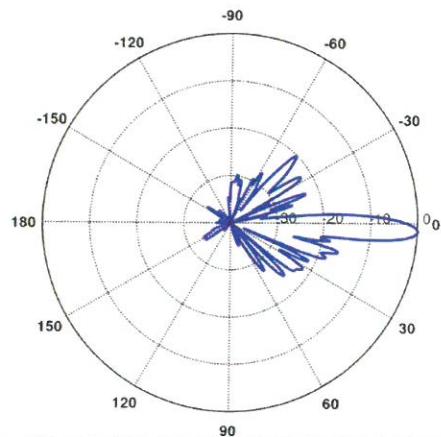
Attachment D: T-Mobile Antenna Model Data Sheets and Electrical Patterns¹³

600 MHz <p> Manufacturer: AMPHENOL Model #: APXVAALL24M-U-J20 Frequency Band: 617-698 MHz Gain: 15.8 dBi Vertical Beamwidth: 9.8° Horizontal Beamwidth: 70° Polarization: ±45° Dimensions (L x W x D): 95.7" x 19.7" x 8.5" </p>	N/A
700 MHz <p> Manufacturer: AMPHENOL Model #: APXVAALL24M-U-J20 Frequency Band: 698-806 MHz Gain: 16.4 dBi Vertical Beamwidth: 9.1° Horizontal Beamwidth: 60° Polarization: ±45° Dimensions (L x W x D): 95.7" x 19.7" x 8.5" </p>	N/A

¹³ In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna

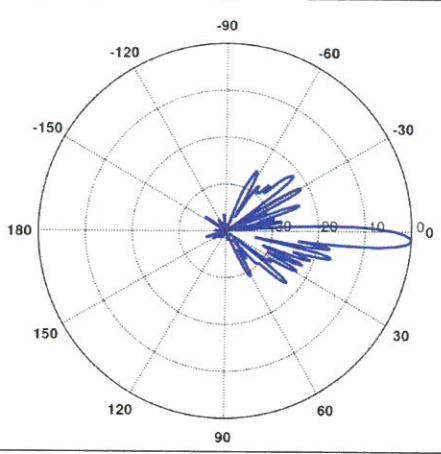
1900 MHz

Manufacturer: RFS
 Model #: APXVLL19P_43-C-A20
 Frequency Band: 1850-1990 MHz
 Gain: 18.7 dBi
 Vertical Beamwidth: 5.3°
 Horizontal Beamwidth: 65°
 Polarization: ±45°
 Dimensions (L x W x D): 75.8" x 11.3" x 4.6"

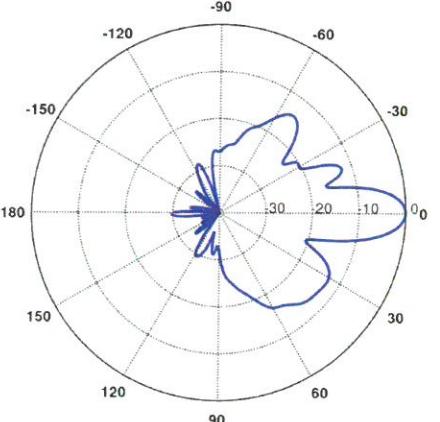
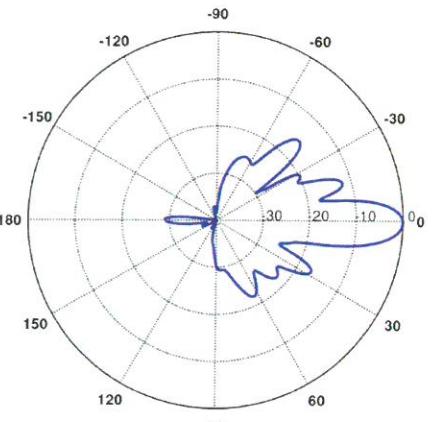


2100 MHz

Manufacturer: RFS
 Model #: APXVLL19P_43-C-A20
 Frequency Band: 1920-2200 MHz
 Gain: 19.4 dBi
 Vertical Beamwidth: 4.9°
 Horizontal Beamwidth: 65°
 Polarization: ±45°
 Dimensions (L x W x D): 75.8" x 11.3" x 4.6"

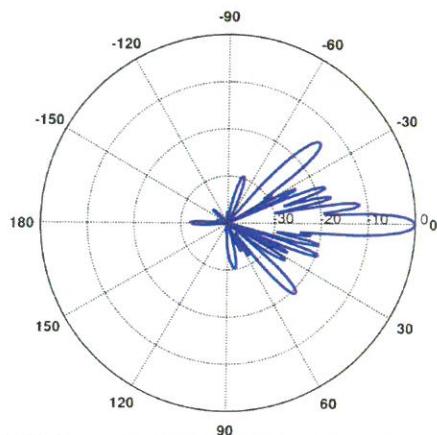


Attachment E: Verizon Antenna Model Data Sheets and Electrical Patterns

<p>750 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NHH-85B-R2B Frequency Band: 617-806 MHz Gain: 14.4 dBi Vertical Beamwidth: 12.3° Horizontal Beamwidth: 83° Polarization: ±45° Dimensions (L x W x D): 72.87" x 11.85" x 7.08"</p>	
<p>885 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NHH-85B-R2B Frequency Band: 806-896 MHz Gain: 14.4 dBi Vertical Beamwidth: 11.2° Horizontal Beamwidth: 87° Polarization: ±45° Dimensions (L x W x D): 72.87" x 11.85" x 7.08"</p>	

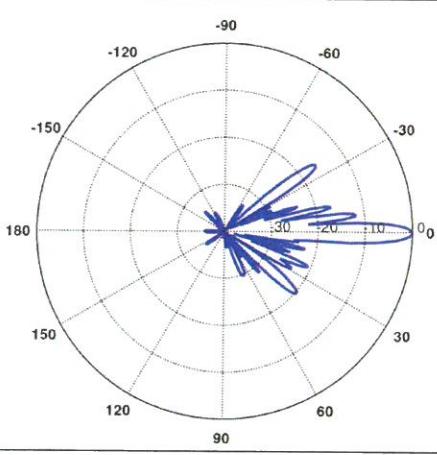
1900 MHz

Manufacturer: COMMSCOPE
 Model #: NHH-85B-R2B
 Frequency Band: 1850-1990 MHz
 Gain: 17.6 dBi
 Vertical Beamwidth: 5.3°
 Horizontal Beamwidth: 79°
 Polarization: ±45°
 Dimensions (L x W x D): 72.87" x 11.85" x 7.08"



2100 MHz

Manufacturer: COMMSCOPE
 Model #: NHH-85B-R2B
 Frequency Band: 1920-2200 MHz
 Gain: 17.9 dBi
 Vertical Beamwidth: 5°
 Horizontal Beamwidth: 78°
 Polarization: ±45°
 Dimensions (L x W x D): 72.87" x 11.85" x 7.08"



* Federal Airways & Airspace *
* Summary Report: New Construction *
* Antenna Structure *

Airspace User: Not Identified

File: 211903

Location: SLATERSVILLE, RI

Latitude: 41°-59'-38.1" Longitude: 71°-34'-15.88"

SITE ELEVATION AMSL.....342 ft.
STRUCTURE HEIGHT.....150 ft.
OVERALL HEIGHT AMSL.....492 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL)
FAR 77.9(b): NNR (DNE Notice Slope)
FAR 77.9(c): NNR (Not a Traverse Way)
FAR 77.9: NNR FAR 77.9 IFR Notice for SFZ
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 1B6
FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required

NNR = Notice Not Required

PNR = Possible Notice Required (depends upon actual IFR procedure)
For new construction review Air Navigation Facilities at bottom
of this report.

Notice to the FAA is not required at the analyzed location and height for
slope, height or Straight-In procedures. Please review the 'Air Navigation'
section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL
FAR 77.17(a)(2): DNE - Airport Surface
FAR 77.19(a): DNE - Horizontal Surface
FAR 77.19(b): DNE - Conical Surface
FAR 77.19(c): DNE - Primary Surface
FAR 77.19(d): DNE - Approach Surface
FAR 77.19(e): DNE - Approach Transitional Surface
FAR 77.19(f): DNE - Abeam Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: SFZ: NORTH CENTRAL STATE

Type: A RD: 33271.79 RE: 419.6

FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Height No Greater Than 200 feet AGL.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: 1B6: HOPEDALE INDUSTRIAL PARK

Type: A RD: 42959.53 RE: 237

FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): Does Not Apply.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)

DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 1400 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION IFR
RI26	HEL LANDMARK MEDICAL CENTER No Impact to Private Landing Facility Structure is beyond notice limit by 15963 feet.	80.28	3.45	+290

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	ST TYPE	AT FREQ	DIST VECTOR (ft)	DELTA ELEVA ST LOCATION	GRND ANGLE	APCH BEAR
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PUT	VOR/DME	R	117.4	259.21	75551	-160	CT PUTNAM	-.12
PVD	RADAR ASR	I	2735.	184.27	99799	-74	RI THEODORE FRANCIS	-.04
PVD	VOR/DME	R	115.6	158.63	105522	+443	RI PROVIDENCE	.24
KBOX	RADAR WXL	Y		96.84	118858	+268	MA BOSTON WXL	.13
ORH	RADAR WXL	Y		321.31	129931	-511	MA WORCESTER	-.23
ORW	VOR/DME	I	110.0	216.09	197649	+182	CT NORWICH	.05
BOS	RADAR ASR	I	2820.	49.65	200405	+442	MA GENERAL EDWARD LA	.13
BOS	VOR/DME	R	112.7	49.76	205916	+474	MA BOSTON	.13

5G AIRPORT SAFETY AREA
No Identified 5G conflict.

CFR Title 47, §1.30000-\$1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.
Movement Method Proof as specified in §73.151(c) is not required.
Please review 'AM Station Report' for details.

Nearest AM Station: WNRI @ 7069 meters.

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