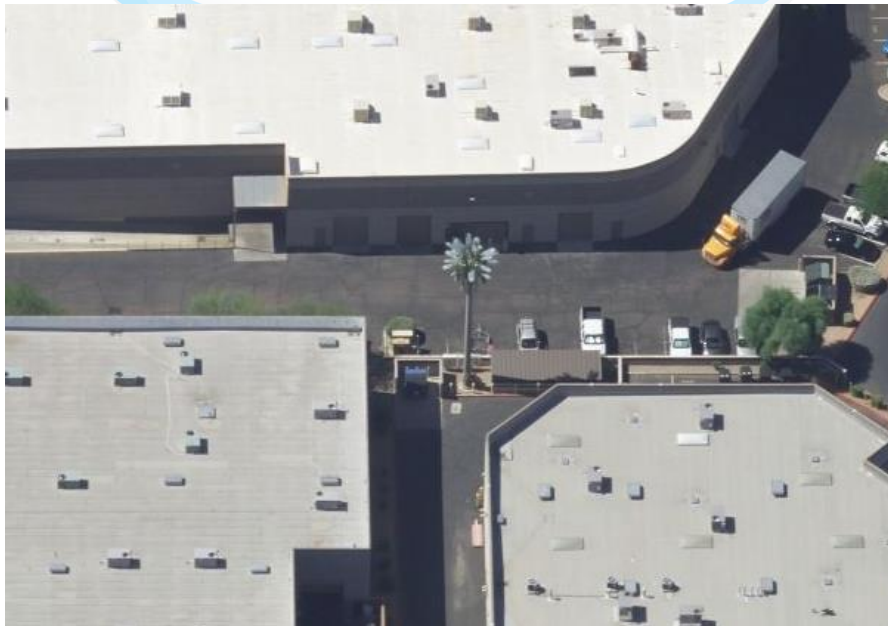




# Electromagnetic Energy (EME) FCC Compliance Report

<b>Site FA #</b>	10140988	<b>Site Name</b>	CMC GOLF - MONOPALM-CANB
<b>US ID</b>	118806	<b>Site ID</b>	W384
<b>Street Address</b>	15695 North 83rd Way	<b>Latitude</b>	33.6276389
<b>City, State, Zip</b>	Scottsdale, AZ 85260	<b>Longitude</b>	-111.9005278
<b>Site Type</b>	Stealth Pole – External Array	<b>Collocation Status</b>	<input type="checkbox"/> Collocated <input checked="" type="checkbox"/> Not Collocated
<b>Area Classification</b>	General Population	<b>Max MPE by AT&amp;T</b>	5140.83%
<b>Access Method</b>	Open Area	<b>Report Type</b>	Pre-Study
<b>Report Creation</b>	Rama Solanki	<b>Report Review</b>	Anil Kumar S M
<b>Report Date</b>	03/01/2022	<b>M-RFSC</b>	N/A
<b>Construction Drawing</b>	approved_RF_02172022_W384_AE203_CBAND_REV_2_02.16.2022		
<b>RF Data Sheet</b>	AZ-NM_ARIZONA_AZL03384_2022-5G-NR-Radio_5G-NR-ISR-CBAND_ka053u_3901A0YW CZ_10140988_118806_02-19-2021_Final-Approved_v1.00		
<b>FCC &amp; AT&amp;T Compliance Status</b>	<input type="checkbox"/> Compliant <input checked="" type="checkbox"/> Site will be compliant following the recommendations in <a href="#">Section 6</a>		



**Environmental Assessment Specialists, Inc.**

71 San Marino Avenue, Ventura, CA 93003 | Office (805) 650-0949 | Fax (805) 650-8054 | [www.easenv.com](http://www.easenv.com)

# Table of Contents

1	General Information .....	3
2	Site Scale Map - Signs and Barriers Required for Compliance (AT&T Only) .....	4
3	Antenna Inventory Table .....	5
4	RF Predictive Modeling .....	6
	a. Antennas Level Modeling with Only AT&T Transmitting .....	6
	b. Adj. Roof 1 Level Modeling with Only AT&T Transmitting .....	7
	c. Adj. Roof 2 Level Modeling with Only AT&T Transmitting .....	8
	d. Ground Level Modeling with Only AT&T Transmitting .....	9
5	Roof master Data Sheet .....	10
6	Statement of Compliance .....	11
	6.1. Site Action requirements .....	11
7	Appendix A .....	12
	7.1. FCC Rules and Regulations .....	12
	7.2. Safety Recommendations .....	13
8	Appendix B .....	14
	8.1. Contribution to Co-Located areas .....	14
	8.2. Occupational limits .....	14
	8.3. General population limits .....	14
	8.4. Controlled Environment .....	14
	8.5. Uncontrolled Environment .....	14
	8.6. Generic Values .....	14
9	Engineering Certification .....	15

# 1 General Information

The Antenna Inventory Table ([Section 3](#)) shows all transmitting antennas on the site. The use of “Unknown” for an operator means the information with regard to the carrier, their FCC license and / or antenna information was not available. Generic values used as estimation for Effective Radiated Power (ERP/EIRP) and antenna characteristics for unknown antennas. Z reference specifies the center line of the antenna to the indicated level.

In this report, it is assumed that all antennas are operating at full power at all times. Software modeling was performed for all transmitting antennas located on the site. EAS has further assumed a 100% duty cycle and maximum radiated power. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the measurement conclusions. In this report, all accessible areas are modeled and taken under consideration. The modeling software that Telnet used to create this report is Roofmaster.

Roofmaster Data Sheet ([Section 5](#)) indicates Roofmaster exported data sheet that contains data used.

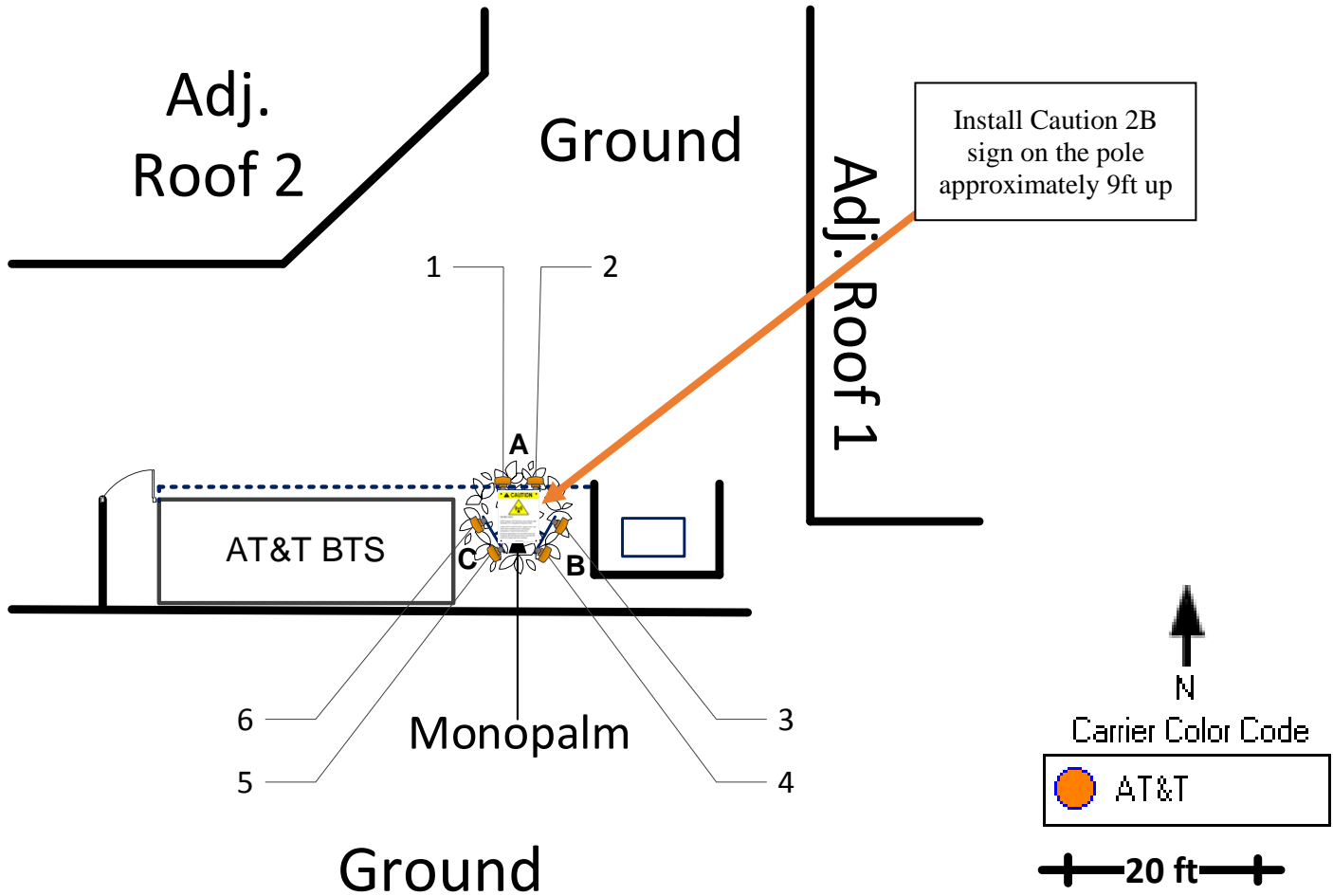
Statement of Compliance ([Section 6](#)) indicated detailed actions required to bring the site compliant to FCC and OSHA rules and regulations with regard to Human Exposure to Radio Frequency Radiation by use of AT&T RF signage, barriers and Demarcation Policy. The whole report is true and accurate to the best of Report Creator and Report Reviewer’s (mentioned in first page) knowledge.

Additional information about how the report is created and modeled is located in [Appendix A](#) and [Appendix B](#) of this report.

## Site Predictive RF Modeling Summary

Max Predictive Spatial Average MPE% - Antennas level	5140.83 %
Max Predictive Spatial Average MPE% - Adj. Roof 1 level	6.04 %
Max Predictive Spatial Average MPE% - Adj. Roof 2 level	0.82 %
Max Predictive Spatial Average MPE% - Ground level	0.79 %
Overall Site Compliance	Will be compliant following the recommendations in <a href="#">Section 6</a>

## 2 Site Scale Map - Signs and Barriers Required for Compliance (AT&T Only)



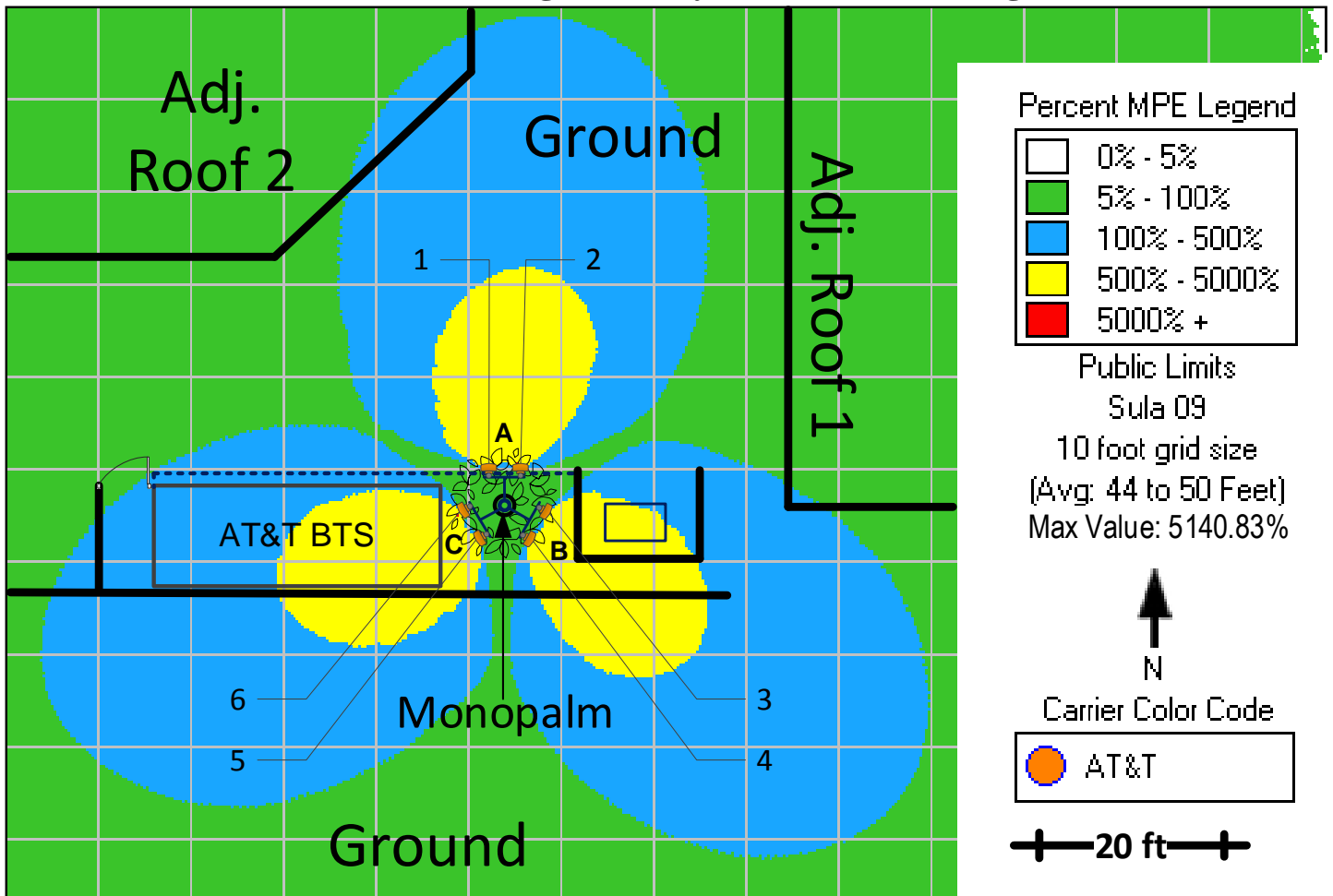
### 3 Antenna Inventory Table

Antenna ID	Operator	Antenna Type	Frequency (MHz)	Technology	Input Power (w)	TX Count	ERP/EIRP (Watts)	Gain (dBd)	Manufacturer	Model	Azimuth (deg.)	Aperture (ft.)	H-BW (deg.)
1	ATT	Panel	-	C-Band	67.78	1	20461.89	22.65	Nokia	AEQK	0	2.46	14
2	ATT	Panel	700	LTE	370.0	4	6444.69	12.41	CommScope	NNH4-65C-R6-V3	0	8.00	74
2	ATT	Panel	1900	L/5G	160.0	4	8071.68	14.88	CommScope	NNH4-65C-R6-V3	0	8.00	59
2	ATT	Panel	2100	LTE	160.0	4	7761.83	14.71	CommScope	NNH4-65C-R6-V3	0	8.00	62
2	ATT	Panel	2300	LTE	100.0	4	5725.90	15.43	CommScope	NNH4-65C-R6-V3	0	8.00	57
3	ATT	Panel	-	C-Band	67.78	1	20461.89	22.65	Nokia	AEQK	120	2.46	14
4	ATT	Panel	700	LTE	370.0	4	6444.69	12.41	CommScope	NNH4-65C-R6-V3	120	8.00	74
4	ATT	Panel	1900	L/5G	160.0	4	8071.68	14.88	CommScope	NNH4-65C-R6-V3	120	8.00	59
4	ATT	Panel	2100	LTE	160.0	4	7761.83	14.71	CommScope	NNH4-65C-R6-V3	120	8.00	62
4	ATT	Panel	2300	LTE	100.0	4	5725.90	15.43	CommScope	NNH4-65C-R6-V3	120	8.00	57
5	ATT	Panel	-	C-Band	67.78	1	20461.89	22.65	Nokia	AEQK	240	2.46	14
6	ATT	Panel	700	LTE	370.0	4	6444.69	12.41	CommScope	NNH4-65C-R6-V3	240	8.00	74
6	ATT	Panel	1900	L/5G	160.0	4	8071.68	14.88	CommScope	NNH4-65C-R6-V3	240	8.00	59
6	ATT	Panel	2100	LTE	160.0	4	7761.83	14.71	CommScope	NNH4-65C-R6-V3	240	8.00	62
6	ATT	Panel	2300	LTE	100.0	4	5725.90	15.43	CommScope	NNH4-65C-R6-V3	240	8.00	57

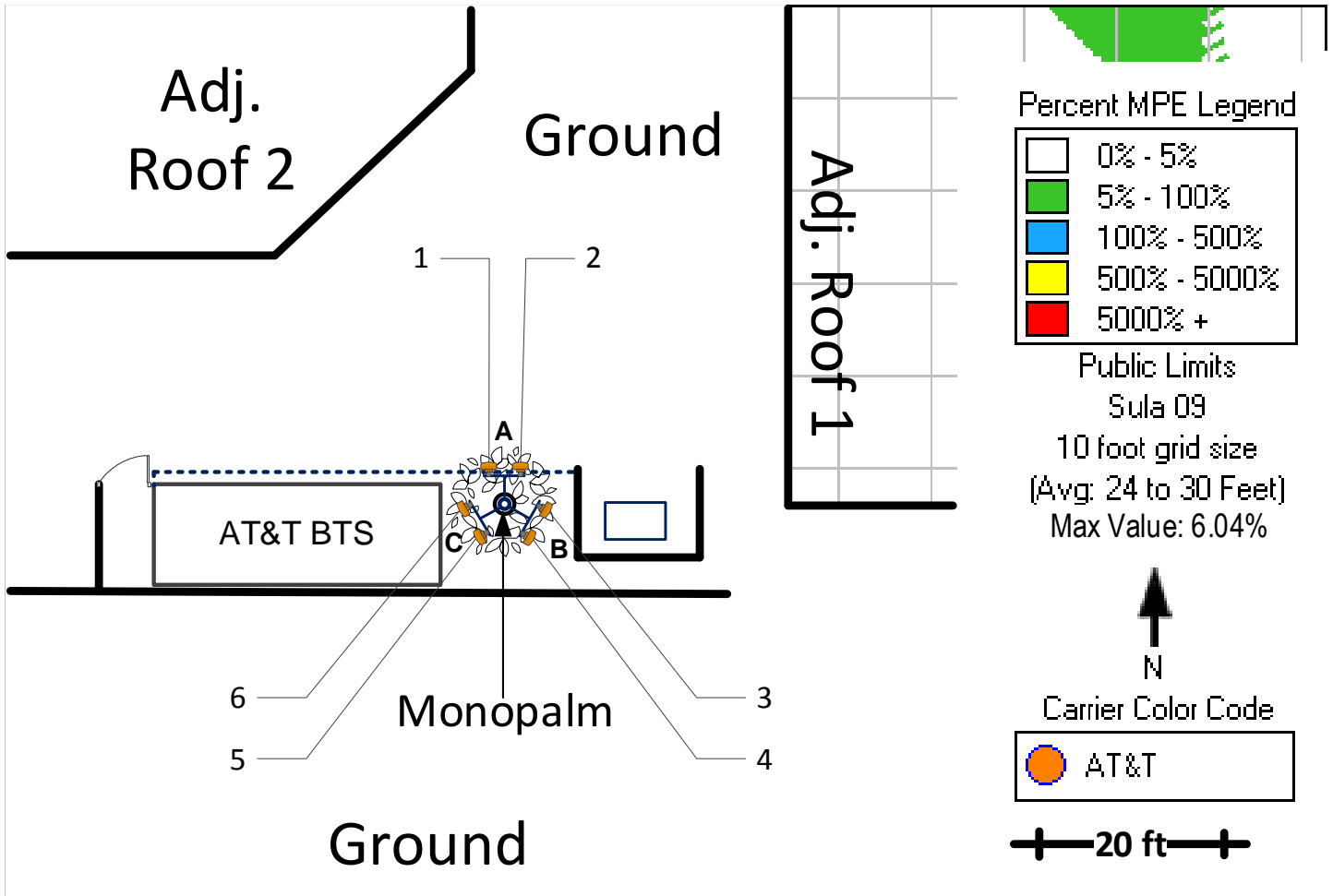
Antenna ID	X (ft)	Y (ft)	Z Antennas Level (ft)	Z Adj. Roof 1 Level (ft)	Z Adj. Roof 2 Level (ft)	Z Ground Level (ft)
1	80.9	70.0	2.0	22.0	22.0	46.0
2	84.1	70.0	4.0	24.0	24.0	48.0
3	87.1	74.7	2.0	22.0	22.0	46.0
4	85.3	77.4	4.0	24.0	24.0	48.0
5	80.0	77.4	2.0	22.0	22.0	46.0
6	78.2	74.7	4.0	24.0	24.0	48.0

# 4 RF Predictive Modeling

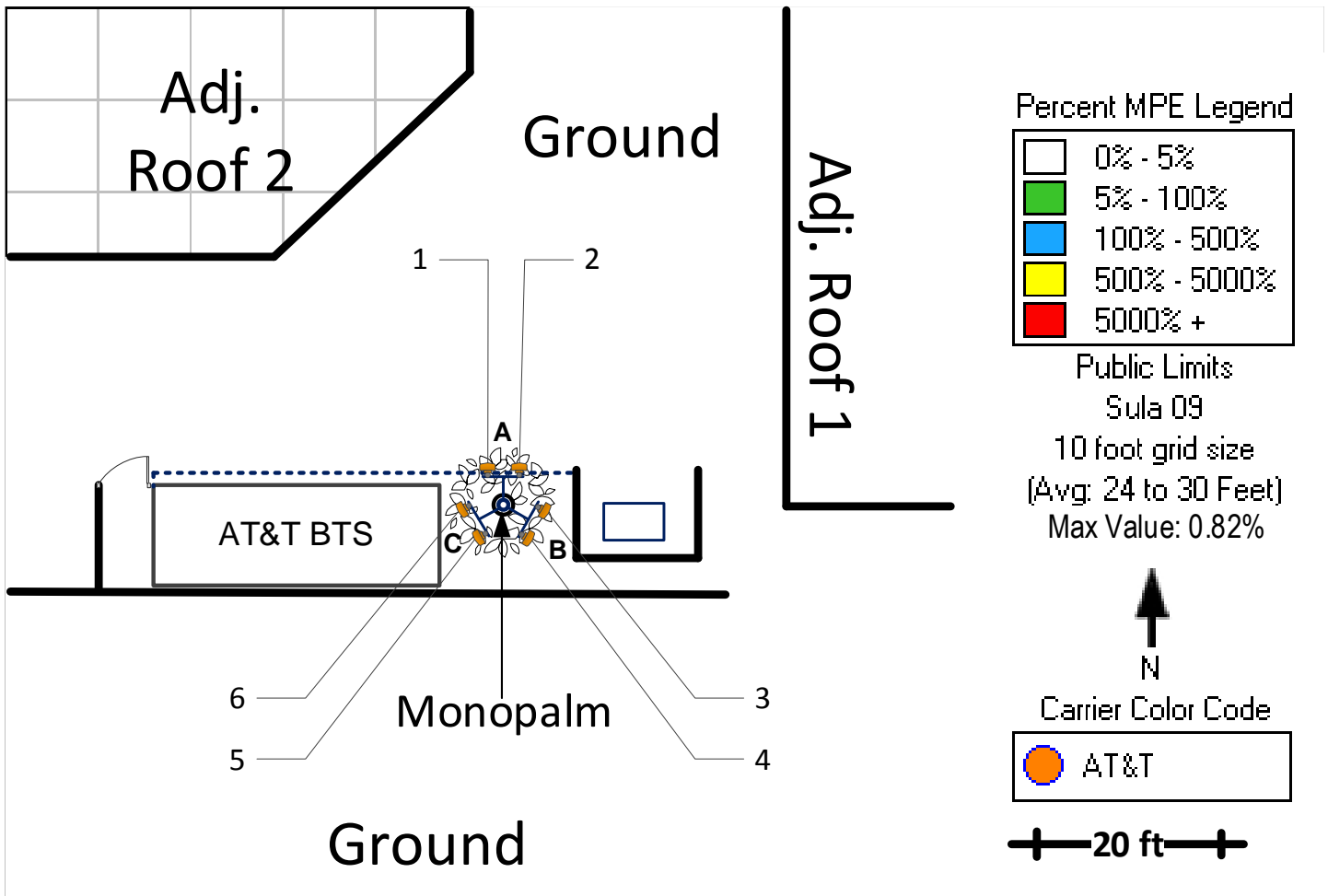
## a. Antennas Level Modeling with Only AT&T Transmitting



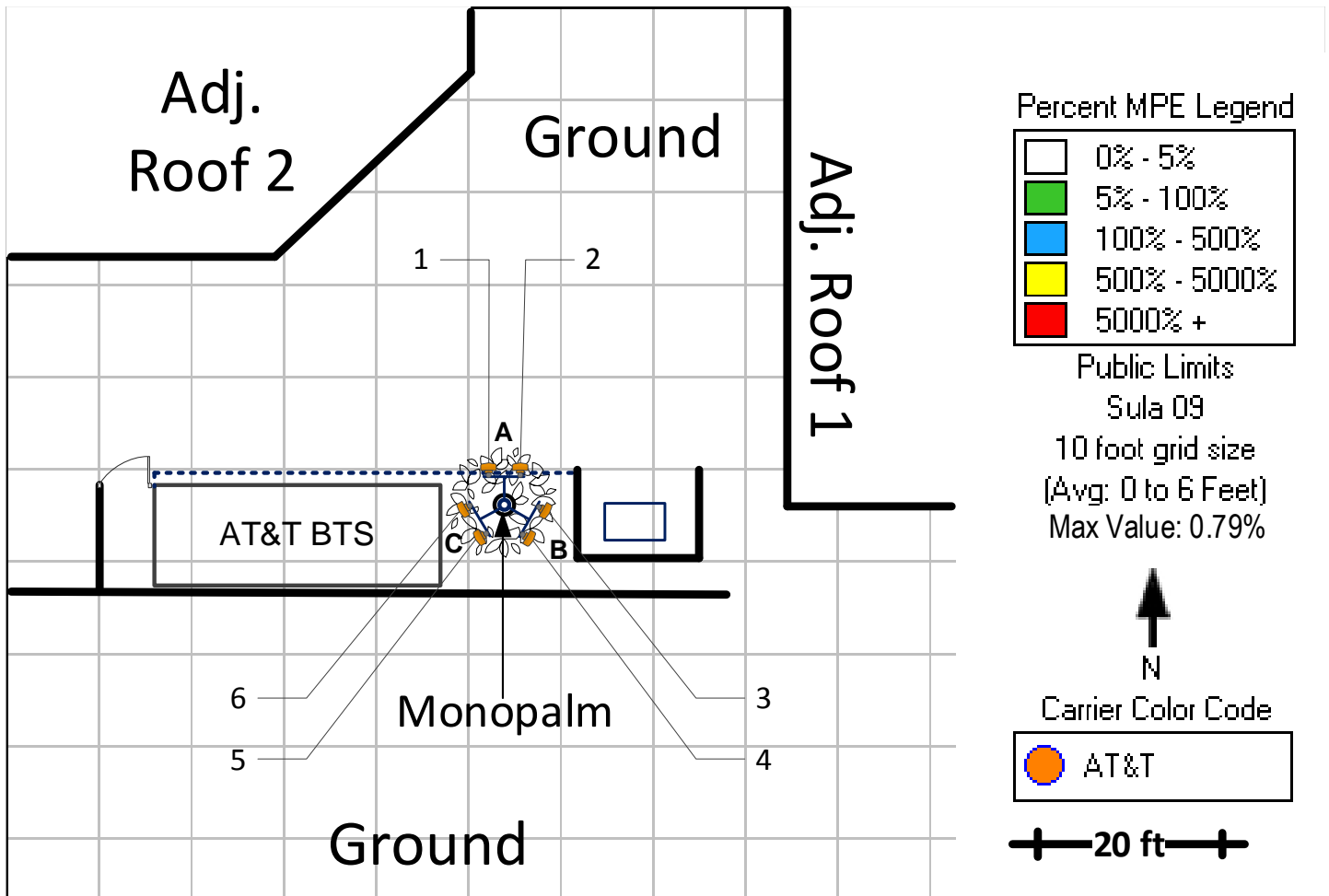
**b. Adj. Roof 1 Level Modeling with Only AT&T Transmitting**



**c. Adj. Roof 2 Level Modeling with Only AT&T Transmitting**



**d. Ground Level Modeling with Only AT&T Transmitting**



## 5 Roof master Data Sheet

Carrier	Antenna Number	Emitter Number	Pattern	Frequency	Power	Length	Azimuth(n)	Height(ft)	X(ft)	Y(ft)
AT&T C-band	1	1	AEQK-120degAzOp-BS-3-1-PatternEnvelope 3840 AT&T.ant	C-Band	20461.8948	0.7500	0	46.0	80.9	70.0
AT&T LTE	2	1	NNH4-65C-R6-V3 00DT 700.ant	700	6444.6895	2.4384	0	48.0	84.1	70.0
AT&T L/5G	2	2	NNH4-65C-R6-V3 00DT 1900.ant	1900	8071.6784	2.4384	0	48.0	84.1	70.0
AT&T LTE	2	3	NNH4-65C-R6-V3 00DT 2100.ant	2100	7761.8250	2.4384	0	48.0	84.1	70.0
AT&T LTE	2	4	NNH4-65C-R6-V3 00DT 2300.ant	2300	5725.9012	2.4384	0	48.0	84.1	70.0
AT&T C-band	3	1	AEQK-120degAzOp-BS-3-1-PatternEnvelope 3840 AT&T.ant	C-Band	20461.8948	0.7500	120	46.0	87.1	74.7
AT&T LTE	4	1	NNH4-65C-R6-V3 00DT 700.ant	700	6444.6895	2.4384	120	48.0	85.3	77.4
AT&T L/5G	4	2	NNH4-65C-R6-V3 00DT 1900.ant	1900	8071.6784	2.4384	120	48.0	85.3	77.4
AT&T LTE	4	3	NNH4-65C-R6-V3 00DT 2100.ant	2100	7761.8250	2.4384	120	48.0	85.3	77.4
AT&T LTE	4	4	NNH4-65C-R6-V3 00DT 2300.ant	2300	5725.9012	2.4384	120	48.0	85.3	77.4
AT&T C-band	5	1	AEQK-120degAzOp-BS-3-1-PatternEnvelope 3840 AT&T.ant	C-Band	20461.8948	0.7500	240	46.0	80.0	77.4
AT&T LTE	6	1	NNH4-65C-R6-V3 00DT 700.ant	700	6444.6895	2.4384	240	48.0	78.2	74.7
AT&T L/5G	6	2	NNH4-65C-R6-V3 00DT 1900.ant	1900	8071.6784	2.4384	240	48.0	78.2	74.7
AT&T LTE	6	3	NNH4-65C-R6-V3 00DT 2100.ant	2100	7761.8250	2.4384	240	48.0	78.2	74.7
AT&T LTE	6	4	NNH4-65C-R6-V3 00DT 2300.ant	2300	5725.9012	2.4384	240	48.0	78.2	74.7

## 6 Statement of Compliance

At the time of our analysis, AT&T Mobility is required to take following action to fulfill their obligations to comply with the FCC's mandate as defines in OET-65.

### 6.1. Site Action requirements

<b>Pole</b>	Install Caution 2B sign on the pole approximately 9ft up
<b>Sector A</b>	N/A
<b>Sector B</b>	N/A
<b>Sector C</b>	N/A

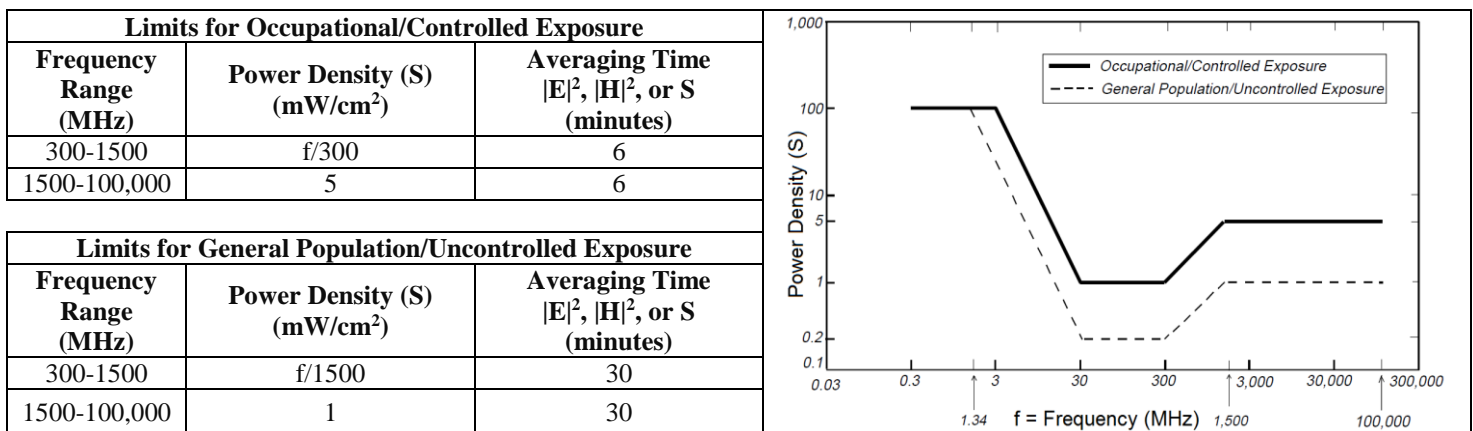
# 7 Appendix A

## 7.1. FCC Rules and Regulations

This appendix summarizes the policies, guidelines and requirements that were adopted by the FCC on August 1, 1996, amending Part 1 of Title 47 of the Code of Federal Regulations, and further amended by action of the Commission on August 25, 1997 (see 47 CFR Sections 1.1307(b), 1.1310, 2.1091 and 2.1093, as amended from FCC “OET Bulletin 65”). Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA), as described in 47 CFR Section 1.1311, if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency (RF) electromagnetic fields in excess of these limits. For exact language, see the relevant FCC rule sections.

The FCC-adopted limits for Maximum Permissible Exposure (MPE) are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on the MPE limits found in Section 4.1 of, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017, and approved for use as an American National Standard by the American National Standards Institute (ANSI). The exposure guidelines are based on thresholds for known adverse effects and they incorporate appropriate margin of safety. The federal health and safety agencies such as: the Environmental Protection Agency (“EPA”), the Food and Drug Administration (“FDA”), the National Institute on Occupational Safety and Health (“NIOSH”) and the Occupational Safety and Health Administration (“OSHA”) have also been actively involved in monitoring and investigating issues related to RF exposure.

The formulas used in Roofmaster for calculating Power density is based on FCC “OET Bulletin 65”, Section 2: PREDICTION METHODS, August 1997, Edition 97-01. Power density is converted to Maximum Permissible Exposure Limits (MPE Limits) based on Limits of General population/Uncontrolled Exposure and Limits of Occupational/Controlled Exposure presented in the following table generated from Appendix A of “OET Bulletin 65”



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## 7.2. Safety Recommendations


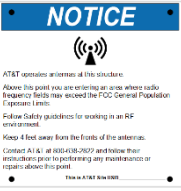




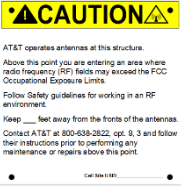



### 7.1.1. Occupational Safety and Health Administration (OSHA) Requirements

OSHA requires that those in the Occupational classification must complete training in RF Safety, RF Awareness, and Utilization of Personal Protective Equipment. OSHA also provides options for Hazard Prevention and Control:

Hazard Prevention	Control
<ul style="list-style-type: none"> <li>Utilization of good equipment</li> <li>Enact control of hazard areas</li> <li>Limit exposures</li> <li>Employ medical surveillance and accident response</li> </ul>	<ul style="list-style-type: none"> <li>Employ Lockout/Tag out</li> <li>Utilize personal alarms &amp; protective clothing</li> <li>Prevent access to hazardous locations</li> <li>Develop or operate an administrative control program</li> </ul>

### 7.1.2. RF Signage and Barriers

RF signs and preventive barriers have an important role in appropriately alerting a worker before entering into a potential RF exposure area. All RF signs should be abided by at all times.

				
<b>Notice 2</b>	<b>Notice - Small Cells</b>	<b>Notice-CRAN</b>	<b>Caution 2A</b>	<b>Caution 2</b>
This sign is used as combination of Information sign and Notice sign	This sign indicates that RF emissions may exceed the FCC General Population MPE limit on the pole	This sign indicates that RF emissions may exceed the FCC General Population MPE limit on the pole	This sign shall be used lieu of barriers along with striping when barriers are not allowed	This sign is used as combination of Information sign and Caution sign
				
<b>Caution 2B</b>	<b>Caution - Small Cells</b>	<b>Caution 2C</b>	<b>Warning 1A</b>	<b>Warning 1B</b>
This sign indicates that RF emissions may exceed the FCC Occupational MPE limit on the tower	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit on the pole	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit at side mounted antennas	This sign shall be used lieu of barriers along with striping when barriers are not allowed	This sign is used as combination of Information sign and Warning sign

## **8 Appendix B**

### **8.1. Contribution to Co-Located areas**

Any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

### **8.2. Occupational 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.

### **8.3. General population limits**

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. (Those without significant and documented RF Safety & Awareness training)

### **8.4. Controlled Environment**

Applies to environments that are restricted or “controlled” in order to prevent access from members of the General Population classification.

### **8.5. Uncontrolled Environment**

Applies to environments that are unrestricted or “uncontrolled” that allow access from members of the General Population classification.

### **8.6. Generic Values**

The use of “Unknown” for an operator means the information with regard to the carrier, their FCC license and / or antenna information was not available. Generic values used as estimation for Effective Radiated Power (ERP) and antenna characteristics for unknown antennas.

## 9 Engineering Certification

I, Heildrick D Valeroso, P.E. provide that:

- I am a Registered Professional Engineer in the state of California, license # E-22394 expiration date 9/30/2022.
- I am familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio- frequency Radiation.
- I reviewed the RFE-EME Compliance Report for the AT&T site

Site ID:	W384
Site Name:	CMC GOLF - MONOPALM-CANB
Address:	15695 North 83rd Way Scottsdale, AZ 85260

and based on supplied data evaluated by industry standard RF compliance software designed for modeling the RF environment on rooftops, towers, small cell and Distributed Antenna Systems, and to the best of my knowledge I believe the Report to be true and accurate



Heildrick D Valeroso, P.E.  
Registered Professional Engineer  
California License # E-22394

Date: 03/09/2022