

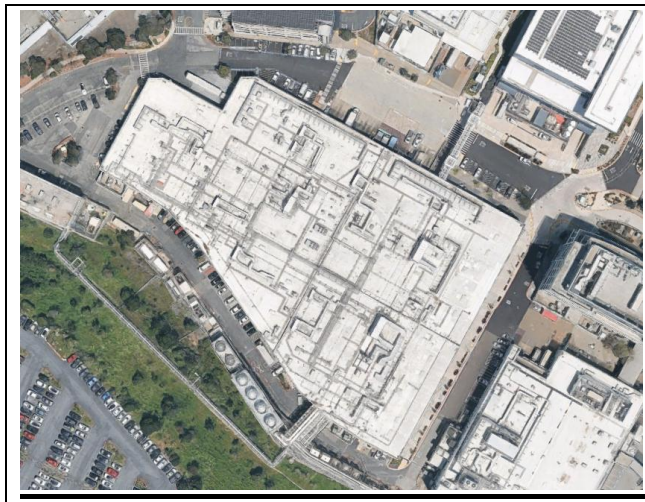


CENTERLINE

Radio Frequency Safety Survey Report Prediction (RFSSRP)

AT&T DAS Facility

Site Name	GENENTECH B9 SOUTH SAN FRANCISCO CA ISE	
Site ID	CCL02773	
Site Address	Building 9, 640 Forbes Blvd, South San Francisco, CA 94080	
Latitude: 37.657970 Longitude: -122.383000 USID: 162837 FA: 13297058 Centerline PN: Internal Pace ID: 3701A0PFTV	Prepared for: Centerline on behalf of AT&T Report Date: August 1, 2025 Report Writer: Samuel Cosgrove Report Reviewer: Michael Fischer	



Statement of Compliance

AT&T will be compliant with FCC regulations upon installation of recommended mitigation measures.

TABLE OF CONTENTS

1.0 GENERAL SUMMARY.....	3
1.1 SITE SUMMARY	3
1.2 SITE MITIGATION.....	4
2.0 SITE SCALE MAP	5
3.0 ANTENNA INVENTORY	6
4.0 CALCULATED RF EXPOSURE LEVELS.....	7
5.0 RF EXPOSURE DIAGRAMS	8
6.0 STATEMENT OF COMPLIANCE	12
6.1 RECOMMENDATIONS.....	12
APPENDIX A: AT&T RF SIGNAGE	13
APPENDIX B: FCC GUIDELINES AND EMISSIONS THRESHOLD LIMITS	14
APPENDIX C: CALCULATION METHODOLOGY	16
APPENDIX D: CERTIFICATIONS.....	17
APPENDIX E: PROPRIETARY STATEMENT.....	18

1.0 GENERAL SUMMARY

Centerline has been contracted to provide a Radio Frequency (RF) Analysis for the following AT&T das facility to determine whether the facility is in compliance with federal standards and regulations regarding RF emissions. This analysis includes theoretical emissions calculations for all equipment for AT&T.

1.1 SITE SUMMARY

Analysis Site Data	
Site USID:	162837
Site FA#:	13297058
Site Name:	GENENTECH B9 SOUTH SAN FRANCISCO CA ISE
Site Address:	Building 9, 640 Forbes Blvd, South San Francisco, CA 94080
Site Latitude:	37.657970
Site Longitude:	-122.383000
Facility Type:	DAS
Compliance Summary	
Compliance Status:	Compliant Upon Mitigation
Maximum Calculated AT&T MPE Level on Site (General Population Limit):	0.57%
Maximum Calculated Composite MPE Level on Site (General Population Limit):	0.57%
Maximum Calculated AT&T MPE Level at Ground (General Population Limit):	0.28%
Maximum Calculated Composite MPE Level at Ground (General Population Limit):	0.28%
Site Data Information	
CD:	2025-02-10_B09 ATT Antenna Relocation_Drawings - IFP (1).pdf
RFDS:	SF_CCL02773_NSB_3701A0PFTV_13297058_08082019_V2.0.xls
MPE Modeling Program:	IXUS Version: 4.14; Published 2025-05-02

1.2 SITE MITIGATION

Signage and barriers are the primary means of mitigating accessible areas of exposure. Below is a summary of existing and recommended signage at this AT&T facility.

Existing Signage and Barriers (AT&T Sectors)										
Location	Safety Instructions	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier
Alpha										

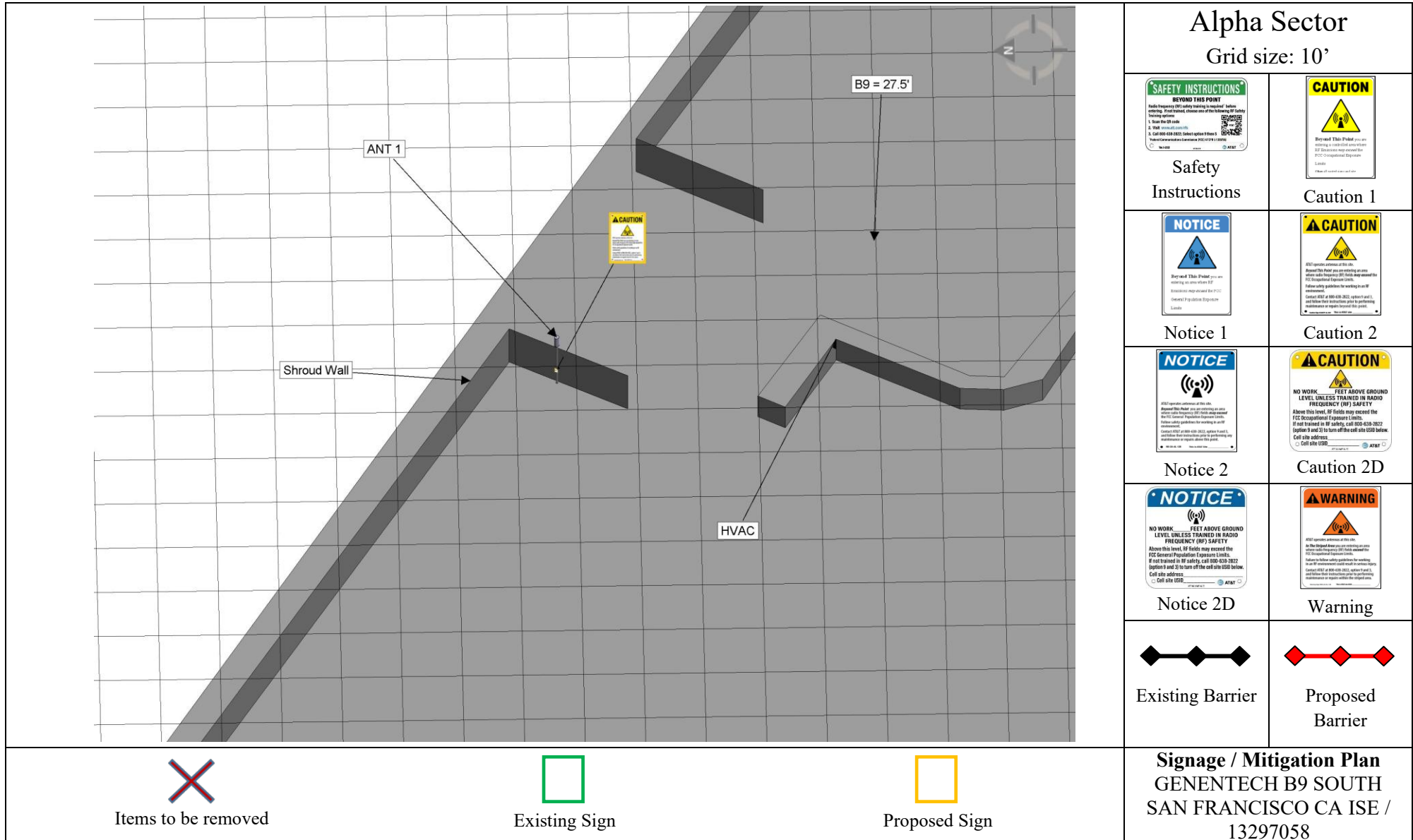
Proposed Signage and Barriers (AT&T Sectors)									
Location	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier
Alpha			1						

Final Signage and Barriers (AT&T Sectors)									
Location	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier
Alpha			1						

Alpha:

- Install (1) Caution 2 sign on the antenna mount.

2.0 SITE SCALE MAP



3.0 ANTENNA INVENTORY

ANT ID	Operator	Antenna Manufacturer	Antenna Model	System / Freq (MHz)	TPO* (Watts)	Gain (dBd)	Total ERP (Watts)	Azimuth (°)	Mech. Tilt (°)	Elec. Tilt (°)	Antenna Length (ft.)	Antenna Centerline Height (ft.)
ANT 1	AT&T	Denki Kogyo	DKOBDYKDP-7R45F	LTE 1900	3.75	6.35	16.18	0	0	0 to 20	1.97	37.5

**75% duty cycle is assumed for all AT&T antennas*

4.0 CALCULATED RF EXPOSURE LEVELS

Calculations performed based upon the data listed for this facility have produced the results that are shown below:

Maximum Calculated AT&T MPE Level on Site:	% of MPE Limit:
Accessible General Population MPE Limits:	0.57%
Accessible Occupational MPE Limits:	0.11%

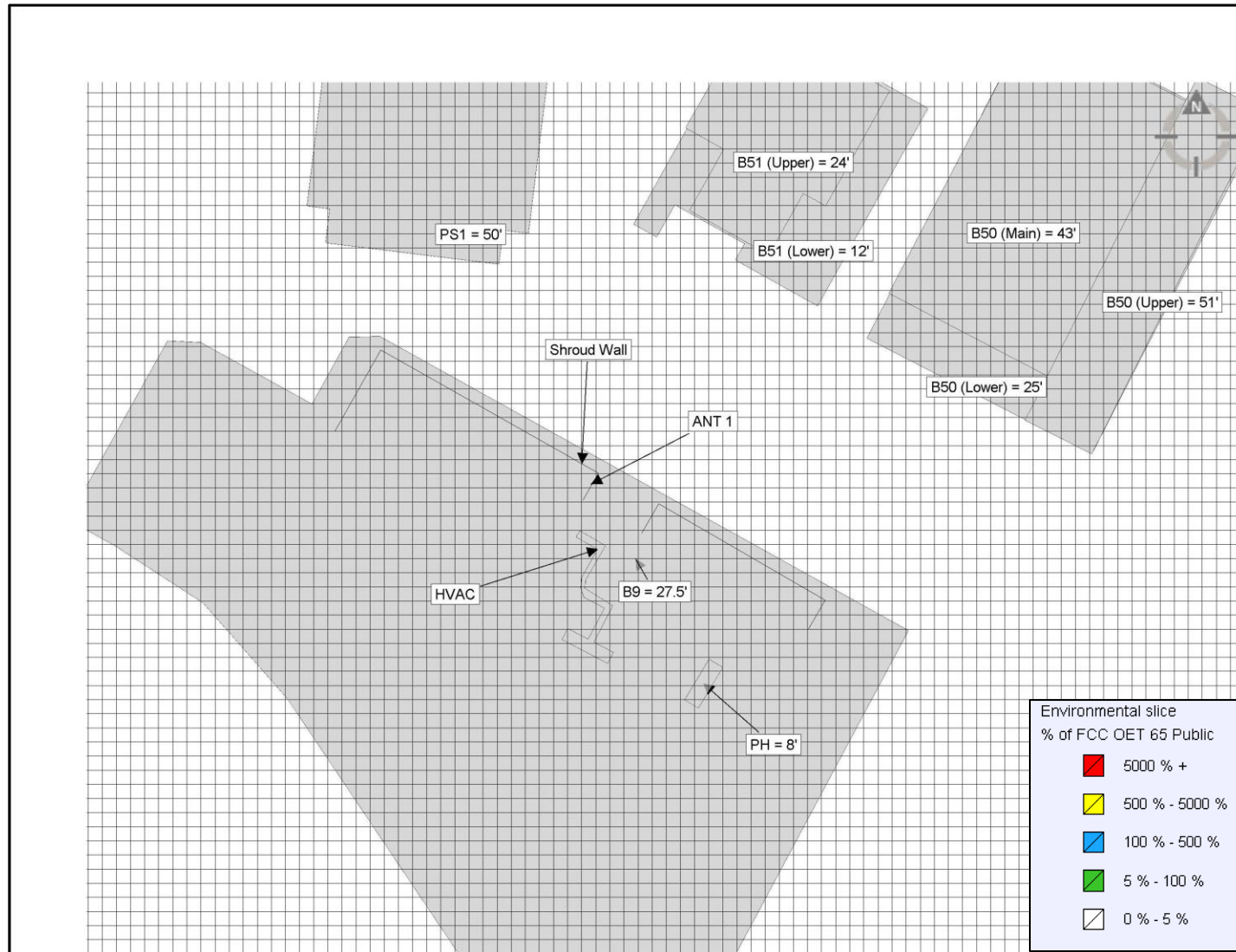
Maximum Calculated Composite MPE Level on Site:	% of MPE Limit:
Accessible General Population MPE Limits:	0.57%
Accessible Occupational MPE Limits:	0.11%

Maximum Calculated AT&T Ground Level MPE:	% of MPE Limit:
Accessible General Population MPE Limits:	0.28%
Accessible Occupational MPE Limits:	0.06%

Maximum Calculated Composite Ground Level MPE:	% of MPE Limit:
Accessible General Population MPE Limits:	0.28%
Accessible Occupational MPE Limits:	0.06%

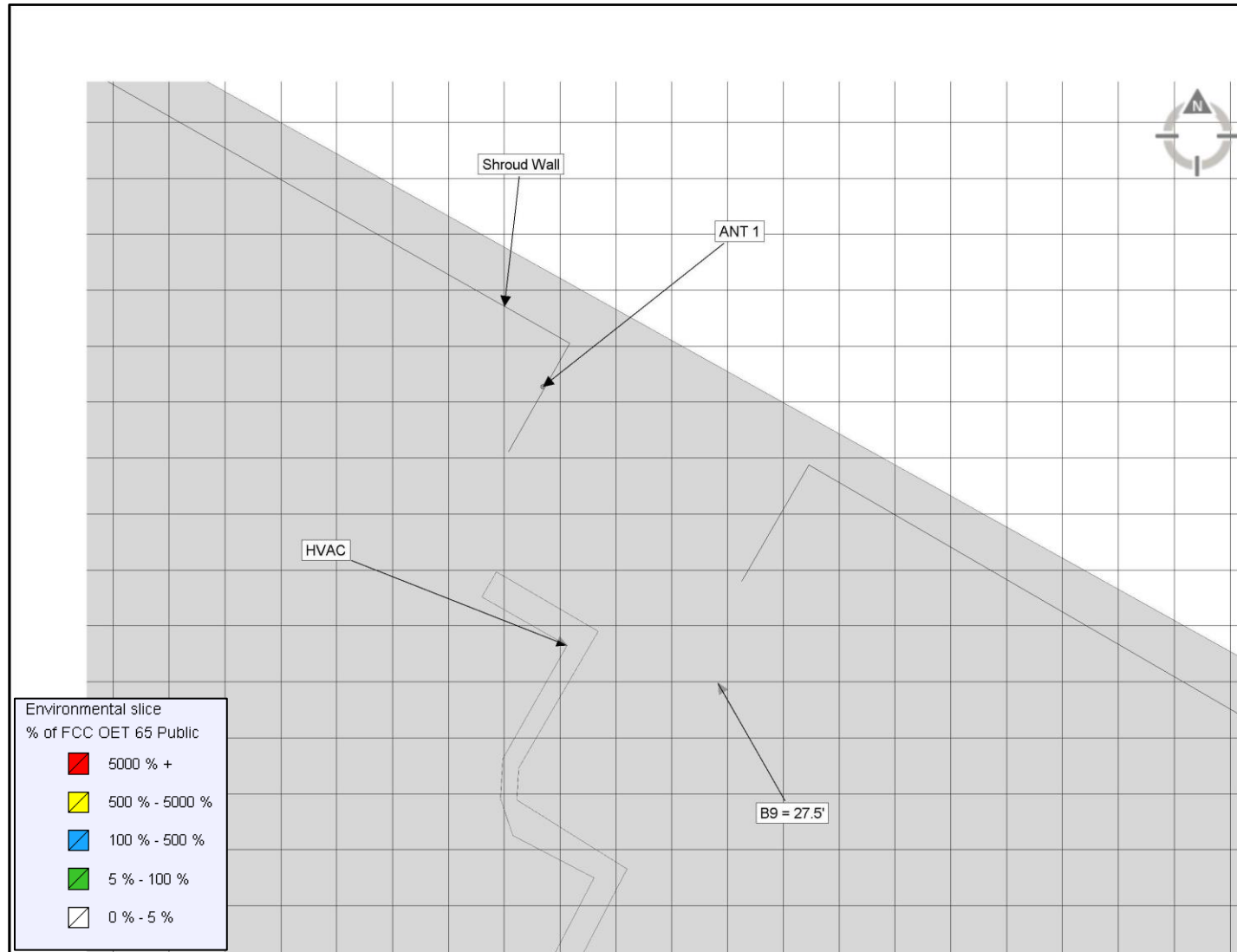
5.0 RF EXPOSURE DIAGRAMS

Overview



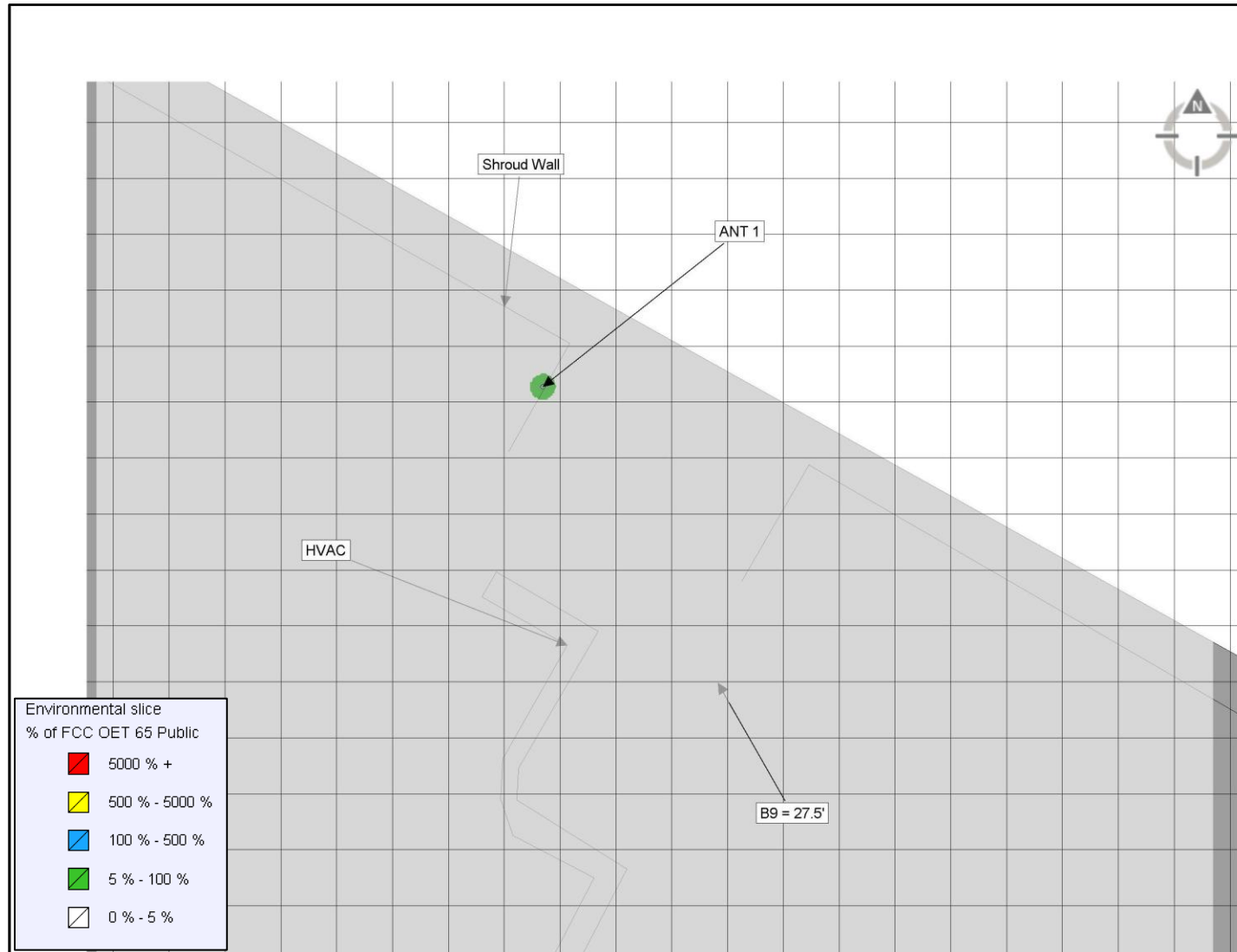
Grid Size: 10'

Detail View

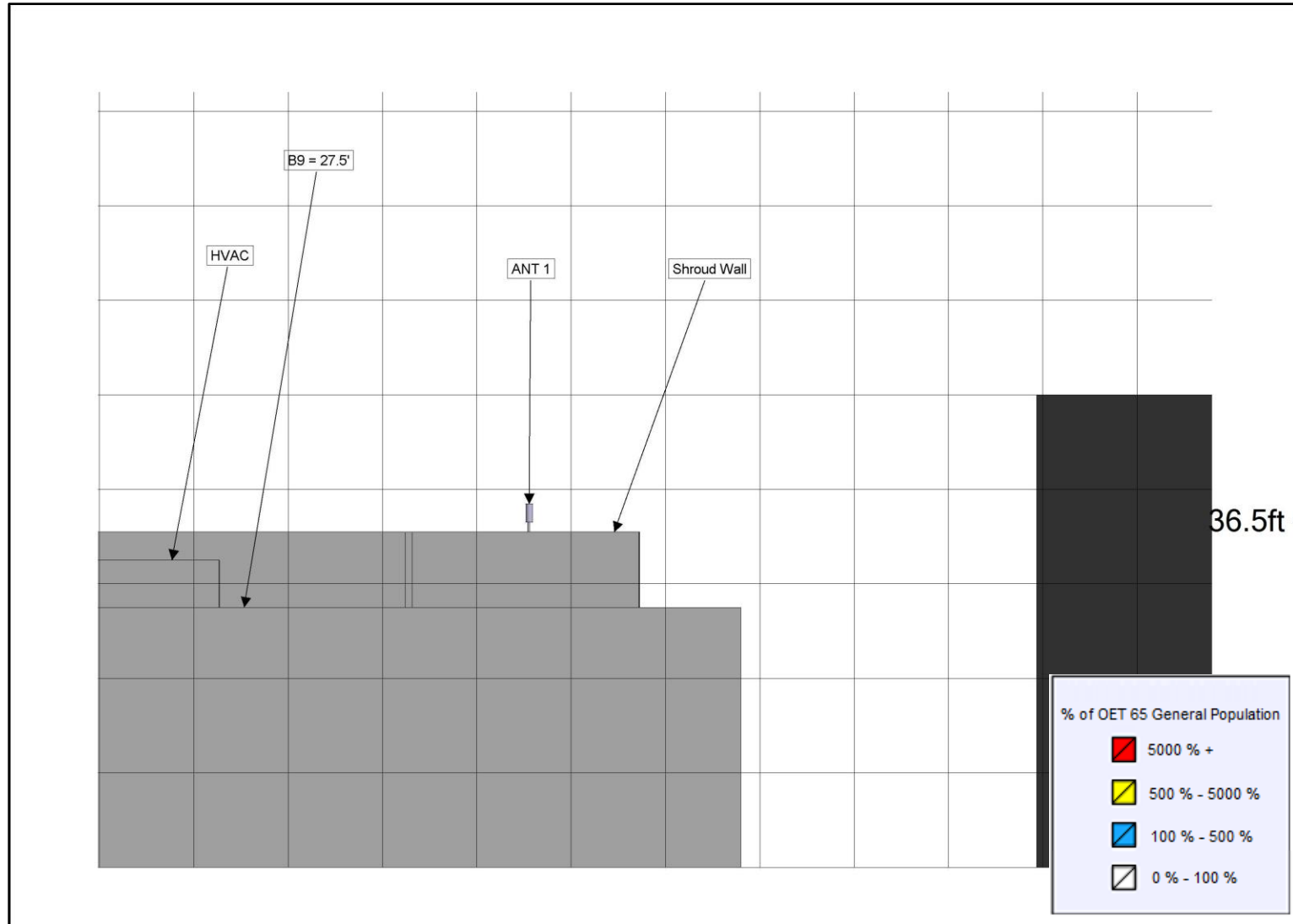


Grid Size: 10'

Antenna Level



Elevation View



Grid Size: 10'

6.0 STATEMENT OF COMPLIANCE

Centerline conducted worst case modeling to determine whether the subject facility is in compliance with FCC regulations.

Based on the information analyzed, AT&T will be compliant with FCC regulations once the mitigation measures recommended in this report are implemented.

6.1 RECOMMENDATIONS

Existing Signage and Barriers (AT&T Sectors)										
Location	Safety Instructions	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier
Alpha										

Proposed Signage and Barriers (AT&T Sectors)										
Location	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier	
Alpha			1							

Final Signage and Barriers (AT&T Sectors)										
Location	Notice 2	Notice 2D	Caution 2	Caution 2B	Caution 2C	Caution 2D	Warning 1B	Warning 2A	Barrier	
Alpha			1							

Alpha:

- Install (1) Caution 2 sign on the antenna mount.

APPENDIX A: AT&T RF SIGNAGE

Sign	Details	Sign	Details
	Safety Instructions Provides guidelines on how to proceed and who to contact regarding areas that may exceed either the FCC's General Population or Occupational exposure limits.		Notice 2 Used to alert individuals that they are entering an area that may exceed the FCC's General Population exposure limits. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Blue Notice 1 signs.
	Caution 2 Used to alert individuals that they are entering an area that may exceed the FCC's Occupational exposure limits. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Yellow Caution 1 signs.		Caution 2A Used to alert individuals that they are entering an area that may exceed the FCC's Occupational exposure limits. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Yellow Caution 1 signs (used in conjunction with painted stripes).
	Caution 2B Used to inform individuals that they are entering an area that may exceed the FCC's Occupational exposure limits. Must be placed at the base of the tower to warn tower climbers of potential for exposure.		Caution 2C Gives specific information on how to proceed and who to contact regarding antennas that are façade mounted, concealed or on stand-alone structures.
	Notice 2D Used to inform individuals accessing adjacent towers that AT&T is exceeding FCC's General Population exposure limits on the structure.		Caution 2D Used to inform individuals accessing adjacent towers that AT&T is exceeding FCC's Occupational exposure limits on the structure.
	Warning 1B Used to inform individuals that they are entering an area that may exceed the FCC's Occupational exposure limits by a factor of 10 or greater. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.		Warning 2A Used to inform individuals that they are entering an area that may exceed the FCC's Occupational exposure limits by a factor of 10 or greater. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas (used in conjunction with painted stripes).

APPENDIX B: FCC GUIDELINES AND EMISSIONS THRESHOLD LIMITS

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{\text{MHz}}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of $1 \text{ mW}/\text{cm}^2$ ($1000 \mu\text{W}/\text{cm}^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Because exposure limits may vary for each frequency band, it is necessary to report % MPE rather than power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Additional details can be found in FCC OET 65.

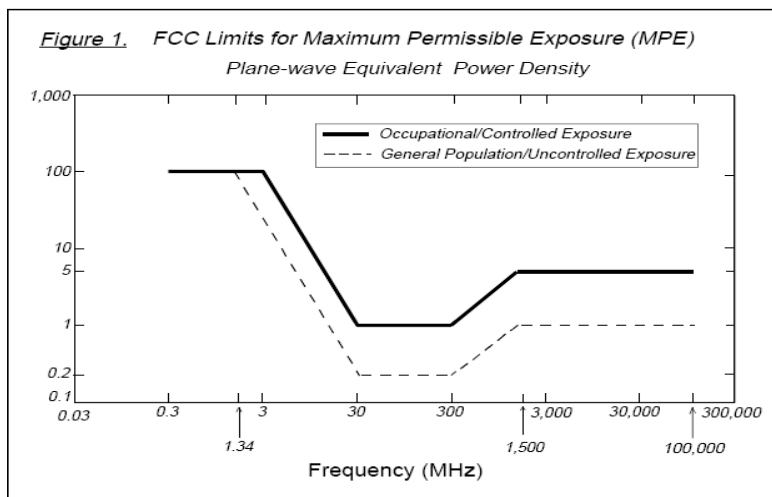
The FCC mandates that if a site is found to be out of compliance with regard to exposure, any system operator contributing 5% or more to areas exceeding the FCC's allowable limits will be responsible for bringing the site into compliance.

Additional details can be found in FCC OET 65.

Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (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
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (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
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

* Plane-wave equivalent power density



APPENDIX C: CALCULATION METHODOLOGY

IXUS electromagnetic energy (EME) calculation software was used to assess all RF field levels presented in this study. IXUS software uses a fast and accurate EME calculation tool that allows for the determination of RF field strength in the vicinity of radio communication base stations and transmitters. At its core, the IXUS EME calculation module implements evaluation techniques detailed in the ITU-T K.61, CENELEC EN 50383, and IEC 62232 specifications and referenced in *C95.3 IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz to 300 GHz*. The EME calculation result at any point in 3D space is achieved via a synthetic ray tracing technique, a conservative cylindrical envelope method, or through full-wave electromagnetic simulation. The ray tracing method is an advanced computation method described in IEC 622322 where the power is summed from elemental sources representing the individual components of the antenna which are selected by an analysis of published manufacturer datasheets and antenna pattern information. The selection of the solution method is determined by the particular antenna being considered.

Power Calculation Table

All Systems	Tx Power in Watts = (X) x 0.75 (AT&T Duty Cycle) = Input Power Example: 160W x 0.75 = 120W
C-Band (3800 MHz) DOD-band (3450 MHz) (for integrated beamforming antennas only)	Tx Power in Watts = (X) x 0.75 (AT&T Duty Cycle) x 1.412 (Power Tolerance) x 0.32 (Power Reduction Factor) = Input Power Example 1: 320W x 0.75 x 1.412 x 0.32 = 108.44W Example 2: 256W x 0.75 x 1.412 x 0.32 = 86.75W Example 3: 160W x 0.75 x 1.412 x 0.32 = 54.22W

APPENDIX D: CERTIFICATIONS

I, Samuel Cosgrove, preparer of this report certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.

Samuel Cosgrove

8/1/2025

I, Michael Fischer, reviewer and approver of this report certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.



Michael Fischer, P.E.
Registered Professional Engineer (Electrical)
California License Number 22921
Expires September 30, 2025

Signed: 8/1/2025

APPENDIX E: PROPRIETARY STATEMENT

This report was prepared for the use of AT&T to meet all applicable FCC requirements. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by Centerline are based solely on the information provided by AT&T and all observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to Centerline so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.