August 1, 2022

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Exempt Modification Application – AT&T Site 13757816
AT&T Mobility Telecommunications Facility @ 199 Town Farm Rd, Farmington, CT 06032

Dear Ms. Bachman,

New Cingular Wireless ("AT&T") desires to modify an existing wireless telecommunications facility at the above referenced address. Enclosed please find a check number 034938 in the amount of Six Hundred and Twenty Five Dollars ($625.00); an original and two (2) copies of the following documents: the CSC Exempt Modification letter; a Letter of Authorization from tower owner; the GIS property map; a set of Construction Drawings; a Structural Analysis Report; an Antenna Mount Analysis Report; an EME Study Report; and three (3) Notice Confirmations.

I will email copies of these documents to the Council.

If you have any questions, please feel free to contact me; I can be reached at 443-677-0144 or via email at jmandrews@clinellc.com. Thank you for your kind cooperation in this matter

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

July 5, 2022

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Exempt Modification Application – AT&T Site 13757816
AT&T Mobility Telecommunications Facility @ 199 Town Farm Rd, Farmington, CT 06032

Dear Ms. Bachman,

New Cingular Wireless, PCS, LLC (dba AT&T) currently maintains antennas on a wireless telecommunications facility on an existing American Tower Corporation (ATC) telecommunications tower at the above referenced address. AT&T desires to modify its existing equipment as described in the attached Construction and Antenna Mount Modification Drawings:

- Remove nine (9) antennas, six (6) RRHs and three (3) TTAs;
- Install twelve (12) antennas, nine (9) RRHs, one (1) squid, one (1) conduit, two (2) DC trunks, six (6) Y cables, and one (1) fiber trunk.
- Ground work includes installing a 6648 with cables.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2), and as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of AT&T's intent to modify a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: American Tower Corporation as Tower Operator/Owner; the Town of Farmington, as Property Owner; Kathleen A. Blonski, the Farmington Town Manager, and Town Planner Shannon Rutherford.

The applicant's proposal falls squarely within those activities explicitly provided for in R.C.S.A. §16-50j-89. Specifically:

1. The proposed modifications will NOT result in an increase in the height of the existing structure.
2. The proposed modifications will NOT require an extension of the site boundary.
3. The proposed modifications will NOT increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will NOT increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.
5. The proposed modifications will NOT cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis enclosed herewith.

Jack Andrews, Zoning Manager 10130 Donleigh Drive, Columbia, MD 21046 (443) 677-0144
Centerline Communications • 750 W Center Street, Suite 301, W Bridgewater, MA 02379

For the foregoing reasons, AT&T respectfully requests that the Council approve this Exempt Modification request for this tower located at 123 Pine Orchard Road, Branford, CT. If you have any questions, please feel free to contact me.

Sincerely,

Jack Andrews
Zoning Manager, Centerline Communications
443-677-0144

Enclosures:
Exhibit 1 – Letter of Authorization from tower owner
Exhibit 2 – Property Card and GIS
Exhibit 3 – Construction and Mount Modification Drawings
Exhibit 4 – Structural Analysis Report
Exhibit 5 – Antenna Mount Analysis Report (failing)
Exhibit 6 – EME Study Report
Exhibit 7 – Four (4) Notice Confirmations

cc:
American Tower Corporation - Tower Operator/Owner
The Town of Farmington - Property Owner
Kathleen A. Blonski - Farmington Town Manager
Shannon Rutherford - Farmington Town Planner

AMERICAN TOWER®
CORPORATION

LETTER OF AUTHORIZATION

ATC SITE#/NAME/PROJECT: 411258 / FARMINGTON NORTH 2 CT / 13757816
SITE ADDRESS: 199 Town Farm Road, Farmington CT 06032-1554
LICENSEE: NEW CINGULAR WIRELESS PCS, LLC D/B/A AT&T MOBILITY

I, Margaret Robinson, Vice President, UST Legal for American Tower*, owner/operator of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize **NEW CINGULAR WIRELESS PCS, LLC D/B/A AT&T MOBILITY Centerline Communications** their successors and assigns, and/or their agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use, building, or electrical permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation on the Tower Facility.

American Tower understands that this application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature:

Print Name: Margaret Robinson
Vice President, UST Legal
American Tower*

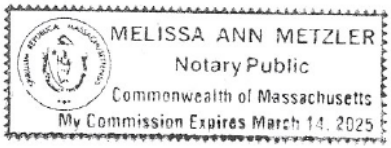
NOTARY BLOCK

Commonwealth of MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel for American Tower*, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

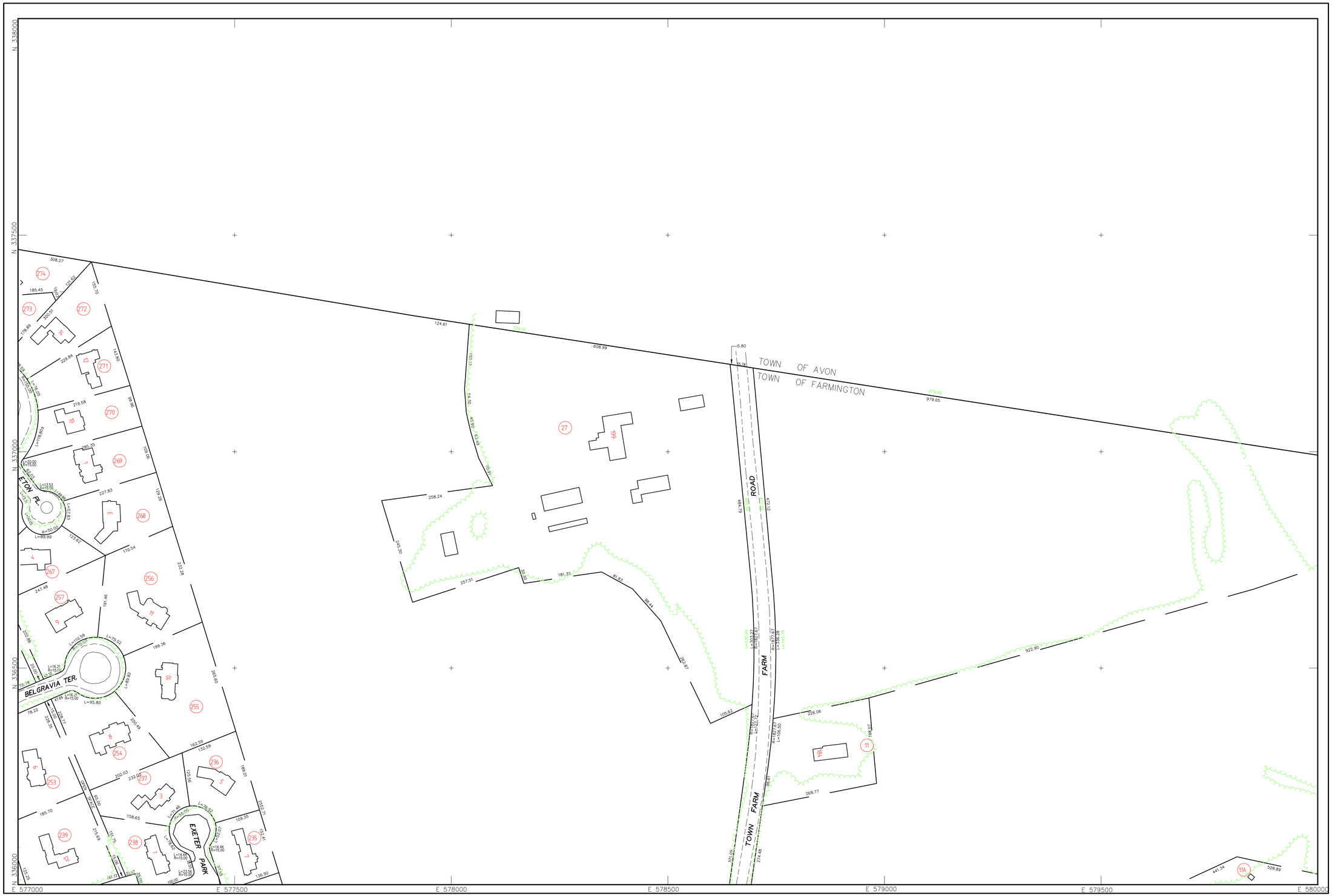
WITNESS my hand and official seal, this 6th day of July 2022

NOTARY SEAL



Notary Public
My Commission Expires: March 14, 2025

* American Tower is defined as American Tower Corporation and any of its affiliates or subsidiaries.



THESE ASSESSOR MAPS ARE NOT LAND RECORD MAPS AND SHOULD NOT BE USED FOR DEED DESCRIPTION OR REFERENCE. REPORT ANY INACCURACIES TO THE OFFICE OF THE TOWN ENGINEER. ALL AVENUES, STREETS, ROADS AND LANES ARE SHOWN WHETHER ACCEPTED, PROPOSED OR DEDICATED BY DEED.

THE 500 FOOT GRID IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (N.A. DATUM OF 1927)

NATIONAL GEODETIC DATUM OF 1929

MAPPING CONFORMS TO NATIONAL MAP ACCURACY STANDARDS

DIGITAL PHOTOGRAMMATIC MAPPING BY: QUINN ASSOCIATES, HORSHAM, PA. DATE OF PHOTOGRAPHY MARCH 19,1990. CONTOUR INTERVALS ARE 2 FEET.

LEGEND

- (8) – ASSESSOR NUMBER
- × 385.6 SPOT ELEV.
- LEDGE
- TRAFFIC SIGNAL
- IRON PIN
- VALVE
- CATCH BASIN
- FP FLAG POLE
- HYDRANT
- MON
- BENCHMARK
- HAND HOLE
- MANHOLE
- POST
- WELL
- FLOW ARROW
- R.R. SWITCH
- LIGHT POLE
- POLE
- SWAMP
- SHRUB
- CTREE
- DTREE
- CULVERT
- LIGHT PEDESTAL
- R.R. CATENARY SUPPORT
- EDGE OF PAVEMENT
- DRIVEWAY
- SIDEWALK
- GUARD RAIL
- FENCE
- RETAINING WALL
- RAILROAD
- WATERCOURSE
- TREE LINE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- DEPRESSION CONTOUR
- 300 CONTOUR LABEL
- WETLAND

KEY MAP

TOWN OF FARMINGTON

ASSESSOR'S OFFICE

1 MONTEITH DRIVE, FARMINGTON, CONNECTICUT 06032
PHONE: (860) 675-2370 FAX: (860) 675-2376

100 0 100 200 300 400
SCALE 1"=100'

MAP PREPARED AND MAINTAINED BY:
DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION

ASSESSOR'S MAP

OF THE
TOWN OF FARMINGTON
HARTFORD COUNTY, CONNECTICUT

SHEET NO:

017 OF 162

DATE PRINTED: FEBRUARY 2020

Radio Frequency Exposure Analysis Report

June 17, 2022

American Tower on behalf of AT&T

AT&T Site Name: Farmington North 2 CT
Site Number: CT2580
FA#: 10141396
USID: 114784

Site Address: 199 TOWN FARM ROAD, FARMINGTON, CT 06032

Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	36.20982 µW/cm^2
Cumulative General Population % MPE (Ground Level):	3.6212%

750 West Center Street | Suite 301 | West Bridgewater | MA | 02379

June 17, 2022

Centerline
Attn: John Luca, Associate Project Manager
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **Farmington North 2 CT**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed AT&T facility at **199 TOWN FARM ROAD, FARMINGTON, CT 06032** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal 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 ($\mu W/cm^2$). 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 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). 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. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to 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.

Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

Data & Results

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

CENTERLINE COMMUNICATIONS

Maximum Calculated Cumulative Power Density (Location: approximately 223' northwest of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
AT&T A 1	CCI TPA65R-BU8D	700	13.05	100.00	4.00	40.00	3229.39	0.00023	466.67	0.00005
AT&T A 1	CCI TPA65R-BU8D	1900	14.35	100.00	4.00	40.00	4356.32	0.00014	1000.00	0.00001
AT&T A 1	CCI TPA65R-BU8D	2100	15.25	100.00	4.00	40.00	5359.45	0.00014	1000.00	0.00001
AT&T A 2	Ericsson AIR6449	3700	23.45	100.00	1.00	108.40	23989.95	0.00253	1000.00	0.00025
AT&T A 3	Ericsson AIR6419	3450	23.45	100.00	1.00	108.40	23989.95	0.00239	1000.00	0.00024
AT&T A 4	CCI DMP65R-BU8D	700	12.25	100.00	4.00	40.00	2686.09	0.00025	466.67	0.00005
AT&T A 4	CCI DMP65R-BU8D	850	12.55	100.00	4.00	40.00	2878.19	0.00014	566.67	0.00002
AT&T A 4	CCI DMP65R-BU8D	2300	14.25	100.00	4.00	25.00	2660.73	0.00011	1000.00	0.00001
AT&T B 5	CCI TPA65R-BU8D	700	13.05	100.00	4.00	40.00	3229.39	0.00000	466.67	0.00000
AT&T B 5	CCI TPA65R-BU8D	1900	14.35	100.00	4.00	40.00	4356.32	0.00000	1000.00	0.00000
AT&T B 5	CCI TPA65R-BU8D	2100	15.25	100.00	4.00	40.00	5359.45	0.00000	1000.00	0.00000
AT&T B 6	Ericsson AIR6449	3700	23.45	100.00	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T B 7	Ericsson AIR6419	3450	23.45	100.00	1.00	108.40	23989.95	0.00000	1000.00	0.00000
AT&T B 8	CCI DMP65R-BU8D	700	12.25	100.00	4.00	40.00	2686.09	0.00000	466.67	0.00000
AT&T B 8	CCI DMP65R-BU8D	850	12.55	100.00	4.00	40.00	2878.19	0.00000	566.67	0.00000
AT&T B 8	CCI DMP65R-BU8D	2300	14.25	100.00	4.00	25.00	2660.73	0.00000	1000.00	0.00000
AT&T C 9	CCI TPA65R-BU8D	700	13.05	100.00	4.00	40.00	3229.39	0.00012	466.67	0.00003
AT&T C 9	CCI TPA65R-BU8D	1900	14.35	100.00	4.00	40.00	4356.32	0.00012	1000.00	0.00001
AT&T C 9	CCI TPA65R-BU8D	2100	15.25	100.00	4.00	40.00	5359.45	0.00008	1000.00	0.00001
AT&T C 10	Ericsson AIR6449	3700	23.45	100.00	1.00	108.40	23989.95	0.00239	1000.00	0.00024
AT&T C 11	Ericsson AIR6419	3450	23.45	100.00	1.00	108.40	23989.95	0.00226	1000.00	0.00023
AT&T C 12	CCI DMP65R-BU8D	700	12.25	100.00	4.00	40.00	2686.09	0.00011	466.67	0.00002
AT&T C 12	CCI DMP65R-BU8D	850	12.55	100.00	4.00	40.00	2878.19	0.00011	566.67	0.00002
AT&T C 12	CCI DMP65R-BU8D	2300	14.25	100.00	4.00	25.00	2660.73	0.00007	1000.00	0.00001
Verizon A 13	AMPHENOL LPA-80063-4CF	850	13.00	109.00	4.00	20.00	1596.21	0.00006	566.67	0.00001
Verizon A 14	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00007	466.67	0.00002
Verizon A 14	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00006	566.67	0.00001
Verizon A 14	COMMSCOPE SBNHH-1D65B	1900	15.89	109.00	4.00	30.00	4657.80	0.00008	1000.00	0.00001
Verizon A 15	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00007	466.67	0.00002
Verizon A 15	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00006	566.67	0.00001
Verizon A 15	COMMSCOPE SBNHH-1D65B	2100	16.44	109.00	4.00	45.00	7929.99	0.00016	1000.00	0.00002
Verizon A 16	SAMSUNG MT6407	3700	23.35	109.00	4.00	50.00	43254.37	0.00336	1000.00	0.00034
Verizon A 17	AMPHENOL LPA-80063-4CF	850	13.00	109.00	3.00	20.00	1197.16	0.00005	566.67	0.00001
Verizon B 18	AMPHENOL LPA-80063-4CF	850	13.00	109.00	4.00	20.00	1596.21	0.00000	566.67	0.00000
Verizon B 19	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00000	466.67	0.00000

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (μW/cm²)	General Population MPE Limit (μW/cm²)	General Population % MPE
Verizon B 19	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00000	566.67	0.00000
Verizon B 19	COMMSCOPE SBNHH-1D65B	1900	15.89	109.00	4.00	30.00	4657.80	0.00000	1000.00	0.00000
Verizon B 20	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00000	466.67	0.00000
Verizon B 20	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00000	566.67	0.00000
Verizon B 20	COMMSCOPE SBNHH-1D65B	2100	16.44	109.00	4.00	45.00	7929.99	0.00000	1000.00	0.00000
Verizon B 21	SAMSUNG MT6407	3700	23.35	109.00	4.00	50.00	43254.37	0.00003	1000.00	0.00000
Verizon B 22	AMPHENOL LPA-80063-4CF	850	13.00	109.00	3.00	20.00	1197.16	0.00000	566.67	0.00000
Verizon C 23	AMPHENOL LPA-80063-4CF	850	13.00	109.00	4.00	20.00	1596.21	0.00006	566.67	0.00001
Verizon C 24	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00008	466.67	0.00002
Verizon C 24	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00007	566.67	0.00001
Verizon C 24	COMMSCOPE SBNHH-1D65B	1900	15.89	109.00	4.00	30.00	4657.80	0.00007	1000.00	0.00001
Verizon C 25	COMMSCOPE SBNHH-1D65B	700	12.38	109.00	2.00	40.00	1383.85	0.00008	466.67	0.00002
Verizon C 25	COMMSCOPE SBNHH-1D65B	850	12.67	109.00	2.00	40.00	1479.41	0.00007	566.67	0.00001
Verizon C 25	COMMSCOPE SBNHH-1D65B	2100	16.44	109.00	4.00	45.00	7929.99	0.00010	1000.00	0.00001
Verizon C 26	SAMSUNG MT6407	3700	23.35	109.00	4.00	50.00	43254.37	0.00306	1000.00	0.00031
Verizon C 27	AMPHENOL LPA-80063-4CF	850	13.00	109.00	3.00	20.00	1197.16	0.00005	566.67	0.00001
Dish A 28	JMA MX08FRO665-21	700	12.05	90.00	4.00	40.00	2565.19	0.00025	466.67	0.00005
Dish A 28	JMA MX08FRO665-21	1900	15.75	90.00	4.00	40.00	6013.40	0.00018	1000.00	0.00002
Dish B 29	JMA MX08FRO665-21	700	12.05	90.00	4.00	40.00	2565.19	0.00000	466.67	0.00000
Dish B 29	JMA MX08FRO665-21	1900	15.75	90.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 30	JMA MX08FRO665-21	700	12.05	90.00	4.00	40.00	2565.19	0.00016	466.67	0.00003
Dish C 30	JMA MX08FRO665-21	1900	15.75	90.00	4.00	40.00	6013.40	0.00011	1000.00	0.00001
							Cumulative Power Density:	**36.20982 μW/cm²**	**Cumulative % MPE:**	**3.62120%**

Summary

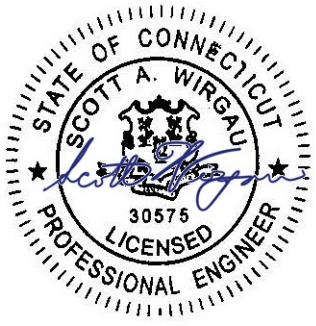
The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **Compliant** with FCC rules and regulations.

Katrina Styx
RF EME Technical Writer
Centerline Communications, LLC

AMERICAN TOWER®
CORPORATION

Mount Analysis Report

ATC Site Name	:	**Farmington North 2 CT, CT**
ATC Site Number	:	**411258**
Engineering Number	:	**13757816_C8_01**
Mount Elevation	:	**100 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB056286**
Carrier Site Number	:	**CT2580**
Site Location	:	**199 Town Farm Road** **Farmington, CT 06032-1554** **41.75777516 , -72.82993932**
County	:	**Hartford**
Date	:	**March 22, 2022**
Max Usage	:	**88%**
Result	:	**Contingent Pass**



Prepared By:
Aviskar Ghansam
Structural Engineer

Aviskar Ghansam

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of the mount analysis performed for AT&T Mobility at 100 ft.

Supporting Documents

Specifications Sheet	Site Pro 1 ULP12-4120, dated May 24, 2018
Radio Frequency Data Sheet	RFDS ID #10141396, dated February 24, 2022
Reference Photos	Site photos from 2019

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	117 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.50'' radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.185, S1 = 0.055
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above provided the modifications listed below are completed:

- Analysis based on a new install of a Site Pro 1 ULP12-4120 (ANT.16966).
- Install P2 (2.375" x 60") antenna mounting pipe (Mount Pipe M, N, O) with Site Pro 1 SCX7-U, (ANT.16985), (or approved equivalent) crossover plate kits.
- No structural failures were addressed with the noted contingencies. Contingencies address Carrier's antenna spacing requirements.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

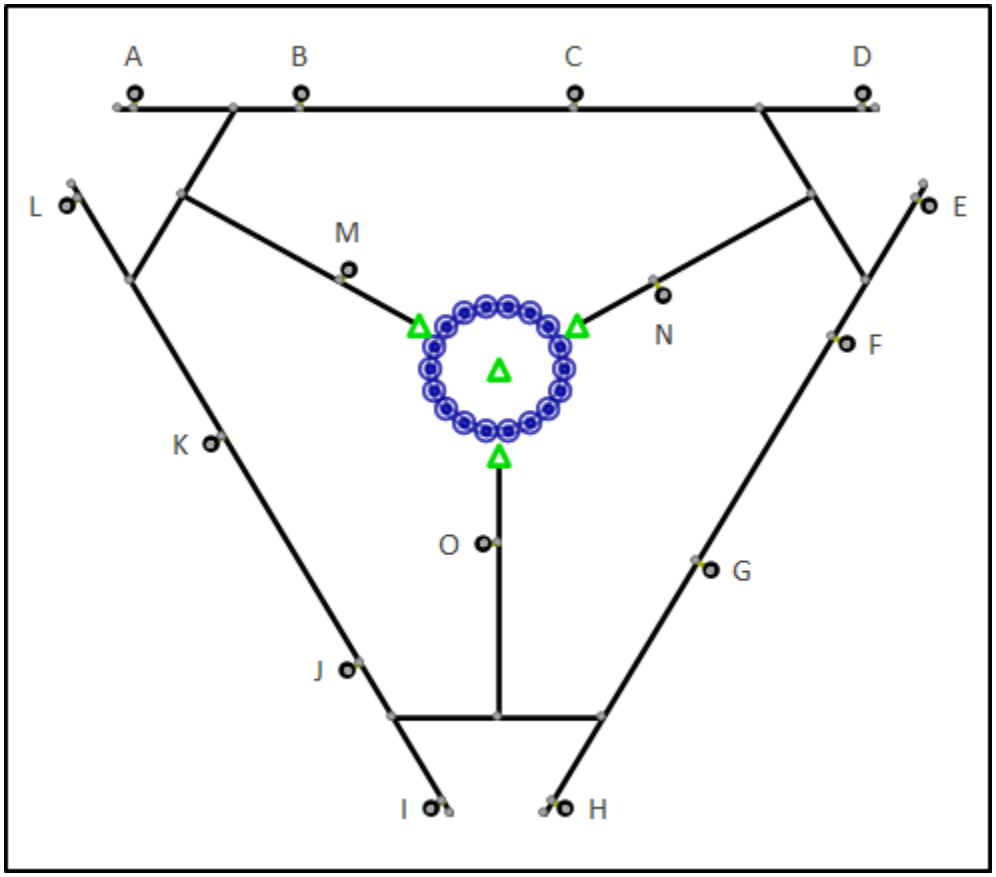
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
100.0	102.0	3	Ericsson AIR 6449 B77D/ C-Band
	100.0	3	CCI TPA65R-BU8D
		3	CCI DMP65R-BU8D
		1	Raycap DC6-48-60-18-8C-EV
		1	Raycap DC6-48-60-18-8F(32.8 lbs)
		1	Raycap DC6-48-60-18-8F ("Squid")
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A
	98.0	3	Ericsson AIR 6419 B77G

Structure Usages

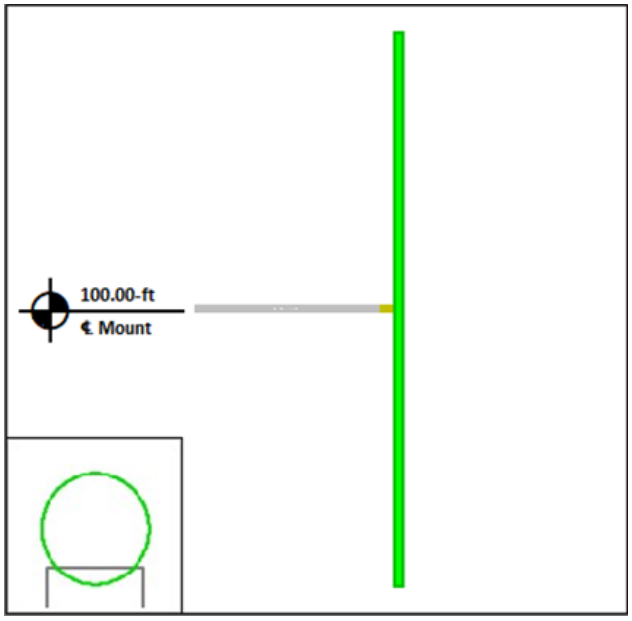
Structural Component	Controlling Usage	Pass/Fail
Horizontals	88%	Pass
Mount Pipes	65%	Pass
Serviceability	N/A	Pass

Mount Layout

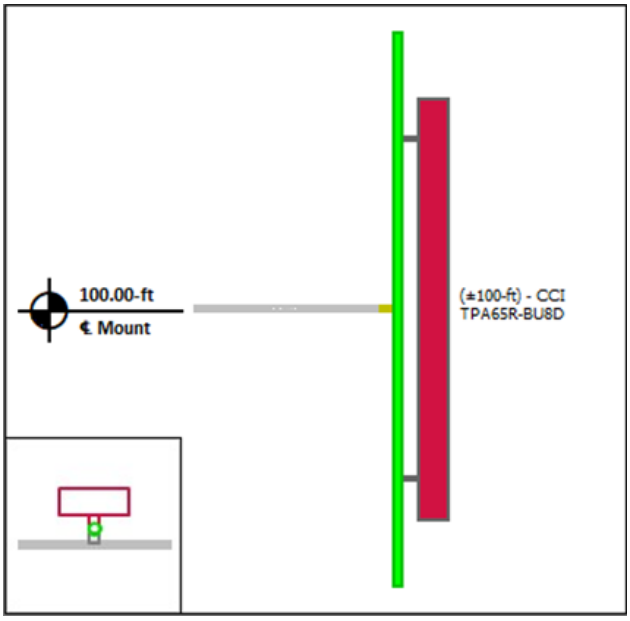


Equipment Layout

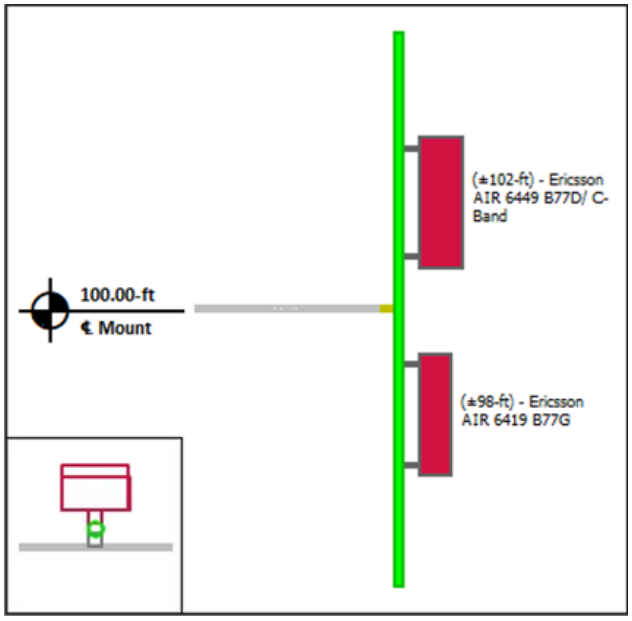
Mount Pipe A



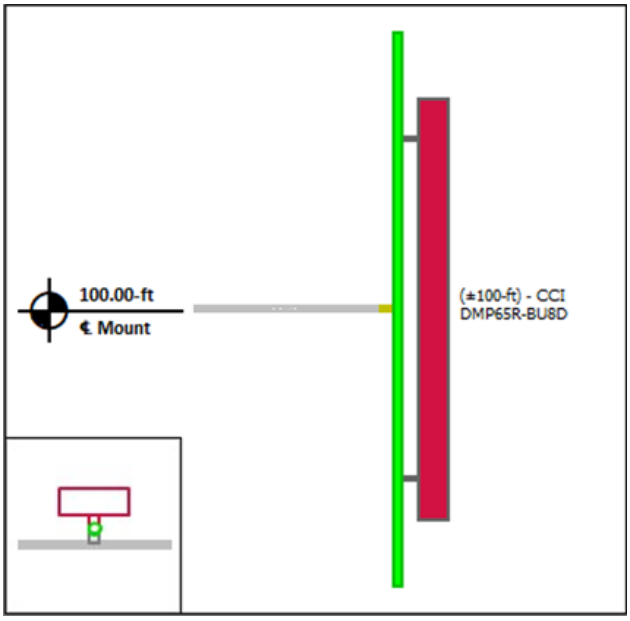
Mount Pipe B



Mount Pipe C

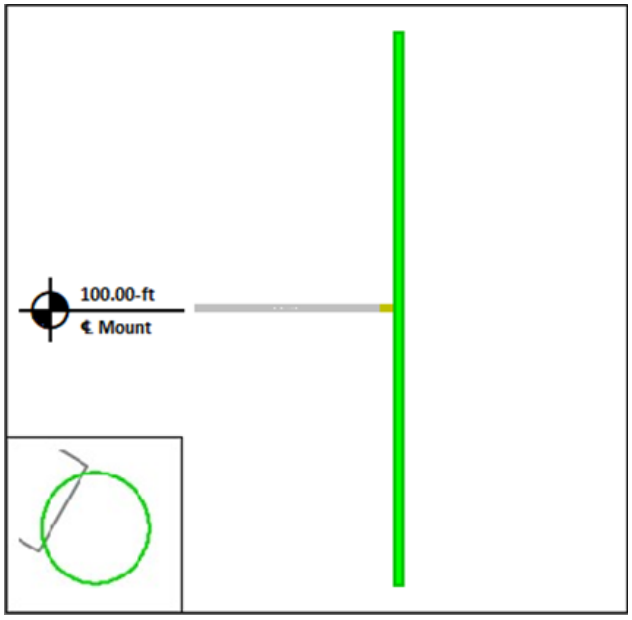


Mount Pipe D

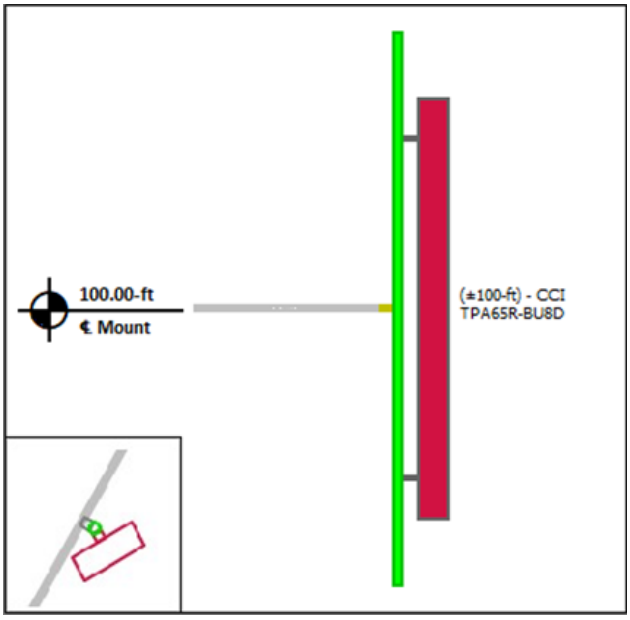


Equipment Layout Cont'd.

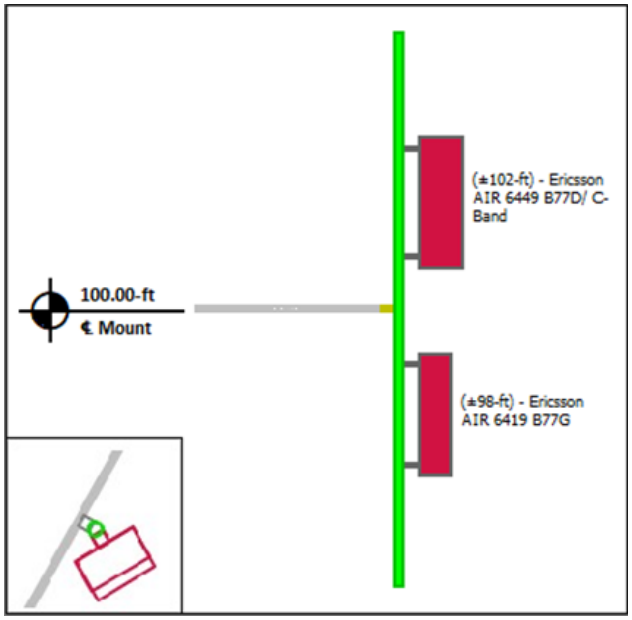
Mount Pipe E



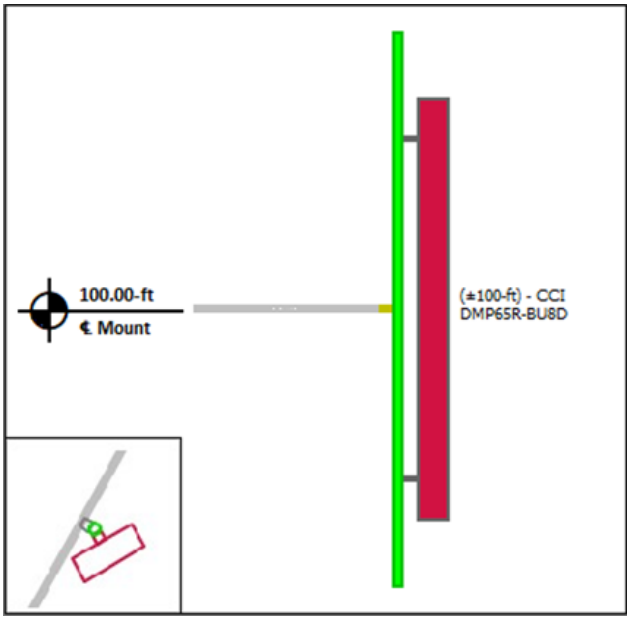
Mount Pipe F



Mount Pipe G

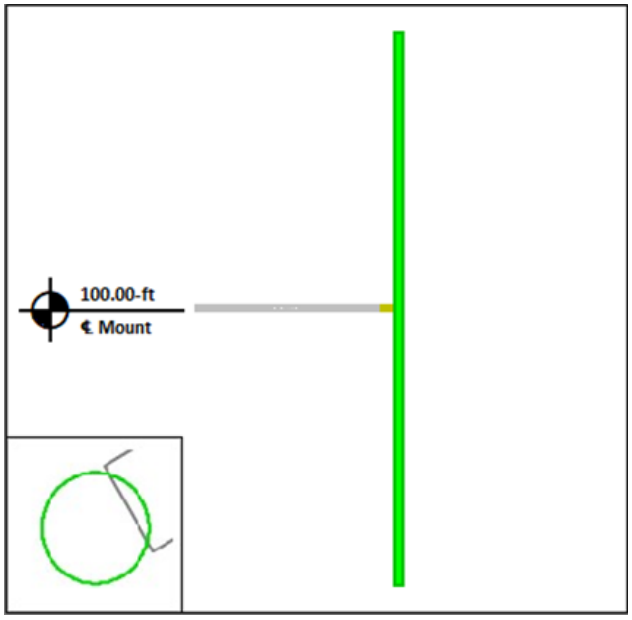


Mount Pipe H

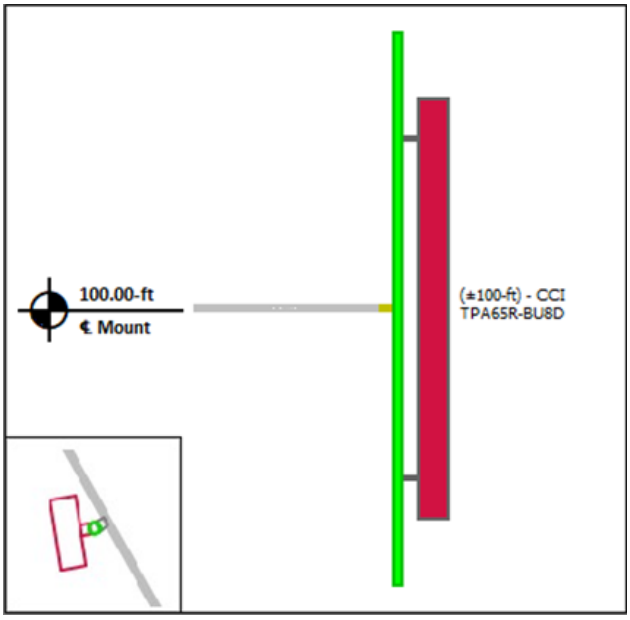


Equipment Layout Cont'd.

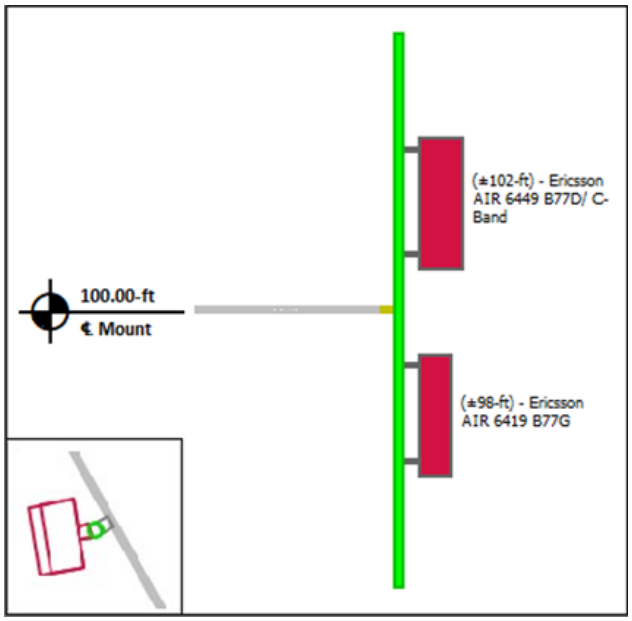
Mount Pipe I



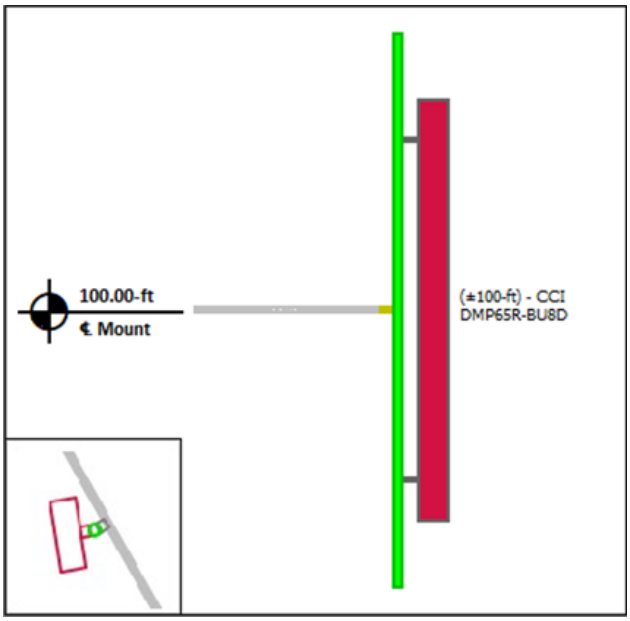
Mount Pipe J



Mount Pipe K

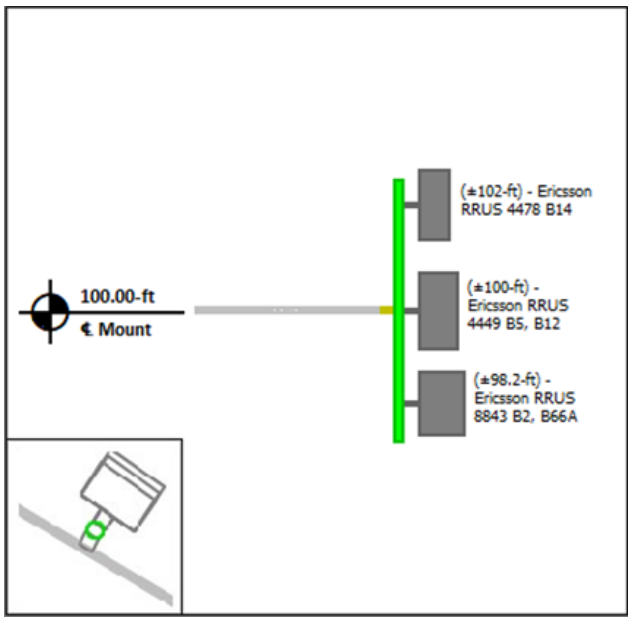


Mount Pipe L

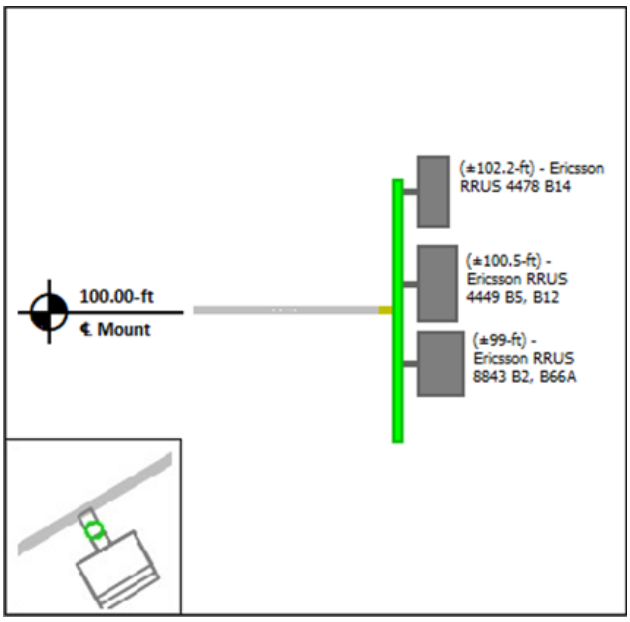


Equipment Layout Cont'd.

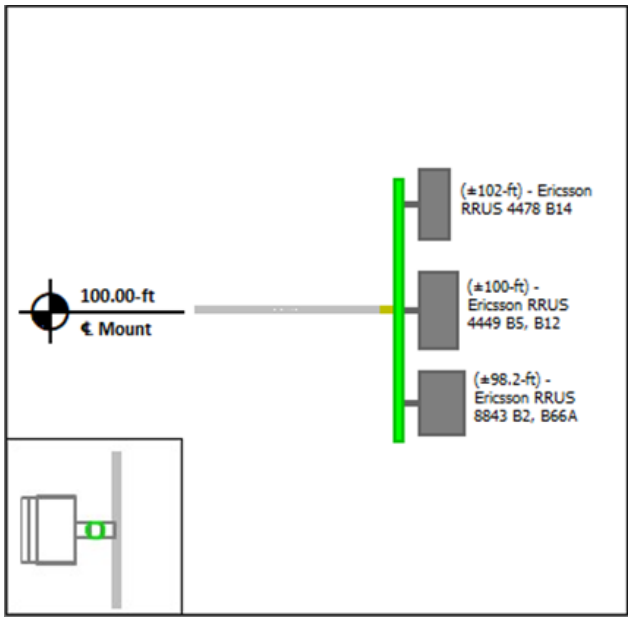
Mount Pipe M



Mount Pipe N



Mount Pipe O



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding equipment, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

AMERICAN TOWER®
CORPORATION

Site Number:	*411258*
Project Number:	*13757816_C8_01*
Carrier:	*AT&T Mobility*
Mount Elevation:	*100 ft*
Date:	3/22/2022

Mount Analysis Force Calculations

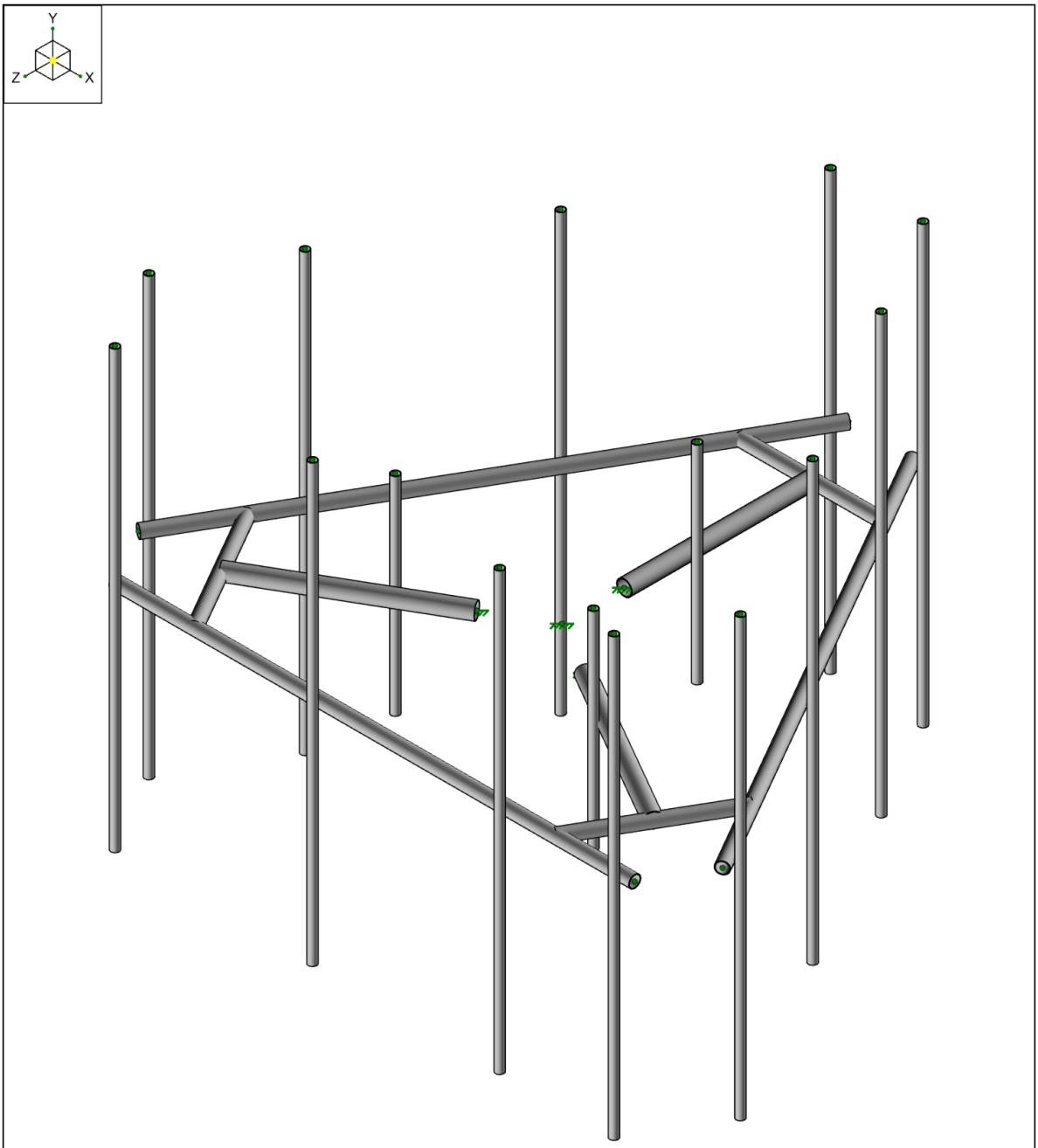
Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.27	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	0.99	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	117	mph
Velocity Pressure	q_z	41.9	psf
Height Escalation Factor	K_{iz}	1.12	
Thickness of Radial Glaze Ice	T_{iz}	1.68	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.197	
1 Second DSRAP	S_{D1}	0.088	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.099	
Amplification Factor	A	1.0	
Total Weight	W	2620.5	lbs
Total Shear Force	V_S	258.6	lbs
Horizontal Seismic Load	Eh	258.6	lbs
Vertical Seismic Load	Ev	103.4	lbs

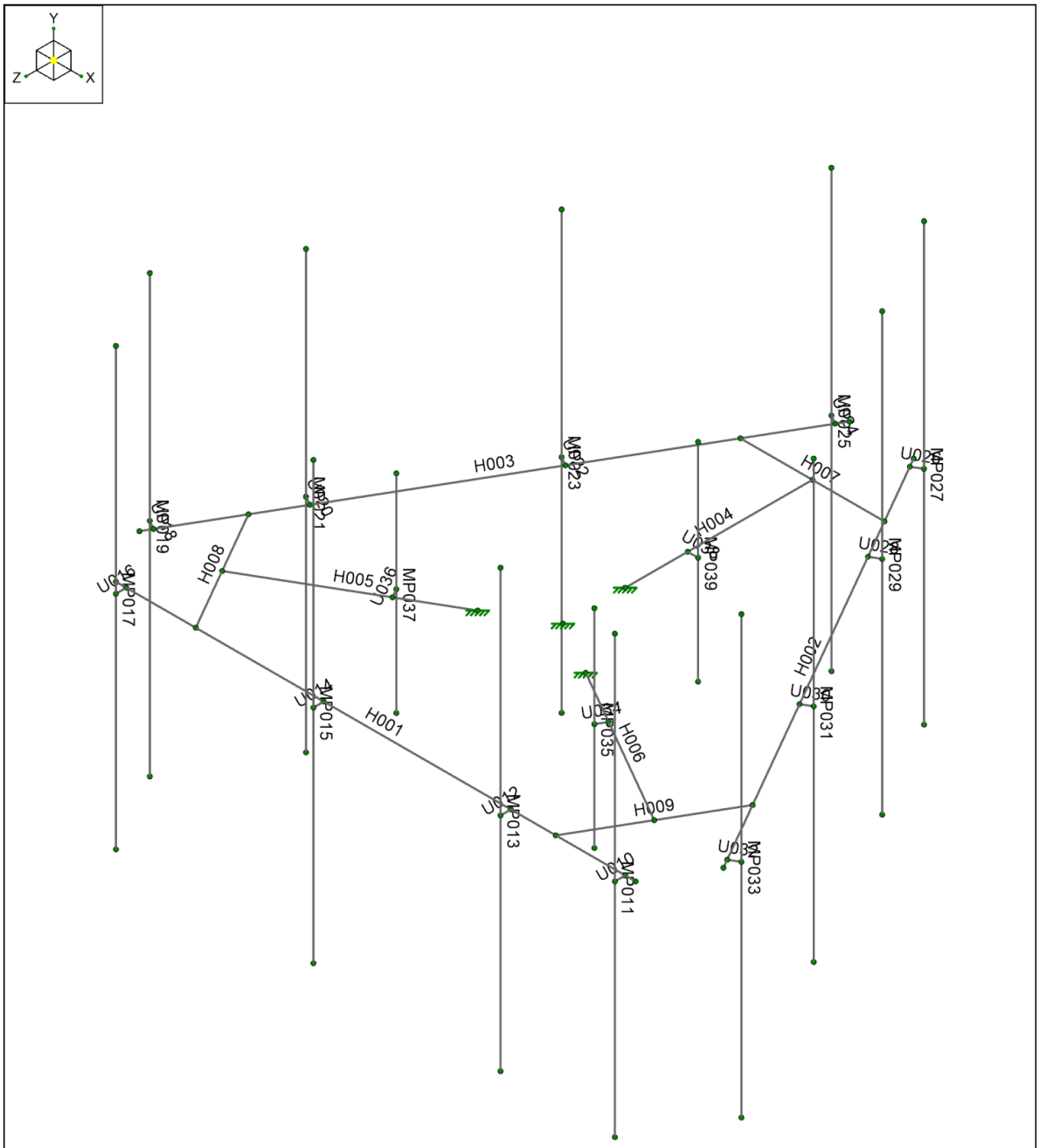
Antenna Calculations (Elevations per Application/RFDS)*

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Ericsson AIR 6449 B77D/ C-Band	30.4	15.9	10.6	81.6	4.03	1.62	5.41	2.37
CCI TPA65R-BU8D	96.0	21.0	7.8	82.5	18.09	3.12	21.71	4.62
CCI DMP65R-BU8D	96.0	20.7	7.7	95.7	17.87	3.08	21.49	4.58
Raycap DC6-48-60-18-8C-EV	31.4	18.3	10.2	16.0	N/A	N/A	N/A	N/A
Raycap DC6-48-60-18-8F(32.8 lbs)	24.0	11.0	11.0	32.8	N/A	N/A	N/A	N/A
Raycap DC6-48-60-18-8F ("Squid")	24.0	11.0	11.0	31.8	N/A	N/A	N/A	N/A
Ericsson RRUS 4478 B14	16.5	13.4	7.7	59.9	1.84	1.06	2.77	1.83
Ericsson RRUS 4449 B5, B12	17.9	13.2	9.4	71.0	1.97	1.40	2.93	2.26
Ericsson RRUS 8843 B2, B66A	14.9	13.2	10.9	72.0	1.64	1.35	2.52	2.17
Ericsson AIR 6419 B77G	28.3	16.1	7.9	66.1	3.80	1.20	5.13	1.91

**** Equipment with EPA values N/A were not considered in the mount analysis***



American Tower Corp.	411258, Farmington North 2 CT	SK-1
Aviskar.Ghansam		Mar 22, 2022
13757816_C8_01		R3D. AT&T MOBILITY @ 411258, …



American Tower Corp.	411258, Farmington North 2 CT	SK-2
Aviskar.Ghansam		Mar 22, 2022
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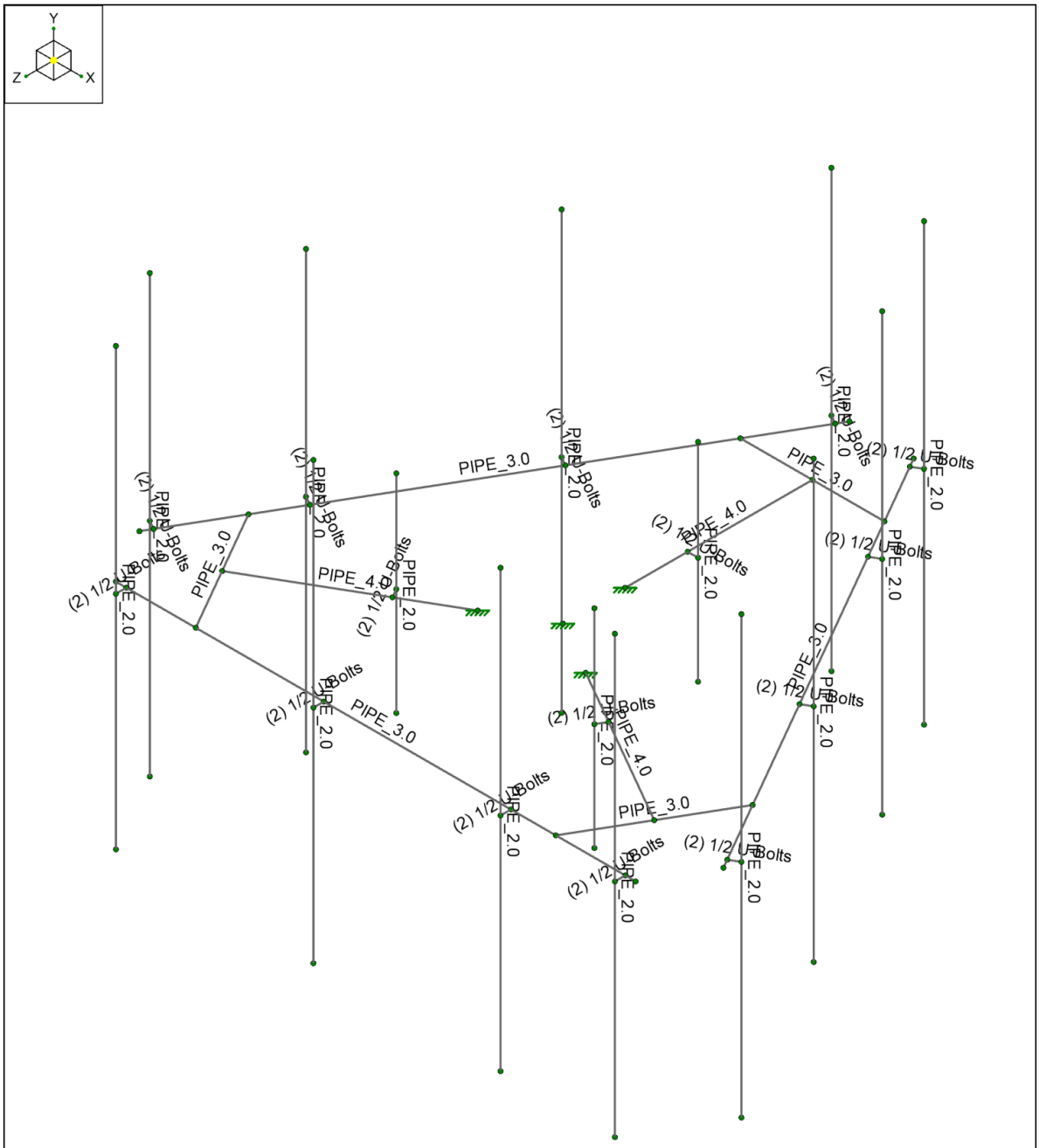
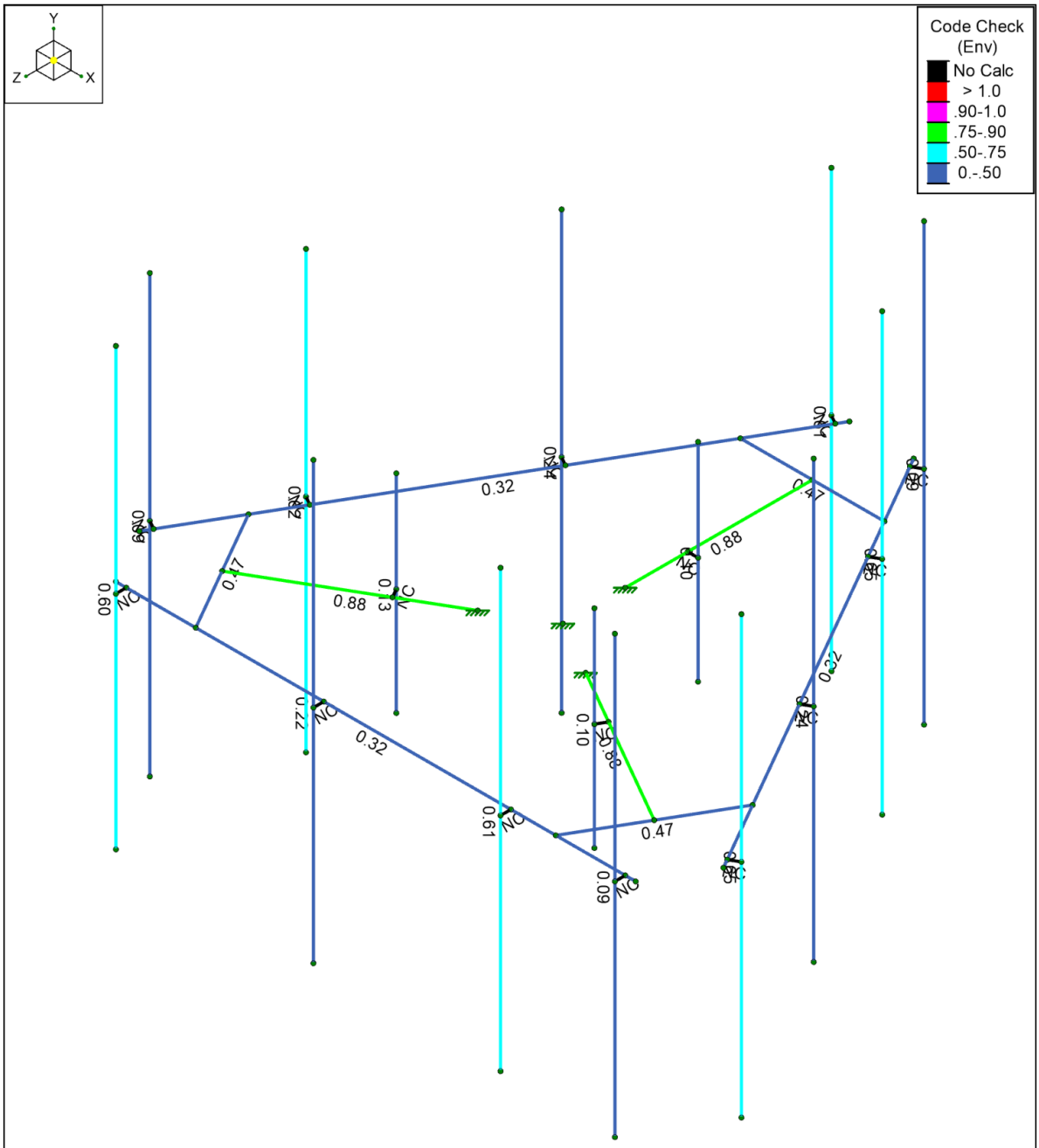
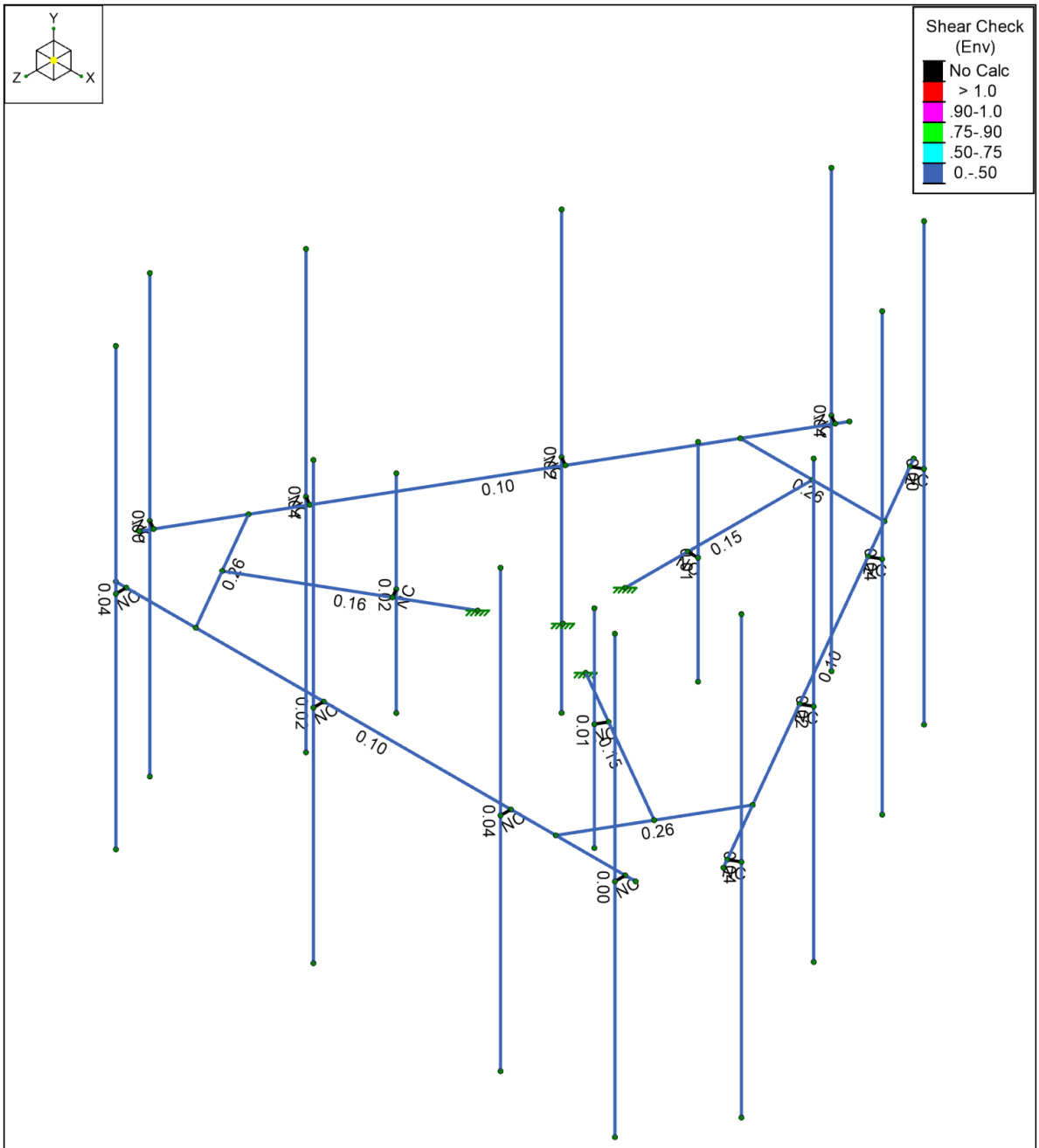


American Tower Corp.	411258, Farmington North 2 CT	SK-3
Aviskar.Ghansam		Mar 22, 2022
13757816_C8_01		R3D. AT&T MOBILITY @ 411258, …



American Tower Corp.	411258, Farmington North 2 CT	SK-4
Aviskar.Ghansam		Mar 22, 2022
13757816_C8_01		R3D. AT&T MOBILITY @ 411258, …



American Tower Corp.	411258, Farmington North 2 CT	SK-5
Aviskar.Ghansam		Mar 22, 2022
13757816_C8_01		R3D. AT&T MOBILITY @ 411258, …

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
1	D	DL	-1		33	
2	Di	IL			33	24
3	W 0	WL			33	48
4	W 30	WL			66	87
5	W 60	WL			66	87
6	W 90	WL			33	42
7	W 120	WL			66	87
8	W 150	WL			66	87
9	W 180	WL			33	48
10	W 210	WL			66	87
11	W 240	WL			66	87
12	W 270	WL			33	42
13	W 300	WL			66	87
14	W 330	WL			66	87
15	Wi 0	WL			33	48
16	Wi 30	WL			66	87
17	Wi 60	WL			66	87
18	Wi 90	WL			33	42
19	Wi 120	WL			66	87
20	Wi 150	WL			66	87
21	Wi 180	WL			33	48
22	Wi 210	WL			66	87
23	Wi 240	WL			66	87
24	Wi 270	WL			33	42
25	Wi 300	WL			66	87
26	Wi 330	WL			66	87
27	Ws 0	WL			33	48
28	Ws 30	WL			66	87
29	Ws 60	WL			66	87
30	Ws 90	WL			33	42
31	Ws 120	WL			66	87
32	Ws 150	WL			66	87
33	Ws 180	WL			33	48
34	Ws 210	WL			66	87
35	Ws 240	WL			66	87
36	Ws 270	WL			33	42
37	Ws 300	WL			66	87
38	Ws 330	WL			66	87
39	Ev -Y	ELY				24
40	Eh -Z	ELZ				24
41	Eh -X	ELX				24
42	Lv (1)	LL			1	
43	Lv (2)	LL			1	
44	Lv (3)	LL			1	
45	Lv (4)	LL			1	
46	Lv (5)	LL			1	
47	Lv (6)	LL			1	
48	Lv (7)	LL			1	
49	Lv (8)	LL			1	
50	Lv (9)	LL			1	
51	Lm (1)	LL		1		
52	Lm (2)	LL		1		
53	Lm (3)	LL		1		
54	Lm (4)	LL		1		
55	Lm (5)	LL		1		

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
56	Lm (6)	LL		1		
57	Lm (7)	LL		1		
58	Lm (8)	LL		1		
59	Lm (9)	LL		1		
60	Lm (10)	LL		1		
61	Lm (11)	LL		1		
62	Lm (12)	LL		1		
63	Lm (13)	LL		1		
64	Lm (14)	LL		1		
65	Lm (15)	LL		1		

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [lb/ft³]	Yield [psi]	Ry	Fu [psi]	Rt
1	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2
2	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2

Node Boundary Conditions

	Node Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot [k-in/rad]	Y Rot [k-in/rad]	Z Rot [k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N008	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N012	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N013	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N002	N003	PIPE_3.0	Beam	None	A53 Gr. B	Typical
2	H002	N004	N006	PIPE_3.0	Beam	None	A53 Gr. B	Typical
3	H003	N005	N007	PIPE_3.0	Beam	None	A53 Gr. B	Typical
4	H004	N009	N008	PIPE_4.0	Beam	None	A53 Gr. B	Typical
5	H005	N010	N012	PIPE_4.0	Beam	None	A53 Gr. B	Typical
6	H006	N011	N013	PIPE_4.0	Beam	None	A53 Gr. B	Typical
7	H007	N015	N014	PIPE_3.0	Beam	None	A53 Gr. B	Typical
8	H008	N016	N018	PIPE_3.0	Beam	None	A53 Gr. B	Typical
9	H009	N017	N019	PIPE_3.0	Beam	None	A53 Gr. B	Typical
10	U010	N020	N032	(2) 1/2 U-Bolts	Beam	None	A36	Typical
11	MP011	N033	N034	PIPE_2.0	Column	None	A53 Gr. B	Typical
12	U012	N021	N035	(2) 1/2 U-Bolts	Beam	None	A36	Typical
13	MP013	N036	N037	PIPE_2.0	Column	None	A53 Gr. B	Typical
14	U014	N022	N038	(2) 1/2 U-Bolts	Beam	None	A36	Typical
15	MP015	N039	N040	PIPE_2.0	Column	None	A53 Gr. B	Typical
16	U016	N023	N041	(2) 1/2 U-Bolts	Beam	None	A36	Typical
17	MP017	N042	N043	PIPE_2.0	Column	None	A53 Gr. B	Typical
18	U018	N025	N044	(2) 1/2 U-Bolts	Beam	None	A36	Typical
19	MP019	N045	N046	PIPE_2.0	Column	None	A53 Gr. B	Typical
20	U020	N027	N047	(2) 1/2 U-Bolts	Beam	None	A36	Typical
21	MP021	N048	N049	PIPE_2.0	Column	None	A53 Gr. B	Typical
22	U022	N029	N050	(2) 1/2 U-Bolts	Beam	None	A36	Typical
23	MP023	N051	N052	PIPE_2.0	Column	None	A53 Gr. B	Typical
24	U024	N031	N053	(2) 1/2 U-Bolts	Beam	None	A36	Typical
25	MP025	N054	N055	PIPE_2.0	Column	None	A53 Gr. B	Typical
26	U026	N024	N056	(2) 1/2 U-Bolts	Beam	None	A36	Typical
27	MP027	N057	N058	PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
28	U028	N026	N059	(2) 1/2 U-Bolts	Beam	None	A36	Typical
29	MP029	N060	N061	PIPE_2.0	Column	None	A53 Gr. B	Typical
30	U030	N028	N062	(2) 1/2 U-Bolts	Beam	None	A36	Typical
31	MP031	N063	N064	PIPE_2.0	Column	None	A53 Gr. B	Typical
32	U032	N030	N065	(2) 1/2 U-Bolts	Beam	None	A36	Typical
33	MP033	N066	N067	PIPE_2.0	Column	None	A53 Gr. B	Typical
34	U034	N070	N071	(2) 1/2 U-Bolts	Beam	None	A36	Typical
35	MP035	N072	N073	PIPE_2.0	Column	None	A53 Gr. B	Typical
36	U036	N069	N074	(2) 1/2 U-Bolts	Beam	None	A36	Typical
37	MP037	N075	N076	PIPE_2.0	Column	None	A53 Gr. B	Typical
38	U038	N068	N077	(2) 1/2 U-Bolts	Beam	None	A36	Typical
39	MP039	N078	N079	PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Activation	Seismic DR
1	H001	Yes	N/A		None
2	H002	Yes	N/A		None
3	H003	Yes	N/A		None
4	H004	Yes	N/A		None
5	H005	Yes	N/A		None
6	H006	Yes	N/A		None
7	H007	Yes	N/A		None
8	H008	Yes	N/A		None
9	H009	Yes	N/A		None
10	U010	Yes	N/A	Exclude	None
11	MP011	Yes	** NA **		None
12	U012	Yes	N/A	Exclude	None
13	MP013	Yes	** NA **		None
14	U014	Yes	N/A	Exclude	None
15	MP015	Yes	** NA **		None
16	U016	Yes	N/A	Exclude	None
17	MP017	Yes	** NA **		None
18	U018	Yes	N/A	Exclude	None
19	MP019	Yes	** NA **		None
20	U020	Yes	N/A	Exclude	None
21	MP021	Yes	** NA **		None
22	U022	Yes	N/A	Exclude	None
23	MP023	Yes	** NA **		None
24	U024	Yes	N/A	Exclude	None
25	MP025	Yes	** NA **		None
26	U026	Yes	N/A	Exclude	None
27	MP027	Yes	** NA **		None
28	U028	Yes	N/A	Exclude	None
29	MP029	Yes	** NA **		None
30	U030	Yes	N/A	Exclude	None
31	MP031	Yes	** NA **		None
32	U032	Yes	N/A	Exclude	None
33	MP033	Yes	** NA **		None
34	U034	Yes	N/A	Exclude	None
35	MP035	Yes	** NA **		None
36	U036	Yes	N/A	Exclude	None
37	MP037	Yes	** NA **		None
38	U038	Yes	N/A	Exclude	None
39	MP039	Yes	** NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	L-Torque [in]	K y-y	K z-z	Function
1	H001	PIPE_3.0	150			Lbyy		1	1	Lateral
2	H002	PIPE_3.0	150			Lbyy		1	1	Lateral
3	H003	PIPE_3.0	150			Lbyy		1	1	Lateral
4	H004	PIPE_4.0	54			Lbyy		1	1	Lateral
5	H005	PIPE_4.0	54			Lbyy		1	1	Lateral
6	H006	PIPE_4.0	54			Lbyy		1	1	Lateral
7	H007	PIPE_3.0	41.569			Lbyy		0.65	0.65	Lateral
8	H008	PIPE_3.0	41.569			Lbyy		0.65	0.65	Lateral
9	H009	PIPE_3.0	41.569			Lbyy		0.65	0.65	Lateral
10	U010	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
11	MP011	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
12	U012	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
13	MP013	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
14	U014	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
15	MP015	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
16	U016	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
17	MP017	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
18	U018	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
19	MP019	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
20	U020	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
21	MP021	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
22	U022	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
23	MP023	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
24	U024	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
25	MP025	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
26	U026	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
27	MP027	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
28	U028	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
29	MP029	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
30	U030	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
31	MP031	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
32	U032	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
33	MP033	PIPE_2.0	126	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
34	U034	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
35	MP035	PIPE_2.0	60	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
36	U036	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
37	MP037	PIPE_2.0	60	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
38	U038	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
39	MP039	PIPE_2.0	60	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	0	250	0	250	0	250	0	250	0	250	0	250
2		min	0	1	0	1	0	1	0	1	0	1	0	1
3	N008	max	1662.112	17	2807.75	32	2445.022	14	9325.955	32	3993.846	23	887.981	189
4		min	-1661.078	23	767.006	22	-2447.556	8	2292.668	14	-3995.701	5	-838.493	150
5	N012	max	2009.15	18	2809.129	37	2056.023	14	-1090.909	14	3942.264	15	-1948.213	22
6		min	-2008.889	12	763.423	20	-2057.988	20	-4648.159	34	-3943.949	21	-8075.663	36
7	N013	max	2462.738	16	2808.786	31	1551.218	3	-1155.898	22	3595.061	18	8068.786	28
8		min	-2459.011	22	763.513	14	-1547.224	21	-4680.174	28	-3583.036	24	1983.847	22
9	Totals:	max	5787.291	16	8421.75	27	5840.006	14						
10		min	-5787.291	10	2303.128	19	-5840.006	20						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	H001	PIPE_3.0	0.316	126.562	32	0.103	128.125	113	28250.554	65205	5748.75	5748.75	1.947	H1-1b
2	H002	PIPE_3.0	0.317	126.563	36	0.103	128.125	213	28250.554	65205	5748.75	5748.75	1.949	H1-1b
3	H003	PIPE_3.0	0.318	126.562	28	0.103	128.125	157	28250.554	65205	5748.75	5748.75	1.949	H1-1b
4	H004	PIPE_4.0	0.881	54	34	0.155	54	188	87391.76	93240	10631.25	10631.25	1.996	H1-1b
5	H005	PIPE_4.0	0.881	54	26	0.155	54	132	87391.76	93240	10631.25	10631.25	1.995	H1-1b
6	H006	PIPE_4.0	0.882	54	30	0.155	54	88	87391.76	93240	10631.25	10631.25	1.996	H1-1b
7	H007	PIPE_3.0	0.47	20.785	31	0.259	20.785	33	63459.119	65205	5748.75	5748.75	1.221	H1-1b
8	H008	PIPE_3.0	0.472	20.785	28	0.259	20.785	37	63459.119	65205	5748.75	5748.75	1.222	H1-1b
9	H009	PIPE_3.0	0.47	20.785	27	0.259	20.785	29	63459.119	65205	5748.75	5748.75	1.22	H1-1b
10	MP011	PIPE_2.0	0.092	61.688	82	0.005	63	9	8355.75	32130	1871.625	1871.625	2.847	H1-1b*
11	MP013	PIPE_2.0	0.607	61.688	8	0.037	61.688	8	8355.75	32130	1871.625	1871.625	1.316	H1-1b
12	MP015	PIPE_2.0	0.224	61.688	7	0.02	63	7	8355.75	32130	1871.625	1871.625	2.811	H1-1b
13	MP017	PIPE_2.0	0.601	61.688	8	0.036	61.688	8	8355.75	32130	1871.625	1871.625	1.691	H1-1b
14	MP019	PIPE_2.0	0.092	61.688	130	0.005	63	5	8355.75	32130	1871.625	1871.625	1.664	H1-1b*
15	MP021	PIPE_2.0	0.616	61.688	3	0.038	61.688	4	8355.75	32130	1871.625	1871.625	2.517	H1-1b
16	MP023	PIPE_2.0	0.236	61.688	4	0.021	61.688	4	8355.75	32130	1871.625	1871.625	2.807	H1-1b
17	MP025	PIPE_2.0	0.61	61.688	3	0.037	61.688	4	8355.75	32130	1871.625	1871.625	2.517	H1-1b
18	MP027	PIPE_2.0	0.092	61.688	176	0.005	63	13	8355.75	32130	1871.625	1871.625	2.391	H1-1b*
19	MP029	PIPE_2.0	0.652	61.688	11	0.041	61.688	11	8355.75	32130	1871.625	1871.625	1.641	H1-1b
20	MP031	PIPE_2.0	0.243	61.688	12	0.022	61.688	12	8355.75	32130	1871.625	1871.625	1.786	H1-1b
21	MP033	PIPE_2.0	0.645	61.688	11	0.04	61.688	11	8355.75	32130	1871.625	1871.625	1.641	H1-1b
22	MP035	PIPE_2.0	0.099	28.75	12	0.011	29.375	8	23593.813	32130	1871.625	1871.625	1.591	H1-1b
23	MP037	PIPE_2.0	0.134	28.75	4	0.02	28.75	4	23593.813	32130	1871.625	1871.625	2.061	H1-1b
24	MP039	PIPE_2.0	0.099	28.75	12	0.011	29.375	12	23593.813	32130	1871.625	1871.625	1.584	H1-1b

AMERICAN TOWER®
CORPORATION

AIROSMITH DEVELOPMENT

Structural Analysis Report

Structure	:	**111 ft Monopine**
ATC Site Name	:	**Farmington North 2 CT, CT**
ATC Site Number	:	**411258**
Engineering Number	:	**13757816_C3_03**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**MRCTB056286**
Carrier Site Number	:	**CT2580**
Site Location	:	**199 Town Farm Road** **Farmington, CT 06032-1554** **41.7578, -72.8299**
County	:	**Hartford**
Date	:	**March 17, 2022**
Max Usage	:	**69%**
Result	:	**Pass**

Prepared By:

Peter Roma
Airosmith Engineering

Reviewed By:

STATE OF CONNECTICUT
JOSEPH R. JOHNSTON
29460
LICENSED PROFESSIONAL ENGINEER

3/21/2022

COA : PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 111 ft Monopine to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	EEI Project #16046 Rev. 3, dated February 8, 2011
Foundation Drawing	EEI Project #16046 Rev. 2, dated December 14, 2010
Geotechnical Report	Clarence Welti Associates, Inc. Project Name Verizon Wireless Cell Tower, dated September 11, 2009

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	117 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.50" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.18, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
111.3	3	Generic RRU (Model TBD)	T-Arm	(2) 1 1/4" Hybriflex Cable (12) 1 5/8" Coax	VERIZON WIRELESS
	3	Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield			
109.9	3	Alcatel-Lucent B13 RRH4x30-4R			
109.0	2	Raycap RC2DC-3315-PF-48			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	1	VZW Unused Reserve (13207.33 sqin)			
	3	Samsung MT6407-77A			
	6	Commscope SBNHH-1D65B			
	6	Antel LPA-80063/4CF			
100.0	1	Raycap DC6-48-60-18-8F ("Squid")	T-Arm	(6) 1 5/8" Coax (1) 2" conduit	AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			
90.0	1	Commscope RDIDC-9181-PF-48	Sector Frame	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605			
	3	Fujitsu TA08025-B604			
	3	JMA Wireless MX08FRO665-21			

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
100.0	18	Generic RCU (Remote Control Unit)	-	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	9	CCI DTMABP7819VG12A (w/ Bracket)			
	3	Ericsson RRUS 32 B2			
	2	CCI TPA-65R-LCUUUU-H8			
	3	Ericsson RRUS 32 (50.8 lbs)			
	1	Quintel QS66512-2			
	6	Andrew SBNH-1D6565C (60.8 lbs)			
	3	Ericsson RRUS-11 (50 lbs.)			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
102.0	3	Ericsson AIR 6449 B77D/ C-Band	T-Arm	(3) 0.40" (10.3mm) Fiber (6) 0.82" (20.8mm) 8 AWG 6 (2) 2" conduit	AT&T MOBILITY
100.0	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18-8C-EV			
	3	CCI DMP65R-BU8D			
	3	CCI TPA65R-BU8D			
98.0	3	Ericsson AIR 6419 B77G			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	54%	Pass
Shaft	52%	Pass
Base Plate	21%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	6395.5	4047.8	63%
Shear (Kips)	68.9	47.8	69%

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
102.0	Ericsson AIR 6449 B77D/ C-Band	AT&T MOBILITY	0.600	0.610
100.0	Ericsson RRUS 4478 B14		0.579	0.610
	Ericsson RRUS 8843 B2, B66A			
	Ericsson RRUS 4449 B5, B12			
	Raycap DC6-48-60-18-8C-EV			
	CCI DMP65R-BU8D			
	CCI TPA65R-BU8D			
98.0	Ericsson AIR 6419 B77G		0.558	0.600

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H**

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

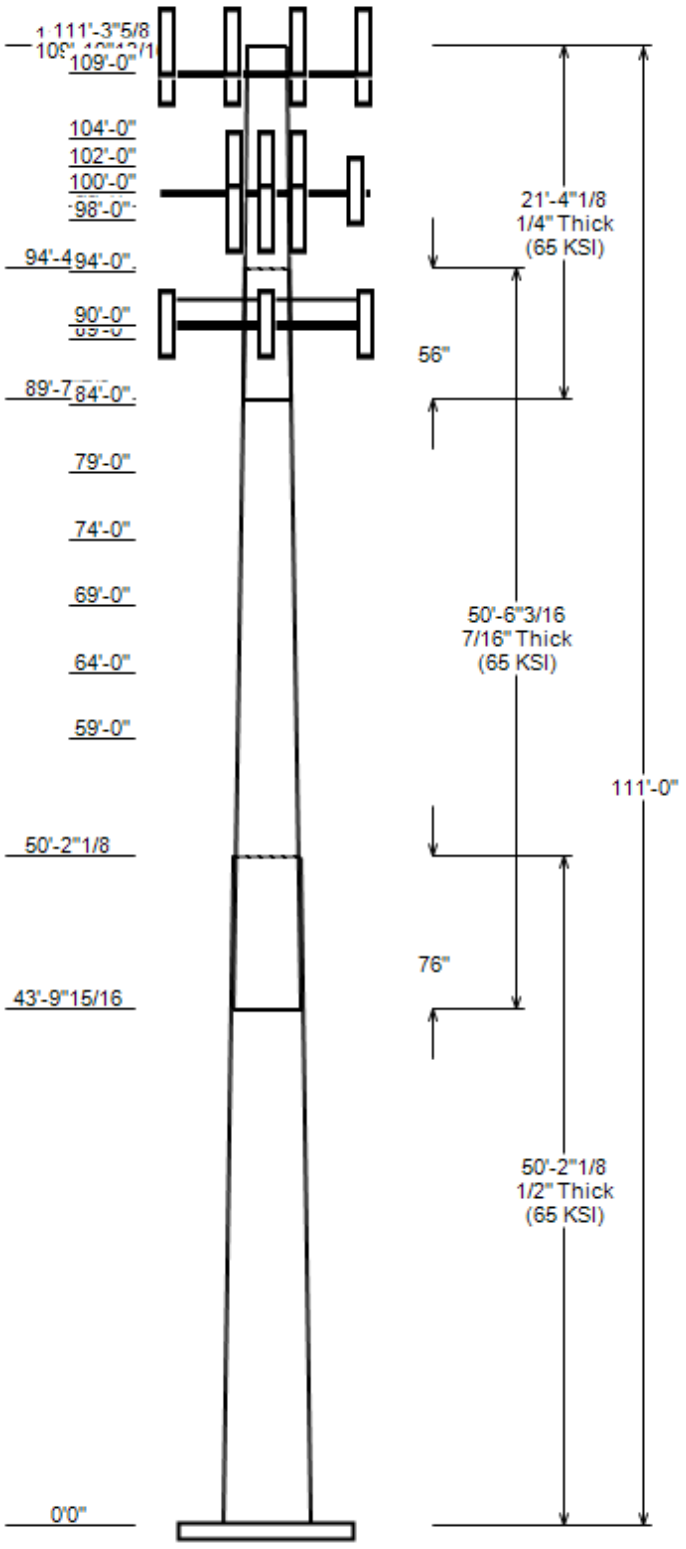
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

JOB INFORMATION

Asset :	411258, Farmington North 2 CT	Height :	111 ft
Client :	AT&T MOBILITY	Base Width :	59
Code :	ANSI/TIA-222-H	Shape :	18 Sides



SITE PARAMETERS

Nominal Wind: 117 mph wind with no ice **Topo Category:** 1

Ice Wind: 50 mph wind with 1.5" radi **Topo Method:** Method 1

Base Elev (ft): 0.00 **Taper :** 0.30000(In/ft) **Topo Feature:**

Structure Class: II **Exposure :** C **S_s :** 0.185 **S_1** : 0.055

SECTION PROPERTIES

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Diameter (in) Across Flats Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	50.175	43.94	59.00	0.500		0.000	18 Sides	65
2	50.518	31.55	46.72	0.438	Slip Joint	76.160	18 Sides	65
3	21.341	27.05	33.46	0.250	Slip Joint	56.250	18 Sides	65

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
111.3	111.3	3	Alcatel-Lucent B66A RRH4x45-4R
111.3	111.3	3	Generic RRU (Model TBD)
109.9	109.9	3	Alcatel-Lucent B13 RRH4x30-4R
109.0	109.0	3	Samsung B5/B13 RRH-BR04C
109.0	109.0	3	Samsung B2/B66A RRH-BR049
109.0	109.0	2	Raycap RC2DC-3315-PF-48
109.0	109.0	3	Samsung MT6407-77A
109.0	111.0	6	Antel LPA-80063/4CF
109.0	111.0	6	Commscope SBNHH-1D65B
109.0	109.0	3	Flat T-Arm
109.0	109.0	1	Pine Branch
109.0	109.0	1	VZW Unused Reserve (13207.33 s
104.0	104.0	1	Pine Branch
102.0	102.0	3	Ericsson AIR 6449 B77D/ C-Band
100.0	100.0	1	Raycap DC6-48-60-18-8F ("Squid
100.0	100.0	1	Raycap DC6-48-60-18-8F(32.8 lb
100.0	100.0	3	Ericsson RRUS 8843 B2, B66A
100.0	100.0	3	Ericsson RRUS 4478 B14
100.0	100.0	3	Ericsson RRUS 4449 B5, B12
100.0	100.0	1	Raycap DC6-48-60-18-8C-EV
100.0	100.0	3	Flat T-Arm
100.0	100.0	3	CCI DMP65R-BU8D
100.0	100.0	3	CCI TPA65R-BU8D
99.0	99.0	1	Pine Branch
98.0	98.0	3	Ericsson AIR 6419 B77G
94.0	94.0	1	Pine Branch
90.0	90.0	1	Commscope RDIDC-9181-PF-48
90.0	90.0	3	Fujitsu TA08025-B604
90.0	90.0	3	Fujitsu TA08025-B605
90.0	90.0	3	JMA Wireless MX08FRO665-21
90.0	90.0	3	Generic Flat Light Sector Fram
89.0	89.0	1	Pine Branch
84.0	84.0	1	Pine Branch
79.0	79.0	1	Pine Branch
74.0	74.0	1	Pine Branch
69.0	69.0	1	Pine Branch
64.0	64.0	1	Pine Branch
59.0	59.0	1	Pine Branch

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	109.0	1 5/8" Coax	No

JOB INFORMATION

Asset :	411258, Farmington North 2 CT	Height :	111 ft
Client :	AT&T MOBILITY	Base Width :	59
Code :	ANSI/TIA-222-H	Shape :	18 Sides

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	109.0	1 1/4" Hybriflex Cable	No
0.0	100.0	2" conduit	No
0.0	100.0	2" conduit	No
0.0	100.0	1 5/8" Coax	No
0.0	100.0	0.82" (20.8mm) 8 AWG 6	No
0.0	100.0	0.40" (10.3mm) Fiber	No
0.0	90.0	1.60" (40.6mm) Hybrid	No

LOAD CASES

1.2D + 1.0W Normal	117 mph wind with no ice
0.9D + 1.0W Normal	117 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Nor	50 mph wind with 1.5" radial ice
1.2D + 1.0Ev + 1.0Eh Nor	Seismic
0.9D - 1.0Ev + 1.0Eh Nor	Seismic (Reduced DL)
1.0D + 1.0W Service Norm	60 mph Wind with No Ice

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W Normal	4047.85	47.83	50.77
0.9D + 1.0W Normal	4031.62	47.82	38.06
1.2D + 1.0Di + 1.0Wi Normal	1192.88	14.14	73.19
1.2D + 1.0Ev + 1.0Eh Normal	174.71	2.07	50.36
0.9D - 1.0Ev + 1.0Eh Normal	173.87	2.07	34.96
1.0D + 1.0W Service Normal	950.17	11.25	42.36

DISH DEFLECTIONS

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)

ANALYSIS PARAMETERS

Location:	Hartford County,CT	**Height:**	111 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	59.00 in
Manufacturer:	Undetermined	**Top Diameter:**	27.05 in
K_d (non-service):	0.95	**Taper:**	0.3000 in/ft
K_e:	0.99	**Rotation:**	0.000°

ICE & WIND PARAMETERS

Exposure Category:	C	**Design Wind Speed w/o Ice:**	117 mph
Risk Category:	II	**Design Wind Speed w/Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Operational Wind Speed:**	60 mph
Topographic Category:	1	**Design Ice Thickness:**	1.50 in
Crest Height:	0 ft	**HMSL:**	183.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	1.20
T_L (sec):	6	**P:**	1	**C_s:**	0.049
S_s:	0.185	**S_1:**	0.055	**C_s Max:**	0.049
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.197	**S_{d1}:**	0.088		

LOAD CASES

1.2D + 1.0W Normal	117 mph wind with no ice
0.9D + 1.0W Normal	117 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1.5" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice

ASSET:	411258, Farmington North 2 CT	CODE:	ANSI/TIA-222-H
CUSTOMER:	AT&T MOBILITY	ENG NO:	13757816_C3_03

SHAFT SECTION PROPERTIES

							Bottom						Top					
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	50.18	0.5000	65		0.00	13,809	59.00	-0.005	92.84	40,140.4	19.40	118.00	43.94	50.17	68.93	16,431.1	14.08	87.87	0.3002
2-18	50.52	0.4375	65	Slip	76.16	9,237	46.72	43.832	64.26	17,388.9	17.42	106.78	31.55	94.35	43.20	5,283.3	11.30	72.11	0.3002
3-18	21.34	0.2500	65	Slip	56.25	1,729	33.46	89.659	26.35	3,670.8	22.19	133.83	27.05	111.00	21.26	1,929.6	17.67	108.20	0.3002
				Shaft Weight		24,775													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
111.30	Alcatel-Lucent B66A RRH4x45-4R	3	0.80	0.000	56.80	2.537	0.67	124.91	3.626	0.67
111.30	Generic RRU (Model TBD)	3	0.80	0.000	55.00	4.563	0.59	159.19	5.913	0.59
109.90	Alcatel-Lucent B13 RRH4x30-4R	3	0.80	0.000	57.80	2.140	0.67	124.77	3.110	0.67
109.00	Commscope SBNHH-1D65B	6	0.80	2.000	50.70	8.173	0.69	220.73	10.914	0.69
109.00	Antel LPA-80063/4CF	6	0.80	2.000	20.00	6.142	0.76	218.37	7.146	0.76
109.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	146.20	2.749	0.50
109.00	Raycap RC2DC-3315-PF-48	2	0.80	0.000	32.00	3.781	0.67	138.19	5.062	0.67
109.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	452.47	20.823	0.67
109.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1004.94	75.370	1.00
109.00	VZW Unused Reserve (13207.33 s	1	0.80	0.000	794.10	91.718	0.90	1330.04	153.618	0.90
109.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	180.34	6.180	0.61
109.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	125.72	2.749	0.50
104.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1003.40	75.255	1.00
102.00	Ericsson AIR 6449 B77D/ C-Band	3	0.80	0.000	81.60	4.028	0.70	193.79	5.350	0.70
100.00	CCI TPA65R-BU8D	3	0.80	0.000	82.50	18.089	0.63	414.10	21.640	0.63
100.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	422.58	21.415	0.63
100.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	451.00	20.765	0.67
100.00	Raycap DC6-48-60-18-8C-EV	1	0.80	0.000	16.00	4.788	1.00	140.19	6.203	1.00
100.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	132.98	2.866	0.50
100.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	113.08	2.705	0.50
100.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.639	0.50	130.95	2.452	0.50
100.00	Raycap DC6-48-60-18-8F(32.8 lb	1	0.80	0.000	32.80	1.470	1.00	92.14	2.142	1.00
100.00	Raycap DC6-48-60-18-8F ("Squid	1	0.80	0.000	31.80	1.470	1.00	91.14	2.142	1.00
99.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1001.60	75.120	1.00
98.00	Ericsson AIR 6419 B77G	3	0.90	0.000	66.10	3.797	0.65	159.13	5.060	0.65
94.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	998.87	74.915	1.00
90.00	Generic Flat Light Sector Fram	3	0.75	0.000	400.00	17.900	0.75	686.50	32.264	0.75
90.00	JMA Wireless MX08FRO665-21	3	0.80	0.000	64.50	12.489	0.64	309.18	15.164	0.64
90.00	Fujitsu TA08025-B605	3	0.80	0.000	75.00	1.962	0.50	134.64	2.838	0.50
90.00	Fujitsu TA08025-B604	3	0.80	0.000	63.90	1.962	0.50	119.42	2.838	0.50
90.00	Commscope RDIDC-9181-PF-48	1	0.80	0.000	21.90	1.867	1.00	76.07	2.724	1.00
89.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	996.65	74.748	1.00
84.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	994.31	74.573	1.00
79.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	991.83	74.387	1.00
74.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	989.21	74.191	1.00
69.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	986.42	73.981	1.00
64.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	983.43	73.758	1.00
59.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	980.22	73.517	1.00
Totals	Num Loadings: 38	87			14,099.10			29,314.29		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax/ Row	Dist Between Rows(in)	Dist Between Cols(in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	109.00	12	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	109.00	2	1 1/4" Hybriflex Cabl	1.54	1	N	0	0	0	0	0	N	VERIZON WIREL
0.00	100.00	6	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	100.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	100.00	3	0.40" (10.3mm) Fiber	0.4	0.09	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	100.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	100.00	1	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	1	1.60" (40.6mm) Hybrid	1.6	2.34	N	0	0	0	0	0	N	DISH WIRELESS

SEGMENT PROPERTIES

(Max Len: 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.5000	59.000	92.836	40,140.40	19.40	118.00	78.6	1340.0	0.0	0.0
5.00		0.5000	57.499	90.454	37,128.90	18.87	115.00	79.2	1271.8	0.0	1,559.2
10.00		0.5000	55.998	88.072	34,272.00	18.34	112.00	79.8	1205.5	0.0	1,518.7
15.00		0.5000	54.497	85.689	31,565.50	17.81	108.99	80.5	1140.8	0.0	1,478.2
20.00		0.5000	52.995	83.307	29,005.40	17.28	105.99	81.1	1078.0	0.0	1,437.6
25.00		0.5000	51.494	80.925	26,587.50	16.75	102.99	81.7	1017.0	0.0	1,397.1
30.00		0.5000	49.993	78.543	24,308.00	16.22	99.99	82.3	957.7	0.0	1,356.6
35.00		0.5000	48.492	76.160	22,162.50	15.69	96.98	82.6	900.2	0.0	1,316.1
40.00		0.5000	46.991	73.778	20,147.20	15.16	93.98	82.6	844.5	0.0	1,275.5
43.83	Bot - Section 2	0.5000	45.841	71.954	18,689.60	14.76	91.68	82.6	803.0	0.0	949.2
45.00		0.5000	45.490	71.396	18,258.00	14.63	90.98	82.6	790.5	0.0	541.0
50.00		0.5000	43.989	69.014	16,490.60	14.10	87.98	82.6	738.4	0.0	2,261.8
50.17	Top - Section 1	0.4375	44.811	61.616	15,328.30	16.65	102.43	81.8	673.7	0.0	77.7
55.00		0.4375	43.362	59.604	13,875.50	16.07	99.11	82.5	630.3	0.0	995.2
59.00		0.4375	42.161	57.937	12,743.20	15.58	96.37	82.6	595.3	0.0	799.9
60.00		0.4375	41.861	57.520	12,470.10	15.46	95.68	82.6	586.7	0.0	196.4
64.00		0.4375	40.660	55.852	11,416.60	14.98	92.94	82.6	553.0	0.0	771.6
65.00		0.4375	40.360	55.435	11,162.90	14.86	92.25	82.6	544.8	0.0	189.3
69.00		0.4375	39.159	53.768	10,185.50	14.37	89.51	82.6	512.3	0.0	743.2
70.00		0.4375	38.859	53.351	9,950.40	14.25	88.82	82.6	504.4	0.0	182.3
74.00		0.4375	37.658	51.683	9,046.20	13.77	86.08	82.6	473.1	0.0	714.8
75.00		0.4375	37.358	51.267	8,829.10	13.65	85.39	82.6	465.5	0.0	175.2
79.00		0.4375	36.157	49.599	7,995.30	13.16	82.64	82.6	435.5	0.0	686.4
80.00		0.4375	35.857	49.182	7,795.30	13.04	81.96	82.6	428.2	0.0	168.1
84.00		0.4375	34.656	47.515	7,029.00	12.56	79.21	82.6	399.5	0.0	658.1
85.00		0.4375	34.355	47.098	6,845.60	12.44	78.53	82.6	392.5	0.0	161.0
89.00		0.4375	33.155	45.430	6,143.90	11.95	75.78	82.6	365.0	0.0	629.7
89.66	Bot - Section 3	0.4375	32.957	45.155	6,033.10	11.87	75.33	82.6	360.6	0.0	101.5
90.00		0.4375	32.854	45.013	5,976.30	11.83	75.10	82.6	358.3	0.0	82.9
94.00		0.4375	31.653	43.346	5,336.40	11.35	72.35	82.6	332.1	0.0	952.4
94.35	Top - Section 2	0.2500	32.049	25.232	3,223.60	21.19	128.20	76.5	198.1	0.0	80.8
95.00		0.2500	31.853	25.076	3,164.30	21.06	127.41	76.6	195.7	0.0	55.9
98.00		0.2500	30.952	24.362	2,901.40	20.42	123.81	77.4	184.6	0.0	252.3
99.00		0.2500	30.652	24.123	2,817.10	20.21	122.61	77.6	181.0	0.0	82.5
100.00		0.2500	30.352	23.885	2,734.50	20.00	121.41	77.9	177.4	0.0	81.7
102.00		0.2500	29.752	23.409	2,574.10	19.57	119.01	78.4	170.4	0.0	160.9
104.00		0.2500	29.151	22.932	2,420.10	19.15	116.60	78.9	163.5	0.0	157.7
105.00		0.2500	28.851	22.694	2,345.40	18.94	115.40	79.1	160.1	0.0	77.6
109.00		0.2500	27.650	21.741	2,062.20	18.09	110.60	80.1	146.9	0.0	302.4
109.90		0.2500	27.380	21.527	2,001.80	17.90	109.52	80.3	144.0	0.0	66.3
110.00		0.2500	27.350	21.503	1,995.20	17.88	109.40	80.4	143.7	0.0	7.3
111.00		0.2500	27.049	21.265	1,929.60	17.67	108.20	80.6	140.5	0.0	72.8
									Totals:		24,774.9

Load Case: 1.2D + 1.0W Normal 117 mph wind with no ice 19 Iterations
Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.77	-47.83	0.00	-4,047.8	0.00	4,047.85	6,566.18	1,629.27	8,609.06	7,898.16	0	0	0.521
5.00	-48.58	-47.40	0.00	-3,808.7	0.00	3,808.69	6,448.38	1,587.47	8,172.95	7,555.74	0.08	-0.14	0.513
10.00	-46.44	-46.97	0.00	-3,571.7	0.00	3,571.69	6,327.90	1,545.66	7,748.19	7,217.60	0.3	-0.28	0.503
15.00	-44.35	-46.55	0.00	-3,336.8	0.00	3,336.82	6,204.76	1,503.85	7,334.75	6,884.01	0.67	-0.42	0.493
20.00	-42.31	-46.10	0.00	-3,104.1	0.00	3,104.10	6,078.95	1,462.04	6,932.65	6,555.20	1.19	-0.57	0.481
25.00	-40.32	-45.64	0.00	-2,873.6	0.00	2,873.60	5,950.46	1,420.23	6,541.89	6,231.43	1.87	-0.72	0.469
30.00	-38.37	-45.16	0.00	-2,645.4	0.00	2,645.42	5,819.31	1,378.42	6,162.46	5,912.94	2.7	-0.86	0.455
35.00	-36.48	-44.67	0.00	-2,419.6	0.00	2,419.63	5,658.34	1,336.62	5,794.36	5,573.27	3.68	-1.01	0.442
40.00	-34.66	-44.23	0.00	-2,196.3	0.00	2,196.27	5,481.35	1,294.81	5,437.60	5,228.32	4.83	-1.16	0.428
43.83	-33.31	-43.97	0.00	-2,026.9	0.00	2,026.93	5,345.84	1,262.80	5,172.10	4,971.66	5.8	-1.27	0.415
45.00	-32.55	-43.67	0.00	-1,975.4	0.00	1,975.41	5,304.37	1,253.00	5,092.17	4,894.40	6.12	-1.31	0.411
50.00	-29.59	-43.35	0.00	-1,757.1	0.00	1,757.09	5,127.38	1,211.19	4,758.08	4,571.50	7.57	-1.45	0.391
50.17	-29.44	-43.11	0.00	-1,749.5	0.00	1,749.51	4,537.14	1,081.36	4,334.29	4,134.27	7.63	-1.46	0.431
55.00	-27.97	-42.65	0.00	-1,541.5	0.00	1,541.51	4,425.85	1,046.06	4,055.94	3,899.91	9.17	-1.6	0.403
59.00	-26.13	-40.51	0.00	-1,370.9	0.00	1,370.90	4,304.41	1,016.79	3,832.20	3,685.72	10.57	-1.72	0.380
60.00	-25.81	-40.27	0.00	-1,330.4	0.00	1,330.39	4,273.44	1,009.47	3,777.26	3,632.60	10.93	-1.75	0.374
64.00	-24.03	-38.09	0.00	-1,169.3	0.00	1,169.31	4,149.55	980.21	3,561.45	3,423.96	12.44	-1.86	0.349
65.00	-23.72	-37.85	0.00	-1,131.2	0.00	1,131.22	4,118.58	972.89	3,508.49	3,372.76	12.84	-1.89	0.343
69.00	-21.98	-35.64	0.00	-979.8	0.00	979.81	3,994.69	943.63	3,300.62	3,171.83	14.47	-2	0.316
70.00	-21.69	-35.40	0.00	-944.2	0.00	944.17	3,963.71	936.31	3,249.64	3,122.56	14.89	-2.02	0.309
74.00	-19.99	-33.17	0.00	-802.6	0.00	802.55	3,839.82	907.04	3,049.71	2,929.35	16.63	-2.12	0.281
75.00	-19.72	-32.93	0.00	-769.4	0.00	769.39	3,808.85	899.73	3,000.72	2,882.01	17.08	-2.15	0.273
79.00	-18.07	-30.66	0.00	-637.7	0.00	637.67	3,684.96	870.46	2,808.71	2,696.51	18.92	-2.24	0.243
80.00	-17.81	-30.43	0.00	-607.0	0.00	607.01	3,653.98	863.15	2,761.70	2,651.10	19.39	-2.26	0.235
84.00	-16.20	-28.14	0.00	-485.3	0.00	485.29	3,530.09	833.88	2,577.64	2,473.31	21.32	-2.34	0.202
85.00	-15.96	-27.91	0.00	-457.2	0.00	457.15	3,499.12	826.56	2,532.61	2,429.83	21.82	-2.36	0.194
89.00	-14.39	-25.61	0.00	-345.5	0.00	345.51	3,375.23	797.30	2,356.48	2,259.75	23.82	-2.43	0.158
89.66	-14.24	-25.56	0.00	-328.6	0.00	328.64	3,354.82	792.48	2,328.08	2,232.33	24.16	-2.44	0.153
90.00	-12.04	-22.77	0.00	-319.9	0.00	319.91	3,344.25	789.98	2,313.44	2,218.20	24.33	-2.44	0.149
94.00	-10.11	-20.45	0.00	-228.8	0.00	228.83	3,220.36	760.72	2,145.24	2,055.84	26.41	-2.5	0.115
94.35	-10.00	-20.40	0.00	-221.7	0.00	221.74	1,736.60	442.82	1,271.87	1,136.24	26.59	-2.5	0.203
95.00	-9.91	-20.24	0.00	-208.4	0.00	208.41	1,729.55	440.09	1,256.22	1,124.59	26.93	-2.51	0.193
98.00	-9.26	-19.73	0.00	-147.7	0.00	147.69	1,696.64	427.54	1,185.65	1,071.51	28.52	-2.55	0.145
99.00	-8.50	-17.54	0.00	-128.0	0.00	127.96	1,685.46	423.36	1,162.57	1,053.95	29.06	-2.57	0.128
100.00	-6.18	-13.32	0.00	-110.4	0.00	110.42	1,674.17	419.18	1,139.73	1,036.47	29.6	-2.58	0.111
102.00	-5.68	-12.82	0.00	-83.8	0.00	83.77	1,651.27	410.82	1,094.72	1,001.73	30.68	-2.6	0.088
104.00	-4.84	-10.57	0.00	-58.1	0.00	58.13	1,627.94	402.46	1,050.61	967.31	31.78	-2.62	0.064
105.00	-4.74	-10.36	0.00	-47.6	0.00	47.57	1,616.11	398.28	1,028.90	950.22	32.33	-2.62	0.054
109.00	-0.75	-0.80	0.00	-1.5	0.00	1.48	1,567.75	381.56	944.32	882.74	34.53	-2.64	0.002
109.90	-0.47	-0.59	0.00	-0.8	0.00	0.76	1,556.63	377.79	925.79	867.76	35.03	-2.64	0.001
110.00	-0.46	-0.55	0.00	-0.7	0.00	0.70	1,555.39	377.37	923.74	866.10	35.08	-2.64	0.001
111.00	0.00	-0.53	0.00	-0.2	0.00	0.15	1,542.92	373.19	903.39	849.55	35.64	-2.64	0.000

Load Case: 0.9D + 1.0W Normal 117 mph wind with no ice 19 Iterations
Gust Response Factor: 1.10
Dead load Factor: 0.90
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-38.06	-47.82	0.00	-4,031.6	0.00	4,031.62	6,566.18	1,629.27	8,609.06	7,898.16	0	0	0.517
5.00	-36.39	-47.36	0.00	-3,792.5	0.00	3,792.53	6,448.38	1,587.47	8,172.95	7,555.74	0.08	-0.14	0.508
10.00	-34.76	-46.90	0.00	-3,555.8	0.00	3,555.76	6,327.90	1,545.66	7,748.19	7,217.60	0.3	-0.28	0.499
15.00	-33.16	-46.45	0.00	-3,321.3	0.00	3,321.26	6,204.76	1,503.85	7,334.75	6,884.01	0.67	-0.42	0.489
20.00	-31.60	-45.98	0.00	-3,089.0	0.00	3,089.03	6,078.95	1,462.04	6,932.65	6,555.20	1.19	-0.57	0.477
25.00	-30.08	-45.49	0.00	-2,859.1	0.00	2,859.14	5,950.46	1,420.23	6,541.89	6,231.43	1.86	-0.71	0.465
30.00	-28.60	-45.00	0.00	-2,631.7	0.00	2,631.67	5,819.31	1,378.42	6,162.46	5,912.94	2.69	-0.86	0.451
35.00	-27.16	-44.49	0.00	-2,406.7	0.00	2,406.69	5,658.34	1,336.62	5,794.36	5,573.27	3.67	-1.01	0.438
40.00	-25.77	-44.04	0.00	-2,184.2	0.00	2,184.23	5,481.35	1,294.81	5,437.60	5,228.32	4.8	-1.15	0.424
43.83	-24.75	-43.78	0.00	-2,015.6	0.00	2,015.63	5,345.84	1,262.80	5,172.10	4,971.66	5.78	-1.27	0.411
45.00	-24.16	-43.46	0.00	-1,964.4	0.00	1,964.35	5,304.37	1,253.00	5,092.17	4,894.40	6.09	-1.3	0.407
50.00	-21.92	-43.15	0.00	-1,747.0	0.00	1,747.05	5,127.38	1,211.19	4,758.08	4,571.50	7.54	-1.45	0.388
50.17	-21.80	-42.90	0.00	-1,739.5	0.00	1,739.51	4,537.14	1,081.36	4,334.29	4,134.27	7.59	-1.45	0.427
55.00	-20.68	-42.44	0.00	-1,532.5	0.00	1,532.50	4,425.85	1,046.06	4,055.94	3,899.91	9.13	-1.59	0.399
59.00	-19.30	-40.30	0.00	-1,362.8	0.00	1,362.75	4,304.41	1,016.79	3,832.20	3,685.72	10.52	-1.71	0.376
60.00	-19.05	-40.05	0.00	-1,322.4	0.00	1,322.45	4,273.44	1,009.47	3,777.26	3,632.60	10.88	-1.74	0.370
64.00	-17.72	-37.88	0.00	-1,162.2	0.00	1,162.24	4,149.55	980.21	3,561.45	3,423.96	12.38	-1.85	0.345
65.00	-17.48	-37.64	0.00	-1,124.4	0.00	1,124.36	4,118.58	972.89	3,508.49	3,372.76	12.78	-1.88	0.339
69.00	-16.18	-35.44	0.00	-973.8	0.00	973.81	3,994.69	943.63	3,300.62	3,171.83	14.4	-1.99	0.312
70.00	-15.96	-35.19	0.00	-938.4	0.00	938.37	3,963.71	936.31	3,249.64	3,122.56	14.82	-2.01	0.306
74.00	-14.70	-32.96	0.00	-797.6	0.00	797.60	3,839.82	907.04	3,049.71	2,929.35	16.55	-2.11	0.277
75.00	-14.49	-32.72	0.00	-764.6	0.00	764.64	3,808.85	899.73	3,000.72	2,882.01	16.99	-2.14	0.270
79.00	-13.26	-30.47	0.00	-633.7	0.00	633.74	3,684.96	870.46	2,808.71	2,696.51	18.83	-2.23	0.240
80.00	-13.06	-30.24	0.00	-603.3	0.00	603.27	3,653.98	863.15	2,761.70	2,651.10	19.3	-2.25	0.232
84.00	-11.88	-27.96	0.00	-482.3	0.00	482.33	3,530.09	833.88	2,577.64	2,473.31	21.22	-2.33	0.200
85.00	-11.69	-27.73	0.00	-454.4	0.00	454.37	3,499.12	826.56	2,532.61	2,429.83	21.71	-2.35	0.191
89.00	-10.54	-25.45	0.00	-343.4	0.00	343.45	3,375.23	797.30	2,356.48	2,259.75	23.7	-2.41	0.156
89.66	-10.42	-25.40	0.00	-326.7	0.00	326.69	3,354.82	792.48	2,328.08	2,232.33	24.04	-2.42	0.150
90.00	-8.79	-22.63	0.00	-318.0	0.00	318.02	3,344.25	789.98	2,313.44	2,218.20	24.21	-2.43	0.147
94.00	-7.37	-20.33	0.00	-227.5	0.00	227.50	3,220.36	760.72	2,145.24	2,055.84	26.27	-2.48	0.114
94.35	-7.29	-20.28	0.00	-220.5	0.00	220.46	1,736.60	442.82	1,271.87	1,136.24	26.45	-2.49	0.200
95.00	-7.22	-20.12	0.00	-207.2	0.00	207.21	1,729.55	440.09	1,256.22	1,124.59	26.79	-2.49	0.191
98.00	-6.74	-19.62	0.00	-146.8	0.00	146.85	1,696.64	427.54	1,185.65	1,071.51	28.38	-2.54	0.143
99.00	-6.19	-17.44	0.00	-127.2	0.00	127.24	1,685.46	423.36	1,162.57	1,053.95	28.91	-2.55	0.126
100.00	-4.49	-13.25	0.00	-109.8	0.00	109.80	1,674.17	419.18	1,139.73	1,036.47	29.45	-2.57	0.110
102.00	-4.12	-12.75	0.00	-83.3	0.00	83.31	1,651.27	410.82	1,094.72	1,001.73	30.53	-2.59	0.087
104.00	-3.52	-10.50	0.00	-57.8	0.00	57.81	1,627.94	402.46	1,050.61	967.31	31.61	-2.6	0.063
105.00	-3.44	-10.30	0.00	-47.3	0.00	47.31	1,616.11	398.28	1,028.90	950.22	32.16	-2.61	0.053
109.00	-0.55	-0.79	0.00	-1.5	0.00	1.47	1,567.75	381.56	944.32	882.74	34.35	-2.62	0.002
109.90	-0.35	-0.58	0.00	-0.8	0.00	0.75	1,556.63	377.79	925.79	867.76	34.85	-2.62	0.001
110.00	-0.34	-0.55	0.00	-0.7	0.00	0.70	1,555.39	377.37	923.74	866.10	34.9	-2.62	0.001
111.00	0.00	-0.53	0.00	-0.2	0.00	0.15	1,542.92	373.19	903.39	849.55	35.45	-2.62	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi Normal		50 mph wind with 1.5" radial ice			18 Iterations
Gust Response Factor:	1.10	Ice Dead Load Factor	1.00		
Dead load Factor:	1.20			Ice Importance Factor	1.00
Wind Load Factor:	1.00				

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.19	-14.14	0.00	-1,192.9	0.00	1,192.88	6,566.18	1,629.27	8,609.06	7,898.16	0	0	0.162
5.00	-70.68	-14.02	0.00	-1,122.2	0.00	1,122.19	6,448.38	1,587.47	8,172.95	7,555.74	0.02	-0.04	0.160
10.00	-68.18	-13.90	0.00	-1,052.1	0.00	1,052.10	6,327.90	1,545.66	7,748.19	7,217.60	0.09	-0.08	0.157
15.00	-65.72	-13.77	0.00	-982.6	0.00	982.62	6,204.76	1,503.85	7,334.75	6,884.01	0.2	-0.12	0.153
20.00	-63.30	-13.65	0.00	-913.8	0.00	913.76	6,078.95	1,462.04	6,932.65	6,555.20	0.35	-0.17	0.150
25.00	-60.93	-13.51	0.00	-845.5	0.00	845.53	5,950.46	1,420.23	6,541.89	6,231.43	0.55	-0.21	0.146
30.00	-58.61	-13.37	0.00	-778.0	0.00	777.97	5,819.31	1,378.42	6,162.46	5,912.94	0.8	-0.25	0.142
35.00	-56.35	-13.23	0.00	-711.1	0.00	711.12	5,658.34	1,336.62	5,794.36	5,573.27	1.09	-0.3	0.138
40.00	-54.15	-13.10	0.00	-645.0	0.00	644.99	5,481.35	1,294.81	5,437.60	5,228.32	1.42	-0.34	0.133
43.83	-52.50	-13.02	0.00	-594.9	0.00	594.86	5,345.84	1,262.80	5,172.10	4,971.66	1.71	-0.37	0.130
45.00	-51.69	-12.93	0.00	-579.6	0.00	579.60	5,304.37	1,253.00	5,092.17	4,894.40	1.8	-0.39	0.128
50.00	-48.31	-12.83	0.00	-515.0	0.00	514.97	5,127.38	1,211.19	4,758.08	4,571.50	2.23	-0.43	0.122
50.17	-48.19	-12.76	0.00	-512.7	0.00	512.73	4,537.14	1,081.36	4,334.29	4,134.27	2.24	-0.43	0.135
55.00	-46.37	-12.62	0.00	-451.2	0.00	451.17	4,425.85	1,046.06	4,055.94	3,899.91	2.7	-0.47	0.126
59.00	-43.86	-11.97	0.00	-400.7	0.00	400.70	4,304.41	1,016.79	3,832.20	3,685.72	3.11	-0.5	0.119
60.00	-43.49	-11.90	0.00	-388.7	0.00	388.72	4,273.44	1,009.47	3,777.26	3,632.60	3.22	-0.51	0.117
64.00	-41.02	-11.24	0.00	-341.1	0.00	341.12	4,149.55	980.21	3,561.45	3,423.96	3.66	-0.55	0.110
65.00	-40.67	-11.17	0.00	-329.9	0.00	329.88	4,118.58	972.89	3,508.49	3,372.76	3.78	-0.56	0.108
69.00	-38.24	-10.50	0.00	-285.2	0.00	285.20	3,994.69	943.63	3,300.62	3,171.83	4.26	-0.59	0.100
70.00	-37.89	-10.43	0.00	-274.7	0.00	274.70	3,963.71	936.31	3,249.64	3,122.56	4.38	-0.59	0.098
74.00	-35.51	-9.74	0.00	-233.0	0.00	233.00	3,839.82	907.04	3,049.71	2,929.35	4.89	-0.62	0.089
75.00	-35.18	-9.67	0.00	-223.2	0.00	223.25	3,808.85	899.73	3,000.72	2,882.01	5.02	-0.63	0.087
79.00	-32.83	-8.98	0.00	-184.6	0.00	184.58	3,684.96	870.46	2,808.71	2,696.51	5.56	-0.66	0.077
80.00	-32.51	-8.90	0.00	-175.6	0.00	175.60	3,653.98	863.15	2,761.70	2,651.10	5.7	-0.66	0.075
84.00	-30.21	-8.20	0.00	-140.0	0.00	140.00	3,530.09	833.88	2,577.64	2,473.31	6.27	-0.69	0.065
85.00	-29.90	-8.13	0.00	-131.8	0.00	131.80	3,499.12	826.56	2,532.61	2,429.83	6.41	-0.69	0.063
89.00	-27.65	-7.42	0.00	-99.3	0.00	99.30	3,375.23	797.30	2,356.48	2,259.75	7	-0.71	0.052
89.66	-27.45	-7.40	0.00	-94.4	0.00	94.41	3,354.82	792.48	2,328.08	2,232.33	7.1	-0.71	0.051
90.00	-23.43	-6.58	0.00	-91.9	0.00	91.89	3,344.25	789.98	2,313.44	2,218.20	7.15	-0.72	0.048
94.00	-20.80	-5.86	0.00	-65.6	0.00	65.58	3,220.36	760.72	2,145.24	2,055.84	7.76	-0.73	0.038
94.35	-20.67	-5.84	0.00	-63.6	0.00	63.55	1,736.60	442.82	1,271.87	1,136.24	7.81	-0.73	0.068
95.00	-20.53	-5.79	0.00	-59.7	0.00	59.74	1,729.55	440.09	1,256.22	1,124.59	7.91	-0.73	0.065
98.00	-19.44	-5.65	0.00	-42.4	0.00	42.37	1,696.64	427.54	1,185.65	1,071.51	8.38	-0.75	0.051
99.00	-18.18	-4.97	0.00	-36.7	0.00	36.72	1,685.46	423.36	1,162.57	1,053.95	8.53	-0.75	0.046
100.00	-12.77	-3.90	0.00	-31.8	0.00	31.75	1,674.17	419.18	1,139.73	1,036.47	8.69	-0.75	0.038
102.00	-11.84	-3.75	0.00	-24.0	0.00	23.96	1,651.27	410.82	1,094.72	1,001.73	9.01	-0.76	0.031
104.00	-10.44	-3.05	0.00	-16.5	0.00	16.46	1,627.94	402.46	1,050.61	967.31	9.33	-0.77	0.023
105.00	-10.27	-2.98	0.00	-13.4	0.00	13.40	1,616.11	398.28	1,028.90	950.22	9.49	-0.77	0.021
109.00	-1.52	-0.22	0.00	-0.4	0.00	0.40	1,567.75	381.56	944.32	882.74	10.13	-0.77	0.001
109.90	-1.00	-0.16	0.00	-0.2	0.00	0.20	1,556.63	377.79	925.79	867.76	10.28	-0.77	0.001
110.00	-0.99	-0.15	0.00	-0.2	0.00	0.18	1,555.39	377.37	923.74	866.10	10.3	-0.77	0.001
111.00	0.00	-0.13	0.00	-0.0	0.00	0.04	1,542.92	373.19	903.39	849.55	10.46	-0.77	0.000

Load Case: 1.0D + 1.0W Service Normal 60 mph Wind with No Ice 18 Iterations
Gust Response Factor: 1.10
Dead load Factor: 1.00
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-42.36	-11.25	0.00	-950.2	0.00	950.17	6,566.18	1,629.27	8,609.06	7,898.16	0	0	0.127
5.00	-40.62	-11.15	0.00	-893.9	0.00	893.91	6,448.38	1,587.47	8,172.95	7,555.74	0.02	-0.03	0.125
10.00	-38.93	-11.04	0.00	-838.2	0.00	838.18	6,327.90	1,545.66	7,748.19	7,217.60	0.07	-0.07	0.122
15.00	-37.27	-10.94	0.00	-783.0	0.00	782.98	6,204.76	1,503.85	7,334.75	6,884.01	0.16	-0.1	0.120
20.00	-35.66	-10.83	0.00	-728.3	0.00	728.30	6,078.95	1,462.04	6,932.65	6,555.20	0.28	-0.13	0.117
25.00	-34.08	-10.72	0.00	-674.2	0.00	674.15	5,950.46	1,420.23	6,541.89	6,231.43	0.44	-0.17	0.114
30.00	-32.55	-10.60	0.00	-620.6	0.00	620.57	5,819.31	1,378.42	6,162.46	5,912.94	0.63	-0.2	0.111
35.00	-31.06	-10.48	0.00	-567.6	0.00	567.57	5,658.34	1,336.62	5,794.36	5,573.27	0.86	-0.24	0.107
40.00	-29.61	-10.38	0.00	-515.2	0.00	515.15	5,481.35	1,294.81	5,437.60	5,228.32	1.13	-0.27	0.104
43.83	-28.53	-10.32	0.00	-475.4	0.00	475.41	5,345.84	1,262.80	5,172.10	4,971.66	1.36	-0.3	0.101
45.00	-27.94	-10.24	0.00	-463.3	0.00	463.32	5,304.37	1,253.00	5,092.17	4,894.40	1.44	-0.31	0.100
50.00	-25.51	-10.17	0.00	-412.1	0.00	412.10	5,127.38	1,211.19	4,758.08	4,571.50	1.78	-0.34	0.095
50.17	-25.42	-10.11	0.00	-410.3	0.00	410.32	4,537.14	1,081.36	4,334.29	4,134.27	1.79	-0.34	0.105
55.00	-24.26	-10.01	0.00	-361.5	0.00	361.52	4,425.85	1,046.06	4,055.94	3,899.91	2.15	-0.37	0.098
59.00	-22.72	-9.50	0.00	-321.5	0.00	321.50	4,304.41	1,016.79	3,832.20	3,685.72	2.48	-0.4	0.093
60.00	-22.49	-9.45	0.00	-312.0	0.00	312.00	4,273.44	1,009.47	3,777.26	3,632.60	2.56	-0.41	0.091
64.00	-20.98	-8.93	0.00	-274.2	0.00	274.21	4,149.55	980.21	3,561.45	3,423.96	2.92	-0.44	0.085
65.00	-20.76	-8.88	0.00	-265.3	0.00	265.28	4,118.58	972.89	3,508.49	3,372.76	3.01	-0.44	0.084
69.00	-19.28	-8.36	0.00	-229.8	0.00	229.77	3,994.69	943.63	3,300.62	3,171.83	3.4	-0.47	0.077
70.00	-19.06	-8.30	0.00	-221.4	0.00	221.41	3,963.71	936.31	3,249.64	3,122.56	3.49	-0.47	0.076
74.00	-17.61	-7.78	0.00	-188.2	0.00	188.21	3,839.82	907.04	3,049.71	2,929.35	3.9	-0.5	0.069
75.00	-17.40	-7.72	0.00	-180.4	0.00	180.43	3,808.85	899.73	3,000.72	2,882.01	4.01	-0.5	0.067
79.00	-15.98	-7.19	0.00	-149.6	0.00	149.55	3,684.96	870.46	2,808.71	2,696.51	4.44	-0.53	0.060
80.00	-15.78	-7.13	0.00	-142.4	0.00	142.36	3,653.98	863.15	2,761.70	2,651.10	4.55	-0.53	0.058
84.00	-14.39	-6.60	0.00	-113.8	0.00	113.82	3,530.09	833.88	2,577.64	2,473.31	5	-0.55	0.050
85.00	-14.19	-6.54	0.00	-107.2	0.00	107.22	3,499.12	826.56	2,532.61	2,429.83	5.12	-0.55	0.048
89.00	-12.83	-6.01	0.00	-81.0	0.00	81.04	3,375.23	797.30	2,356.48	2,259.75	5.59	-0.57	0.040
89.66	-12.71	-5.99	0.00	-77.1	0.00	77.09	3,354.82	792.48	2,328.08	2,232.33	5.67	-0.57	0.038
90.00	-10.79	-5.34	0.00	-75.0	0.00	75.04	3,344.25	789.98	2,313.44	2,218.20	5.71	-0.57	0.037
94.00	-9.11	-4.80	0.00	-53.7	0.00	53.68	3,220.36	760.72	2,145.24	2,055.84	6.2	-0.59	0.029
94.35	-9.02	-4.79	0.00	-52.0	0.00	52.02	1,736.60	442.82	1,271.87	1,136.24	6.24	-0.59	0.051
95.00	-8.94	-4.75	0.00	-48.9	0.00	48.89	1,729.55	440.09	1,256.22	1,124.59	6.32	-0.59	0.049
98.00	-8.40	-4.63	0.00	-34.6	0.00	34.65	1,696.64	427.54	1,185.65	1,071.51	6.69	-0.6	0.037
99.00	-7.69	-4.12	0.00	-30.0	0.00	30.02	1,685.46	423.36	1,162.57	1,053.95	6.82	-0.6	0.033
100.00	-5.61	-3.13	0.00	-25.9	0.00	25.91	1,674.17	419.18	1,139.73	1,036.47	6.95	-0.61	0.028
102.00	-5.19	-3.01	0.00	-19.7	0.00	19.66	1,651.27	410.82	1,094.72	1,001.73	7.2	-0.61	0.023
104.00	-4.41	-2.48	0.00	-13.6	0.00	13.64	1,627.94	402.46	1,050.61	967.31	7.46	-0.61	0.017
105.00	-4.32	-2.43	0.00	-11.2	0.00	11.16	1,616.11	398.28	1,028.90	950.22	7.59	-0.62	0.014
109.00	-0.65	-0.19	0.00	-0.4	0.00	0.35	1,567.75	381.56	944.32	882.74	8.1	-0.62	0.001
109.90	-0.41	-0.14	0.00	-0.2	0.00	0.18	1,556.63	377.79	925.79	867.76	8.22	-0.62	0.000
110.00	-0.41	-0.13	0.00	-0.2	0.00	0.16	1,555.39	377.37	923.74	866.10	8.23	-0.62	0.000
111.00	0.00	-0.12	0.00	-0.0	0.00	0.04	1,542.92	373.19	903.39	849.55	8.36	-0.62	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period (S_S):	0.185
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.055
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a:	1.600
Site Coefficient F_v:	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.197
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.088
Seismic Response Coefficient (C_s):	0.049
Upper Limit C_S:	0.049
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	1.200
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.350
Total Unfactored Dead Load:	42.360 k
Seismic Base Shear (E):	2.070 k

1.2D + 1.0Ev + 1.0Eh Normal **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
41	110.5	73	42	0.004	7	90
40	109.95	7	4	0.000	1	9
39	109.45	66	37	0.003	7	82
38	107	350	192	0.016	33	434
37	104.5	89	47	0.004	8	111
36	103	181	94	0.008	16	225
35	101	185	94	0.008	16	229
34	99.5	113	56	0.005	10	141
33	98.5	114	56	0.005	10	142
32	96.5	347	165	0.014	29	431
31	94.6732	77	36	0.003	6	95
30	94.1732	92	42	0.004	7	114
29	92	1,079	482	0.040	84	1,338
28	89.8294	94	41	0.003	7	117
27	89.3294	124	53	0.004	9	154
26	87	766	317	0.027	55	949
25	84.5	195	78	0.006	13	242
24	82	794	304	0.026	53	984
23	79.5	202	74	0.006	13	251
22	77	823	289	0.024	50	1,020
21	74.5	209	70	0.006	12	259
20	72	851	273	0.023	47	1,055
19	69.5	216	66	0.006	11	268
18	67	879	256	0.022	44	1,090
17	64.5	223	62	0.005	11	277
16	62	908	238	0.020	41	1,125
15	59.5	230	57	0.005	10	286
14	57	936	219	0.018	38	1,160
13	52.5874	1,159	243	0.020	42	1,437
12	50.0874	84	16	0.001	3	104
11	47.5	2,432	445	0.037	77	3,014
10	44.4142	581	97	0.008	17	720
9	41.9142	1,080	167	0.014	29	1,338
8	37.5	1,446	192	0.016	33	1,792

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
7	32.5	1,486	163	0.014	28	1,842
6	27.5	1,527	134	0.011	23	1,892
5	22.5	1,567	105	0.009	18	1,943
4	17.5	1,608	76	0.006	13	1,993
3	12.5	1,648	50	0.004	9	2,043
2	7.5	1,689	26	0.002	4	2,093
1	2.5	1,729	6	0.000	1	2,144
Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield	111	170	98	0.008	17	211
Generic RRU (Model TBD)	111	165	95	0.008	17	205
Alcatel-Lucent B13 RRH4x30-4R	109.9	173	98	0.008	17	215
Samsung B5/B13 RRH-BR04C	109	211	118	0.010	21	261
Samsung B2/B66A RRH-BR049	109	253	142	0.012	25	314
Raycap RC2DC-3315-PF-48	109	64	36	0.003	6	79
Samsung MT6407-77A	109	245	137	0.012	24	303
Antel LPA-80063/4CF	109	120	67	0.006	12	149
Commscope SBNHH-1D65B	109	304	171	0.014	30	377
Flat T-Arm	109	750	421	0.035	73	930
Flat T-Arm	100	750	375	0.031	65	930
Pine Branch	109	600	337	0.028	59	744
Pine Branch	104	600	316	0.026	55	744
Pine Branch	99	600	296	0.025	51	744
Pine Branch	94	600	276	0.023	48	744
Pine Branch	89	600	256	0.022	45	744
Pine Branch	84	600	237	0.020	41	744
Pine Branch	79	600	218	0.018	38	744
Pine Branch	74	600	200	0.017	35	744
Pine Branch	69	600	182	0.015	32	744
Pine Branch	64	600	164	0.014	29	744
Pine Branch	59	600	147	0.012	26	744
VZW Unused Reserve (13207.33 sqin)	109	794	446	0.037	77	984
Ericsson AIR 6449 B77D/ C-Band	102	245	126	0.010	22	303
Raycap DC6-48-60-18-8F ("Squid")	100	32	16	0.001	3	39
Raycap DC6-48-60-18-8F(32.8 lbs)	100	33	16	0.001	3	41
Ericsson RRUS 8843 B2, B66A	100	216	108	0.009	19	268
Ericsson RRUS 4478 B14	100	180	90	0.008	16	223
Ericsson RRUS 4449 B5, B12	100	213	106	0.009	19	264
Raycap DC6-48-60-18-8C-EV	100	16	8	0.001	1	20
CCI DMP65R-BU8D	100	287	143	0.012	25	356
CCI TPA65R-BU8D	100	248	124	0.010	21	307
Ericsson AIR 6419 B77G	98	198	96	0.008	17	246
Commscope RDIDC-9181-PF-48	90	22	9	0.001	2	27
Fujitsu TA08025-B604	90	192	83	0.007	14	238
Fujitsu TA08025-B605	90	225	98	0.008	17	279
JMA Wireless MX08FRO665-21	90	194	84	0.007	15	240
Generic Flat Light Sector Frame	90	1,200	520	0.044	90	1,487
		42,361	11,927	1.000	2,073	52,505

0.9D - 1.0Ev + 1.0Eh Normal **Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
41	110.5	73	42	0.004	7	63
40	109.95	7	4	0.000	1	6
39	109.45	66	37	0.003	7	57
38	107	350	192	0.016	33	301
37	104.5	89	47	0.004	8	77
36	103	181	94	0.008	16	156
35	101	185	94	0.008	16	159
34	99.5	113	56	0.005	10	98
33	98.5	114	56	0.005	10	98
32	96.5	347	165	0.014	29	299
31	94.6732	77	36	0.003	6	66
30	94.1732	92	42	0.004	7	79

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
29	92	1,079	482	0.040	84	929
28	89.8294	94	41	0.003	7	81
27	89.3294	124	53	0.004	9	107
26	87	766	317	0.027	55	659
25	84.5	195	78	0.006	13	168
24	82	794	304	0.026	53	683
23	79.5	202	74	0.006	13	174
22	77	823	289	0.024	50	708
21	74.5	209	70	0.006	12	180
20	72	851	273	0.023	47	732
19	69.5	216	66	0.006	11	186
18	67	879	256	0.022	44	757
17	64.5	223	62	0.005	11	192
16	62	908	238	0.020	41	781
15	59.5	230	57	0.005	10	198
14	57	936	219	0.018	38	806
13	52.5874	1,159	243	0.020	42	998
12	50.0874	84	16	0.001	3	72
11	47.5	2,432	445	0.037	77	2,093
10	44.4142	581	97	0.008	17	500
9	41.9142	1,080	167	0.014	29	929
8	37.5	1,446	192	0.016	33	1,244
7	32.5	1,486	163	0.014	28	1,279
6	27.5	1,527	134	0.011	23	1,314
5	22.5	1,567	105	0.009	18	1,349
4	17.5	1,608	76	0.006	13	1,384
3	12.5	1,648	50	0.004	9	1,418
2	7.5	1,689	26	0.002	4	1,453
1	2.5	1,729	6	0.000	1	1,488
Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield	111	170	98	0.008	17	147
Generic RRU (Model TBD)	111	165	95	0.008	17	142
Alcatel-Lucent B13 RRH4x30-4R	109.9	173	98	0.008	17	149
Samsung B5/B13 RRH-BR04C	109	211	118	0.010	21	181
Samsung B2/B66A RRH-BR049	109	253	142	0.012	25	218
Raycap RC2DC-3315-PF-48	109	64	36	0.003	6	55
Samsung MT6407-77A	109	245	137	0.012	24	211
Antel LPA-80063/4CF	109	120	67	0.006	12	103
Commscope SBNHH-1D65B	109	304	171	0.014	30	262
Flat T-Arm	109	750	421	0.035	73	645
Flat T-Arm	100	750	375	0.031	65	645
Pine Branch	109	600	337	0.028	59	516
Pine Branch	104	600	316	0.026	55	516
Pine Branch	99	600	296	0.025	51	516
Pine Branch	94	600	276	0.023	48	516
Pine Branch	89	600	256	0.022	45	516
Pine Branch	84	600	237	0.020	41	516
Pine Branch	79	600	218	0.018	38	516
Pine Branch	74	600	200	0.017	35	516
Pine Branch	69	600	182	0.015	32	516
Pine Branch	64	600	164	0.014	29	516
Pine Branch	59	600	147	0.012	26	516
VZW Unused Reserve (13207.33 sqin)	109	794	446	0.037	77	683
Ericsson AIR 6449 B77D/ C-Band	102	245	126	0.010	22	211
Raycap DC6-48-60-18-8F ("Squid")	100	32	16	0.001	3	27
Raycap DC6-48-60-18-8F(32.8 lbs)	100	33	16	0.001	3	28
Ericsson RRUS 8843 B2, B66A	100	216	108	0.009	19	186
Ericsson RRUS 4478 B14	100	180	90	0.008	16	155
Ericsson RRUS 4449 B5, B12	100	213	106	0.009	19	183
Raycap DC6-48-60-18-8C-EV	100	16	8	0.001	1	14
CCI DMP65R-BU8D	100	287	143	0.012	25	247
CCI TPA65R-BU8D	100	248	124	0.010	21	213
Ericsson AIR 6419 B77G	98	198	96	0.008	17	171
Commscope RDIDC-9181-PF-48	90	22	9	0.001	2	19
Fujitsu TA08025-B604	90	192	83	0.007	14	165
Fujitsu TA08025-B605	90	225	98	0.008	17	194
JMA Wireless MX08FRO665-21	90	194	84	0.007	15	167
Generic Flat Light Sector Frame	90	1,200	520	0.044	90	1,033
		42,361	11,927	1.000	2,073	36,453

1.2D + 1.0Ev + 1.0Eh Normal **Seismic**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.36	-2.07	0.00	-174.71	0.00	174.71	6,566.18	1,629.27	8,609	7,898.16	0.00	0.00	0.03
5.00	-48.27	-2.07	0.00	-164.34	0.00	164.34	6,448.38	1,587.47	8,173	7,555.74	0.00	-0.01	0.03
10.00	-46.22	-2.07	0.00	-153.96	0.00	153.96	6,327.90	1,545.66	7,748	7,217.60	0.01	-0.01	0.03
15.00	-44.23	-2.06	0.00	-143.61	0.00	143.61	6,204.76	1,503.85	7,335	6,884.01	0.03	-0.02	0.03
20.00	-42.29	-2.05	0.00	-133.30	0.00	133.30	6,078.95	1,462.04	6,933	6,555.20	0.05	-0.02	0.03
25.00	-40.40	-2.03	0.00	-123.06	0.00	123.06	5,950.46	1,420.23	6,542	6,231.43	0.08	-0.03	0.03
30.00	-38.55	-2.00	0.00	-112.93	0.00	112.93	5,819.31	1,378.42	6,162	5,912.94	0.12	-0.04	0.03
35.00	-36.76	-1.97	0.00	-102.91	0.00	102.91	5,658.34	1,336.62	5,794	5,573.27	0.16	-0.04	0.03
40.00	-35.42	-1.95	0.00	-93.06	0.00	93.06	5,481.35	1,294.81	5,438	5,228.32	0.21	-0.05	0.02
43.83	-34.70	-1.93	0.00	-85.61	0.00	85.61	5,345.84	1,262.80	5,172	4,971.66	0.25	-0.05	0.02
45.00	-31.69	-1.85	0.00	-83.35	0.00	83.35	5,304.37	1,253.00	5,092	4,894.40	0.26	-0.06	0.02
50.00	-31.59	-1.85	0.00	-74.09	0.00	74.09	5,127.38	1,211.19	4,758	4,571.50	0.33	-0.06	0.02
50.17	-30.15	-1.81	0.00	-73.77	0.00	73.77	4,537.14	1,081.36	4,334	4,134.27	0.33	-0.06	0.02
55.00	-28.99	-1.77	0.00	-65.04	0.00	65.04	4,425.85	1,046.06	4,056	3,899.91	0.39	-0.07	0.02
59.00	-27.96	-1.74	0.00	-57.96	0.00	57.96	4,304.41	1,016.79	3,832	3,685.72	0.45	-0.07	0.02
60.00	-26.83	-1.69	0.00	-56.22	0.00	56.22	4,273.44	1,009.47	3,777	3,632.60	0.47	-0.07	0.02
64.00	-25.81	-1.66	0.00	-49.45	0.00	49.45	4,149.55	980.21	3,561	3,423.96	0.53	-0.08	0.02
65.00	-24.72	-1.61	0.00	-47.79	0.00	47.79	4,118.58	972.89	3,508	3,372.76	0.55	-0.08	0.02
69.00	-23.71	-1.57	0.00	-41.35	0.00	41.35	3,994.69	943.63	3,301	3,171.83	0.62	-0.09	0.02
70.00	-22.66	-1.52	0.00	-39.78	0.00	39.78	3,963.71	936.31	3,250	3,122.56	0.64	-0.09	0.02
74.00	-21.65	-1.47	0.00	-33.70	0.00	33.70	3,839.82	907.04	3,050	2,929.35	0.71	-0.09	0.02
75.00	-20.63	-1.42	0.00	-32.23	0.00	32.23	3,808.85	899.73	3,001	2,882.01	0.73	-0.09	0.02
79.00	-19.64	-1.37	0.00	-26.55	0.00	26.55	3,684.96	870.46	2,809	2,696.51	0.81	-0.10	0.02
80.00	-18.65	-1.32	0.00	-25.18	0.00	25.18	3,653.98	863.15	2,762	2,651.10	0.83	-0.10	0.02
84.00	-17.67	-1.26	0.00	-19.92	0.00	19.92	3,530.09	833.88	2,578	2,473.31	0.91	-0.10	0.01
85.00	-16.72	-1.20	0.00	-18.66	0.00	18.66	3,499.12	826.56	2,533	2,429.83	0.93	-0.10	0.01
89.00	-15.82	-1.15	0.00	-13.85	0.00	13.85	3,375.23	797.30	2,356	2,259.75	1.02	-0.10	0.01
89.66	-15.71	-1.14	0.00	-13.09	0.00	13.09	3,354.82	792.48	2,328	2,232.33	1.03	-0.10	0.01
90.00	-12.10	-0.91	0.00	-12.70	0.00	12.70	3,344.25	789.98	2,313	2,218.20	1.04	-0.10	0.01
94.00	-11.24	-0.86	0.00	-9.05	0.00	9.05	3,220.36	760.72	2,145	2,055.84	1.13	-0.11	0.01
94.35	-11.15	-0.85	0.00	-8.75	0.00	8.75	1,736.60	442.82	1,272	1,136.24	1.13	-0.11	0.01
95.00	-10.72	-0.82	0.00	-8.19	0.00	8.19	1,729.55	440.09	1,256	1,124.59	1.15	-0.11	0.01
98.00	-10.33	-0.79	0.00	-5.73	0.00	5.73	1,696.64	427.54	1,186	1,071.51	1.22	-0.11	0.01
99.00	-9.44	-0.73	0.00	-4.94	0.00	4.94	1,685.46	423.36	1,163	1,053.95	1.24	-0.11	0.01
100.00	-6.77	-0.54	0.00	-4.21	0.00	4.21	1,674.17	419.18	1,140	1,036.47	1.26	-0.11	0.01
102.00	-6.24	-0.50	0.00	-3.13	0.00	3.13	1,651.27	410.82	1,095	1,001.73	1.31	-0.11	0.01
104.00	-5.39	-0.43	0.00	-2.13	0.00	2.13	1,627.94	402.46	1,051	967.31	1.35	-0.11	0.01
105.00	-4.95	-0.40	0.00	-1.69	0.00	1.69	1,616.11	398.28	1,029	950.22	1.38	-0.11	0.01
109.00	-0.73	-0.06	0.00	-0.09	0.00	0.09	1,567.75	381.56	944	882.74	1.47	-0.11	0.00
109.90	-0.51	-0.04	0.00	-0.04	0.00	0.04	1,556.63	377.79	926	867.76	1.49	-0.11	0.00
110.00	-0.42	-0.03	0.00	-0.03	0.00	0.03	1,555.39	377.37	924	866.10	1.49	-0.11	0.00
111.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,542.92	373.19	903	849.55	1.52	-0.11	0.00

0.9D - 1.0Ev + 1.0Eh Normal **Seismic (Reduced DL)**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-34.96	-2.07	0.00	-173.87	0.00	173.87	6,566.18	1,629.27	8,609	7,898.16	0.00	0.00	0.03
5.00	-33.51	-2.07	0.00	-163.51	0.00	163.51	6,448.38	1,587.47	8,173	7,555.74	0.00	-0.01	0.03
10.00	-32.09	-2.07	0.00	-153.14	0.00	153.14	6,327.90	1,545.66	7,748	7,217.60	0.01	-0.01	0.03
15.00	-30.71	-2.06	0.00	-142.81	0.00	142.81	6,204.76	1,503.85	7,335	6,884.01	0.03	-0.02	0.03
20.00	-29.36	-2.04	0.00	-132.53	0.00	132.53	6,078.95	1,462.04	6,933	6,555.20	0.05	-0.02	0.03
25.00	-28.05	-2.02	0.00	-122.32	0.00	122.32	5,950.46	1,420.23	6,542	6,231.43	0.08	-0.03	0.02
30.00	-26.77	-1.99	0.00	-112.22	0.00	112.22	5,819.31	1,378.42	6,162	5,912.94	0.12	-0.04	0.02
35.00	-25.52	-1.96	0.00	-102.25	0.00	102.25	5,658.34	1,336.62	5,794	5,573.27	0.16	-0.04	0.02
40.00	-24.59	-1.94	0.00	-92.44	0.00	92.44	5,481.35	1,294.81	5,438	5,228.32	0.21	-0.05	0.02
43.83	-24.09	-1.92	0.00	-85.03	0.00	85.03	5,345.84	1,262.80	5,172	4,971.66	0.25	-0.05	0.02
45.00	-22.00	-1.84	0.00	-82.78	0.00	82.78	5,304.37	1,253.00	5,092	4,894.40	0.26	-0.06	0.02
50.00	-21.93	-1.84	0.00	-73.58	0.00	73.58	5,127.38	1,211.19	4,758	4,571.50	0.32	-0.06	0.02
50.17	-20.93	-1.80	0.00	-73.25	0.00	73.25	4,537.14	1,081.36	4,334	4,134.27	0.33	-0.06	0.02
55.00	-20.12	-1.76	0.00	-64.58	0.00	64.58	4,425.85	1,046.06	4,056	3,899.91	0.39	-0.07	0.02

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
59.00	-19.41	-1.72	0.00	-57.54	0.00	57.54	4,304.41	1,016.79	3,832	3,685.72	0.45	-0.07	0.02
60.00	-18.63	-1.68	0.00	-55.82	0.00	55.82	4,273.44	1,009.47	3,777	3,632.60	0.47	-0.07	0.02
64.00	-17.92	-1.64	0.00	-49.08	0.00	49.08	4,149.55	980.21	3,561	3,423.96	0.53	-0.08	0.02
65.00	-17.16	-1.60	0.00	-47.44	0.00	47.44	4,118.58	972.89	3,508	3,372.76	0.55	-0.08	0.02
69.00	-16.46	-1.56	0.00	-41.04	0.00	41.04	3,994.69	943.63	3,301	3,171.83	0.62	-0.08	0.02
70.00	-15.73	-1.51	0.00	-39.49	0.00	39.49	3,963.71	936.31	3,250	3,122.56	0.63	-0.09	0.02
74.00	-15.03	-1.46	0.00	-33.45	0.00	33.45	3,839.82	907.04	3,050	2,929.35	0.71	-0.09	0.02
75.00	-14.32	-1.41	0.00	-31.99	0.00	31.99	3,808.85	899.73	3,001	2,882.01	0.73	-0.09	0.02
79.00	-13.63	-1.36	0.00	-26.35	0.00	26.35	3,684.96	870.46	2,809	2,696.51	0.80	-0.09	0.01
80.00	-12.95	-1.31	0.00	-24.99	0.00	24.99	3,653.98	863.15	2,762	2,651.10	0.82	-0.10	0.01
84.00	-12.27	-1.25	0.00	-19.77	0.00	19.77	3,530.09	833.88	2,578	2,473.31	0.91	-0.10	0.01
85.00	-11.61	-1.19	0.00	-18.52	0.00	18.52	3,499.12	826.56	2,533	2,429.83	0.93	-0.10	0.01
89.00	-10.99	-1.14	0.00	-13.74	0.00	13.74	3,375.23	797.30	2,356	2,259.75	1.01	-0.10	0.01
89.66	-10.90	-1.13	0.00	-12.99	0.00	12.99	3,354.82	792.48	2,328	2,232.33	1.03	-0.10	0.01
90.00	-8.40	-0.91	0.00	-12.60	0.00	12.60	3,344.25	789.98	2,313	2,218.20	1.03	-0.10	0.01
94.00	-7.80	-0.85	0.00	-8.98	0.00	8.98	3,220.36	760.72	2,145	2,055.84	1.12	-0.10	0.01
94.35	-7.74	-0.84	0.00	-8.68	0.00	8.68	1,736.60	442.82	1,272	1,136.24	1.13	-0.11	0.01
95.00	-7.44	-0.81	0.00	-8.13	0.00	8.13	1,729.55	440.09	1,256	1,124.59	1.14	-0.11	0.01
98.00	-7.17	-0.79	0.00	-5.69	0.00	5.69	1,696.64	427.54	1,186	1,071.51	1.21	-0.11	0.01
99.00	-6.56	-0.73	0.00	-4.90	0.00	4.90	1,685.46	423.36	1,163	1,053.95	1.23	-0.11	0.01
100.00	-4.70	-0.53	0.00	-4.17	0.00	4.17	1,674.17	419.18	1,140	1,036.47	1.25	-0.11	0.01
102.00	-4.33	-0.50	0.00	-3.11	0.00	3.11	1,651.27	410.82	1,095	1,001.73	1.30	-0.11	0.01
104.00	-3.74	-0.43	0.00	-2.11	0.00	2.11	1,627.94	402.46	1,051	967.31	1.35	-0.11	0.00
105.00	-3.44	-0.40	0.00	-1.68	0.00	1.68	1,616.11	398.28	1,029	950.22	1.37	-0.11	0.00
109.00	-0.51	-0.06	0.00	-0.09	0.00	0.09	1,567.75	381.56	944	882.74	1.46	-0.11	0.00
109.90	-0.35	-0.04	0.00	-0.04	0.00	0.04	1,556.63	377.79	926	867.76	1.48	-0.11	0.00
110.00	-0.29	-0.03	0.00	-0.03	0.00	0.03	1,555.39	377.37	924	866.10	1.48	-0.11	0.00
111.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,542.92	373.19	903	849.55	1.51	-0.11	0.00

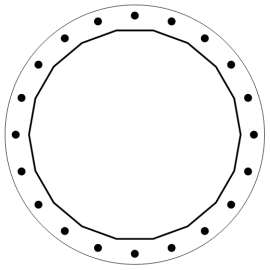
ANALYSIS SUMMARY

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W Normal	47.83	0.00	50.77	0.00	0.00	4047.85	0.00	0.52
0.9D + 1.0W Normal	47.82	0.00	38.06	0.00	0.00	4031.62	0.00	0.52
1.2D + 1.0Di + 1.0Wi Normal	14.14	0.00	73.19	0.00	0.00	1192.88	0.00	0.16
1.2D + 1.0Ev + 1.0Eh Normal	2.07	0.00	50.36	0.00	0.00	174.71	0.00	0.03
0.9D - 1.0Ev + 1.0Eh Normal	2.07	0.00	34.96	0.00	0.00	173.87	0.00	0.03
1.0D + 1.0W Service Normal	11.25	0.00	42.36	0.00	0.00	950.17	0.00	0.13

BASE PLATE ANALYSIS @ 0 FT

PLATE PARAMETERS (ID# 16361)

Diameter:	73	in
Shape:	Round	
Thickness:	3	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	252	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 16747]	Radial	20	2.25	67	A615-75	75	100	-	-

ANCHOR ROD GEOMETRY AND APPLIED LOADS --- ORIGINAL (20) 2.25"ø [ID 16747]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in^4)	Axial Load (k)	Shear Load (k)
1	0.314	31.86	10.35	26.040	2203.078	124.59	2.23
2	0.628	27.10	19.69	18.919	1163.320	124.59	3.06
3	0.942	19.69	27.10	9.946	322.141	124.59	3.60
4	1.257	10.35	31.86	0.000	0.839	124.59	3.79
5	1.571	0.00	33.50	-9.946	322.141	-114.43	3.60
6	1.885	-10.35	31.86	-18.919	1163.323	-114.43	3.06
7	2.199	-19.69	27.10	-26.040	2203.078	-114.43	2.23
8	2.513	-27.10	19.69	-30.612	3044.257	-114.43	1.17
9	2.827	-31.86	10.35	-32.188	3365.560	-114.43	0.00
10	3.142	-33.50	0.00	-30.612	3044.257	-114.43	1.17
11	3.456	-31.86	-10.35	-26.040	2203.077	-114.43	2.23
12	3.770	-27.10	-19.69	-18.919	1163.322	-114.43	3.06
13	4.084	-19.69	-27.10	-9.946	322.142	-114.43	3.60
14	4.398	-10.35	-31.86	0.000	0.839	124.59	3.79
15	4.712	0.00	-33.50	9.946	322.142	124.59	3.60
16	5.027	10.35	-31.86	18.919	1163.321	124.59	3.06
17	5.341	19.69	-27.10	26.040	2203.079	124.59	2.23
18	5.655	27.10	-19.69	30.612	3044.258	124.59	1.17
19	5.969	31.86	-10.35	32.188	3365.560	124.59	0.00
20	6.283	33.50	0.00	30.612	3044.258	124.59	1.17

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	59"ø x 0.5" (18 Sides)	4047.8	50.77	47.83	1.000
Bolt Group	Original (20) 2.25"ø	4047.8	-	47.83	1.000
	TOTALS	**4047.85**	**50.77**	**47.83**	

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	59"ø x 0.5" (18 Sides)	91.4258	-	-	39117.88	-
Bolt Group	Original (20) 2.25"ø	3.9761	3.2477	0.8393	33663.99	4.5

EXTERNAL BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	59.12	in
Point-to-Point Diameter:	60.04	in
Flat Width:	10.425	in
Flat Radians:	0.349	rad

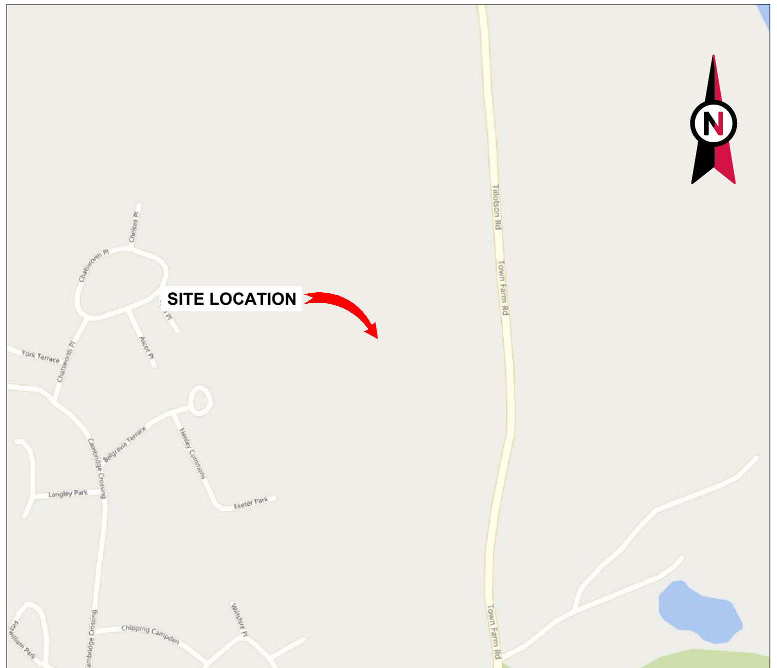
PLATE PROPERTIES

Neutral Axis:	252	°
Bend Line Lower Limit:	5.477	rad
Bend Line Upper Limit:	0.178	rad

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment Mu (k-in)	Moment Capacity ϕMn (k-in)	Ratio
Flat	38.197	0.00	85.943	709.1	3867.4	0.183
Corner	36.746	0.00	82.679	506.0	3720.6	0.136
Circumferential	45.490	0.00	102.352	966.0	4605.8	0.210

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity ϕPn (k)	Ratio
Original	20	2.25	124.5	3.8	243.6	0.543



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: FARMINGTON NORTH 2 CT
ATC SITE NUMBER: 411258
AT&T PACE NUMBERS: MRCTB054329, MRCTB056307, MRCTB055325, MRCTB053999, MRCTB055853, MRCTB055843, MRCTB056286, MRCTB055398
AT&T SITE ID: CT2580
AT&T FA CODE: 10141396
AT&T SITE NAME: CT2580
SITE ADDRESS: 199 TOWN FARM ROAD
FARMINGTON, CT 06032

AT&T CBAND 5G NR AMENDMENT PLAN

LOCATION MAP

THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. CT STATE BUILDING CODE, INCORPORATING THE 2018 INTERNATIONAL BUILDING CODE
2. 2017 NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: UNKNOWN
PHONE: N/A

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

199 TOWN FARM ROAD
FARMINGTON, CT 06032
COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.75777516
LONGITUDE: -72.82993932
GROUND ELEVATION: 183' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

AT&T MOBILITY

ENGINEER:

COLLIERS ENGINEERING
& DESIGN CT, P.C.
135 NEW ROAD
MADISON, CT 06443

PROJECT #:
22904275A

PROPERTY OWNER:

TOWN OF FARMINGTON CT
199 TOWN FARM ROAD
FARMINGTON, CT 06032

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:
REMOVE (9) ANTENNA(S), (6) RRH(S) AND (3) TTA(S)

INSTALL (12) ANTENNA(S), (9) RRH(S), (1) SQUID(S), (1) CONDUIT(S), (2) 6AWG6 DC TRUNK(S), (6) Y CABLE(S) AND (1) FIBER TRUNK(S)

EXISTING (3) RRH(S), (2) SQUID(S), (4) 8AWG6 DC TRUNK(S), (2) 18 PAIR FIBER TRUNK(S), (6) COAX CABLE(S) AND (2) CONDUIT(S) TO REMAIN

GROUND WORK:

INSTALL 6648 WITH XCEDE CABLES

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

HEAD NORTHEAST ON I-84 E, USE THE LEFT LANE TO TAKE EXIT 39 TOWARD CT-4/FARMINGTON, CONTINUE ONTO STATE HWY 508, STATE HWY 508 TURNS SLIGHTLY RIGHT AND BECOMES CT-4 W, TURN RIGHT ONTO TOWN FARM RD, DESTINATION WILL BE ON THE LEFT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	05/16/22	JLK
G-002	GENERAL NOTES	0	05/16/22	JLK
C-101	DETAILED SITE PLAN	0	05/16/22	JLK
C-201	TOWER ELEVATION	0	05/16/22	JLK
C-401	ANTENNA INSTALLATION	0	05/16/22	JLK
C-402	RF SCHEDULE	0	05/16/22	JLK
C-501	CONSTRUCTION DETAILS	0	05/16/22	JLK
E-501	GROUNDING DETAILS	0	05/16/22	JLK
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			

AMERICAN TOWER®

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER CONSULTING
MADISON
135 New Road
Madison, CT 06443
Phone: 860.395.0055
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	03/25/22
B	PRELIM	JLK	04/12/22
0	FOR CONSTRUCTION	AMN	05/16/22

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

AT&T SITE NAME:
CT2580

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:12-04'00'

AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY AT&T REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T REP. ANY WORK FOUND BY THE AT&T REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. AT&T FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. AT&T OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND AT&T SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	03/25/22
B	PRELIM	JLK	04/12/22
0	FOR CONSTRUCTION	AMN	05/16/22

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

AT&T SITE NAME:
CT2580

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:20-04'00'

AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

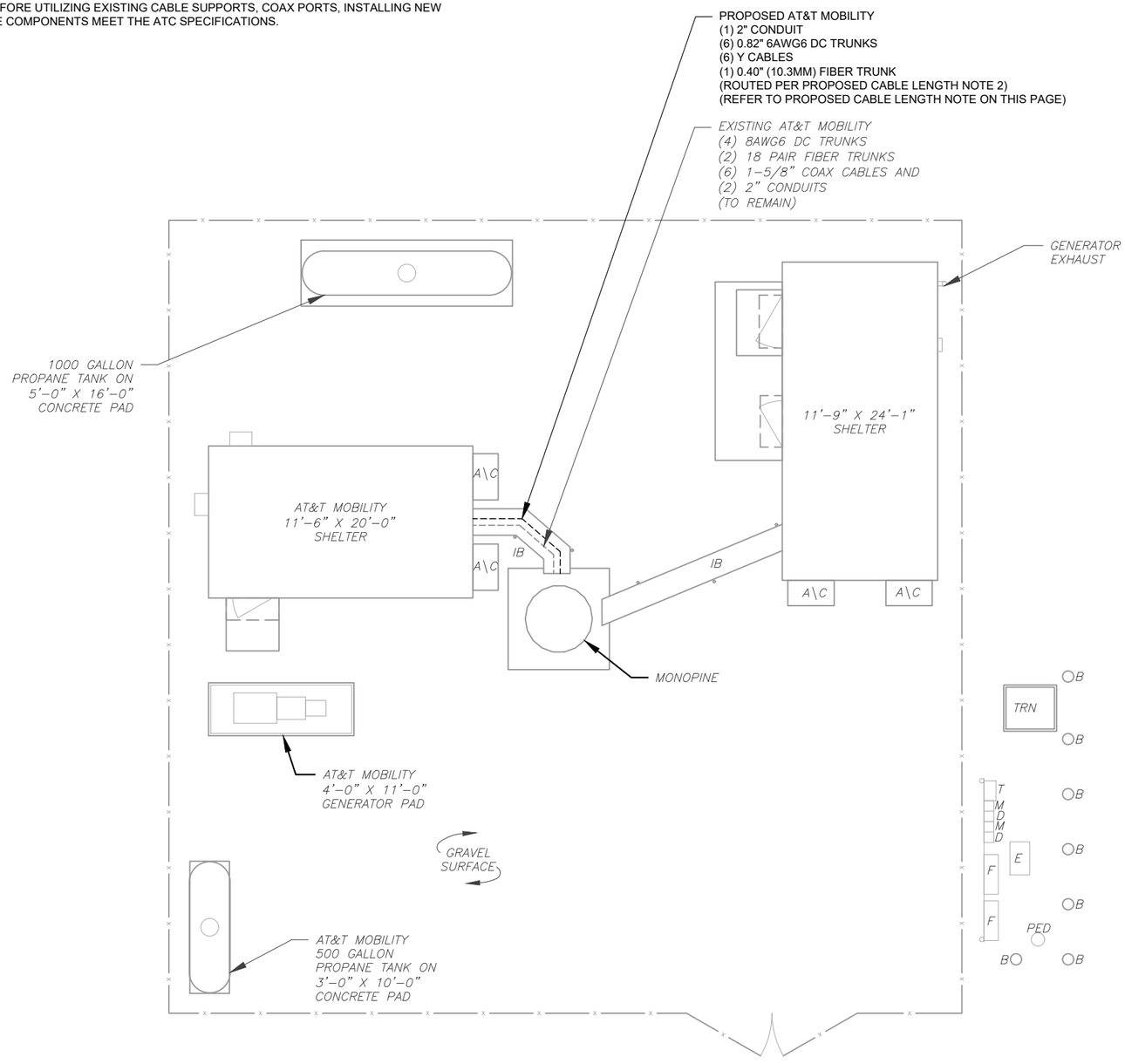
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
——x——	CHAINLINK FENCE



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **130'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

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411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

AT&T SITE NAME:
CT2580

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

STATE OF CONNECTICUT 31965 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:20-04'00'

AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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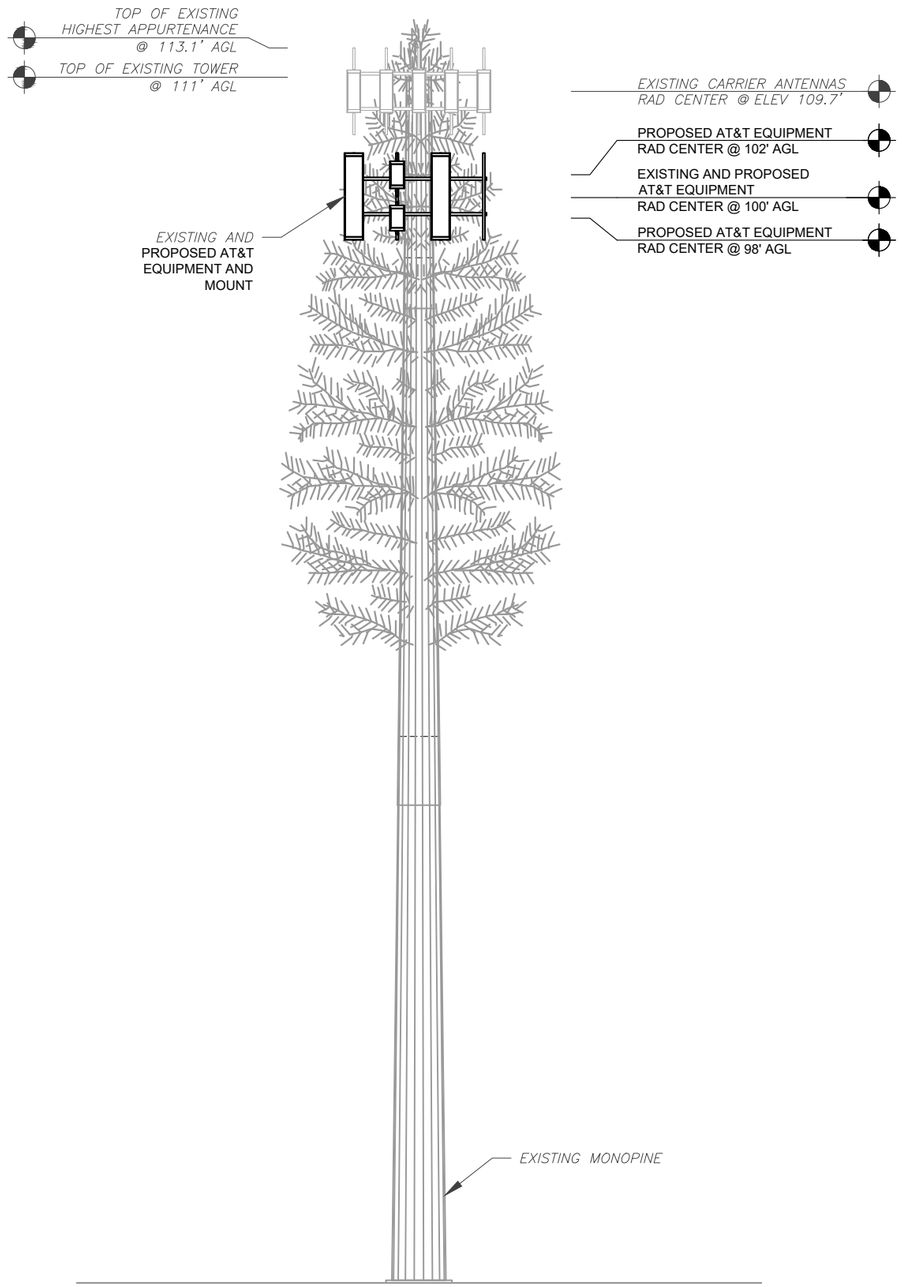
PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 03/22/22, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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0	FOR CONSTRUCTION	AMN	05/16/22

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

AT&T SITE NAME:
CT2580

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

STATE OF CONNECTICUT · JUSTIN PETER LINETTE · 31965 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:21-04'00'

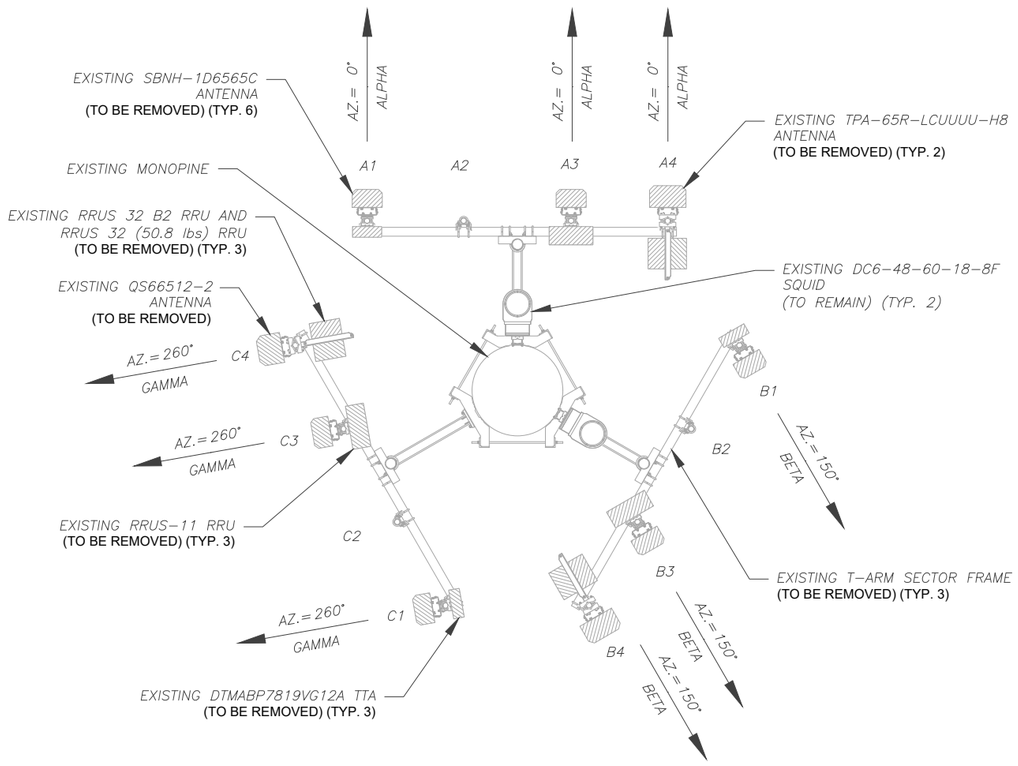
AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

EXISTING CONFIGURATIONS ARE BASED ON RFDS.
CONTRACTOR TO VERIFY EXISTING CONDITIONS.



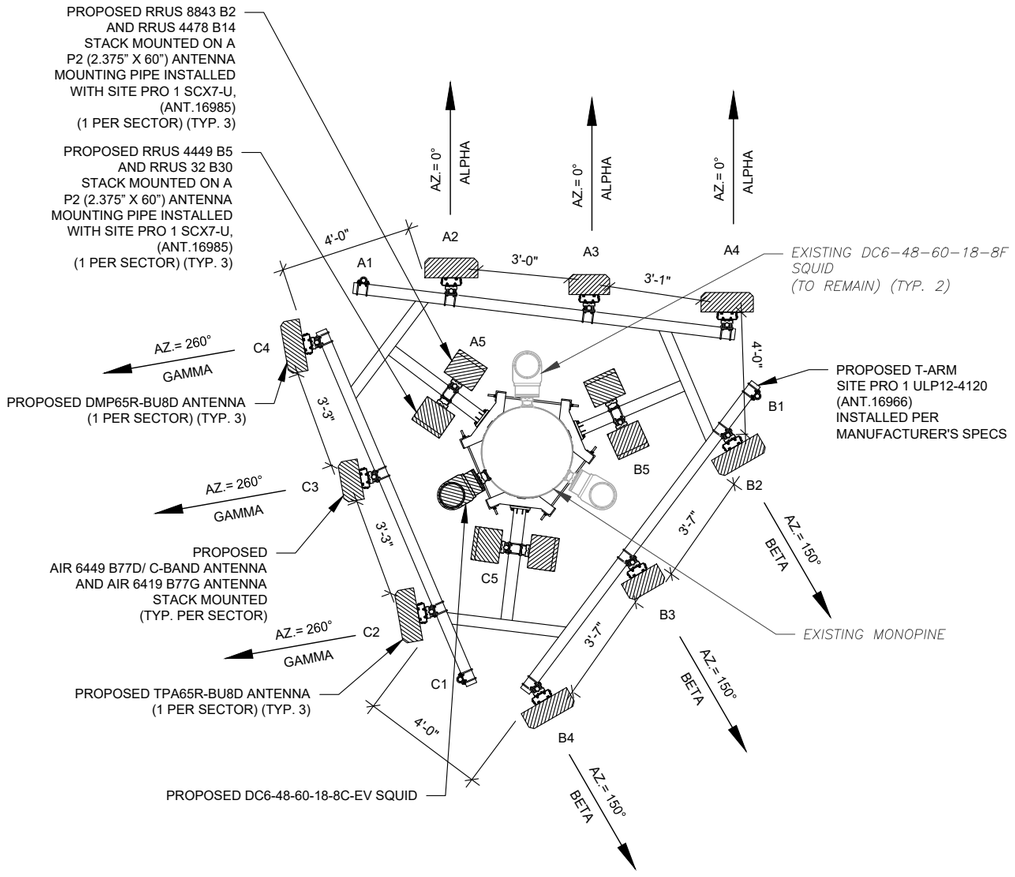
1 CURRENT ANTENNA PLAN

SCALE: 1"=5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 03/22/22, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN

SCALE: 1"=5'

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 8" AWAY FROM ALL ANTENNAS

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FARMINGTON, CT 06032

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AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-401	0

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	100'	0°	A1	SBNH-1D6565C	UMTS 850	RMV	DTMABP7819VG12A	RMV
			A2	–	–	–	–	–
			A3	SBNH-1D6565C	LTE 700	RMV	RRUS-11	RMV
			A4	TPA-65R-LCUUUU-H8	LTE 1900/WCS	RMV	RRUS 32 B2 RRUS 32	RMV
BETA	100'	150°	B1	SBNH-1D6565C	UMTS 850	RMV	DTMABP7819VG12A	RMV
			B2	–	–	–	–	–
			B3	SBNH-1D6565C	LTE 700	RMV	RRUS-11	RMV
			B4	TPA-65R-LCUUUU-H8	LTE 1900/WCS	RMV	RRUS 32 B2 RRUS 32	RMV
GAMMA	100'	260°	C1	SBNH-1D6565C	UMTS 850	RMV	DTMABP7819VG12A	RMV
			C2	–	–	–	–	–
			C3	SBNH-1D6565C	LTE 700	RMV	RRUS-11	RMV
			C4	QS66512-2	LTE 1900/WCS	RMV	RRUS 32 B2 RRUS 32	RMV

NOTES

1. CONFIRM WITH AT&T REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
3. THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
4. CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	100'	0°	A1	-	-	-	-	-
			A2	TPA65R-BU8D	LTE 700/1900/AWS 5G 1900/AWS	ADD	RRUS 4478 B14 RRUS 8843 B2, B66A	ADD ADD
	98' 102'		A3	AIR 6419 B77G AIR 6449 B77D/ C-Band	5G CBAND/DOD	ADD ADD	-	-
	100'		A4	DMP65R-BU8D	LTE 700/WCS/5G 850	ADD	-	-
			A5	-	-	-	RRUS 4449 B5, B12 RRUS 32 B30	ADD ADD
BETA	100'	150°	B1	-	-	-	-	-
			B2	TPA65R-BU8D	LTE 700/1900/AWS 5G 1900/AWS	ADD	-	-
	98' 102'		B3	AIR 6419 B77G AIR 6449 B77D/ C-Band	5G CBAND/DOD	ADD ADD	-	-
	100'		B4	DMP65R-BU8D	LTE 700/WCS/5G 850	ADD	-	-
			B5	-	-	-	RRUS 4449 B5, B12 RRUS 4478 B14 RRUS 8843 B2, B66A	ADD ADD ADD
GAMMA	100'	260°	C1	-	-	-	-	-
			C2	TPA65R-BU8D	LTE 700/1900/AWS 5G 1900/AWS	ADD	-	-
	98' 102'		C3	AIR 6419 B77G AIR 6449 B77D/ C-Band	5G CBAND/DOD	ADD ADD	-	-
	100'		C4	DMP65R-BU8D	LTE 700/WCS/5G 850	ADD	-	-
			C5	-	-	-	RRUS 4449 B5, B12 RRUS 4478 B14 RRUS 8843 B2, B66A	ADD ADD ADD

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC6-48-60-18-8F ("Squid")	RMN	(6) 1-5/8" (2) 2" CONDUIT	(4) 8AWG6	(2) 18 PAIR	RMN

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC6-48-60-18-8F ("Squid")	RMN	(6) 1-5/8" (2) 2" CONDUIT	(4) 8AWG6	(2) 18 PAIR	RMN
(1) DC6-48-60-18-8C-EV	ADD	(1) 2" CONDUIT (6) Y CABLES	(6) 6AWG6	(1) 18 PAIR	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER CONSULTING
MADISON
135 New Road
Madison, CT 06443
Phone: 860.395.0055
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	03/25/22
B	PRELIM	JLK	04/12/22
0	FOR CONSTRUCTION	AMN	05/16/22

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

AT&T SITE NAME:
CT2580

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

STATE OF CONNECTICUT · JUSTIN PETER LINETTE · 31965 · LICENSED PROFESSIONAL ENGINEER

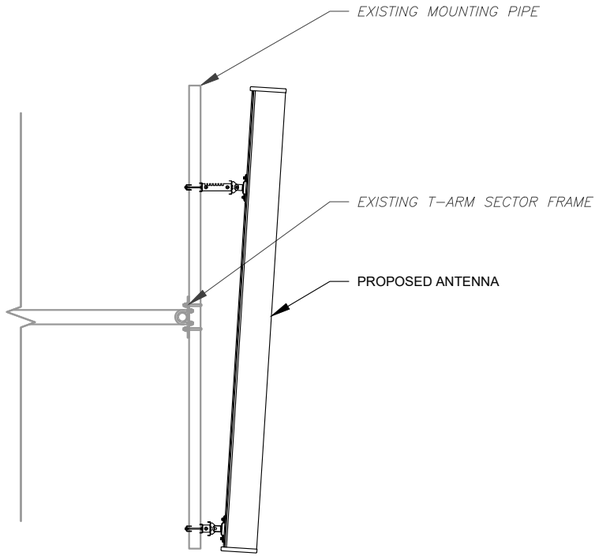
Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:21-04'00'

AT&T

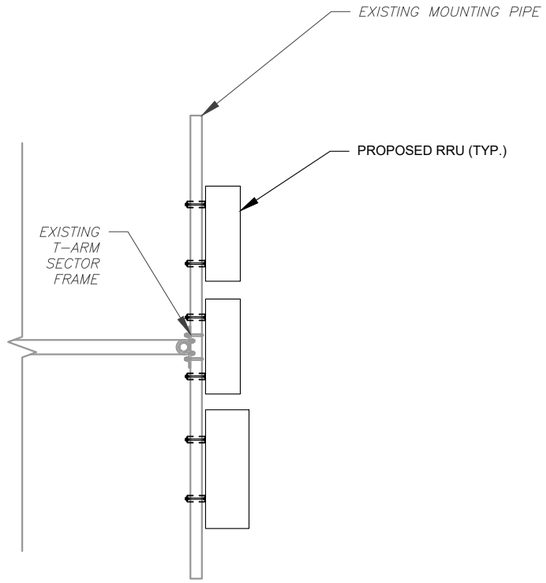
DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

RF SCHEDULE

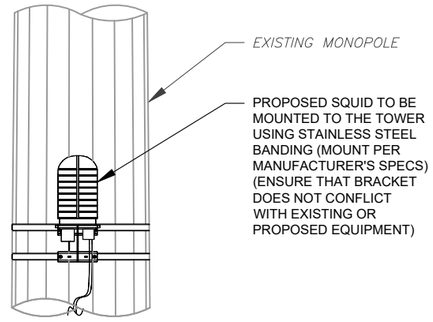
SHEET NUMBER:	REVISION:
C-402	0



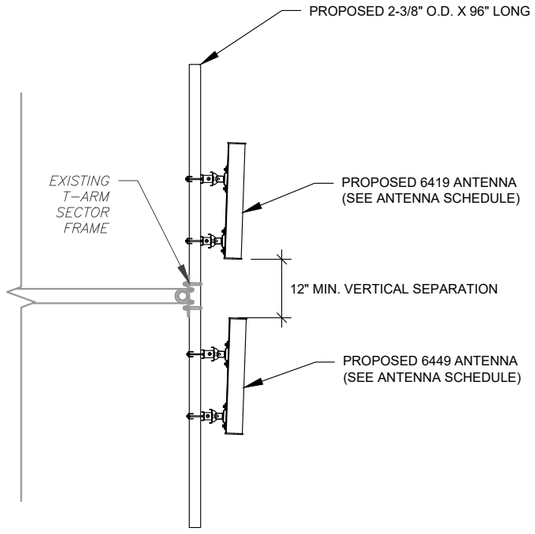
1 ANTENNA DETAIL
SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



3 PROPOSED SQUID MOUNTING
SCALE: N.T.S.



4 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.

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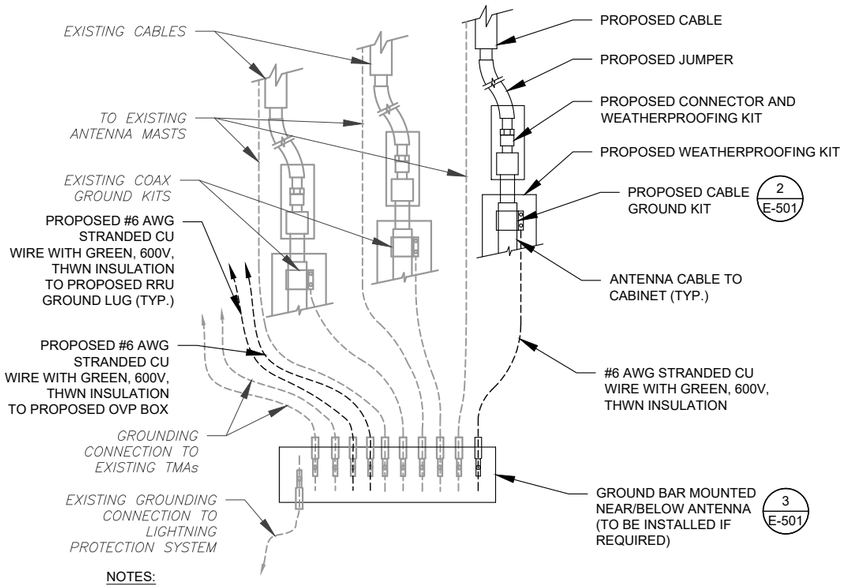
Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:22-04'00'

AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

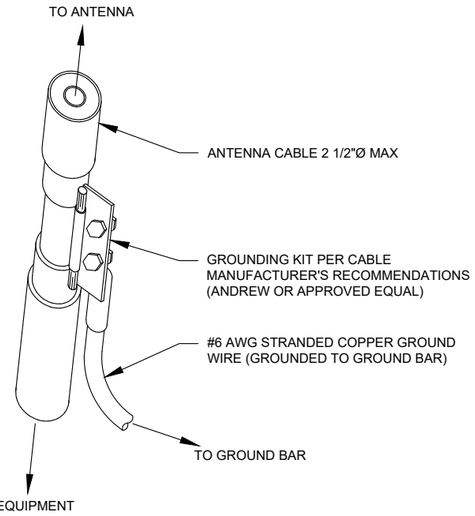


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.



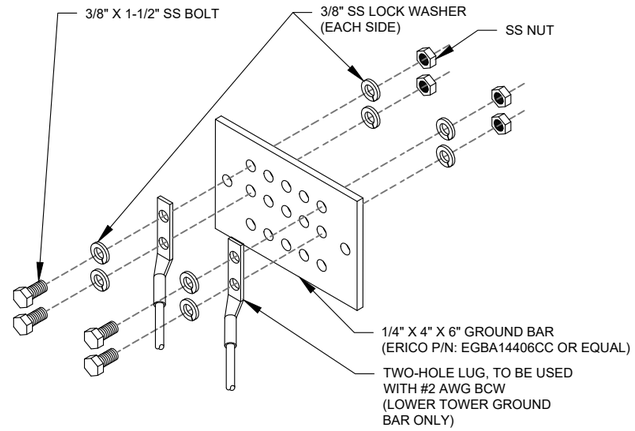
GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.

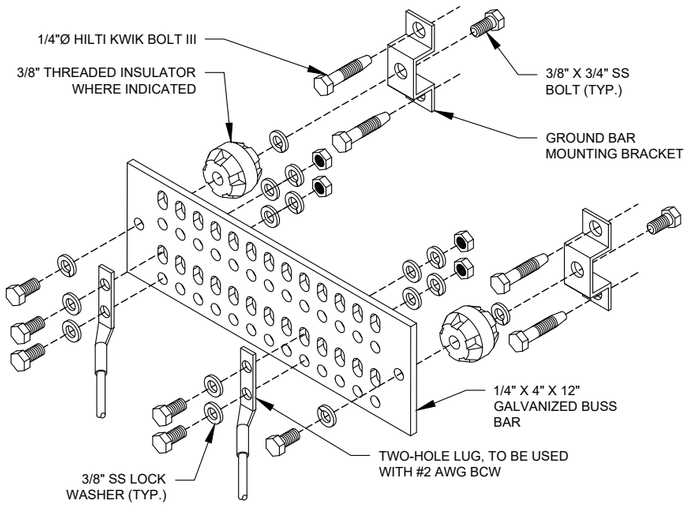


GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

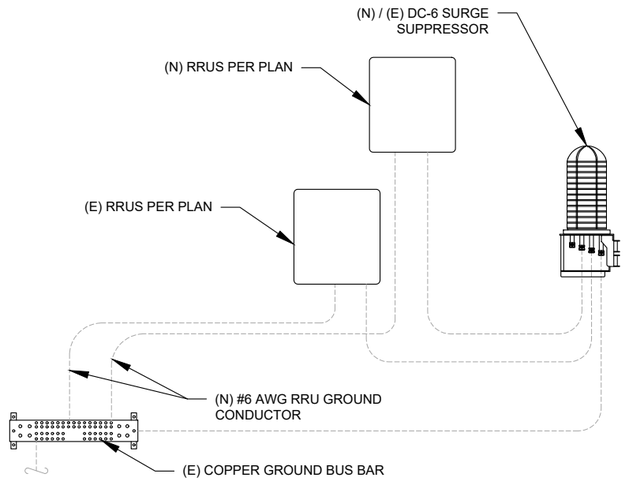


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

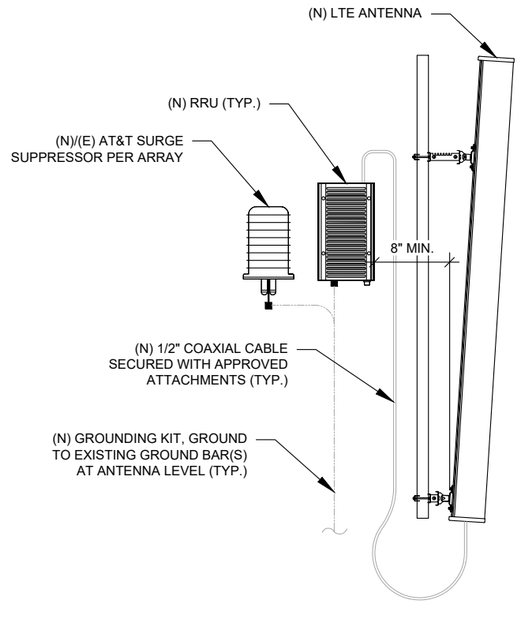
4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



5 RRU GROUNDING

SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

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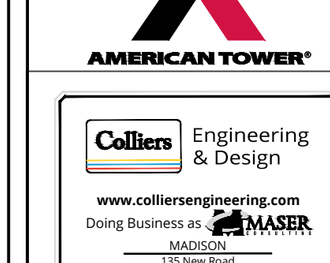


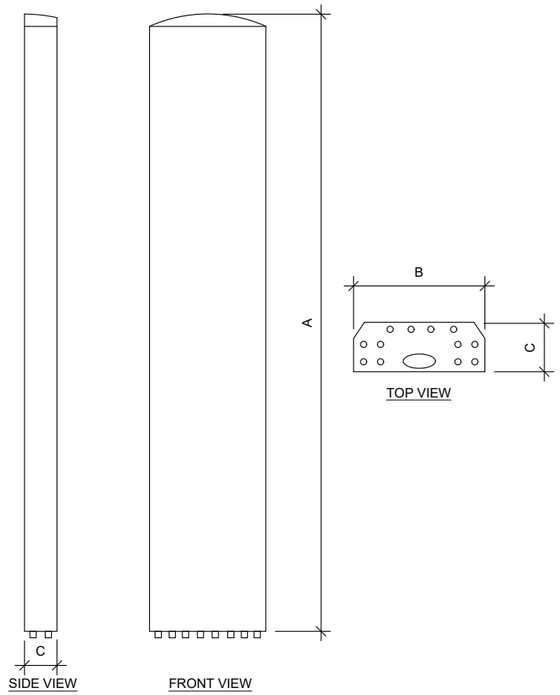
Digitally signed by Justin Peter Linette
Date: 2022.05.17 08:08:22-04'00'

AT&T

DATE DRAWN:	03/25/22
ATC JOB NO:	13757816_G5
CUSTOMER ID:	CT2580
CUSTOMER #:	10141396

GROUNDING DETAILS

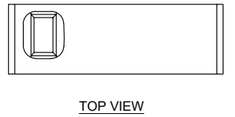
SHEET NUMBER:	REVISION:
E-501	0



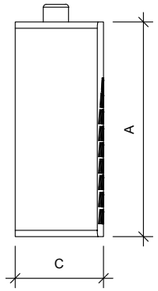
SIDE VIEW FRONT VIEW

TOP VIEW

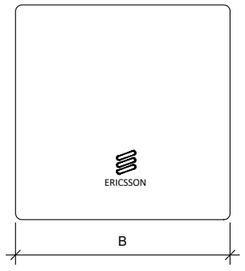
ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
TPA65R-BU8D	96.0"	21.0"	7.8"	82.5
DMP65R-BU8D	96.0"	20.7"	7.7"	95.7
AIR 6419 B77G	28.3"	16.1"	7.9"	66.1
AIR 6449 B77D/C-BAND	30.4"	15.9"	10.6"	81.6



TOP VIEW

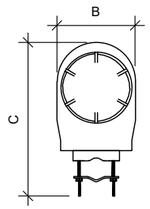


SIDW VIEW

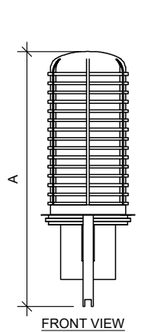


FRONT VIEW

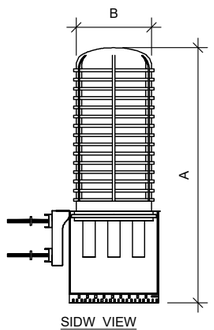
RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
4449 B5, B12	17.9"	13.2"	9.4"	71.0
4478 B14	18.1"	13.4"	8.3"	59.4
8843 B2, B66A	14.9"	13.2"	10.9"	72.0



PLAN VIEW



FRONT VIEW



SIDW VIEW

RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC6-48-60-18-8C-EV	31.4"	18.3"	10.2"	16.0

1 EQUIPMENT SPECIFICATIONS

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: -

RF REQUIREMENTS FOR 700 B14 FIRSTNET, 700 B12, 700D B29 ANTENNA SEPARATION

- ❑ Horizontal separation (side to side of antenna): >= 3’
- ❑ Vertical separation (between the tips of the antennas): > 3’
- ❑ Inter-sector separation: > 4' between the center of the antenna backplanes.

- ❑ Please note additional horizontal separation may be required if B14 antennas azimuth are different from others or antennas are severely angled with respect to the mount.
- ❑ Typical 3' horizontal separation can tolerate skew angle up to 6°.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: -

AMERICAN TOWER®
CORPORATION

Mount Analysis Report

ATC Site Name	:	**Farmington North 2 CT, CT**
ATC Site Number	:	**411258**
Engineering Number	:	**13757816_C8_01**
Mount Elevation	:	**100 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB056286**
Carrier Site Number	:	**CT2580**
Site Location	:	**199 Town Farm Road** **Farmington, CT 06032-1554** **41.75777516 , -72.82993932**
County	:	**Hartford**
Date	:	**March 22, 2022**
Max Usage	:	**88%**
Result	:	**Contingent Pass**

Prepared By:
Aviskar Ghansam
Structural Engineer

Aviskar Ghansam

Reviewed By:

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
22 Mar 2022 09:48:06 cosign

COA: PEC.0001553

Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
100.0	102.0	3	Ericsson AIR 6449 B77D/ C-Band
	100.0	3	CCI TPA65R-BU8D
		3	CCI DMP65R-BU8D
		1	Raycap DC6-48-60-18-8C-EV
		1	Raycap DC6-48-60-18-8F(32.8 lbs)
		1	Raycap DC6-48-60-18-8F ("Squid")
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A
	98.0	3	Ericsson AIR 6419 B77G

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	88%	Pass
Mount Pipes	65%	Pass
Serviceability	N/A	Pass

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above provided the modifications listed below are completed:

- Analysis based on a new install of a Site Pro 1 ULP12-4120 (ANT.16966).
- Install P2 (2.375" x 60") antenna mounting pipe (Mount Pipe M, N, O) with Site Pro 1 SCX7-U, (ANT.16985), (or approved equivalent) crossover plate kits.
- No structural failures were addressed with the noted contingencies. Contingencies address Carrier's antenna spacing requirements.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

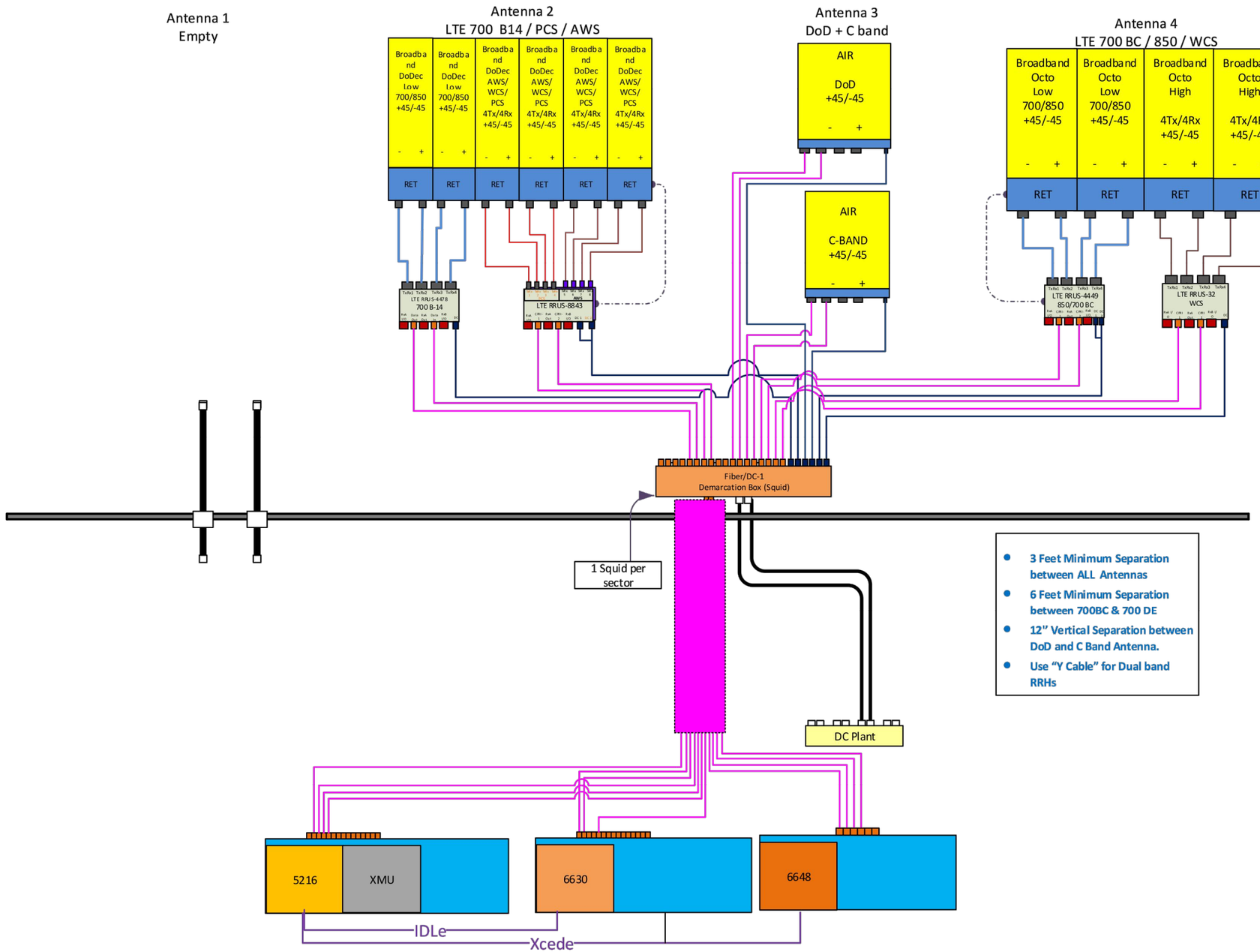
SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: -

Diagram - Sector	A	Diagram File Name - 4846450_CT2580_A_B_C_CBand_DoD_Rev 1.vsd					
Atoll Site Name -	CT2580	Location Name -	FARMINGTON CT TOWN FARM ROAD	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND

Comments: "Important Note: For detailed radio to antenna wiring refer to the latest field notice - Antenna_Radio Connection Drawings Playbook v6.0_Ericsson"

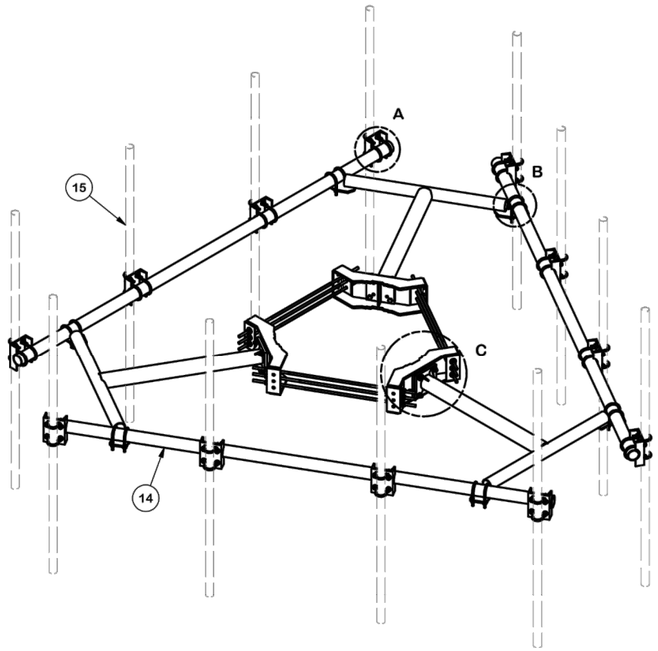


1 RFDS PLUMBING DIAGRAM

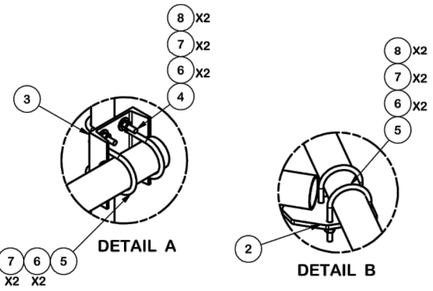
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. GENERAL CONTRACTOR IS TO CHECK WITH THE AT&T CM TO ENSURE THIS IS THE MOST RECENT VERSION OF THE RFDS.

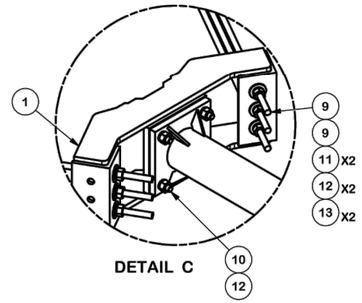
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	-



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	3	X-ULP	SUPPORT ARM WELDMENT		103.07	309.20
3	12	X-SP219	SMALL SUPPORT CROSS PLATE	8.250 in	8.61	103.33
4	24	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.26	6.17
5	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.26	9.25
6	120	G12FW	1/2" HDG USS FLATWASHER	0.095	0.03	4.09
7	120	G12LW	1/2" HDG LOCKWASHER	.125	0.01	1.67
8	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
9	9	G58R-24	5/8" X 24" GALV THREADED ROD		2.20	19.76
9	9	G58R-48	5/8" X 48" GALV THREADED ROD		4.39	39.52
10	12	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2.75	0.36	4.27
11	18	G58FW	5/8" HDG USS FLATWASHER	.122	0.07	1.27
12	30	G58LW	5/8" HDG LOCKWASHER	.156	0.03	0.78
13	30	G58NUT	5/8" HDG HEAVY 2H HEX NUT	5/8	0.13	3.90
14	3	P3150	3-1/2" X 150" SCH 40 GALVANIZED PIPE	150.000 in	94.80	284.40
15	12	A	B	C	D	





ATENNA PIPES					
"ASSEMBLY NO."	PART NO. "A"	PART DESCRIPTION "B"	LENGTH "C"	UNIT WT. "D"	TOTAL WT.
ULP12-472	P272	2-3/8" O.D. SCH. 40 PIPE	72"	23.07	1,311.05
ULP12-484	P284	2-3/8" O.D. SCH. 40 PIPE	84"	26.91	1,357.13
ULP12-496	P296	2-3/8" O.D. SCH. 40 PIPE	96"	30.76	1,403.33
ULP12-4126	P2126	2-3/8" O.D. SCH. 40 PIPE	126"	40.76	1523.33

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	ADDED 10' 6" ANTENNA MOUNTING PIPES	5416	CEK	7/2/2015

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
ULTRA LOW PROFILE RIDGED T-ARM
FOR 12 ATENNAS

CPD NO.	DRAWN BY	ENG. APPROVAL
5416	LMD 12/20/2012	

CLASS	SUB	DRAWING USAGE	CHECKED BY
81	01	CUSTOMER	BMC 12/27/2012

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

PART NO. SEE "ASSEMBLY NO."
DWG. NO. ULP12-4XX

SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION: -

July 5, 2022

Jacqueline Hall
Project Manager, Site Development
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

Re: Exempt Modification Application – AT&T Site 13757816
AT&T Mobility Telecommunications Facility @ 199 Town Farm Rd, Farmington, CT 06032

Dear Ms. Hall:

New Cingular Wireless, PCS, LLC (dba AT&T) currently maintains antennas on a wireless telecommunications facility on an existing American Tower Corporation (ATC) telecommunications tower at the above referenced address. AT&T desires to modify its existing equipment as described in the attached Construction and Antenna Mount Modification Drawings:

- Remove nine (9) antennas, six (6) RRHs and three (3) TTAs;
- Install twelve (12) antennas, nine (9) RRHs, one (1) squid, one (1) conduit, two (2) DC trunks, six (6) Y cables, and one (1) fiber trunk.
- Ground work includes installing a 6648 with cables.

This letter is intended to serve as the required notice to the tower owner. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Acting Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

Enclosures

July 5, 2022

Town Planner Shannon Rutherford
Farmington Planning and Zoning
1 Monteith Drive
Farmington, CT 06032

Re: Exempt Modification Application – AT&T Site 13757816
AT&T Mobility Telecommunications Facility @ 199 Town Farm Rd, Farmington, CT 06032

Dear Ms. Rutherford:

New Cingular Wireless, PCS, LLC (dba AT&T) currently maintains antennas on a wireless telecommunications facility on an existing American Tower Corporation (ATC) telecommunications tower at the above referenced address. AT&T desires to modify its existing equipment as described in the attached Construction and Antenna Mount Modification Drawings:

- Remove nine (9) antennas, six (6) RRHs and three (3) TTAs;
- Install twelve (12) antennas, nine (9) RRHs, one (1) squid, one (1) conduit, two (2) DC trunks, six (6) Y cables, and one (1) fiber trunk.
- Ground work includes installing a 6648 with cables.

This letter is intended to serve as the required notice to the municipal planning agency. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe the proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046

enclosures

July 5, 2022

Kathleen A. Blonski, Town Manager
Farmington Town Hall
1 Monteith Drive
Farmington, CT 06032

Re: Exempt Modification Application – AT&T Site 13757816
AT&T Mobility Telecommunications Facility @ 199 Town Farm Rd, Farmington, CT 06032

Dear Ms. Blonski:

New Cingular Wireless, PCS, LLC (dba AT&T) currently maintains antennas on a wireless telecommunications facility on an existing American Tower Corporation (ATC) telecommunications tower at the above referenced address. AT&T desires to modify its existing equipment as described in the attached Construction and Antenna Mount Modification Drawings:

- Remove nine (9) antennas, six (6) RRHs and three (3) TTAs;
- Install twelve (12) antennas, nine (9) RRHs, one (1) squid, one (1) conduit, two (2) DC trunks, six (6) Y cables, and one (1) fiber trunk.
- Ground work includes installing a 6648 with cables.

This letter is intended to serve as the required notice to both the property owner and to chief executive official of the municipality. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

Enclosures

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