



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

September 12, 2022

Jack Andrews
Zoning Manager
Centerline Communications, LLC
10130 Donleigh Drive
Columbia, MD 21046
jmandrews@clinellc.com

RE: **EM-AT&T-057-220808** - AT&T notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.

Dear Mr. Andrews:

The Connecticut Siting Council (Council) is in receipt of your correspondence of September 9, 2022 submitted in response to the Council's September 7, 2022 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

A handwritten signature in dark ink, appearing to read "Melanie Bachman".

Melanie Bachman
Executive Director

MAB/RDM/laf

From: John Andrews <jmandrews@clinellc.com>
Sent: Friday, September 9, 2022 12:29 PM
To: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: EM-AT&T-057-220808 - Reply to Incomplete Letter

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Attached is an electronic document containing the cover letter, revised Drawing and revised Structural Report, as requested by the Council. Hard copies are being mailed this afternoon. Thanks



John Andrews Jr. | Project Manager
10130 Donleigh Drive, Columbia, MD 21046
Centerline Communications
750 W Center St, Suite 301 | West Bridgewater, MA 02379
Mobile: 443.677.0144
jmandrews@clinellc.com | www.centerlinecommunications.com



September 9, 2022

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

RE: EM-AT&T-057-220808 - AT&T notice of intent to modify an existing telecommunication facility located at 36 Ritch Avenue, Greenwich, Connecticut

Dear Ms. Bachman,

I was advised that the above referenced AT&T Exempt Modification application was deficient because a) The Structural Analysis prepared by American Tower dated March 30, 2022, did not include antenna mount modifications included in the Mount Analysis Report; and b) there are no notations on the Site Plans specifying how the antennas will be concealed or otherwise treated.

Accordingly, enclosed please find a Revised Structural Report containing the information in the Mount Analysis Report, as well as a Revised set of Drawings with concealment notes added to pages C-201 and C-204. Please move forward with this application.

A PDF copy of these documents has been emailed 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,

A handwritten signature in black ink, appearing to read 'Jack Andrews', is written over a circular stamp or watermark.

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



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 83 ft Monopine
ATC Site Name : Byram Park CT,CT
ATC Site Number : 414240
Engineering Number : 13755490_C3_06
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : MRCTB055124
Carrier Site Number : N/A
Site Location : 48 RITCH AVENUE WEST
GREENWICH, CT 06830-9992
41.0051, -73.6483
County : Fairfield
Date : September 8, 2022
Max Usage : 99%
Result : Pass

Prepared By:

Sarah Kramer
Structural Engineer

Sarah D. Kramer

Reviewed By:



COA : PEC.0001553



Table of Contents

Introduction.....	3
Supporting Documents	3
Analysis	3
Conclusion	3
Existing and Reserved Equipment.....	4
Equipment to be Removed	4
Proposed Equipment	5
Structure Usages.....	6
Foundations	6
Deflection and Sway*	6
Standard Conditions	7
Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 83 ft Monopine to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	EEI Project #16733 Rev. 3, dated December 9, 2011
Foundation Drawing	Centek Engineering Job #09129 Rev. 0, dated February 14, 2012
Geotechnical Report	DET Job #2010.14, dated October 4, 2010
Modifications	ATC Project #OAA711130_C6_09, dated October 26, 2018
Mount Analysis	ATC Project #13755490_C8_05, dated July 18, 2022

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:	116 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" 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:	$S_s = 0.28, S_i = 0.06$
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
89.0	2	dbSpectra DS7C09P36U-D	Pole Mount	(2) 1/2" Coax (2) 7/8" Coax	TOWN OF GREENWICH, CT
	1	Bird 428D-83I-01-T			
82.0	3	Ericsson RRUS 32 B66	T-Arm	(1) 1 1/4" Hybriflex Cable (3) 1 1/4" (1.25"- 31.8mm) Fiber (3) 1 5/8" (1.63"- 41.3mm) Fiber	T-MOBILE
	-	-			
	3	Ericsson Radio 4449 B71 B85A			
76.0	3	Ericsson Air6449 B41	T-Arm	(1) 1 1/4" Hybriflex Cable (3) 1 1/4" (1.25"- 31.8mm) Fiber (3) 1 5/8" (1.63"- 41.3mm) Fiber	T-MOBILE
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson RRUS 4415 B25			
	3	Ericsson AIR32 B66Aa/B2a			
67.0	3	Commscope CBC1923Q-43	T-Arm	(3) 0.41" (10.3mm) Fiber (6) 0.82" (20.8mm) 8 AWG 6 (1) 0.92" (23.4mm) Cable (6) 1 5/8" Coax (4) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 32 B2			
	3	Ericsson RRUS 4426 B66			
	3	Ericsson Air 6449 B77D			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	2	Raycap DC6-48-60-18-8F(32.8 lbs)			
	1	Raycap DC9-48-60-24-8C-EV			
	3	Ericsson RRUS E2 B29			
	3	Ericsson RRUS 32 B30			
60.0	3	CCI DMP65R-BU4D	T-Arm	(2) 1 5/8" Hybriflex (18) 1 5/8" Coax	VERIZON WIRELESS
	3	Ericsson AIR 6419 B77G			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	1	Raycap RCMDC-6627-PF-48			
	6	Amphenol Antel LPA-80063-6CF-EDIN-X			
	3	Samsung MT6407-77A			
	2	Commscope JAHH-65A-R3B			
	4	Commscope JAHH-45A-R3B			
45.0	3	Commscope CBC78T-DS-43-2X	T-Arm	(1) 1.41" (35.8mm) Hybrid	DISH WIRELESS L.L.C.
	1	VZW Unused Reserve (14306.88 sqin)			
	3	Commscope FFVV-65B-R2			
	3	Fujitsu TA08025-B605			
	3	Fujitsu TA08025-B604			
1	Raycap RDIDC-9181-PF-48				

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
67.0	3	Quintel QD8616-7	-	-	AT&T MOBILITY
	3	CCI DMP65R-BU4D			

**Proposed Equipment**

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
67.0	3	Quintel QD6616-7	T-Arm with Stand-Offs per ATC #13755490 C8 05	-	AT&T MOBILITY

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

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	38%	Pass
Shaft	99%	Pass
Base Plate	21%	Pass
Flange	11%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	4725.0	2650.5	56%
Shear (Kips)	75.6	49.1	65%

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 and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
67.0	Quintel QD6616-7	AT&T MOBILITY	0.228	0.340

*Deflection 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 Services LLC 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 Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC 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 Services LLC, 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 Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Asset : 414240, Byram Park CT
 Client : AT&T MOBILITY
 Code : ANSI/TIA-222-H

Height : 83.2 ft
 Base Width : 52
 Shape : 18 Sides

SITE PARAMETERS

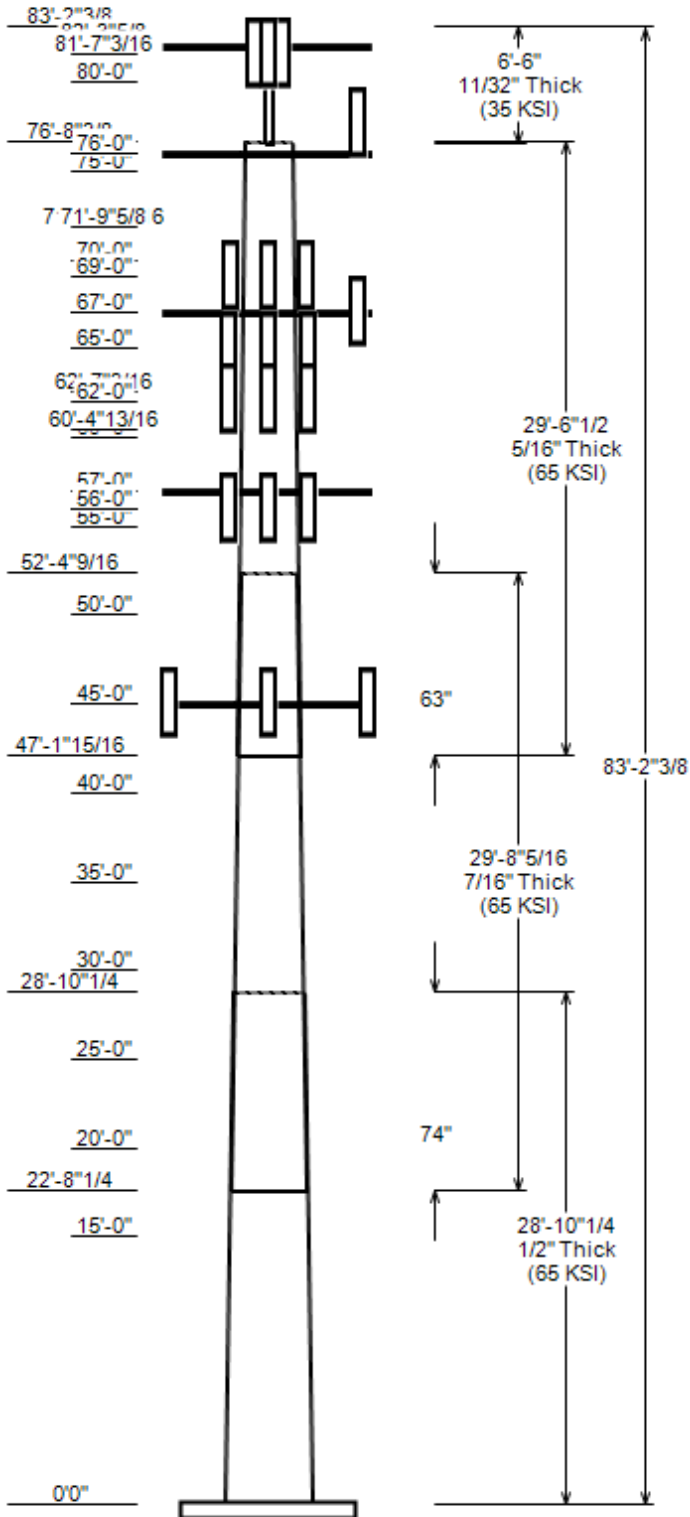
Nominal Wind: 116 mph wind with no ice **Topo Category:** 1
Ice Wind: 50 mph wind with 1" radial **Topo Method:** Method 1
Base Elev (ft): 0.00 **Taper :** 0.33600(ln/ft) **Topo Feature:**
Structure Class: II **Exposure :** C **S_s :** 0.277 **S₁ :** 0.06

SECTION PROPERTIES

Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Overlap Length (in)	Shape	Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom				
1	28.852	42.31	52.00	0.500	0.000	18 Sides	65
2	29.693	35.29	45.26	0.438 Slip Joint	73.970	18 Sides	65
3	29.541	27.75	37.67	0.312 Slip Joint	62.660	18 Sides	65
4	6.500	4.50	4.50	0.337 Butt Joint	0.000	Round	35

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
89.0	89.0	1	Bird 428D-83I-01-T
89.0	89.0	2	dbSpectra DS7C09P36U-D
82.3	82.3	3	Ericsson RRUS 32 B66
82.0	82.0	2	Pole Mount
81.6	81.6	3	Ericsson Radio 4449 B71 B85A
81.6	81.6	3	Ericsson Air6449 B41
80.0	80.0	1	Pine Branches
76.0	77.0	3	Commscope CBC1923Q-43
76.0	77.0	3	Ericsson RRUS 4415 B25
76.0	77.0	3	Ericsson AIR32 B66Aa/B2a
76.0	77.0	3	Generic Round T-Arm
76.0	77.0	3	RFS APXVAARR24_43-U-NA20
75.0	75.4	1	Pine Branches
71.9	72.9	3	Ericsson RRUS 32 B2
71.8	72.8	3	Ericsson RRUS 4426 B66
70.0	70.0	1	Pine Branches
69.0	69.0	3	Ericsson Air 6449 B77D
67.0	68.0	2	Raycap DC6-48-60-18-8F(32.8 lb
67.0	67.0	3	Ericsson RRUS 4449 B5, B12
67.0	67.0	3	Ericsson RRUS 4478 B14
67.0	67.0	3	Ericsson RRUS 32 B30
67.0	67.0	3	Ericsson RRUS E2 B29
67.0	67.0	1	Raycap DC9-48-60-24-8C-EV
67.0	67.0	3	Generic Round Stand-Off
67.0	67.0	3	CCI DMP65R-BU4D
67.0	67.0	3	Site PRO1, RMV12-496
67.0	67.0	3	Quintel QD6616-7
65.0	65.0	3	Ericsson AIR 6419 B77G
65.0	65.0	1	Pine Branches
62.7	62.7	3	Samsung B2/B66A RRH-BR049
62.6	62.6	3	Samsung B5/B13 RRH-BR04C
62.0	62.0	1	Raycap RCMD-6627-PF-48
60.4	61.4	6	Amphenol Antel LPA-80063-6CF-E
60.0	60.0	1	Pine Branches
57.0	57.0	3	Generic Flat T-Arm
56.0	56.0	3	Commscope CBC78T-DS-43-2X
56.0	56.0	3	Samsung MT6407-77A
56.0	56.0	2	Commscope JAHH-65A-R3B
56.0	56.0	4	Commscope JAHH-45A-R3B
56.0	56.0	1	VZW Unused Reserve (14306.88 s
55.0	55.0	1	Pine Branches
50.0	50.0	1	Pine Branches
45.0	45.0	1	Raycap RDIDC-9181-PF-48



JOB INFORMATION

Asset : 414240, Byram Park CT
 Client : AT&T MOBILITY
 Code : ANSI/TIA-222-H

Height : 83.2 ft
 Base Width : 52
 Shape : 18 Sides

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
45.0	45.0	3	Fujitsu TA08025-B605
45.0	45.0	3	Fujitsu TA08025-B604
45.0	45.0	3	Commscope FFVV-65B-R2
45.0	45.0	3	Generic Flat T-Arm
45.0	45.0	1	Pine Branches
40.0	40.0	1	Pine Branches
35.0	35.0	1	Pine Branches
30.0	30.0	1	Pine Branches
25.0	25.0	1	Pine Branches
20.0	20.0	1	Pine Branches
15.0	15.0	1	Pine Branches

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	89.0	7/8" Coax	No
0.0	89.0	1/2" Coax	No
0.0	82.0	1 1/4" Hybriflex Cable	No
0.0	77.0	1 5/8" (1.63"-41.3mm) Fiber	No
0.0	77.0	1 1/4" (1.25"- 31.8mm) Fiber	No
0.0	67.0	2" conduit	No
0.0	67.0	1 5/8" Coax	No
0.0	67.0	0.92" (23.4mm) Cable	No
0.0	67.0	0.82" (20.8mm) 8 AWG 6	No
0.0	67.0	0.41" (10.3mm) Fiber	No
0.0	62.0	1 5/8" Hybriflex	No
0.0	60.0	1 5/8" Coax	No
0.0	56.0	1 5/8" Coax	No
0.0	45.0	1.41" (35.8mm) Hybrid	No

LOAD CASES

1.2D + 1.0W	116 mph wind with no ice
0.9D + 1.0W	116 mph wind with no ice
1.2D + 1.0Di + 1.0Wi	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W	2650.54	49.10	47.93
0.9D + 1.0W	2643.89	49.09	35.93
1.2D + 1.0Di + 1.0Wi	683.54	12.78	61.64
1.2D + 1.0Ev + 1.0Eh	180.93	3.15	48.26
0.9D - 1.0Ev + 1.0Eh	180.31	3.15	32.28
1.0D + 1.0W	633.90	11.76	39.99

DISH DEFLECTIONS

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

ASSET: 414240, Byram Park CT
CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
ENG NO: 13755490_C3_06

ANALYSIS PARAMETERS

Location:	Fairfield County,CT	Height:	83.2 ft
Type and Shape:	Custom, Round	Base Diameter:	52.00 in
Manufacturer:	EEI	Top Diameter:	4.50 in
K_d (non-service):	0.95	Taper:	0.3360 in/ft
K_e:	1.00	Rotation:	0.000°

ICE & WIND PARAMETERS

Exposure Category:	C	Design Wind Speed w/o Ice:	116 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:	1.00 in
Crest Height:	0 ft	HMSL:	53.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	0.81
T_L (sec):	6	P:	1
S_s:	0.277	S₁:	0.060
F_a:	1.578	F_v:	2.400
S_{ds}:	0.291	S_{dt}:	0.096
		C_s:	0.079
		C_s Max:	0.079
		C_s Min:	0.030

LOAD CASES

1.2D + 1.0W	116 mph wind with no ice
0.9D + 1.0W	116 mph wind with no ice
1.2D + 1.0Di + 1.0Wi	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

SHAFT SECTION PROPERTIES

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Weight (lb)	Bottom						Top						
							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	28.85	0.5000	65		0.00	7,269	52.00	-0.002	81.73	27,386.5	16.93	104.00	42.31	28.85	66.36	14,658.7	13.51	84.63	0.3357
2-18	29.69	0.4375	65	Slip	73.97	5,589	45.26	22.687	62.24	15,797.0	16.83	103.45	35.29	52.38	48.40	7,427.8	12.81	80.66	0.3357
3-18	29.54	0.3125	65	Slip	62.66	3,230	37.67	47.159	37.05	6,532.6	19.84	120.54	27.75	76.70	27.22	2,588.9	14.25	88.80	0.3357
4-R	6.50	0.3370	35	Butt	0.00	97	4.50	76.700	4.41	9.6	0.00	13.35	4.50	83.20	4.41	9.6	0.00	13.35	0.0000

Shaft Weight 16,185

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice												
					Weight (lb)	EPAa (sf)	Orientation Factor	Weight (lb)	EPAa (sf)	Orientation Factor										
89.00	Bird 428D-83I-01-T	1	1.00	0.000	8.90	0.465	1.00	19.92	0.764	1.00										
89.00	dbSpectra DS7C09P36U-D	2	1.00	0.000	70.00	3.550	1.00	127.74	6.727	1.00										
82.30	Ericsson RRUS 32 B66	3	0.80	0.000	53.00	2.743	0.50	99.26	3.479	0.50										
82.00	Pole Mount	2	1.00	0.000	40.00	1.630	1.00	69.66	2.343	1.00										
81.60	Ericsson Air6449 B41	3	0.80	0.000	104.00	5.682	0.63	189.58	6.679	0.63										
81.60	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	112.76	2.183	0.50										
80.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	861.68	64.626	1.00										
76.00	Generic Round T-Arm	3	0.75	1.000	312.50	9.700	0.67	475.44	14.842	0.67										
76.00	Ericsson AIR32 B66Aa/B2a	3	0.80	1.000	132.20	6.510	0.71	231.75	7.876	0.71										
76.00	Ericsson RRUS 4415 B25	3	0.80	1.000	46.00	1.842	0.50	76.58	2.401	0.50										
76.00	Commscope CBC1923Q-43	3	0.80	1.000	7.30	0.318	0.50	14.20	0.569	0.50										
76.00	RFS APXVAARR24_43-U-NA20	3	0.80	1.000	127.90	20.243	0.63	372.76	22.556	0.63										
75.00	Pine Branches	1	1.00	0.400	600.00	45.000	1.00	859.99	64.499	1.00										
71.90	Ericsson RRUS 32 B2	3	0.80	1.000	53.00	2.743	0.50	98.65	3.469	0.50										
71.80	Ericsson RRUS 4426 B66	3	0.80	1.000	48.40	1.650	0.50	76.07	2.177	0.50										
70.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	858.56	64.392	1.00										
69.00	Ericsson Air 6449 B77D	3	0.80	0.000	81.60	4.028	0.65	145.07	4.877	0.65										
67.00	Quintel QD6616-7	3	0.80	0.000	130.00	5.1400	0.64	310.02	58.011	0.64										
67.00	CCI DMP65R-BU4D	3	0.80	0.000	67.90	8.280	0.62	179.04	9.526	0.62										
67.00	Site PRO1, RMV12-496	3	0.75	0.000	452.60	9.700	0.67	646.63	13.858	0.67										
67.00	Generic Round Stand-Off	3	0.80	0.000	187.50	5.200	0.67	243.77	6.872	0.67										
67.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	95.44	5.693	1.00										
67.00	Ericsson RRUS E2 B29	3	0.80	0.000	60.00	3.145	0.50	109.77	3.858	0.50										
67.00	Ericsson RRUS 32 B30	3	0.80	0.000	60.00	2.743	0.50	105.27	3.463	0.50										
67.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.40	2.021	0.50	97.17	2.602	0.50										
67.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	110.66	2.543	0.50										
67.00	Raycap DC6-48-60-18-8F(32.8 lb	2	0.80	1.000	32.80	1.470	1.00	70.77	1.900	1.00										
65.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	856.38	64.228	1.00										
65.00	Ericsson AIR 6419 B77G	3	0.80	0.000	66.10	3.797	0.65	125.61	4.605	0.65										
62.70	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	123.45	2.428	0.50										
62.60	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	105.30	2.427	0.50										
62.00	Raycap RCMD-6627-PF-48	1	0.80	0.000	32.00	4.056	1.00	109.62	4.890	1.00										
60.40	Amphenol Antel LPA-80063-6CF-E	6	0.80	1.000	27.00	9.732	0.75	186.11	11.402	0.75										
60.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	854.14	64.061	1.00										
57.00	Generic Flat T-Arm	3	0.75	0.000	312.50	12.900	0.67	470.79	17.855	0.67										
56.00	Commscope JAHH-45A-R3B	4	0.80	0.000	70.50	8.420	0.63	178.51	9.747	0.63										
56.00	Commscope JAHH-65A-R3B	2	0.80	0.000	50.70	6.673	0.76	146.36	7.966	0.76										
56.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	143.25	5.628	0.61										
56.00	Commscope CBC78T-DS-43-2X	3	0.80	0.000	20.70	0.552	0.50	34.06	0.859	0.50										
56.00	VZW Unused Reserve (14306.88 s	1	0.80	0.000	1151.60	99.353	0.90	1636.82	141.215	0.90										
55.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	851.97	63.898	1.00										
50.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	849.46	63.710	1.00										
45.00	Generic Flat T-Arm	3	0.75	0.000	312.50	12.900	0.67	466.34	17.716	0.67										
45.00	Commscope FFVV-65B-R2	3	0.80	0.000	70.80	12.271	0.64	218.79	13.922	0.64										
45.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	846.15	63.461	1.00										
45.00	Fujitsu TA08025-B605	3	0.80	0.000	75.00	1.962	0.50	111.89	2.504	0.50										
45.00	Raycap RDIDC-9181-PF-48	1	0.80	0.000	21.90	1.867	1.00	55.41	2.397	1.00										
45.00	Fujitsu TA08025-B604	3	0.80	0.000	63.90	1.962	0.50	98.24	2.504	0.50										
40.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	843.09	63.232	1.00										
35.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	839.63	62.973	1.00										
30.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	837.26	62.795	1.00										
25.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	832.33	62.424	1.00										
20.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	825.25	61.894	1.00										
15.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	817.80	61.335	1.00										
Totals	Num Loadings: 54		124			20,322.70			33,187.17											

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : _

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	89.00	2	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	TOWN OF GREEN
0.00	89.00	2	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	TOWN OF GREEN
0.00	82.00	1	1 1/4" Hybriflex Cabl	1.54	1	N	0	0	0	0	0	N	T-MOBILE
0.00	77.00	3	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0	0	0	0	N	T-MOBILE
0.00	77.00	3	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0	0	0	0	N	T-MOBILE
0.00	67.00	6	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	67.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	67.00	4	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	67.00	3	0.41" (10.3mm) Fiber	0.41	0.09	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	67.00	1	0.92" (23.4mm) Cable	0.92	0.89	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	62.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIREL
0.00	60.00	2	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	56.00	16	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	45.00	1	1.41" (35.8mm) Hybrid	1.41	1.66	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	52.000	81.728	27,386.50	16.93	104.00	81.5	1037.3	0.0	0.0
5.00		0.5000	50.322	79.064	24,795.00	16.34	100.64	82.2	970.5	0.0	1,367.8
10.00		0.5000	48.643	76.400	22,372.50	15.74	97.29	82.6	905.9	0.0	1,322.5
15.00		0.5000	46.965	73.737	20,113.10	15.15	93.93	82.6	843.5	0.0	1,277.2
20.00		0.5000	45.286	71.073	18,011.10	14.56	90.57	82.6	783.4	0.0	1,231.9
22.69	Bot - Section 2	0.5000	44.384	69.641	16,944.40	14.24	88.77	82.6	751.9	0.0	643.4
25.00		0.5000	43.608	68.409	16,061.00	13.97	87.22	82.6	725.4	0.0	1,028.6
28.85	Top - Section 1	0.4375	43.190	59.364	13,708.60	16.00	98.72	82.6	625.2	0.0	1,672.9
30.00		0.4375	42.804	58.829	13,341.10	15.84	97.84	82.6	613.9	0.0	230.9
35.00		0.4375	41.126	56.498	11,817.40	15.16	94.00	82.6	566.0	0.0	981.1
40.00		0.4375	39.447	54.168	10,414.40	14.49	90.16	82.6	520.0	0.0	941.4
45.00		0.4375	37.769	51.837	9,127.10	13.81	86.33	82.6	476.0	0.0	901.8
47.16	Bot - Section 3	0.4375	37.044	50.831	8,605.70	13.52	84.67	82.6	457.6	0.0	377.1
50.00		0.4375	36.090	49.506	7,950.50	13.13	82.49	82.6	433.9	0.0	838.6
52.38	Top - Section 2	0.3125	35.916	35.313	5,655.50	18.85	114.93	79.2	310.1	0.0	685.7
55.00		0.3125	35.037	34.441	5,246.70	18.36	112.12	79.8	294.9	0.0	310.9
56.00		0.3125	34.701	34.108	5,096.00	18.17	111.04	80	289.2	0.0	116.6
57.00		0.3125	34.365	33.775	4,948.20	17.98	109.97	80.3	283.6	0.0	115.5
60.00		0.3125	33.358	32.776	4,522.00	17.41	106.75	80.9	267.0	0.0	339.7
60.40		0.3125	33.224	32.643	4,467.10	17.34	106.32	81	264.8	0.0	44.5
62.00		0.3125	32.687	32.110	4,251.90	17.03	104.60	81.4	256.2	0.0	176.3
62.60		0.3125	32.485	31.910	4,173.10	16.92	103.95	81.5	253.0	0.0	65.4
62.70		0.3125	32.452	31.877	4,160.00	16.90	103.85	81.5	252.5	0.0	10.9
65.00		0.3125	31.680	31.111	3,867.30	16.46	101.37	82	240.4	0.0	246.5
67.00		0.3125	31.008	30.445	3,624.30	16.09	99.23	82.5	230.2	0.0	209.5
69.00		0.3125	30.337	29.779	3,391.60	15.71	97.08	82.6	220.2	0.0	204.9
70.00		0.3125	30.001	29.446	3,279.10	15.52	96.00	82.6	215.3	0.0	100.8
71.80		0.3125	29.397	28.847	3,083.00	15.18	94.07	82.6	206.6	0.0	178.5
71.90		0.3125	29.363	28.814	3,072.30	15.16	93.96	82.6	206.1	0.0	9.8
75.00		0.3125	28.323	27.781	2,753.80	14.57	90.63	82.6	191.5	0.0	298.5
76.00		0.3125	27.987	27.448	2,656.00	14.38	89.56	82.6	186.9	0.0	94.0
76.70	Top - Section 3	0.3125	27.752	27.215	2,588.90	14.25	88.81	82.6	183.7	0.0	65.1
76.70	Bot - Section 4	0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	
80.00		0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	49.5
81.60		0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	24.0
82.00		0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	6.0
82.30		0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	4.5
83.20		0.3370	4.500	4.407	9.60	0.00	13.35	35	4.2	5.9	13.5

Totals: 16,185.8

Load Case: 1.2D + 1.0W	116 mph wind with no ice	17 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	-47.93	-49.10	0.00	-2,650.5	0.00	2,650.54	5,994.05	1,434.32	6,672.27	6,339.93	0	0	0.427
5.00	-45.85	-48.73	0.00	-2,405.0	0.00	2,405.04	5,848.23	1,387.57	6,244.49	5,982.15	0.07	-0.13	0.411
10.00	-43.84	-48.36	0.00	-2,161.4	0.00	2,161.40	5,676.15	1,340.82	5,830.89	5,608.58	0.28	-0.26	0.394
15.00	-41.17	-46.62	0.00	-1,919.6	0.00	1,919.59	5,478.25	1,294.08	5,431.45	5,222.38	0.63	-0.39	0.376
20.00	-38.59	-44.86	0.00	-1,686.5	0.00	1,686.51	5,280.36	1,247.33	5,046.18	4,849.95	1.11	-0.52	0.356
22.69	-37.60	-44.66	0.00	-1,566.0	0.00	1,565.95	5,173.98	1,222.20	4,844.96	4,655.46	1.42	-0.59	0.345
25.00	-35.46	-42.87	0.00	-1,462.7	0.00	1,462.68	5,082.46	1,200.58	4,675.09	4,491.29	1.72	-0.65	0.334
28.85	-33.16	-42.64	0.00	-1,297.6	0.00	1,297.56	4,410.48	1,041.84	4,023.35	3,870.56	2.29	-0.74	0.344
30.00	-32.06	-40.80	0.00	-1,248.6	0.00	1,248.59	4,370.71	1,032.45	3,951.12	3,800.72	2.47	-0.77	0.337
35.00	-29.80	-38.73	0.00	-1,044.6	0.00	1,044.60	4,197.54	991.55	3,644.30	3,504.05	3.34	-0.89	0.307
40.00	-27.59	-36.60	0.00	-851.0	0.00	850.98	4,024.38	950.64	3,349.87	3,219.43	4.34	-1.01	0.273
45.00	-23.59	-32.79	0.00	-668.0	0.00	667.99	3,851.22	909.74	3,067.84	2,946.87	5.46	-1.11	0.234
47.16	-22.99	-32.57	0.00	-597.2	0.00	597.20	3,776.46	892.08	2,949.90	2,832.91	5.97	-1.15	0.218
50.00	-21.10	-30.55	0.00	-504.6	0.00	504.65	3,678.06	868.83	2,798.22	2,686.37	6.67	-1.2	0.195
52.38	-20.11	-30.32	0.00	-431.9	0.00	431.93	2,517.86	619.74	1,993.02	1,842.82	7.28	-1.24	0.245
55.00	-18.89	-28.34	0.00	-352.5	0.00	352.49	2,473.76	604.43	1,895.79	1,765.43	7.98	-1.28	0.209
56.00	-16.57	-24.02	0.00	-324.2	0.00	324.15	2,456.68	598.59	1,859.31	1,736.14	8.25	-1.3	0.195
57.00	-15.26	-23.04	0.00	-300.1	0.00	300.13	2,439.47	592.75	1,823.19	1,707.00	8.53	-1.32	0.184
60.00	-14.04	-21.04	0.00	-231.0	0.00	231.01	2,387.04	575.22	1,716.96	1,620.46	9.37	-1.37	0.150
60.40	-13.80	-19.51	0.00	-221.2	0.00	221.16	2,379.96	572.88	1,703.04	1,609.02	9.49	-1.37	0.144
62.00	-13.48	-19.28	0.00	-189.9	0.00	189.94	2,351.42	563.53	1,647.91	1,563.54	9.95	-1.39	0.128
62.60	-13.13	-19.15	0.00	-178.4	0.00	178.37	2,340.63	560.02	1,627.47	1,546.59	10.13	-1.4	0.122
62.70	-12.81	-18.96	0.00	-176.5	0.00	176.46	2,338.83	559.44	1,624.08	1,543.77	10.15	-1.4	0.121
65.00	-11.51	-16.64	0.00	-132.9	0.00	132.86	2,296.98	546.00	1,546.99	1,479.38	10.84	-1.42	0.096
67.00	-7.30	-10.84	0.00	-99.5	0.00	99.48	2,260.03	534.31	1,481.49	1,424.11	11.44	-1.44	0.073
69.00	-6.75	-10.45	0.00	-77.8	0.00	77.80	2,212.44	522.62	1,417.40	1,363.33	12.05	-1.46	0.061
70.00	-5.94	-8.42	0.00	-67.4	0.00	67.35	2,187.71	516.78	1,385.88	1,332.86	12.35	-1.46	0.054
71.80	-5.54	-8.25	0.00	-52.1	0.00	52.11	2,143.18	506.26	1,330.05	1,278.88	12.9	-1.47	0.044
71.90	-5.34	-7.99	0.00	-51.1	0.00	51.14	2,140.71	505.68	1,326.98	1,275.91	12.94	-1.47	0.043
75.00	-4.28	-5.88	0.00	-25.6	0.00	25.61	2,064.02	487.56	1,233.63	1,185.66	13.9	-1.48	0.024
76.00	-1.97	-3.22	0.00	-17.2	0.00	17.20	2,039.28	481.72	1,204.24	1,157.26	14.21	-1.49	0.016
76.70	-1.88	-3.16	0.00	-15.0	0.00	14.95	2,021.97	477.63	1,183.88	1,137.58	14.42	-1.49	0.014
76.70	-1.88	-3.16	0.00	-15.0	0.00	14.95	138.83	41.65	15.24	15.36	14.42	-1.49	0.993
80.00	-1.14	-1.15	0.00	-4.5	0.00	4.52	138.83	41.65	15.24	15.36	15.45	-1.49	0.303
81.60	-0.48	-0.66	0.00	-2.7	0.00	2.68	138.83	41.65	15.24	15.36	15.98	-1.66	0.178
82.00	-0.38	-0.51	0.00	-2.4	0.00	2.41	138.83	41.65	15.24	15.36	16.12	-1.69	0.160
82.30	-0.19	-0.35	0.00	-2.3	0.00	2.26	138.83	41.65	15.24	15.36	16.23	-1.71	0.149
83.20	0.00	-0.34	0.00	-2.0	0.00	1.95	138.83	41.65	15.24	15.36	16.56	-1.77	0.127

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

Load Case: 0.9D + 1.0W	116 mph wind with no ice	17 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	-35.93	-49.09	0.00	-2,643.9	0.00	2,643.89	5,994.05	1,434.32	6,672.27	6,339.93	0	0	0.424
5.00	-34.35	-48.69	0.00	-2,398.5	0.00	2,398.47	5,848.23	1,387.57	6,244.49	5,982.15	0.07	-0.13	0.408
10.00	-32.81	-48.30	0.00	-2,155.0	0.00	2,155.03	5,676.15	1,340.82	5,830.89	5,608.58	0.28	-0.26	0.391
15.00	-30.79	-46.53	0.00	-1,913.5	0.00	1,913.53	5,478.25	1,294.08	5,431.45	5,222.38	0.63	-0.39	0.373
20.00	-28.84	-44.76	0.00	-1,680.9	0.00	1,680.87	5,280.36	1,247.33	5,046.18	4,849.95	1.11	-0.52	0.353
22.69	-28.08	-44.56	0.00	-1,560.6	0.00	1,560.57	5,173.98	1,222.20	4,844.96	4,655.46	1.42	-0.59	0.342
25.00	-26.47	-42.76	0.00	-1,457.5	0.00	1,457.54	5,082.46	1,200.58	4,675.09	4,491.29	1.72	-0.65	0.331
28.85	-24.74	-42.53	0.00	-1,292.8	0.00	1,292.85	4,410.48	1,041.84	4,023.35	3,870.56	2.28	-0.74	0.341
30.00	-23.90	-40.68	0.00	-1,244.0	0.00	1,244.00	4,370.71	1,032.45	3,951.12	3,800.72	2.46	-0.77	0.334
35.00	-22.19	-38.60	0.00	-1,040.6	0.00	1,040.61	4,197.54	991.55	3,644.30	3,504.05	3.33	-0.89	0.304
40.00	-20.53	-36.47	0.00	-847.6	0.00	847.63	4,024.38	950.64	3,349.87	3,219.43	4.33	-1	0.270
45.00	-17.54	-32.67	0.00	-665.3	0.00	665.30	3,851.22	909.74	3,067.84	2,946.87	5.44	-1.11	0.232
47.16	-17.08	-32.45	0.00	-594.8	0.00	594.77	3,776.46	892.08	2,949.90	2,832.91	5.95	-1.15	0.216
50.00	-15.67	-30.43	0.00	-502.6	0.00	502.57	3,678.06	868.83	2,798.22	2,686.37	6.65	-1.2	0.193
52.38	-14.92	-30.21	0.00	-430.1	0.00	430.14	2,517.86	619.74	1,993.02	1,842.82	7.26	-1.24	0.242
55.00	-14.01	-28.23	0.00	-351.0	0.00	351.00	2,473.76	604.43	1,895.79	1,765.43	7.95	-1.28	0.207
56.00	-12.29	-23.92	0.00	-322.8	0.00	322.76	2,456.68	598.59	1,859.31	1,736.14	8.22	-1.3	0.193
57.00	-11.32	-22.95	0.00	-298.8	0.00	298.85	2,439.47	592.75	1,823.19	1,707.00	8.5	-1.31	0.181
60.00	-10.41	-20.95	0.00	-230.0	0.00	230.01	2,387.04	575.22	1,716.96	1,620.46	9.34	-1.36	0.148
60.40	-10.24	-19.42	0.00	-220.2	0.00	220.19	2,379.96	572.88	1,703.04	1,609.02	9.46	-1.37	0.142
62.00	-10.00	-19.20	0.00	-189.1	0.00	189.11	2,351.42	563.53	1,647.91	1,563.54	9.92	-1.39	0.126
62.60	-9.73	-19.07	0.00	-177.6	0.00	177.59	2,340.63	560.02	1,627.47	1,546.59	10.09	-1.39	0.120
62.70	-9.49	-18.87	0.00	-175.7	0.00	175.69	2,338.83	559.44	1,624.08	1,543.77	10.12	-1.4	0.119
65.00	-8.53	-16.56	0.00	-132.3	0.00	132.28	2,296.98	546.00	1,546.99	1,479.38	10.8	-1.42	0.094
67.00	-5.41	-10.80	0.00	-99.0	0.00	99.05	2,260.03	534.31	1,481.49	1,424.11	11.4	-1.44	0.072
69.00	-4.99	-10.40	0.00	-77.5	0.00	77.46	2,212.44	522.62	1,417.40	1,363.33	12.01	-1.45	0.059
70.00	-4.41	-8.38	0.00	-67.1	0.00	67.06	2,187.71	516.78	1,385.88	1,332.86	12.31	-1.46	0.053
71.80	-4.10	-8.21	0.00	-51.9	0.00	51.89	2,143.18	506.26	1,330.05	1,278.88	12.86	-1.47	0.043
71.90	-3.95	-7.95	0.00	-50.9	0.00	50.93	2,140.71	505.68	1,326.98	1,275.91	12.89	-1.47	0.042
75.00	-3.17	-5.85	0.00	-25.5	0.00	25.52	2,064.02	487.56	1,233.63	1,185.66	13.85	-1.48	0.023
76.00	-1.46	-3.20	0.00	-17.1	0.00	17.14	2,039.28	481.72	1,204.24	1,157.26	14.16	-1.48	0.016
76.70	-1.39	-3.15	0.00	-14.9	0.00	14.89	2,021.97	477.63	1,183.88	1,137.58	14.38	-1.48	0.014
76.70	-1.39	-3.15	0.00	-14.9	0.00	14.89	138.83	41.65	15.24	15.36	14.38	-1.48	0.985
80.00	-0.85	-1.14	0.00	-4.5	0.00	4.50	138.83	41.65	15.24	15.36	15.4	-1.48	0.300
81.60	-0.35	-0.65	0.00	-2.7	0.00	2.67	138.83	41.65	15.24	15.36	15.93	-1.66	0.177
82.00	-0.28	-0.50	0.00	-2.4	0.00	2.41	138.83	41.65	15.24	15.36	16.07	-1.69	0.159
82.30	-0.14	-0.35	0.00	-2.3	0.00	2.26	138.83	41.65	15.24	15.36	16.18	-1.71	0.148
83.20	0.00	-0.34	0.00	-2.0	0.00	1.95	138.83	41.65	15.24	15.36	16.5	-1.76	0.127

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph wind with 1" radial ice		16 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	-61.64	-12.78	0.00	-683.5	0.00	683.54	5,994.05	1,434.32	6,672.27	6,339.93	0	0	0.118
5.00	-59.42	-12.66	0.00	-619.7	0.00	619.67	5,848.23	1,387.57	6,244.49	5,982.15	0.02	-0.03	0.114
10.00	-57.24	-12.55	0.00	-556.4	0.00	556.37	5,676.15	1,340.82	5,830.89	5,608.58	0.07	-0.07	0.109
15.00	-54.23	-12.08	0.00	-493.6	0.00	493.64	5,478.25	1,294.08	5,431.45	5,222.38	0.16	-0.1	0.105
20.00	-51.27	-11.62	0.00	-433.2	0.00	433.22	5,280.36	1,247.33	5,046.18	4,849.95	0.29	-0.13	0.099
22.69	-50.18	-11.55	0.00	-402.0	0.00	402.01	5,173.98	1,222.20	4,844.96	4,655.46	0.37	-0.15	0.096
25.00	-47.77	-11.08	0.00	-375.3	0.00	375.29	5,082.46	1,200.58	4,675.09	4,491.29	0.44	-0.17	0.093
28.85	-45.31	-11.01	0.00	-332.6	0.00	332.62	4,410.48	1,041.84	4,023.35	3,870.56	0.59	-0.19	0.096
30.00	-43.99	-10.52	0.00	-320.0	0.00	319.97	4,370.71	1,032.45	3,951.12	3,800.72	0.64	-0.2	0.094
35.00	-41.33	-9.95	0.00	-267.4	0.00	267.39	4,197.54	991.55	3,644.30	3,504.05	0.86	-0.23	0.086
40.00	-38.72	-9.37	0.00	-217.6	0.00	217.63	4,024.38	950.64	3,349.87	3,219.43	1.12	-0.26	0.077
45.00	-33.38	-8.40	0.00	-170.8	0.00	170.75	3,851.22	909.74	3,067.84	2,946.87	1.4	-0.29	0.067
47.16	-32.69	-8.33	0.00	-152.6	0.00	152.61	3,776.46	892.08	2,949.90	2,832.91	1.53	-0.3	0.063
50.00	-30.46	-7.79	0.00	-128.9	0.00	128.94	3,678.06	868.83	2,798.22	2,686.37	1.72	-0.31	0.056
52.38	-29.37	-7.72	0.00	-110.4	0.00	110.40	2,517.86	619.74	1,993.02	1,842.82	1.87	-0.32	0.072
55.00	-27.80	-7.18	0.00	-90.2	0.00	90.19	2,473.76	604.43	1,895.79	1,765.43	2.05	-0.33	0.062
56.00	-24.33	-6.09	0.00	-83.0	0.00	83.00	2,456.68	598.59	1,859.31	1,736.14	2.12	-0.33	0.058
57.00	-22.61	-5.82	0.00	-76.9	0.00	76.91	2,439.47	592.75	1,823.19	1,707.00	2.19	-0.34	0.054
60.00	-21.02	-5.28	0.00	-59.4	0.00	59.44	2,387.04	575.22	1,716.96	1,620.46	2.41	-0.35	0.046
60.40	-20.01	-4.94	0.00	-57.0	0.00	57.01	2,379.96	572.88	1,703.04	1,609.02	2.44	-0.35	0.044
62.00	-19.56	-4.88	0.00	-49.1	0.00	49.11	2,351.42	563.53	1,647.91	1,563.54	2.56	-0.36	0.040
62.60	-19.09	-4.84	0.00	-46.2	0.00	46.18	2,340.63	560.02	1,627.47	1,546.59	2.6	-0.36	0.038
62.70	-18.68	-4.79	0.00	-45.7	0.00	45.70	2,338.83	559.44	1,624.08	1,543.77	2.61	-0.36	0.038
65.00	-16.90	-4.17	0.00	-34.7	0.00	34.68	2,296.98	546.00	1,546.99	1,479.38	2.78	-0.37	0.031
67.00	-10.71	-2.85	0.00	-26.3	0.00	26.32	2,260.03	534.31	1,481.49	1,424.11	2.94	-0.37	0.023
69.00	-9.92	-2.75	0.00	-20.6	0.00	20.61	2,212.44	522.62	1,417.40	1,363.33	3.09	-0.37	0.020
70.00	-8.83	-2.20	0.00	-17.9	0.00	17.86	2,187.71	516.78	1,385.88	1,332.86	3.17	-0.38	0.017
71.80	-8.28	-2.16	0.00	-13.9	0.00	13.87	2,143.18	506.26	1,330.05	1,278.88	3.32	-0.38	0.015
71.90	-7.96	-2.08	0.00	-13.6	0.00	13.62	2,140.71	505.68	1,326.98	1,275.91	3.32	-0.38	0.014
75.00	-6.53	-1.51	0.00	-7.0	0.00	6.96	2,064.02	487.56	1,233.63	1,185.66	3.57	-0.38	0.009
76.00	-2.86	-0.88	0.00	-4.9	0.00	4.87	2,039.28	481.72	1,204.24	1,157.26	3.65	-0.38	0.006
76.70	-2.74	-0.86	0.00	-4.3	0.00	4.26	2,021.97	477.63	1,183.88	1,137.58	3.71	-0.38	0.005
76.70	-2.74	-0.86	0.00	-4.3	0.00	4.26	138.83	41.65	15.24	15.36	3.71	-0.38	0.297
80.00	-1.73	-0.32	0.00	-1.4	0.00	1.43	138.83	41.65	15.24	15.36	3.97	-0.38	0.105
81.60	-0.76	-0.20	0.00	-0.9	0.00	0.92	138.83	41.65	15.24	15.36	4.11	-0.44	0.065
82.00	-0.60	-0.16	0.00	-0.8	0.00	0.84	138.83	41.65	15.24	15.36	4.15	-0.45	0.059
82.30	-0.30	-0.12	0.00	-0.8	0.00	0.79	138.83	41.65	15.24	15.36	4.17	-0.46	0.054
83.20	0.00	-0.12	0.00	-0.7	0.00	0.68	138.83	41.65	15.24	15.36	4.26	-0.48	0.044

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

Load Case: 1.0D + 1.0W	60 mph Wind with No Ice	16 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	-39.99	-11.76	0.00	-633.9	0.00	633.90	5,994.05	1,434.32	6,672.27	6,339.93	0	0	0.107
5.00	-38.34	-11.66	0.00	-575.1	0.00	575.12	5,848.23	1,387.57	6,244.49	5,982.15	0.02	-0.03	0.103
10.00	-36.75	-11.57	0.00	-516.8	0.00	516.80	5,676.15	1,340.82	5,830.89	5,608.58	0.07	-0.06	0.099
15.00	-34.60	-11.15	0.00	-458.9	0.00	458.94	5,478.25	1,294.08	5,431.45	5,222.38	0.15	-0.09	0.094
20.00	-32.50	-10.73	0.00	-403.2	0.00	403.19	5,280.36	1,247.33	5,046.18	4,849.95	0.27	-0.12	0.089
22.69	-31.71	-10.68	0.00	-374.4	0.00	374.36	5,173.98	1,222.20	4,844.96	4,655.46	0.34	-0.14	0.087
25.00	-29.95	-10.25	0.00	-349.7	0.00	349.66	5,082.46	1,200.58	4,675.09	4,491.29	0.41	-0.15	0.084
28.85	-28.07	-10.20	0.00	-310.2	0.00	310.18	4,410.48	1,041.84	4,023.35	3,870.56	0.55	-0.18	0.087
30.00	-27.18	-9.75	0.00	-298.5	0.00	298.47	4,370.71	1,032.45	3,951.12	3,800.72	0.59	-0.18	0.085
35.00	-25.33	-9.26	0.00	-249.7	0.00	249.71	4,197.54	991.55	3,644.30	3,504.05	0.8	-0.21	0.077
40.00	-23.52	-8.75	0.00	-203.4	0.00	203.43	4,024.38	950.64	3,349.87	3,219.43	1.04	-0.24	0.069
45.00	-20.16	-7.84	0.00	-159.7	0.00	159.70	3,851.22	909.74	3,067.84	2,946.87	1.3	-0.27	0.060
47.16	-19.67	-7.78	0.00	-142.8	0.00	142.78	3,776.46	892.08	2,949.90	2,832.91	1.43	-0.28	0.056
50.00	-18.09	-7.30	0.00	-120.7	0.00	120.66	3,678.06	868.83	2,798.22	2,686.37	1.6	-0.29	0.050
52.38	-17.28	-7.25	0.00	-103.3	0.00	103.28	2,517.86	619.74	1,993.02	1,842.82	1.74	-0.3	0.063
55.00	-16.23	-6.77	0.00	-84.3	0.00	84.30	2,473.76	604.43	1,895.79	1,765.43	1.91	-0.31	0.054
56.00	-14.23	-5.74	0.00	-77.5	0.00	77.52	2,456.68	598.59	1,859.31	1,736.14	1.97	-0.31	0.051
57.00	-13.14	-5.51	0.00	-71.8	0.00	71.78	2,439.47	592.75	1,823.19	1,707.00	2.04	-0.32	0.048
60.00	-12.08	-5.03	0.00	-55.3	0.00	55.26	2,387.04	575.22	1,716.96	1,620.46	2.24	-0.33	0.039
60.40	-11.86	-4.66	0.00	-52.9	0.00	52.91	2,379.96	572.88	1,703.04	1,609.02	2.27	-0.33	0.038
62.00	-11.60	-4.61	0.00	-45.4	0.00	45.44	2,351.42	563.53	1,647.91	1,563.54	2.38	-0.33	0.034
62.60	-11.30	-4.58	0.00	-42.7	0.00	42.68	2,340.63	560.02	1,627.47	1,546.59	2.42	-0.33	0.032
62.70	-11.03	-4.53	0.00	-42.2	0.00	42.22	2,338.83	559.44	1,624.08	1,543.77	2.43	-0.33	0.032
65.00	-9.91	-3.98	0.00	-31.8	0.00	31.80	2,296.98	546.00	1,546.99	1,479.38	2.59	-0.34	0.026
67.00	-6.30	-2.59	0.00	-23.8	0.00	23.82	2,260.03	534.31	1,481.49	1,424.11	2.73	-0.34	0.020
69.00	-5.83	-2.50	0.00	-18.6	0.00	18.63	2,212.44	522.62	1,417.40	1,363.33	2.88	-0.35	0.016
70.00	-5.12	-2.02	0.00	-16.1	0.00	16.13	2,187.71	516.78	1,385.88	1,332.86	2.95	-0.35	0.014
71.80	-4.78	-1.98	0.00	-12.5	0.00	12.49	2,143.18	506.26	1,330.05	1,278.88	3.09	-0.35	0.012
71.90	-4.61	-1.91	0.00	-12.3	0.00	12.26	2,140.71	505.68	1,326.98	1,275.91	3.09	-0.35	0.012
75.00	-3.68	-1.41	0.00	-6.1	0.00	6.14	2,064.02	487.56	1,233.63	1,185.66	3.32	-0.35	0.007
76.00	-1.70	-0.77	0.00	-4.1	0.00	4.13	2,039.28	481.72	1,204.24	1,157.26	3.4	-0.36	0.004
76.70	-1.63	-0.76	0.00	-3.6	0.00	3.59	2,021.97	477.63	1,183.88	1,137.58	3.45	-0.36	0.004
76.70	-1.63	-0.76	0.00	-3.6	0.00	3.59	138.83	41.65	15.24	15.36	3.45	-0.36	0.246
80.00	-0.98	-0.28	0.00	-1.1	0.00	1.08	138.83	41.65	15.24	15.36	3.7	-0.36	0.078
81.60	-0.41	-0.16	0.00	-0.6	0.00	0.64	138.83	41.65	15.24	15.36	3.82	-0.4	0.045
82.00	-0.33	-0.12	0.00	-0.6	0.00	0.58	138.83	41.65	15.24	15.36	3.86	-0.4	0.040
82.30	-0.16	-0.08	0.00	-0.5	0.00	0.54	138.83	41.65	15.24	15.36	3.88	-0.41	0.036
83.20	0.00	-0.08	0.00	-0.5	0.00	0.47	138.83	41.65	15.24	15.36	3.96	-0.42	0.030

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.277
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.060
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a :	1.578
Site Coefficient F_v :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.291
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.096
Seismic Response Coefficient (C_s):	0.079
Upper Limit C_s :	0.079
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	0.810
Redundancy Factor (ρ):	1.000
Seismic Force Distribution Exponent (k):	1.160
Total Unfactored Dead Load:	39.990 k
Seismic Base Shear (E):	3.150 k

1.2D + 1.0Ev + 1.0Eh Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
36	82.75	14	2	0.001	2	18
35	82.15	5	1	0.000	1	6
34	81.8	7	1	0.000	1	9
33	80.8	27	4	0.001	4	34
32	78.35	58	9	0.003	9	73
31	76.35	72	11	0.003	10	91
30	75.5	104	15	0.005	15	131
29	73.45	329	47	0.014	45	414
28	71.85	11	2	0.000	1	14
27	70.9	196	27	0.008	26	247
26	69.5	111	15	0.004	14	139
25	68	225	30	0.009	28	283
24	66	278	35	0.011	33	350
23	63.85	325	40	0.012	38	410
22	62.65	14	2	0.000	2	18
21	62.3	86	10	0.003	10	108
20	61.2	235	27	0.008	26	296
19	60.2	59	7	0.002	6	75
18	58.5	455	50	0.015	48	573
17	56.5	154	16	0.005	15	194
16	55.5	168	17	0.005	17	212
15	53.6901	446	45	0.013	42	562
14	51.1901	809	76	0.023	73	1,018
13	48.5794	986	88	0.026	83	1,240
12	46.0794	489	41	0.012	39	615
11	42.5	1,169	89	0.027	85	1,470
10	37.5	1,208	80	0.024	76	1,520
9	32.5	1,248	70	0.021	66	1,570
8	29.4258	292	15	0.004	14	368
7	26.9258	1,878	84	0.025	80	2,364
6	23.8438	1,152	45	0.014	43	1,450
5	21.3438	787	27	0.008	26	990
4	17.5	1,499	41	0.012	39	1,886
3	12.5	1,544	29	0.009	27	1,943

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
2	7.5	1,589	16	0.005	15	2,000
1	2.5	1,635	5	0.001	4	2,057
Bird 428D-83I-01-T	83.2	9	1	0.000	1	11
dbSpectra DS7C09P36U-D	83.2	140	23	0.007	22	176
Ericsson RRUS 32 B66	82.3	159	26	0.008	25	200
Pole Mount	82	80	13	0.004	12	101
Ericsson Radio 4449 B71 B85A	81.6	225	36	0.011	35	283
Ericsson Air6449 B41	81.6	312	51	0.015	48	393
Pine Branches	80	600	95	0.029	90	755
Pine Branches	75	600	88	0.026	84	755
Pine Branches	70	600	81	0.024	77	755
Pine Branches	65	600	75	0.022	71	755
Pine Branches	60	600	68	0.020	65	755
Pine Branches	55	600	62	0.018	58	755
Pine Branches	50	600	55	0.017	52	755
Pine Branches	45	600	49	0.015	46	755
Pine Branches	40	600	43	0.013	40	755
Pine Branches	35	600	37	0.011	35	755
Pine Branches	30	600	31	0.009	29	755
Pine Branches	25	600	25	0.008	24	755
Pine Branches	20	600	19	0.006	18	755
Pine Branches	15	600	14	0.004	13	755
Commscope CBC1923Q-43	76	22	3	0.001	3	28
Ericsson RRUS 4415 B25	76	138	21	0.006	20	174
Ericsson AIR32 B66Aa/B2a	76	397	59	0.018	56	499
Generic Round T-Arm	76	938	140	0.042	133	1,180
RFS APXVAARR24_43-U-NA20	76	384	57	0.017	54	483
Ericsson RRUS 32 B2	71.9	159	22	0.007	21	200
Ericsson RRUS 4426 B66	71.8	145	20	0.006	19	183
Ericsson Air 6449 B77D	69	245	33	0.010	31	308
Raycap DC6-48-60-18-8F(32.8 lbs)	67	66	8	0.002	8	83
Ericsson RRUS 4449 B5, B12	67	213	27	0.008	26	268
Ericsson RRUS 4478 B14	67	178	23	0.007	22	224
Ericsson RRUS 32 B30	67	180	23	0.007	22	226
Ericsson RRUS E2 B29	67	180	23	0.007	22	226
Raycap DC9-48-60-24-8C-EV	67	16	2	0.001	2	20
Generic Round Stand-Off	67	562	73	0.022	69	708
CCI DMP65R-BU4D	67	204	26	0.008	25	256
Site PRO1, RMV12-496	67	1,358	175	0.053	166	1,709
Quintel QD6616-7	67	390	50	0.015	48	491
Ericsson AIR 6419 B77G	65	198	25	0.007	23	250
Samsung B2/B66A RRH-BR049	62.7	253	30	0.009	29	319
Samsung B5/B13 RRH-BR04C	62.6	211	25	0.008	24	265
Raycap RCMDC-6627-PF-48	62	32	4	0.001	4	40
Amphenol Antel LPA-80063-6CF-EDIN-X	60.4	162	19	0.006	18	204
Generic Flat T-Arm	57	938	100	0.030	95	1,180
Generic Flat T-Arm	45	938	76	0.023	72	1,180
Commscope CBC78T-DS-43-2X	56	62	7	0.002	6	78
Samsung MT6407-77A	56	245	26	0.008	24	308
Commscope JAHH-65A-R3B	56	101	11	0.003	10	128
Commscope JAHH-45A-R3B	56	282	30	0.009	28	355
VZW Unused Reserve (14306.88 sqin)	56	1,152	121	0.036	115	1,449
Raycap RDIDC-9181-PF-48	45	22	2	0.000	2	28
Fujitsu TA08025-B604	45	192	16	0.005	15	241
Fujitsu TA08025-B605	45	225	18	0.006	17	283
Commscope FFVV-65B-R2	45	212	17	0.005	16	267
		39,989	3,322	0.999	3,153	50,318

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

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
36	82.75	14	2	0.001	2	12

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	82.15	5	1	0.000	1	4
34	81.8	7	1	0.000	1	6
33	80.8	27	4	0.001	4	23
32	78.35	58	9	0.003	9	49
31	76.35	72	11	0.003	10	61
30	75.5	104	15	0.005	15	87
29	73.45	329	47	0.014	45	277
28	71.85	11	2	0.000	1	9
27	70.9	196	27	0.008	26	165
26	69.5	111	15	0.004	14	93
25	68	225	30	0.009	28	189
24	66	278	35	0.011	33	234
23	63.85	325	40	0.012	38	274
22	62.65	14	2	0.000	2	12
21	62.3	86	10	0.003	10	72
20	61.2	235	27	0.008	26	198
19	60.2	59	7	0.002	6	50
18	58.5	455	50	0.015	48	383
17	56.5	154	16	0.005	15	130
16	55.5	168	17	0.005	17	142
15	53.6901	446	45	0.013	42	376
14	51.1901	809	76	0.023	73	681
13	48.5794	986	88	0.026	83	830
12	46.0794	489	41	0.012	39	411
11	42.5	1,169	89	0.027	85	984
10	37.5	1,208	80	0.024	76	1,017
9	32.5	1,248	70	0.021	66	1,050
8	29.4258	292	15	0.004	14	246
7	26.9258	1,878	84	0.025	80	1,581
6	23.8438	1,152	45	0.014	43	970
5	21.3438	787	27	0.008	26	662
4	17.5	1,499	41	0.012	39	1,261
3	12.5	1,544	29	0.009	27	1,300
2	7.5	1,589	16	0.005	15	1,338
1	2.5	1,635	5	0.001	4	1,376
Bird 428D-83I-01-T	83.2	9	1	0.000	1	7
dbSpectra DS7C09P36U-D	83.2	140	23	0.007	22	118
Ericsson RRUS 32 B66	82.3	159	26	0.008	25	134
Pole Mount	82	80	13	0.004	12	67
Ericsson Radio 4449 B71 B85A	81.6	225	36	0.011	35	189
Ericsson Air6449 B41	81.6	312	51	0.015	48	263
Pine Branches	80	600	95	0.029	90	505
Pine Branches	75	600	88	0.026	84	505
Pine Branches	70	600	81	0.024	77	505
Pine Branches	65	600	75	0.022	71	505
Pine Branches	60	600	68	0.020	65	505
Pine Branches	55	600	62	0.018	58	505
Pine Branches	50	600	55	0.017	52	505
Pine Branches	45	600	49	0.015	46	505
Pine Branches	40	600	43	0.013	40	505
Pine Branches	35	600	37	0.011	35	505
Pine Branches	30	600	31	0.009	29	505
Pine Branches	25	600	25	0.008	24	505
Pine Branches	20	600	19	0.006	18	505
Pine Branches	15	600	14	0.004	13	505
Commscope CBC1923Q-43	76	22	3	0.001	3	18
Ericsson RRUS 4415 B25	76	138	21	0.006	20	116
Ericsson AIR32 B66Aa/B2a	76	397	59	0.018	56	334
Generic Round T-Arm	76	938	140	0.042	133	789
RFS APXVAARR24_43-U-NA20	76	384	57	0.017	54	323
Ericsson RRUS 32 B2	71.9	159	22	0.007	21	134
Ericsson RRUS 4426 B66	71.8	145	20	0.006	19	122
Ericsson Air 6449 B77D	69	245	33	0.010	31	206
Raycap DC6-48-60-18-8F(32.8 lbs)	67	66	8	0.002	8	55
Ericsson RRUS 4449 B5, B12	67	213	27	0.008	26	179
Ericsson RRUS 4478 B14	67	178	23	0.007	22	150
Ericsson RRUS 32 B30	67	180	23	0.007	22	152
Ericsson RRUS E2 B29	67	180	23	0.007	22	152
Raycap DC9-48-60-24-8C-EV	67	16	2	0.001	2	13
Generic Round Stand-Off	67	562	73	0.022	69	473

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
CCI DMP65R-BU4D	67	204	26	0.008	25	171
Site PRO1, RMV12-496	67	1,358	175	0.053	166	1,143
Quintel QD6616-7	67	390	50	0.015	48	328
Ericsson AIR 6419 B77G	65	198	25	0.007	23	167
Samsung B2/B66A RRH-BR049	62.7	253	30	0.009	29	213
Samsung B5/B13 RRH-BR04C	62.6	211	25	0.008	24	178
Raycap RCMDC-6627-PF-48	62	32	4	0.001	4	27
Amphenol Antel LPA-80063-6CF-EDIN-X	60.4	162	19	0.006	18	136
Generic Flat T-Arm	57	938	100	0.030	95	789
Generic Flat T-Arm	45	938	76	0.023	72	789
Commscope CBC78T-DS-43-2X	56	62	7	0.002	6	52
Samsung MT6407-77A	56	245	26	0.008	24	206
Commscope JAHH-65A-R3B	56	101	11	0.003	10	85
Commscope JAHH-45A-R3B	56	282	30	0.009	28	237
VZW Unused Reserve (14306.88 sqin)	56	1,152	121	0.036	115	969
Raycap RDIDC-9181-PF-48	45	22	2	0.000	2	18
Fujitsu TA08025-B604	45	192	16	0.005	15	161
Fujitsu TA08025-B605	45	225	18	0.006	17	189
Commscope FV5V-65B-R2	45	212	17	0.005	16	179
		39,989	3,322	0.999	3,153	33,659

1.2D + 1.0Ev + 1.0Eh 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	-48.26	-3.15	0.00	-180.93	0.00	180.93	5,994.05	1,434.32	6,672	6,339.93	0.00	0.00	0.04
5.00	-46.26	-3.14	0.00	-165.17	0.00	165.17	5,848.23	1,387.57	6,244	5,982.15	0.00	-0.01	0.04
10.00	-44.32	-3.12	0.00	-149.45	0.00	149.45	5,676.15	1,340.82	5,831	5,608.58	0.02	-0.02	0.03
15.00	-41.68	-3.08	0.00	-133.83	0.00	133.83	5,478.25	1,294.08	5,431	5,222.38	0.04	-0.03	0.03
20.00	-39.93	-3.04	0.00	-118.45	0.00	118.45	5,280.36	1,247.33	5,046	4,849.95	0.08	-0.04	0.03
22.69	-38.48	-3.00	0.00	-110.29	0.00	110.29	5,173.98	1,222.20	4,845	4,655.46	0.10	-0.04	0.03
25.00	-35.36	-2.89	0.00	-103.36	0.00	103.36	5,082.46	1,200.58	4,675	4,491.29	0.12	-0.04	0.03
28.85	-34.99	-2.88	0.00	-92.22	0.00	92.22	4,410.48	1,041.84	4,023	3,870.56	0.16	-0.05	0.03
30.00	-32.67	-2.79	0.00	-88.91	0.00	88.91	4,370.71	1,032.45	3,951	3,800.72	0.17	-0.05	0.03
35.00	-30.39	-2.68	0.00	-74.98	0.00	74.98	4,197.54	991.55	3,644	3,504.05	0.23	-0.06	0.03
40.00	-28.17	-2.56	0.00	-61.58	0.00	61.58	4,024.38	950.64	3,350	3,219.43	0.30	-0.07	0.03
45.00	-24.80	-2.35	0.00	-48.80	0.00	48.80	3,851.22	909.74	3,068	2,946.87	0.38	-0.08	0.02
47.16	-23.56	-2.26	0.00	-43.74	0.00	43.74	3,776.46	892.08	2,950	2,832.91	0.42	-0.08	0.02
50.00	-21.79	-2.14	0.00	-37.31	0.00	37.31	3,678.06	868.83	2,798	2,686.37	0.47	-0.09	0.02
52.38	-21.22	-2.09	0.00	-32.23	0.00	32.23	2,517.86	619.74	1,993	1,842.82	0.51	-0.09	0.03
55.00	-20.26	-2.02	0.00	-26.74	0.00	26.74	2,473.76	604.43	1,896	1,765.43	0.56	-0.09	0.02
56.00	-17.75	-1.82	0.00	-24.72	0.00	24.72	2,456.68	598.59	1,859	1,736.14	0.58	-0.09	0.02
57.00	-15.99	-1.67	0.00	-22.91	0.00	22.91	2,439.47	592.75	1,823	1,707.00	0.60	-0.09	0.02
60.00	-15.16	-1.60	0.00	-17.90	0.00	17.90	2,387.04	575.22	1,717	1,620.46	0.66	-0.10	0.02
60.40	-14.66	-1.55	0.00	-17.26	0.00	17.26	2,379.96	572.88	1,703	1,609.02	0.67	-0.10	0.02
62.00	-14.52	-1.54	0.00	-14.77	0.00	14.77	2,351.42	563.53	1,648	1,563.54	0.70	-0.10	0.02
62.60	-14.23	-1.52	0.00	-13.85	0.00	13.85	2,340.63	560.02	1,627	1,546.59	0.71	-0.10	0.02
62.70	-13.50	-1.45	0.00	-13.69	0.00	13.69	2,338.83	559.44	1,624	1,543.77	0.71	-0.10	0.02
65.00	-12.15	-1.32	0.00	-10.36	0.00	10.36	2,296.98	546.00	1,547	1,479.38	0.76	-0.10	0.01
67.00	-7.66	-0.87	0.00	-7.73	0.00	7.73	2,260.03	534.31	1,481	1,424.11	0.80	-0.10	0.01
69.00	-7.21	-0.83	0.00	-5.98	0.00	5.98	2,212.44	522.62	1,417	1,363.33	0.85	-0.10	0.01
70.00	-6.21	-0.72	0.00	-5.16	0.00	5.16	2,187.71	516.78	1,386	1,332.86	0.87	-0.10	0.01
71.80	-6.01	-0.70	0.00	-3.86	0.00	3.86	2,143.18	506.26	1,330	1,278.88	0.91	-0.11	0.01
71.90	-5.40	-0.63	0.00	-3.79	0.00	3.79	2,140.71	505.68	1,327	1,275.91	0.91	-0.11	0.01
75.00	-4.51	-0.53	0.00	-1.82	0.00	1.82	2,064.02	487.56	1,234	1,185.66	0.98	-0.11	0.00
76.00	-2.06	-0.25	0.00	-1.29	0.00	1.29	2,039.28	481.72	1,204	1,157.26	1.00	-0.11	0.00
76.70	-1.99	-0.24	0.00	-1.11	0.00	1.11	2,021.97	477.63	1,184	1,137.58	1.02	-0.11	0.00
76.70	-1.99	-0.24	0.00	-1.11	0.00	1.11	138.83	41.65	15	15.36	1.02	-0.11	0.09
80.00	-1.20	-0.15	0.00	-0.30	0.00	0.30	138.83	41.65	15	15.36	1.09	-0.11	0.03
81.60	-0.51	-0.06	0.00	-0.06	0.00	0.06	138.83	41.65	15	15.36	1.13	-0.12	0.01
82.00	-0.41	-0.05	0.00	-0.04	0.00	0.04	138.83	41.65	15	15.36	1.14	-0.12	0.01
82.30	-0.19	-0.02	0.00	-0.02	0.00	0.02	138.83	41.65	15	15.36	1.15	-0.12	0.00
83.20	0.00	-0.02	0.00	0.00	0.00	0.00	138.83	41.65	15	15.36	1.17	-0.12	0.00

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

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 (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-32.28	-3.15	0.00	-180.31	0.00	180.31	5,994.05	1,434.32	6,672	6,339.93	0.00	0.00	0.03
5.00	-30.94	-3.14	0.00	-164.55	0.00	164.55	5,848.23	1,387.57	6,244	5,982.15	0.00	-0.01	0.03
10.00	-29.64	-3.12	0.00	-148.85	0.00	148.85	5,676.15	1,340.82	5,831	5,608.58	0.02	-0.02	0.03
15.00	-27.88	-3.07	0.00	-133.27	0.00	133.27	5,478.25	1,294.08	5,431	5,222.38	0.04	-0.03	0.03
20.00	-26.71	-3.03	0.00	-117.92	0.00	117.92	5,280.36	1,247.33	5,046	4,849.95	0.08	-0.04	0.03
22.69	-25.74	-2.99	0.00	-109.79	0.00	109.79	5,173.98	1,222.20	4,845	4,655.46	0.10	-0.04	0.03
25.00	-23.65	-2.88	0.00	-102.88	0.00	102.88	5,082.46	1,200.58	4,675	4,491.29	0.12	-0.04	0.03
28.85	-23.41	-2.87	0.00	-91.78	0.00	91.78	4,410.48	1,041.84	4,023	3,870.56	0.16	-0.05	0.03
30.00	-21.85	-2.78	0.00	-88.48	0.00	88.48	4,370.71	1,032.45	3,951	3,800.72	0.17	-0.05	0.03
35.00	-20.33	-2.67	0.00	-74.60	0.00	74.60	4,197.54	991.55	3,644	3,504.05	0.23	-0.06	0.03
40.00	-18.84	-2.54	0.00	-61.26	0.00	61.26	4,024.38	950.64	3,350	3,219.43	0.30	-0.07	0.02
45.00	-16.59	-2.33	0.00	-48.55	0.00	48.55	3,851.22	909.74	3,068	2,946.87	0.38	-0.08	0.02
47.16	-15.76	-2.25	0.00	-43.51	0.00	43.51	3,776.46	892.08	2,950	2,832.91	0.41	-0.08	0.02
50.00	-14.57	-2.12	0.00	-37.11	0.00	37.11	3,678.06	868.83	2,798	2,686.37	0.46	-0.08	0.02
52.38	-14.20	-2.08	0.00	-32.06	0.00	32.06	2,517.86	619.74	1,993	1,842.82	0.51	-0.09	0.02
55.00	-13.55	-2.01	0.00	-26.60	0.00	26.60	2,473.76	604.43	1,896	1,765.43	0.56	-0.09	0.02
56.00	-11.87	-1.81	0.00	-24.59	0.00	24.59	2,456.68	598.59	1,859	1,736.14	0.57	-0.09	0.02
57.00	-10.70	-1.66	0.00	-22.79	0.00	22.79	2,439.47	592.75	1,823	1,707.00	0.59	-0.09	0.02
60.00	-10.14	-1.59	0.00	-17.80	0.00	17.80	2,387.04	575.22	1,717	1,620.46	0.65	-0.10	0.02
60.40	-9.81	-1.55	0.00	-17.17	0.00	17.17	2,379.96	572.88	1,703	1,609.02	0.66	-0.10	0.02
62.00	-9.71	-1.53	0.00	-14.69	0.00	14.69	2,351.42	563.53	1,648	1,563.54	0.70	-0.10	0.01
62.60	-9.52	-1.51	0.00	-13.77	0.00	13.77	2,340.63	560.02	1,627	1,546.59	0.71	-0.10	0.01
62.70	-9.03	-1.44	0.00	-13.62	0.00	13.62	2,338.83	559.44	1,624	1,543.77	0.71	-0.10	0.01
65.00	-8.13	-1.31	0.00	-10.31	0.00	10.31	2,296.98	546.00	1,547	1,479.38	0.76	-0.10	0.01
67.00	-5.12	-0.87	0.00	-7.69	0.00	7.69	2,260.03	534.31	1,481	1,424.11	0.80	-0.10	0.01
69.00	-4.82	-0.82	0.00	-5.95	0.00	5.95	2,212.44	522.62	1,417	1,363.33	0.84	-0.10	0.01
70.00	-4.15	-0.72	0.00	-5.13	0.00	5.13	2,187.71	516.78	1,386	1,332.86	0.87	-0.10	0.01
71.80	-4.02	-0.70	0.00	-3.84	0.00	3.84	2,143.18	506.26	1,330	1,278.88	0.91	-0.10	0.01
71.90	-3.61	-0.63	0.00	-3.77	0.00	3.77	2,140.71	505.68	1,327	1,275.91	0.91	-0.10	0.01
75.00	-3.02	-0.53	0.00	-1.81	0.00	1.81	2,064.02	487.56	1,234	1,185.66	0.98	-0.11	0.00
76.00	-1.38	-0.25	0.00	-1.28	0.00	1.28	2,039.28	481.72	1,204	1,157.26	1.00	-0.11	0.00
76.70	-1.33	-0.24	0.00	-1.10	0.00	1.10	2,021.97	477.63	1,184	1,137.58	1.01	-0.11	0.00
76.70	-1.33	-0.24	0.00	-1.10	0.00	1.10	138.83	41.65	15	15.36	1.01	-0.11	0.08
80.00	-0.80	-0.15	0.00	-0.30	0.00	0.30	138.83	41.65	15	15.36	1.09	-0.11	0.03
81.60	-0.34	-0.06	0.00	-0.06	0.00	0.06	138.83	41.65	15	15.36	1.13	-0.11	0.01
82.00	-0.27	-0.05	0.00	-0.04	0.00	0.04	138.83	41.65	15	15.36	1.13	-0.12	0.00
82.30	-0.13	-0.02	0.00	-0.02	0.00	0.02	138.83	41.65	15	15.36	1.14	-0.12	0.00
83.20	0.00	-0.02	0.00	0.00	0.00	0.00	138.83	41.65	15	15.36	1.16	-0.12	0.00

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490_C3_06

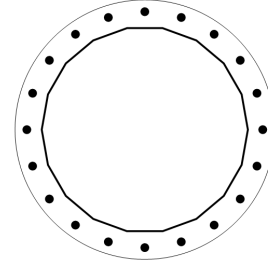
ANALYSIS SUMMARY

Load Case	Reactions						Max Usage	
	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	49.10	0.00	47.93	0.00	0.00	2650.54	76.70	0.99
0.9D + 1.0W	49.09	0.00	35.93	0.00	0.00	2643.89	76.70	0.99
1.2D + 1.0Di + 1.0Wi	12.78	0.00	61.64	0.00	0.00	683.54	76.70	0.3
1.2D + 1.0Ev + 1.0Eh	3.15	0.00	48.26	0.00	0.00	180.93	76.70	0.09
0.9D - 1.0Ev + 1.0Eh	3.15	0.00	32.28	0.00	0.00	180.31	76.70	0.08
1.0D + 1.0W	11.76	0.00	39.99	0.00	0.00	633.90	76.70	0.25

BASE PLATE ANALYSIS @ 0 FT

PLATE PARAMETERS (ID# 3004)

Diameter:	66	in
Shape:	Round	
Thickness:	2.75	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	4.5	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# 9222]	Radial	20	2.25	60	A615-75	75	100	-	-

ANCHOR ROD GEOMETRY AND APPLIED LOADS --- ORIGINAL (20) 2.25"Ø [ID 9222]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.314	28.53	9.27	23.209	1750.184	92.60	2.29
2	0.628	24.27	17.63	16.862	924.254	92.60	3.15
3	0.942	17.63	24.27	8.865	256.065	92.60	3.70
4	1.257	9.27	28.53	0.000	0.839	92.60	3.89
5	1.571	0.00	30.00	-8.865	256.065	-83.01	3.70
6	1.885	-9.27	28.53	-16.862	924.256	-83.01	3.15
7	2.199	-17.63	24.27	-23.209	1750.184	-83.01	2.29
8	2.513	-24.27	17.63	-27.283	2418.373	-83.01	1.20
9	2.827	-28.53	9.27	-28.688	2673.599	-83.01	0.00
10	3.142	-30.00	0.00	-27.283	2418.373	-83.01	1.20
11	3.456	-28.53	-9.27	-23.209	1750.183	-83.01	2.29
12	3.770	-24.27	-17.63	-16.862	924.256	-83.01	3.15
13	4.084	-17.63	-24.27	-8.865	256.066	-83.01	3.70
14	4.398	-9.27	-28.53	0.000	0.839	92.60	3.89
15	4.712	0.00	-30.00	8.865	256.065	92.60	3.70
16	5.027	9.27	-28.53	16.862	924.254	92.60	3.15
17	5.341	17.63	-24.27	23.209	1750.185	92.60	2.29
18	5.655	24.27	-17.63	27.283	2418.374	92.60	1.20
19	5.969	28.53	-9.27	28.688	2673.599	92.60	0.00
20	6.283	30.00	0.00	27.283	2418.374	92.60	1.20

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	52"Ø x 0.5" (18 Sides)	2650.5	47.93	49.10	1.000
Bolt Group	Original (20) 2.25"Ø	2650.5	-	49.10	1.000
TOTALS		2650.54	47.93	49.1	

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	52"Ø x 0.5" (18 Sides)	80.4859	-	-	26690.34	-
Bolt Group	Original (20) 2.25"Ø	3.9761	3.2477	0.8393	26744.39	4.5

EXTERNAL BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter: 52.12 in
 Point-to-Point Diameter: 52.93 in
 Flat Width: 9.191 in
 Flat Radians: 0.349 rad

PLATE PROPERTIES

Neutral Axis: 252 °
 Bend Line Lower Limit: 5.496 rad
 Bend Line Upper Limit: 0.159 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	36.073	0.00	68.201	560.3	3069.0	0.183
Corner	34.883	0.00	65.950	428.1	2967.8	0.144
Circumferential	41.030	0.00	77.572	730.8	3490.7	0.209

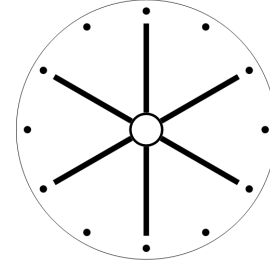
PLASTIC ANCHOR ROD ANALYSIS

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	92.6	3.9	243.6	0.380

UPPER FLANGE PLATE ANALYSIS @ 76.7 FT

PLATE PARAMETERS (ID# 2286)

Diameter: 35 in
 Shape: Round
 Thickness: 1.5 in
 Grade: A572-50
 Yield Strength: 50 ksi
 Tensile Strength: 65 ksi
 Pole Weld Size: 0.125 in
 Orientation Offset: - °
 Analysis Type: Plastic
 Neutral Axis: 14 °

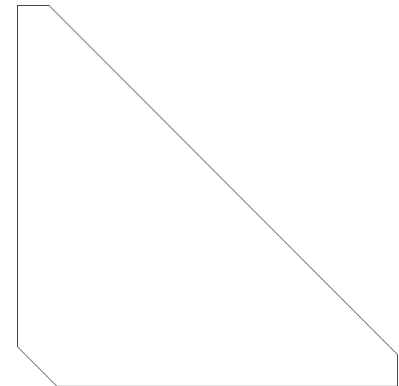


FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 9223]	Radial	12	1	32	A325	92	120	-	-

STIFFENER PARAMETERS

Arrangement: Radial
 Quantity: 6
 Height: 12 in
 Width: 12 in
 Thickness: 0.75 in
 Notch: 1.25 in
 Grade: Not Listed
 Yield Strength: 0 ksi
 Tensile Strength: 0 ksi
 Horizontal Weld Type: Fillet
 Horizontal Weld Fillet Size: 0.125 in
 Vertical Weld Fillet Size: 0.125 in
 Weld Strength: 70 ksi
 Orientation Offset: - °



FLANGE BOLT GEOMETRY AND APPLIED LOADS -- ORIGINAL (12) 1"Ø [ID 9223]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.524	13.86	8.00	4.238	10.908	1.82	0.39
2	1.047	8.00	13.86	11.060	74.124	1.82	0.28
3	1.571	0.00	16.00	14.918	134.841	1.82	0.10
4	2.094	-8.00	13.86	14.779	132.343	1.82	0.11
5	2.618	-13.86	8.00	10.680	69.127	1.82	0.29
6	3.142	-16.00	0.00	3.720	8.410	1.82	0.40
7	3.665	-13.86	-8.00	-4.238	10.908	-1.20	0.39
8	4.189	-8.00	-13.86	-11.060	74.124	-1.20	0.28
9	4.712	0.00	-16.00	-14.918	134.841	-1.20	0.10
10	5.236	8.00	-13.86	-14.779	132.343	-1.20	0.11
11	5.760	13.86	-8.00	-10.680	69.127	-1.20	0.29
12	6.283	16.00	0.00	-3.720	8.410	-1.20	0.40

STIFFENER GEOMETRY AND APPLIED LOADS

Position	Radians	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.524	2.274	137.350	1.94	0.78
2	1.571	8.005	471.692	6.05	0.20
3	2.618	5.731	294.409	4.42	0.58
4	3.665	-2.274	137.349	-1.32	0.78
5	4.712	-8.005	471.692	-5.42	0.20
6	5.760	-5.731	294.409	-3.80	0.58

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	4.5"Ø x 0.337" (Round)	15.0	1.88	3.16	1.000
Bolt Group	Original (12) 1"Ø	15.0	-	3.16	1.000
Stiffeners	(6) 12"H x 12"W x 0.75"T	14.9	-	3.14	0.995
TOTALS		14.95	1.88	3.16	

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	4.5"Ø x 0.337" (Round)	4.4074	-	-	9.72	-
Bolt Group	Original (12) 1"Ø	0.7854	0.6057	0.0292	859.51	8.0
Stiffeners	(6) 12"H x 12"W x 0.75"T	8.0625	7.2563	432.0000	1806.90	-

ASSET: 414240, Byram Park CT
 CUSTOMER: AT&T MOBILITY

CODE: ANSI/TIA-222-H
 ENG NO: 13755490

EXTERNAL UPPER FLANGE PLATE BEND LINE ANALYSIS @ 76.7 FT

POLE PROPERTIES

Flat-to-Flat Diameter: 4.62 in
 Point-to-Point Diameter: 4.62 in
 Flat Width: 0.040 in
 Flat Radians: 0.017 rad

PLATE PROPERTIES

Neutral Axis: 14 °
 Bend Line Lower Limit: 6.109 rad
 Bend Line Upper Limit: 3.839 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	33.255	19.72	29.799	79.4	1341.0	0.059
Corner	33.255	19.72	29.799	79.4	1341.0	0.059
Circumferential	50.398	51.00	57.036	110.4	2566.6	0.043

PLASTIC FLANGE BOLT ANALYSIS

Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity φPn (k)	Ratio
Original	12	1	1.8	0.4	54.5	0.033

UPPER FLANGE PLATE STIFFENER ANALYSIS

Quantity:	6	
Height:	12	in
Width:	12	in
Effective Width:	12.000	in
Thickness:	0.75	in
Notch:	1.25	in
Grade:	Not Listed	
Yield Strength:	0	ksi
Tensile Strength:	0	ksi
Horizontal Weld Type:	Fillet	
Horizontal Weld Fillet Size:	0.125	in
Horizontal Weld Bevel Size:		in
Vertical Weld Fillet Size:	0.125	in
Weld Strength:	70	ksi
Electrode Coefficient:	1.000	

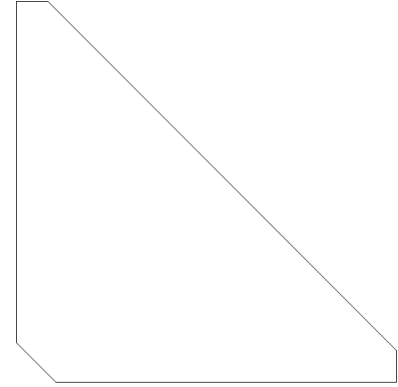


PLATE COMPRESSION

Radius of Gyration:	0.217	in ³
kl/r:	33.26	
4.71 √(E/Fy):	0.00	
Buckling Stress, Fe:	0.00	ksi
Crit. Buckling Stress, Fcr:	0.00	ksi
Applied Compression, Pu:	6.05	k
Compressive Capacity, φPn:	0.00	k
Pu/φPn:	0.000	

PLATE TENSION

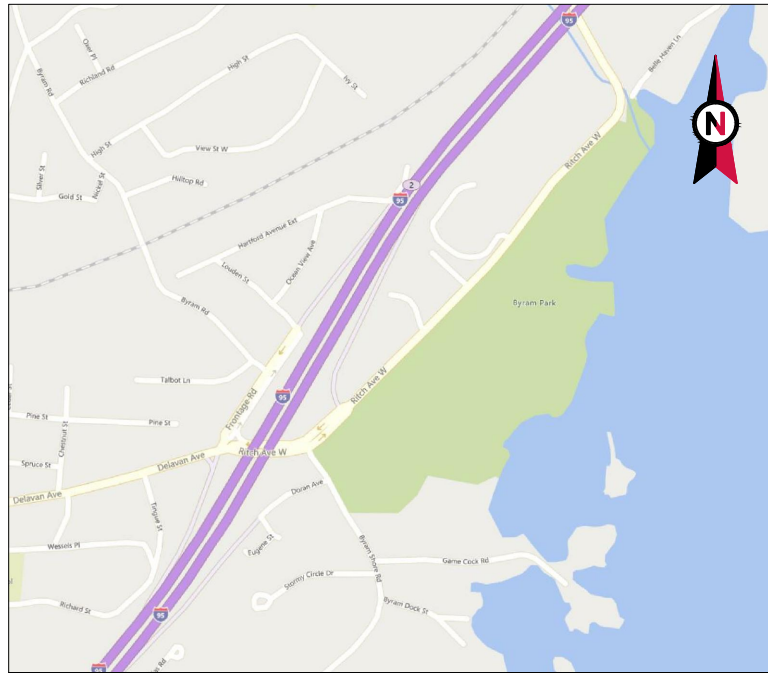
Gross Cross Section:	8.0625	in ²
Net Cross Section:	7.2563	in ²
Applied Tension, Tu:	5.42	k
Tensile Capacity, φTn:	0.00	k
Tu/φTn:	0.000	

VERTICAL WELD TO POLE

Vertical Eccentricity Ratio, a=e _x /l:	0.333	
Spacing Ratio, k:	0.063	
Weld Coefficient, C:	3.090	
Applied Compression, Pu:	6.05	k
Compressive Capacity, φPn:	55.62	k
Horizontal Eccentricity Ratio, a=e _y /l:	0.333	
Weld Coefficient, C:	2.940	
Applied Shear, Vu:	0.20	k
Shear Capacity, φVn:	52.92	k
Pu/φPn + Vu/φVn:	0.112	

HORIZONTAL WELD TO PLATE

Horizontal Eccentricity Ratio, a=e _x /l:	0.167	
Spacing Ratio, k:	0.063	
Weld Coefficient, C:	3.900	
Effective Fillet Size:	0.125	in
Applied Compression, Pu:	6.05	k
Compressive Capacity, φPn:	70.20	k
Vertical Eccentricity Ratio, a=e _y /l:	0.167	
Weld Coefficient, C:	3.670	
Applied Shear, Vu:	0.20	k
Shear Capacity, φVn:	66.06	k
Pu/φPn + Vu/φVn:	0.089	



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: BYRAM PARK CT
 ATC SITE NUMBER: 414240
 AT&T PACE NUMBERS: MRCTB053754 (5G NR SOFTWARE RADIO), MRCTB055124 (5G NR RADIO), MRCTB053744 (5G NR SOFTWARE RADIO), MRCTB055128 (5G NR RADIO), MRCTB055084 (CELL SITE RF MODIFICATIONS), MRCTB038187 (CRAN)

AT&T SITE ID: 24473
 AT&T FA CODE: 10071045
 AT&T SITE NAME: GREENWICH SW
 SITE ADDRESS: 48 RITCH AVENUE WEST
 GREENWICH, CT 06830
 AT&T AMENDMENT PLAN



LOCATION MAP

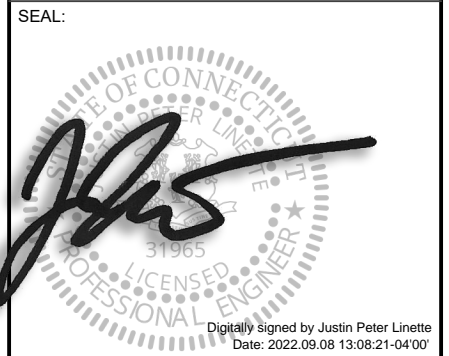


Colliers Engineering & Design

www.colliersengineering.com
 Doing Business as MASER CONSULTING
 STAMFORD
 1055 Washington Boulevard
 Stamford, CT 06901
 Phone: 203.324.0800
 COLLIER ENGINEERING & DESIGN CT, P.C.
 DOING BUSINESS AS MASER CONSULTING

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240
 ATC SITE NAME:
BYRAM PARK CT
 AT&T SITE NAME:
GREENWICH SW
 SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

TITLE SHEET
 SHEET NUMBER: G-001
 REVISION: 1

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX					
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	<u>SITE ADDRESS:</u> 48 RITCH AVENUE WEST GREENWICH, CT 06830 COUNTY: FAIRFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.00506654 LONGITUDE: -73.64830301 GROUND ELEVATION: 53' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (9) ANTENNA(S), (1) SQUID(S), (6) TTA(S), (6) COAX CABLE(S), (6) CONTROL CABLE(S), (2) FIBER TRUNK CABLE(S) AND (2) CONDUIT(S) INSTALL (9) ANTENNA(S), (1) SQUID(S), (3) CONDUIT(S), (7) CONTROL CABLE(S), (3) FIBER TRUNK CABLE(S) AND (3) Y-CABLE(S) EXISTING (3) ANTENNA(S), (15) RRH(S), (2) SQUID(S), (6) COAX CABLE(S) AND (1) CONDUIT(S) TO REMAIN <u>GROUND WORK:</u> INSTALL 6648 W/ XCEDE CABLE	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:	
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> COLLIER ENGINEERING & DESIGN CT, P.C. 1055 WASHINGTON BLVD STAMFORD, CT 06901 PROJECT #: 22904290 <u>PROPERTY OWNER:</u> --- 48 RITCH AVENUE WEST GREENWICH, CT 06830	<u>PROJECT NOTES</u> 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).	G-001 TITLE SHEET G-002 GENERAL NOTES C-101 DETAILED SITE PLAN C-102 DETAILED SHELTER LAYOUT C-201 TOWER ELEVATION C-401 ANTENNA INSTALLATION C-402 RF SCHEDULE C-501 CONSTRUCTION DETAILS E-501 GROUNDING DETAILS R-601 SUPPLEMENTAL R-602 SUPPLEMENTAL R-603 SUPPLEMENTAL R-604 SUPPLEMENTAL					
		<u>PROJECT LOCATION DIRECTIONS</u> TAKE RITCH AVE W AND HAMILTON AVE TO GLEN ST IN GREENWICH, 4 MIN (1.6 MI), HEAD NORTHEAST ON I-95 N, 0.2 MI, TAKE EXIT 2 FOR BYRAM TOWARD DELAVAN AVE, 0.2 MI, CONTINUE ONTO DORAN AVE, 361 FT, TURN LEFT ONTO BYRAM SHORE RD, 167 FT, TURN RIGHT ONTO RITCH AVE W, 0.6 MI, CONTINUE ONTO HAMILTON AVE, 0.5 MI, TAKE RODWELL AVE TO HAMILTON AVE, 43 S (0.2 MI), TURN RIGHT ONTO GLEN ST, 351 FT, GLEN ST TURNS LEFT AND BECOMES RODWELL AVE, 476 FT, RODWELL AVE TURNS LEFT AND BECOMES STONE AVE, 358 FT, CONTINUE ON HAMILTON AVE, DRIVE TO RITCH AVE W, 3 MIN (1.1 MI), TURN LEFT ONTO HAMILTON AVE, 0.6 MI, CONTINUE ONTO RITCH AVE W, DESTINATION WILL BE ON THE RIGHT.						



Copyright © 2022 ATC IP, LLC. All Rights Reserved.

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 ANSII/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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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)

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.



Colliers Engineering & Design

www.colliersengineering.com

Doing Business as **MASER CONSULTING**

STAMFORD
1055 Washington Boulevard

Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

SEAL:

Digitally signed by Justin Peter Linette
Date: 2022.09.08 13:08:33-04'00'



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

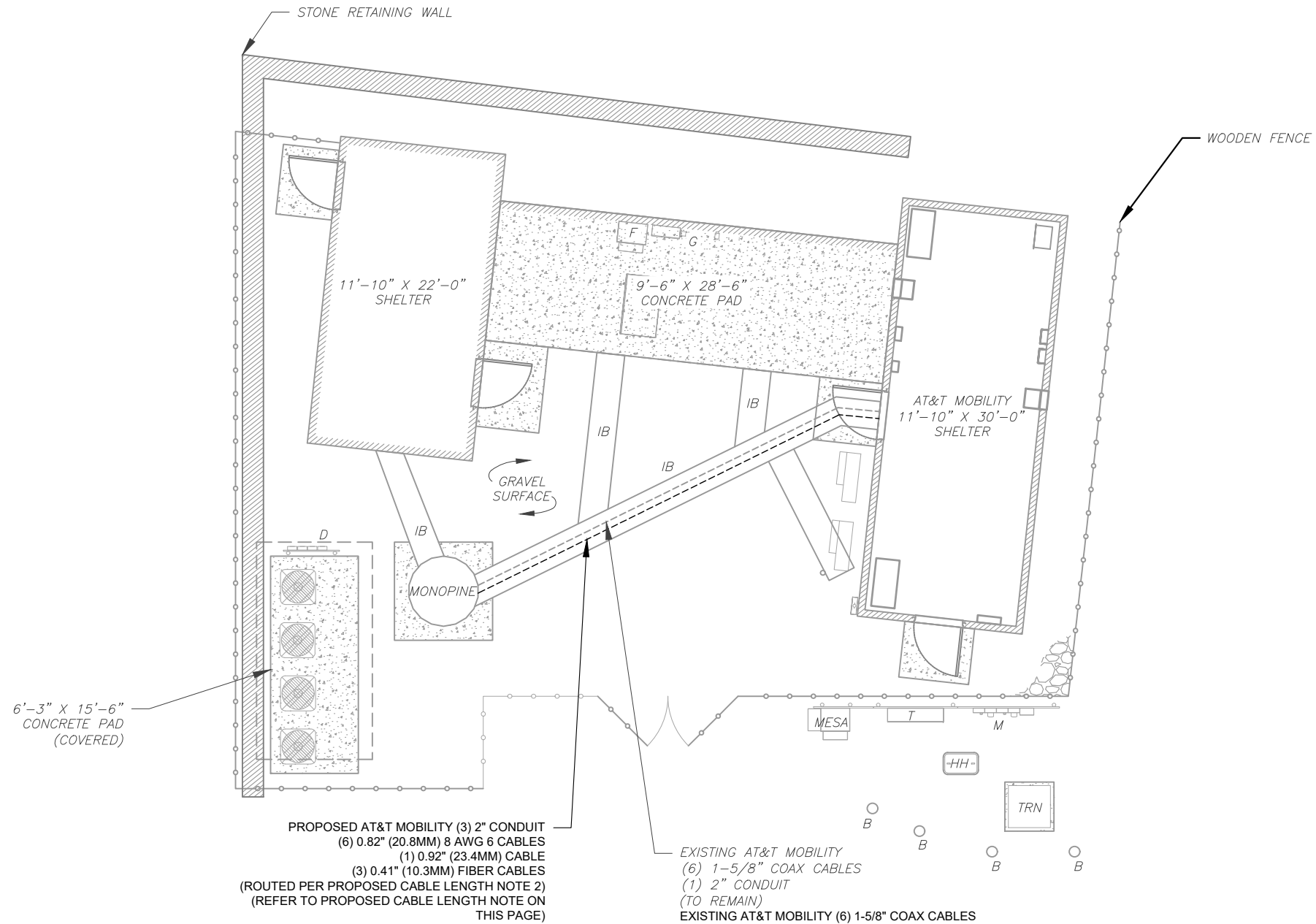
GENERAL NOTES	
SHEET NUMBER: G-002	REVISION: 1

Copyright © 2022 ATC IP, LLC. All Rights Reserved.

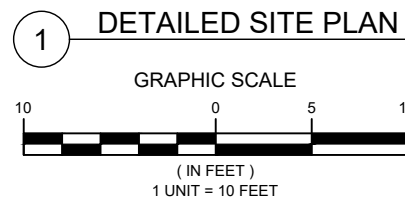
SITE PLAN NOTES:

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 **120'**. 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.



Colliers Engineering & Design

www.colliersengineering.com
 Doing Business as **MASER CONSULTING**
 STAMFORD
 1055 Washington Boulevard
 Stamford, CT 06901
 Phone: 203.324.0800
 COLLIER ENGINEERING & DESIGN CT, P.C.
 DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, revised, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

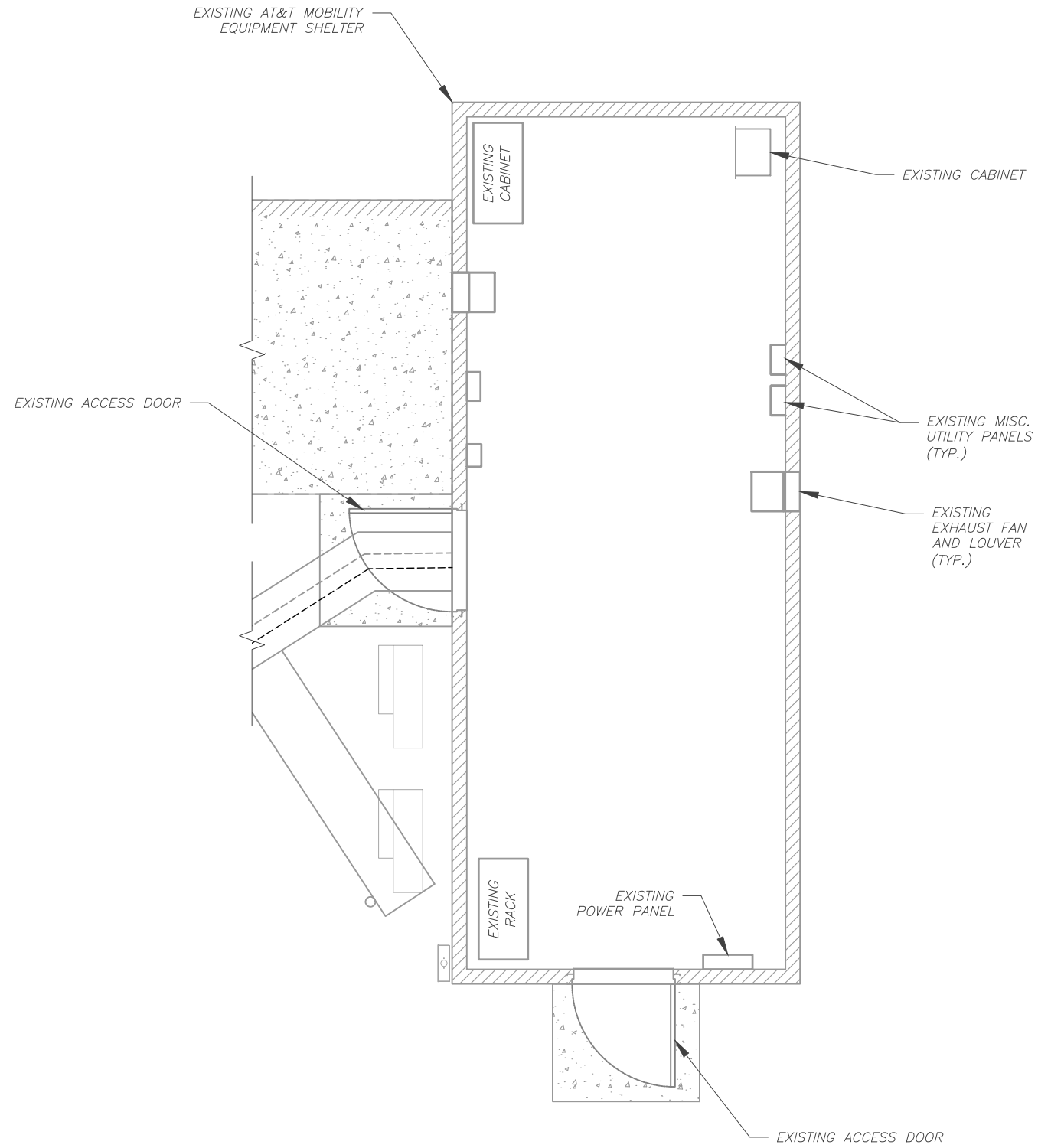
SEAL:



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	1



1 DETAILED SHELTER LAYOUT

0 5' 10'

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



Colliers Engineering & Design

www.colliersengineering.com

Doing Business as **MASER**

STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

SEAL:

Digitally signed by Justin Peter Linette
Date: 2022.09.08 13:08:33-04'00'



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

DETAILED SHELTER LAYOUT	
SHEET NUMBER: C-102	REVISION: 1

Copyright © 2022 ATC IP, LLC, All Rights Reserved.

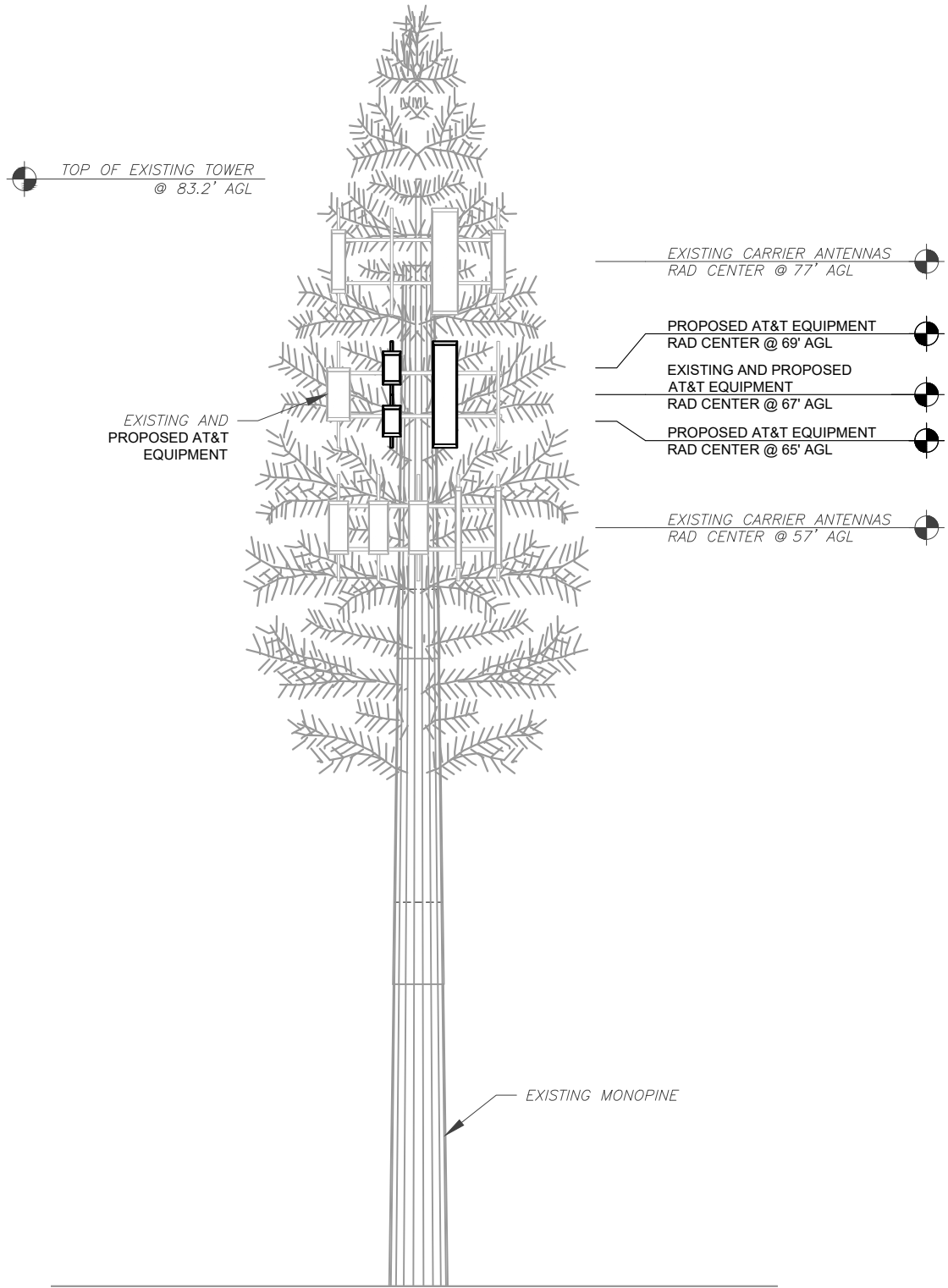
PER MOUNT ANALYSIS COMPLETED BY TELAMON TOWER ENGINEERING PLLC, DATED 07/18/22, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

Install (1) 6ft. long Pipe 2 STD, A53 Gr. B, mount pipes at each stand-off tube (3 total). Connect to face stand-off members (1) Site Pro 1 SQCX4-K crossover plate kits or equal (3 total).

1

MONOPINE ANTENNA NOTES:

1. ANTENNAS SHALL BE MOUNTED WITHIN THE FOLIAGE OF THE MONOPINE AND ALL BRANCHES SHALL EXTEND BEYOND THE ANTENNA PANELS AND MOUNTING HARDWARE. ADD AND/OR REPLACE BRANCHES AS REQUIRED.
2. ANTENNAS SHALL BE PAINTED/SOCKED TO MATCH EXISTING.
3. ANTENNA MOUNTS SHALL BE PAINTED TO MATCH EXISTING.



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. 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.
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.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
4. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

1 TOWER ELEVATION
SCALE: N.T.S.



Colliers Engineering & Design
www.colliersengineering.com
Doing Business as **MASER**
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
**48 RITCH AVENUE WEST
GREENWICH, CT 06830**

SEAL:



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

TOWER ELEVATION

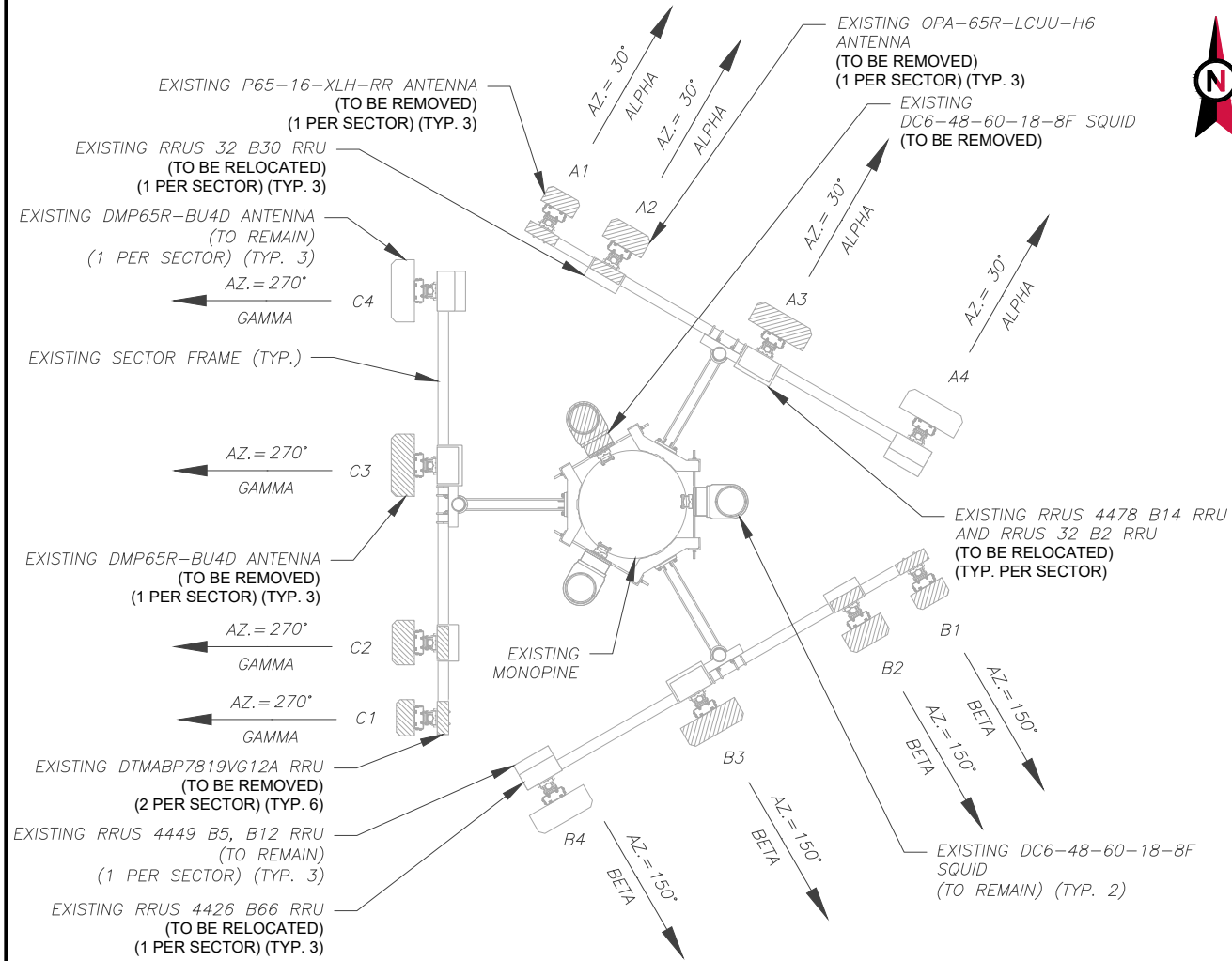
SHEET NUMBER: C-201	REVISION: 1
-------------------------------	-----------------------

Copyright © 2022 ATC IP, LLC. All Rights Reserved.

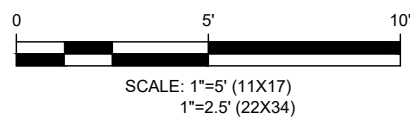
EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.

MONOPINE BRANCHES NOT SHOWN FOR CLARITY.

1



1 CURRENT ANTENNA PLAN
SCALE: 1"=5'



PER MOUNT ANALYSIS COMPLETED BY TELAMON TOWER ENGINEERING PLLC, DATED 07/18/22, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

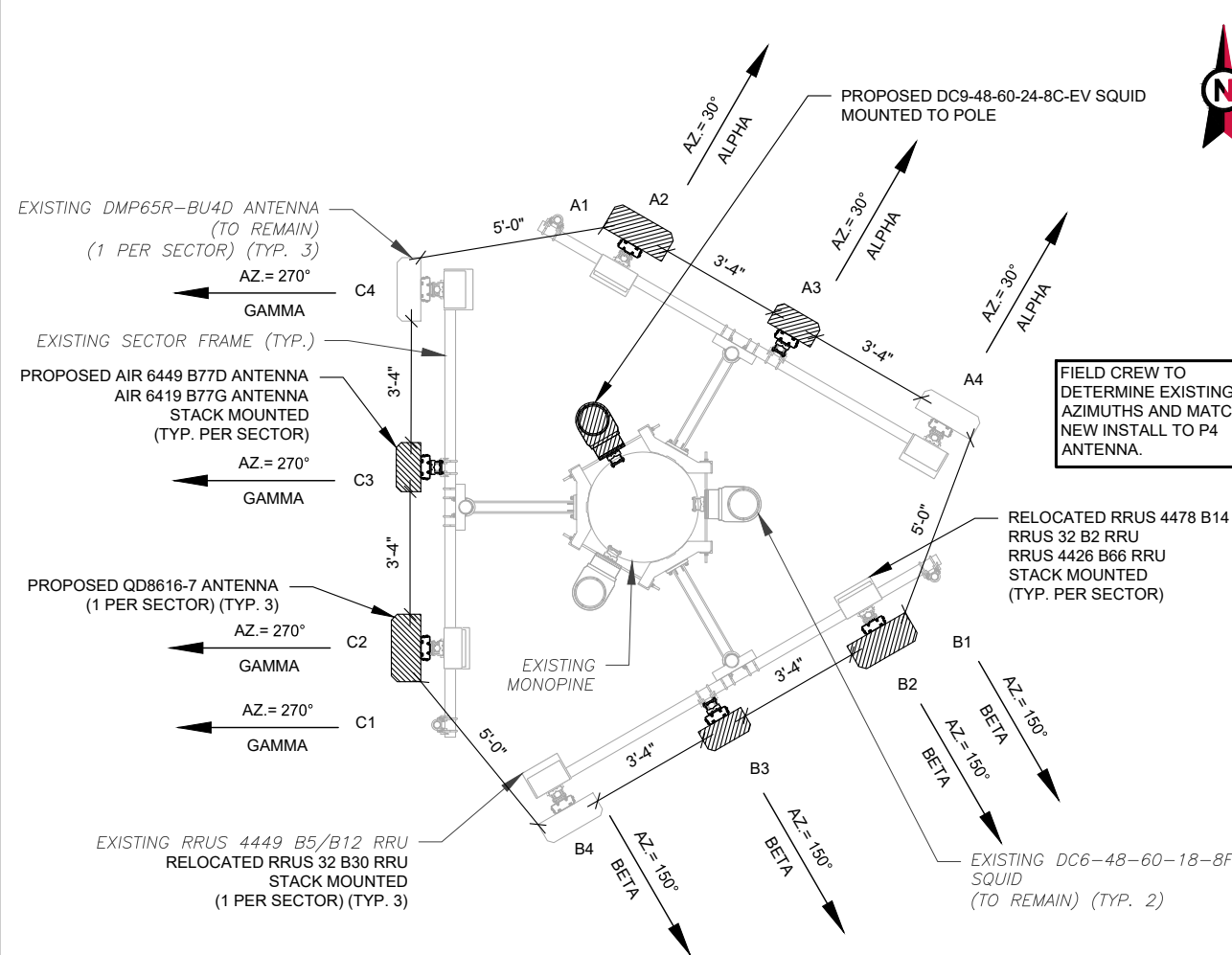
Install (1) 6ft. long Pipe 2 STD, A53 Gr. B, mount pipes at each stand-off tube (3 total). Connect to face stand-off members (1) Site Pro 1 SQCX4-K crossover plate kits or equal (3 total).

1

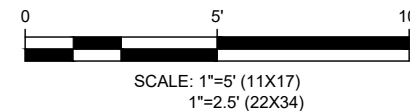
MONOPINE BRANCHES NOT SHOWN FOR CLARITY.

MONOPINE ANTENNA NOTES:

1. ANTENNAS SHALL BE MOUNTED WITHIN THE FOLIAGE OF THE MONOPINE AND ALL BRANCHES SHALL EXTEND BEYOND THE ANTENNA PANELS AND MOUNTING HARDWARE. ADD AND/OR REPLACE BRANCHES AS REQUIRED.
2. ANTENNAS SHALL BE PAINTED/SOCKED TO MATCH EXISTING.
3. ANTENNA MOUNTS SHALL BE PAINTED TO MATCH EXISTING.



2 FINAL ANTENNA PLAN
SCALE: 1"=5'



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



Colliers Engineering & Design

www.colliersengineering.com
Doing Business as MASER
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, revised, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

SEAL:



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

ANTENNA INSTALLATION

SHEET NUMBER:
C-401

REVISION:
1



Colliers Engineering & Design

www.colliersengineering.com

Doing Business as **MASER**

STAMFORD
1055 Washington Boulevard

Stamford, CT 06901
Phone: 203.324.0800

COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, revised, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

SEAL:



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

RF SCHEDULE

SHEET NUMBER:	REVISION:
C-402	1

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	67'	30°	A1	P65-16-XLH-RR	-	RMV	DTMABP7819VG12A	RMV
			A2	OPA-65R-LCUU-H6	LTE 700/WCS	RMV	DTMABP7819VG12A RRUS 32 B30	RMV REL
			A3	DMP65R-BU4D	LTE 700/1900	RMV	RRUS 4478 B14 RRUS 32 B2	REL REL
			A4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 4449 B5/B12 RRUS 4426 B66	RMN REL
BETA	67'	150°	B1	P65-16-XLH-RR	-	RMV	DTMABP7819VG12A	RMV
			B2	OPA-65R-LCUU-H6	LTE 700/WCS	RMV	DTMABP7819VG12A RRUS 32 B30	RMV REL
			B3	DMP65R-BU4D	LTE 700/1900	RMV	RRUS 4478 B14 RRUS 32 B2	REL REL
			B4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 4449 B5/B12 RRUS 4426 B66	RMN REL
GAMMA	67'	270°	C1	P65-16-XLH-RR	-	RMV	DTMABP7819VG12A	RMV
			C2	OPA-65R-LCUU-H6	LTE 700/WCS	RMV	DTMABP7819VG12A RRUS 32 B30	RMV REL
			C3	DMP65R-BU4D	LTE 700/1900	RMV	RRUS 4478 B14 RRUS 32 B2	REL REL
			C4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 4449 B5/B12 RRUS 4426 B66	RMN REL

NOTES

- CONFIRM WITH AT&T REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- 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.
- 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	67'	30°	A1	-	-	-	-	-
			A2	QD8616-7	LTE 700/1900/AWS 5G 1900/AWS	ADD	RRUS 4478 B14 RRUS 32 B2 RRUS 4426 B66	REL REL REL
			A3	AIR 6419 B77G AIR 6449 B77D	5G CBAND/DOD	ADD ADD	-	-
			A4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 32 B30 RRUS 4449 B5/B12	REL RMN
BETA	67'	150°	B1	-	-	-	-	-
			B2	QD8616-7	LTE 700/1900/AWS 5G 1900/AWS	ADD	RRUS 4478 B14 RRUS 32 B2 RRUS 4426 B66	REL REL REL
			B3	AIR 6419 B77G AIR 6449 B77D	5G CBAND/DOD	ADD ADD	-	-
			B4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 32 B30 RRUS 4449 B5/B12	REL RMN
GAMMA	67'	270°	C1	-	-	-	-	-
			C2	QD8616-7	LTE 700/1900/AWS 5G 1900/AWS	ADD	RRUS 4478 B14 RRUS 32 B2 RRUS 4426 B66	REL REL REL
			C3	AIR 6419 B77G AIR 6449 B77D	5G CBAND/DOD	ADD ADD	-	-
			C4	DMP65R-BU4D	LTE 700/AWS/ 5G 850	RMN	RRUS 32 B30 RRUS 4449 B5/B12	REL RMN

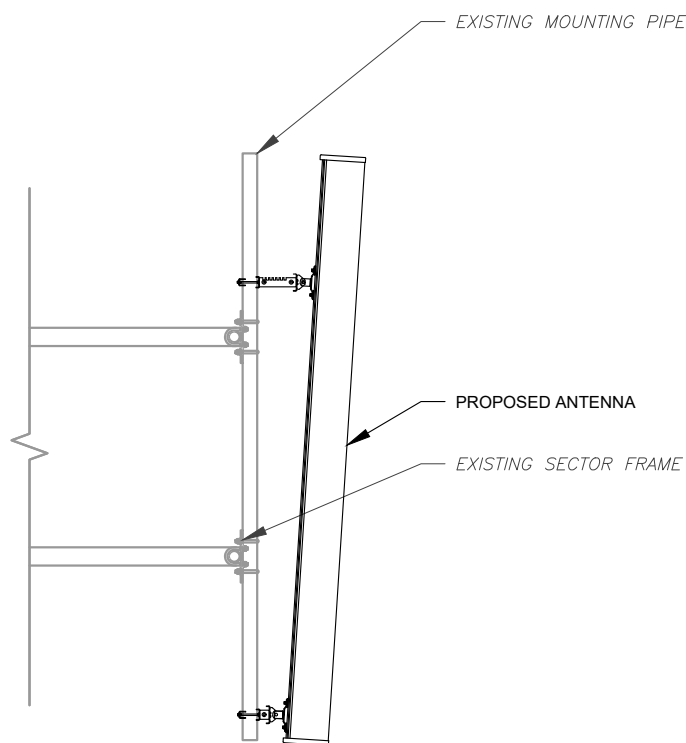
CABLE LENGTHS FOR JUMPERS
JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

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

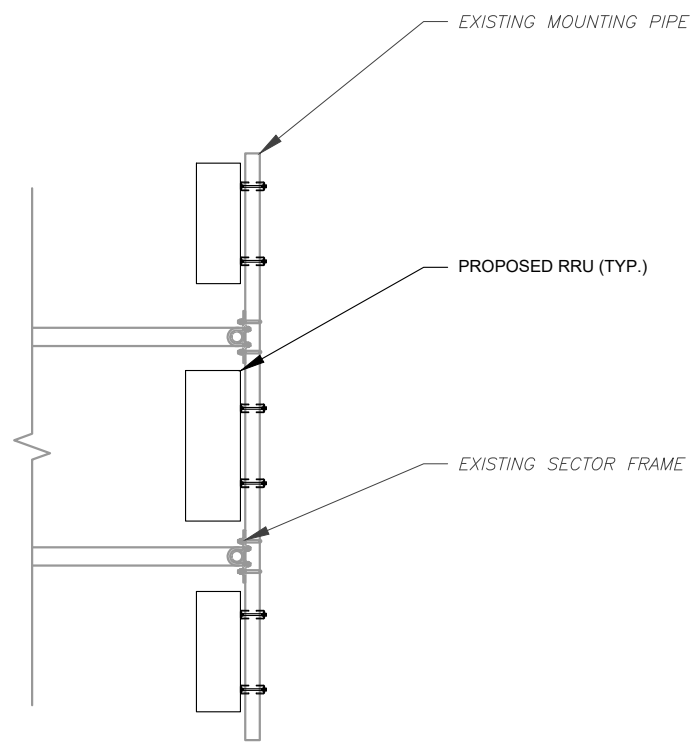
EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC9-48-60-24-8C-EV	RMN	(6) 1-5/8"	-	-	RMN
(1) DC6-48-60-18-8F	RMV	(6) 1-5/8"	(6) 0.78" (19.7MM) 8 AWG 6	(2) 0.39" (10MM)	RMV

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC9-48-60-24-8C-EV	RMN	(6) 1-5/8"	-	-	RMN
-	-	-	(6) 0.82" (20.8MM) 8 AWG 6 (1) 0.92" (23.4MM)	(3) 0.41" (10.3MM)	ADD

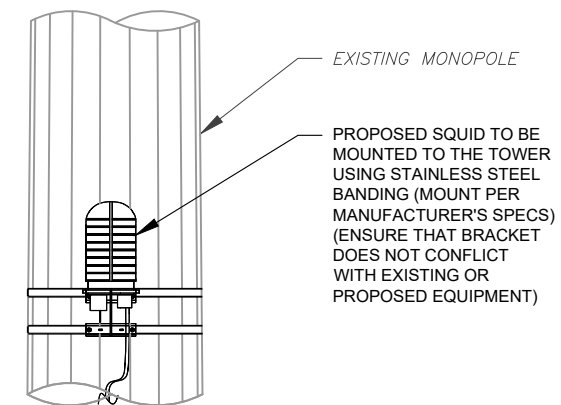
THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.



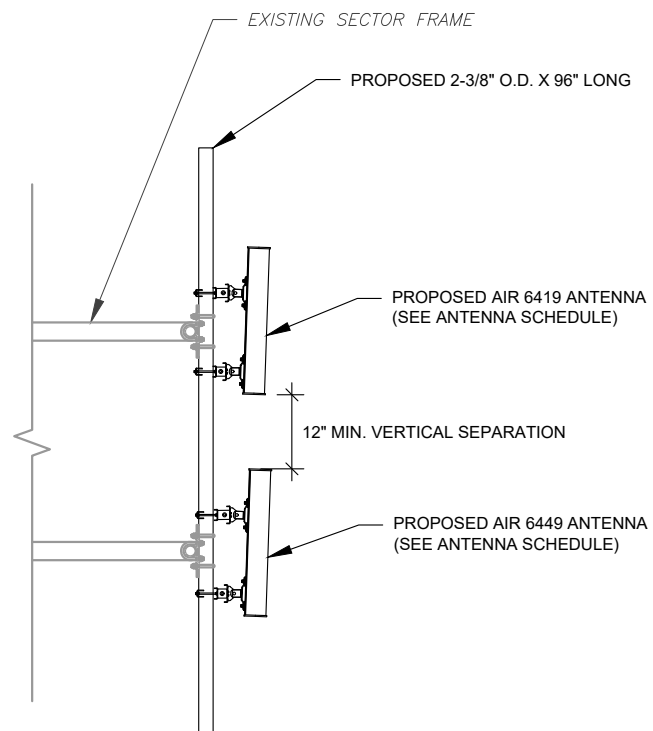
1 ANTENNA DETAIL
SCALE: N.T.S.



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.



Colliers Engineering & Design

www.colliersengineering.com
Doing Business as **MASER**
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or to whom it is certified. This drawing may not be copied, reused, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

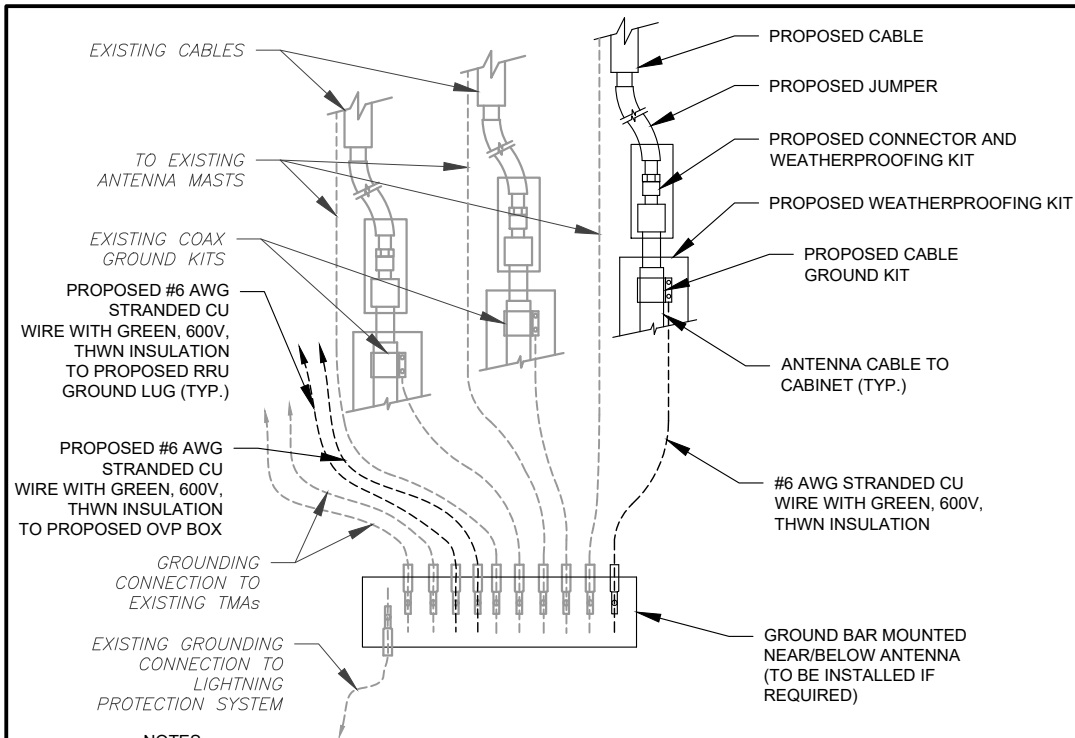
SEAL:



DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

CONSTRUCTION
DETAILS

SHEET NUMBER:	REVISION:
C-501	1

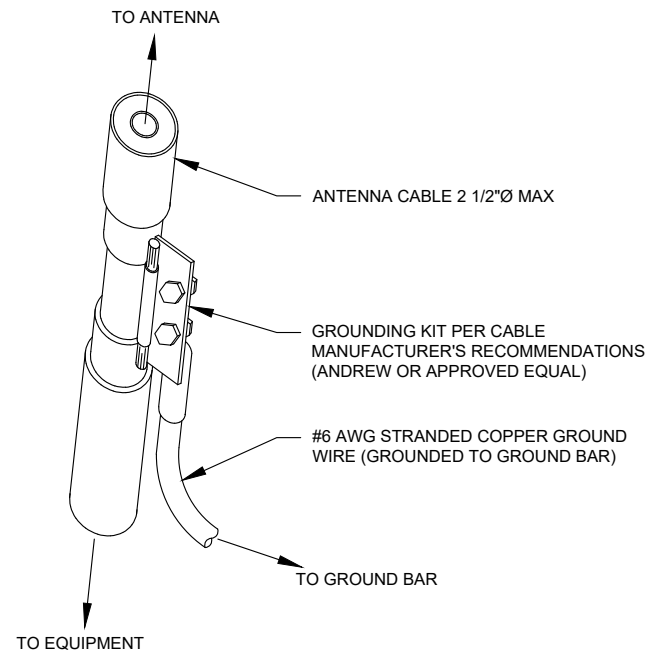


NOTES:

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.

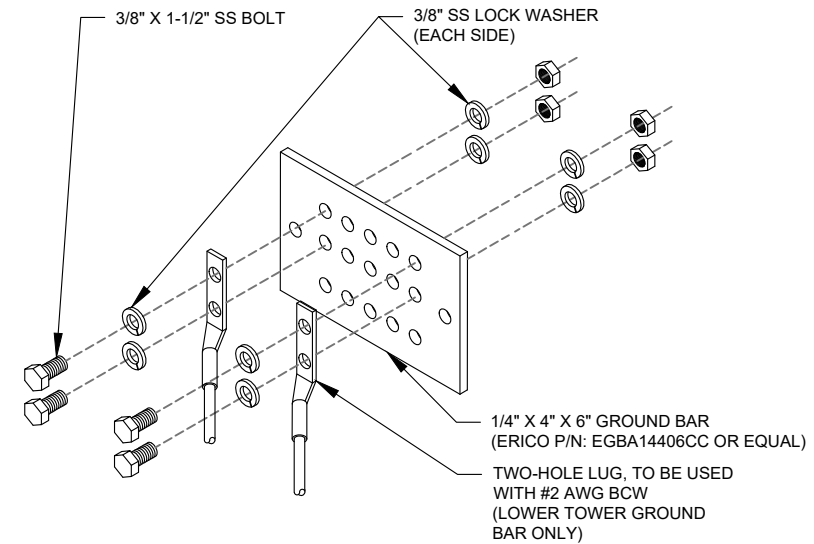


GROUND KIT NOTES:

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.

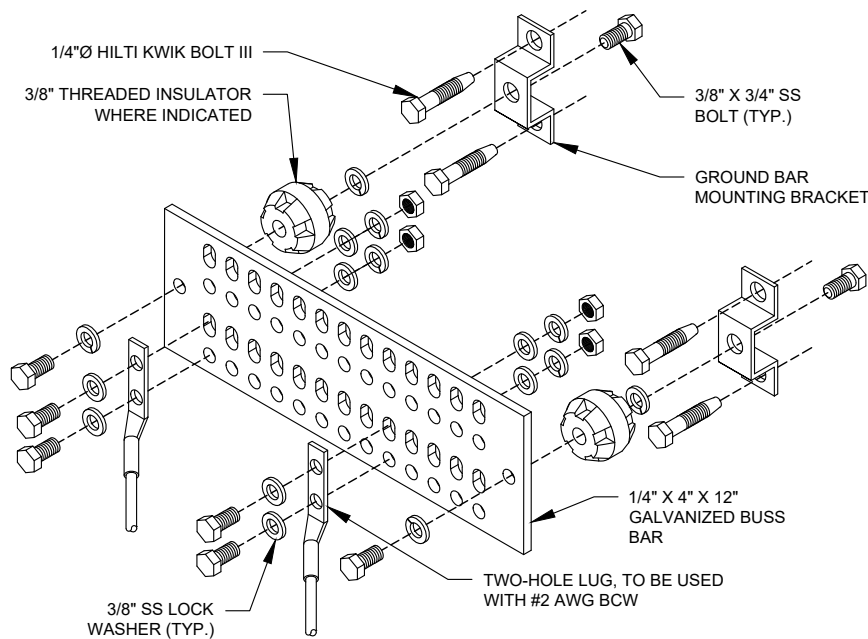


GROUND BAR NOTES:

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.

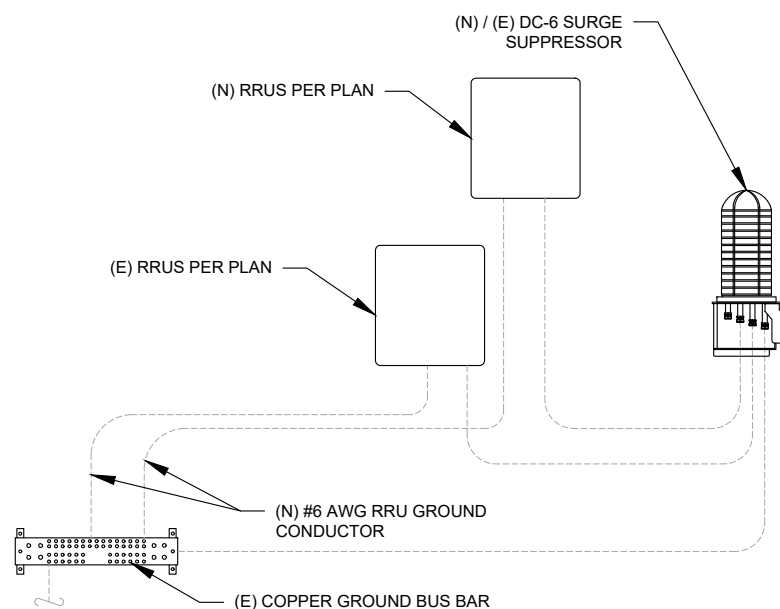


GROUND BAR NOTES

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.

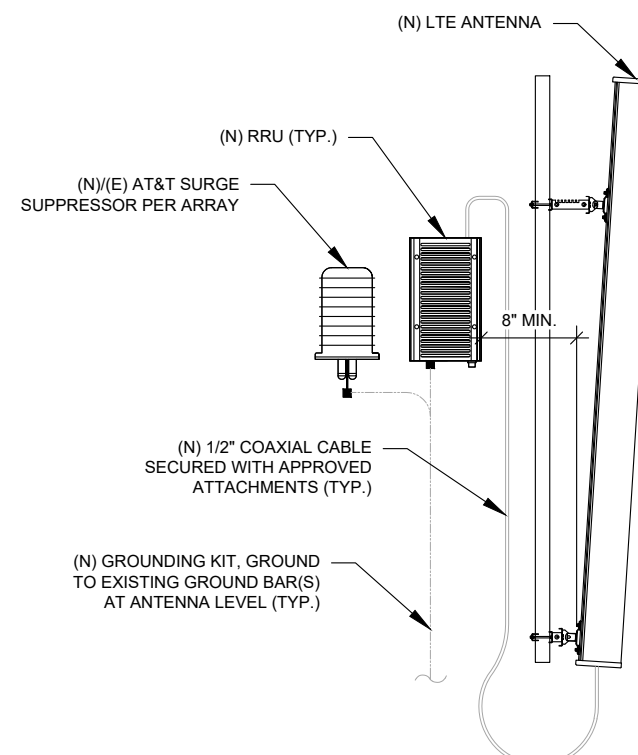
4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



5 RRU GROUNDING

SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING

SCALE: N.T.S.



Colliers Engineering & Design

www.colliersengineering.com
 Doing Business as **MASER**
 STAMFORD
 1055 Washington Boulevard
 Stamford, CT 06901
 Phone: 203.324.0800
 COLLIERS ENGINEERING & DESIGN CT, P.C.
 DOING BUSINESS AS MASER CONSULTING

Copyright © 2022, Colliers Engineering & Design All Rights Reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contacted or to whom it is certified. This drawing may not be copied, revised, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	JLK	04/26/22
0	FOR CONSTRUCTION	RMD	07/20/22
1	FOR CONSTRUCTION	AMN	09/08/22

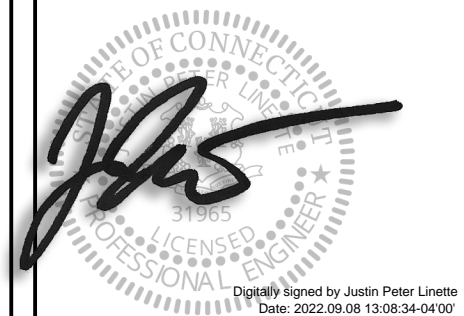
ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

AT&T SITE NAME:
GREENWICH SW

SITE ADDRESS:
48 RITCH AVENUE WEST
GREENWICH, CT 06830

SEAL:



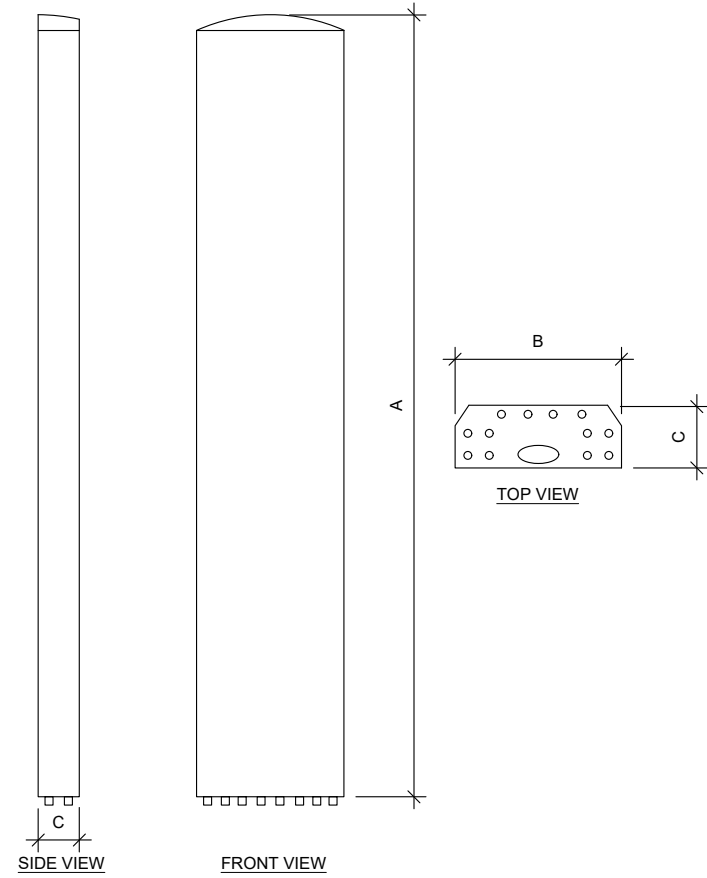
DATE DRAWN:	04/26/22
ATC JOB NO:	13755490_G5
CUSTOMER ID:	24473
CUSTOMER #:	10071045

GROUNDING DETAILS

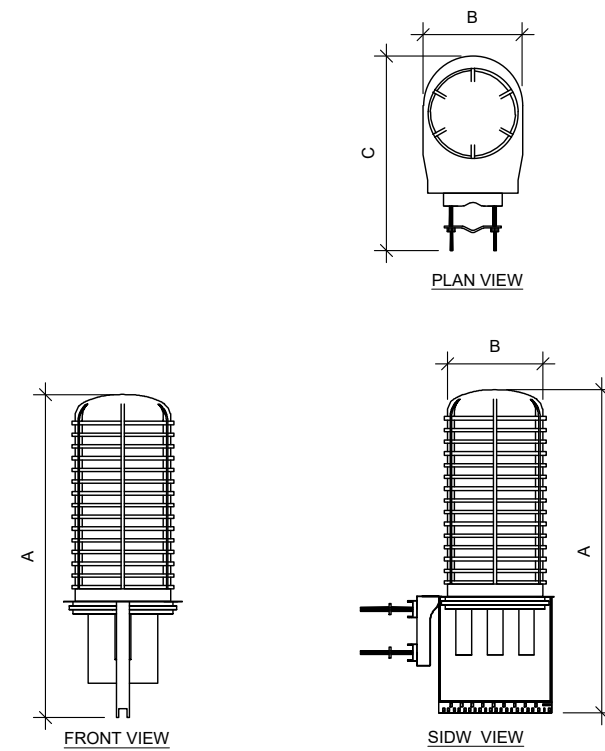
SHEET NUMBER:
E-501

REVISION:
1

Copyright © 2022 ATC IP, LLC. All Rights Reserved.



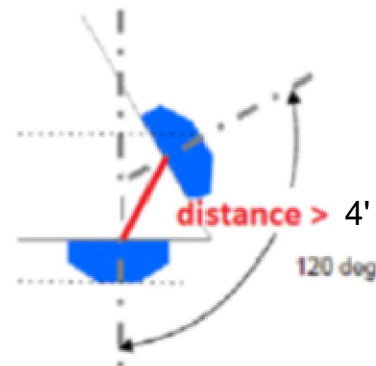
ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
AIR 6419 B77G	28.3"	16.1"	7.9"	66.1
AIR 6449 B77D	30.4"	15.9"	8.1"	81.6
QD8616-7	96"	22"	9.6"	150.0



RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC9-48-60-24-8C-EV	31.4"	18.3"	10.2"	16.0

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

- Horizontal separation (side to side of antenna): $\geq 3'$
- 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.

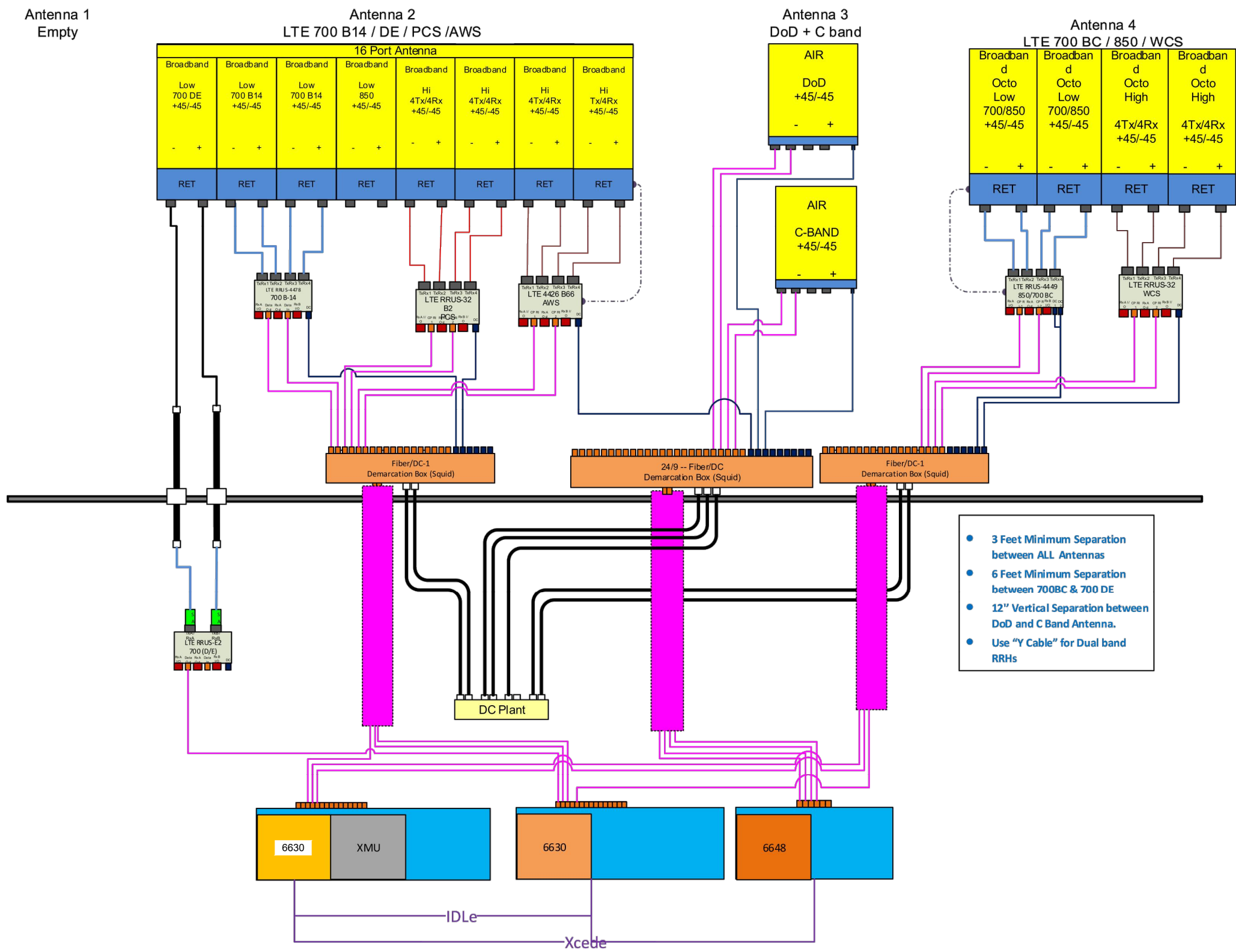
SUPPLEMENTAL

SHEET NUMBER:

R-602

REVISION:

-



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.



This report was prepared for American Tower Corporation by

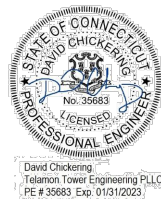


Antenna Mount Analysis Report

ATC Site Name : Byram Park CT
ATC Asset Number : 414240
Engineering Number : 13755490_C8_05
Mount Elevation : 66 ft
Carrier : AT&T Mobility
Carrier Site Name : MRCTB055124
Carrier Site Number : N/A
Site Location : 48 Ritch Avenue West
 Greenwich, CT 06830-9992
 41.00506388, -73.64831111
County : Fairfield
Date : July 18, 2022
Max Usage : 92%
Result : Contingent Pass*
 *See conclusion for requirements

Prepared By:
Kowsalya V
 Telamon Tower Engineering, PLLC

Reviewed By:



Digitally signed by David W
 Chickering
 Date: 2022.07.18 15:05:46
 -04'00'

Mount Analysis for American Tower July 18, 2022
 414240 - Byram Park CT Telamon Tower Engineering, PLLC Project #41124-13755490_C8_05-01-MA

Conclusion

Based on the analysis, the antenna mount meets the requirements per the applicable codes listed above. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

AT&T CONMAT does not have parts which connect mount pipe to HSS. Hence proposing modifications parts which are not listed in the CONMAT list.

- Install (1) 6ft. long Pipe 2 STD, A53 Gr. B, mount pipes at each stand-off tube (3 total). Connect to face stand-off members (1) Site Pro 1 SQCX4-K crossover plate kits or equal (3 total).

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.

Mount Analysis for American Tower July 18, 2022
 414240 - Byram Park CT Telamon Tower Engineering, PLLC Project #41124-13755490_C8_05-01-MA

Antenna Loading

Elevation (ft)		Antennas	
Mount	Rad.	#	Name
66.0	67.0	3	Ericsson AIR 6449 B77D
		3	Quintel Technology QD6616-7
		3	CCI DMP65R-BU4D
		1	Raycap DC9-48-60-24-8C-EV
		3	Ericsson RRUS 32 B2
		3	Ericsson RRUS 32 B30
		3	Ericsson RRUS E2 B29
		3	Ericsson RRUS 4449 B5/B12
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4426 B66
		2	Raycap DC6-48-60-18-8F
		65.0	3

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Face Horizontals	92%	Pass
Stand-Off Horizontals	71%	Pass
Tower Mount Plate Connection	59%	Pass
Mount Pipes	50%	Pass

SUPPLEMENTAL

SHEET NUMBER:
R-604

REVISION:

-

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.