MJ Umali, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (978) 568-7906
MUmali@centerlinecommunications.com

September 21, 2021

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

RE: Notice of Exempt Modification // Site: Southbury West (ATC: 302519)
133 Horse Fence Hill Road, Southbury, CT, 06488
N 41.4600 // W 73.2450

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 113-ft level on the existing 150ft Monopole tower, located at 133 Horse Fence Hill Road, Southbury, CT. The tower is owned by American Tower. The property is also owned by William Beatty. The Council approved Verizon Wireless use of the existing tower in 2000. Verizon Wireless now intends to remove 9 antennas and install 9 new ones for the LTE (3700 MHz) replacements for its 5G upgrade. Additionally, Verizon Wireless intends to remove 3 Remote Radio Heads (RRHs) and install 6 new RRHs, remove 6 diplexers, remove 1 OVP and replace with 1 new one, remove 1 hybrid cable and replace with 2 new ones, and remove 1 coax cable, and install mount modifications; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Jeff Manville, First Selectman, its Land Use Inspector/Enforcement Officer, Taianna Kern, American Tower, the tower owner, and the property owner, William Beatty.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated August 24, 2021, by Colliers Engineering & Design, a structural analysis dated August 5, 2021, by Tower Engineering Professionals, Inc., and a structural mount analysis by GDP Engineering & Architecture date August 10, 2021, and radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by Tower Engineering Professionals, Inc., dated August 5, 2021, and a structural mount analysis by GDP Engineering & Architecture, dated August 10, 2021, pursuant to certain conditions defined therein. Design and engineering is fully illustrated within final construction drawings, signed and stamped dated August 24, 2021.

For the foregoing reasons, Verizon Wireless respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

MJ Umali

_____

MJ Umali, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (978) 568-7906
MUmali@centerlinecommunications.com

Attachments
cc: Jeff Manville, First Selectman – Chief Elected Official
Tianna Kern – Land Use Inspector/Enforcement Officer - as P&Z official
American Tower Corporation - as tower owner
William Beatty – as ground owner

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1Z9Y45030334322950

Weight
5.00 LBS

Service

UPS Ground

Shipped / Billed On
09/20/2021

Delivered On

09/24/2021 12:14 P.M.

Delivered To
JEFF MANVILLE, FIRST SELE
501 MAIN ST S
SOUTHBURY, CT, 06488, US

Received By

ROSA

Left At
Office

Reference Number(s)
SOUTHBURY, 302519

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 09/27/2021 1:53 P.M. EST

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
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450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

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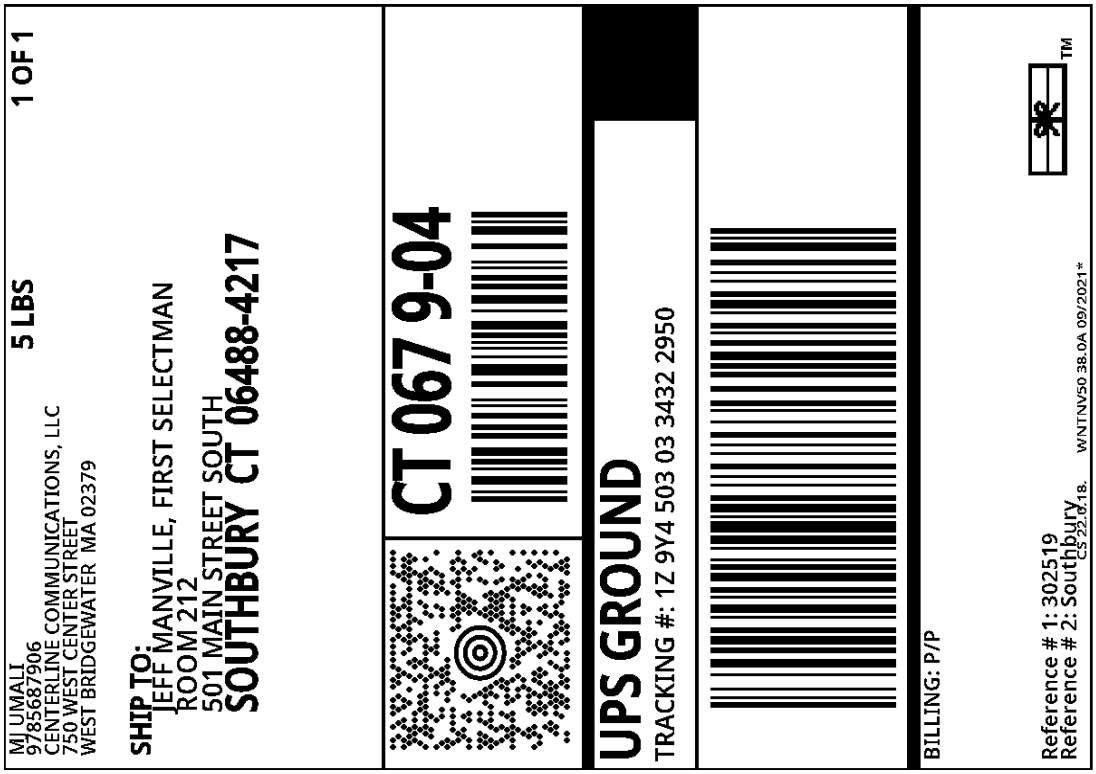

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

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3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

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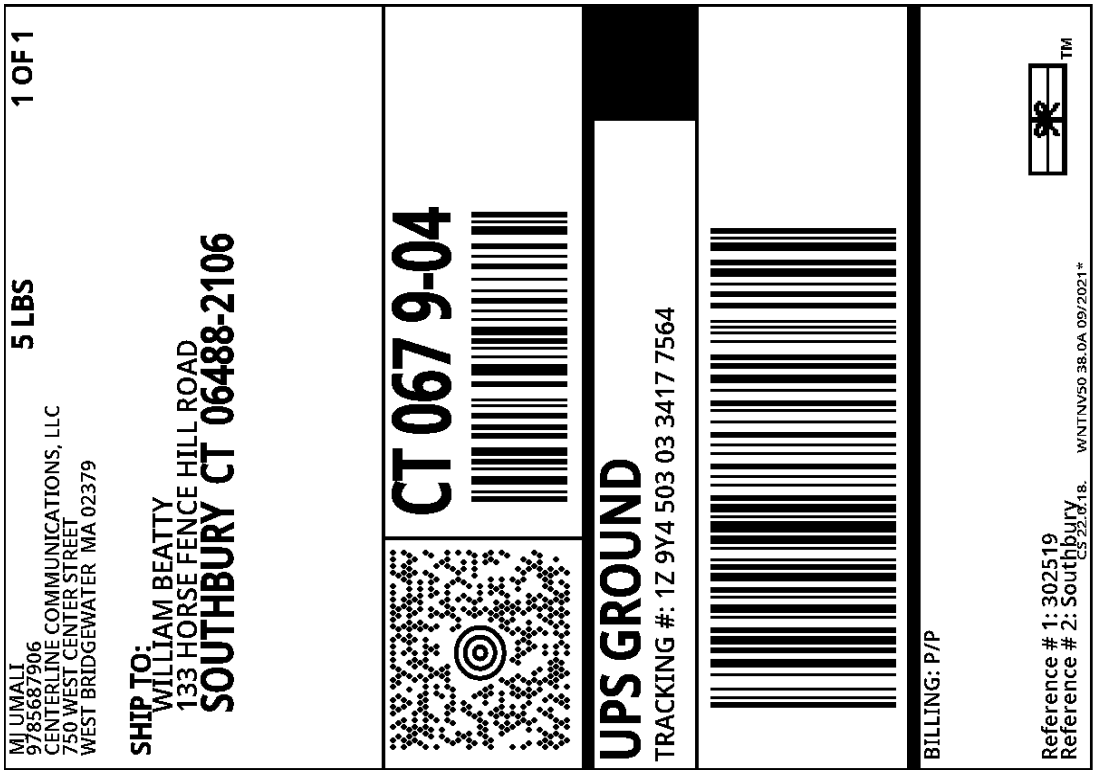
WEST BRIDGEWATER ,MA 02379

FOLD HERE



CT-652

TOWN OF SOUTHBURY

ZONING COMMISSION
501 Main Street South
Southbury, Connecticut 06488-2295
(203) 262-0665
FAX: (203) 264-3719

Zoning Permit

Permit Number	4546	*Issue Date*	3/19/03
Permission is granted t	SMITH, SCOTT & LYNN		
To build	CELL TOWER/CO-LOCATE		
Address	133 HORSE FENCE HILL ROAD	*Lot*	58

This permit is granted subject to compliance with the state law of Connecticut and zoning and building ordinances of the Town of Southbury.

Zoning Enforcement Officer

NOTE: As of March 1, 1985, on completion of the foundations, a certified plot plan will be required and filed in the zoning department (as built).

Z/B/A

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER ENGINEERING PROFESSIONALS

Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Southbury, CT**
ATC Asset Number	:	**302519**
Engineering Number	:	**13673542_C3_02**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**SOUTHBURY WEST**
Carrier Site Number	:	**467324**
Site Location	:	**133 Horse Fence Hill Rd** **Southbury, CT 06488-2106** **41.460000,-73.245000**
County	:	**New Haven**
Date	:	**August 5, 2021**
Max Usage	:	**97%**
Result	:	**Pass**

Prepared By:
Andy Schaffner
TEP

Reviewed By:

STATE OF CONNECTICUT
AARON THOMAS RUCKER
32608
LICENSED PROFESSIONAL ENGINEER

08/05/2021

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	ITT Meyers Site #CT-0055, dated May 21, 2002
Foundation Drawing	Girard Project #1C140, dated November 19, 1987
Modifications	SpectraSite Site #CT-0055, dated May 21, 2002

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:	113.06 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	48.73 mph (3-Second Gust) w/ 0.85" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Hill
Crest Height (H):	132 ft
Crest Length (L):	456 ft
Spectral Response:	Ss = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil

****Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, Annex S.**

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
153.0	6	Powerwave Allgon 7020.00 Dual Band RET	Platform with Handrails	(3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax (3) 2" conduit	AT&T MOBILITY
	6	Kaelus DBC0061F1V51-1			
	3	CCI DMP65R-BU6DA			
	3	Powerwave Allgon TT19-08BP111-001			
	3	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 32 B66A			
	3	Ericsson RRUS 32 B2			
	3	Ericsson RRUS-32 B30 (77 lbs)			
	3	Quintel QS66512-2			
	3	CCI HPA-65R-BUU-H6			
148.0	3	Ericsson RRUS 11 (Band 12) (55 lb)			
140.0	-	-	Collar Mount	-	UNKNOWN
113.0	3	Andrew LNX-6514DS-VTM (72.7" height)	T-Arms	(11) 1 5/8" Coax (1) 1 5/8" Hybriflex	VERIZON WIRELESS

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
113.0	6	RFS FD9R6004/1C-3L	-	(1) 1 5/8" Coax	VERIZON WIRELESS
	3	Alcatel-Lucent RRH2x40-AWS			
	3	Powerwave Allgon P65-16-XL-2			
	1	RFS DB-T1-6Z-8AB-0Z			
	3	Andrew HBX-6517DS-VTM (13.2lbs)			
	3	Decibel 932DG90T2E-M			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
113.0	3	Samsung RF4440d-13A	T-Arms	(1) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung RF4439d-25A			
	1	Raycap RCMDC-6627-PF-48			
	3	Samsung MT6407-77A			
	6	JMA Wireless MX06FRO660-03			

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

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	61%	Pass
Shaft	97%	Pass
Base Plate	83%	Pass
Reinforcement	92%	Pass
Flange	77%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	1,831.3	63%
Axial (Kips)	30.4	21%
Shear (Kips)	17.2	43%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
113.0	Samsung RF4440d-13A	VERIZON WIRELESS	2.221	2.502
	Samsung RF4439d-25A			
	Raycap RCMDC-6627-PF-48			
	Samsung MT6407-77A			
	JMA Wireless MX06FRO660-03			

***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 Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

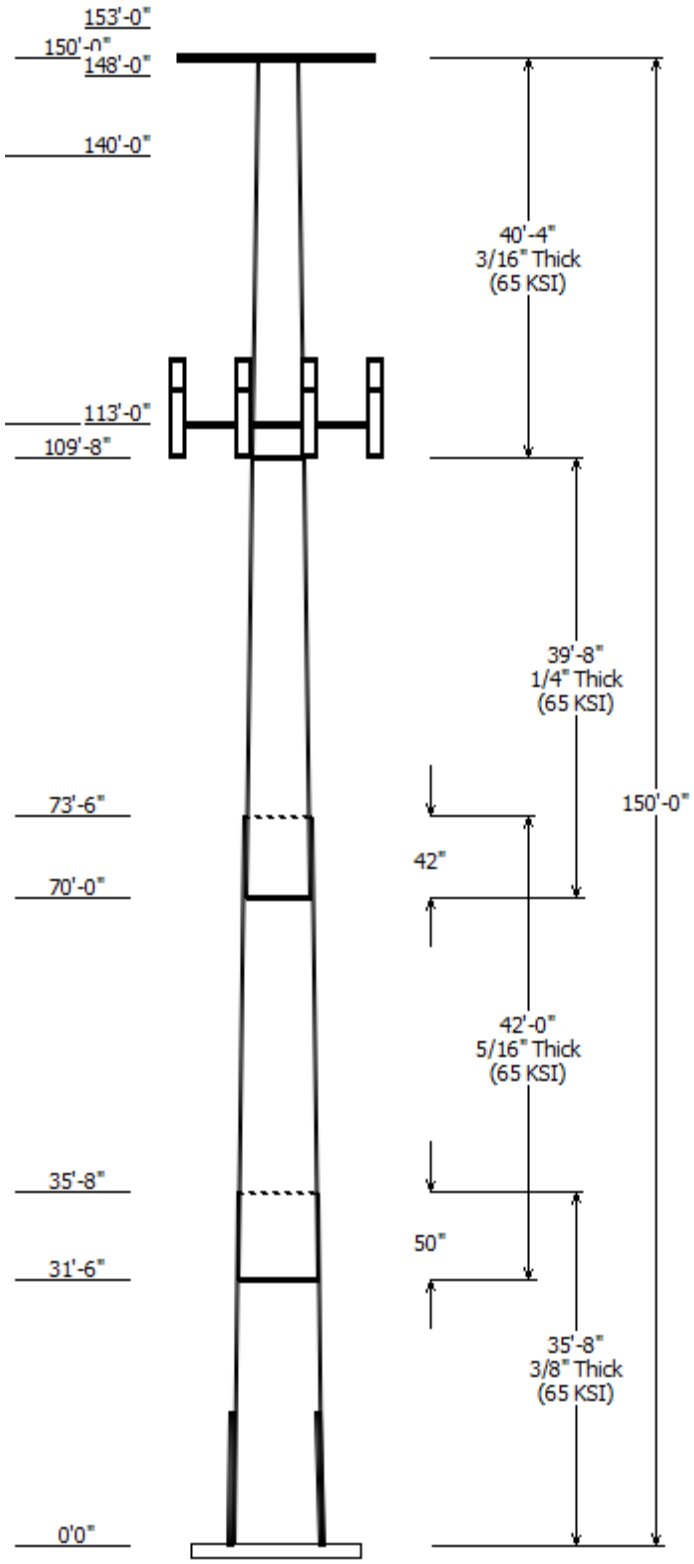
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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

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

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

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



Job Information

Client :	VERIZON WIRELESS		
Pole :	302519	Code:	ANSI/TIA-222-H
Location :	Southbury, CT		
Description :	150 ft ITT Meyer Type "B" Monopole	Risk Category :	II
Shape :	12 Sides	Exposure :	B
Height :	150.00 (ft)	Topo Method :	Method 2
Base Elev (ft):	0.00	Topographic Feature :	Hill
Taper:	0.143833 (in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	35.667	30.32	35.45	0.375		0.000	12 Sides	65
2	42.000	25.50	31.54	0.313	Slip Joint	50.000	12 Sides	65
3	39.667	20.80	26.50	0.250	Slip Joint	42.000	12 Sides	65
4	40.333	15.00	20.80	0.188	Butt Joint	0.000	12 Sides	65

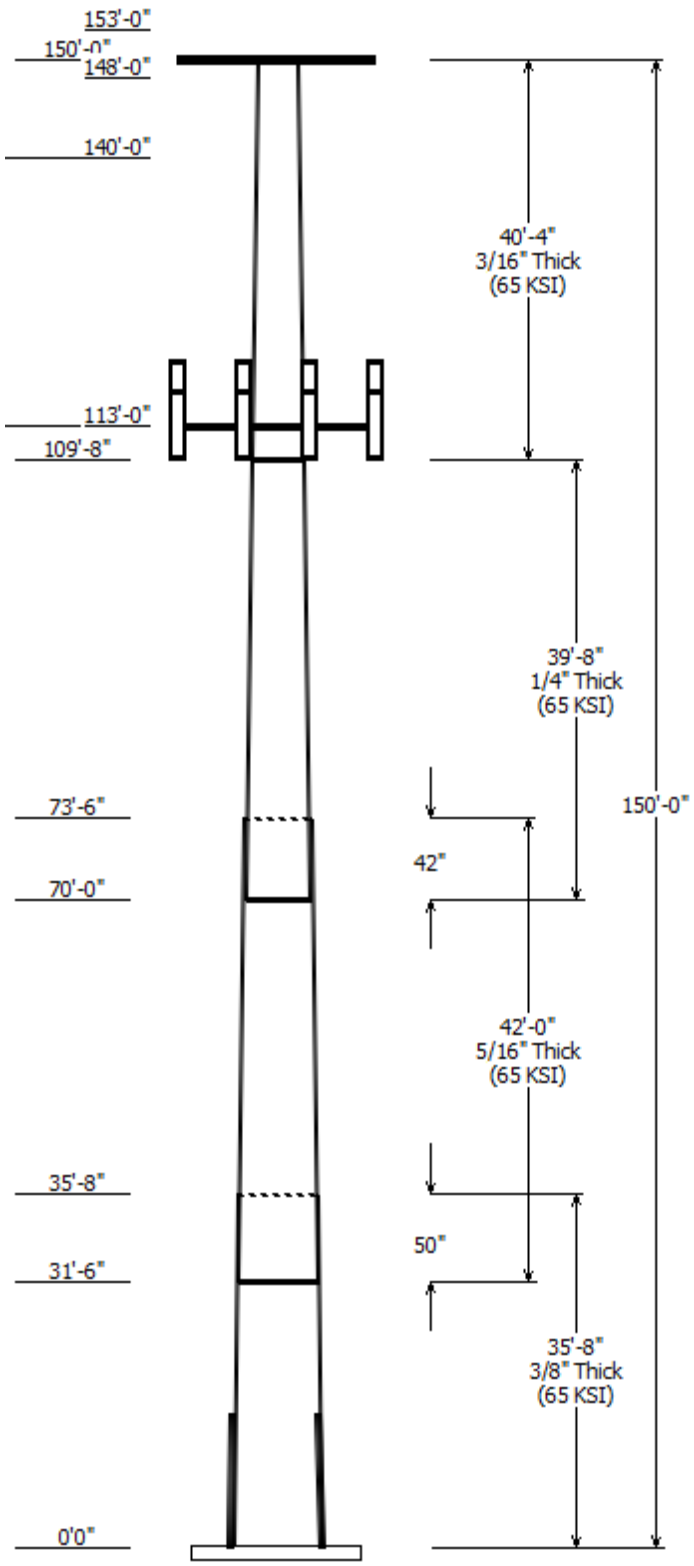
Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
153.000	153.000	3	CCI DMP65R-BU6DA
153.000	153.000	3	CCI HPA-65R-BUU-H6
153.000	153.000	3	Quintel QS66512-2
153.000	153.000	3	Ericsson RRUS-32 B30 (77 lbs)
153.000	153.000	3	Ericsson RRUS 32 B2
153.000	153.000	3	Ericsson RRUS 32 B66A
153.000	153.000	3	Ericsson RRUS 4449 B5, B12
153.000	153.000	3	Ericsson RRUS 4478 B14
153.000	153.000	3	Raycap DC6-48-60-18-8F
153.000	153.000	3	Powerwave Allgon TT19-
153.000	153.000	6	Kaelus DBC0061F1V51-1
153.000	153.000	6	Powerwave Allgon 7020.00
150.000	150.000	1	Flat Platform w/ Handrails
148.000	148.000	3	Ericsson RRUS 11 (Band 12) (55
140.000	140.000	3	Flush Mounts
113.000	113.000	3	Round T-Arms
113.000	113.000	6	JMA Wireless MX06FRO660-03
113.000	114.000	3	Andrew LNX-6514DS-VTM
113.000	113.000	3	Samsung MT6407-77A
113.000	113.000	1	Raycap RCMDC-6627-PF-48
113.000	113.000	3	Samsung RF4439d-25A
113.000	113.000	3	Samsung RF4440d-13A

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	22.000	#20 w/ Angle	Yes
0.000	22.000	#20 w/ Angle	Yes
0.000	22.000	#20 w/ Angle	Yes
0.000	22.000	#20 w/ Angle	Yes
0.000	113.0	1 5/8" Coax	No
0.000	113.0	1 5/8" Hybriflex	No
0.000	113.0	1 5/8" Hybriflex	No
0.000	153.0	0.39" (10mm)	No
0.000	153.0	0.78" (19.7mm) 8	No
0.000	153.0	1 1/4" Coax	No
0.000	153.0	2" conduit	No

Load Cases



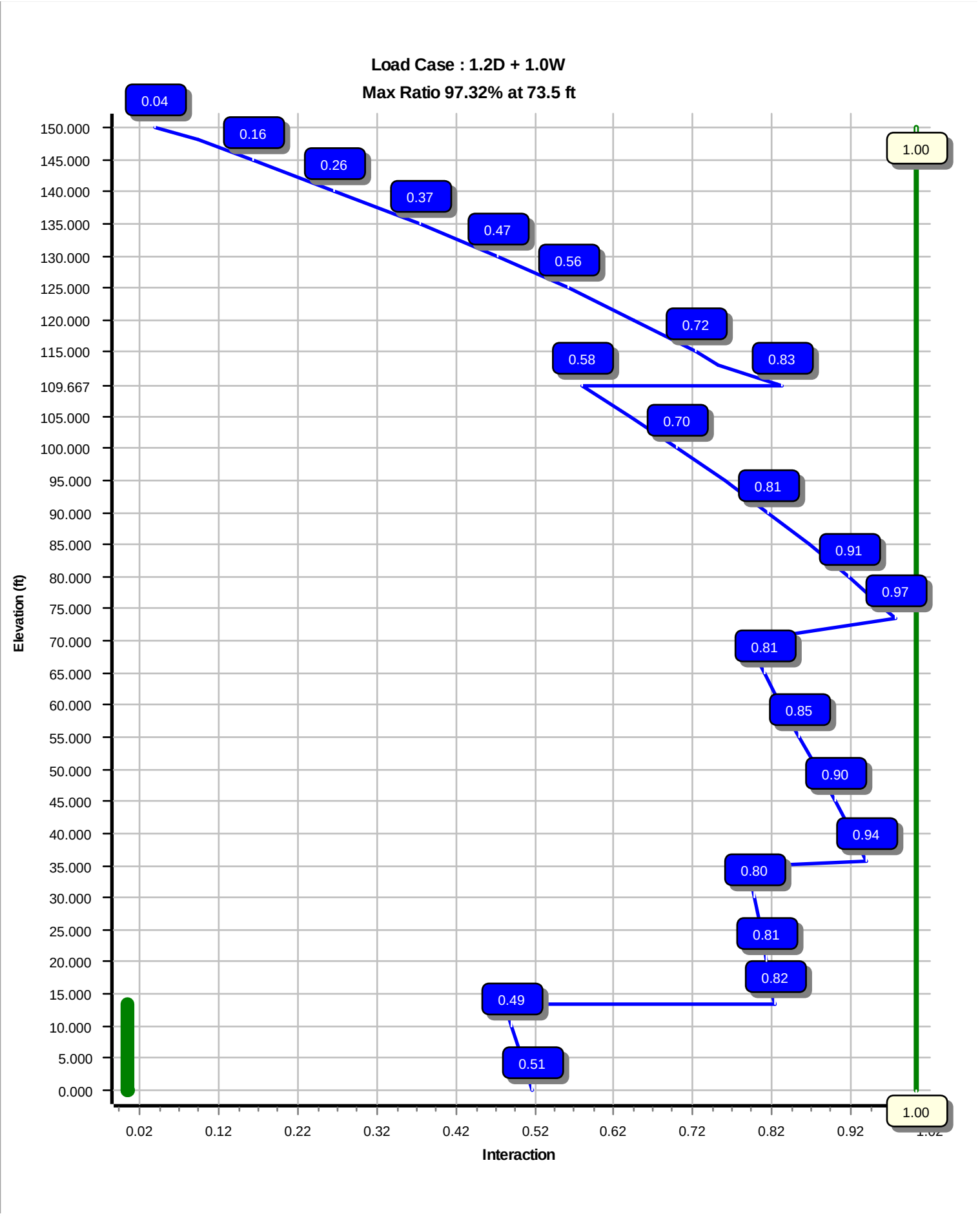
1.2D + 1.0W	113 mph with No Ice
0.9D + 1.0W	113 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	1831.32	17.20	30.43
0.9D + 1.0W	1779.83	17.18	22.82
1.2D + 1.0Di + 1.0Wi	464.68	3.98	39.16
1.2D + 1.0Ev + 1.0Eh	138.57	0.99	29.93
0.9D - 1.0Ev + 1.0Eh	133.28	0.99	20.63
1.0D + 1.0W	455.24	4.33	25.39

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Load Case : 1.2D + 1.0W
Max Ratio 97.32% at 73.5 ft
0.04
0.16
0.26
0.37
0.47
0.56
0.72
0.58
0.83
0.70
0.81
0.91
0.97
0.81
0.85
0.90
0.94
0.80
0.81
0.82
0.49
0.51
1.00
1.00
150.000
145.000
140.000
135.000
130.000
125.000
120.000
115.000
109.667
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 302519 **Code: ANSI/TIA-222-H**

Site Name: Southbury, CT **Engineering Number:13673542_C3_02** **8/5/2021 11:30:19 AM**

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	**New Haven County, CT**	**Height (ft) :**	**150**
Code :	**ANSI/TIA-222-H**	**Base Diameter (in) :**	**35.45**
Shape :	**12 Sides**	**Top Diameter (in) :**	**15.00**
Pole Type :	**Taper**	**Taper (in/ft) :**	**0.144**
Pole Manfacturer :	**ITT Meyer**	**Rotation (deg) :**	**0.00**
Kd (non-service) :	**0.95**	**Ke :**	**0.99**

Ice & Wind Parameters

Exposure Category:	**B**	**Design Wind Speed Without Ice:**	**113 mph**
Risk Category:	**II**	**Design Wind Speed With Ice:**	**49 mph**
Topographic Factor Procedure:	**Method 2**	**Operational Wind Speed:**	**60 mph**
Feature:	**Hill**	**Design Ice Thickness:**	**0.85 in**
Crest Height (H):	**132 ft**	**HMSL:**	**346.00 ft**
Crest Length (L):	**456 ft**		
Distance from Apex (x):	**379 ft**		
Upwind / Downwind	**Downwind**		

Seismic Parameters

Analysis Method:	**Equivalent Lateral Force Method**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**3.72**				
T_L (sec):	**6**	**p:**	**1.3**	**C_s:**	**0.030**
S_s:	**0.202**	**S_1:**	**0.055**	**C_s Max:**	**0.030**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.215**	**S_{d1}:**	**0.088**		

Load Cases

1.2D + 1.0W	**113 mph with No Ice**
0.9D + 1.0W	**113 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**49 mph with 0.85 in Radial Ice**
1.2D + 1.0Ev + 1.0Eh	**Seismic**
0.9D - 1.0Ev + 1.0Eh	**Seismic (Reduced DL)**
1.0D + 1.0W	**Serviceability 60 mph**

Site Number: 302519 **Code: ANSI/TIA-222-H**

Site Name: Southbury, CT **Engineering Number:13673542_C3_02** **8/5/2021 11:30:19 AM**

Customer: VERIZON WIRELESS

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	35.667	0.3750	65		0.00	4,764	35.45	0.00	42.35	6650.7	22.65	94.53	30.32	35.67	36.16	4138.5	18.99	80.85	0.143833
2-12	42.000	0.3125	65	Slip	50.00	4,057	31.54	31.50	31.43	3912.7	24.37	100.94	25.50	73.50	25.35	2053.1	19.19	81.61	0.143833
3-12	39.667	0.2500	65	Slip	42.00	2,543	26.50	70.00	21.14	1859.9	25.73	106.03	20.80	109.67	16.54	891.9	19.62	83.20	0.143833
4-12	40.333	0.1875	65	Butt	0.00	1,468	20.80	109.67	12.45	675.0	27.05	110.94	15.00	150.00	8.94	250.5	18.76	80.00	0.143833
				Shaft Weight		12,832													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
153.00	Powerwave Allgon 7020.00 Dual	6	0.75	0.000	2.20	0.339	0.50	8.01	0.572	0.50
153.00	Kaelus DBC0061F1V51-1	6	0.75	0.000	12.70	0.413	0.50	19.98	0.664	0.50
153.00	Powerwave Allgon TT19-	3	0.75	0.000	16.00	0.553	0.50	27.48	0.844	0.50
153.00	Raycap DC6-48-60-18-8F	3	0.75	0.000	31.80	1.470	0.50	66.86	1.867	0.50
153.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	91.32	2.352	0.50
153.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	107.63	2.499	0.50
153.00	Ericsson RRUS 32 B66A	3	0.75	0.000	50.70	2.720	0.50	92.35	3.381	0.50
153.00	Ericsson RRUS 32 B2	3	0.75	0.000	53.00	2.743	0.50	94.80	3.408	0.50
153.00	Ericsson RRUS-32 B30 (77 lbs)	3	0.75	0.000	77.00	3.314	0.50	132.27	4.044	0.50
153.00	Quintel QS66512-2	3	0.75	0.000	111.00	8.133	0.74	224.25	9.717	0.74
153.00	CCI HPA-65R-BUU-H6	3	0.75	0.000	51.00	9.658	0.69	175.68	11.233	0.69
153.00	CCI DMP65R-BU6DA	3	0.75	0.000	79.40	12.709	0.63	225.80	14.294	0.63
150.00	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	2,807.66	54.319	1.00
148.00	Ericsson RRUS 11 (Band 12) (55	3	0.75	0.000	55.00	2.522	0.50	93.17	3.112	0.50
140.00	Flush Mounts	3	1.00	0.000	200.00	3.500	1.00	396.43	5.563	1.00
113.00	Samsung RF4440d-13A	3	0.80	0.000	70.30	1.875	0.50	103.65	2.374	0.50
113.00	Samsung RF4439d-25A	3	0.80	0.000	74.70	2.500	0.50	118.88	3.079	0.50
113.00	Raycap RCMDC-6627-PF-48	1	0.80	0.000	32.00	4.056	0.50	102.24	4.810	0.50
113.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	137.94	5.548	0.61
113.00	Andrew LNX-6514DS-VTM (72.7"	3	0.80	1.000	38.80	8.173	0.69	136.04	9.731	0.69
113.00	Round T-Arms	3	0.75	0.000	250.00	9.700	0.67	365.51	14.257	0.67
113.00	JMA Wireless MX06FRO660-03	6	0.80	0.000	60.00	9.872	0.71	192.52	11.389	0.71
Totals	Num Loadings:22	71			6,595.00			12,003.08		

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	153.00	3	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	12	1 1/4" Coax	1.55	0.63	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	3	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	113.00	11	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	113.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	113.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	22.00	1	#20 w/ Angle Brackets	4.00	4.68	N	1	0.00	0.00	0	1.00	Y	
0.00	22.00	1	#20 w/ Angle Brackets	4.00	4.68	N	1	0.00	0.00	90	1.00	Y	
0.00	22.00	1	#20 w/ Angle Brackets	4.00	4.68	N	1	0.00	0.00	180	1.00	Y	
0.00	22.00	1	#20 w/ Angle Brackets	4.00	4.68	N	1	0.00	0.00	270	1.00	Y	

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections			Connectors	Continuation?
						Description	Spacing (in)	Len (in)		
0.00	13.50	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No

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)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ix (in^4)	Additional Reinforcing Weight (lb)
0.00		0.3750	35.450	42.353	6,650.7	22.65	94.53	80.0	362.4	0.0	0.0	19.64	4,406	0.0
5.00		0.3750	34.731	41.485	6,249.9	22.14	92.62	80.6	347.6	0.0	713.2	19.64	4,258	334.0
10.00		0.3750	34.012	40.616	5,865.6	21.62	90.70	81.1	333.2	0.0	698.4	19.64	4,112	334.0
13.50	Reinf. Top	0.3750	33.508	40.008	5,606.2	21.26	89.36	81.5	323.2	0.0	480.1	19.64	4,012	233.8
15.00		0.3750	33.292	39.748	5,497.4	21.11	88.78	81.7	319.0	0.0	203.5			
20.00		0.3750	32.573	38.879	5,144.9	20.60	86.86	81.9	305.1	0.0	668.9			
25.00		0.3750	31.854	38.011	4,807.8	20.08	84.94	81.9	291.6	0.0	654.1			
30.00		0.3750	31.135	37.143	4,485.7	19.57	83.03	81.9	278.3	0.0	639.3			
31.50	Bot - Section 2	0.3750	30.919	36.882	4,392.0	19.41	82.45	81.9	274.4	0.0	188.9			
35.00		0.3750	30.416	36.274	4,178.4	19.05	81.11	81.9	265.4	0.0	806.9			
35.67	Top - Section 1	0.3125	30.945	30.824	3,691.8	23.85	99.02	78.7	230.5	0.0	152.2			
40.00		0.3125	30.322	30.197	3,471.0	23.32	97.03	79.3	221.1	0.0	449.9			
45.00		0.3125	29.603	29.473	3,227.4	22.70	94.73	80.0	210.6	0.0	507.6			
50.00		0.3125	28.883	28.749	2,995.4	22.09	92.43	80.6	200.3	0.0	495.3			
55.00		0.3125	28.164	28.026	2,774.9	21.47	90.13	81.3	190.3	0.0	483.0			
60.00		0.3125	27.445	27.302	2,565.4	20.85	87.82	81.9	180.6	0.0	470.7			
65.00		0.3125	26.726	26.578	2,366.8	20.24	85.52	81.9	171.1	0.0	458.4			
70.00	Bot - Section 3	0.3125	26.007	25.855	2,178.7	19.62	83.22	81.9	161.8	0.0	446.0			
73.50	Top - Section 2	0.2500	26.003	20.731	1,755.0	25.19	104.01	77.2	130.4	0.0	554.2			
75.00		0.2500	25.788	20.558	1,711.3	24.96	103.15	77.5	128.2	0.0	105.4			
80.00		0.2500	25.068	19.979	1,570.7	24.19	100.27	78.3	121.0	0.0	344.8			
85.00		0.2500	24.349	19.400	1,438.1	23.42	97.40	79.2	114.1	0.0	335.0			
90.00		0.2500	23.630	18.821	1,313.2	22.65	94.52	80.0	107.4	0.0	325.1			
95.00		0.2500	22.911	18.242	1,195.7	21.88	91.64	80.9	100.8	0.0	315.3			
100.0		0.2500	22.192	17.663	1,085.4	21.11	88.77	81.7	94.5	0.0	305.4			
105.0		0.2500	21.472	17.084	982.1	20.33	85.89	81.9	88.4	0.0	295.6			
109.6	Top - Section 3	0.2500	20.801	16.544	891.9	19.62	83.20	81.9	82.8	0.0	267.0			
109.6	Bot - Section 4	0.1875	20.801	12.446	675.0	27.05	110.94	75.2	62.7	0.0				
110.0		0.1875	20.753	12.417	670.3	26.98	110.68	75.3	62.4	0.0	14.1			
113.0		0.1875	20.322	12.156	629.0	26.36	108.38	76.0	59.8	0.0	125.4			
115.0		0.1875	20.034	11.982	602.4	25.95	106.85	76.4	58.1	0.0	82.1			
120.0		0.1875	19.315	11.548	539.3	24.92	103.01	77.5	53.9	0.0	200.2			
125.0		0.1875	18.596	11.114	480.7	23.90	99.18	78.7	49.9	0.0	192.8			
130.0		0.1875	17.877	10.680	426.5	22.87	95.34	79.8	46.1	0.0	185.4			
135.0		0.1875	17.158	10.246	376.6	21.84	91.51	80.9	42.4	0.0	178.0			
140.0		0.1875	16.438	9.811	330.7	20.81	87.67	81.9	38.9	0.0	170.6			
145.0		0.1875	15.719	9.377	288.7	19.78	83.84	81.9	35.5	0.0	163.2			
148.0		0.1875	15.288	9.117	265.3	19.17	81.53	81.9	33.5	0.0	94.4			
150.0		0.1875	15.000	8.943	250.5	18.76	80.00	81.9	32.3	0.0	61.5			
											12,832.1			901.8

Load Case: 1.2D + 1.0W — 113 mph with No Ice — 31 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		223.3	0.0					0.0	0.0	223.3	0.0	0.0	0.0
5.00		441.4	855.8					98.3	716.2	539.7	1,572.1	0.0	0.0
10.00		367.7	838.1					98.1	716.2	465.8	1,554.3	0.0	0.0
13.50	Reinf. Top	213.0	576.1					68.5	501.4	281.5	1,077.5	0.0	0.0
15.00		271.3	244.3					29.3	94.6	300.6	338.9	0.0	0.0
20.00		410.8	802.7					97.6	315.4	508.4	1,118.1	0.0	0.0
25.00		359.6	784.9					97.3	248.0	457.0	1,033.0	0.0	0.0
30.00		203.3	767.2					0.0	203.1	203.3	970.3	0.0	0.0
31.50	Bot - Section 2	158.7	226.7					0.0	60.9	158.7	287.6	0.0	0.0
35.00		133.6	968.3					0.0	142.2	133.6	1,110.4	0.0	0.0
35.67	Top - Section 1	162.2	182.6					0.0	27.1	162.2	209.7	0.0	0.0
40.00		304.7	539.9					0.0	176.0	304.7	715.9	0.0	0.0
45.00		328.8	609.1					0.0	203.1	328.8	812.2	0.0	0.0
50.00		330.2	594.4					0.0	203.1	330.2	797.5	0.0	0.0
55.00		330.4	579.6					0.0	203.1	330.4	782.7	0.0	0.0
60.00		329.7	564.8					0.0	203.1	329.7	767.9	0.0	0.0
65.00		328.1	550.0					0.0	203.1	328.1	753.1	0.0	0.0
70.00	Bot - Section 3	279.4	535.3					0.0	203.1	279.4	738.4	0.0	0.0
73.50	Top - Section 2	165.3	665.1					0.0	142.2	165.3	807.2	0.0	0.0
75.00		213.2	126.4					0.0	60.9	213.2	187.4	0.0	0.0
80.00		325.5	413.8					0.0	203.1	325.5	616.9	0.0	0.0
85.00		321.5	402.0					0.0	203.1	321.5	605.1	0.0	0.0
90.00		316.8	390.2					0.0	203.1	316.8	593.3	0.0	0.0
95.00		311.7	378.4					0.0	203.1	311.7	581.5	0.0	0.0
100.00		306.2	366.5					0.0	203.1	306.2	569.6	0.0	0.0
105.00		290.4	354.7					0.0	203.1	290.4	557.8	0.0	0.0
109.67	Top - Section 3	148.6	320.4					0.0	189.6	148.6	510.0	0.0	0.0
110.00		97.4	16.9					0.0	13.5	97.4	30.4	0.0	0.0
113.00	Appurtenance(s)	145.3	150.5	2,632.1	0.0	472.4	2,325.8	0.0	121.9	2,777.4	2,598.2	0.0	0.0
115.00		199.6	98.6					0.0	53.4	199.6	151.9	0.0	0.0
120.00		280.1	240.2					0.0	133.4	280.1	373.6	0.0	0.0
125.00		272.7	231.3					0.0	133.4	272.7	364.7	0.0	0.0
130.00		265.0	222.5					0.0	133.4	265.0	355.9	0.0	0.0
135.00		257.0	213.6					0.0	133.4	257.0	347.0	0.0	0.0
140.00	Appurtenance(s)	248.7	204.7	387.7	0.0	0.0	720.0	0.0	133.4	636.4	1,058.1	0.0	0.0
145.00		193.5	195.9					0.0	133.4	193.5	329.3	0.0	0.0
148.00	Appurtenance(s)	117.9	113.3	106.4	0.0	0.0	198.0	0.0	80.0	224.3	391.3	0.0	0.0
150.00	Appurtenance(s)	46.6	73.7	1,595.6	0.0	0.0	2,400.0	0.0	53.4	1,642.2	2,527.1	0.0	0.0
								Totals:		14,910.2	28,195.8	0.00	0.00

Load Case: 1.2D + 1.0W — 113 mph with No Ice — 31 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	-30.43	-17.20	0.00	-1,831.32	0.00	1,831.32	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.514
5.00	-28.79	-16.77	0.00	-1,745.34	0.00	1,745.34	3,008.23	728.06	2,359.94	2,100.75	0.12	-0.23	0.501
10.00	-27.19	-16.39	0.00	-1,661.50	0.00	1,661.50	2,965.74	712.82	2,262.21	2,027.26	0.49	-0.46	0.488
13.50	-26.08	-16.15	0.00	-1,604.14	0.00	1,604.14	2,935.48	702.15	2,195.03	1,976.22	0.89	-0.62	0.480
13.50	-26.08	-16.15	0.00	-1,604.14	0.00	1,604.14	2,935.48	702.15	2,195.03	1,976.22	0.89	-0.62	0.821
15.00	-25.68	-15.95	0.00	-1,579.92	0.00	1,579.92	2,922.38	697.58	2,166.54	1,954.44	1.09	-0.69	0.818
20.00	-24.46	-15.60	0.00	-1,500.18	0.00	1,500.18	2,865.81	682.34	2,072.95	1,874.26	2.03	-1.09	0.809
25.00	-23.33	-15.28	0.00	-1,422.20	0.00	1,422.20	2,801.80	667.09	1,981.42	1,791.00	3.39	-1.50	0.803
30.00	-22.29	-15.15	0.00	-1,345.79	0.00	1,345.79	2,737.79	651.85	1,891.95	1,709.63	5.18	-1.91	0.796
31.50	-21.96	-15.07	0.00	-1,323.07	0.00	1,323.07	2,718.59	647.28	1,865.51	1,685.59	5.80	-2.03	0.794
35.00	-20.81	-14.95	0.00	-1,270.34	0.00	1,270.34	2,673.78	636.61	1,804.55	1,630.15	7.40	-2.33	0.788
35.67	-20.55	-14.86	0.00	-1,260.37	0.00	1,260.37	2,183.22	540.96	1,563.37	1,360.34	7.73	-2.38	0.937
40.00	-19.74	-14.67	0.00	-1,195.98	0.00	1,195.98	2,154.64	529.95	1,500.42	1,314.94	10.06	-2.75	0.919
45.00	-18.83	-14.45	0.00	-1,122.64	0.00	1,122.64	2,120.84	517.25	1,429.39	1,262.98	13.19	-3.23	0.899
50.00	-17.93	-14.23	0.00	-1,050.37	0.00	1,050.37	2,086.17	504.55	1,360.08	1,211.51	16.82	-3.70	0.876
55.00	-17.06	-13.99	0.00	-979.23	0.00	979.23	2,050.62	491.85	1,292.50	1,160.56	20.95	-4.19	0.853
60.00	-16.20	-13.74	0.00	-909.29	0.00	909.29	2,012.44	479.15	1,226.64	1,109.22	25.59	-4.67	0.829
65.00	-15.36	-13.48	0.00	-840.60	0.00	840.60	1,959.10	466.45	1,162.50	1,050.87	30.74	-5.16	0.809
70.00	-14.56	-13.23	0.00	-773.21	0.00	773.21	1,905.75	453.75	1,100.08	994.10	36.39	-5.64	0.786
73.50	-13.72	-13.05	0.00	-726.89	0.00	726.89	1,441.17	363.84	883.97	755.32	40.64	-5.98	0.973
75.00	-13.47	-12.90	0.00	-707.32	0.00	707.32	1,433.76	360.79	869.22	745.08	42.54	-6.13	0.960
80.00	-12.77	-12.63	0.00	-642.82	0.00	642.82	1,408.50	350.63	820.97	711.14	49.25	-6.69	0.914
85.00	-12.10	-12.36	0.00	-579.66	0.00	579.66	1,382.37	340.47	774.10	677.52	56.54	-7.25	0.866
90.00	-11.44	-12.07	0.00	-517.88	0.00	517.88	1,355.35	330.31	728.60	644.25	64.40	-7.79	0.814
95.00	-10.80	-11.78	0.00	-457.52	0.00	457.52	1,327.47	320.15	684.48	611.38	72.81	-8.32	0.758
100.00	-10.18	-11.48	0.00	-398.62	0.00	398.62	1,298.70	309.99	641.74	578.94	81.77	-8.83	0.698
105.00	-9.59	-11.18	0.00	-341.21	0.00	341.21	1,259.27	299.83	600.38	542.76	91.23	-9.31	0.638
109.67	-9.07	-10.99	0.00	-289.02	0.00	289.02	1,219.44	290.34	563.02	508.77	100.51	-9.74	0.577
109.67	-9.07	-10.99	0.00	-289.02	0.00	289.02	842.50	218.42	424.75	353.65	100.51	-9.74	0.831
110.00	-9.02	-10.92	0.00	-285.36	0.00	285.36	841.37	217.91	422.77	352.35	101.19	-9.77	0.823
113.00	-6.90	-7.77	0.00	-252.14	0.00	252.14	831.08	213.34	405.23	340.67	107.40	-10.11	0.750
115.00	-6.74	-7.59	0.00	-236.61	0.00	236.61	824.04	210.29	393.73	332.91	111.67	-10.33	0.720
120.00	-6.36	-7.30	0.00	-198.68	0.00	198.68	805.83	202.67	365.72	313.65	122.70	-10.85	0.643
125.00	-6.00	-7.01	0.00	-162.19	0.00	162.19	786.74	195.05	338.75	294.59	134.25	-11.32	0.559
130.00	-5.66	-6.72	0.00	-127.15	0.00	127.15	766.78	187.43	312.81	275.79	146.26	-11.75	0.470
135.00	-5.33	-6.42	0.00	-93.57	0.00	93.57	745.94	179.81	287.90	257.27	158.68	-12.12	0.372
140.00	-4.41	-5.60	0.00	-61.45	0.00	61.45	723.20	172.19	264.02	238.74	171.44	-12.41	0.265
145.00	-4.12	-5.35	0.00	-33.47	0.00	33.47	691.20	164.57	241.18	217.96	184.45	-12.62	0.161
148.00	-3.78	-5.04	0.00	-17.43	0.00	17.43	671.99	160.00	227.97	205.95	192.34	-12.69	0.091
150.00	0.00	-4.09	0.00	-7.34	0.00	7.34	659.19	156.95	219.37	198.13	197.62	-12.72	0.038

Load Case: 0.9D + 1.0W — 113 mph with No Ice (Reduced DL) — 31 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		223.3	0.0					0.0	0.0	223.3	0.0	0.0	0.0
5.00		441.4	641.9					98.3	537.2	539.7	1,179.0	0.0	0.0
10.00		367.7	628.6					98.1	537.2	465.8	1,165.7	0.0	0.0
13.50	Reinf. Top	213.0	432.1					68.5	376.0	281.5	808.1	0.0	0.0
15.00		271.3	183.2					29.3	71.0	300.6	254.2	0.0	0.0
20.00		410.8	602.0					97.6	236.6	508.4	838.6	0.0	0.0
25.00		359.6	588.7					97.3	186.0	457.0	774.7	0.0	0.0
30.00		203.3	575.4					0.0	152.3	203.3	727.7	0.0	0.0
31.50	Bot - Section 2	158.7	170.0					0.0	45.7	158.7	215.7	0.0	0.0
35.00		133.6	726.2					0.0	106.6	133.6	832.8	0.0	0.0
35.67	Top - Section 1	162.2	137.0					0.0	20.3	162.2	157.3	0.0	0.0
40.00		304.7	404.9					0.0	132.0	304.7	536.9	0.0	0.0
45.00		328.8	456.8					0.0	152.3	328.8	609.2	0.0	0.0
50.00		330.2	445.8					0.0	152.3	330.2	598.1	0.0	0.0
55.00		330.4	434.7					0.0	152.3	330.4	587.0	0.0	0.0
60.00		329.7	423.6					0.0	152.3	329.7	575.9	0.0	0.0
65.00		328.1	412.5					0.0	152.3	328.1	564.8	0.0	0.0
70.00	Bot - Section 3	279.4	401.4					0.0	152.3	279.4	553.8	0.0	0.0
73.50	Top - Section 2	165.3	498.8					0.0	106.6	165.3	605.4	0.0	0.0
75.00		213.2	94.8					0.0	45.7	213.2	140.5	0.0	0.0
80.00		325.5	310.4					0.0	152.3	325.5	462.7	0.0	0.0
85.00		321.5	301.5					0.0	152.3	321.5	453.8	0.0	0.0
90.00		316.8	292.6					0.0	152.3	316.8	445.0	0.0	0.0
95.00		311.7	283.8					0.0	152.3	311.7	436.1	0.0	0.0
100.00		306.2	274.9					0.0	152.3	306.2	427.2	0.0	0.0
105.00		290.4	266.0					0.0	152.3	290.4	418.4	0.0	0.0
109.67	Top - Section 3	148.6	240.3					0.0	142.2	148.6	382.5	0.0	0.0
110.00		97.4	12.7					0.0	10.1	97.4	22.8	0.0	0.0
113.00	Appurtenance(s)	145.3	112.9	2,632.1	0.0	472.4	1,744.4	0.0	91.4	2,777.4	1,948.7	0.0	0.0
115.00		199.6	73.9					0.0	40.0	199.6	113.9	0.0	0.0
120.00		280.1	180.2					0.0	100.0	280.1	280.2	0.0	0.0
125.00		272.7	173.5					0.0	100.0	272.7	273.5	0.0	0.0
130.00		265.0	166.9					0.0	100.0	265.0	266.9	0.0	0.0
135.00		257.0	160.2					0.0	100.0	257.0	260.2	0.0	0.0
140.00	Appurtenance(s)	248.7	153.6	387.7	0.0	0.0	540.0	0.0	100.0	636.4	793.6	0.0	0.0
145.00		193.5	146.9					0.0	100.0	193.5	246.9	0.0	0.0
148.00	Appurtenance(s)	117.9	85.0	106.4	0.0	0.0	148.5	0.0	60.0	224.3	293.5	0.0	0.0
150.00	Appurtenance(s)	46.6	55.3	1,595.6	0.0	0.0	1,800.0	0.0	40.0	1,642.2	1,895.3	0.0	0.0
								Totals:		14,910.2	21,146.8	0.00	0.00

Load Case: 0.9D + 1.0W — 113 mph with No Ice (Reduced DL) — 31 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	-22.82	-17.18	0.00	-1,779.83	0.00	1,779.83	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.498
5.00	-21.57	-16.72	0.00	-1,693.94	0.00	1,693.94	3,008.23	728.06	2,359.94	2,100.75	0.12	-0.22	0.485
10.00	-20.36	-16.32	0.00	-1,610.33	0.00	1,610.33	2,965.74	712.82	2,262.21	2,027.26	0.47	-0.45	0.472
13.50	-19.52	-16.07	0.00	-1,553.23	0.00	1,553.23	2,935.48	702.15	2,195.03	1,976.22	0.86	-0.60	0.463
13.50	-19.52	-16.07	0.00	-1,553.23	0.00	1,553.23	2,935.48	702.15	2,195.03	1,976.22	0.86	-0.60	0.793
15.00	-19.20	-15.84	0.00	-1,529.13	0.00	1,529.13	2,922.38	697.58	2,166.54	1,954.44	1.06	-0.67	0.789
20.00	-18.27	-15.44	0.00	-1,449.93	0.00	1,449.93	2,865.81	682.34	2,072.95	1,874.26	1.97	-1.06	0.780
25.00	-17.40	-15.09	0.00	-1,372.72	0.00	1,372.72	2,801.80	667.09	1,981.42	1,791.00	3.29	-1.45	0.773
30.00	-16.61	-14.94	0.00	-1,297.28	0.00	1,297.28	2,737.79	651.85	1,891.95	1,709.63	5.02	-1.84	0.765
31.50	-16.35	-14.83	0.00	-1,274.88	0.00	1,274.88	2,718.59	647.28	1,865.51	1,685.59	5.62	-1.97	0.763
35.00	-15.48	-14.71	0.00	-1,222.97	0.00	1,222.97	2,673.78	636.61	1,804.55	1,630.15	7.16	-2.25	0.757
35.67	-15.28	-14.60	0.00	-1,213.16	0.00	1,213.16	2,183.22	540.96	1,563.37	1,360.34	7.48	-2.30	0.900
40.00	-14.65	-14.38	0.00	-1,149.90	0.00	1,149.90	2,154.64	529.95	1,500.42	1,314.94	9.73	-2.66	0.882
45.00	-13.95	-14.13	0.00	-1,078.03	0.00	1,078.03	2,120.84	517.25	1,429.39	1,262.98	12.76	-3.11	0.861
50.00	-13.26	-13.87	0.00	-1,007.39	0.00	1,007.39	2,086.17	504.55	1,360.08	1,211.51	16.26	-3.57	0.839
55.00	-12.59	-13.60	0.00	-938.04	0.00	938.04	2,050.62	491.85	1,292.50	1,160.56	20.25	-4.03	0.815
60.00	-11.93	-13.33	0.00	-870.02	0.00	870.02	2,012.44	479.15	1,226.64	1,109.22	24.72	-4.50	0.791
65.00	-11.29	-13.05	0.00	-803.38	0.00	803.38	1,959.10	466.45	1,162.50	1,050.87	29.67	-4.96	0.771
70.00	-10.67	-12.79	0.00	-738.14	0.00	738.14	1,905.75	453.75	1,100.08	994.10	35.11	-5.43	0.749
73.50	-10.04	-12.61	0.00	-693.37	0.00	693.37	1,441.17	363.84	883.97	755.32	39.20	-5.75	0.926
75.00	-9.84	-12.44	0.00	-674.45	0.00	674.45	1,433.76	360.79	869.22	745.08	41.03	-5.89	0.913
80.00	-9.31	-12.16	0.00	-612.24	0.00	612.24	1,408.50	350.63	820.97	711.14	47.47	-6.43	0.869
85.00	-8.79	-11.86	0.00	-551.46	0.00	551.46	1,382.37	340.47	774.10	677.52	54.47	-6.96	0.822
90.00	-8.28	-11.57	0.00	-492.14	0.00	492.14	1,355.35	330.31	728.60	644.25	62.02	-7.47	0.771
95.00	-7.79	-11.27	0.00	-434.29	0.00	434.29	1,327.47	320.15	684.48	611.38	70.09	-7.97	0.717
100.00	-7.33	-10.96	0.00	-377.95	0.00	377.95	1,298.70	309.99	641.74	578.94	78.67	-8.46	0.660
105.00	-6.88	-10.67	0.00	-323.13	0.00	323.13	1,259.27	299.83	600.38	542.76	87.74	-8.92	0.602
109.67	-6.48	-10.48	0.00	-273.35	0.00	273.35	1,219.44	290.34	563.02	508.77	96.62	-9.32	0.544
109.67	-6.48	-10.48	0.00	-273.35	0.00	273.35	842.50	218.42	424.75	353.65	96.62	-9.32	0.783
110.00	-6.44	-10.40	0.00	-269.86	0.00	269.86	841.37	217.91	422.77	352.35	97.27	-9.35	0.776
113.00	-4.95	-7.37	0.00	-238.18	0.00	238.18	831.08	213.34	405.23	340.67	103.22	-9.67	0.706
115.00	-4.83	-7.18	0.00	-223.45	0.00	223.45	824.04	210.29	393.73	332.91	107.30	-9.88	0.678
120.00	-4.54	-6.89	0.00	-187.55	0.00	187.55	805.83	202.67	365.72	313.65	117.86	-10.37	0.605
125.00	-4.27	-6.61	0.00	-153.10	0.00	153.10	786.74	195.05	338.75	294.59	128.90	-10.82	0.526
130.00	-4.02	-6.32	0.00	-120.07	0.00	120.07	766.78	187.43	312.81	275.79	140.37	-11.22	0.442
135.00	-3.78	-6.04	0.00	-88.47	0.00	88.47	745.94	179.81	287.90	257.27	152.24	-11.57	0.350
140.00	-3.12	-5.27	0.00	-58.28	0.00	58.28	723.20	172.19	264.02	238.74	164.43	-11.85	0.249
145.00	-2.90	-5.03	0.00	-31.95	0.00	31.95	691.20	164.57	241.18	217.96	176.85	-12.04	0.152
148.00	-2.66	-4.75	0.00	-16.85	0.00	16.85	671.99	160.00	227.97	205.95	184.39	-12.11	0.087
150.00	0.00	-4.09	0.00	-7.34	0.00	7.34	659.19	156.95	219.37	198.13	189.43	-12.14	0.038

Load Case: 1.2D + 1.0Di + 1.0Wi — 49 mph with 0.85 in Radial Ice — 31 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

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		43.9	0.0					0.0	0.0	43.9	0.0	0.0	0.0
5.00		87.1	1,008.5					0.0	751.5	87.1	1,760.0	0.0	0.0
10.00		73.1	1,005.2					0.0	755.9	73.1	1,761.1	0.0	0.0
13.50	Reinf. Top	42.6	696.7					0.0	530.5	42.6	1,227.2	0.0	0.0
15.00		54.5	296.6					0.0	107.4	54.5	404.0	0.0	0.0
20.00		83.0	977.0					0.0	358.8	83.0	1,335.8	0.0	0.0
25.00		79.8	959.8					0.0	265.9	79.8	1,225.7	0.0	0.0
30.00		50.2	941.7					0.0	203.1	50.2	1,144.8	0.0	0.0
31.50	Bot - Section 2	39.2	279.3					0.0	60.9	39.2	340.2	0.0	0.0
35.00		33.0	1,092.4					0.0	142.2	33.0	1,234.5	0.0	0.0
35.67	Top - Section 1	40.2	206.3					0.0	27.1	40.2	233.4	0.0	0.0
40.00		75.5	691.9					0.0	176.0	75.5	867.9	0.0	0.0
45.00		81.6	782.5					0.0	203.1	81.6	985.6	0.0	0.0
50.00		82.1	765.5					0.0	203.1	82.1	968.6	0.0	0.0
55.00		82.3	748.2					0.0	203.1	82.3	951.3	0.0	0.0
60.00		82.3	730.7					0.0	203.1	82.3	933.8	0.0	0.0
65.00		82.1	713.1					0.0	203.1	82.1	916.2	0.0	0.0
70.00	Bot - Section 3	70.0	695.2					0.0	203.1	70.0	898.4	0.0	0.0
73.50	Top - Section 2	41.4	777.7					0.0	142.2	41.4	919.9	0.0	0.0
75.00		53.5	174.5					0.0	60.9	53.5	235.4	0.0	0.0
80.00		81.9	570.3					0.0	203.1	81.9	773.4	0.0	0.0
85.00		81.0	555.1					0.0	203.1	81.0	758.2	0.0	0.0
90.00		80.1	539.8					0.0	203.1	80.1	742.9	0.0	0.0
95.00		79.0	524.4					0.0	203.1	79.0	727.5	0.0	0.0
100.00		77.8	508.9					0.0	203.1	77.8	712.0	0.0	0.0
105.00		74.0	493.3					0.0	203.1	74.0	696.4	0.0	0.0
109.67	Top - Section 3	37.9	446.5					0.0	189.6	37.9	636.1	0.0	0.0
110.00		24.9	25.9					0.0	13.5	24.9	39.4	0.0	0.0
113.00	Appurtenance(s)	37.2	230.1	601.8	0.0	104.5	3,736.2	0.0	121.9	639.0	4,088.2	0.0	0.0
115.00		51.2	151.0					0.0	53.4	51.2	204.4	0.0	0.0
120.00		72.1	367.2					0.0	133.4	72.1	500.6	0.0	0.0
125.00		70.5	354.3					0.0	133.4	70.5	487.7	0.0	0.0
130.00		68.7	341.4					0.0	133.4	68.7	474.8	0.0	0.0
135.00		67.0	328.5					0.0	133.4	67.0	461.8	0.0	0.0
140.00	Appurtenance(s)	65.1	315.4	114.5	0.0	0.0	1,159.3	0.0	133.4	179.6	1,608.1	0.0	0.0
145.00		50.9	302.4					0.0	133.4	50.9	435.8	0.0	0.0
148.00	Appurtenance(s)	31.1	175.7	24.4	0.0	0.0	283.6	0.0	80.0	55.5	539.3	0.0	0.0
150.00	Appurtenance(s)	12.3	114.7	379.7	0.0	0.0	3,003.7	0.0	53.4	392.0	3,171.7	0.0	0.0
								Totals:		3,460.68	35,402.0	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi — 49 mph with 0.85 in Radial Ice — 31 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	-39.16	-3.98	0.00	-464.68	0.00	464.68	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.137
5.00	-37.39	-3.93	0.00	-444.78	0.00	444.78	3,008.23	728.06	2,359.94	2,100.75	0.03	-0.06	0.134
10.00	-35.63	-3.89	0.00	-425.12	0.00	425.12	2,965.74	712.82	2,262.21	2,027.26	0.12	-0.12	0.131
13.50	-34.40	-3.86	0.00	-411.52	0.00	411.52	2,935.48	702.15	2,195.03	1,976.22	0.23	-0.16	0.129
13.50	-34.40	-3.86	0.00	-411.52	0.00	411.52	2,935.48	702.15	2,195.03	1,976.22	0.23	-0.16	0.220
15.00	-33.99	-3.84	0.00	-405.73	0.00	405.73	2,922.38	697.58	2,166.54	1,954.44	0.28	-0.18	0.219
20.00	-32.65	-3.81	0.00	-386.54	0.00	386.54	2,865.81	682.34	2,072.95	1,874.26	0.52	-0.28	0.218
25.00	-31.42	-3.78	0.00	-367.49	0.00	367.49	2,801.80	667.09	1,981.42	1,791.00	0.87	-0.38	0.216
30.00	-30.27	-3.76	0.00	-348.59	0.00	348.59	2,737.79	651.85	1,891.95	1,709.63	1.33	-0.49	0.215
31.50	-29.93	-3.74	0.00	-342.95	0.00	342.95	2,718.59	647.28	1,865.51	1,685.59	1.48	-0.52	0.215
35.00	-28.69	-3.72	0.00	-329.85	0.00	329.85	2,673.78	636.61	1,804.55	1,630.15	1.90	-0.60	0.213
35.67	-28.45	-3.71	0.00	-327.37	0.00	327.37	2,183.22	540.96	1,563.37	1,360.34	1.98	-0.61	0.254
40.00	-27.58	-3.67	0.00	-311.31	0.00	311.31	2,154.64	529.95	1,500.42	1,314.94	2.58	-0.71	0.250
45.00	-26.59	-3.64	0.00	-292.94	0.00	292.94	2,120.84	517.25	1,429.39	1,262.98	3.39	-0.83	0.245
50.00	-25.61	-3.60	0.00	-274.75	0.00	274.75	2,086.17	504.55	1,360.08	1,211.51	4.33	-0.96	0.239
55.00	-24.65	-3.55	0.00	-256.77	0.00	256.77	2,050.62	491.85	1,292.50	1,160.56	5.40	-1.08	0.233
60.00	-23.71	-3.50	0.00	-239.02	0.00	239.02	2,012.44	479.15	1,226.64	1,109.22	6.60	-1.21	0.227
65.00	-22.79	-3.45	0.00	-221.50	0.00	221.50	1,959.10	466.45	1,162.50	1,050.87	7.94	-1.34	0.222
70.00	-21.89	-3.40	0.00	-204.25	0.00	204.25	1,905.75	453.75	1,100.08	994.10	9.41	-1.47	0.217
73.50	-20.97	-3.36	0.00	-192.35	0.00	192.35	1,441.17	363.84	883.97	755.32	10.52	-1.56	0.269
75.00	-20.73	-3.33	0.00	-187.31	0.00	187.31	1,433.76	360.79	869.22	745.08	11.02	-1.60	0.266
80.00	-19.95	-3.28	0.00	-170.64	0.00	170.64	1,408.50	350.63	820.97	711.14	12.77	-1.75	0.254
85.00	-19.19	-3.22	0.00	-154.24	0.00	154.24	1,382.37	340.47	774.10	677.52	14.67	-1.89	0.242
90.00	-18.44	-3.16	0.00	-138.12	0.00	138.12	1,355.35	330.31	728.60	644.25	16.73	-2.04	0.228
95.00	-17.71	-3.10	0.00	-122.30	0.00	122.30	1,327.47	320.15	684.48	611.38	18.94	-2.18	0.213
100.00	-16.99	-3.04	0.00	-106.79	0.00	106.79	1,298.70	309.99	641.74	578.94	21.30	-2.31	0.198
105.00	-16.29	-2.97	0.00	-91.61	0.00	91.61	1,259.27	299.83	600.38	542.76	23.79	-2.44	0.182
109.67	-15.66	-2.92	0.00	-77.76	0.00	77.76	1,219.44	290.34	563.02	508.77	26.24	-2.56	0.166
109.67	-15.66	-2.92	0.00	-77.76	0.00	77.76	842.50	218.42	424.75	353.65	26.24	-2.56	0.239
110.00	-15.61	-2.91	0.00	-76.79	0.00	76.79	841.37	217.91	422.77	352.35	26.42	-2.57	0.237
113.00	-11.56	-2.10	0.00	-67.97	0.00	67.97	831.08	213.34	405.23	340.67	28.06	-2.66	0.214
115.00	-11.35	-2.06	0.00	-63.78	0.00	63.78	824.04	210.29	393.73	332.91	29.19	-2.72	0.205
120.00	-10.85	-1.98	0.00	-53.50	0.00	53.50	805.83	202.67	365.72	313.65	32.11	-2.86	0.184
125.00	-10.36	-1.91	0.00	-43.58	0.00	43.58	786.74	195.05	338.75	294.59	35.17	-2.99	0.161
130.00	-9.89	-1.84	0.00	-34.03	0.00	34.03	766.78	187.43	312.81	275.79	38.36	-3.10	0.136
135.00	-9.43	-1.76	0.00	-24.85	0.00	24.85	745.94	179.81	287.90	257.27	41.66	-3.20	0.109
140.00	-7.83	-1.50	0.00	-16.06	0.00	16.06	723.20	172.19	264.02	238.74	45.05	-3.28	0.078
145.00	-7.40	-1.42	0.00	-8.58	0.00	8.58	691.20	164.57	241.18	217.96	48.51	-3.33	0.050
148.00	-6.86	-1.34	0.00	-4.31	0.00	4.31	671.99	160.00	227.97	205.95	50.61	-3.35	0.031
150.00	0.00	-0.94	0.00	-1.63	0.00	1.63	659.19	156.95	219.37	198.13	52.01	-3.35	0.008

Load Case: 1.0D + 1.0W Serviceability 60 mph 29 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		56.3	0.0					0.0	0.0	56.3	0.0	0.0	0.0
5.00		111.2	713.2					24.8	596.8	136.0	1,310.1	0.0	0.0
10.00		92.7	698.4					24.7	596.8	117.4	1,295.3	0.0	0.0
13.50	Reinf. Top	53.7	480.1					17.3	417.8	70.9	897.9	0.0	0.0
15.00		68.4	203.5					7.4	78.9	75.7	282.4	0.0	0.0
20.00		103.5	668.9					24.6	262.8	128.1	931.7	0.0	0.0
25.00		90.6	654.1					24.5	206.7	115.2	860.8	0.0	0.0
30.00		51.2	639.3					0.0	169.2	51.2	808.6	0.0	0.0
31.50	Bot - Section 2	40.0	188.9					0.0	50.8	40.0	239.7	0.0	0.0
35.00		33.7	806.9					0.0	118.5	33.7	925.4	0.0	0.0
35.67	Top - Section 1	40.9	152.2					0.0	22.6	40.9	174.8	0.0	0.0
40.00		76.8	449.9					0.0	146.7	76.8	596.6	0.0	0.0
45.00		82.9	507.6					0.0	169.2	82.9	676.9	0.0	0.0
50.00		83.2	495.3					0.0	169.2	83.2	664.5	0.0	0.0
55.00		83.3	483.0					0.0	169.2	83.3	652.2	0.0	0.0
60.00		83.1	470.7					0.0	169.2	83.1	639.9	0.0	0.0
65.00		82.7	458.4					0.0	169.2	82.7	627.6	0.0	0.0
70.00	Bot - Section 3	70.4	446.0					0.0	169.3	70.4	615.3	0.0	0.0
73.50	Top - Section 2	41.7	554.2					0.0	118.5	41.7	672.7	0.0	0.0
75.00		53.7	105.4					0.0	50.8	53.7	156.1	0.0	0.0
80.00		82.0	344.8					0.0	169.2	82.0	514.1	0.0	0.0
85.00		81.0	335.0					0.0	169.2	81.0	504.2	0.0	0.0
90.00		79.8	325.1					0.0	169.2	79.8	494.4	0.0	0.0
95.00		78.6	315.3					0.0	169.2	78.6	484.5	0.0	0.0
100.00		77.2	305.4					0.0	169.2	77.2	474.7	0.0	0.0
105.00		73.2	295.6					0.0	169.2	73.2	464.8	0.0	0.0
109.67	Top - Section 3	37.4	267.0					0.0	158.0	37.4	425.0	0.0	0.0
110.00		24.5	14.1					0.0	11.3	24.5	25.4	0.0	0.0
113.00	Appurtenance(s)	36.6	125.4	663.3	0.0	119.0	1,938.2	0.0	101.6	699.9	2,165.2	0.0	0.0
115.00		50.3	82.1					0.0	44.5	50.3	126.6	0.0	0.0
120.00		70.6	200.2					0.0	111.1	70.6	311.3	0.0	0.0
125.00		68.7	192.8					0.0	111.1	68.7	303.9	0.0	0.0
130.00		66.8	185.4					0.0	111.1	66.8	296.5	0.0	0.0
135.00		64.8	178.0					0.0	111.1	64.8	289.2	0.0	0.0
140.00	Appurtenance(s)	62.7	170.6	97.7	0.0	0.0	600.0	0.0	111.1	160.4	881.8	0.0	0.0
145.00		48.8	163.2					0.0	111.1	48.8	274.4	0.0	0.0
148.00	Appurtenance(s)	29.7	94.4	26.8	0.0	0.0	165.0	0.0	66.7	56.5	326.1	0.0	0.0
150.00	Appurtenance(s)	11.7	61.5	402.1	0.0	0.0	2,000.0	0.0	44.5	413.8	2,105.9	0.0	0.0
								Totals:		3,757.20	23,496.5	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 29 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	-25.39	-4.33	0.00	-455.24	0.00	455.24	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.132
5.00	-24.07	-4.22	0.00	-433.59	0.00	433.59	3,008.23	728.06	2,359.94	2,100.75	0.03	-0.06	0.128
10.00	-22.77	-4.12	0.00	-412.50	0.00	412.50	2,965.74	712.82	2,262.21	2,027.26	0.12	-0.11	0.125
13.50	-21.87	-4.05	0.00	-398.09	0.00	398.09	2,935.48	702.15	2,195.03	1,976.22	0.22	-0.15	0.122
13.50	-21.87	-4.05	0.00	-398.09	0.00	398.09	2,935.48	702.15	2,195.03	1,976.22	0.22	-0.15	0.209
15.00	-21.59	-4.00	0.00	-392.01	0.00	392.01	2,922.38	697.58	2,166.54	1,954.44	0.27	-0.17	0.208
20.00	-20.65	-3.90	0.00	-372.01	0.00	372.01	2,865.81	682.34	2,072.95	1,874.26	0.50	-0.27	0.206
25.00	-19.78	-3.82	0.00	-352.49	0.00	352.49	2,801.80	667.09	1,981.42	1,791.00	0.84	-0.37	0.204
30.00	-18.97	-3.78	0.00	-333.39	0.00	333.39	2,737.79	651.85	1,891.95	1,709.63	1.29	-0.47	0.202
31.50	-18.73	-3.76	0.00	-327.71	0.00	327.71	2,718.59	647.28	1,865.51	1,685.59	1.44	-0.50	0.201
35.00	-17.80	-3.73	0.00	-314.56	0.00	314.56	2,673.78	636.61	1,804.55	1,630.15	1.84	-0.58	0.200
35.67	-17.62	-3.70	0.00	-312.07	0.00	312.07	2,183.22	540.96	1,563.37	1,360.34	1.92	-0.59	0.238
40.00	-17.02	-3.65	0.00	-296.02	0.00	296.02	2,154.64	529.95	1,500.42	1,314.94	2.50	-0.68	0.233
45.00	-16.34	-3.59	0.00	-277.76	0.00	277.76	2,120.84	517.25	1,429.39	1,262.98	3.27	-0.80	0.228
50.00	-15.67	-3.53	0.00	-259.80	0.00	259.80	2,086.17	504.55	1,360.08	1,211.51	4.17	-0.92	0.222
55.00	-15.01	-3.47	0.00	-242.13	0.00	242.13	2,050.62	491.85	1,292.50	1,160.56	5.20	-1.04	0.216
60.00	-14.36	-3.40	0.00	-224.78	0.00	224.78	2,012.44	479.15	1,226.64	1,109.22	6.35	-1.16	0.210
65.00	-13.73	-3.34	0.00	-207.76	0.00	207.76	1,959.10	466.45	1,162.50	1,050.87	7.62	-1.28	0.205
70.00	-13.11	-3.28	0.00	-191.08	0.00	191.08	1,905.75	453.75	1,100.08	994.10	9.02	-1.40	0.199
73.50	-12.44	-3.23	0.00	-179.61	0.00	179.61	1,441.17	363.84	883.97	755.32	10.08	-1.48	0.247
75.00	-12.28	-3.19	0.00	-174.76	0.00	174.76	1,433.76	360.79	869.22	745.08	10.55	-1.52	0.243
80.00	-11.76	-3.12	0.00	-158.81	0.00	158.81	1,408.50	350.63	820.97	711.14	12.22	-1.66	0.232
85.00	-11.25	-3.05	0.00	-143.19	0.00	143.19	1,382.37	340.47	774.10	677.52	14.02	-1.79	0.220
90.00	-10.75	-2.98	0.00	-127.92	0.00	127.92	1,355.35	330.31	728.60	644.25	15.97	-1.93	0.207
95.00	-10.26	-2.91	0.00	-113.00	0.00	113.00	1,327.47	320.15	684.48	611.38	18.06	-2.06	0.193
100.00	-9.78	-2.84	0.00	-98.45	0.00	98.45	1,298.70	309.99	641.74	578.94	20.28	-2.18	0.178
105.00	-9.32	-2.76	0.00	-84.26	0.00	84.26	1,259.27	299.83	600.38	542.76	22.64	-2.30	0.163
109.67	-8.89	-2.72	0.00	-71.36	0.00	71.36	1,219.44	290.34	563.02	508.77	24.94	-2.41	0.148
109.67	-8.89	-2.72	0.00	-71.36	0.00	71.36	842.50	218.42	424.75	353.65	24.94	-2.41	0.212
110.00	-8.86	-2.70	0.00	-70.46	0.00	70.46	841.37	217.91	422.77	352.35	25.11	-2.42	0.211
113.00	-6.73	-1.92	0.00	-62.24	0.00	62.24	831.08	213.34	405.23	340.67	26.65	-2.50	0.191
115.00	-6.60	-1.87	0.00	-58.41	0.00	58.41	824.04	210.29	393.73	332.91	27.71	-2.56	0.184
120.00	-6.29	-1.80	0.00	-49.06	0.00	49.06	805.83	202.67	365.72	313.65	30.46	-2.68	0.164
125.00	-5.99	-1.73	0.00	-40.06	0.00	40.06	786.74	195.05	338.75	294.59	33.33	-2.80	0.144
130.00	-5.69	-1.66	0.00	-31.42	0.00	31.42	766.78	187.43	312.81	275.79	36.32	-2.91	0.121
135.00	-5.40	-1.58	0.00	-23.14	0.00	23.14	745.94	179.81	287.90	257.27	39.41	-3.00	0.097
140.00	-4.53	-1.38	0.00	-15.22	0.00	15.22	723.20	172.19	264.02	238.74	42.59	-3.07	0.070
145.00	-4.26	-1.32	0.00	-8.31	0.00	8.31	691.20	164.57	241.18	217.96	45.83	-3.12	0.044
148.00	-3.94	-1.25	0.00	-4.35	0.00	4.35	671.99	160.00	227.97	205.95	47.80	-3.14	0.027
150.00	0.00	-1.03	0.00	-1.85	0.00	1.85	659.19	156.95	219.37	198.13	49.11	-3.15	0.009

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_S):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coeffiecient F_v:	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	3.72
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	25.39 k
Seismic Base Shear (E):	0.99 k

Load Case 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)
37	149.00	106	2,351	0.011	11	132
36	146.50	161	3,457	0.016	16	200
35	142.50	274	5,572	0.026	25	341
34	137.50	282	5,327	0.025	24	350
33	132.50	289	5,077	0.023	23	359
32	127.50	297	4,821	0.022	22	369
31	122.50	304	4,561	0.021	21	378
30	117.50	311	4,298	0.020	20	387
29	114.00	127	1,645	0.008	8	157
28	111.50	227	2,822	0.013	13	282
27	109.83	25	306	0.001	1	32
26	107.33	425	4,896	0.023	22	528
25	102.50	465	4,884	0.023	22	578
24	97.50	475	4,513	0.021	21	590
23	92.50	485	4,146	0.019	19	602
22	87.50	494	3,785	0.017	17	615
21	82.50	504	3,432	0.016	16	627
20	77.50	514	3,088	0.014	14	639
19	74.25	156	861	0.004	4	194
18	71.75	673	3,463	0.016	16	836
17	67.50	615	2,803	0.013	13	765
16	62.50	628	2,452	0.011	11	780
15	57.50	640	2,116	0.010	10	795
14	52.50	652	1,798	0.008	8	811
13	47.50	665	1,499	0.007	7	826

12	42.50	677	1,223	0.006	6	841
11	37.83	597	854	0.004	4	742
10	35.33	175	218	0.001	1	217
9	33.25	925	1,023	0.005	5	1,150
8	30.75	240	227	0.001	1	298
7	27.50	809	611	0.003	3	1,005
6	22.50	861	436	0.002	2	1,070
5	17.50	932	285	0.001	1	1,158
4	14.25	282	57	0.000	0	351
3	11.75	898	124	0.001	1	1,116
2	7.50	1,295	73	0.000	0	1,610
1	2.50	1,310	8	0.000	0	1,629
Powerwave Allgon 702	150.00	13	297	0.001	1	16
Kaelus DBC0061F1V51-	150.00	76	1,715	0.008	8	95
Powerwave Allgon TT1	150.00	48	1,080	0.005	5	60
Raycap DC6-48-60-18-	150.00	95	2,147	0.010	10	119
Ericsson RRUS 4478 B	150.00	180	4,043	0.019	18	223
Ericsson RRUS 4449 B	150.00	213	4,793	0.022	22	265
Ericsson RRUS 32 B66	150.00	152	3,422	0.016	16	189
Ericsson RRUS 32 B2	150.00	159	3,577	0.017	16	198
Ericsson RRUS-32 B30	150.00	231	5,198	0.024	24	287
Quintel QS66512-2	150.00	333	7,493	0.035	34	414
CCI HPA-65R-BUU-H6	150.00	153	3,443	0.016	16	190
CCI DMP65R-BU6DA	150.00	238	5,360	0.025	24	296
Flat Platform w/ Han	150.00	2,000	45,000	0.208	206	2,486
Ericsson RRUS 11 (Ba	148.00	165	3,614	0.017	17	205
Flush Mounts	140.00	600	11,760	0.054	54	746
Samsung RF4440d-13A	113.00	211	2,693	0.012	12	262
Samsung RF4439d-25A	113.00	224	2,862	0.013	13	279
Raycap RCMDC-6627-PF	113.00	32	409	0.002	2	40
Samsung MT6407-77A	113.00	245	3,126	0.014	14	304
Andrew LNX-6514DS-VT	113.00	116	1,486	0.007	7	145
Round T-Arms	113.00	750	9,577	0.044	44	932
JMA Wireless MX06FRO	113.00	360	4,597	0.021	21	448
		25,388	216,800	1.000	990	31,560

Load Case 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)
37	149.00	106	2,351	0.011	11	91
36	146.50	161	3,457	0.016	16	138
35	142.50	274	5,572	0.026	25	235
34	137.50	282	5,327	0.025	24	241
33	132.50	289	5,077	0.023	23	248
32	127.50	297	4,821	0.022	22	254
31	122.50	304	4,561	0.021	21	260
30	117.50	311	4,298	0.020	20	267
29	114.00	127	1,645	0.008	8	108
28	111.50	227	2,822	0.013	13	194
27	109.83	25	306	0.001	1	22
26	107.33	425	4,896	0.023	22	364
25	102.50	465	4,884	0.023	22	398
24	97.50	475	4,513	0.021	21	407
23	92.50	485	4,146	0.019	19	415
22	87.50	494	3,785	0.017	17	424
21	82.50	504	3,432	0.016	16	432
20	77.50	514	3,088	0.014	14	441
19	74.25	156	861	0.004	4	134
18	71.75	673	3,463	0.016	16	576
17	67.50	615	2,803	0.013	13	527

16	62.50	628	2,452	0.011	11	538
15	57.50	640	2,116	0.010	10	548
14	52.50	652	1,798	0.008	8	559
13	47.50	665	1,499	0.007	7	569
12	42.50	677	1,223	0.006	6	580
11	37.83	597	854	0.004	4	511
10	35.33	175	218	0.001	1	150
9	33.25	925	1,023	0.005	5	793
8	30.75	240	227	0.001	1	205
7	27.50	809	611	0.003	3	693
6	22.50	861	436	0.002	2	738
5	17.50	932	285	0.001	1	798
4	14.25	282	57	0.000	0	242
3	11.75	898	124	0.001	1	769
2	7.50	1,295	73	0.000	0	1,110
1	2.50	1,310	8	0.000	0	1,123
Powerwave Allgon 702	150.00	13	297	0.001	1	11
Kaelus DBC0061F1V51-	150.00	76	1,715	0.008	8	65
Powerwave Allgon TT1	150.00	48	1,080	0.005	5	41
Raycap DC6-48-60-18-	150.00	95	2,147	0.010	10	82
Ericsson RRUS 4478 B	150.00	180	4,043	0.019	18	154
Ericsson RRUS 4449 B	150.00	213	4,793	0.022	22	183
Ericsson RRUS 32 B66	150.00	152	3,422	0.016	16	130
Ericsson RRUS 32 B2	150.00	159	3,577	0.017	16	136
Ericsson RRUS-32 B30	150.00	231	5,198	0.024	24	198
Quintel QS66512-2	150.00	333	7,493	0.035	34	285
CCI HPA-65R-BUU-H6	150.00	153	3,443	0.016	16	131
CCI DMP65R-BU6DA	150.00	238	5,360	0.025	24	204
Flat Platform w/ Han	150.00	2,000	45,000	0.208	206	1,714
Ericsson RRUS 11 (Ba	148.00	165	3,614	0.017	17	141
Flush Mounts	140.00	600	11,760	0.054	54	514
Samsung RF4440d-13A	113.00	211	2,693	0.012	12	181
Samsung RF4439d-25A	113.00	224	2,862	0.013	13	192
Raycap RCMDC-6627-PF	113.00	32	409	0.002	2	27
Samsung MT6407-77A	113.00	245	3,126	0.014	14	210
Andrew LNX-6514DS-VT	113.00	116	1,486	0.007	7	100
Round T-Arms	113.00	750	9,577	0.044	44	643
JMA Wireless MX06FRO	113.00	360	4,597	0.021	21	308
		25,388	216,800	1.000	990	21,755

Load Case 1.2D + 1.0Ev + 1.0Eh **Seismic**

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	-29.93	-0.99	0.00	-138.57	0.00	138.57	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.045
5.00	-28.32	-1.00	0.00	-133.60	0.00	133.60	3,008.23	728.06	2,359.94	2,100.75	0.01	-0.02	0.044
10.00	-27.20	-1.01	0.00	-128.59	0.00	128.59	2,965.74	712.82	2,262.21	2,027.26	0.04	-0.04	0.043
13.50	-26.85	-1.01	0.00	-125.06	0.00	125.06	2,935.48	702.15	2,195.03	1,976.22	0.07	-0.05	0.043
13.50	-26.85	-1.01	0.00	-125.06	0.00	125.06	2,935.48	702.15	2,195.03	1,976.22	0.07	-0.05	0.072
15.00	-25.69	-1.02	0.00	-123.55	0.00	123.55	2,922.38	697.58	2,166.54	1,954.44	0.08	-0.05	0.072
20.00	-24.62	-1.03	0.00	-118.46	0.00	118.46	2,865.81	682.34	2,072.95	1,874.26	0.16	-0.08	0.072
25.00	-23.62	-1.04	0.00	-113.32	0.00	113.32	2,801.80	667.09	1,981.42	1,791.00	0.26	-0.12	0.072
30.00	-23.32	-1.04	0.00	-108.13	0.00	108.13	2,737.79	651.85	1,891.95	1,709.63	0.40	-0.15	0.072
31.50	-22.17	-1.04	0.00	-106.57	0.00	106.57	2,718.59	647.28	1,865.51	1,685.59	0.45	-0.16	0.071
35.00	-21.95	-1.05	0.00	-102.92	0.00	102.92	2,673.78	636.61	1,804.55	1,630.15	0.58	-0.18	0.071
35.67	-21.21	-1.05	0.00	-102.22	0.00	102.22	2,183.22	540.96	1,563.37	1,360.34	0.60	-0.19	0.085
40.00	-20.37	-1.05	0.00	-97.68	0.00	97.68	2,154.64	529.95	1,500.42	1,314.94	0.79	-0.22	0.084
45.00	-19.54	-1.05	0.00	-92.43	0.00	92.43	2,120.84	517.25	1,429.39	1,262.98	1.04	-0.26	0.082
50.00	-18.73	-1.05	0.00	-87.17	0.00	87.17	2,086.17	504.55	1,360.08	1,211.51	1.33	-0.30	0.081
55.00	-17.93	-1.05	0.00	-81.89	0.00	81.89	2,050.62	491.85	1,292.50	1,160.56	1.66	-0.34	0.079
60.00	-17.15	-1.05	0.00	-76.63	0.00	76.63	2,012.44	479.15	1,226.64	1,109.22	2.03	-0.38	0.078
65.00	-16.39	-1.04	0.00	-71.38	0.00	71.38	1,959.10	466.45	1,162.50	1,050.87	2.45	-0.42	0.076
70.00	-15.55	-1.03	0.00	-66.17	0.00	66.17	1,905.75	453.75	1,100.08	994.10	2.91	-0.46	0.075
73.50	-15.36	-1.03	0.00	-62.56	0.00	62.56	1,441.17	363.84	883.97	755.32	3.26	-0.49	0.093
75.00	-14.72	-1.02	0.00	-61.02	0.00	61.02	1,433.76	360.79	869.22	745.08	3.41	-0.50	0.092
80.00	-14.09	-1.01	0.00	-55.93	0.00	55.93	1,408.50	350.63	820.97	711.14	3.96	-0.55	0.089
85.00	-13.47	-1.00	0.00	-50.88	0.00	50.88	1,382.37	340.47	774.10	677.52	4.57	-0.60	0.085
90.00	-12.87	-0.98	0.00	-45.90	0.00	45.90	1,355.35	330.31	728.60	644.25	5.22	-0.65	0.081
95.00	-12.28	-0.96	0.00	-40.98	0.00	40.98	1,327.47	320.15	684.48	611.38	5.92	-0.69	0.076
100.00	-11.70	-0.94	0.00	-36.16	0.00	36.16	1,298.70	309.99	641.74	578.94	6.67	-0.74	0.071
105.00	-11.17	-0.92	0.00	-31.44	0.00	31.44	1,259.27	299.83	600.38	542.76	7.47	-0.78	0.067
109.67	-11.14	-0.93	0.00	-27.13	0.00	27.13	1,219.44	290.34	563.02	508.77	8.26	-0.82	0.062
109.67	-11.14	-0.93	0.00	-27.13	0.00	27.13	842.50	218.42	424.75	353.65	8.26	-0.82	0.090
110.00	-10.86	-0.91	0.00	-26.82	0.00	26.82	841.37	217.91	422.77	352.35	8.32	-0.83	0.089
113.00	-8.29	-0.76	0.00	-24.09	0.00	24.09	831.08	213.34	405.23	340.67	8.84	-0.86	0.081
115.00	-7.91	-0.74	0.00	-22.57	0.00	22.57	824.04	210.29	393.73	332.91	9.21	-0.88	0.077
120.00	-7.53	-0.72	0.00	-18.89	0.00	18.89	805.83	202.67	365.72	313.65	10.16	-0.93	0.070
125.00	-7.16	-0.69	0.00	-15.30	0.00	15.30	786.74	195.05	338.75	294.59	11.15	-0.97	0.061
130.00	-6.80	-0.67	0.00	-11.83	0.00	11.83	766.78	187.43	312.81	275.79	12.20	-1.01	0.052
135.00	-6.45	-0.64	0.00	-8.49	0.00	8.49	745.94	179.81	287.90	257.27	13.28	-1.05	0.042
140.00	-5.37	-0.54	0.00	-5.28	0.00	5.28	723.20	172.19	264.02	238.74	14.39	-1.07	0.030
145.00	-5.17	-0.53	0.00	-2.56	0.00	2.56	691.20	164.57	241.18	217.96	15.52	-1.09	0.019
148.00	-4.83	-0.49	0.00	-0.98	0.00	0.98	671.99	160.00	227.97	205.95	16.21	-1.10	0.012
150.00	0.00	-0.40	0.00	0.00	0.00	0.00	659.19	156.95	219.37	198.13	16.67	-1.10	0.000

Load Case 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 (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.63	-0.99	0.00	-133.28	0.00	133.28	3,049.83	743.30	2,459.73	2,174.87	0.00	0.00	0.041
5.00	-19.52	-1.00	0.00	-128.31	0.00	128.31	3,008.23	728.06	2,359.94	2,100.75	0.01	-0.02	0.041
10.00	-18.75	-1.00	0.00	-123.32	0.00	123.32	2,965.74	712.82	2,262.21	2,027.26	0.04	-0.03	0.040
13.50	-18.51	-1.00	0.00	-119.82	0.00	119.82	2,935.48	702.15	2,195.03	1,976.22	0.07	-0.05	0.040
13.50	-18.51	-1.00	0.00	-119.82	0.00	119.82	2,935.48	702.15	2,195.03	1,976.22	0.07	-0.05	0.067
15.00	-17.71	-1.01	0.00	-118.31	0.00	118.31	2,922.38	697.58	2,166.54	1,954.44	0.08	-0.05	0.067
20.00	-16.97	-1.01	0.00	-113.27	0.00	113.27	2,865.81	682.34	2,072.95	1,874.26	0.15	-0.08	0.066
25.00	-16.28	-1.02	0.00	-108.21	0.00	108.21	2,801.80	667.09	1,981.42	1,791.00	0.25	-0.11	0.066
30.00	-16.07	-1.02	0.00	-103.11	0.00	103.11	2,737.79	651.85	1,891.95	1,709.63	0.39	-0.14	0.066
31.50	-15.28	-1.02	0.00	-101.58	0.00	101.58	2,718.59	647.28	1,865.51	1,685.59	0.43	-0.15	0.066
35.00	-15.13	-1.02	0.00	-98.01	0.00	98.01	2,673.78	636.61	1,804.55	1,630.15	0.55	-0.18	0.066
35.67	-14.62	-1.02	0.00	-97.33	0.00	97.33	2,183.22	540.96	1,563.37	1,360.34	0.58	-0.18	0.078
40.00	-14.04	-1.02	0.00	-92.90	0.00	92.90	2,154.64	529.95	1,500.42	1,314.94	0.75	-0.21	0.077
45.00	-13.47	-1.02	0.00	-87.79	0.00	87.79	2,120.84	517.25	1,429.39	1,262.98	0.99	-0.25	0.076
50.00	-12.91	-1.02	0.00	-82.69	0.00	82.69	2,086.17	504.55	1,360.08	1,211.51	1.27	-0.28	0.074
55.00	-12.36	-1.01	0.00	-77.59	0.00	77.59	2,050.62	491.85	1,292.50	1,160.56	1.58	-0.32	0.073
60.00	-11.82	-1.01	0.00	-72.52	0.00	72.52	2,012.44	479.15	1,226.64	1,109.22	1.94	-0.36	0.071
65.00	-11.29	-1.00	0.00	-67.48	0.00	67.48	1,959.10	466.45	1,162.50	1,050.87	2.34	-0.40	0.070
70.00	-10.72	-0.99	0.00	-62.48	0.00	62.48	1,905.75	453.75	1,100.08	994.10	2.78	-0.44	0.068
73.50	-10.58	-0.98	0.00	-59.03	0.00	59.03	1,441.17	363.84	883.97	755.32	3.11	-0.47	0.085
75.00	-10.14	-0.97	0.00	-57.55	0.00	57.55	1,433.76	360.79	869.22	745.08	3.25	-0.48	0.084
80.00	-9.71	-0.96	0.00	-52.69	0.00	52.69	1,408.50	350.63	820.97	711.14	3.78	-0.52	0.081
85.00	-9.29	-0.95	0.00	-47.89	0.00	47.89	1,382.37	340.47	774.10	677.52	4.35	-0.57	0.077
90.00	-8.87	-0.93	0.00	-43.16	0.00	43.16	1,355.35	330.31	728.60	644.25	4.97	-0.61	0.074
95.00	-8.46	-0.91	0.00	-38.50	0.00	38.50	1,327.47	320.15	684.48	611.38	5.64	-0.66	0.069
100.00	-8.06	-0.89	0.00	-33.95	0.00	33.95	1,298.70	309.99	641.74	578.94	6.35	-0.70	0.065
105.00	-7.70	-0.87	0.00	-29.49	0.00	29.49	1,259.27	299.83	600.38	542.76	7.11	-0.74	0.060
109.67	-7.68	-0.87	0.00	-25.44	0.00	25.44	1,219.44	290.34	563.02	508.77	7.85	-0.78	0.056
109.67	-7.68	-0.87	0.00	-25.44	0.00	25.44	842.50	218.42	424.75	353.65	7.85	-0.78	0.081
110.00	-7.48	-0.86	0.00	-25.15	0.00	25.15	841.37	217.91	422.77	352.35	7.90	-0.78	0.080
113.00	-5.72	-0.71	0.00	-22.58	0.00	22.58	831.08	213.34	405.23	340.67	8.41	-0.81	0.073
115.00	-5.45	-0.69	0.00	-21.15	0.00	21.15	824.04	210.29	393.73	332.91	8.75	-0.83	0.070
120.00	-5.19	-0.67	0.00	-17.68	0.00	17.68	805.83	202.67	365.72	313.65	9.65	-0.88	0.063
125.00	-4.93	-0.65	0.00	-14.32	0.00	14.32	786.74	195.05	338.75	294.59	10.59	-0.92	0.055
130.00	-4.69	-0.63	0.00	-11.07	0.00	11.07	766.78	187.43	312.81	275.79	11.57	-0.96	0.046
135.00	-4.44	-0.60	0.00	-7.94	0.00	7.94	745.94	179.81	287.90	257.27	12.59	-0.99	0.037
140.00	-3.70	-0.51	0.00	-4.94	0.00	4.94	723.20	172.19	264.02	238.74	13.65	-1.01	0.026
145.00	-3.56	-0.49	0.00	-2.39	0.00	2.39	691.20	164.57	241.18	217.96	14.72	-1.03	0.016
148.00	-3.33	-0.46	0.00	-0.92	0.00	0.92	671.99	160.00	227.97	205.95	15.37	-1.03	0.009
150.00	0.00	-0.40	0.00	0.00	0.00	0.00	659.19	156.95	219.37	198.13	15.80	-1.04	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	17.20	0.00	30.43	0.00	0.00	1831.32	73.50	0.97
0.9D + 1.0W	17.18	0.00	22.82	0.00	0.00	1779.83	73.50	0.93
1.2D + 1.0Di + 1.0Wi	3.98	0.00	39.16	0.00	0.00	464.68	73.50	0.27
1.2D + 1.0Ev + 1.0Eh	0.99	0.00	29.93	0.00	0.00	138.57	73.50	0.09
0.9D - 1.0Ev + 1.0Eh	0.99	0.00	20.63	0.00	0.00	133.28	73.50	0.09
1.0D + 1.0W	4.33	0.00	25.39	0.00	0.00	455.24	73.50	0.25

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Max Member Pu (kip)	phiPn (kip)	Ratio
0.00	13.50	(4) SOL-#20 All Thread Bar	166.5	5.0	16.8	0.297	208.9	330.5	0.632

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	Lower Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
0.00	13.50	(4) SOL-#20 All Thread Bar	198.4	12.0	17	18	0.919	0.0	12.0	0	0	0.000

Flange Plate Analysis

Flange Plate

Plate Type	***Flange***	***@ 110 ft***
Pole Diameter	21.267	in
Pole Thickness	0.1875	in
Plate Diameter	30	in
Plate Thickness	1	in
Plate Fy	36	ksi
Weld Length	3/16	in
f_s Resistance	145.94	k-in
Applied	88.98	k-in

Code Rev.	***H***
Moment	289.0 k-ft
Axial	9.1 k

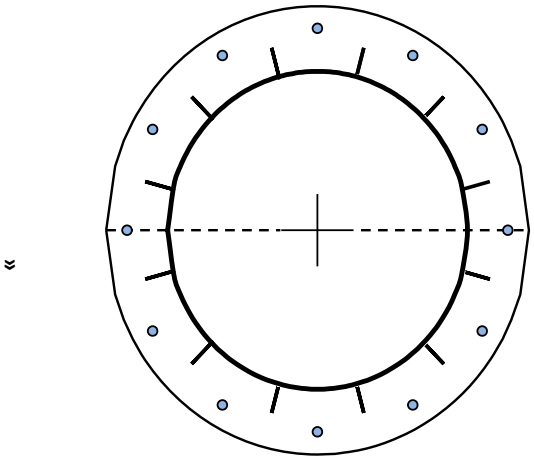
Date	8/5/2021
Engineer	JAS
Site #	302519
Carrier	VERIZON WIRELESS

Stiffeners

#	***12***	***Show***
Thickness	1/2	in
Length	2 3/4	in
Height	4	in
Chamfer	0	in
Offset Angle	0	°
Fy	36	ksi

Bolts

#	***12***	
Bolt Circle	27	in
(R)adial / (S)quare	R	
Diameter	1	in
Hole Diameter	1 1/8	in
Type	A325	
Fy	92	ksi
Fu	120	ksi
f_s Resistance	54.52	k
Applied	42.04	k



Reinforcement

#		

Plate Stress Ratio:

61% Pass

Bolt Stress Ratio:

77% Pass

Extra Bolts O

#		

Base Plate & Anchor Rod Analysis

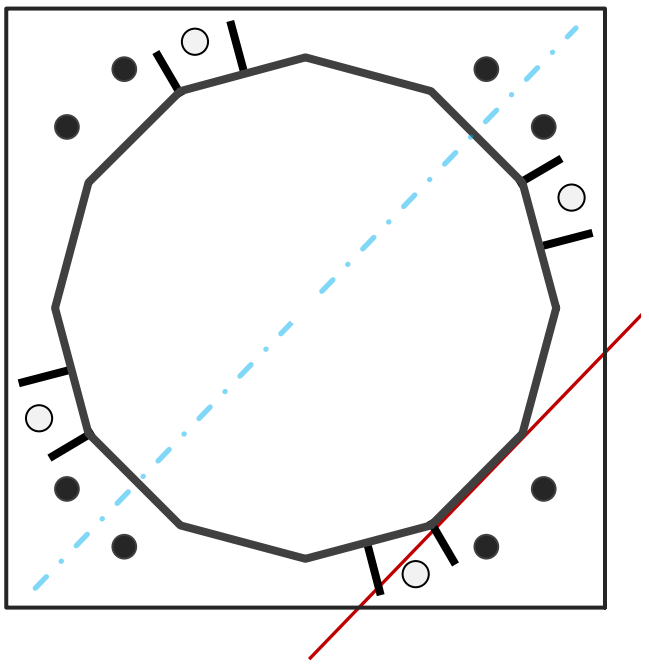
Pole Dimensions		
Number of Sides	12	-
Diameter	35.45	in
Thickness	3/8	in
Orientation Offset		°

Base Reactions		
Moment, Mu	1831.3	k-ft
Axial, Pu	30.4	k
Shear, Vu	17.2	k
Neutral Axis	226	°

Report Capacities		
Component	Capacity	Result
Base Plate	83%	Pass
Anchor Rods	61%	Pass
Dwyidag	54%	Pass

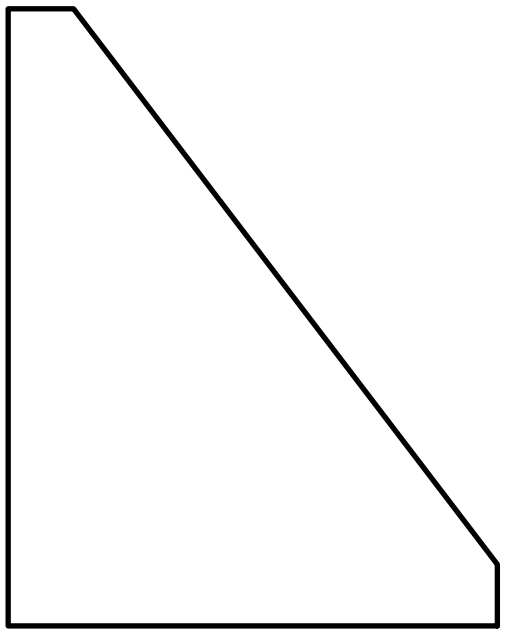
Base Plate		
Shape	Square	-
Width	44	in
Thickness	2 1/2	in
Grade	A36	
Yield Strength, Fy	36	ksi
Tensile Strength, Fu	58	ksi
Clip	0	in
Orientation Offset		°
Anchor Rod Detail	c	η=0.55
Clear Distance	N/A	in
Applied Moment, Mu	1181.5	k
Bending Stress, ϕMn	1415.0	k

Dywidag Reinforcement		
Quantity	4	-
Bar Size	#20	in
Diameter, ø	2.5	in
Bracket Type	Angle	-
Circle	42.33	in
Orientation Offset	22.5	°
Applied Force, Pu	199.0	k
Dywidag Bar, ϕPn	368.2	k



Original Anchor Rods		
Arrangement	Cluster	-
Quantity	8	-
Diameter, ø	2 1/4	in
Bolt Circle	44	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset		°
Applied Force, Pu	147.9	k
Anchor Rods, ϕPn	243.6	k

Stiffeners		
Arrangement	Cluster	-
Quantity	8	-
Height	5	in
Width	3.75	in
Effective Width	3.750	in
Thickness	5/8	in
Effective Thickness	0.455	in
Notch	0	in
Flat Edge	0.5	in
Grade	A36	-
Yield Strength, Fy	36	ksi
Tensile Strength, Fu	58	ksi
Horizontal Weld	Fillet	
Horizontal Fillet Size	1/4	in
Bevel Depth	0	in
Vertical Weld	Fillet	
Vertical Fillet Size	1/4	in
Weld Strength	70	ksi
Electrode Coefficient	1	-
Orientation Offset	67.5	°
Vertical Weld, ϕRn	49.7	k
Horz. Weld, ϕRn	44.3	k
Ten. Capacity, ϕTn	75.9	k
Comp. Capacity, ϕPn	1015.0	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	17.2	1076.6	0.59
Anchor Rod Forces	17.2	1076.6	0.59
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	754.7	0.41
Stiffener Forces	4.7	294.6	0.16

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	40.8514	3.4043	0.1604		6284.13
Bolt	3.9761	3.2477	0.8393	4.5	6294.24
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	4.9087	4.9087	1.9175		4405.48
Stiffener	1.7063	1.5356	7.9980		2367.82

Base Plate		
Shape	Square	-
Width, W	44	in
Thickness, t	2.5	in
Yield Strength, Fy	36	ksi
Tensile Strength, Fu	58	ksi
Base Plate Chord	26.063	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

External Base Plate		
Chord Length AA	26.650	in
Additional AA	1.300	in
Section Modulus, Z	43.673	in^3
Applied Moment, Mu	1181.5	k-ft
Bending Capacity, ϕMn	1415.0	k-ft
Capacity, Mu/ϕMn	0.835	OK
Chord Length AB	25.395	in
Additional AB	0.810	in
Section Modulus, Z	40.946	in^3
Applied Moment, Mu	996.4	k-ft
Bending Capacity, ϕMn	1326.7	k-ft
Capacity, Mu/ϕMn	0.751	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Anchor Rods		
Anchor Rod Quantity, N	8	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	44	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	147.9	k
Applied Shear, Vu	0.5	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.607	OK
Interaction Capacity	0.610	OK

Dywidag Reinforcement		
Dywidag Quantity, N	4	-
Dywidag Diameter, d	2.5	in
Bolt Circle, BC	42.33	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	199.0	k
Compressive Capacity, ϕPn	368.2	k
Capacity, Pu/ϕPn	0.541	OK

Base Plate Stiffeners		
Applied Axial Force, Pu	43.9	k
Applied Horizontal Force, Vu	0.29	k

Vertical Weld		
Vert.-to-Stiffener a=e_x/l	0.250	-
Spacing Ratio, k	0.125	-
Weld Coefficient, C	3.310	-
Compressive Capacity, ϕPn	49.7	k
Vert.-to-Plate a=e_x/l	0.333	-
Spacing Ratio, k	0.125	-
Weld Coefficient, C	2.970	-
Shear Capacity, ϕVn	44.6	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	0.890	OK

Horizontal Weld		
Horz.-to-Stiffener a=e_x/l	0.167	-
Spacing Ratio, k	0.167	-
Weld Coefficient, C	3.940	-
Effective Fillet	0.250	in
Compressive Capacity, ϕPn	44.3	k
Horz.-to-Pole a=e_x/l	0.222	-
Spacing Ratio, k	0.167	-
Weld Coefficient, C	3.510	-
Shear Capacity, ϕVn	39.5	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	0.997	OK

Plate Tension		
Gross Cross Section	1.706	in^2
Net Cross Section	1.536	in^2
Tensile Capacity, ϕTn	75.9	k
Capacity, Tu/ϕTn	0.289	OK

Plate Compression		
Radius of Gyration	0.131	in^3
kl/r	22.84	-
4.71 $\sqrt{(E/Fy)}$	133.68	-
Buckling Stress(Fe)	548.7	-
Crit. Buckling Stress(Fcr)	481.2	ksi
Compressive Capacity, ϕPn	1015.0	k
Capacity, Pu/ϕPn	0.022	OK

Site Name: Southbury, CT
Site Number: 302519
Tower Type: MP
Design Loads (Factored) - Analysis per TIA-222-H Standards

Monolithic Mat & Pier Foundation Analysis

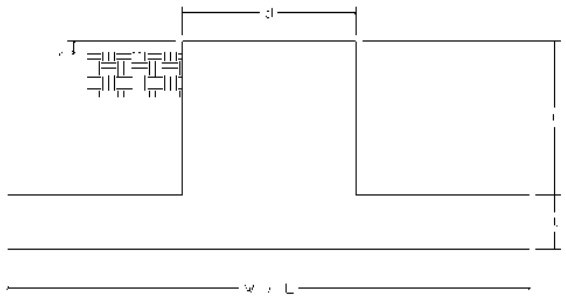
Foundation Analysis Parameters		
Design / Analysis / Mapping:	Analysis	-
Compression/Leg:	30.4	k
Uplift/Leg:	0.0	k
Total Shear:	17.2	k
Moment:	1,831.3	k-ft
Tower + Appurtenance Weight:	30.4	k
Depth to Base of Foundation (l + t - h):	8	ft
Diameter of Pier (d):	5	ft
Length of Pier (l):	5.5	ft
Height of Pier above Ground (h):	0.5	ft
Width of Pad (W):	18	ft
Length of Pad (L):	18	ft
Thickness of Pad (t):	3	ft
Tower Leg Center to Center:	0	ft
Number of Tower Legs:	1	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	18	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	113	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	50.6	pcf
Friction Angle of Uplift:	15	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	42,025	psf
Ultimate Passive Pressure on Pad Face:	0	psf
$f_{Soil\ and\ Concrete\ Weight}$:	0.9	-
f_{Soil}:	0.75	-

Overturning Moment Usage		
Design OTM:	1977.5	k-ft
OTM Resistance:	3134.6	k-ft
Design OTM / OTM Resistance:	63%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	6468	psf
Factored Nominal Bearing Pressure:	31519	psf
Factored Nominal (Net) Bearing Pressure:	21%	Pass
Load Direction Controling Design Bearing Pressure:	*Diagonal to Pad Edge*	

Sliding Factor of Safety		
Ultimate Friction Resistance:	179.6	k
Ultimate Passive Pressure Resistance:	0.0	k
Total Factored Sliding Resistance:	134.7	k
Sliding Design / Sliding Resistance:	13%	Pass

Foundation Steel Parameters		
Shear/Leg (Compression):	11.5	k
Shear/Leg (Uplift):	9.5	k
Concrete Strength (f'_c):	3,000	psi
Pad Tension Steel Depth:	32.38	in
Dead Load Factor:	0.9	-
f_{Shear}:	0.75	-
$f_{Flexure\ /\ Tension}$:	0.9	-
$f_{Compression:}$	0.65	-
b:	0.85	-
Bottom Pad Rebar Size #:	10	-
# of Bottom Pad Rebar:	36	-
Pad Bottom Steel Area:	45.72	in^2
Pad Steel F_y:	60,000	psi
Top Pad Rebar Size #:	5	-
# of Top Pad Rebar:	36	-
Pad Top Steel Area:	11.16	in^2
Pier Rebar Size #:	11	-
Pier Steel Area (Single Bar):	1.56	in^2
# of Pier Rebar:	52	-
Pier Steel F_y:	60,000	psi
Pier Cage Diameter:	51.6	in
Rebar Strain Limit:	0.008	-
Steel Elastic Modulus:	29,000	ksi
Tie Rebar Size #:	4	-
Tie Steel Area (Single Bar):	0.20	in^2
Tie Spacing:	12	in
Tie Steel F_y:	60,000	psi
Clear Cover:	3	in



Pad Strength Capacity			
Factored One Way Shear (V_u):	208.5	k	
One Way Shear Capacity (fV_c):	480.7	k	*ACI 318-14 25.5.5.1*
V_u / fV_c:	43%	Pass	
Load Direction Controling Shear Capacity:	*Diagonal to Pad Edge*		
Lower Steel Pad Factored Moment (M_u):	1206.7	k-ft	
Lower Steel Pad Moment Capacity (fM_n):	6225.3	k-ft	*ACI 318-14 22.3.1.1*
M_u / fM_n:	19%	Pass	
Load Direction Controling Flexural Capacity:	*Parallel to Pad Edge*		
Upper Steel Pad Factored Moment (M_u):	386.0	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	1599.9	k-ft	
M_u / fM_n:	24%	Pass	
Lower Pad Flexural Reinforcement Ratio:	0.0065		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Upper Pad Flexural Reinforcement Ratio:	0.0016		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Pad Shrinkage Reinforcement Ratio:	0.0081		*OK - ACI 318-14 24.4.3.2*
Lower Pad Reinforcement Spacing:	6.0	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Upper Pad Reinforcement Spacing:	6.0	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Ultimate Punching Shear Stress, v_u:	32.41	psi	*ACI 318-14 R8.4.4.2.3*
Nominal Punching Shear Capacity (f_cv_c):	164.3	psi	*ACI 318-14 22.6.5.2*
v_u / f_cv_c:	20%	Pass	
Pier Moment Pad Flexure Transfer Ratio, γ_f:	0.60		*TIA-222-H 9.4.2*
Moment Transfer Effective Flexural Width, B_{eff}:	14.00	ft	*TIA-222-H 9.4.2*
Moment Transfer Through Pad Flexure:	13866.48	k-in	*TIA-222-H 9.4.2*
Moment Transfer Flexural Capacity ($fM_{sc,f}$):	60188.44	k-in	
g_fM_{sc} / $fM_{sc,f}$:	0%	Pass	

Pier Strength Capacity			
Factored Moment in Pier (M_u):	1925.9	k-ft	
Pier Moment Capacity (fM_n):	9214.4	k-ft	
M_u / fM_n:	21%	Pass	
Factored Shear in Pier (V_u):	17.2	k	
Pier Shear Capacity (fV_n):	305.5	k	*ACI 318-14 22.5.1.1*
V_u / fV_c:	6%	Pass	
Pier Shear Reinforcement Ratio:	0.0007		*OK - No Ties Necessary for Shear - ACI11.5.6.1*
Factored Tension in Pier (T_u):	0.0	k	
Pier Tension Capacity (fT_n):	4380.5	k	
T_u / fT_n:	0%	Pass	
Factored Compression in Pier (P_u):	30.4	k	
Pier Compression Capacity (fP_n):	3690.3	k	*ACI 318-14 22.4.2.1*
P_u / fP_n:	1%	Pass	
Pier Compression Reinforcement Ratio:	0.029		*OK - TIA-222-H 9.4.1*
Minimum Depth to Develop Vertical Rebar:	63	in	*ACI 318-14 25.4.2.3*
Minimum Hook Development Length:	31	in	*ACI 318-14 25.4.3.1*
Minimum Mat Thickness / Edge Distance from Pier:	34.0	in	
Minimum Foundation Depth:	8.35	ft	
$M_u/f_BM_n + T_u/f_TT_n$:	21%	Pass	

SOUTHBURY W CT

SITE #: 467324

SMART TOOL PROJECT #: 10091168

verizon

MOUNT INFORMATION:

MOUNT TYPE:	12'-6" T-ARM
SITE LOCATION:	
LAT.:	41.460096°
LONG.:	-73.245390°
STREET ADDRESS:	133 HORSE FENCE HILL ROAD
CITY, STATE ZIP:	SOUTHBURY, CT 06488
COUNTY:	NEW HAVEN
TOWER OWNER:	ATC
TOWER SITE NUMBER:	302519

CODE COMPLIANCE:

GOVERNING CODES:	TIA-222-H
WIND SPEEDS:	116 MPH 3-SECOND GUST 50 MPH 3-SECOND GUST (W/ ICE)
ICE THICKNESS:	1"
RISK CATEGORY:	II
EXPOSURE CATEGORY:	B
TOPO CATEGORY:	1

SEISMIC CRITERIA:

SITE CLASS:	D
RESPONSE COEFFICIENT (R):	2
1-SECOND SPECTRAL RESPONSE ACCELERATION (S_1) :	0.055
SHORT PERIOD SPECTRAL RESPONSE ACCELERATION (S_S):	0.202

PROJECT CONTACTS:

MASER CONSULTING CONTACT:

PETER ALBANO

PETER.ALBANO@COLLIERSENGINEERING.COM

(856) 371-9457

PROJECT #: 21777856

ENGINEER CONTACT:

GPD ENGINEERING AND ARCHITECTURE PROFESSIONAL CORPORATION

520 SOUTH MAIN STREET, SUITE 2531

AKRON, OH 44311

(330)572-2100

FOR QUESTIONS PLEASE EMAIL: GPDMODS@GPDGROUP.COM

SHEET INDEX:

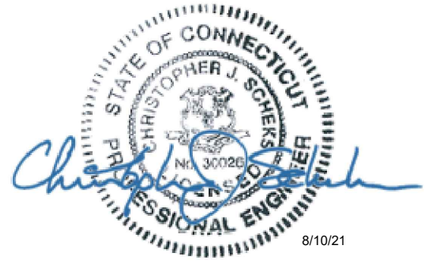
CONTRACTOR PMI REQUIREMENTS:

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10091168
VZW LOCATION CODE (PSLC):	467324
FUZE ID:	16053187

REFERENCED DOCUMENTS:

PASSING MOUNT ANALYSIS REPORT

SMART TOOL PROJECT #:	10091168
GPD PROJECT #:	2021740.467324.02
ANALYSIS DATE:	8/10/2021



8/10/21

GPD Engineering and Architecture Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

TITLE SHEET

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

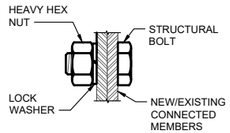
JOB NO.
2021740.467324.02

T-01

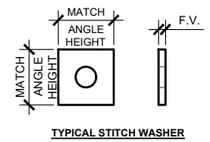
MODIFICATION INSPECTION CHECKLIST

REQUIRED	REPORT ITEM	BRIEF DESCRIPTION
	PRE-CONSTRUCTION	
X	PACKING SLIPS	ANY RECEIPT OF PURCHASE FOR THE MODIFICATION MATERIAL IS ACCEPTABLE.
X	CERTIFICATE OF CONFORMANCE	ALL PRE-ENGINEERED KITS, PARTS, AND/OR ASSEMBLIES PURCHASED FROM REPUTABLE SUPPLIERS SHALL HAVE A SITE SPECIFIC CERTIFICATE OF CONFORMANCE PROVIDED TO CONFIRM ACCEPTABILITY.
X	MATERIAL TEST REPORT (CUSTOM ORDERED OR FABRICATED HARDWARE ONLY)	ALL HARDWARE NOT SPECIFICALLY PROVIDED AS A PRE-ENGINEERED KIT, PART, AND/OR ASSEMBLY SHALL REQUIRE MTR'S TO VERIFY ACCEPTABILITY.
X	EXISTING MOUNT(S)	PHOTOS OF ALL SECTORS (WHERE APPLICABLE) PRIOR TO MODIFICATIONS.
X	HARDWARE PRIOR TO INSTALLATION	PHOTOS OF ALL HARDWARE BEFORE BEING INSTALLED ON THE MOUNT(S).
X	NDT - ALL FULL PENETRATION OR WELDS > 5/16"	AWS STAMPED REPORT REQUIRED. WELDING REQUIREMENTS NOT APPLICABLE FOR PRE-ENGINEERED KITS, PARTS OR ASSEMBLIES FROM REPUTABLE SUPPLIERS.
X	FABRICATOR CERTIFIED WELD INSPECTION	
X	WELDER'S CERTIFICATIONS	
	POST-CONSTRUCTION	
X	ON SITE COLD GALVANIZING VERIFICATION (IF APPLICABLE, SEE STRUCTURAL STEEL NOTE #2)	ANY DAMAGE TO THE TOWER SHALL BE REPAIRED IN ACCORDANCE WITH STRUCTURAL STEEL NOTE #2.
X	GC AS-BUILT DRAWINGS	ALL DEVIATIONS TO THE DRAWINGS THAT WERE FOUND MUST BE CLEARLY MARKED AND APPROVED BY THE EOR.
X	MEMBER SIZES	NEW MEMBERS SHALL BE VERIFIED WITH A TAPE MEASURE, CALIPERS, THICKNESS GAUGE, OR OTHER STANDARD INDUSTRY EQUIPMENT.
X	CONNECTION HARDWARE	BOLT SIZE (VIA CALIPERS), FIT-UP, LOCKING MECHANISMS, AND TIGHTNESS SHALL ALL BE VERIFIED AND DOCUMENTED.
X	CRITICAL DIMENSIONS	ALL DIMENSIONS SPECIFICALLY CALLED OUT IN THE DRAWING PACKAGE SHALL BE VERIFIED WITH A TAPE MEASURE. THIS INCLUDES MEMBER LENGTHS, HORIZONTAL AND/OR VERTICAL OFFSETS, SPACING REQUIREMENTS, ETC.
X	FINAL INSTALLED CONFIGURATION	THE COMPLETE MODIFIED CONDITION SHALL BE INSPECTED TO ENSURE FULL CONFORMANCE WITH THE DESIGN DRAWINGS.

BOLTING DETAILS



TYPICAL BOLT ASSEMBLY



TYPICAL STITCH WASHER

BOLT SCHEDULE

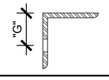
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	C-C SPACING
1/2	9/16	9/16x11/16	7/8	1-1/2
5/8	11/16	11/16x7/8	1-1/8	1-7/8
3/4	13/16	13/16x1	1-1/4	2-1/4
7/8	15/16	15/16x1-1/8	1-1/2	2-5/8
1	1-1/8	1-1/8x1-5/16	1-3/4	3

-DIMENSIONS GIVEN IN INCHES

-SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED ON THE PLANS

WORKABLE GAGES

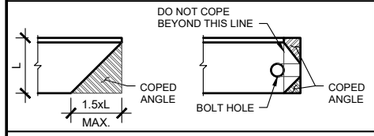
LEG	4	3-1/2	3	2-1/2	2	1-3/4
G	2-1/2	2	1-3/4	1-3/8	1-1/8	1



-DIMENSIONS GIVEN IN INCHES

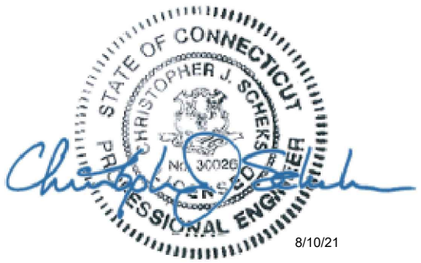
-MATCH EXISTING WHEN APPLICABLE

ALLOWABLE ANGLE COPE



NOTES:

1. ALL DIMENSIONS REPRESENTED IN THESE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. AS AN ALTERNATIVE TO USING A LOCK WASHER PAL-NUTS CAN BE INSTALLED ABOVE THE HEX NUT. ALL BOLTS MUST HAVE LOCKING DEVICES INSTALLED AS PART OF THE ASSEMBLY.
4. ADDITIONAL HARDENED FLAT WASHERS MAY BE REQUIRED IN CASES WHERE OVERSIZED OR SLOTTED HOLES ARE PRESENT. EXISTING CONDITIONS SHALL BE APPROVED BY THE EOR.



8/10/21

GENERAL NOTES

1. THIS DESIGN IS IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222, AWS, ANSI TIA-322, AND AISC. MATERIALS, FABRICATION, INSTALLATION, AND ALL OTHER SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES AND THE CONTRACT SPECIFICATIONS.
2. THIS DESIGN ASSUMES THE TOWER AND MOUNTS HAVE BEEN WELL MAINTAINED, ARE IN GOOD CONDITION, AND ARE WITHOUT DEFECT. BENT MEMBERS, CORRODED MEMBERS, LOOSE BOLTS, CRACKED WELDS AND OTHER MEMBER DEFECTS HAVE NOT BEEN CONSIDERED. THE TOWER IS ASSUMED TO BE PLUMB AND THE SITE IS ASSUMED TO BE LEVEL. THIS DESIGN IS BEING PROVIDED WITHOUT THE BENEFIT OF A CONDITION ASSESSMENT BY GPD.
3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING; ANY PROBLEMS WITH ACCESS, INTERFERENCE, ETC. SHALL BE RESOLVED PRIOR TO MOBILIZATION. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND NOTE ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS OR THAT INTERFERE WITH THE CONTINUOUS INSTALLATION OF THE MODIFICATIONS. CONTRACTOR SHALL NOTE ALL ATTACHMENT POINTS, ANTENNAS, MOUNTS, COAX, LIGHTING, CLIMBING SUPPORTS, STEP BOLTS, PORT HOLES, AND ANY OTHER APPURTENANCES IN THE REGION OF THE MODIFICATIONS. GPD SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE SIGNIFICANCE OF ANY DEVIATION PRIOR TO ORDERING MATERIAL.
4. ALL MATERIAL SPECIFIED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZES AND/OR STRENGTHS, MUST BE APPROVED BY THE ENGINEER IN WRITING. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR DETERMINING IF SUBSTITUTE IS SUITABLE FOR USE AND MEETS THE ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER.
5. CONTRACTOR IS RESPONSIBLE FOR ENGAGING A MODIFICATION INSPECTOR AT THE TIME OF AWARD TO COORDINATE AN INSPECTION SCHEDULE AND ENSURE PROPER DOCUMENTATION IS RETAINED THROUGHOUT THE PROJECT. REFER TO THE MODIFICATION INSPECTION TABLES ON THIS SHEET.
6. INSTALLATION OF THE PROPOSED LOADING IS BY OTHERS AND IS BEYOND THE SCOPE OF THESE DRAWINGS.
7. ALL CONTRACTORS AND LOWER TIER CONTRACTORS MUST ACKNOWLEDGE IN WRITING TO TOWER OWNER AND GPD THAT THEY HAVE OBTAINED, UNDERSTAND, AND WILL FOLLOW TOWER OWNER STANDARDS OF PRACTICE, CONSTRUCTION GUIDELINES, ALL SITE AND TOWER SAFETY PROCEDURES, ALL PRODUCT LIMITATIONS AND INSTALLATION PROCEDURES USED ON SITE, AND PROPOSED MODIFICATIONS DESCRIBED. RECEIPT OF ACKNOWLEDGMENT MUST OCCUR PRIOR TO BEGINNING CONSTRUCTION OR CLIMBING. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THIS DOCUMENTATION FOR TOWER OWNER AND GPD ON COMPANY LETTERHEAD AND THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN THIS DOCUMENTATION FROM LOWER TIER SUBCONTRACTORS (ON SUBCONTRACTOR LETTERHEAD) AND DELIVER IT TO TOWER OWNER AND GPD.
8. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE. THIS INCLUDES PROVIDING THE NECESSARY CERTIFICATIONS TO THE TOWER OWNER AND ENGINEER.
9. THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
10. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE SAFETY OF THEIR WORK FORCE, THE WORK AREA, ADJACENT AREA, AND ANY PROPERTY OCCUPANTS WHO MAY BE AFFECTED BY THE WORK UNDER CONTRACT. THE CONTRACTOR SHALL REVIEW AND ABIDE BY ALL LANDOWNER, PRIME CONTRACTOR, CARRIER, OSHA, AND LOCAL SAFETY GUIDELINES. ALL TOWER WORKERS SHALL UTILIZE APPROPRIATE FALL PROTECTION AND SAFETY EQUIPMENT THAT IS UP-TO-DATE AND INSPECTED PER OSHA AND INDUSTRY GUIDELINES. ALL WORKERS SHALL BE TRAINED AND MONITORED TO ENSURE SAFE WORKING PRACTICES ARE MAINTAINED.
11. CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY REMOVING ALL COAX, T-BRACKETS, ANTENNA MOUNTS, AND ANY OTHER APPURTENANCE THAT MAY INTERFERE WITH THE TOWER MODIFICATIONS. ALL TOWER APPURTENANCES MUST BE REPLACED AND/OR RESTORED TO ITS ORIGINAL LOCATION. SOME ATTACHMENTS MAY REQUIRE CUSTOM MODIFICATIONS TO PROPERLY FIT THE MODIFIED REGION OF THE STRUCTURE. THESE CUSTOMIZATIONS ARE DESIGNED BY OTHERS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO REMOVING SUCH ATTACHMENTS. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.
12. CONTRACTOR SHALL ONLY WORK WITHIN THE LIMITS OF THE TOWER OWNER'S PROPERTY OR LEASE AREA AND APPROVED EASEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WORK IS WITHIN THESE BOUNDARIES. CONTRACTOR SHALL EMPLOY A SURVEYOR AS REQUIRED. ANY WORK OUTSIDE THESE BOUNDARIES SHALL BE APPROVED IN WRITING BY THE LAND OWNER PRIOR TO MOBILIZATION. CONSTRUCTION STAKING AND BOUNDARY MARKING IS THE RESPONSIBILITY OF THE CONTRACTOR.
13. THE STRUCTURAL INTEGRITY OF THIS DESIGN EXTENDS TO THE COMPLETE CONDITION ONLY. THE CONTRACTOR MUST BE COGNIZANT THAT THE REMOVAL OF ANY STRUCTURAL COMPONENT HAS THE POTENTIAL TO CAUSE THE PARTIAL OR COMPLETE COLLAPSE OF THE STRUCTURE. ALL NECESSARY PRECAUTIONS MUST BE TAKEN TO ENSURE THE STRUCTURAL INTEGRITY, INCLUDING, BUT NOT LIMITED TO, ENGINEERING ASSESSMENT OF CONSTRUCTION STRESSES WITH INSTALLATION MAXIMUM WIND SPEED AND/OR TEMPORARY BRACING AND SHORING.
14. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 10-MPH). ALL TEMPORARY BRACING AND TEMPORARY SUPPORTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
15. VERIFY IF THIS STRUCTURE IS AN FM TOWER AND TAKE NECESSARY ACTIONS TO PROVIDE SAFE WORKING CONDITIONS INCLUDING, BUT NOT LIMITED TO, HAVING FM SIGNAL TURNED OFF. CONTRACTOR SHALL HAVE PROPER RADMAN FOR NOTIFICATION OF EXCESSIVE RF EXPOSURE FOR ALL INDIVIDUALS WORKING ON SITE IF FM ANTENNAS ARE PRESENT.
16. ALL MANUFACTURERS HARDWARE AND ASSEMBLY INSTRUCTIONS SHALL BE FOLLOWED EXACTLY. DEVIATION FROM THE INSTRUCTIONS IS UNACCEPTABLE AND REQUIRES WRITTEN APPROVAL FROM ENGINEER.
17. DO NOT SCALE DRAWINGS.
18. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL ASSOCIATED HARDWARE SHALL NOT BE IMPEDED OR MODIFIED WITHOUT THE WRITTEN CONSENT OF GPD.
19. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.

STRUCTURAL STEEL NOTES

1. ALL NEW STEEL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123, ASTM A153/A153M, OR ASTM A653 G90, AS APPLICABLE FOR FULL WEATHER PROTECTION. FOR HIGH STRENGTH STEEL FASTENERS WHERE HOT-DIPPED GALVANIZING IS NOT PERMITTED MAGNI 565 COATING (OR ENGINEER APPROVED EQUIVALENT) SHALL BE USED. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING TOWER STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
2. ALL EXPOSED STRUCTURAL STEEL AS THE RESULT OF THIS SCOPE OF WORK INCLUDING, BUT NOT LIMITED TO, DAMAGED MEMBERS, FIELD WELDS, FIELD CUT MEMBERS, FIELD DRILLED HOLES, AND SHAFT INTERIORS (WHERE APPLICABLE), SHALL BE SOLVENT CLEANED AND HAVE TWO (2) COATS OF BRUSHED ON ZRC ZINC RICH COLD GALVANIZING PAINT APPLIED AND SHALL BE PAINTED TO MATCH THE TOWER FINISH (WHERE APPLICABLE). PHOTO DOCUMENTATION IS REQUIRED TO BE SUBMITTED TO THE MODIFICATION INSPECTOR.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO THE LISTED REQUIREMENTS U.N.O. IN THESE DRAWINGS:

• STEEL ANGLE:	ASTM A36 (Fy=36 KSI)
• PIPE (ROUND):	ASTM A53 GRADE B (Fy=35 KSI)
• BOLTS:	ASTM A325 TYPE 1
• THREADED RODS:	ASTM A307 GRADE A
• U-BOLTS:	ASTM A307 GRADE A
• NUTS:	ASTM A563 GRADE DH
• WASHERS (AS REQUIRED):	ASTM F436 TYPE 1
• LOCKING DEVICES:	PAL-NUT OR SPLIT WASHER

4. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222 REQUIREMENTS.
5. ALL BOLTS, INCLUDING U-BOLTS, SHALL BE TIGHTENED IN ACCORDANCE WITH AISC "SNUG TIGHT" REQUIREMENTS, U.N.O.
6. ALL U-BOLTS SPECIFIED SHALL MEET THE REQUIREMENTS OF ASME B18.31.5-2011 BENT BOLTS.
7. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE PROVIDED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
8. UNLESS NOTED OTHERWISE, ALL NEW MEMBERS SHALL MAINTAIN THE EXISTING MEMBER WORK LINES AND NOT INTRODUCE ECCENTRICITIES INTO THE STRUCTURE.
9. WELDING OF ANY KIND IS NOT PERMITTED ON SITE UNLESS SPECIFIED WITHIN THESE DRAWINGS. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING OR OPEN FLAME IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
10. FOR ALL SHOP WELDING, USE E70XX ELECTRODES FOR SMAW PROCESS AND E7XT-XX ELECTRODES FOR FCAW PROCESS, UNO.

MODIFICATION INSPECTION NOTES

GENERAL

1. THE MI IS AN ON-SITE AND HANDS-ON INSPECTION OF THE MODIFICATIONS INCLUDING A REVIEW OF CONSTRUCTION REPORTS AND ADDITIONAL PERTINENT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR (GC), AS WELL AS AND INSPECTION DOCUMENTS PROVIDED BY 3RD PARTY INSPECTORS. THE MI IS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE MODIFICATION DRAWINGS; IN ACCORDANCE WITH ALL APPLICABLE INDUSTRY STANDARDS; AND AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. NO DOCUMENT, CODE, OR POLICY CAN ANTICIPATE EVERY SITUATION THAT MAY ARISE. ACCORDINGLY, THE CHECKLIST IS INTENDED TO SERVE AS A SOURCE OF GUIDING PRINCIPLES IN ESTABLISHING GUIDELINES FOR THE MODIFICATION INSPECTION.
3. THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, AND THE MI INSPECTOR DOES NOT TAKE OWNERSHIP OF THE DESIGN. THE MI INSPECTOR SHALL INSPECT AN NOTE CONFORMANCE/NON-CONFORMANCE AND PROVIDE TO THE TOWER/STRUCTURE OWNER AND EOR FOR EVALUATION.
4. TO ENSURE THAT THE REQUIREMENTS OF THE MODIFICATION INSPECTION ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO OR PAYMENT IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. CONTACT LISTED ON THE TITLE SHEET SHALL BE CONTACTED IF SPECIFIC INSPECTOR CONTACT INFORMATION IS NOT KNOWN.

FAILING INSPECTION REQUIREMENTS

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE MODIFICATION INSPECTION ("FAILED MODIFICATION INSPECTION"), THE GC SHALL WORK WITH THE MI INSPECTOR TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL MODIFICATION DRAWINGS AND COORDINATE A SUPPLEMENT MODIFICATION INSPECTION.
   - OR, WITH TOWER OWNER APPROVAL, THE GC MAY WORK WITH THE ENGINEER OF RECORD TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

SERVICE LEVEL COMMITMENT

1. THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:
   - THE GC SHALL PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL E READY TO THE MI TO BE CONDUCTED.
   - THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
   - WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY MINOR DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:
   - PRE-CONSTRUCTION GENERAL SITE CONDITION
   - PHOTOGRAPHS DURING THE MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - RAW MATERIALS
     - PHOTOS OF ALL CRITICAL DETAILS
     - WELD PREPARATION
     - BOLT INSTALLATION
     - FINAL INSTALLED CONDITION
     - SURFACE COATING REPAIR
   - ANY OTHER PHOTOS DEEMED RELEVANT TO SHOW COMPLETE DETAILS OF THE MODIFICATIONS.
2. PHOTOS OF ELEVATED MODIFICATION TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

GPD Engineering and Architecture Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467234
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

PROJECT NOTES & INSPECTION CHECKLIST

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

N-01

BILL OF MATERIALS

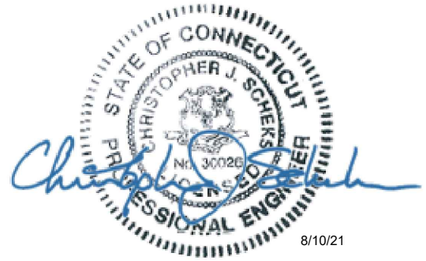
VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT	WEIGHT
3	VZWSMART	VZWSMART-SFK4	T-ARM REINFORCEMENT KIT	FIELD TRIM REINFORCEMENT HSS TUBES TO REQUIRED LENGTH.	106	318
1		VZWSMART-PLK7	COLLAR MOUNT ASSEMBLY		150	150
15		VZWSMART-MSK2	CROSSOVER PLATE ASSEMBLY		15	225
OTHER REQUIRED KITS						
3	-	12'-6"± P3 STD PIPE	FACE HORIZONTAL	FIELD VERIFY REQUIRED LENGTH. SEE PAGE N-01 FOR STEEL GRADE REQUIREMENTS.	95	285
3		7'-0" P2.5 STD PIPE	MOUNT PIPE	SEE PAGE N-01 FOR STEEL GRADE REQUIREMENTS.	41	123
					TOTAL:	1101

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WIRELESSSALES@PERFECT-VISION.COM
WEBSITE	WWW.PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTES:
1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.



8/10/21

GPD Engineering and Architecture
Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
verizon
SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

BILL OF MATERIALS

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-01

GPD Engineering and Architecture
Professional Corporation

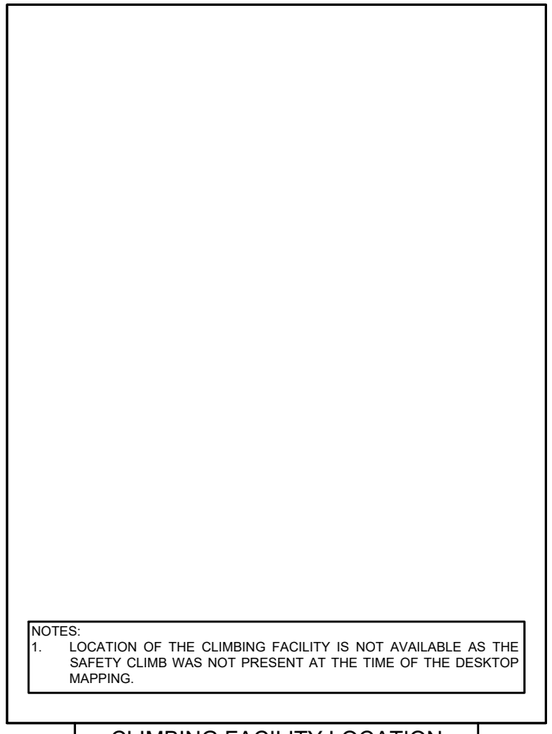
520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS
PREPARED FOR:

verizon

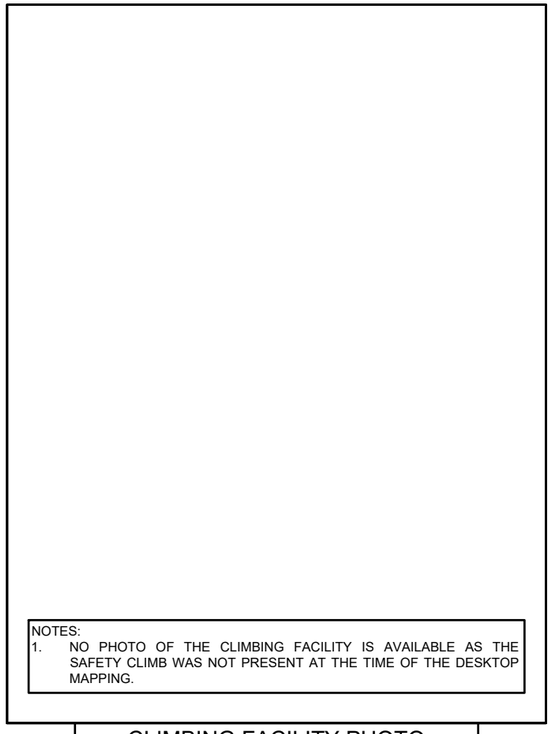
SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE



NOTES:
1. LOCATION OF THE CLIMBING FACILITY IS NOT AVAILABLE AS THE SAFETY CLIMB WAS NOT PRESENT AT THE TIME OF THE DESKTOP MAPPING.

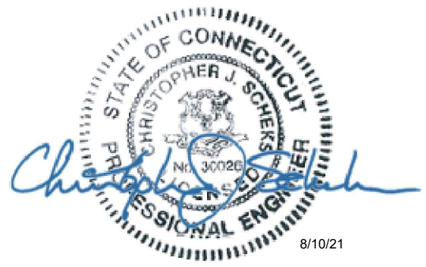
CLIMBING FACILITY LOCATION



NOTES:
1. NO PHOTO OF THE CLIMBING FACILITY IS AVAILABLE AS THE SAFETY CLIMB WAS NOT PRESENT AT THE TIME OF THE DESKTOP MAPPING.

CLIMBING FACILITY PHOTO

NOTES:
1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



8/10/21

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

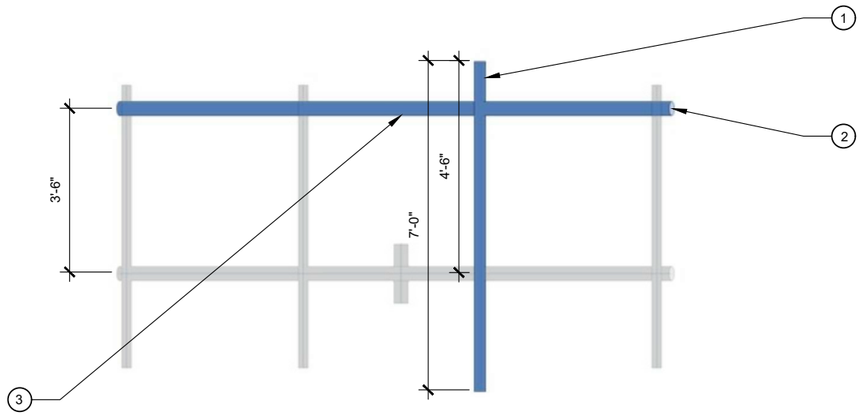
CLIMBING FACILITY DETAIL

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-02



1 S-03 ELEVATION VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.

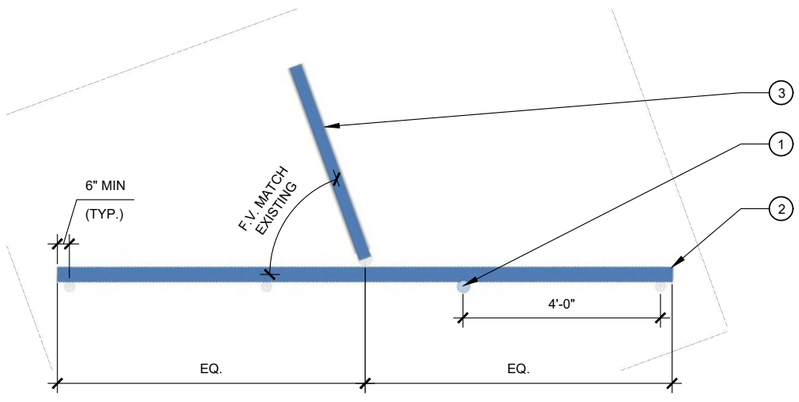
MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	109'-6"±	3	REPLACEMENT MOUNT PIPE (P2.5 STD)	REPLACE EXISTING POSITION 2 MOUNT PIPE WITH LARGER DIAMETER MOUNT PIPE. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL USING NEW CROSSOVER PLATE ASSEMBLIES (VERIZON P/N: VZWSMART-MSK2).
2		3	PROPOSED FACE HORIZONTAL (P3 STD)	INSTALL A NEW FACE HORIZONTAL CONNECTED TO MOUNT PIPES (F.V. REQUIRED LENGTH BEFORE ORDERING). CONNECT NEW FACE HORIZONTAL TO MOUNT PIPES USING NEW CROSSOVER PLATE ASSEMBLIES (VERIZON P/N: VZWSMART-MSK2).
3		3	PROPOSED T-ARM REINFORCEMENT KIT (PART #: VZWSMART-SFK4)	INSTALL A NEW T-ARM REINFORCEMENT KIT (VERIZON P/N: VZWSMART-SFK4) CONNECTED TO TOWER SHAFT AND NEW FACE HORIZONTAL. FIELD TRIM REINFORCEMENT TUBES TO REQUIRED LENGTH AND DRILL NEW STANDARD SIZE HOLES FOR CONNECTION BOLTS. CONNECT NEW T-ARM REINFORCEMENT KIT TO TOWER SHAFT USING NEW COLLAR MOUNT ASSEMBLY (VERIZON P/N: VZWSMART-PLK7).

NOTES:
1. ANY SUBSTITUTION OF PARTS SPECIFIED IN THIS DESIGN PACKAGE SHALL REQUIRE ENGINEER APPROVAL PRIOR TO FABRICATION.
2. ALL MATERIAL REMOVED FROM MOUNT SHALL BE DISPOSED OF BY CONTRACTOR OFF SITE.
3. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.

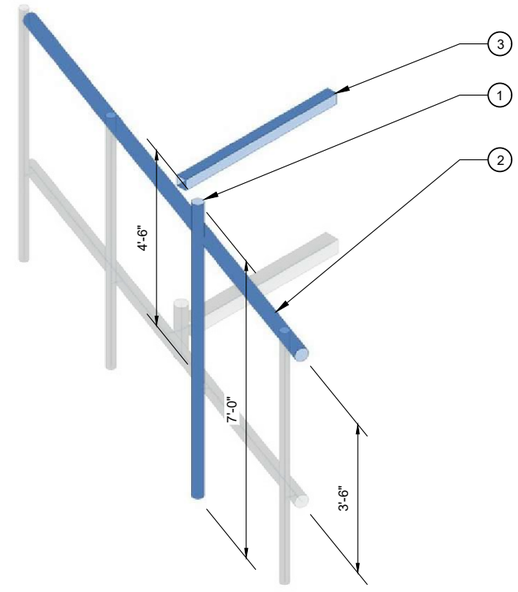
STATE OF CONNECTICUT
CHRISTOPHER J. SCHEKS
No. 30026
PROFESSIONAL ENGINEER

8/10/21



2 S-03 PLAN VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.



3 S-03 ISOMETRIC VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.

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DESIGN DRAWINGS PREPARED FOR:
verizon
SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

MODIFICATION SCHEDULE & DETAILS

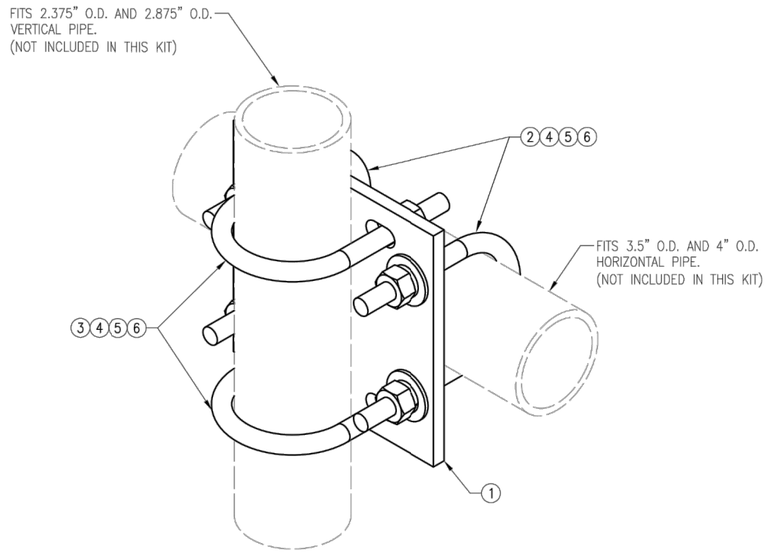
ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

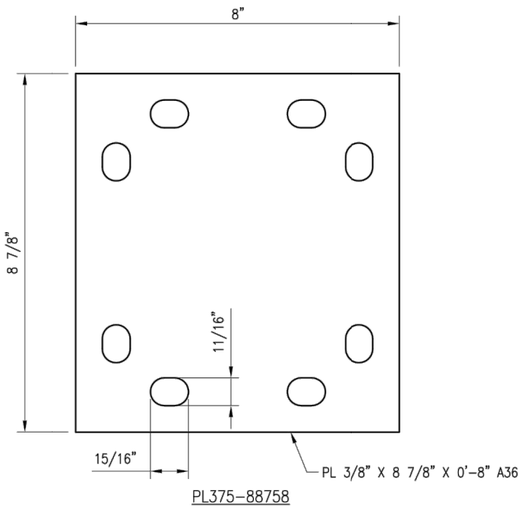
ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-03

REFERENCE ONLY





PL375-88758

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK2 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

VzW SMART Tool© Vendor

verizon

DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2 | REV #: 0

GPD Engineering and Architecture Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

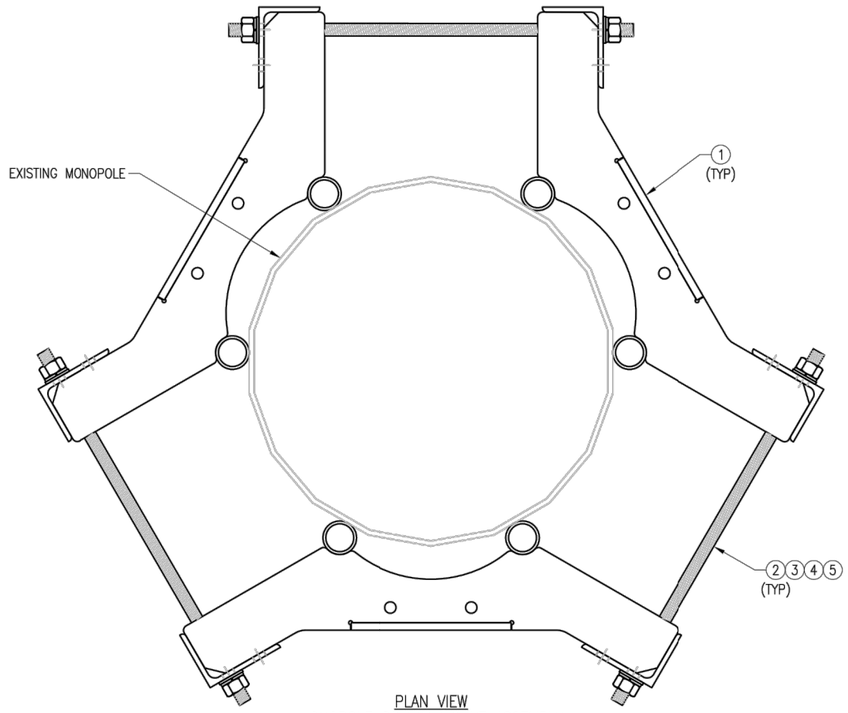
DETAILS/PARTS

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

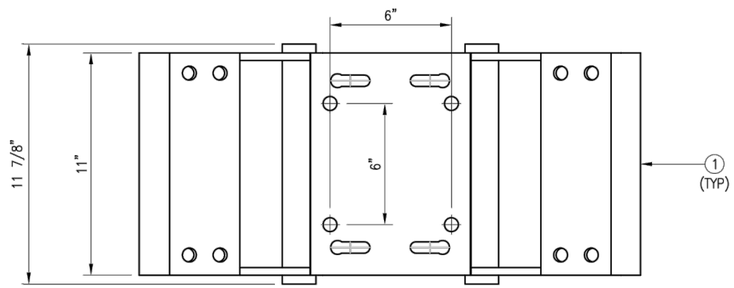
ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-04



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

REFERENCE ONLY

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

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DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7 | REV #: 0

GPD Engineering and Architecture
Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS
PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

DETAILS/PARTS

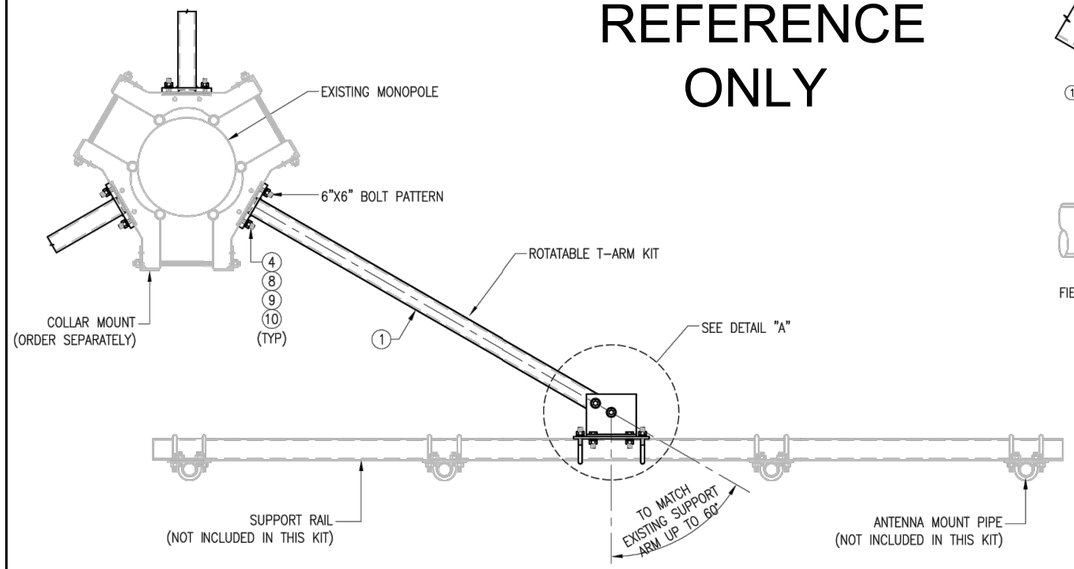
ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

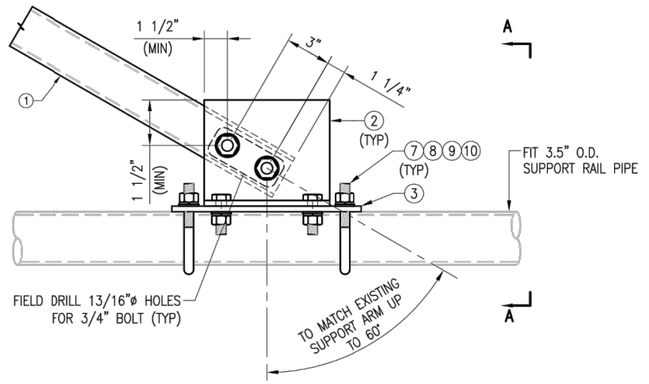
JOB NO.
2021740.467324.02

S-05

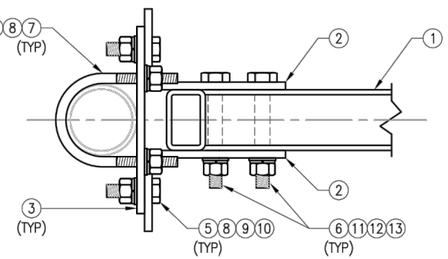
REFERENCE ONLY



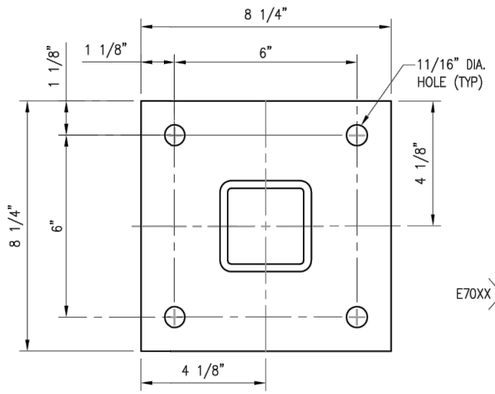
PLAN VIEW
T-ARM KIT



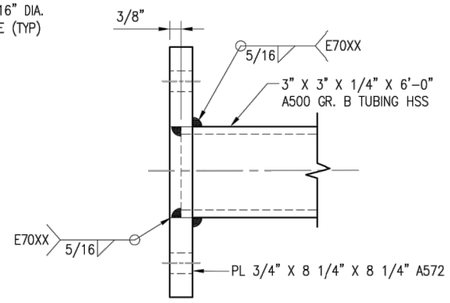
DETAIL "A"



SECTION "A-A"



FRONT VIEW



SIDE VIEW

RO-TAW-6 WELDMENT

VZWSMART-SFK4 (T-ARM KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
				GALVANIZED WT	106

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

verizon

DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20

SHEET TITLE:
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4 | REV #: 0

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
verizon
SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

DETAILS/PARTS

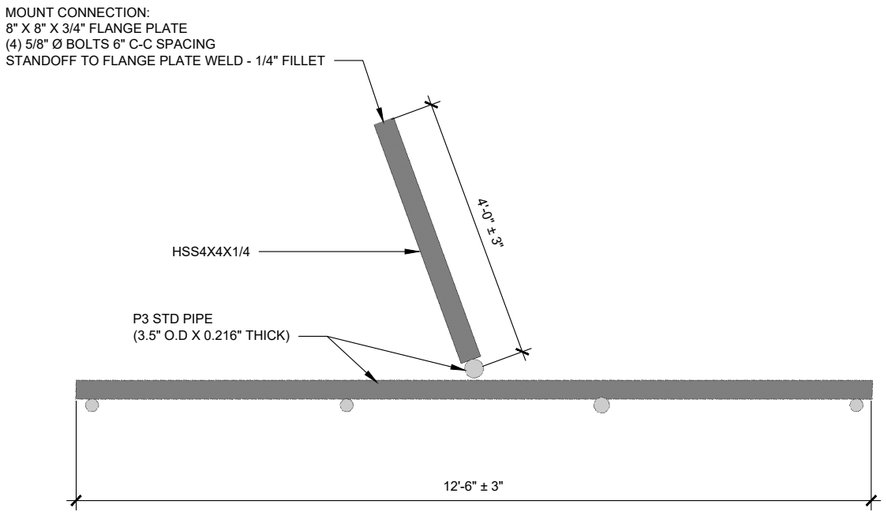
ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

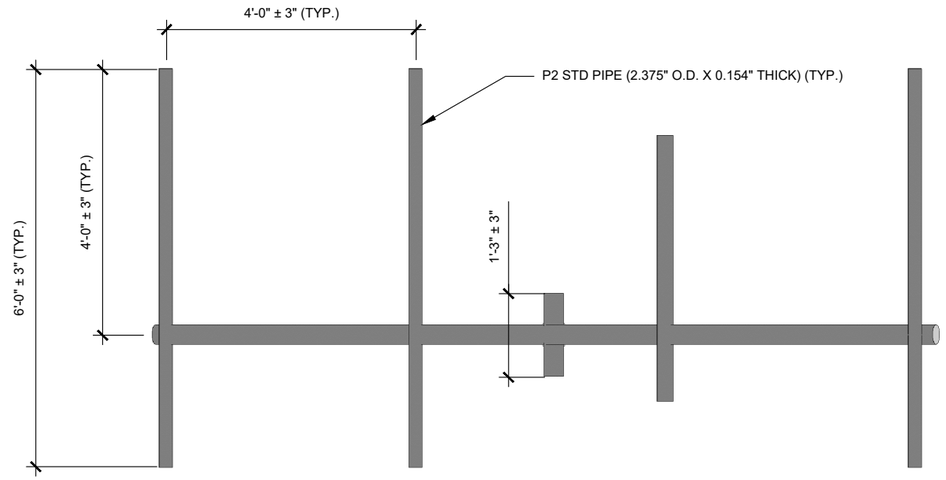
S-06

MOUNT PLAN VIEW



CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT ALL VARIATIONS OR DEVIATIONS VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION

MOUNT FRONT VIEW



CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT ALL VARIATIONS OR DEVIATIONS VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION

STATE OF CONNECTICUT
CHRISTOPHER J. SCHERER
No. 30026
REGISTERED
PROFESSIONAL ENGINEER

8/10/21

GPD Engineering and Architecture
Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS
PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

MOUNT GEOMETRY VERIFICATION

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-07

MOUNT PHOTO

MOUNT PHOTO

MOUNT PHOTO

GPD Engineering and Architecture
Professional Corporation

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Akron, OH 44311
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DESIGN DRAWINGS
PREPARED FOR:

verizon

SOUTHBURY W CT
SITE #: 467324
SMART TOOL PROJECT #: 10091168

REV.	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

MOUNT PHOTOS

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

P-01

STATE OF CONNECTICUT
CHRISTOPHER J. SCHEKS
No. 30026
PROFESSIONAL ENGINEER

8/10/21

GPD Engineering And Architecture Professional Corporation
520 South Main Street, Suite 2531
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(317) 295-3174

Maser Consulting Contact:
Peter.albano@colliersengineering.com
(856) 371-9457

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10091168
GPD Project #: 2021740.467324.02
Maser Consulting Project #: 21777856

August 10, 2021

Site Information	*Site ID:*	*467324-VZW / SOUTHBURY W CT*
	Site Name:	*SOUTHBURY W CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*133 Horse Fence Hill Road* *Southbury, Connecticut 06488, New Haven County*
	Latitude:	*41.460096°*
	Longitude:	*-73.245390°*
Structure Information	*Tower Type:*	*150-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

FUZE ID # 16053187

Analysis Results

T-Arm: **69.8% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared by: Eric Nieto

Respectfully Submitted by:

Christopher J. Scheks, P.E.
Connecticut #: 30026

8/10/2021

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS Site ID: 324866, dated 7/20/2021
Desktop Mount Mapping Form	Colliers Project #: 21777856, dated 7/9/2021
Previous Mount Analysis Report	GPD Project #: 2021740.467324.01, dated 7/27/2021
Proposed Mount Modification Design	GPD Project #: 2021740.467324.02 Rev. 0, dated 8/10/2021

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	116 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.988
Seismic Parameters:	S_S:	0.202
	S_1:	0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	250 lbs.*
	*Reduced as allowed per ANSI/TIA-222-H 16.9	
Analysis Software:	RISA-3D (V17.0.2)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
109.50	111.00	6	JMA Wireless	MX06FRO660-03	Added
		3	Samsung	MT6407-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Andrew	LNX-6514DS-VTM	Retained

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to GPD and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to GPD to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by TES, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. GPD is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
    - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
    - HSS (Rectangular) — ASTM 500 (Gr. B-46)
    - Pipe — ASTM A53 (Gr. B-35)
    - Threaded Rod — F1554 (Gr. 36)
    - Bolts — ASTM A325

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by GPD.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	44.8 %	Pass
Standoff	40.1 %	Pass
Mount Pipe	27.0 %	Pass
Mod Mount Pipe	34.6 %	Pass
Mod Face Horizontal	32.6 %	Pass
Mod Standoff	35.9 %	Pass
Mount Connection	69.8 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**69.8%***

***The mount has been found structurally adequate for all steel and external connection capacities. Serviceability in accordance with TIA-222-H Section 4.9.11.3 has not been considered.**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Desktop Mount Mapping Form (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption Wind Speed Letter


09/26/2019

Desktop Mount Mapping Form

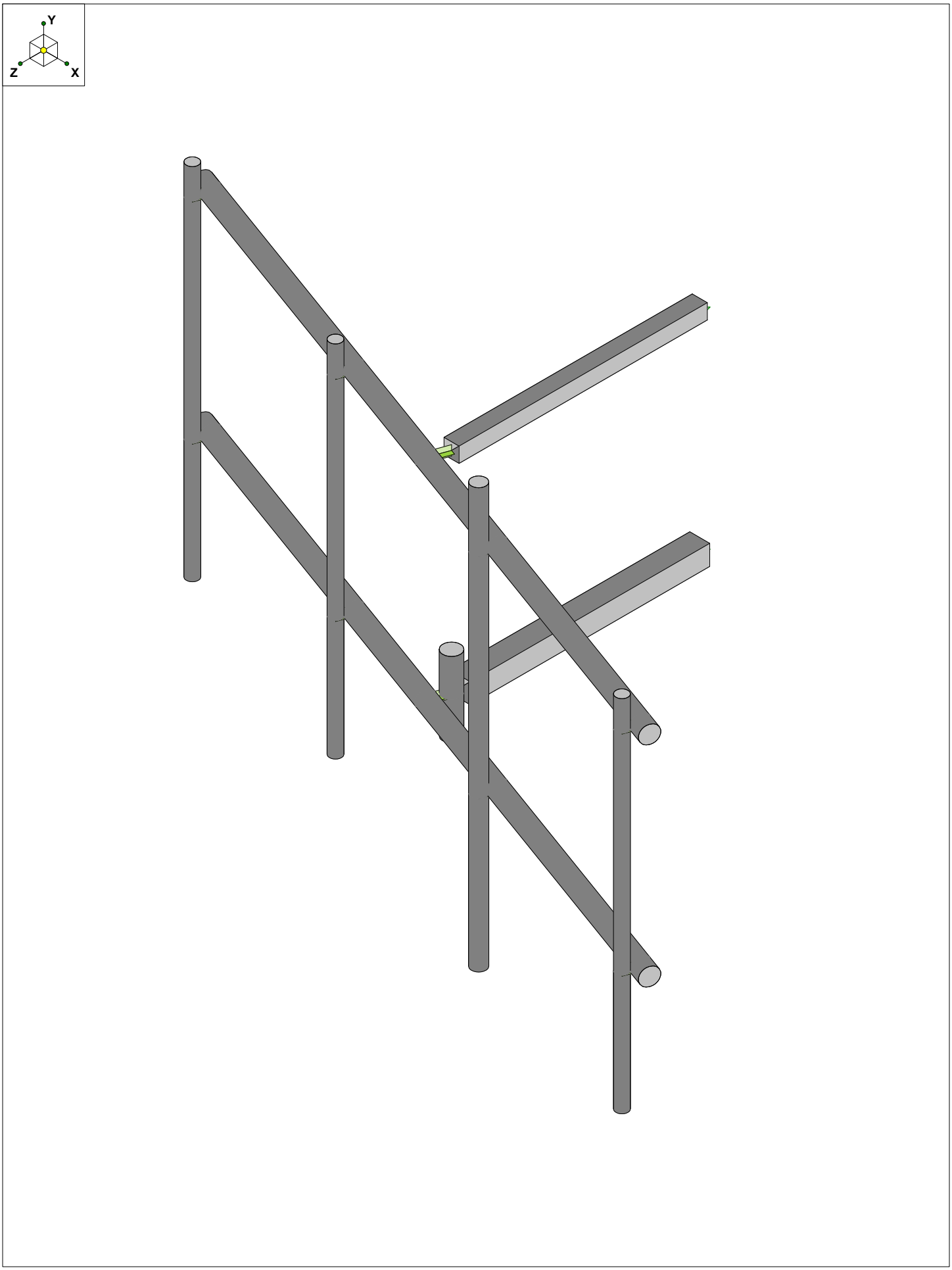
Site Name:	SOUTHBURY W CT	**Tower Type:**	Monopole
Site ID:	467324	**Tower Owner:**	ATC
FUZE Project ID:	16053187	**Tower Height (Ft.):**	
Customer:	Verizon Wireless	**Mount Elevation (Ft.):**	
Colliers Project No.	21777856	**Date:**	7/9/2021

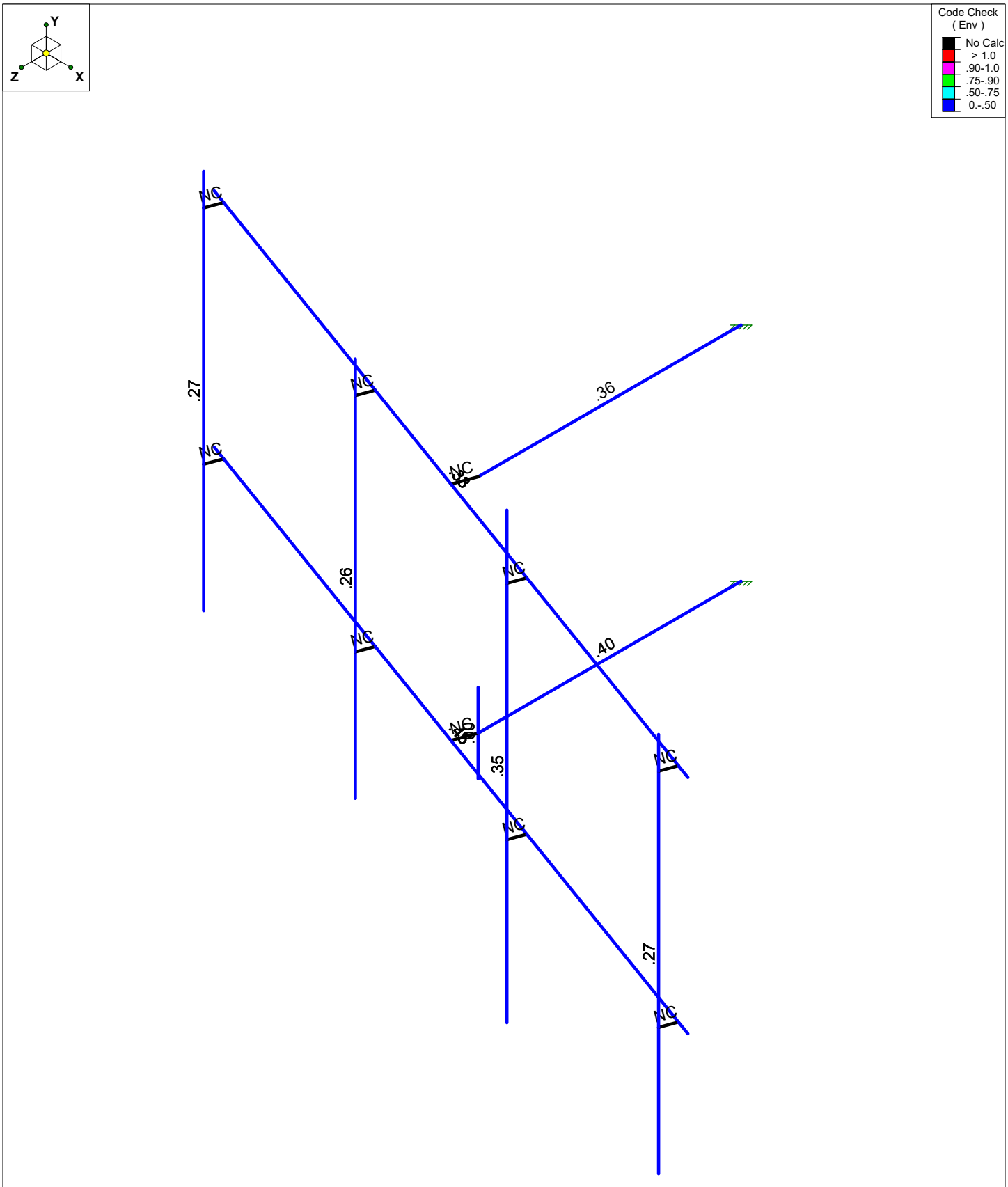
Document Type	Provided? (Yes/No)	Source Name	Project No.	Dated	Comments/Remarks
Previous Mount Mapping	No				
Previous Mapping Photos	No				
Previous Mount Analysis	No				
Previous Mount Modifications	No				
Previous Structural Analysis	No				
Construction Drawings	No				
Closeout Package	No				
Closeout Photos	No				
Handover Package	No				
New Build 445 Documentation	No				
Other	Yes	Hudson Design Group		5/7/2021	Ground Photos Package
Previous PMI	No				

The desktop mount mapping is based on the engineering review of the available site documents in FUZE, as listed above, in place of a full mount mapping. It is assumed that the information provided in the documents listed above, provide an accurate representation of the existing mount. EOR reserves the right and will typically require additional clarification and verification as will be included in the PMI requirements. During the Post Modification Inspection (PMI) process, the GC on site will be required to confirm all questions, confirmations, and validations as posed by the EOR. The engineering review for this desktop mount mapping was performed in accordance to the ANSI/TIA-222-H requirements and Verizon's NSTD446 standard.

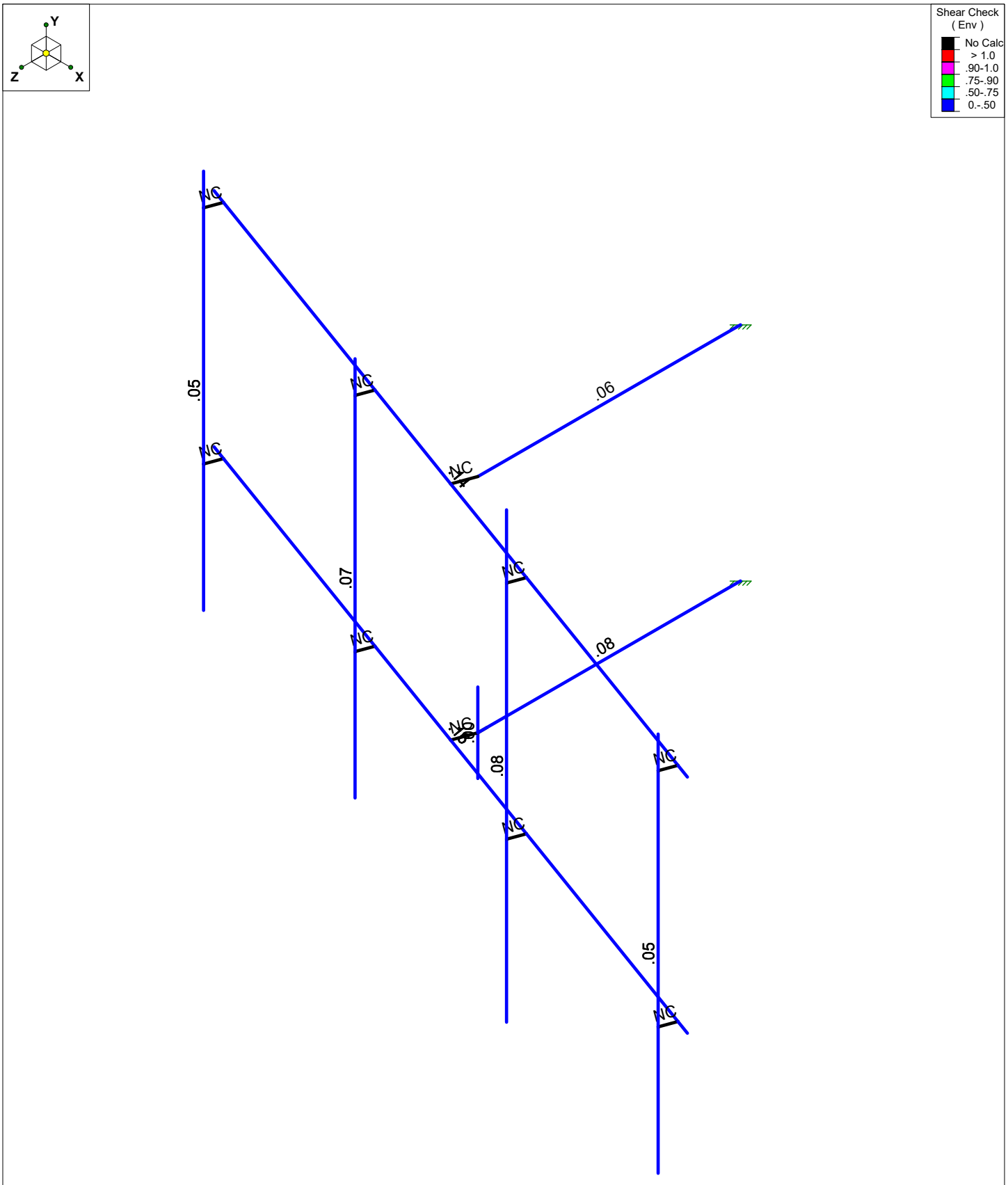
Photo taken from: Closeout Package

Photo taken from: Closeout Package


Y
Z
X



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Basic Load Cases

	BLC Description	Category	X Gra...	Y Gra...	Z Grav...	Joint	Point	Distrib...	Area(Member)	Surface(Plate/W...
1	Antenna D	None					42			
2	Antenna Di	None					42			
3	Antenna Wo (0 Deg)	None					42			
4	Antenna Wo (30 Deg)	None					42			
5	Antenna Wo (60 Deg)	None					42			
6	Antenna Wo (90 Deg)	None					42			
7	Antenna Wo (120 Deg)	None					42			
8	Antenna Wo (150 Deg)	None					42			
9	Antenna Wo (180 Deg)	None					42			
10	Antenna Wo (210 Deg)	None					42			
11	Antenna Wo (240 Deg)	None					42			
12	Antenna Wo (270 Deg)	None					42			
13	Antenna Wo (300 Deg)	None					42			
14	Antenna Wo (330 Deg)	None					42			
15	Antenna Wi (0 Deg)	None					42			
16	Antenna Wi (30 Deg)	None					42			
17	Antenna Wi (60 Deg)	None					42			
18	Antenna Wi (90 Deg)	None					42			
19	Antenna Wi (120 Deg)	None					42			
20	Antenna Wi (150 Deg)	None					42			
21	Antenna Wi (180 Deg)	None					42			
22	Antenna Wi (210 Deg)	None					42			
23	Antenna Wi (240 Deg)	None					42			
24	Antenna Wi (270 Deg)	None					42			
25	Antenna Wi (300 Deg)	None					42			
26	Antenna Wi (330 Deg)	None					42			
27	Antenna Wm (0 Deg)	None					42			
28	Antenna Wm (30 Deg)	None					42			
29	Antenna Wm (60 Deg)	None					42			
30	Antenna Wm (90 Deg)	None					42			
31	Antenna Wm (120 Deg)	None					42			
32	Antenna Wm (150 Deg)	None					42			
33	Antenna Wm (180 Deg)	None					42			
34	Antenna Wm (210 Deg)	None					42			
35	Antenna Wm (240 Deg)	None					42			
36	Antenna Wm (270 Deg)	None					42			
37	Antenna Wm (300 Deg)	None					42			
38	Antenna Wm (330 Deg)	None					42			
39	Structure D	None		-1						
40	Structure Di	None						9		
41	Structure Wo (0 Deg)	None						18		
42	Structure Wo (30 Deg)	None						18		
43	Structure Wo (60 Deg)	None						18		
44	Structure Wo (90 Deg)	None						18		
45	Structure Wo (120 Deg)	None						18		
46	Structure Wo (150 Deg)	None						18		
47	Structure Wo (180 Deg)	None						18		
48	Structure Wo (210 Deg)	None						18		
49	Structure Wo (240 Deg)	None						18		
50	Structure Wo (270 Deg)	None						18		
51	Structure Wo (300 Deg)	None						18		
52	Structure Wo (330 Deg)	None						18		
53	Structure Wi (0 Deg)	None						18		
54	Structure Wi (30 Deg)	None						18		
55	Structure Wi (60 Deg)	None						18		
56	Structure Wi (90 Deg)	None						18		

Basic Load Cases (Continued)

	BLC Description	Category	X Gra...	Y Gra...	Z Grav...	Joint	Point	Distrib...	Area(Member)	Surface(Plate/W...
57	Structure Wi (120 Deg)	None						18		
58	Structure Wi (150 Deg)	None						18		
59	Structure Wi (180 Deg)	None						18		
60	Structure Wi (210 Deg)	None						18		
61	Structure Wi (240 Deg)	None						18		
62	Structure Wi (270 Deg)	None						18		
63	Structure Wi (300 Deg)	None						18		
64	Structure Wi (330 Deg)	None						18		
65	Structure Wm (0 Deg)	None						18		
66	Structure Wm (30 Deg)	None						18		
67	Structure Wm (60 Deg)	None						18		
68	Structure Wm (90 Deg)	None						18		
69	Structure Wm (120 Deg)	None						18		
70	Structure Wm (150 Deg)	None						18		
71	Structure Wm (180 Deg)	None						18		
72	Structure Wm (210 Deg)	None						18		
73	Structure Wm (240 Deg)	None						18		
74	Structure Wm (270 Deg)	None						18		
75	Structure Wm (300 Deg)	None						18		
76	Structure Wm (330 Deg)	None						18		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	S...	PDel...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Y...	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30 Deg)	Y...	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60 Deg)	Y...	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90 Deg)	Y...	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (120 Deg)	Y...	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (150 Deg)	Y...	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (180 Deg)	Y...	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (210 Deg)	Y...	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (240 Deg)	Y...	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (270 Deg)	Y...	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (300 Deg)	Y...	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (330 Deg)	Y...	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	28	1	66	1												
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												

Load Combinations (Continued)

	Description	S...	PDel...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Y...	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Y...	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Y...	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + 1.0Eh (0 Deg)		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + 1.0Eh (30 Deg)		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.8...										
55	1.2D + 1.0Ev + 1.0Eh (60 Deg)		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + 1.0Eh (90 Deg)		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + 1.0Eh (120 Deg)		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + 1.0Eh (150 Deg)		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + 1.0Eh (180 Deg)		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + 1.0Eh (210 Deg)		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + 1.0Eh (240 Deg)		Y		1	1.2	39	1.2	SX	-.8...	SY	1	SZ	.5										
62	1.2D + 1.0Ev + 1.0Eh (270 Deg)		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + 1.0Eh (300 Deg)		Y		1	1.2	39	1.2	SX	-.8...	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + 1.0Eh (330 Deg)		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.8...										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	5.759072	0	7.59669	0	
2	N2	-5.987086	0	3.321438	0	
3	N3	5.524149	0	7.511185	0	
4	N4	5.440425	0	7.741214	0	
5	N5	1.765379	0	6.143104	0	
6	N6	1.681655	0	6.373133	0	
7	N7	-1.993392	0	4.775024	0	
8	N8	-2.077116	0	5.005053	0	
9	N9	-5.752162	0	3.406943	0	
10	N10	-5.835886	0	3.636972	0	
11	N11	-0.114007	0	5.459064	0	
12	N12	0	0	5	0	
13	N13	0	0	1	0	
14	N14	0	0	5.145833	0	
15	N15	0	.625	5.145833	0	
16	N16	0	-.625	5.145833	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N17	5.440425	-2	7.741214	0	
18	N18	1.681655	-2.5	6.373133	0	
19	N19	-2.077116	-2	5.005053	0	
20	N20	-5.835886	-2	3.636972	0	
21	N21	5.440425	4	7.741214	0	
22	N22	1.681655	4.5	6.373133	0	
23	N23	-2.077116	4	5.005053	0	
24	N24	-5.835886	4	3.636972	0	
25	C	0	0	0	0	
26	N26	5.759072	3.5	7.59669	0	
27	N27	-5.987086	3.5	3.321438	0	
28	N28	5.524149	3.5	7.511185	0	
29	N29	5.440425	3.5	7.741214	0	
30	N30	1.765379	3.5	6.143104	0	
31	N31	1.681655	3.5	6.373133	0	
32	N32	-1.993392	3.5	4.775024	0	
33	N33	-2.077116	3.5	5.005053	0	
34	N34	-5.752162	3.5	3.406943	0	
35	N35	-5.835886	3.5	3.636972	0	
36	N36	0	3.5	1	0	
37	N37	-0.114007	3.5	5.459064	0	
38	N39	0	3.5	5.145833	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in...	Iyy [i...	Izz [i...	J [in4]
1	Face Horizontal	PIPE_3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff Vertical	PIPE_3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Standoff	HSS4X4X4	None	None	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
4	Mount Pipe	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Mod Mount Pipe	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
6	Mod Face Horizontal	PIPE_3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
7	Mod Standoff	HSS3X3X4	None	None	A500 Gr.B Rect	Typical	2.44	3.02	3.02	5.08

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N1	N2			Face Horizontal	None	None	A53 Gr.B	Typical
2	M2	N3	N4			RIGID	None	None	RIGID	Typical
3	M3	N5	N6			RIGID	None	None	RIGID	Typical
4	M4	N7	N8			RIGID	None	None	RIGID	Typical
5	M5	N9	N10			RIGID	None	None	RIGID	Typical
6	M7	N14	N13			Standoff	None	None	A500 Gr...	Typical
7	M8	N15	N16			Standoff Vertical	None	None	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
8	MP1A	N21	N17			Mount Pipe	None	None	A53 Gr.B	Typical
9	MP2A	N22	N18			Mod Mount Pipe	None	None	A53 Gr.B	Typical
10	MP3A	N23	N19			Mount Pipe	None	None	A53 Gr.B	Typical
11	MP4A	N24	N20			Mount Pipe	None	None	A53 Gr.B	Typical
12	M13	N26	N27			Mod Face Horizontal	None	None	A53 Gr.B	Typical
13	M14	N28	N29			RIGID	None	None	RIGID	Typical
14	M15	N30	N31			RIGID	None	None	RIGID	Typical
15	M16	N32	N33			RIGID	None	None	RIGID	Typical
16	M17	N34	N35			RIGID	None	None	RIGID	Typical
17	M17A	N11	N14			RIGID	None	None	RIGID	Typical
18	M18	N37	N39			RIGID	None	None	RIGID	Typical
19	M19	N39	N36			Mod Standoff	None	None	A500 Gr...	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis Offs...	Inactive	Seismi...
1	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M7			1.75			Yes	** NA **			None
7	M8						Yes	** NA **			None
8	MP1A						Yes	** NA **			None
9	MP2A						Yes	** NA **			None
10	MP3A						Yes	** NA **			None
11	MP4A						Yes	** NA **			None
12	M13						Yes	** NA **			None
13	M14						Yes	** NA **			None
14	M15						Yes	** NA **			None
15	M16						Yes	** NA **			None
16	M17						Yes	** NA **			None
17	M17A						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-23	.28
2	MP2A	My	-.023	.28
3	MP2A	Mz	-.019	.28
4	MP2A	Y	-23	5.72
5	MP2A	My	-.023	5.72
6	MP2A	Mz	-.019	5.72
7	MP2A	Y	-23	.28
8	MP2A	My	-.023	.28
9	MP2A	Mz	.019	.28
10	MP2A	Y	-23	5.72
11	MP2A	My	-.023	5.72
12	MP2A	Mz	.019	5.72
13	MP4A	Y	-43.55	1.04
14	MP4A	My	-.036	1.04
15	MP4A	Mz	0	1.04
16	MP4A	Y	-43.55	3.96
17	MP4A	My	-.036	3.96

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP4A	Mz	0	3.96
19	MP1A	Y	-35.15	2.25
20	MP1A	My	.035	2.25
21	MP1A	Mz	0	2.25
22	MP1A	Y	-35.15	2.25
23	MP1A	My	.035	2.25
24	MP1A	Mz	0	2.25
25	MP3A	Y	-35.15	2.25
26	MP3A	My	.035	2.25
27	MP3A	Mz	0	2.25
28	MP3A	Y	-35.15	2.25
29	MP3A	My	.035	2.25
30	MP3A	Mz	0	2.25
31	M7	Y	-16	2.89
32	M7	My	-.008	2.89
33	M7	Mz	0	2.89
34	M7	Y	-16	2.89
35	M7	My	-.008	2.89
36	M7	Mz	0	2.89
37	MP1A	Y	-16.55	.5
38	MP1A	My	-.014	.5
39	MP1A	Mz	0	.5
40	MP1A	Y	-16.55	5.5
41	MP1A	My	-.014	5.5
42	MP1A	Mz	0	5.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-80.532	.28
2	MP2A	My	-.081	.28
3	MP2A	Mz	-.067	.28
4	MP2A	Y	-80.532	5.72
5	MP2A	My	-.081	5.72
6	MP2A	Mz	-.067	5.72
7	MP2A	Y	-80.532	.28
8	MP2A	My	-.081	.28
9	MP2A	Mz	.067	.28
10	MP2A	Y	-80.532	5.72
11	MP2A	My	-.081	5.72
12	MP2A	Mz	.067	5.72
13	MP4A	Y	-34.755	1.04
14	MP4A	My	-.029	1.04
15	MP4A	Mz	0	1.04
16	MP4A	Y	-34.755	3.96
17	MP4A	My	-.029	3.96
18	MP4A	Mz	0	3.96
19	MP1A	Y	-19.692	2.25
20	MP1A	My	.02	2.25
21	MP1A	Mz	0	2.25
22	MP1A	Y	-19.692	2.25
23	MP1A	My	.02	2.25
24	MP1A	Mz	0	2.25
25	MP3A	Y	-19.692	2.25
26	MP3A	My	.02	2.25
27	MP3A	Mz	0	2.25
28	MP3A	Y	-19.692	2.25

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3A	My	.02	2.25
30	MP3A	Mz	0	2.25
31	M7	Y	-42.914	2.89
32	M7	My	-.021	2.89
33	M7	Mz	0	2.89
34	M7	Y	-42.914	2.89
35	M7	My	-.021	2.89
36	M7	Mz	0	2.89
37	MP1A	Y	-59.144	.5
38	MP1A	My	-.049	.5
39	MP1A	Mz	0	.5
40	MP1A	Y	-59.144	5.5
41	MP1A	My	-.049	5.5
42	MP1A	Mz	0	5.5

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	-146.153	.28
3	MP2A	Mx	.122	.28
4	MP2A	X	0	5.72
5	MP2A	Z	-146.153	5.72
6	MP2A	Mx	.122	5.72
7	MP2A	X	0	.28
8	MP2A	Z	-146.153	.28
9	MP2A	Mx	-.122	.28
10	MP2A	X	0	5.72
11	MP2A	Z	-146.153	5.72
12	MP2A	Mx	-.122	5.72
13	MP4A	X	0	1.04
14	MP4A	Z	-69.597	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	-69.597	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	-27.691	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	-27.691	2.25
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	-27.691	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	-27.691	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	-60.12	2.89
33	M7	Mx	0	2.89
34	M7	X	0	2.89
35	M7	Z	-60.12	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	-119.795	.5
39	MP1A	Mx	0	.5

Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP1A	X	0	5.5
41	MP1A	Z	-119.795	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	68.39	.28
2	MP2A	Z	-118.455	.28
3	MP2A	Mx	.03	.28
4	MP2A	X	68.39	5.72
5	MP2A	Z	-118.455	5.72
6	MP2A	Mx	.03	5.72
7	MP2A	X	68.39	.28
8	MP2A	Z	-118.455	.28
9	MP2A	Mx	-.167	.28
10	MP2A	X	68.39	5.72
11	MP2A	Z	-118.455	5.72
12	MP2A	Mx	-.167	5.72
13	MP4A	X	29.505	1.04
14	MP4A	Z	-51.104	1.04
15	MP4A	Mx	-.025	1.04
16	MP4A	X	29.505	3.96
17	MP4A	Z	-51.104	3.96
18	MP4A	Mx	-.025	3.96
19	MP1A	X	12.258	2.25
20	MP1A	Z	-21.232	2.25
21	MP1A	Mx	.012	2.25
22	MP1A	X	12.258	2.25
23	MP1A	Z	-21.232	2.25
24	MP1A	Mx	.012	2.25
25	MP3A	X	12.258	2.25
26	MP3A	Z	-21.232	2.25
27	MP3A	Mx	.012	2.25
28	MP3A	X	12.258	2.25
29	MP3A	Z	-21.232	2.25
30	MP3A	Mx	.012	2.25
31	M7	X	28.278	2.89
32	M7	Z	-48.98	2.89
33	M7	Mx	-.014	2.89
34	M7	X	28.278	2.89
35	M7	Z	-48.98	2.89
36	M7	Mx	-.014	2.89
37	MP1A	X	54.811	.5
38	MP1A	Z	-94.935	.5
39	MP1A	Mx	-.046	.5
40	MP1A	X	54.811	5.5
41	MP1A	Z	-94.935	5.5
42	MP1A	Mx	-.046	5.5

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	102.219	.28
2	MP2A	Z	-59.016	.28
3	MP2A	Mx	-.053	.28
4	MP2A	X	102.219	5.72
5	MP2A	Z	-59.016	5.72

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
6	MP2A	Mx	-.053	5.72
7	MP2A	X	102.219	.28
8	MP2A	Z	-59.016	.28
9	MP2A	Mx	-.151	.28
10	MP2A	X	102.219	5.72
11	MP2A	Z	-59.016	5.72
12	MP2A	Mx	-.151	5.72
13	MP4A	X	32.766	1.04
14	MP4A	Z	-18.917	1.04
15	MP4A	Mx	-.027	1.04
16	MP4A	X	32.766	3.96
17	MP4A	Z	-18.917	3.96
18	MP4A	Mx	-.027	3.96
19	MP1A	X	15.733	2.25
20	MP1A	Z	-9.084	2.25
21	MP1A	Mx	.016	2.25
22	MP1A	X	15.733	2.25
23	MP1A	Z	-9.084	2.25
24	MP1A	Mx	.016	2.25
25	MP3A	X	15.733	2.25
26	MP3A	Z	-9.084	2.25
27	MP3A	Mx	.016	2.25
28	MP3A	X	15.733	2.25
29	MP3A	Z	-9.084	2.25
30	MP3A	Mx	.016	2.25
31	M7	X	42.808	2.89
32	M7	Z	-24.715	2.89
33	M7	Mx	-.021	2.89
34	M7	X	42.808	2.89
35	M7	Z	-24.715	2.89
36	M7	Mx	-.021	2.89
37	MP1A	X	77.313	.5
38	MP1A	Z	-44.636	.5
39	MP1A	Mx	-.064	.5
40	MP1A	X	77.313	5.5
41	MP1A	Z	-44.636	5.5
42	MP1A	Mx	-.064	5.5

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	108.659	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	-.109	.28
4	MP2A	X	108.659	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	-.109	5.72
7	MP2A	X	108.659	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	-.109	.28
10	MP2A	X	108.659	5.72
11	MP2A	Z	0	5.72
12	MP2A	Mx	-.109	5.72
13	MP4A	X	27.247	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	-.023	1.04
16	MP4A	X	27.247	3.96

Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	0	3.96
18	MP4A	Mx	-.023	3.96
19	MP1A	X	14.993	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	.015	2.25
22	MP1A	X	14.993	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	.015	2.25
25	MP3A	X	14.993	2.25
26	MP3A	Z	0	2.25
27	MP3A	Mx	.015	2.25
28	MP3A	X	14.993	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	.015	2.25
31	M7	X	45.867	2.89
32	M7	Z	0	2.89
33	M7	Mx	-.023	2.89
34	M7	X	45.867	2.89
35	M7	Z	0	2.89
36	M7	Mx	-.023	2.89
37	MP1A	X	79.099	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	-.066	.5
40	MP1A	X	79.099	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	-.066	5.5

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	102.219	.28
2	MP2A	Z	59.016	.28
3	MP2A	Mx	-.151	.28
4	MP2A	X	102.219	5.72
5	MP2A	Z	59.016	5.72
6	MP2A	Mx	-.151	5.72
7	MP2A	X	102.219	.28
8	MP2A	Z	59.016	.28
9	MP2A	Mx	-.053	.28
10	MP2A	X	102.219	5.72
11	MP2A	Z	59.016	5.72
12	MP2A	Mx	-.053	5.72
13	MP4A	X	32.766	1.04
14	MP4A	Z	18.917	1.04
15	MP4A	Mx	-.027	1.04
16	MP4A	X	32.766	3.96
17	MP4A	Z	18.917	3.96
18	MP4A	Mx	-.027	3.96
19	MP1A	X	15.733	2.25
20	MP1A	Z	9.084	2.25
21	MP1A	Mx	.016	2.25
22	MP1A	X	15.733	2.25
23	MP1A	Z	9.084	2.25
24	MP1A	Mx	.016	2.25
25	MP3A	X	15.733	2.25
26	MP3A	Z	9.084	2.25
27	MP3A	Mx	.016	2.25

Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP3A	X	15.733	2.25
29	MP3A	Z	9.084	2.25
30	MP3A	Mx	.016	2.25
31	M7	X	42.808	2.89
32	M7	Z	24.715	2.89
33	M7	Mx	-.021	2.89
34	M7	X	42.808	2.89
35	M7	Z	24.715	2.89
36	M7	Mx	-.021	2.89
37	MP1A	X	77.313	.5
38	MP1A	Z	44.636	.5
39	MP1A	Mx	-.064	.5
40	MP1A	X	77.313	5.5
41	MP1A	Z	44.636	5.5
42	MP1A	Mx	-.064	5.5

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	68.39	.28
2	MP2A	Z	118.455	.28
3	MP2A	Mx	-.167	.28
4	MP2A	X	68.39	5.72
5	MP2A	Z	118.455	5.72
6	MP2A	Mx	-.167	5.72
7	MP2A	X	68.39	.28
8	MP2A	Z	118.455	.28
9	MP2A	Mx	.03	.28
10	MP2A	X	68.39	5.72
11	MP2A	Z	118.455	5.72
12	MP2A	Mx	.03	5.72
13	MP4A	X	29.505	1.04
14	MP4A	Z	51.104	1.04
15	MP4A	Mx	-.025	1.04
16	MP4A	X	29.505	3.96
17	MP4A	Z	51.104	3.96
18	MP4A	Mx	-.025	3.96
19	MP1A	X	12.258	2.25
20	MP1A	Z	21.232	2.25
21	MP1A	Mx	.012	2.25
22	MP1A	X	12.258	2.25
23	MP1A	Z	21.232	2.25
24	MP1A	Mx	.012	2.25
25	MP3A	X	12.258	2.25
26	MP3A	Z	21.232	2.25
27	MP3A	Mx	.012	2.25
28	MP3A	X	12.258	2.25
29	MP3A	Z	21.232	2.25
30	MP3A	Mx	.012	2.25
31	M7	X	28.278	2.89
32	M7	Z	48.98	2.89
33	M7	Mx	-.014	2.89
34	M7	X	28.278	2.89
35	M7	Z	48.98	2.89
36	M7	Mx	-.014	2.89
37	MP1A	X	54.811	.5
38	MP1A	Z	94.935	.5

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
39	MP1A	Mx	-.046	.5
40	MP1A	X	54.811	5.5
41	MP1A	Z	94.935	5.5
42	MP1A	Mx	-.046	5.5

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	146.153	.28
3	MP2A	Mx	-.122	.28
4	MP2A	X	0	5.72
5	MP2A	Z	146.153	5.72
6	MP2A	Mx	-.122	5.72
7	MP2A	X	0	.28
8	MP2A	Z	146.153	.28
9	MP2A	Mx	.122	.28
10	MP2A	X	0	5.72
11	MP2A	Z	146.153	5.72
12	MP2A	Mx	.122	5.72
13	MP4A	X	0	1.04
14	MP4A	Z	69.597	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	69.597	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	27.691	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	27.691	2.25
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	27.691	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	27.691	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	60.12	2.89
33	M7	Mx	0	2.89
34	M7	X	0	2.89
35	M7	Z	60.12	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	119.795	.5
39	MP1A	Mx	0	.5
40	MP1A	X	0	5.5
41	MP1A	Z	119.795	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-68.39	.28
2	MP2A	Z	118.455	.28
3	MP2A	Mx	-.03	.28
4	MP2A	X	-68.39	5.72

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP2A	Z	118.455	5.72
6	MP2A	Mx	-.03	5.72
7	MP2A	X	-68.39	.28
8	MP2A	Z	118.455	.28
9	MP2A	Mx	.167	.28
10	MP2A	X	-68.39	5.72
11	MP2A	Z	118.455	5.72
12	MP2A	Mx	.167	5.72
13	MP4A	X	-29.505	1.04
14	MP4A	Z	51.104	1.04
15	MP4A	Mx	.025	1.04
16	MP4A	X	-29.505	3.96
17	MP4A	Z	51.104	3.96
18	MP4A	Mx	.025	3.96
19	MP1A	X	-12.258	2.25
20	MP1A	Z	21.232	2.25
21	MP1A	Mx	-.012	2.25
22	MP1A	X	-12.258	2.25
23	MP1A	Z	21.232	2.25
24	MP1A	Mx	-.012	2.25
25	MP3A	X	-12.258	2.25
26	MP3A	Z	21.232	2.25
27	MP3A	Mx	-.012	2.25
28	MP3A	X	-12.258	2.25
29	MP3A	Z	21.232	2.25
30	MP3A	Mx	-.012	2.25
31	M7	X	-28.278	2.89
32	M7	Z	48.98	2.89
33	M7	Mx	.014	2.89
34	M7	X	-28.278	2.89
35	M7	Z	48.98	2.89
36	M7	Mx	.014	2.89
37	MP1A	X	-54.811	.5
38	MP1A	Z	94.935	.5
39	MP1A	Mx	.046	.5
40	MP1A	X	-54.811	5.5
41	MP1A	Z	94.935	5.5
42	MP1A	Mx	.046	5.5

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-102.219	.28
2	MP2A	Z	59.016	.28
3	MP2A	Mx	.053	.28
4	MP2A	X	-102.219	5.72
5	MP2A	Z	59.016	5.72
6	MP2A	Mx	.053	5.72
7	MP2A	X	-102.219	.28
8	MP2A	Z	59.016	.28
9	MP2A	Mx	.151	.28
10	MP2A	X	-102.219	5.72
11	MP2A	Z	59.016	5.72
12	MP2A	Mx	.151	5.72
13	MP4A	X	-32.766	1.04
14	MP4A	Z	18.917	1.04
15	MP4A	Mx	.027	1.04

Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP4A	X	-32.766	3.96
17	MP4A	Z	18.917	3.96
18	MP4A	Mx	.027	3.96
19	MP1A	X	-15.733	2.25
20	MP1A	Z	9.084	2.25
21	MP1A	Mx	-.016	2.25
22	MP1A	X	-15.733	2.25
23	MP1A	Z	9.084	2.25
24	MP1A	Mx	-.016	2.25
25	MP3A	X	-15.733	2.25
26	MP3A	Z	9.084	2.25
27	MP3A	Mx	-.016	2.25
28	MP3A	X	-15.733	2.25
29	MP3A	Z	9.084	2.25
30	MP3A	Mx	-.016	2.25
31	M7	X	-42.808	2.89
32	M7	Z	24.715	2.89
33	M7	Mx	.021	2.89
34	M7	X	-42.808	2.89
35	M7	Z	24.715	2.89
36	M7	Mx	.021	2.89
37	MP1A	X	-77.313	.5
38	MP1A	Z	44.636	.5
39	MP1A	Mx	.064	.5
40	MP1A	X	-77.313	5.5
41	MP1A	Z	44.636	5.5
42	MP1A	Mx	.064	5.5

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-108.659	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	.109	.28
4	MP2A	X	-108.659	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	.109	5.72
7	MP2A	X	-108.659	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	.109	.28
10	MP2A	X	-108.659	5.72
11	MP2A	Z	0	5.72
12	MP2A	Mx	.109	5.72
13	MP4A	X	-27.247	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	.023	1.04
16	MP4A	X	-27.247	3.96
17	MP4A	Z	0	3.96
18	MP4A	Mx	.023	3.96
19	MP1A	X	-14.993	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	-.015	2.25
22	MP1A	X	-14.993	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	-.015	2.25
25	MP3A	X	-14.993	2.25
26	MP3A	Z	0	2.25

Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP3A	Mx	-.015	2.25
28	MP3A	X	-14.993	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	-.015	2.25
31	M7	X	-45.867	2.89
32	M7	Z	0	2.89
33	M7	Mx	.023	2.89
34	M7	X	-45.867	2.89
35	M7	Z	0	2.89
36	M7	Mx	.023	2.89
37	MP1A	X	-79.099	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	.066	.5
40	MP1A	X	-79.099	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	.066	5.5

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-102.219	.28
2	MP2A	Z	-59.016	.28
3	MP2A	Mx	.151	.28
4	MP2A	X	-102.219	5.72
5	MP2A	Z	-59.016	5.72
6	MP2A	Mx	.151	5.72
7	MP2A	X	-102.219	.28
8	MP2A	Z	-59.016	.28
9	MP2A	Mx	.053	.28
10	MP2A	X	-102.219	5.72
11	MP2A	Z	-59.016	5.72
12	MP2A	Mx	.053	5.72
13	MP4A	X	-32.766	1.04
14	MP4A	Z	-18.917	1.04
15	MP4A	Mx	.027	1.04
16	MP4A	X	-32.766	3.96
17	MP4A	Z	-18.917	3.96
18	MP4A	Mx	.027	3.96
19	MP1A	X	-15.733	2.25
20	MP1A	Z	-9.084	2.25
21	MP1A	Mx	-.016	2.25
22	MP1A	X	-15.733	2.25
23	MP1A	Z	-9.084	2.25
24	MP1A	Mx	-.016	2.25
25	MP3A	X	-15.733	2.25
26	MP3A	Z	-9.084	2.25
27	MP3A	Mx	-.016	2.25
28	MP3A	X	-15.733	2.25
29	MP3A	Z	-9.084	2.25
30	MP3A	Mx	-.016	2.25
31	M7	X	-42.808	2.89
32	M7	Z	-24.715	2.89
33	M7	Mx	.021	2.89
34	M7	X	-42.808	2.89
35	M7	Z	-24.715	2.89
36	M7	Mx	.021	2.89
37	MP1A	X	-77.313	.5

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP1A	Z	-44.636	.5
39	MP1A	Mx	.064	.5
40	MP1A	X	-77.313	5.5
41	MP1A	Z	-44.636	5.5
42	MP1A	Mx	.064	5.5

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-68.39	.28
2	MP2A	Z	-118.455	.28
3	MP2A	Mx	.167	.28
4	MP2A	X	-68.39	5.72
5	MP2A	Z	-118.455	5.72
6	MP2A	Mx	.167	5.72
7	MP2A	X	-68.39	.28
8	MP2A	Z	-118.455	.28
9	MP2A	Mx	-.03	.28
10	MP2A	X	-68.39	5.72
11	MP2A	Z	-118.455	5.72
12	MP2A	Mx	-.03	5.72
13	MP4A	X	-29.505	1.04
14	MP4A	Z	-51.104	1.04
15	MP4A	Mx	.025	1.04
16	MP4A	X	-29.505	3.96
17	MP4A	Z	-51.104	3.96
18	MP4A	Mx	.025	3.96
19	MP1A	X	-12.258	2.25
20	MP1A	Z	-21.232	2.25
21	MP1A	Mx	-.012	2.25
22	MP1A	X	-12.258	2.25
23	MP1A	Z	-21.232	2.25
24	MP1A	Mx	-.012	2.25
25	MP3A	X	-12.258	2.25
26	MP3A	Z	-21.232	2.25
27	MP3A	Mx	-.012	2.25
28	MP3A	X	-12.258	2.25
29	MP3A	Z	-21.232	2.25
30	MP3A	Mx	-.012	2.25
31	M7	X	-28.278	2.89
32	M7	Z	-48.98	2.89
33	M7	Mx	.014	2.89
34	M7	X	-28.278	2.89
35	M7	Z	-48.98	2.89
36	M7	Mx	.014	2.89
37	MP1A	X	-54.811	.5
38	MP1A	Z	-94.935	.5
39	MP1A	Mx	.046	.5
40	MP1A	X	-54.811	5.5
41	MP1A	Z	-94.935	5.5
42	MP1A	Mx	.046	5.5

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	-29.555	.28
3	MP2A	Mx	.025	.28

Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	0	5.72
5	MP2A	Z	-29.555	5.72
6	MP2A	Mx	.025	5.72
7	MP2A	X	0	.28
8	MP2A	Z	-29.555	.28
9	MP2A	Mx	-.025	.28
10	MP2A	X	0	5.72
11	MP2A	Z	-29.555	5.72
12	MP2A	Mx	-.025	5.72
13	MP4A	X	0	1.04
14	MP4A	Z	-14.57	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	-14.57	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	-6.133	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	-6.133	2.25
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	-6.133	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	-6.133	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	-12.617	2.89
33	M7	Mx	0	2.89
34	M7	X	0	2.89
35	M7	Z	-12.617	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	-24.469	.5
39	MP1A	Mx	0	.5
40	MP1A	X	0	5.5
41	MP1A	Z	-24.469	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	13.877	.28
2	MP2A	Z	-24.035	.28
3	MP2A	Mx	.006	.28
4	MP2A	X	13.877	5.72
5	MP2A	Z	-24.035	5.72
6	MP2A	Mx	.006	5.72
7	MP2A	X	13.877	.28
8	MP2A	Z	-24.035	.28
9	MP2A	Mx	-.034	.28
10	MP2A	X	13.877	5.72
11	MP2A	Z	-24.035	5.72
12	MP2A	Mx	-.034	5.72
13	MP4A	X	6.238	1.04
14	MP4A	Z	-10.805	1.04

Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP4A	Mx	-.005	1.04
16	MP4A	X	6.238	3.96
17	MP4A	Z	-10.805	3.96
18	MP4A	Mx	-.005	3.96
19	MP1A	X	2.744	2.25
20	MP1A	Z	-4.752	2.25
21	MP1A	Mx	.003	2.25
22	MP1A	X	2.744	2.25
23	MP1A	Z	-4.752	2.25
24	MP1A	Mx	.003	2.25
25	MP3A	X	2.744	2.25
26	MP3A	Z	-4.752	2.25
27	MP3A	Mx	.003	2.25
28	MP3A	X	2.744	2.25
29	MP3A	Z	-4.752	2.25
30	MP3A	Mx	.003	2.25
31	M7	X	5.964	2.89
32	M7	Z	-10.33	2.89
33	M7	Mx	-.003	2.89
34	M7	X	5.964	2.89
35	M7	Z	-10.33	2.89
36	M7	Mx	-.003	2.89
37	MP1A	X	11.283	.5
38	MP1A	Z	-19.543	.5
39	MP1A	Mx	-.009	.5
40	MP1A	X	11.283	5.5
41	MP1A	Z	-19.543	5.5
42	MP1A	Mx	-.009	5.5

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.915	.28
2	MP2A	Z	-12.075	.28
3	MP2A	Mx	-.011	.28
4	MP2A	X	20.915	5.72
5	MP2A	Z	-12.075	5.72
6	MP2A	Mx	-.011	5.72
7	MP2A	X	20.915	.28
8	MP2A	Z	-12.075	.28
9	MP2A	Mx	-.031	.28
10	MP2A	X	20.915	5.72
11	MP2A	Z	-12.075	5.72
12	MP2A	Mx	-.031	5.72
13	MP4A	X	7.178	1.04
14	MP4A	Z	-4.144	1.04
15	MP4A	Mx	-.006	1.04
16	MP4A	X	7.178	3.96
17	MP4A	Z	-4.144	3.96
18	MP4A	Mx	-.006	3.96
19	MP1A	X	3.634	2.25
20	MP1A	Z	-2.098	2.25
21	MP1A	Mx	.004	2.25
22	MP1A	X	3.634	2.25
23	MP1A	Z	-2.098	2.25
24	MP1A	Mx	.004	2.25
25	MP3A	X	3.634	2.25

Member Point Loads (BLC 17 : Antenna Wi (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP3A	Z	-2.098	2.25
27	MP3A	Mx	.004	2.25
28	MP3A	X	3.634	2.25
29	MP3A	Z	-2.098	2.25
30	MP3A	Mx	.004	2.25
31	M7	X	9.137	2.89
32	M7	Z	-5.275	2.89
33	M7	Mx	-.005	2.89
34	M7	X	9.137	2.89
35	M7	Z	-5.275	2.89
36	M7	Mx	-.005	2.89
37	MP1A	X	16.248	.5
38	MP1A	Z	-9.381	.5
39	MP1A	Mx	-.014	.5
40	MP1A	X	16.248	5.5
41	MP1A	Z	-9.381	5.5
42	MP1A	Mx	-.014	5.5

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	22.35	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	-.022	.28
4	MP2A	X	22.35	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	-.022	5.72
7	MP2A	X	22.35	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	-.022	.28
10	MP2A	X	22.35	5.72
11	MP2A	Z	0	5.72
12	MP2A	Mx	-.022	5.72
13	MP4A	X	6.195	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	-.005	1.04
16	MP4A	X	6.195	3.96
17	MP4A	Z	0	3.96
18	MP4A	Mx	-.005	3.96
19	MP1A	X	3.551	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	.004	2.25
22	MP1A	X	3.551	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	.004	2.25
25	MP3A	X	3.551	2.25
26	MP3A	Z	0	2.25
27	MP3A	Mx	.004	2.25
28	MP3A	X	3.551	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	.004	2.25
31	M7	X	9.861	2.89
32	M7	Z	0	2.89
33	M7	Mx	-.005	2.89
34	M7	X	9.861	2.89
35	M7	Z	0	2.89
36	M7	Mx	-.005	2.89

Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP1A	X	16.858	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	-.014	.5
40	MP1A	X	16.858	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	-.014	5.5

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.915	.28
2	MP2A	Z	12.075	.28
3	MP2A	Mx	-.031	.28
4	MP2A	X	20.915	5.72
5	MP2A	Z	12.075	5.72
6	MP2A	Mx	-.031	5.72
7	MP2A	X	20.915	.28
8	MP2A	Z	12.075	.28
9	MP2A	Mx	-.011	.28
10	MP2A	X	20.915	5.72
11	MP2A	Z	12.075	5.72
12	MP2A	Mx	-.011	5.72
13	MP4A	X	7.178	1.04
14	MP4A	Z	4.144	1.04
15	MP4A	Mx	-.006	1.04
16	MP4A	X	7.178	3.96
17	MP4A	Z	4.144	3.96
18	MP4A	Mx	-.006	3.96
19	MP1A	X	3.634	2.25
20	MP1A	Z	2.098	2.25
21	MP1A	Mx	.004	2.25
22	MP1A	X	3.634	2.25
23	MP1A	Z	2.098	2.25
24	MP1A	Mx	.004	2.25
25	MP3A	X	3.634	2.25
26	MP3A	Z	2.098	2.25
27	MP3A	Mx	.004	2.25
28	MP3A	X	3.634	2.25
29	MP3A	Z	2.098	2.25
30	MP3A	Mx	.004	2.25
31	M7	X	9.137	2.89
32	M7	Z	5.275	2.89
33	M7	Mx	-.005	2.89
34	M7	X	9.137	2.89
35	M7	Z	5.275	2.89
36	M7	Mx	-.005	2.89
37	MP1A	X	16.248	.5
38	MP1A	Z	9.381	.5
39	MP1A	Mx	-.014	.5
40	MP1A	X	16.248	5.5
41	MP1A	Z	9.381	5.5
42	MP1A	Mx	-.014	5.5

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	13.877	.28
2	MP2A	Z	24.035	.28

Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP2A	Mx	-.034	.28
4	MP2A	X	13.877	5.72
5	MP2A	Z	24.035	5.72
6	MP2A	Mx	-.034	5.72
7	MP2A	X	13.877	.28
8	MP2A	Z	24.035	.28
9	MP2A	Mx	.006	.28
10	MP2A	X	13.877	5.72
11	MP2A	Z	24.035	5.72
12	MP2A	Mx	.006	5.72
13	MP4A	X	6.238	1.04
14	MP4A	Z	10.805	1.04
15	MP4A	Mx	-.005	1.04
16	MP4A	X	6.238	3.96
17	MP4A	Z	10.805	3.96
18	MP4A	Mx	-.005	3.96
19	MP1A	X	2.744	2.25
20	MP1A	Z	4.752	2.25
21	MP1A	Mx	.003	2.25
22	MP1A	X	2.744	2.25
23	MP1A	Z	4.752	2.25
24	MP1A	Mx	.003	2.25
25	MP3A	X	2.744	2.25
26	MP3A	Z	4.752	2.25
27	MP3A	Mx	.003	2.25
28	MP3A	X	2.744	2.25
29	MP3A	Z	4.752	2.25
30	MP3A	Mx	.003	2.25
31	M7	X	5.964	2.89
32	M7	Z	10.33	2.89
33	M7	Mx	-.003	2.89
34	M7	X	5.964	2.89
35	M7	Z	10.33	2.89
36	M7	Mx	-.003	2.89
37	MP1A	X	11.283	.5
38	MP1A	Z	19.543	.5
39	MP1A	Mx	-.009	.5
40	MP1A	X	11.283	5.5
41	MP1A	Z	19.543	5.5
42	MP1A	Mx	-.009	5.5

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	29.555	.28
3	MP2A	Mx	-.025	.28
4	MP2A	X	0	5.72
5	MP2A	Z	29.555	5.72
6	MP2A	Mx	-.025	5.72
7	MP2A	X	0	.28
8	MP2A	Z	29.555	.28
9	MP2A	Mx	.025	.28
10	MP2A	X	0	5.72
11	MP2A	Z	29.555	5.72
12	MP2A	Mx	.025	5.72
13	MP4A	X	0	1.04

Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP4A	Z	14.57	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	14.57	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	6.133	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	6.133	2.25
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	6.133	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	6.133	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	12.617	2.89
33	M7	Mx	0	2.89
34	M7	X	0	2.89
35	M7	Z	12.617	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	24.469	.5
39	MP1A	Mx	0	.5
40	MP1A	X	0	5.5
41	MP1A	Z	24.469	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-13.877	.28
2	MP2A	Z	24.035	.28
3	MP2A	Mx	-.006	.28
4	MP2A	X	-13.877	5.72
5	MP2A	Z	24.035	5.72
6	MP2A	Mx	-.006	5.72
7	MP2A	X	-13.877	.28
8	MP2A	Z	24.035	.28
9	MP2A	Mx	.034	.28
10	MP2A	X	-13.877	5.72
11	MP2A	Z	24.035	5.72
12	MP2A	Mx	.034	5.72
13	MP4A	X	-6.238	1.04
14	MP4A	Z	10.805	1.04
15	MP4A	Mx	.005	1.04
16	MP4A	X	-6.238	3.96
17	MP4A	Z	10.805	3.96
18	MP4A	Mx	.005	3.96
19	MP1A	X	-2.744	2.25
20	MP1A	Z	4.752	2.25
21	MP1A	Mx	-.003	2.25
22	MP1A	X	-2.744	2.25
23	MP1A	Z	4.752	2.25
24	MP1A	Mx	-.003	2.25

Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP3A	X	-2.744	2.25
26	MP3A	Z	4.752	2.25
27	MP3A	Mx	-.003	2.25
28	MP3A	X	-2.744	2.25
29	MP3A	Z	4.752	2.25
30	MP3A	Mx	-.003	2.25
31	M7	X	-5.964	2.89
32	M7	Z	10.33	2.89
33	M7	Mx	.003	2.89
34	M7	X	-5.964	2.89
35	M7	Z	10.33	2.89
36	M7	Mx	.003	2.89
37	MP1A	X	-11.283	.5
38	MP1A	Z	19.543	.5
39	MP1A	Mx	.009	.5
40	MP1A	X	-11.283	5.5
41	MP1A	Z	19.543	5.5
42	MP1A	Mx	.009	5.5

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.915	.28
2	MP2A	Z	12.075	.28
3	MP2A	Mx	.011	.28
4	MP2A	X	-20.915	5.72
5	MP2A	Z	12.075	5.72
6	MP2A	Mx	.011	5.72
7	MP2A	X	-20.915	.28
8	MP2A	Z	12.075	.28
9	MP2A	Mx	.031	.28
10	MP2A	X	-20.915	5.72
11	MP2A	Z	12.075	5.72
12	MP2A	Mx	.031	5.72
13	MP4A	X	-7.178	1.04
14	MP4A	Z	4.144	1.04
15	MP4A	Mx	.006	1.04
16	MP4A	X	-7.178	3.96
17	MP4A	Z	4.144	3.96
18	MP4A	Mx	.006	3.96
19	MP1A	X	-3.634	2.25
20	MP1A	Z	2.098	2.25
21	MP1A	Mx	-.004	2.25
22	MP1A	X	-3.634	2.25
23	MP1A	Z	2.098	2.25
24	MP1A	Mx	-.004	2.25
25	MP3A	X	-3.634	2.25
26	MP3A	Z	2.098	2.25
27	MP3A	Mx	-.004	2.25
28	MP3A	X	-3.634	2.25
29	MP3A	Z	2.098	2.25
30	MP3A	Mx	-.004	2.25
31	M7	X	-9.137	2.89
32	M7	Z	5.275	2.89
33	M7	Mx	.005	2.89
34	M7	X	-9.137	2.89
35	M7	Z	5.275	2.89

Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	M7	Mx	.005	2.89
37	MP1A	X	-16.248	.5
38	MP1A	Z	9.381	.5
39	MP1A	Mx	.014	.5
40	MP1A	X	-16.248	5.5
41	MP1A	Z	9.381	5.5
42	MP1A	Mx	.014	5.5

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-22.35	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	.022	.28
4	MP2A	X	-22.35	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	.022	5.72
7	MP2A	X	-22.35	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	.022	.28
10	MP2A	X	-22.35	5.72
11	MP2A	Z	0	5.72
12	MP2A	Mx	.022	5.72
13	MP4A	X	-6.195	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	.005	1.04
16	MP4A	X	-6.195	3.96
17	MP4A	Z	0	3.96
18	MP4A	Mx	.005	3.96
19	MP1A	X	-3.551	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	-.004	2.25
22	MP1A	X	-3.551	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	-.004	2.25
25	MP3A	X	-3.551	2.25
26	MP3A	Z	0	2.25
27	MP3A	Mx	-.004	2.25
28	MP3A	X	-3.551	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	-.004	2.25
31	M7	X	-9.861	2.89
32	M7	Z	0	2.89
33	M7	Mx	.005	2.89
34	M7	X	-9.861	2.89
35	M7	Z	0	2.89
36	M7	Mx	.005	2.89
37	MP1A	X	-16.858	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	.014	.5
40	MP1A	X	-16.858	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	.014	5.5

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.915	.28

Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP2A	Z	-12.075	.28
3	MP2A	Mx	.031	.28
4	MP2A	X	-20.915	5.72
5	MP2A	Z	-12.075	5.72
6	MP2A	Mx	.031	5.72
7	MP2A	X	-20.915	.28
8	MP2A	Z	-12.075	.28
9	MP2A	Mx	.011	.28
10	MP2A	X	-20.915	5.72
11	MP2A	Z	-12.075	5.72
12	MP2A	Mx	.011	5.72
13	MP4A	X	-7.178	1.04
14	MP4A	Z	-4.144	1.04
15	MP4A	Mx	.006	1.04
16	MP4A	X	-7.178	3.96
17	MP4A	Z	-4.144	3.96
18	MP4A	Mx	.006	3.96
19	MP1A	X	-3.634	2.25
20	MP1A	Z	-2.098	2.25
21	MP1A	Mx	-.004	2.25
22	MP1A	X	-3.634	2.25
23	MP1A	Z	-2.098	2.25
24	MP1A	Mx	-.004	2.25
25	MP3A	X	-3.634	2.25
26	MP3A	Z	-2.098	2.25
27	MP3A	Mx	-.004	2.25
28	MP3A	X	-3.634	2.25
29	MP3A	Z	-2.098	2.25
30	MP3A	Mx	-.004	2.25
31	M7	X	-9.137	2.89
32	M7	Z	-5.275	2.89
33	M7	Mx	.005	2.89
34	M7	X	-9.137	2.89
35	M7	Z	-5.275	2.89
36	M7	Mx	.005	2.89
37	MP1A	X	-16.248	.5
38	MP1A	Z	-9.381	.5
39	MP1A	Mx	.014	.5
40	MP1A	X	-16.248	5.5
41	MP1A	Z	-9.381	5.5
42	MP1A	Mx	.014	5.5

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-13.877	.28
2	MP2A	Z	-24.035	.28
3	MP2A	Mx	.034	.28
4	MP2A	X	-13.877	5.72
5	MP2A	Z	-24.035	5.72
6	MP2A	Mx	.034	5.72
7	MP2A	X	-13.877	.28
8	MP2A	Z	-24.035	.28
9	MP2A	Mx	-.006	.28
10	MP2A	X	-13.877	5.72
11	MP2A	Z	-24.035	5.72
12	MP2A	Mx	-.006	5.72

Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP4A	X	-6.238	1.04
14	MP4A	Z	-10.805	1.04
15	MP4A	Mx	.005	1.04
16	MP4A	X	-6.238	3.96
17	MP4A	Z	-10.805	3.96
18	MP4A	Mx	.005	3.96
19	MP1A	X	-2.744	2.25
20	MP1A	Z	-4.752	2.25
21	MP1A	Mx	-.003	2.25
22	MP1A	X	-2.744	2.25
23	MP1A	Z	-4.752	2.25
24	MP1A	Mx	-.003	2.25
25	MP3A	X	-2.744	2.25
26	MP3A	Z	-4.752	2.25
27	MP3A	Mx	-.003	2.25
28	MP3A	X	-2.744	2.25
29	MP3A	Z	-4.752	2.25
30	MP3A	Mx	-.003	2.25
31	M7	X	-5.964	2.89
32	M7	Z	-10.33	2.89
33	M7	Mx	.003	2.89
34	M7	X	-5.964	2.89
35	M7	Z	-10.33	2.89
36	M7	Mx	.003	2.89
37	MP1A	X	-11.283	.5
38	MP1A	Z	-19.543	.5
39	MP1A	Mx	.009	.5
40	MP1A	X	-11.283	5.5
41	MP1A	Z	-19.543	5.5
42	MP1A	Mx	.009	5.5

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	-9.775	.28
3	MP2A	Mx	.008	.28
4	MP2A	X	0	5.72
5	MP2A	Z	-9.775	5.72
6	MP2A	Mx	.008	5.72
7	MP2A	X	0	.28
8	MP2A	Z	-9.775	.28
9	MP2A	Mx	-.008	.28
10	MP2A	X	0	5.72
11	MP2A	Z	-9.775	5.72
12	MP2A	Mx	-.008	5.72
13	MP4A	X	0	1.04
14	MP4A	Z	-4.655	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	-4.655	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	-1.852	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	-1.852	2.25

Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	-1.852	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	-1.852	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	-4.021	2.89
33	M7	Mx	0	2.89
34	M7	X	0	2.89
35	M7	Z	-4.021	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	-8.012	.5
39	MP1A	Mx	0	.5
40	MP1A	X	0	5.5
41	MP1A	Z	-8.012	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.574	.28
2	MP2A	Z	-7.923	.28
3	MP2A	Mx	.002	.28
4	MP2A	X	4.574	5.72
5	MP2A	Z	-7.923	5.72
6	MP2A	Mx	.002	5.72
7	MP2A	X	4.574	.28
8	MP2A	Z	-7.923	.28
9	MP2A	Mx	-.011	.28
10	MP2A	X	4.574	5.72
11	MP2A	Z	-7.923	5.72
12	MP2A	Mx	-.011	5.72
13	MP4A	X	1.973	1.04
14	MP4A	Z	-3.418	1.04
15	MP4A	Mx	-.002	1.04
16	MP4A	X	1.973	3.96
17	MP4A	Z	-3.418	3.96
18	MP4A	Mx	-.002	3.96
19	MP1A	X	.82	2.25
20	MP1A	Z	-1.42	2.25
21	MP1A	Mx	.00082	2.25
22	MP1A	X	.82	2.25
23	MP1A	Z	-1.42	2.25
24	MP1A	Mx	.00082	2.25
25	MP3A	X	.82	2.25
26	MP3A	Z	-1.42	2.25
27	MP3A	Mx	.00082	2.25
28	MP3A	X	.82	2.25
29	MP3A	Z	-1.42	2.25
30	MP3A	Mx	.00082	2.25
31	M7	X	1.891	2.89
32	M7	Z	-3.276	2.89
33	M7	Mx	-.000946	2.89
34	M7	X	1.891	2.89

Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	M7	Z	-3.276	2.89
36	M7	Mx	-.000946	2.89
37	MP1A	X	3.666	.5
38	MP1A	Z	-6.35	.5
39	MP1A	Mx	-.003	.5
40	MP1A	X	3.666	5.5
41	MP1A	Z	-6.35	5.5
42	MP1A	Mx	-.003	5.5

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.837	.28
2	MP2A	Z	-3.947	.28
3	MP2A	Mx	-.004	.28
4	MP2A	X	6.837	5.72
5	MP2A	Z	-3.947	5.72
6	MP2A	Mx	-.004	5.72
7	MP2A	X	6.837	.28
8	MP2A	Z	-3.947	.28
9	MP2A	Mx	-.01	.28
10	MP2A	X	6.837	5.72
11	MP2A	Z	-3.947	5.72
12	MP2A	Mx	-.01	5.72
13	MP4A	X	2.192	1.04
14	MP4A	Z	-1.265	1.04
15	MP4A	Mx	-.002	1.04
16	MP4A	X	2.192	3.96
17	MP4A	Z	-1.265	3.96
18	MP4A	Mx	-.002	3.96
19	MP1A	X	1.052	2.25
20	MP1A	Z	-.608	2.25
21	MP1A	Mx	.001	2.25
22	MP1A	X	1.052	2.25
23	MP1A	Z	-.608	2.25
24	MP1A	Mx	.001	2.25
25	MP3A	X	1.052	2.25
26	MP3A	Z	-.608	2.25
27	MP3A	Mx	.001	2.25
28	MP3A	X	1.052	2.25
29	MP3A	Z	-.608	2.25
30	MP3A	Mx	.001	2.25
31	M7	X	2.863	2.89
32	M7	Z	-1.653	2.89
33	M7	Mx	-.001	2.89
34	M7	X	2.863	2.89
35	M7	Z	-1.653	2.89
36	M7	Mx	-.001	2.89
37	MP1A	X	5.171	.5
38	MP1A	Z	-2.985	.5
39	MP1A	Mx	-.004	.5
40	MP1A	X	5.171	5.5
41	MP1A	Z	-2.985	5.5
42	MP1A	Mx	-.004	5.5

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]

Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	7.268	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	-.007	.28
4	MP2A	X	7.268	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	-.007	5.72
7	MP2A	X	7.268	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	-.007	.28
10	MP2A	X	7.268	5.72
11	MP2A	Z	0	5.72
12	MP2A	Mx	-.007	5.72
13	MP4A	X	1.822	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	-.002	1.04
16	MP4A	X	1.822	3.96
17	MP4A	Z	0	3.96
18	MP4A	Mx	-.002	3.96
19	MP1A	X	1.003	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	.001	2.25
22	MP1A	X	1.003	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	.001	2.25
25	MP3A	X	1.003	2.25
26	MP3A	Z	0	2.25
27	MP3A	Mx	.001	2.25
28	MP3A	X	1.003	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	.001	2.25
31	M7	X	3.068	2.89
32	M7	Z	0	2.89
33	M7	Mx	-.002	2.89
34	M7	X	3.068	2.89
35	M7	Z	0	2.89
36	M7	Mx	-.002	2.89
37	MP1A	X	5.29	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	-.004	.5
40	MP1A	X	5.29	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	-.004	5.5

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.837	.28
2	MP2A	Z	3.947	.28
3	MP2A	Mx	-.01	.28
4	MP2A	X	6.837	5.72
5	MP2A	Z	3.947	5.72
6	MP2A	Mx	-.01	5.72
7	MP2A	X	6.837	.28
8	MP2A	Z	3.947	.28
9	MP2A	Mx	-.004	.28
10	MP2A	X	6.837	5.72
11	MP2A	Z	3.947	5.72

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mx	-.004	5.72
13	MP4A	X	2.192	1.04
14	MP4A	Z	1.265	1.04
15	MP4A	Mx	-.002	1.04
16	MP4A	X	2.192	3.96
17	MP4A	Z	1.265	3.96
18	MP4A	Mx	-.002	3.96
19	MP1A	X	1.052	2.25
20	MP1A	Z	.608	2.25
21	MP1A	Mx	.001	2.25
22	MP1A	X	1.052	2.25
23	MP1A	Z	.608	2.25
24	MP1A	Mx	.001	2.25
25	MP3A	X	1.052	2.25
26	MP3A	Z	.608	2.25
27	MP3A	Mx	.001	2.25
28	MP3A	X	1.052	2.25
29	MP3A	Z	.608	2.25
30	MP3A	Mx	.001	2.25
31	M7	X	2.863	2.89
32	M7	Z	1.653	2.89
33	M7	Mx	-.001	2.89
34	M7	X	2.863	2.89
35	M7	Z	1.653	2.89
36	M7	Mx	-.001	2.89
37	MP1A	X	5.171	.5
38	MP1A	Z	2.985	.5
39	MP1A	Mx	-.004	.5
40	MP1A	X	5.171	5.5
41	MP1A	Z	2.985	5.5
42	MP1A	Mx	-.004	5.5

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.574	.28
2	MP2A	Z	7.923	.28
3	MP2A	Mx	-.011	.28
4	MP2A	X	4.574	5.72
5	MP2A	Z	7.923	5.72
6	MP2A	Mx	-.011	5.72
7	MP2A	X	4.574	.28
8	MP2A	Z	7.923	.28
9	MP2A	Mx	.002	.28
10	MP2A	X	4.574	5.72
11	MP2A	Z	7.923	5.72
12	MP2A	Mx	.002	5.72
13	MP4A	X	1.973	1.04
14	MP4A	Z	3.418	1.04
15	MP4A	Mx	-.002	1.04
16	MP4A	X	1.973	3.96
17	MP4A	Z	3.418	3.96
18	MP4A	Mx	-.002	3.96
19	MP1A	X	.82	2.25
20	MP1A	Z	1.42	2.25
21	MP1A	Mx	.00082	2.25
22	MP1A	X	.82	2.25

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP1A	Z	1.42	2.25
24	MP1A	Mx	.00082	2.25
25	MP3A	X	.82	2.25
26	MP3A	Z	1.42	2.25
27	MP3A	Mx	.00082	2.25
28	MP3A	X	.82	2.25
29	MP3A	Z	1.42	2.25
30	MP3A	Mx	.00082	2.25
31	M7	X	1.891	2.89
32	M7	Z	3.276	2.89
33	M7	Mx	-.000946	2.89
34	M7	X	1.891	2.89
35	M7	Z	3.276	2.89
36	M7	Mx	-.000946	2.89
37	MP1A	X	3.666	.5
38	MP1A	Z	6.35	.5
39	MP1A	Mx	-.003	.5
40	MP1A	X	3.666	5.5
41	MP1A	Z	6.35	5.5
42	MP1A	Mx	-.003	5.5

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.28
2	MP2A	Z	9.775	.28
3	MP2A	Mx	-.008	.28
4	MP2A	X	0	5.72
5	MP2A	Z	9.775	5.72
6	MP2A	Mx	-.008	5.72
7	MP2A	X	0	.28
8	MP2A	Z	9.775	.28
9	MP2A	Mx	.008	.28
10	MP2A	X	0	5.72
11	MP2A	Z	9.775	5.72
12	MP2A	Mx	.008	5.72
13	MP4A	X	0	1.04
14	MP4A	Z	4.655	1.04
15	MP4A	Mx	0	1.04
16	MP4A	X	0	3.96
17	MP4A	Z	4.655	3.96
18	MP4A	Mx	0	3.96
19	MP1A	X	0	2.25
20	MP1A	Z	1.852	2.25
21	MP1A	Mx	0	2.25
22	MP1A	X	0	2.25
23	MP1A	Z	1.852	2.25
24	MP1A	Mx	0	2.25
25	MP3A	X	0	2.25
26	MP3A	Z	1.852	2.25
27	MP3A	Mx	0	2.25
28	MP3A	X	0	2.25
29	MP3A	Z	1.852	2.25
30	MP3A	Mx	0	2.25
31	M7	X	0	2.89
32	M7	Z	4.021	2.89
33	M7	Mx	0	2.89

Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	M7	X	0	2.89
35	M7	Z	4.021	2.89
36	M7	Mx	0	2.89
37	MP1A	X	0	.5
38	MP1A	Z	8.012	.5
39	MP1A	Mx	0	.5
40	MP1A	X	0	5.5
41	MP1A	Z	8.012	5.5
42	MP1A	Mx	0	5.5

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.574	.28
2	MP2A	Z	7.923	.28
3	MP2A	Mx	-.002	.28
4	MP2A	X	-4.574	5.72
5	MP2A	Z	7.923	5.72
6	MP2A	Mx	-.002	5.72
7	MP2A	X	-4.574	.28
8	MP2A	Z	7.923	.28
9	MP2A	Mx	.011	.28
10	MP2A	X	-4.574	5.72
11	MP2A	Z	7.923	5.72
12	MP2A	Mx	.011	5.72
13	MP4A	X	-1.973	1.04
14	MP4A	Z	3.418	1.04
15	MP4A	Mx	.002	1.04
16	MP4A	X	-1.973	3.96
17	MP4A	Z	3.418	3.96
18	MP4A	Mx	.002	3.96
19	MP1A	X	-.82	2.25
20	MP1A	Z	1.42	2.25
21	MP1A	Mx	-.00082	2.25
22	MP1A	X	-.82	2.25
23	MP1A	Z	1.42	2.25
24	MP1A	Mx	-.00082	2.25
25	MP3A	X	-.82	2.25
26	MP3A	Z	1.42	2.25
27	MP3A	Mx	-.00082	2.25
28	MP3A	X	-.82	2.25
29	MP3A	Z	1.42	2.25
30	MP3A	Mx	-.00082	2.25
31	M7	X	-1.891	2.89
32	M7	Z	3.276	2.89
33	M7	Mx	.000946	2.89
34	M7	X	-1.891	2.89
35	M7	Z	3.276	2.89
36	M7	Mx	.000946	2.89
37	MP1A	X	-3.666	.5
38	MP1A	Z	6.35	.5
39	MP1A	Mx	.003	.5
40	MP1A	X	-3.666	5.5
41	MP1A	Z	6.35	5.5
42	MP1A	Mx	.003	5.5

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.837	.28
2	MP2A	Z	3.947	.28
3	MP2A	Mx	.004	.28
4	MP2A	X	-6.837	5.72
5	MP2A	Z	3.947	5.72
6	MP2A	Mx	.004	5.72
7	MP2A	X	-6.837	.28
8	MP2A	Z	3.947	.28
9	MP2A	Mx	.01	.28
10	MP2A	X	-6.837	5.72
11	MP2A	Z	3.947	5.72
12	MP2A	Mx	.01	5.72
13	MP4A	X	-2.192	1.04
14	MP4A	Z	1.265	1.04
15	MP4A	Mx	.002	1.04
16	MP4A	X	-2.192	3.96
17	MP4A	Z	1.265	3.96
18	MP4A	Mx	.002	3.96
19	MP1A	X	-1.052	2.25
20	MP1A	Z	.608	2.25
21	MP1A	Mx	-.001	2.25
22	MP1A	X	-1.052	2.25
23	MP1A	Z	.608	2.25
24	MP1A	Mx	-.001	2.25
25	MP3A	X	-1.052	2.25
26	MP3A	Z	.608	2.25
27	MP3A	Mx	-.001	2.25
28	MP3A	X	-1.052	2.25
29	MP3A	Z	.608	2.25
30	MP3A	Mx	-.001	2.25
31	M7	X	-2.863	2.89
32	M7	Z	1.653	2.89
33	M7	Mx	.001	2.89
34	M7	X	-2.863	2.89
35	M7	Z	1.653	2.89
36	M7	Mx	.001	2.89
37	MP1A	X	-5.171	.5
38	MP1A	Z	2.985	.5
39	MP1A	Mx	.004	.5
40	MP1A	X	-5.171	5.5
41	MP1A	Z	2.985	5.5
42	MP1A	Mx	.004	5.5

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-7.268	.28
2	MP2A	Z	0	.28
3	MP2A	Mx	.007	.28
4	MP2A	X	-7.268	5.72
5	MP2A	Z	0	5.72
6	MP2A	Mx	.007	5.72
7	MP2A	X	-7.268	.28
8	MP2A	Z	0	.28
9	MP2A	Mx	.007	.28
10	MP2A	X	-7.268	5.72
11	MP2A	Z	0	5.72

Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mx	.007	5.72
13	MP4A	X	-1.822	1.04
14	MP4A	Z	0	1.04
15	MP4A	Mx	.002	1.04
16	MP4A	X	-1.822	3.96
17	MP4A	Z	0	3.96
18	MP4A	Mx	.002	3.96
19	MP1A	X	-1.003	2.25
20	MP1A	Z	0	2.25
21	MP1A	Mx	-.001	2.25
22	MP1A	X	-1.003	2.25
23	MP1A	Z	0	2.25
24	MP1A	Mx	-.001	2.25
25	MP3A	X	-1.003	2.25
26	MP3A	Z	0	2.25
27	MP3A	Mx	-.001	2.25
28	MP3A	X	-1.003	2.25
29	MP3A	Z	0	2.25
30	MP3A	Mx	-.001	2.25
31	M7	X	-3.068	2.89
32	M7	Z	0	2.89
33	M7	Mx	.002	2.89
34	M7	X	-3.068	2.89
35	M7	Z	0	2.89
36	M7	Mx	.002	2.89
37	MP1A	X	-5.29	.5
38	MP1A	Z	0	.5
39	MP1A	Mx	.004	.5
40	MP1A	X	-5.29	5.5
41	MP1A	Z	0	5.5
42	MP1A	Mx	.004	5.5

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.837	.28
2	MP2A	Z	-3.947	.28
3	MP2A	Mx	.01	.28
4	MP2A	X	-6.837	5.72
5	MP2A	Z	-3.947	5.72
6	MP2A	Mx	.01	5.72
7	MP2A	X	-6.837	.28
8	MP2A	Z	-3.947	.28
9	MP2A	Mx	.004	.28
10	MP2A	X	-6.837	5.72
11	MP2A	Z	-3.947	5.72
12	MP2A	Mx	.004	5.72
13	MP4A	X	-2.192	1.04
14	MP4A	Z	-1.265	1.04
15	MP4A	Mx	.002	1.04
16	MP4A	X	-2.192	3.96
17	MP4A	Z	-1.265	3.96
18	MP4A	Mx	.002	3.96
19	MP1A	X	-1.052	2.25
20	MP1A	Z	-.608	2.25
21	MP1A	Mx	-.001	2.25
22	MP1A	X	-1.052	2.25

Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP1A	Z	-.608	2.25
24	MP1A	Mx	-.001	2.25
25	MP3A	X	-1.052	2.25
26	MP3A	Z	-.608	2.25
27	MP3A	Mx	-.001	2.25
28	MP3A	X	-1.052	2.25
29	MP3A	Z	-.608	2.25
30	MP3A	Mx	-.001	2.25
31	M7	X	-2.863	2.89
32	M7	Z	-1.653	2.89
33	M7	Mx	.001	2.89
34	M7	X	-2.863	2.89
35	M7	Z	-1.653	2.89
36	M7	Mx	.001	2.89
37	MP1A	X	-5.171	.5
38	MP1A	Z	-2.985	.5
39	MP1A	Mx	.004	.5
40	MP1A	X	-5.171	5.5
41	MP1A	Z	-2.985	5.5
42	MP1A	Mx	.004	5.5

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.574	.28
2	MP2A	Z	-7.923	.28
3	MP2A	Mx	.011	.28
4	MP2A	X	-4.574	5.72
5	MP2A	Z	-7.923	5.72
6	MP2A	Mx	.011	5.72
7	MP2A	X	-4.574	.28
8	MP2A	Z	-7.923	.28
9	MP2A	Mx	-.002	.28
10	MP2A	X	-4.574	5.72
11	MP2A	Z	-7.923	5.72
12	MP2A	Mx	-.002	5.72
13	MP4A	X	-1.973	1.04
14	MP4A	Z	-3.418	1.04
15	MP4A	Mx	.002	1.04
16	MP4A	X	-1.973	3.96
17	MP4A	Z	-3.418	3.96
18	MP4A	Mx	.002	3.96
19	MP1A	X	-.82	2.25
20	MP1A	Z	-1.42	2.25
21	MP1A	Mx	-.00082	2.25
22	MP1A	X	-.82	2.25
23	MP1A	Z	-1.42	2.25
24	MP1A	Mx	-.00082	2.25
25	MP3A	X	-.82	2.25
26	MP3A	Z	-1.42	2.25
27	MP3A	Mx	-.00082	2.25
28	MP3A	X	-.82	2.25
29	MP3A	Z	-1.42	2.25
30	MP3A	Mx	-.00082	2.25
31	M7	X	-1.891	2.89
32	M7	Z	-3.276	2.89
33	M7	Mx	.000946	2.89

Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	M7	X	-1.891	2.89
35	M7	Z	-3.276	2.89
36	M7	Mx	.000946	2.89
37	MP1A	X	-3.666	.5
38	MP1A	Z	-6.35	.5
39	MP1A	Mx	.003	.5
40	MP1A	X	-3.666	5.5
41	MP1A	Z	-6.35	5.5
42	MP1A	Mx	.003	5.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%34

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%2

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%100

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-6.374	-6.374	0	%100
2	M7	Y	-9.345	-9.345	0	%100
3	M8	Y	-6.374	-6.374	0	%100
4	MP1A	Y	-4.824	-4.824	0	%100
5	MP2A	Y	-5.513	-5.513	0	%100
6	MP3A	Y	-4.824	-4.824	0	%100
7	MP4A	Y	-4.824	-4.824	0	%100
8	M13	Y	-6.374	-6.374	0	%100
9	M19	Y	-7.397	-7.397	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-9.117	-9.117	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	-6.365	-6.365	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-7.006	-7.006	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-8.481	-8.481	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-7.006	-7.006	0	%100
13	MP4A	X	0	0	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
14	MP4A	Z	-7.006	-7.006	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-9.117	-9.117	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	5.007	5.007	0	%100
2	M1	Z	-8.672	-8.672	0	%100
3	M7	X	1.236	1.236	0	%100
4	M7	Z	-2.141	-2.141	0	%100
5	M8	X	3.182	3.182	0	%100
6	M8	Z	-5.512	-5.512	0	%100
7	MP1A	X	3.503	3.503	0	%100
8	MP1A	Z	-6.068	-6.068	0	%100
9	MP2A	X	4.241	4.241	0	%100
10	MP2A	Z	-7.345	-7.345	0	%100
11	MP3A	X	3.503	3.503	0	%100
12	MP3A	Z	-6.068	-6.068	0	%100
13	MP4A	X	3.503	3.503	0	%100
14	MP4A	Z	-6.068	-6.068	0	%100
15	M13	X	5.007	5.007	0	%100
16	M13	Z	-8.672	-8.672	0	%100
17	M19	X	1.001	1.001	0	%100
18	M19	Z	-1.735	-1.735	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	5.247	5.247	0	%100
2	M1	Z	-3.03	-3.03	0	%100
3	M7	X	6.424	6.424	0	%100
4	M7	Z	-3.709	-3.709	0	%100
5	M8	X	5.512	5.512	0	%100
6	M8	Z	-3.182	-3.182	0	%100
7	MP1A	X	6.068	6.068	0	%100
8	MP1A	Z	-3.503	-3.503	0	%100
9	MP2A	X	7.345	7.345	0	%100
10	MP2A	Z	-4.241	-4.241	0	%100
11	MP3A	X	6.068	6.068	0	%100
12	MP3A	Z	-3.503	-3.503	0	%100
13	MP4A	X	6.068	6.068	0	%100
14	MP4A	Z	-3.503	-3.503	0	%100
15	M13	X	5.247	5.247	0	%100
16	M13	Z	-3.03	-3.03	0	%100
17	M19	X	5.204	5.204	0	%100
18	M19	Z	-3.004	-3.004	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.208	1.208	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	9.89	9.89	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	6.365	6.365	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
6	M8	Z	0	0	0	%100
7	MP1A	X	7.006	7.006	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	8.481	8.481	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	7.006	7.006	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	7.006	7.006	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	1.208	1.208	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	8.012	8.012	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.27	.27	0	%100
2	M1	Z	.156	.156	0	%100
3	M7	X	6.424	6.424	0	%100
4	M7	Z	3.709	3.709	0	%100
5	M8	X	5.512	5.512	0	%100
6	M8	Z	3.182	3.182	0	%100
7	MP1A	X	6.068	6.068	0	%100
8	MP1A	Z	3.503	3.503	0	%100
9	MP2A	X	7.345	7.345	0	%100
10	MP2A	Z	4.241	4.241	0	%100
11	MP3A	X	6.068	6.068	0	%100
12	MP3A	Z	3.503	3.503	0	%100
13	MP4A	X	6.068	6.068	0	%100
14	MP4A	Z	3.503	3.503	0	%100
15	M13	X	.27	.27	0	%100
16	M13	Z	.156	.156	0	%100
17	M19	X	5.204	5.204	0	%100
18	M19	Z	3.004	3.004	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.133	2.133	0	%100
2	M1	Z	3.695	3.695	0	%100
3	M7	X	1.236	1.236	0	%100
4	M7	Z	2.141	2.141	0	%100
5	M8	X	3.182	3.182	0	%100
6	M8	Z	5.512	5.512	0	%100
7	MP1A	X	3.503	3.503	0	%100
8	MP1A	Z	6.068	6.068	0	%100
9	MP2A	X	4.241	4.241	0	%100
10	MP2A	Z	7.345	7.345	0	%100
11	MP3A	X	3.503	3.503	0	%100
12	MP3A	Z	6.068	6.068	0	%100
13	MP4A	X	3.503	3.503	0	%100
14	MP4A	Z	6.068	6.068	0	%100
15	M13	X	2.133	2.133	0	%100
16	M13	Z	3.695	3.695	0	%100
17	M19	X	1.001	1.001	0	%100
18	M19	Z	1.735	1.735	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	9.117	9.117	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	6.365	6.365	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	7.006	7.006	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	8.481	8.481	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	7.006	7.006	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	7.006	7.006	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	9.117	9.117	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.007	-5.007	0	%100
2	M1	Z	8.672	8.672	0	%100
3	M7	X	-1.236	-1.236	0	%100
4	M7	Z	2.141	2.141	0	%100
5	M8	X	-3.182	-3.182	0	%100
6	M8	Z	5.512	5.512	0	%100
7	MP1A	X	-3.503	-3.503	0	%100
8	MP1A	Z	6.068	6.068	0	%100
9	MP2A	X	-4.241	-4.241	0	%100
10	MP2A	Z	7.345	7.345	0	%100
11	MP3A	X	-3.503	-3.503	0	%100
12	MP3A	Z	6.068	6.068	0	%100
13	MP4A	X	-3.503	-3.503	0	%100
14	MP4A	Z	6.068	6.068	0	%100
15	M13	X	-5.007	-5.007	0	%100
16	M13	Z	8.672	8.672	0	%100
17	M19	X	-1.001	-1.001	0	%100
18	M19	Z	1.735	1.735	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.247	-5.247	0	%100
2	M1	Z	3.03	3.03	0	%100
3	M7	X	-6.424	-6.424	0	%100
4	M7	Z	3.709	3.709	0	%100
5	M8	X	-5.512	-5.512	0	%100
6	M8	Z	3.182	3.182	0	%100
7	MP1A	X	-6.068	-6.068	0	%100
8	MP1A	Z	3.503	3.503	0	%100
9	MP2A	X	-7.345	-7.345	0	%100
10	MP2A	Z	4.241	4.241	0	%100
11	MP3A	X	-6.068	-6.068	0	%100
12	MP3A	Z	3.503	3.503	0	%100
13	MP4A	X	-6.068	-6.068	0	%100
14	MP4A	Z	3.503	3.503	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
15	M13	X	-5.247	-5.247	0	%100
16	M13	Z	3.03	3.03	0	%100
17	M19	X	-5.204	-5.204	0	%100
18	M19	Z	3.004	3.004	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.208	-1.208	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	-9.89	-9.89	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	-6.365	-6.365	0	%100
6	M8	Z	0	0	0	%100
7	MP1A	X	-7.006	-7.006	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-8.481	-8.481	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-7.006	-7.006	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-7.006	-7.006	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-1.208	-1.208	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	-8.012	-8.012	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.27	-.27	0	%100
2	M1	Z	-.156	-.156	0	%100
3	M7	X	-6.424	-6.424	0	%100
4	M7	Z	-3.709	-3.709	0	%100
5	M8	X	-5.512	-5.512	0	%100
6	M8	Z	-3.182	-3.182	0	%100
7	MP1A	X	-6.068	-6.068	0	%100
8	MP1A	Z	-3.503	-3.503	0	%100
9	MP2A	X	-7.345	-7.345	0	%100
10	MP2A	Z	-4.241	-4.241	0	%100
11	MP3A	X	-6.068	-6.068	0	%100
12	MP3A	Z	-3.503	-3.503	0	%100
13	MP4A	X	-6.068	-6.068	0	%100
14	MP4A	Z	-3.503	-3.503	0	%100
15	M13	X	-.27	-.27	0	%100
16	M13	Z	-.156	-.156	0	%100
17	M19	X	-5.204	-5.204	0	%100
18	M19	Z	-3.004	-3.004	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.133	-2.133	0	%100
2	M1	Z	-3.695	-3.695	0	%100
3	M7	X	-1.236	-1.236	0	%100
4	M7	Z	-2.141	-2.141	0	%100
5	M8	X	-3.182	-3.182	0	%100
6	M8	Z	-5.512	-5.512	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	-3.503	-3.503	0	%100
8	MP1A	Z	-6.068	-6.068	0	%100
9	MP2A	X	-4.241	-4.241	0	%100
10	MP2A	Z	-7.345	-7.345	0	%100
11	MP3A	X	-3.503	-3.503	0	%100
12	MP3A	Z	-6.068	-6.068	0	%100
13	MP4A	X	-3.503	-3.503	0	%100
14	MP4A	Z	-6.068	-6.068	0	%100
15	M13	X	-2.133	-2.133	0	%100
16	M13	Z	-3.695	-3.695	0	%100
17	M19	X	-1.001	-1.001	0	%100
18	M19	Z	-1.735	-1.735	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-2.796	-2.796	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	-2.006	-2.006	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-2.547	-2.547	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-2.823	-2.823	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-2.547	-2.547	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-2.547	-2.547	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-2.796	-2.796	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.536	1.536	0	%100
2	M1	Z	-2.66	-2.66	0	%100
3	M7	X	.377	.377	0	%100
4	M7	Z	-.653	-.653	0	%100
5	M8	X	1.003	1.003	0	%100
6	M8	Z	-1.737	-1.737	0	%100
7	MP1A	X	1.274	1.274	0	%100
8	MP1A	Z	-2.206	-2.206	0	%100
9	MP2A	X	1.411	1.411	0	%100
10	MP2A	Z	-2.444	-2.444	0	%100
11	MP3A	X	1.274	1.274	0	%100
12	MP3A	Z	-2.206	-2.206	0	%100
13	MP4A	X	1.274	1.274	0	%100
14	MP4A	Z	-2.206	-2.206	0	%100
15	M13	X	1.536	1.536	0	%100
16	M13	Z	-2.66	-2.66	0	%100
17	M19	X	.333	.333	0	%100
18	M19	Z	-.578	-.578	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.609	1.609	0	%100
2	M1	Z	-.929	-.929	0	%100
3	M7	X	1.96	1.96	0	%100
4	M7	Z	-1.132	-1.132	0	%100
5	M8	X	1.737	1.737	0	%100
6	M8	Z	-1.003	-1.003	0	%100
7	MP1A	X	2.206	2.206	0	%100
8	MP1A	Z	-1.274	-1.274	0	%100
9	MP2A	X	2.444	2.444	0	%100
10	MP2A	Z	-1.411	-1.411	0	%100
11	MP3A	X	2.206	2.206	0	%100
12	MP3A	Z	-1.274	-1.274	0	%100
13	MP4A	X	2.206	2.206	0	%100
14	MP4A	Z	-1.274	-1.274	0	%100
15	M13	X	1.609	1.609	0	%100
16	M13	Z	-.929	-.929	0	%100
17	M19	X	1.733	1.733	0	%100
18	M19	Z	-1	-1	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.37	.37	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	3.018	3.018	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	2.006	2.006	0	%100
6	M8	Z	0	0	0	%100
7	MP1A	X	2.547	2.547	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	2.823	2.823	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	2.547	2.547	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	2.547	2.547	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	.37	.37	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	2.668	2.668	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.083	.083	0	%100
2	M1	Z	.048	.048	0	%100
3	M7	X	1.96	1.96	0	%100
4	M7	Z	1.132	1.132	0	%100
5	M8	X	1.737	1.737	0	%100
6	M8	Z	1.003	1.003	0	%100
7	MP1A	X	2.206	2.206	0	%100
8	MP1A	Z	1.274	1.274	0	%100
9	MP2A	X	2.444	2.444	0	%100
10	MP2A	Z	1.411	1.411	0	%100
11	MP3A	X	2.206	2.206	0	%100
12	MP3A	Z	1.274	1.274	0	%100
13	MP4A	X	2.206	2.206	0	%100
14	MP4A	Z	1.274	1.274	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
15	M13	X	.083	.083	0	%100
16	M13	Z	.048	.048	0	%100
17	M19	X	1.733	1.733	0	%100
18	M19	Z	1	1	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.654	.654	0	%100
2	M1	Z	1.133	1.133	0	%100
3	M7	X	.377	.377	0	%100
4	M7	Z	.653	.653	0	%100
5	M8	X	1.003	1.003	0	%100
6	M8	Z	1.737	1.737	0	%100
7	MP1A	X	1.274	1.274	0	%100
8	MP1A	Z	2.206	2.206	0	%100
9	MP2A	X	1.411	1.411	0	%100
10	MP2A	Z	2.444	2.444	0	%100
11	MP3A	X	1.274	1.274	0	%100
12	MP3A	Z	2.206	2.206	0	%100
13	MP4A	X	1.274	1.274	0	%100
14	MP4A	Z	2.206	2.206	0	%100
15	M13	X	.654	.654	0	%100
16	M13	Z	1.133	1.133	0	%100
17	M19	X	.333	.333	0	%100
18	M19	Z	.578	.578	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	2.796	2.796	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	2.006	2.006	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	2.547	2.547	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	2.823	2.823	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	2.547	2.547	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	2.547	2.547	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	2.796	2.796	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.536	-1.536	0	%100
2	M1	Z	2.66	2.66	0	%100
3	M7	X	-.377	-.377	0	%100
4	M7	Z	.653	.653	0	%100
5	M8	X	-1.003	-1.003	0	%100
6	M8	Z	1.737	1.737	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	-1.274	-1.274	0	%100
8	MP1A	Z	2.206	2.206	0	%100
9	MP2A	X	-1.411	-1.411	0	%100
10	MP2A	Z	2.444	2.444	0	%100
11	MP3A	X	-1.274	-1.274	0	%100
12	MP3A	Z	2.206	2.206	0	%100
13	MP4A	X	-1.274	-1.274	0	%100
14	MP4A	Z	2.206	2.206	0	%100
15	M13	X	-1.536	-1.536	0	%100
16	M13	Z	2.66	2.66	0	%100
17	M19	X	-.333	-.333	0	%100
18	M19	Z	.578	.578	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.609	-1.609	0	%100
2	M1	Z	.929	.929	0	%100
3	M7	X	-1.96	-1.96	0	%100
4	M7	Z	1.132	1.132	0	%100
5	M8	X	-1.737	-1.737	0	%100
6	M8	Z	1.003	1.003	0	%100
7	MP1A	X	-2.206	-2.206	0	%100
8	MP1A	Z	1.274	1.274	0	%100
9	MP2A	X	-2.444	-2.444	0	%100
10	MP2A	Z	1.411	1.411	0	%100
11	MP3A	X	-2.206	-2.206	0	%100
12	MP3A	Z	1.274	1.274	0	%100
13	MP4A	X	-2.206	-2.206	0	%100
14	MP4A	Z	1.274	1.274	0	%100
15	M13	X	-1.609	-1.609	0	%100
16	M13	Z	.929	.929	0	%100
17	M19	X	-1.733	-1.733	0	%100
18	M19	Z	1	1	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.37	-.37	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	-3.018	-3.018	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	-2.006	-2.006	0	%100
6	M8	Z	0	0	0	%100
7	MP1A	X	-2.547	-2.547	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-2.823	-2.823	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-2.547	-2.547	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-2.547	-2.547	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-.37	-.37	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	-2.668	-2.668	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.083	-.083	0	%100
2	M1	Z	-.048	-.048	0	%100
3	M7	X	-1.96	-1.96	0	%100
4	M7	Z	-1.132	-1.132	0	%100
5	M8	X	-1.737	-1.737	0	%100
6	M8	Z	-1.003	-1.003	0	%100
7	MP1A	X	-2.206	-2.206	0	%100
8	MP1A	Z	-1.274	-1.274	0	%100
9	MP2A	X	-2.444	-2.444	0	%100
10	MP2A	Z	-1.411	-1.411	0	%100
11	MP3A	X	-2.206	-2.206	0	%100
12	MP3A	Z	-1.274	-1.274	0	%100
13	MP4A	X	-2.206	-2.206	0	%100
14	MP4A	Z	-1.274	-1.274	0	%100
15	M13	X	-.083	-.083	0	%100
16	M13	Z	-.048	-.048	0	%100
17	M19	X	-1.733	-1.733	0	%100
18	M19	Z	-1	-1	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.654	-.654	0	%100
2	M1	Z	-1.133	-1.133	0	%100
3	M7	X	-.377	-.377	0	%100
4	M7	Z	-.653	-.653	0	%100
5	M8	X	-1.003	-1.003	0	%100
6	M8	Z	-1.737	-1.737	0	%100
7	MP1A	X	-1.274	-1.274	0	%100
8	MP1A	Z	-2.206	-2.206	0	%100
9	MP2A	X	-1.411	-1.411	0	%100
10	MP2A	Z	-2.444	-2.444	0	%100
11	MP3A	X	-1.274	-1.274	0	%100
12	MP3A	Z	-2.206	-2.206	0	%100
13	MP4A	X	-1.274	-1.274	0	%100
14	MP4A	Z	-2.206	-2.206	0	%100
15	M13	X	-.654	-.654	0	%100
16	M13	Z	-1.133	-1.133	0	%100
17	M19	X	-.333	-.333	0	%100
18	M19	Z	-.578	-.578	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.612	-.612	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	-.427	-.427	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.47	-.47	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.569	-.569	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-.47	-.47	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-.47	-.47	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
15	M13	X	0	0	0	%100
16	M13	Z	-.612	-.612	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.336	.336	0	%100
2	M1	Z	-.582	-.582	0	%100
3	M7	X	.083	.083	0	%100
4	M7	Z	-.144	-.144	0	%100
5	M8	X	.214	.214	0	%100
6	M8	Z	-.37	-.37	0	%100
7	MP1A	X	.235	.235	0	%100
8	MP1A	Z	-.407	-.407	0	%100
9	MP2A	X	.285	.285	0	%100
10	MP2A	Z	-.493	-.493	0	%100
11	MP3A	X	.235	.235	0	%100
12	MP3A	Z	-.407	-.407	0	%100
13	MP4A	X	.235	.235	0	%100
14	MP4A	Z	-.407	-.407	0	%100
15	M13	X	.336	.336	0	%100
16	M13	Z	-.582	-.582	0	%100
17	M19	X	.067	.067	0	%100
18	M19	Z	-.116	-.116	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.352	.352	0	%100
2	M1	Z	-.203	-.203	0	%100
3	M7	X	.431	.431	0	%100
4	M7	Z	-.249	-.249	0	%100
5	M8	X	.37	.37	0	%100
6	M8	Z	-.214	-.214	0	%100
7	MP1A	X	.407	.407	0	%100
8	MP1A	Z	-.235	-.235	0	%100
9	MP2A	X	.493	.493	0	%100
10	MP2A	Z	-.285	-.285	0	%100
11	MP3A	X	.407	.407	0	%100
12	MP3A	Z	-.235	-.235	0	%100
13	MP4A	X	.407	.407	0	%100
14	MP4A	Z	-.235	-.235	0	%100
15	M13	X	.352	.352	0	%100
16	M13	Z	-.203	-.203	0	%100
17	M19	X	.349	.349	0	%100
18	M19	Z	-.202	-.202	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.081	.081	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	.664	.664	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	.427	.427	0	%100
6	M8	Z	0	0	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	.47	.47	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	.569	.569	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	.47	.47	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	.47	.47	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	.081	.081	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	.538	.538	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.018	.018	0	%100
2	M1	Z	.01	.01	0	%100
3	M7	X	.431	.431	0	%100
4	M7	Z	.249	.249	0	%100
5	M8	X	.37	.37	0	%100
6	M8	Z	.214	.214	0	%100
7	MP1A	X	.407	.407	0	%100
8	MP1A	Z	.235	.235	0	%100
9	MP2A	X	.493	.493	0	%100
10	MP2A	Z	.285	.285	0	%100
11	MP3A	X	.407	.407	0	%100
12	MP3A	Z	.235	.235	0	%100
13	MP4A	X	.407	.407	0	%100
14	MP4A	Z	.235	.235	0	%100
15	M13	X	.018	.018	0	%100
16	M13	Z	.01	.01	0	%100
17	M19	X	.349	.349	0	%100
18	M19	Z	.202	.202	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.143	.143	0	%100
2	M1	Z	.248	.248	0	%100
3	M7	X	.083	.083	0	%100
4	M7	Z	.144	.144	0	%100
5	M8	X	.214	.214	0	%100
6	M8	Z	.37	.37	0	%100
7	MP1A	X	.235	.235	0	%100
8	MP1A	Z	.407	.407	0	%100
9	MP2A	X	.285	.285	0	%100
10	MP2A	Z	.493	.493	0	%100
11	MP3A	X	.235	.235	0	%100
12	MP3A	Z	.407	.407	0	%100
13	MP4A	X	.235	.235	0	%100
14	MP4A	Z	.407	.407	0	%100
15	M13	X	.143	.143	0	%100
16	M13	Z	.248	.248	0	%100
17	M19	X	.067	.067	0	%100
18	M19	Z	.116	.116	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.612	.612	0	%100
3	M7	X	0	0	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	0	0	0	%100
6	M8	Z	.427	.427	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.47	.47	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.569	.569	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.47	.47	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	.47	.47	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	.612	.612	0	%100
17	M19	X	0	0	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.336	-.336	0	%100
2	M1	Z	.582	.582	0	%100
3	M7	X	-.083	-.083	0	%100
4	M7	Z	.144	.144	0	%100
5	M8	X	-.214	-.214	0	%100
6	M8	Z	.37	.37	0	%100
7	MP1A	X	-.235	-.235	0	%100
8	MP1A	Z	.407	.407	0	%100
9	MP2A	X	-.285	-.285	0	%100
10	MP2A	Z	.493	.493	0	%100
11	MP3A	X	-.235	-.235	0	%100
12	MP3A	Z	.407	.407	0	%100
13	MP4A	X	-.235	-.235	0	%100
14	MP4A	Z	.407	.407	0	%100
15	M13	X	-.336	-.336	0	%100
16	M13	Z	.582	.582	0	%100
17	M19	X	-.067	-.067	0	%100
18	M19	Z	.116	.116	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.352	-.352	0	%100
2	M1	Z	.203	.203	0	%100
3	M7	X	-.431	-.431	0	%100
4	M7	Z	.249	.249	0	%100
5	M8	X	-.37	-.37	0	%100
6	M8	Z	.214	.214	0	%100
7	MP1A	X	-.407	-.407	0	%100
8	MP1A	Z	.235	.235	0	%100
9	MP2A	X	-.493	-.493	0	%100
10	MP2A	Z	.285	.285	0	%100
11	MP3A	X	-.407	-.407	0	%100
12	MP3A	Z	.235	.235	0	%100
13	MP4A	X	-.407	-.407	0	%100
14	MP4A	Z	.235	.235	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
15	M13	X	-.352	-.352	0	%100
16	M13	Z	.203	.203	0	%100
17	M19	X	-.349	-.349	0	%100
18	M19	Z	.202	.202	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.081	-.081	0	%100
2	M1	Z	0	0	0	%100
3	M7	X	-.664	-.664	0	%100
4	M7	Z	0	0	0	%100
5	M8	X	-.427	-.427	0	%100
6	M8	Z	0	0	0	%100
7	MP1A	X	-.47	-.47	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-.569	-.569	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-.47	-.47	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-.47	-.47	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-.081	-.081	0	%100
16	M13	Z	0	0	0	%100
17	M19	X	-.538	-.538	0	%100
18	M19	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.018	-.018	0	%100
2	M1	Z	-.01	-.01	0	%100
3	M7	X	-.431	-.431	0	%100
4	M7	Z	-.249	-.249	0	%100
5	M8	X	-.37	-.37	0	%100
6	M8	Z	-.214	-.214	0	%100
7	MP1A	X	-.407	-.407	0	%100
8	MP1A	Z	-.235	-.235	0	%100
9	MP2A	X	-.493	-.493	0	%100
10	MP2A	Z	-.285	-.285	0	%100
11	MP3A	X	-.407	-.407	0	%100
12	MP3A	Z	-.235	-.235	0	%100
13	MP4A	X	-.407	-.407	0	%100
14	MP4A	Z	-.235	-.235	0	%100
15	M13	X	-.018	-.018	0	%100
16	M13	Z	-.01	-.01	0	%100
17	M19	X	-.349	-.349	0	%100
18	M19	Z	-.202	-.202	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.143	-.143	0	%100
2	M1	Z	-.248	-.248	0	%100
3	M7	X	-.083	-.083	0	%100
4	M7	Z	-.144	-.144	0	%100
5	M8	X	-.214	-.214	0	%100
6	M8	Z	-.37	-.37	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	-.235	-.235	0	%100
8	MP1A	Z	-.407	-.407	0	%100
9	MP2A	X	-.285	-.285	0	%100
10	MP2A	Z	-.493	-.493	0	%100
11	MP3A	X	-.235	-.235	0	%100
12	MP3A	Z	-.407	-.407	0	%100
13	MP4A	X	-.235	-.235	0	%100
14	MP4A	Z	-.407	-.407	0	%100
15	M13	X	-.143	-.143	0	%100
16	M13	Z	-.248	-.248	0	%100
17	M19	X	-.067	-.067	0	%100
18	M19	Z	-.116	-.116	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N13	m...	801.705	9	1277.574	19	1305.984	1	-1.864	8	4.619	9	.677	49
2		min	-748.201	3	548.914	1	-657.306	7	-4.194	14	-4.434	3	-.822	50
3	N36	m...	321.776	9	680.924	13	309.818	1	-.794	7	1.971	9	.303	49
4		min	-375.283	3	282.897	7	-987.907	19	-1.96	13	-2.118	3	-.335	50
5	Totals:	m...	1123.482	9	1943.575	21	1615.802	1						
6		min	-1123.4...	3	908.257	3	-1615.788	7						

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

	Member	Shape	Code Che...	Loc[ft]	LC	Shear Che...	Loc[ft]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	M1	PIPE_3.0	.448	6.25	2	.160	6.25		18	2825..	65205	5.749	5.749	...	H1-...
2	M7	HSS4X4X4	.401	4	9	.082	4	y	50	1304..	1395..	16.1...	16.1...	...	H1-...
3	M19	HSS3X3X4	.359	4.146	3	.059	4.146	y	50	8830..	1010..	8.556	8.556	...	H1-...
4	MP2A	PIPE_2.5	.346	4.448	13	.084	4.521		4	3396..	50715	3.596	3.596	...	H1-...
5	M13	PIPE_3.0	.326	6.25	8	.145	6.25		15	2825..	65205	5.749	5.749	...	H1-...
6	MP1A	PIPE_2.0	.270	4	49	.054	4		10	2086..	32130	1.872	1.872	...	H1-...
7	MP4A	PIPE_2.0	.269	4	50	.053	4		15	2086..	32130	1.872	1.872	...	H1-...
8	MP3A	PIPE_2.0	.262	4	50	.070	2.188		15	2086..	32130	1.872	1.872	...	H1-...
9	M8	PIPE_3.0	.000	.625	7	.000	.625		8	6466..	65205	5.749	5.749	1	H1-...

TIA-222-H CONNECTION CHECK
Mount to Tower Connection - Typ. All Sectors
2021740.467324.02

Bolt Information		
Bolt Diameter (d)	0.625	in
Net Tensile Area (An)	0.226	in^2
# of Bolts Total (n)	4	
Bolt Distance Up-Down	6	in
Bolt Distance Left-Right	6	in
Bolt Grade	A325N	
Bolt Tensile Strength (F_{ub})	120	ksi

Flange Information		
Height (h)	8	in
Width (w)	8	in
Thickness (t)	0.75	in
Steel Grade	A36	
Plate Yield Strength (Fy)	36	ksi
Support Arm Height	4	in
Support Arm Width	4	in

RISA 3D Reactions		
Moment (M)	4.17	k-ft
Axial (T)	-0.60	kips
Shear (V)	1.29	kips

Bolt Capacity		
Nominal Tensile Strength (R_{nt})	27.120	kips
Nominal Shear Strength (R_{nv})	18.41	kips
Bolt Tensile Force (T_{ub})	7.03	kips
Bolt Shear Force (V_{ub})	0.323	kips
$T_{ub}/\phi R_{nt}$	0.34567	
$V_{ub}/\phi R_{nv}$	0.02336	
$(V_{ub}/\phi R_{nv})^2+(T_{ub}/\phi R_{nt})^2$	0.12004	
Bolt Capacity =	34.6%	OK

Plate Capacity		
Bolt Circle (D_{BC})	8.485	in
Effective Width (B_{eff})	5.66	in
Flexural Moment (M_u)	9.94	k-in
Flexural Strength ($ØM_n$)	25.77	k-in
Plate Capacity=	38.6%	OK

Weld Capacity		
Fillet (leg) =	0.250	in
Throat (eff) =	0.18	in
Fexx =	70.00	ksi
ø =	0.75	
øRn =	5.57	kips/in
Weld Capacity=	69.8%	OK

TIA-222-H CONNECTION CHECK
Mod Standoff to Tower Connection - Typ. All Sectors
2021740.467324.02

Bolt Information		
Bolt Diameter (d)	0.625	in
Net Tensile Area (An)	0.226	in^2
# of Bolts Total (n)	4	
Bolt Distance Up-Down	6	in
Bolt Distance Left-Right	6	in
Bolt Grade	A325N	
Bolt Tensile Strength (F_{ub})	120	ksi

Flange Information		
Height (h)	8.25	in
Width (w)	8.25	in
Thickness (t)	0.75	in
Steel Grade	A572-50	
Plate Yield Strength (Fy)	50	ksi
Support Arm Height	3	in
Support Arm Width	3	in

RISA 3D Reactions		
Moment (M)	1.92	k-ft
Axial (T)	0.99	kips
Shear (V)	0.69	kips

Bolt Capacity		
Nominal Tensile Strength (R_{nt})	27.120	kips
Nominal Shear Strength (R_{nv})	18.41	kips
Bolt Tensile Force (T_{ub})	3.27	kips
Bolt Shear Force (V_{ub})	0.172	kips
$T_{ub}/\phi R_{nt}$	0.16062	
$V_{ub}/\phi R_{nv}$	0.01249	
$(V_{ub}/\phi R_{nv})^2+(T_{ub}/\phi R_{nt})^2$	0.02596	
Bolt Capacity =	16.1%	OK

Plate Capacity		
Bolt Circle (D_{BC})	8.485	in
Effective Width (B_{eff})	7.35	in
Flexural Moment (M_u)	6.93	k-in
Flexural Strength ($ØM_n$)	46.50	k-in
Plate Capacity=	14.9%	OK

Weld Capacity		
Fillet (leg) =	0.313	in
Throat (eff) =	0.22	in
Fexx =	70.00	ksi
ø =	0.75	
øRn =	6.96	kips/in
Weld Capacity=	48.1%	OK

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide TES the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide "as built drawings" showing contractor's name, preparer's signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact TES immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded **to** https://pmi.vzwsmart.com as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
    - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
        - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
    - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
    - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
    - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
    - Photos showing the safety climb wire rope above and below the mount prior to modification.
    - Photos showing the climbing facility and safety climb if present.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by TES.
    - If the drawings are as specified on the drawings
        - The contractor should provide the packing list or the materials utilized to perform the mount modification
    - If an equivalent is utilized
        - It is required that the TES certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.

☐ The Material utilized was as specified on the TES Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

☐ The material utilized was an "equivalent" and included as part of the contractor submission is the TES certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

- ☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

- ☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

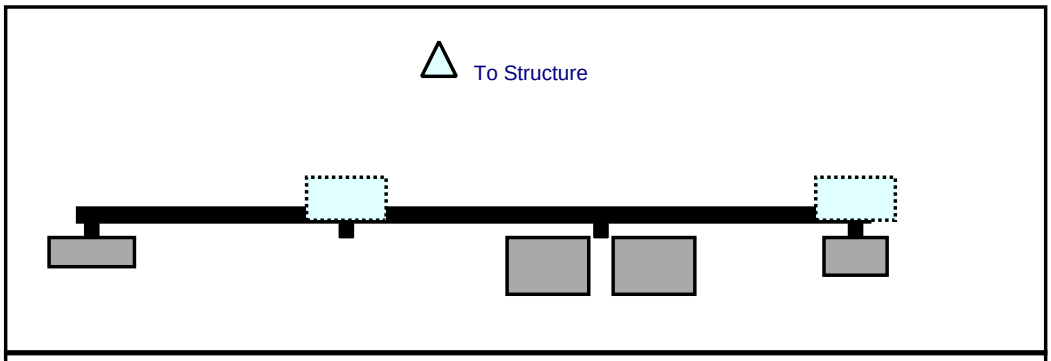
Structure: 467324-VZW - SOUTHBURY W CT

Sector: **A** 8/10/2021

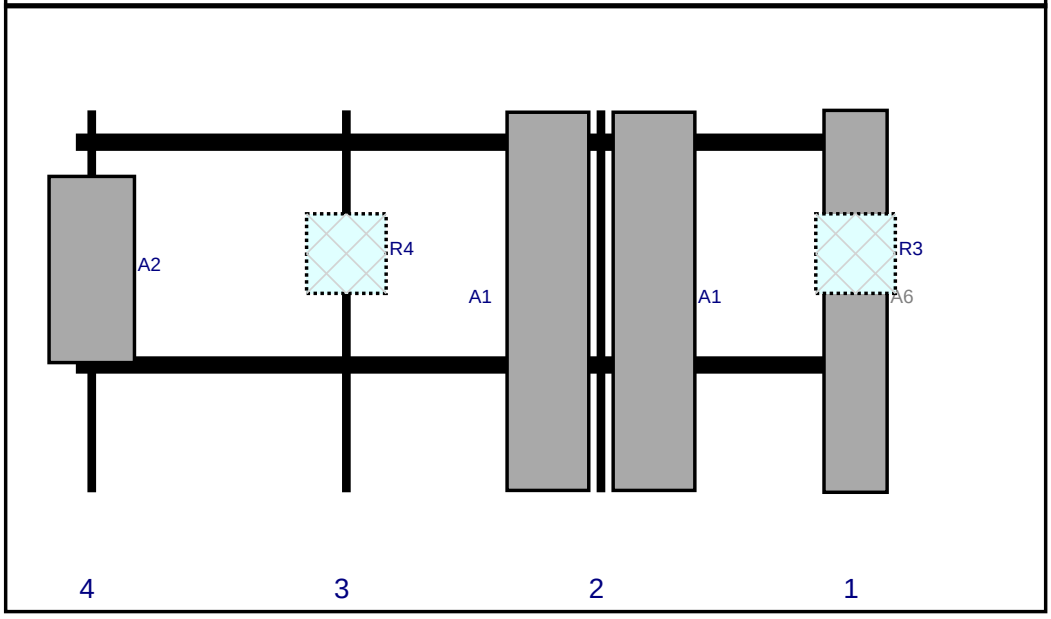
Structure Type: Monopole 10091168

Mount Elev: 109.50 Page: 1

Plan View



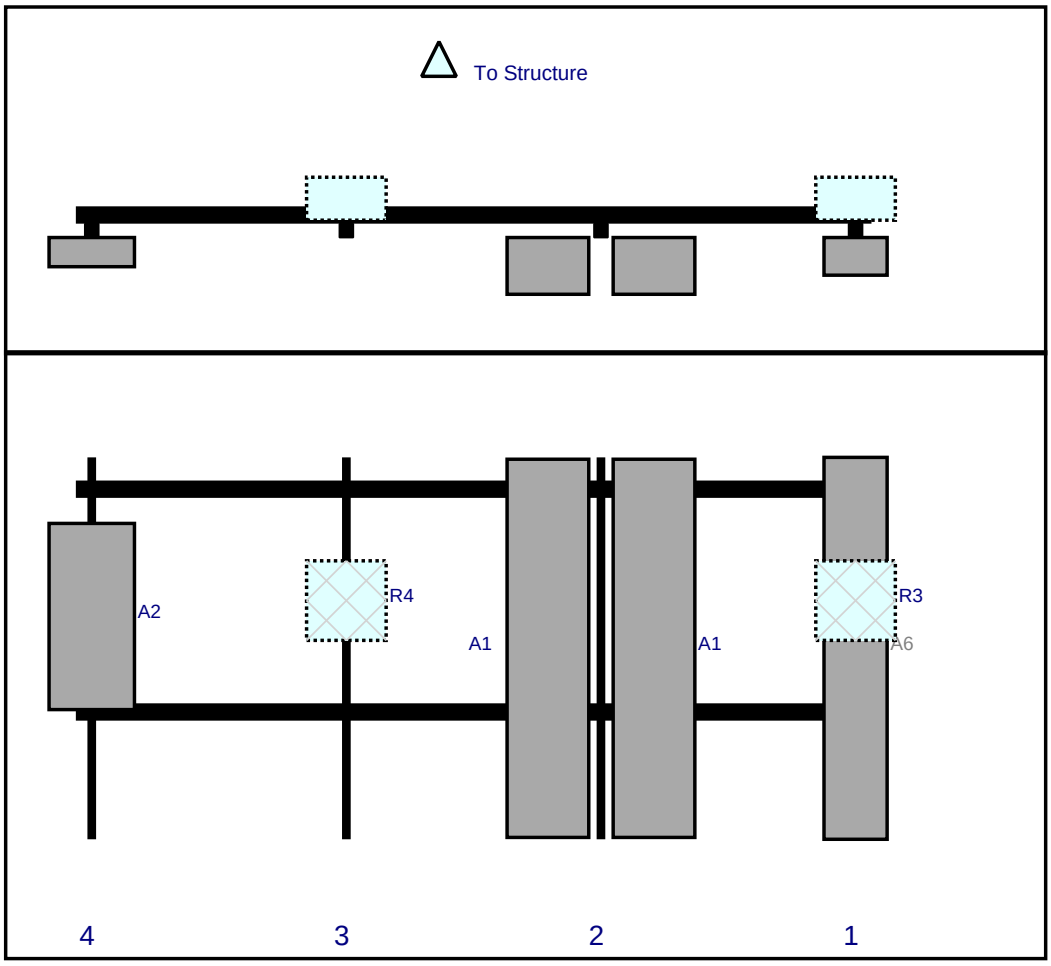
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LNX-6514DS-VTM	72	11.9	147	1	a	Front	36	0	Retained	
R3	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	147	1	a	Behind	27	0	Added	
A1	MX06FRO660-02	71.3	15.4	99	2	a	Front	36	-10	Added	
A1	MX06FRO660-02	71.3	15.4	99	2	b	Front	36	10	Added	
R4	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	51	3	a	Behind	27	0	Added	
A2	MT6407-77A	35.1	16.1	3	4	a	Front	30	0	Added	

Plan View

Front View
Looking at Structure



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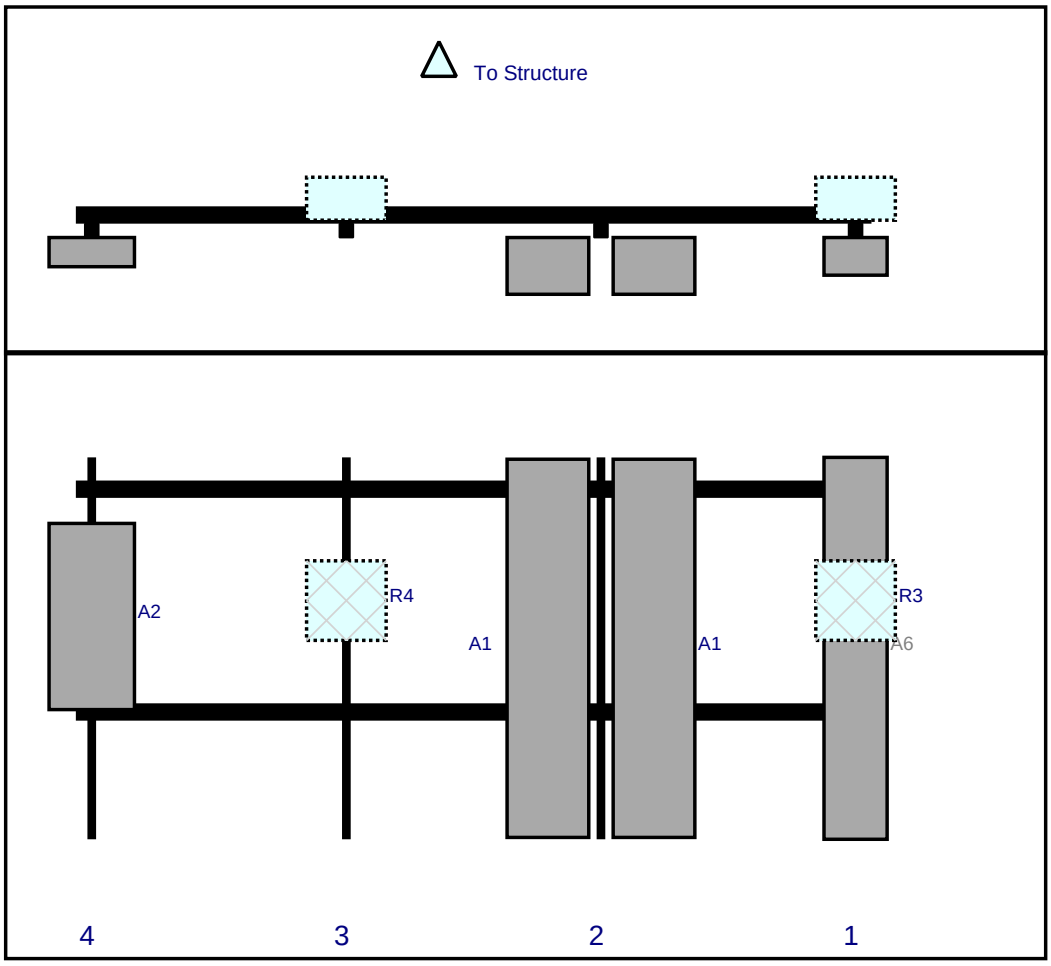
Plan View

Front View
Looking at Structure



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A1	MX06FRO660-02	71.3	15.4	99	2	a	Front	36	-10	Added	
A1	MX06FRO660-02	71.3	15.4	99	2	b	Front	36	10	Added	
R4	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	51	3	a	Behind	27	0	Added	
A2	MT6407-77A	35.1	16.1	3	4	a	Front	30	0	Added	

GPD Engineering and Architecture
Professional Corporation

August 10, 2021
2021740. 467324.02

Subject	TIA-222-H Usage
Site Information	Site ID: 467324-VZW / SOUTHBURY W CT Site Name: SOUTHBURY W CT Carrier Name: Verizon Wireless Address: 133 Horse Fence Hill Road, Southbury, Connecticut 06488, New Haven County Latitude: 41.460096° Longitude: -73.245390°
Structure Information	Tower Type: 150-Ft Monopole Mount Type: 12.50-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2018 Connecticut State Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

GPD Group

Christopher J. Scheks, P.E.
Connecticut #: 30026

Site Name: ***SOUTHBURY W CT***
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	751	4	609	2437	111	0.0071	0.5007	1.42%
VZW CDMA	877.26	2	497	993	111	0.0029	0.5848	0.50%
VZW Cellular	874	4	609	2437	111	0.0071	0.5827	1.22%
VZW PCS	1975	4	1442	5769	111	0.0168	1.0000	1.68%
VZW AWS	2120	4	1530	6122	111	0.0179	1.0000	1.79%
VZW CBAND	3730.08	4	6237	24949	111	0.0728	1.0000	7.28%
Total Percentage of Maximum Permissible Exposure								13.89%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992
**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

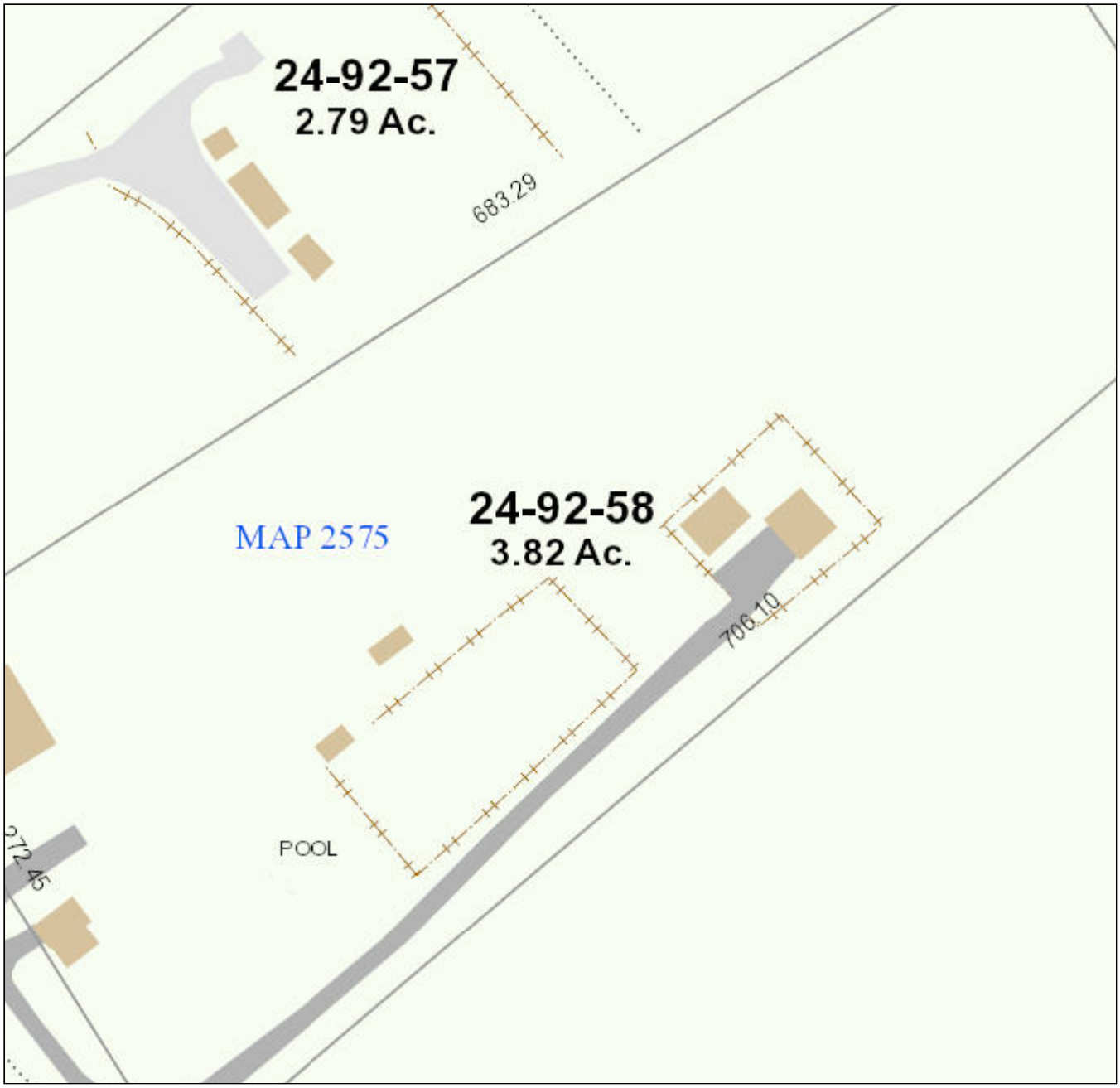
MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used.

Town of Southbury

Geographic Information System (GIS)

Date Printed: 9/15/2021



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for informational purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Southbury and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 75 feet

0 75 Feet

N W E S

133 HORSE FENCE HILL ROAD

Location	133 HORSE FENCE HILL ROAD	**Mblu**	24/ 92/ 58/ /
Acct#	00214500	**Owner**	BEATTY WILLIAM
Assessment	$197,400	**Appraisal**	$382,600
PID	2310	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$89,140	$293,460	$382,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$62,390	$135,010	$197,400

Owner of Record

Owner	BEATTY WILLIAM	**Sale Price**	$175,000
Co-Owner		**Certificate**	
Address	133 HORSE FENCE HILL ROAD SOUTHBURY, CT 06488	**Book & Page**	0689/0156
		Sale Date	05/06/2019
		Instrument	01

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
BEATTY WILLIAM	$175,000		0689/0156	01	05/06/2019
BEATTY DAVID	$147,000		0681/0599	00	08/13/2018
SMITH LYNN REV FAM TRUST	$0		0493/1152	25	08/19/2005
SMITH SCOTT S & LYNN	$0		1640/0144	25	03/15/1983

Building Information

Building 1 : Section 1

Year Built:	1950
Living Area:	1,104
Replacement Cost:	$124,272

Building Percent Good: 66

Replacement Cost

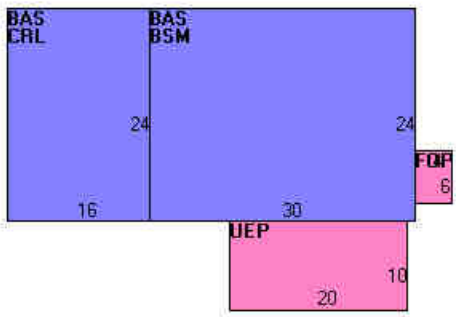
Less Depreciation: $82,020

Building Attributes	
Field	**Description**
Style	Ranch
Model	Residential
Grade:	D
Stories	1
Occupancy	1
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Forced Hot Air
AC Percent	0
Total Bedrooms:	3 Bedrooms
Full Bthrms:	2
Half Baths:	0
Extra Fixtures	0
Total Rooms:	5
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	1
Pln FPL:	0
Det FPL:	0
Gas Fireplace(s)	0
% Attic Fin	0
LF Dormer	0
Foundation	Conc Block
Bsmt Gar(s)	0
Bsmt %	75
SF FBM	0.00
SF Rec Rm	0
Fin Bsmt Qual	
Bsmt Access	Hatchway
Fndtn Cndtn	

Building Photo

(http://images.vgsi.com/photos/SouthburyCTPhotos//\00\00\11\05.JPG)

Building Layout



(http://images.vgsi.com/photos/SouthburyCTPhotos//Sketches/2310_2310.

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,104	1,104
BSM	Basement	720	0
CRL	Crawl Space	384	0
FOP	Open Porch	24	0
UEP	Unfin. Enclosed Porch	200	0
		2,432	1,104

Basement	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	101
Description	Res Dwelling
Zone	R-60
Neighborhood	25
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	3.78
Frontage	0
Depth	0
Assessed Value	$135,010
Appraised Value	$293,460

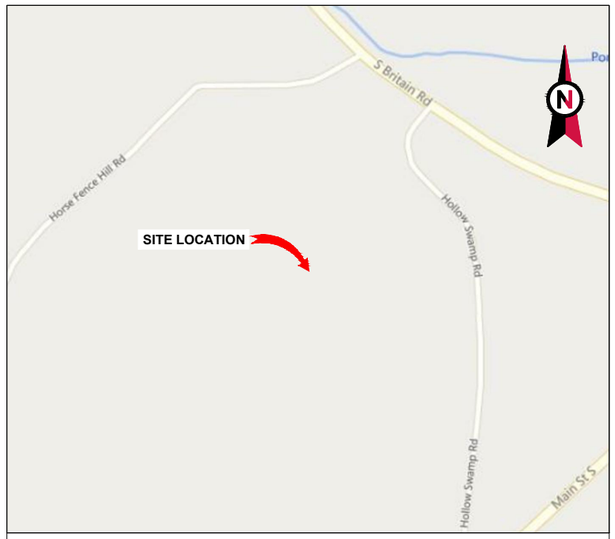
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FGR1	Garage	FR	Frame	336.00 S.F.	$4,700	1
SHD1	Shed	FR	Frame	200.00 S.F.	$1,200	1
SHD1	Shed	FR	Frame	160.00 S.F.	$960	1
SHD1	Shed	FR	Frame	240.00 S.F.	$260	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$89,140	$212,360	$301,500
2016	$99,290	$216,960	$316,250
2012	$99,290	$216,960	$316,250

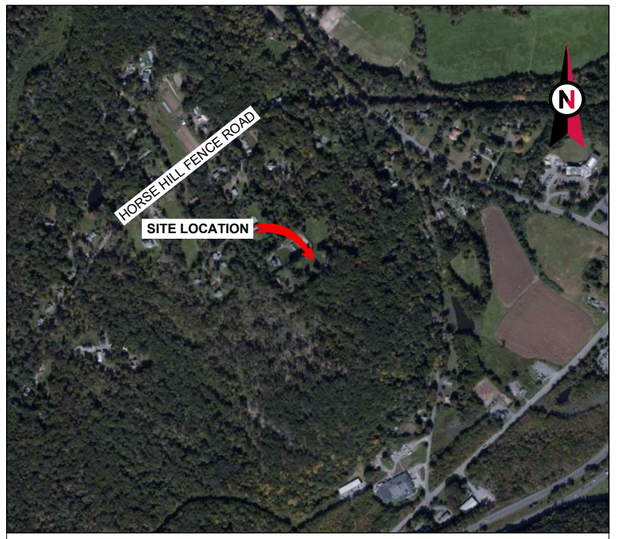
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$62,390	$148,650	$211,040
2016	$69,500	$151,870	$221,370
2012	$69,500	$151,870	$221,370



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: SOUTHBURY
ATC SITE NUMBER: 302519
VERIZON SITE NAME: SOUTHBURY W CT
VERIZON SITE NUMBER:467324
SITE ADDRESS: 133 HORSE FENCE HILL RD
SOUTHBURY, CT 06488



LOCATION MAP

VERIZON
ANTENNA AMENDMENT DRAWINGS

COMPLIANCE CODE

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

1. 2018 CONNECTICUT STATE BUILDING CODE, INCORPORATION THE 2015 IBC
2. 2017 NATIONAL ELECTRIC CODE - NFPA 70
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: CONNECTICUT LIGHT & POWER
PHONE: (800) 286-2000

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 921-8102

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

PROJECT SUMMARY

SITE ADDRESS:

133 HORSE FENCE HILL RD

SOUTHBURY, CT 06488

COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:

LATITUDE: 41.45997222

LONGITUDE: -73.245

GROUND ELEVATION: 346' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

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

PROJECT #:
21904298A

PROPERTY OWNER:

DAVID A BEATTY
133 HORSE FENCE HILL RD
SOUTHBURY, CT 06488

PROJECT DESCRIPTION

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

REMOVE (9) ANTENNA(s), (3) RRH(s), (6) DIPLEXER(s), (1) OVP(s), (1) HYBRID CABLE(s) AND (1) COAX CABLE(s)

INSTALL (9) ANTENNA(s), (6) RRH(s), (1) OVP(s), (2) HYBRID CABLE(s) AND MOUNT MODIFICATIONS

EXISTING (3) ANTENNA(s) AND (11) COAX CABLE(s) TO REMAIN

PROJECT NOTES

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

PROJECT LOCATION DIRECTIONS

FROM HARTFORD TAKE I-84 WEST TO EXIT 14. TAKE A RIGHT OFF EXIT, TAKE 3RD LEFT ON HORSE FENCE HILL RD. HALFWAY UP HILL LOOK FOR A GROUP OF 3 MAILBOXES ON LEFT, ONE WILL BE 113. FOLLOW DRIVEWAY TO END PAST LAST HOUSE TURN LEFT AFTER TREES. CHAIN AT BEGINNING OF ACCESS ROAD AT THAT POINT.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	08/24/21	RMD
G-002	GENERAL NOTES	0	08/24/21	RMD
C-101	DETAILED SITE PLAN	0	08/24/21	RMD
C-201	TOWER ELEVATION	0	08/24/21	RMD
C-401	ANTENNA INFORMATION & SCHEDULE	0	08/24/21	RMD
C-501	CONSTRUCTION DETAILS	0	08/24/21	RMD
E-501	GROUNDING DETAILS	0	08/24/21	RMD
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			

&2175$&725 30, 5(48,5(0(176

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT #:	10091168
VZW LOCATION CODE (PSLC):	467324
ANALYSIS DATE:	08/10/21

*** PMI AND REQUIREMENTS ARE EMBEDDED IN MOUNT ANALYSIS REPORT

IF MOUNT MODIFICATION IS REQUIRED ONLY USE VZW APPROVED SMART KIT VENDORS

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

AMERICAN TOWER®

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/13/21
0	FOR CONSTRUCTION	AMN	08/24/21

ATC SITE NUMBER:
302519

ATC SITE NAME:
SOUTHBURY

VERIZON SITE NAME:
SOUTHBURY W CT

SITE ADDRESS:
133 HORSE FENCE HILL RD
SOUTHBURY, CT 06488

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.08.24 14:41:17-04'00'

Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

verizon

DATE DRAWN:	08/13/21
ATC JOB NO:	13673542_D1
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "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 VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON 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 VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON 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. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON 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. VERIZON 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 VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
   - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON 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 GREED 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.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/13/21
0	FOR CONSTRUCTION	AMN	08/24/21

ATC SITE NUMBER:
302519

ATC SITE NAME:
SOUTHBURY

VERIZON SITE NAME:
SOUTHBURY W CT

SITE ADDRESS:
133 HORSE FENCE HILL RD
SOUTHBURY, CT 06488

SEAL:

Digitally signed by Alec Norris
Date: 2021.08.24 14:41:19-04'00'

Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

verizon

DATE DRAWN:	08/13/21
ATC JOB NO:	13673542_D1
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

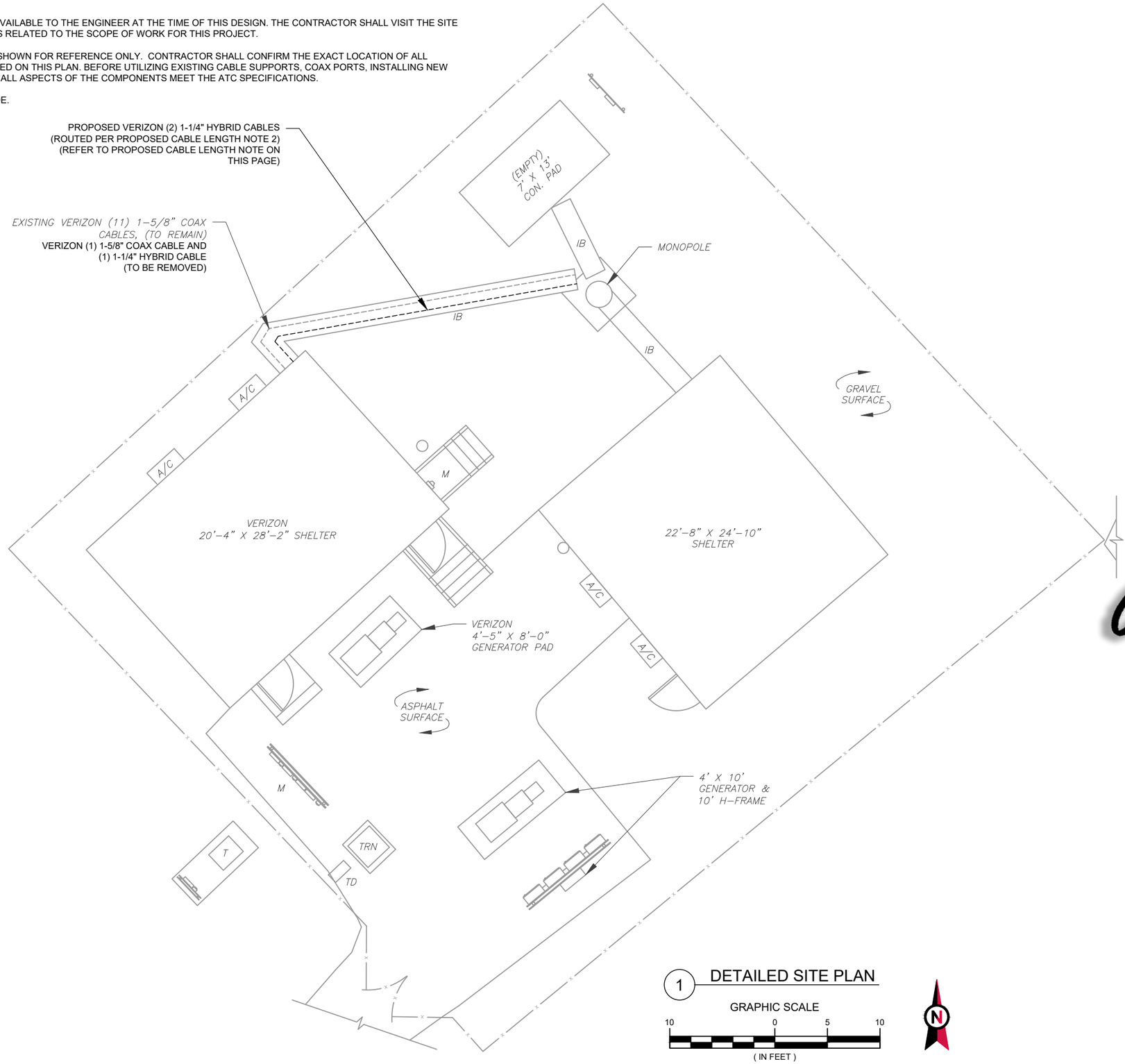
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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

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

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
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



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **170'**. 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.

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SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

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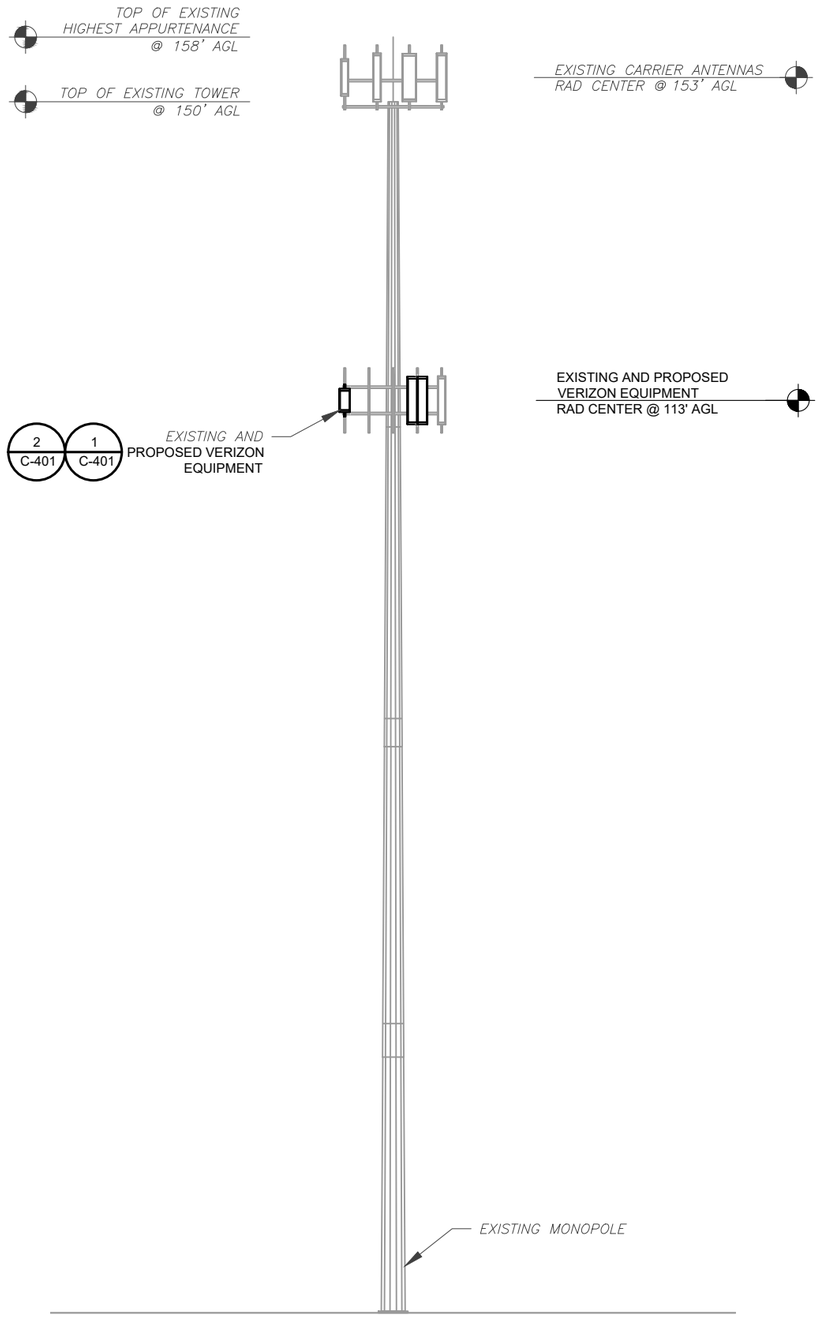
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY GDP ENGINEERING AND ARCHITECTURE PROFESSIONAL CORPORATION, DATED 08/10/21, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

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

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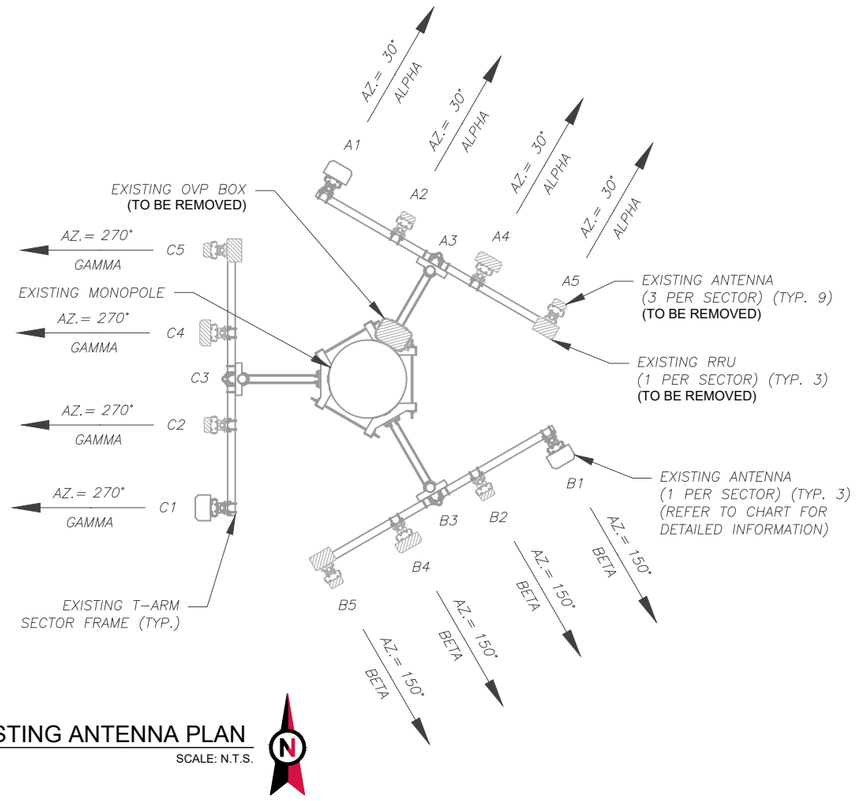
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

TOWER ELEVATION

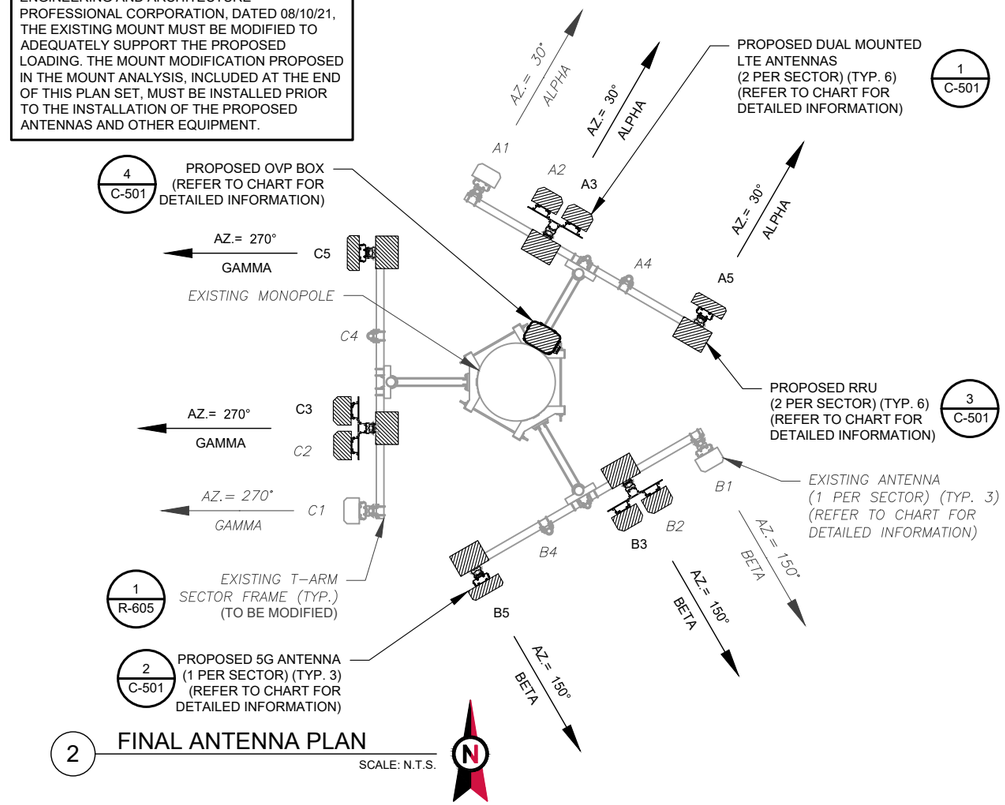
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY GDP ENGINEERING AND ARCHITECTURE PROFESSIONAL CORPORATION, DATED 08/10/21, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	113'	30°	A1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	–	–
			A2	932DG90T2E-M	–	0/0	RMV	–	–
			A3	–	–	–	–	–	–
			A4	P65-16-XL-2	LTE 700	0/-2	RMV	–	–
			A5	HBX-6517DS-VTM	LTE AWS	0/2	RMV	RRH2X40-AWS	RMV
BETA	113'	150°	B1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	–	–
			B2	932DG90T2E-M	–	0/0	RMV	–	–
			B3	–	–	–	–	–	–
			B4	P65-16-XL-2	LTE 700	0/-2	RMV	–	–
			B5	HBX-6517DS-VTM	LTE AWS	0/2	RMV	RRH2X40-AWS	RMV
GAMMA	113'	270°	C1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	–	–
			C2	932DG90T2E-M	–	0/0	RMV	–	–
			C3	–	–	–	–	–	–
			C4	P65-16-XL-2	LTE 700	0/-2	RMV	–	–
			C5	HBX-6517DS-VTM	LTE AWS	0/2	RMV	RRH2X40-AWS	RMV

NOTES

1. CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	113'	30°	A1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	-	-
			A2	-	-	-	-	-	-
			A3	(2) MX06FRO660-03	LTE 700/850/1900/AWS	0/2/2/2	ADD	RF4440D-13A	ADD
			A4	-	-	-	-	-	-
			A5	MT6407-77A	5G	0/6	ADD	RF4439D-25A	ADD
BETA	113'	150°	B1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	-	-
			B2	-	-	-	-	-	-
			B3	(2) MX06FRO660-03	LTE 700/850/1900/AWS	0/2/2/2	ADD	RF4440D-13A	ADD
			B4	-	-	-	-	-	-
			B5	MT6407-77A	5G	0/6	ADD	RF4439D-25A	ADD
GAMMA	113'	270°	C1	LNX-6514DS-VTM	CDMA 850	0/0	RMN	-	-
			C2	-	-	-	-	-	-
			C3	(2) MX06FRO660-03	LTE 700/850/1900/AWS	0/2/2/2	ADD	RF4440D-13A	ADD
			C4	-	-	-	-	-	-
			C5	MT6407-77A	5G	0/6	ADD	RF4439D-25A	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX

MODEL NUMBER	STATUS
–	–
DB-T1-6Z-8AB-0Z	RMV

EXISTING CABLING SUMMARY

COAX	HYBRID	STATUS
(11) 1-5/8"	–	RMN
(1) 1-5/8"	(1) 1-1/4"	RMV

FINAL FIBER DISTRIBUTION / OVP BOX

MODEL NUMBER	STATUS
-	-
RCMDC-6627-PF-48	ADD

FINAL CABLING SUMMARY

COAX	HYBRID	STATUS
(11) 1-5/8"	–	RMN
-	(2) 1-1/4"	ADD

3 EQUIPMENT SCHEDULES

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STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
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verizon

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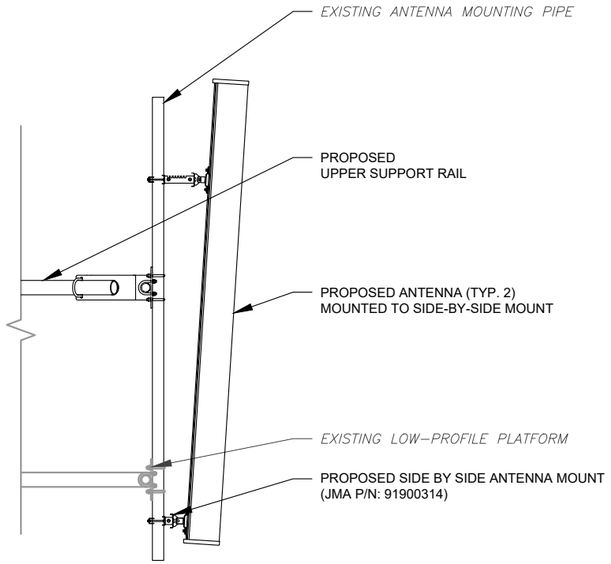
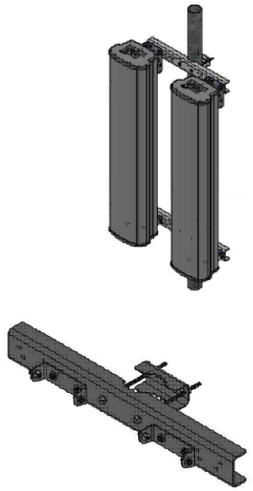
ATC JOB NO:	13673542_D1
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



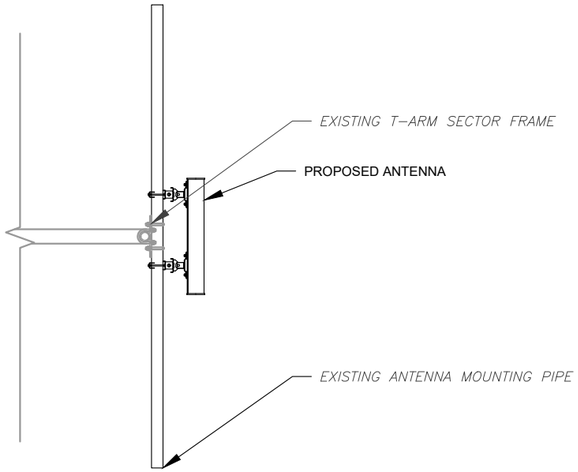
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

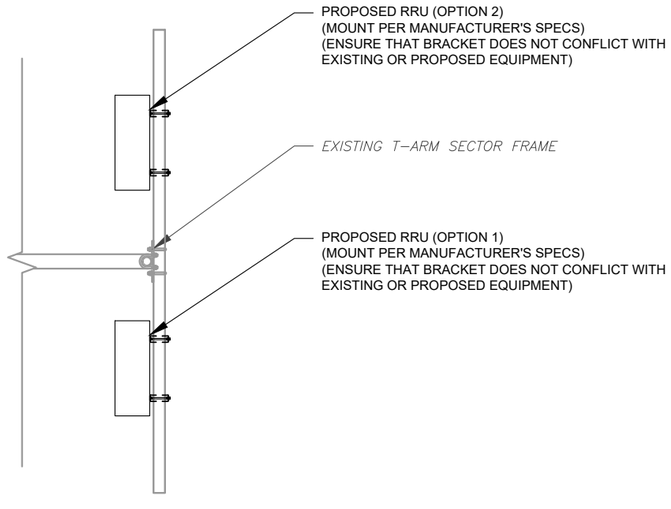
1 PROPOSED SIDE-BY-SIDE MOUNT

SCALE: NOT TO SCALE



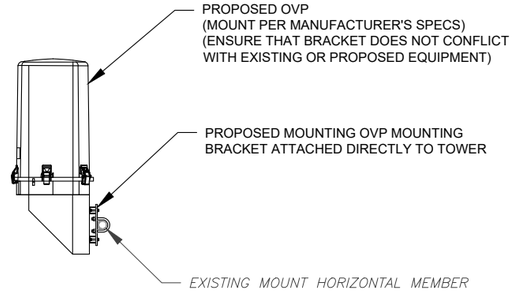
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



4 PROPOSED OVP MOUNTING

SCALE: N.T.S.

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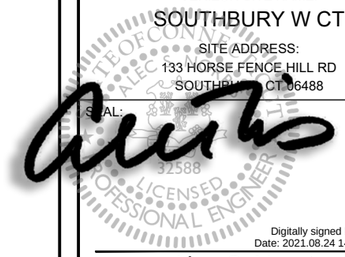

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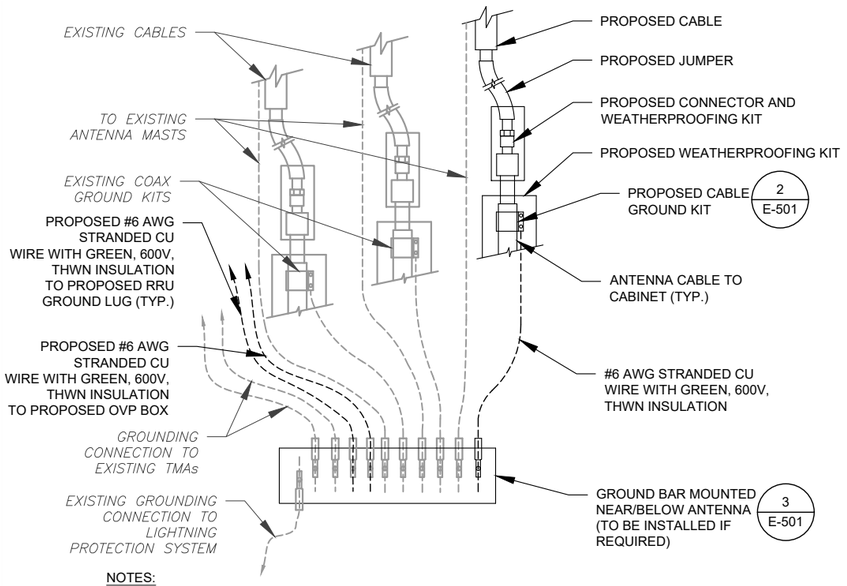
C.T. JPC.0000131

verizon

DATE DRAWN:	08/13/21
ATC JOB NO:	13673542_D1
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

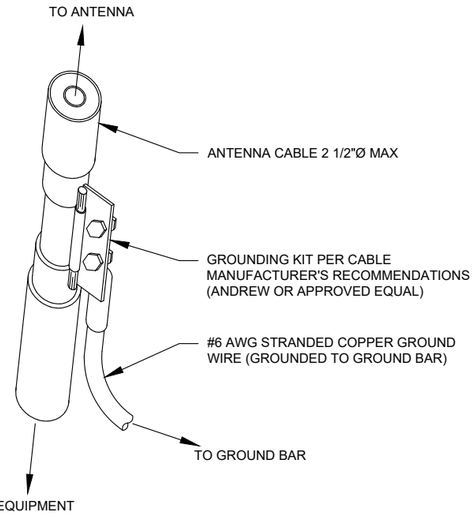


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON 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.

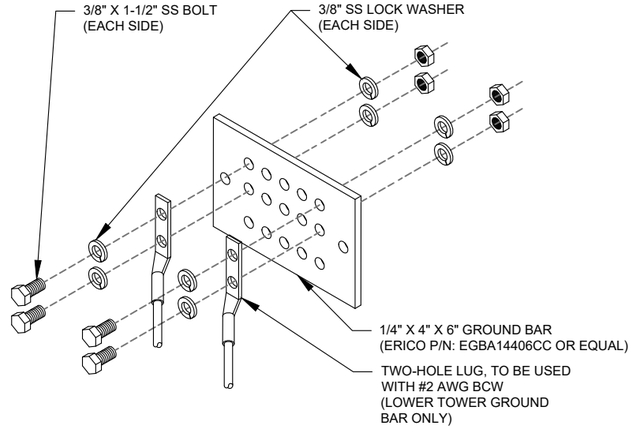


GROUND KIT NOTES:

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.

AMERICAN TOWER®

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/13/21
0	FOR CONSTRUCTION	AMN	08/24/21

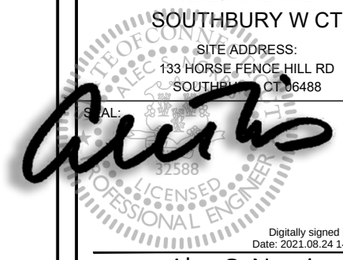
ATC SITE NUMBER:
302519

ATC SITE NAME:
SOUTHBURY

VERIZON SITE NAME:
SOUTHBURY W CT

SITE ADDRESS:
133 HORSE FENCE HILL RD
SOUTHBURY, CT 06488

SEAL:



Digitally signed by Alec Norris
Date: 2021.08.24 14:41:29-04'00'

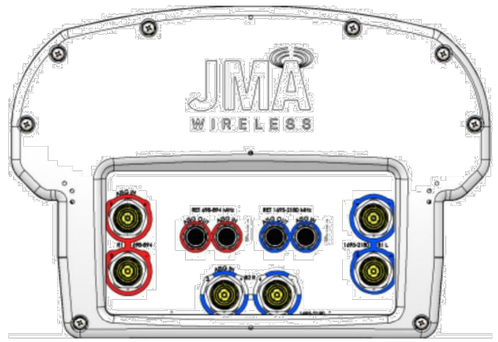
Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

verizon

DATE DRAWN:	08/13/21
ATC JOB NO:	13673542_D1
CUSTOMER ID:	SOUTHBURY W CT
CUSTOMER #:	467324

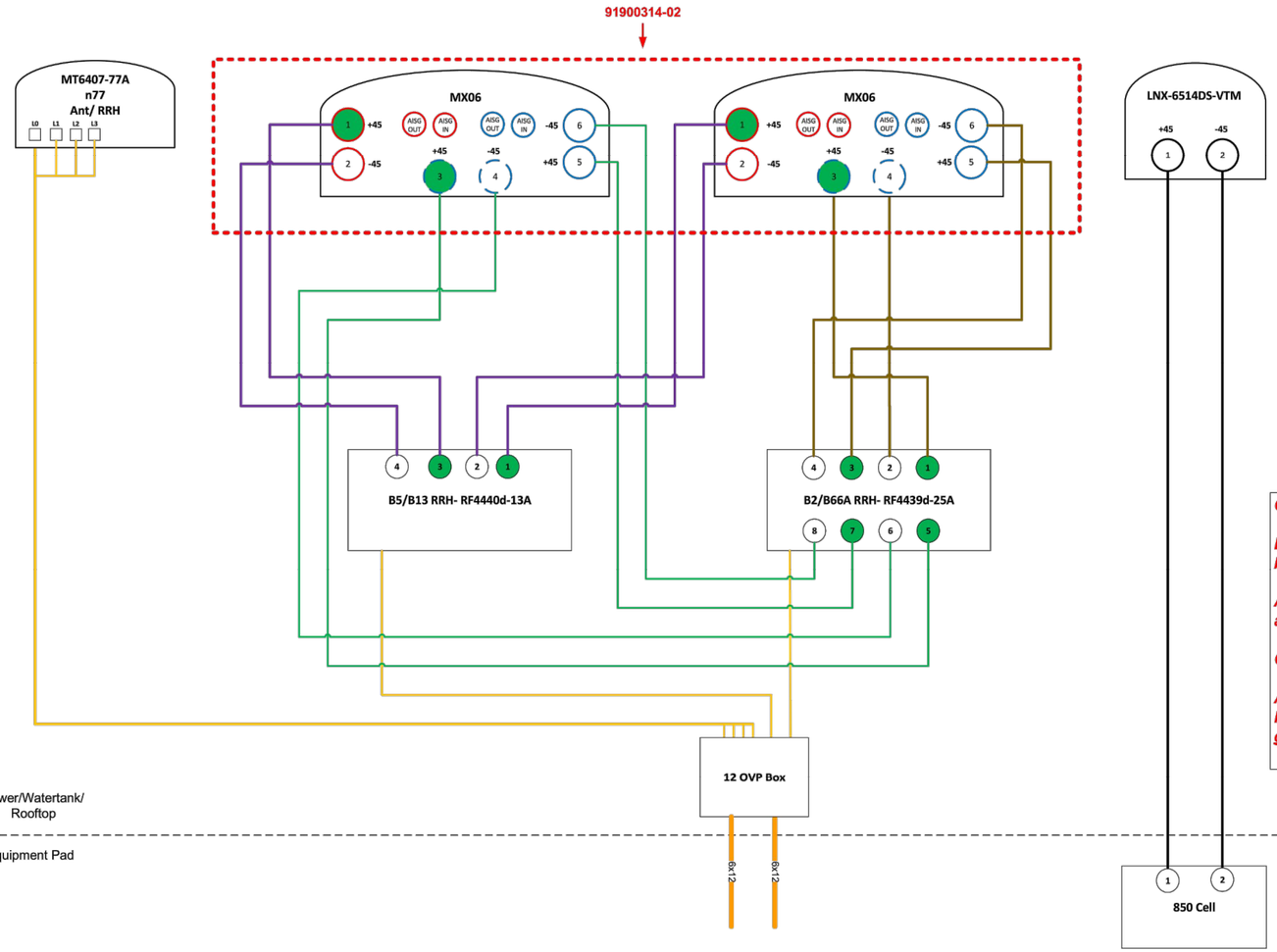
GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0



- Port 1 & 2 are for low band (698-896 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Smart Bias Tee (SBT) is through port 1 & 3 for low band and port 1 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.

RET DC signal pass for RET
(Port that will control RET)



DC signal capable Port

AISG Cable

RET DC signal pass for RET
(Port that will control RET)

Hybriflex cables

Comments:

Diagram shows antenna port configuration as viewed from below antennas.

Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)

1 ANTENNA CONFIGURATION

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	-

MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

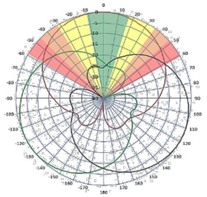
2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs

Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



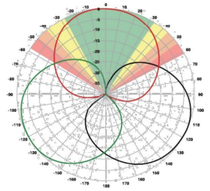
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna

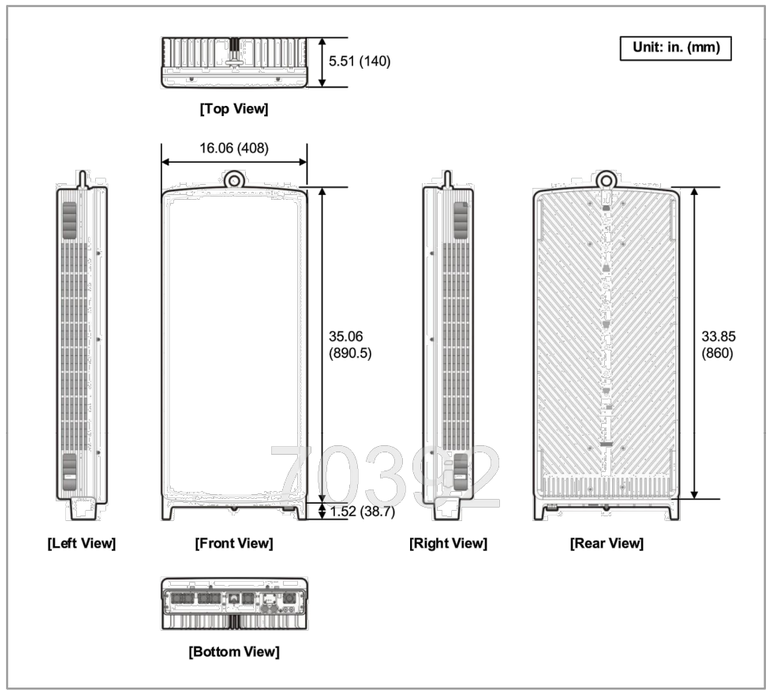


Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

[1] Typical value over frequency and tilt

The following figures depict the physical views of the MT6407-77A.

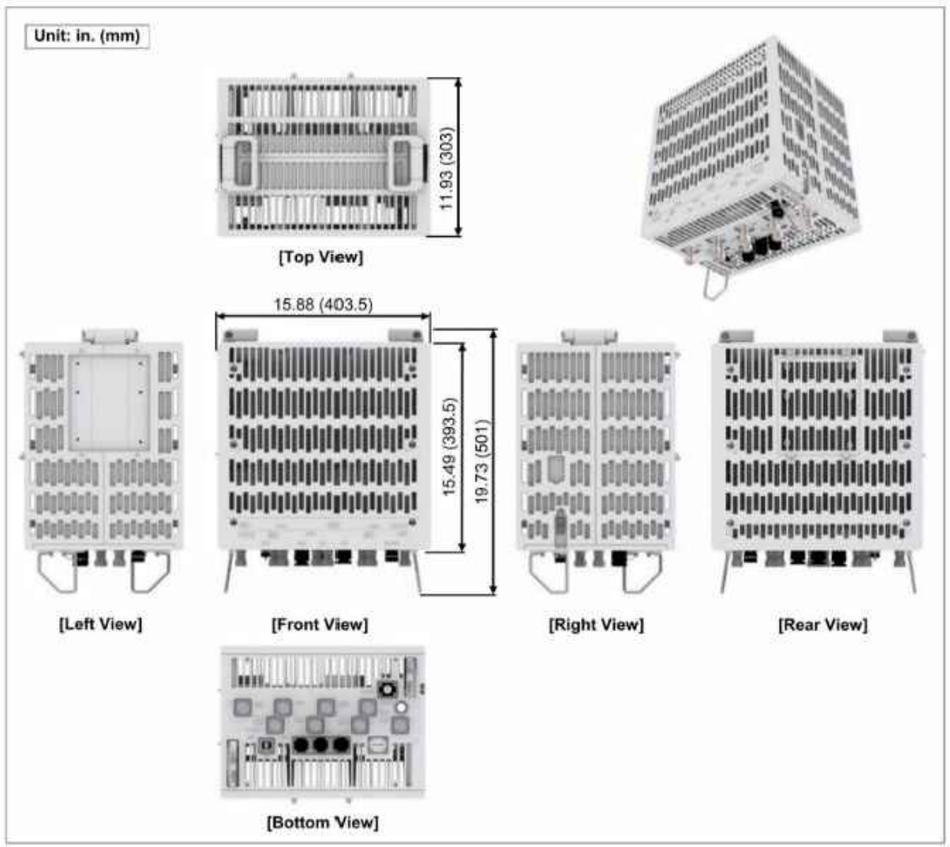
Figure 1. Appearance



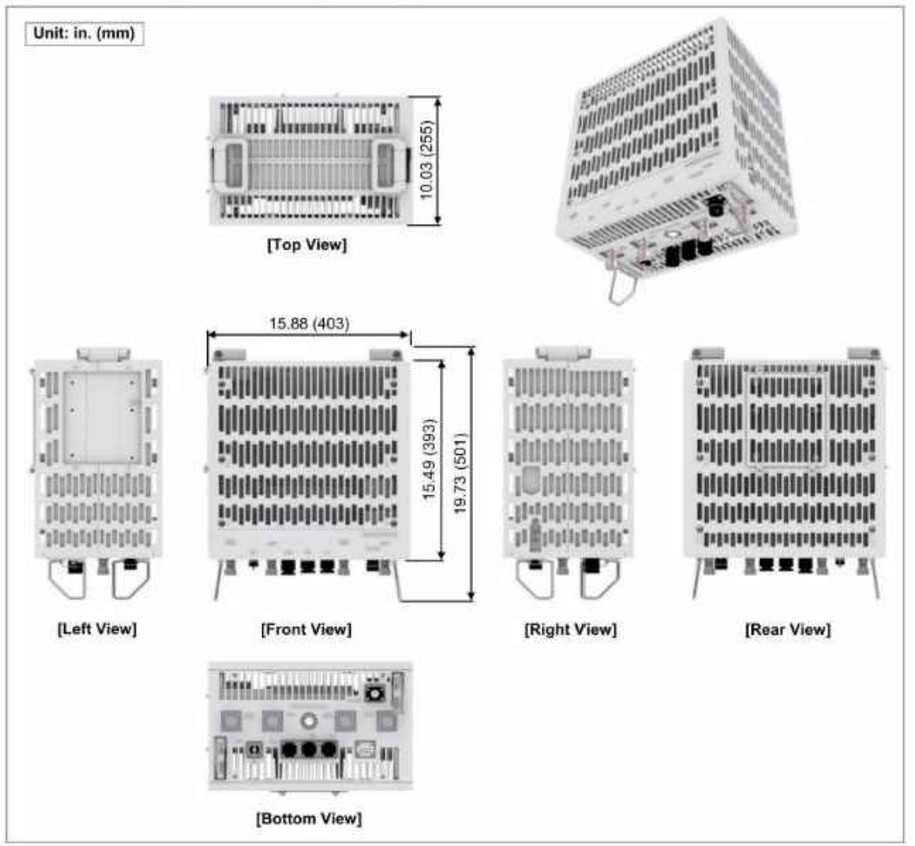
SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: -



RFV01U-D1A



RFV01U-D2A

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	-

GPD Engineering And Architecture Professional Corporation
520 South Main Street, Suite 2531
Akron, OH 44311
(317) 295-3174

Maser Consulting Contact:
Peter.albano@colliersengineering.com
(856) 371-9457

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10091168
GPD Project #: 2021740.467324.02
Maser Consulting Project #: 21777856

August 10, 2021

Site Information

Site ID:	*467324-VZW / SOUTHBURY W CT*
Site Name:	*SOUTHBURY W CT*
Carrier Name:	*Verizon Wireless*
Address:	*133 Horse Fence Hill Road* *Southbury, Connecticut 06488, New Haven County*
Latitude:	*41.460096°*
Longitude:	*-73.245390°*

Structure Information

Tower Type:	*150-Ft Monopole*
Mount Type:	*12.50-Ft T-Arm*

FUZE ID # 16053187

Analysis Results

T-Arm: **69.8% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared by: Eric Nieto

Respectfully Submitted by:

Christopher J. Scheks, P.E.
Connecticut #: 30026

8/10/2021

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
109.50	111.00	6	JMA Wireless	MX06FRO660-03	Added
		3	Samsung	MT6407-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Andrew	LNX-6514DS-VTM	Retained

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to GPD and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to GPD to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by TES, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. GPD is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

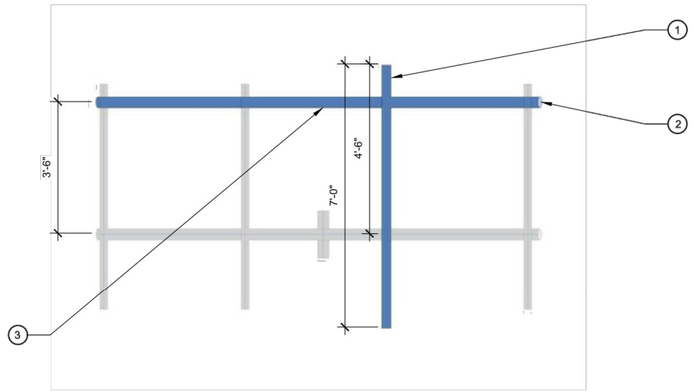
1 MOUNT ANALYSIS

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

SUPPLEMENTAL

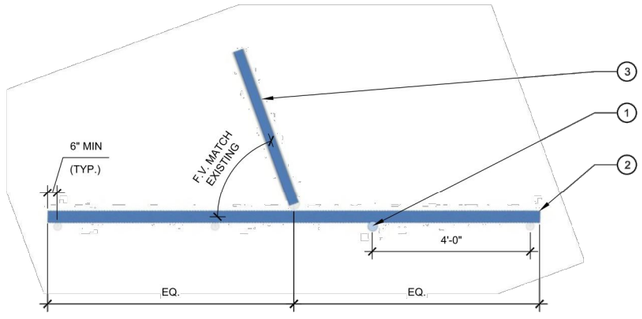
SHEET NUMBER: R-604

REVISION: -



1 S-03 ELEVATION VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.



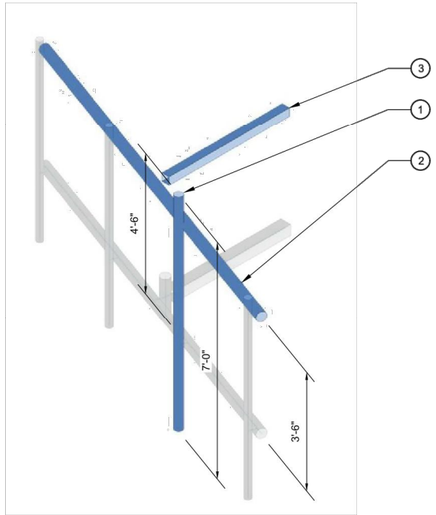
2 S-03 PLAN VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	109'-6"±	3	REPLACEMENT MOUNT PIPE (P2.5 STD)	REPLACE EXISTING POSITION 2 MOUNT PIPE WITH LARGER DIAMETER MOUNT PIPE. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL USING NEW CROSSOVER PLATE ASSEMBLIES (VERIZON P/N: VZWSMART-MSK2).
2		3	PROPOSED FACE HORIZONTAL (P3 STD)	INSTALL A NEW FACE HORIZONTAL CONNECTED TO MOUNT PIPES (F.V. REQUIRED LENGTH BEFORE ORDERING). CONNECT NEW FACE HORIZONTAL TO MOUNT PIPES USING NEW CROSSOVER PLATE ASSEMBLIES (VERIZON P/N: VZWSMART-MSK2).
3		3	PROPOSED T-ARM REINFORCEMENT KIT (PART #: VZWSMART-SFK4)	INSTALL A NEW T-ARM REINFORCEMENT KIT (VERIZON P/N: VZWSMART-SFK4) CONNECTED TO TOWER SHAFT AND NEW FACE HORIZONTAL. FIELD TRIM REINFORCEMENT TUBES TO REQUIRED LENGTH AND DRILL NEW STANDARD SIZE HOLES FOR CONNECTION BOLTS. CONNECT NEW T-ARM REINFORCEMENT KIT TO TOWER SHAFT USING NEW COLLAR MOUNT ASSEMBLY (VERIZON P/N: VZWSMART-PLK7).

NOTES:
1. ANY SUBSTITUTION OF PARTS SPECIFIED IN THIS DESIGN PACKAGE SHALL REQUIRE ENGINEER APPROVAL PRIOR TO FABRICATION.
2. ALL MATERIAL REMOVED FROM MOUNT SHALL BE DISPOSED OF BY CONTRACTOR OFF SITE.
3. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.



3 S-03 ISOMETRIC VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT.

1 MOUNT MODIFICATION

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GPD Engineering and Architecture Professional Corporation
500 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
verizon
SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SMART TOOL PROJECT #: 10091168

REV	DATE	DESCRIPTION
0	8/10/21	INITIAL RELEASE

SOUTHBURY W CT
133 HORSE FENCE HILL ROAD
SOUTHBURY, CT 06488

MODIFICATION SCHEDULE & DETAILS

ISSUED FOR:	
PERMIT	8/10/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467324.02

S-03

SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION: -