



July 18, 2022

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

Re: Exempt Modification Application – AT&T Site 13755484
AT&T Mobility Telecommunications Facility @ 20 Oxford Drive, Shelton, CT 06484
AKA 14 Oxford Drive – Booth Hill Road

Dear Ms. Bachman,

AT&T is proposing a wireless telecommunications facility on an existing tower at the above referenced address. Enclosed please find Check Number 034929 in the amount of Six Hundred and Twenty Five Dollars (\$625.00); an original and two (2) copies of the following documents: the CSC Exempt Mod letter; a Letter of Authorization from tower owner; the Property Card and GIS data of the property; a set of Construction Drawings; a Structural Analysis Report; an Antenna Mount Analysis Report; an EME Study Report; and three (3) Notice Confirmations.

I will email a .pdf copy of these documents to the Council.

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

Respectfully Submitted,

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



July 7, 2022

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

Re: Exempt Modification Application – AT&T Site 13755484
AT&T Mobility Telecommunications Facility @ 20 Oxford Drive, Shelton, CT 06484
AKA 14 Oxford Drive – Booth Hill Road

Dear Ms. Bachman,

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

- Remove nine (9) antennas, three (3) RRHs, two (2) squids, six (6) TTAs, one (1) conduit, one (1) control cable and three (3) coax cables;
- Install twelve (12) antennas, six (6) RRHs, three (3) squids, three (3) filters, two (2) conduits, seven (7) control cables, and one (1) fiber cable.
- Ground work includes removal of six (6) diplexers, and one (1) 3160 outdoor BBU; and installing a Y cable, and IDLe cable, a baseband 6648 and a baseband 6630.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2), and as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of AT&T's intent to modify a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: American Tower Corporation as Tower Operator/Owner; American Tower Corp., as Property Owner; the Honorable Mark A. Lauretti, the Mayor of Shelton, and Alexander Rosetti, Shelton Planning & Zoning Administrator.

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

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

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



6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis enclosed herewith.

For the foregoing reasons, AT&T respectfully requests that the Council approve this Exempt Modification request for this tower located at 20 Oxford Drive, Shelton, CT 06484. If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over the typed name.

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

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

cc: American Tower Corporation - Tower Operator/Owner
American Tower Corporation - Property Owner
The Honorable Mark A. Lauretti - Mayor of Shelton,
Alexander Rosetti - Shelton Planning & Zoning Administrator



AMERICAN TOWER®
CORPORATION
LETTER OF AUTHORIZATION

CENTERLINE COMMUNICATIONS LLC/ AT&T MOBILITY

I, Margaret Robinson, Vice President, US Tower Legal Division on behalf of American Tower*, owner/operator of the tower facility located at the address identified below (the "Tower Facilities"), do hereby authorize AT&T MOBILITY, CENTERLINE COMMUNICATIONS LLC, its successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit AT&T MOBILITY, CENTERLINE COMMUNICATIONS LLC to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installation of telecommunications equipment without the prior written approval of American Tower.

*American Tower includes all affiliates and subsidiaries of American Tower Corporation.


ATC Asset #	Site Name	Project Number	Site Address
283420	STONEBROOK RD CT	13682835	23 Stonybrook Road, Stratford, Connecticut
243036	WEST HAVEN & RT 162 CT	13682841	668 Jones Hill Road, West Haven, Connecticut
302479	Rkhl - Rocky Hill	13683394	699 West Street, Rocky Hill, Connecticut
302537	Middletown CT 3	13747862	47 Inwood Road, Rocky Hill, Connecticut
302535	Milford CT 2	13748383	185 Research Drive, Milford, Connecticut
302473	E H F R - Prestige Park	13748397	310 Prestige Park Road, East Hartford, Connecticut
302505	Wshn - West Haven	13748405	204 Burwell Street, West Haven, Connecticut
302489	Enfd - Enfield	13753208	77 Town Farm Road, Enfield, Connecticut
302524	Beacon Falls	13753210	664 Rimmon Hill Road, Seymour, Connecticut
310968	WSPT-WESTPORT REBUILD CT	13753216	180A Bayberry Lane, Westport, Connecticut
302526	Naugatuck (telephone Pole)	13753218	585 South Main St. (soc. Club), Naugatuck, Connecticut
310972	WATERFORD REBUILD CT	13753547	15 Miner Lane, Waterford, Connecticut
302538	Parsonage Hill Aka Wallin	13753549	922 Northrop Road, Wallingford, Connecticut
370624	Mankes Silo	13754283	1338 Highland Ave, Cheshire, Connecticut



AMERICAN TOWER®
CORPORATION

88017	SHELTON-TRUMBULL	13755484	14 OXFORD DRIVE/BOOTH HILL RD, Shelton, Connecticut
414240	Byram Park CT	13755490	48 RITCH AVENUE WEST, Greenwich, Connecticut
283423	NAUGATUCK CT	13755758	880 Andrew Mountain Road, Naugatuck, Connecticut
302480	Woodbridge CT 1	13756843	77 Pease Road, Woodbridge, Connecticut
411183	WATERFORD CT	13756866	53 Dayton Rd. Waterford, Connecticut
302540	Madison CT 6	13757740	8 Old 79, Madison, Connecticut
411259	CT Collinsville CAC 802816 CT	13757764	650 Albany Turnpike, Collinsville, Connecticut
411256	CANTON CT	13757774	14 CANTON SPRINGS ROAD, Canton, Connecticut
302493	Nrwc - Norwich	13757776	225 Rogers Road, Norwich, Connecticut
302476	Wtbr - Waterbury	13757794	352 Garden Circle, Waterbury, Connecticut
302475	Sttn - Southington	13757796	80 Shuttle Meadow Road, Southington, Connecticut
302494	Hddm - Haddam	13757798	139 Morris Hubbard Rd, Higganum, Connecticut
283419	PINE ORCHARD BRANFORD CT	13757800	123 Pine Orchard Road, Branford, Connecticut
302482	North Havent CT 1	13757802	15 Dewight Street, North Haven, Connecticut
302485	Mdfd - Middlefield	13757806	134 Kikapoo Road, Middlefield, Connecticut
302500	Brst - Bristol	13757810	790 Willis Street, Bristol, Connecticut
302467	Bilkays Express	13757812	90 North Plains Industrial Rd. Wallingford, Connecticut
302536	Cherry Hill-branford	13759895	4 Beaver Road, Brandford, Connecticut
302482	North Havent CT 1	14050356	15 Dewight Street, North Haven, Connecticut
311305	GLFD-GUILFORD REBUILD CT	14050358	10 Tanner Marsh Road, Guilford, Connecticut
411261	CROMWELLSW CT	14089799	99 Christian Hill Road, Cromwell, Connecticut
302481	Hrfr - South	14090117	289 Mountain Street, Hartford, Connecticut

Signature: _____


Margaret Robinson, Vice President
US Tower Legal Division

See attached Notary Block



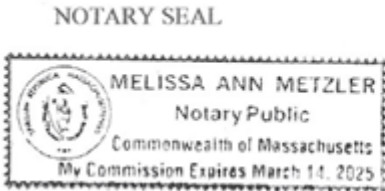
**LETTER OF AUTHORIZATION
CENTERLINE COMMUNICATIONS LLC/ AT&T MOBILITY**

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal of American Tower (Tower Facility owner), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 30th day of June, 2022.



Notary Public 
My Commission Expires: March 14, 2025



**CITY OF
SHELTON
CONNECTICUT**
GIS & Real Property
Information

City Offices
254 Hill Street
Shelton, CT 06484

Property Search

Name: ex. Smith

House No:

Street:

Example: 117B 73 (Map Lot)



Information Updates

GIS Parcels Provided
Oct 2020

Ownership & Sales Updated
Oct 2021

Current Parcel Count
13,296 +/-

Detailed Parcel Information

Parcel ID
33 13

Owner
AMERICAN TOWERS INC

Dev Map

Dev Lot

Location
20 OXFORD DR

MAILING ADDRESS
P O BOX 723597
ATLANTA GA 31139



[Quick Map](#) [Assessor Map](#) [Property Card](#) [FEMA Panel](#) [eQuality](#) [Zoom to GIS](#)

Scroll Down For Complete Property Detail

PARCEL VALUATIONS

	Appraised Value	Assessed Value
Buildings	132000	92400
Land	90200	63140
Other	00000	00000

REPORT AN ISSUE

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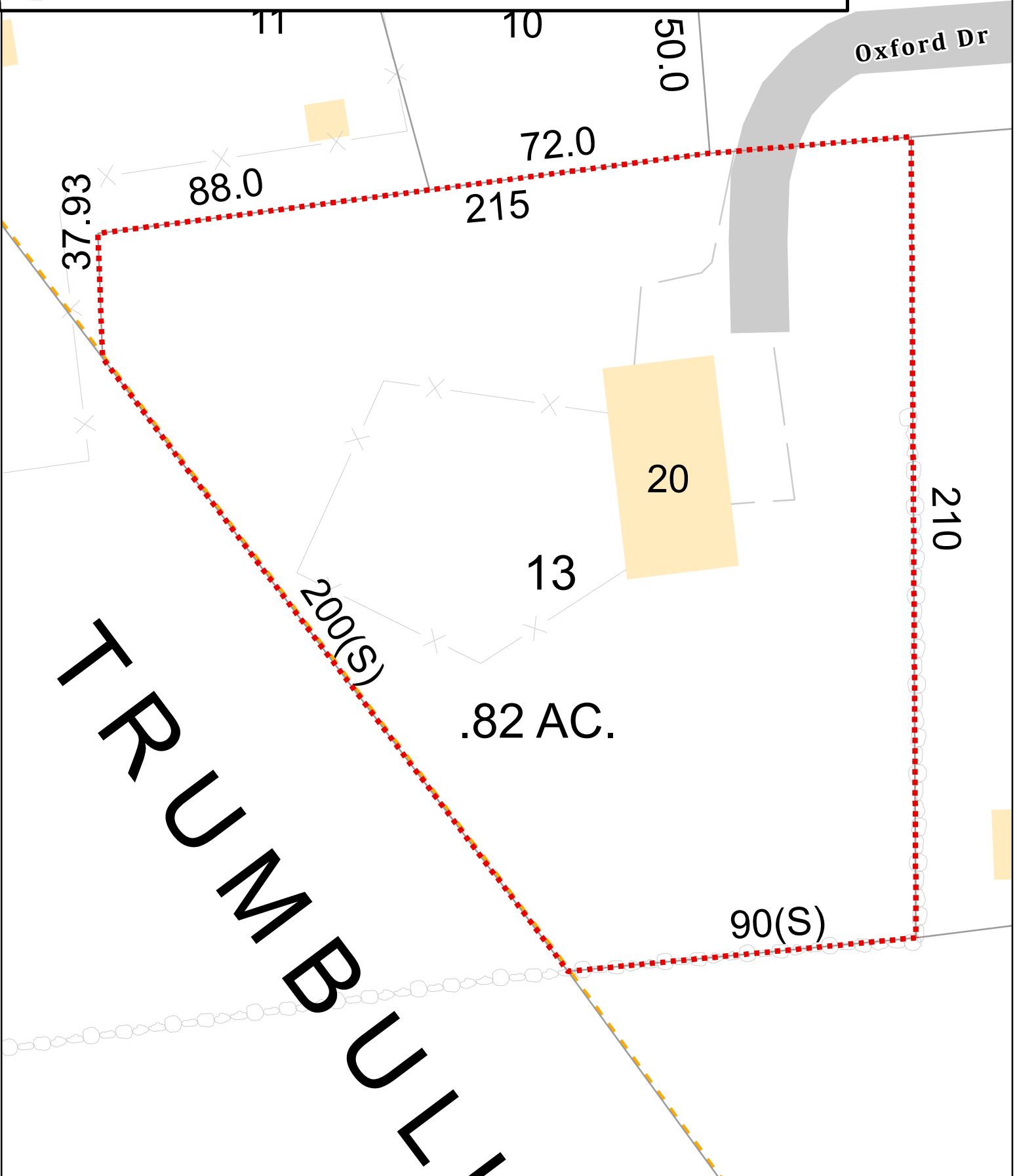
Designed and hosted by **New England GeoSystems**



City of Shelton, Connecticut - Parcel Map

Parcels: 33 13

Address: 20 OXFORD DR



Approximate Scale: 1:390

50 0 Feet

Map Produced
October 2021

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The City of Shelton and its mapping contractors assume no legal responsibility for the information contained herein.



Radio Frequency Exposure Analysis Report

June 21, 2022

American Tower on behalf of AT&T
Centerline Communications Project Number: 950035-004

AT&T Site Name: SHELTON-TRUMBULL
Site Number: CTL05542
FA#: 10071232
USID: 26165

Site Address: 20 Oxford Drive, Shelton, CT 06484

Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	13.88793 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	1.3889%



June 21, 2022

Centerline
Attn: Jennifer Iliades, Project Manager
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **SHELTON-TRUMBULL**

Centerline Communications, LLC (“Centerline”) was contracted to analyze the proposed AT&T facility at 20 Oxford Drive, Shelton, **CT 06484** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

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

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

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

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



Calculation Methodology

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

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



Data & Results

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

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

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



Maximum Calculated Cumulative Power Density (Location: approximately 300' southeast of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
AT&T A 1	CCI TPA65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00000	466.67	0.00000
AT&T A 1	CCI TPA65R-BU6D	1900	15.05	144.00	4.00	30.00	3838.67	0.00000	1000.00	0.00000
AT&T A 1	CCI TPA65R-BU6D	2100	15.95	144.00	4.00	30.00	4722.60	0.00000	1000.00	0.00000
AT&T A 2	Ericsson SON_AIR6419	3450	23.45	145.75	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T A 3	Ericsson SON_AIR6449	3700	23.45	142.25	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T A 4	CCI DMP65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00000	466.67	0.00000
AT&T A 4	CCI DMP65R-BU6D	850	11.45	144.00	4.00	30.00	1675.64	0.00000	566.67	0.00000
AT&T A 4	CCI DMP65R-BU6D	2300	14.95	144.00	4.00	18.00	2250.78	0.00000	1000.00	0.00000
AT&T B 5	CCI TPA65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00015	466.67	0.00003
AT&T B 5	CCI TPA65R-BU6D	1900	15.05	144.00	4.00	30.00	3838.67	0.00019	1000.00	0.00002
AT&T B 5	CCI TPA65R-BU6D	2100	15.95	144.00	4.00	30.00	4722.60	0.00020	1000.00	0.00002
AT&T B 6	Ericsson SON_AIR6419	3450	23.45	145.75	1.00	108.40	23989.95	0.00091	1000.00	0.00009
AT&T B 7	Ericsson SON_AIR6449	3700	23.45	142.25	1.00	108.40	23989.95	0.00119	1000.00	0.00012
AT&T B 8	CCI DMP65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00017	466.67	0.00004
AT&T B 8	CCI DMP65R-BU6D	850	11.45	144.00	4.00	30.00	1675.64	0.00014	566.67	0.00003
AT&T B 8	CCI DMP65R-BU6D	2300	14.95	144.00	4.00	18.00	2250.78	0.00011	1000.00	0.00001
AT&T C 9	CCI TPA65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00000	466.67	0.00000
AT&T C 9	CCI TPA65R-BU6D	1900	15.05	144.00	4.00	30.00	3838.67	0.00000	1000.00	0.00000
AT&T C 9	CCI TPA65R-BU6D	2100	15.95	144.00	4.00	30.00	4722.60	0.00000	1000.00	0.00000
AT&T C 10	Ericsson SON_AIR6419	3450	23.45	145.75	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T C 11	Ericsson SON_AIR6449	3700	23.45	142.25	1.00	108.40	23989.95	0.00001	1000.00	0.00000
AT&T C 12	CCI DMP65R-BU6D	700	11.75	144.00	4.00	30.00	1795.48	0.00000	466.67	0.00000
AT&T C 12	CCI DMP65R-BU6D	850	11.45	144.00	4.00	30.00	1675.64	0.00000	566.67	0.00000
AT&T C 12	CCI DMP65R-BU6D	2300	14.95	144.00	4.00	18.00	2250.78	0.00000	1000.00	0.00000
T-Mobile A 13	GENERIC PANEL 6FT	1900	15.84	155.00	2.00	60.00	4604.49	0.00000	1000.00	0.00000
T-Mobile A 14	GENERIC PANEL 6FT	600	0.00	155.00	2.00	60.00	120.00	0.00000	400.00	0.00000
T-Mobile A 15	GENERIC PANEL 6FT	700	12.33	155.00	2.00	60.00	2052.02	0.00000	466.67	0.00000
T-Mobile A 16	GENERIC PANEL 6FT	2100	16.39	155.00	2.00	60.00	5226.14	0.00000	1000.00	0.00000
T-Mobile B 17	GENERIC PANEL 6FT	1900	15.84	155.00	2.00	60.00	4604.49	0.00012	1000.00	0.00001
T-Mobile B 18	GENERIC PANEL 6FT	600	0.00	155.00	2.00	60.00	120.00	0.00012	400.00	0.00003
T-Mobile B 19	GENERIC PANEL 6FT	700	12.33	155.00	2.00	60.00	2052.02	0.00012	466.67	0.00003
T-Mobile B 20	GENERIC PANEL 6FT	2100	16.39	155.00	2.00	60.00	5226.14	0.00013	1000.00	0.00001
T-Mobile C 21	GENERIC PANEL 6FT	1900	15.84	155.00	2.00	60.00	4604.49	0.00000	1000.00	0.00000



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
T-Mobile C 22	GENERIC PANEL 6FT	600	0.00	155.00	2.00	60.00	120.00	0.00000	400.00	0.00000
T-Mobile C 23	GENERIC PANEL 6FT	700	12.33	155.00	2.00	60.00	2052.02	0.00000	466.67	0.00000
T-Mobile C 24	GENERIC PANEL 6FT	2100	16.39	155.00	2.00	60.00	5226.14	0.00000	1000.00	0.00000
Unknown A 25	GENERIC PANEL 6FT	700	12.33	162.00	4.00	40.00	2736.02	0.00000	466.67	0.00000
Unknown A 26	GENERIC PANEL 6FT	850	12.62	162.00	4.00	40.00	2924.96	0.00000	566.67	0.00000
Unknown A 27	GENERIC PANEL 6FT	1900	15.84	162.00	4.00	40.00	6139.32	0.00000	1000.00	0.00000
Unknown A 28	GENERIC PANEL 6FT	2100	16.39	162.00	4.00	40.00	6968.19	0.00000	1000.00	0.00000
Unknown B 29	GENERIC PANEL 6FT	700	12.33	162.00	4.00	40.00	2736.02	0.00014	466.67	0.00003
Unknown B 30	GENERIC PANEL 6FT	850	12.62	162.00	4.00	40.00	2924.96	0.00015	566.67	0.00003
Unknown B 31	GENERIC PANEL 6FT	1900	15.84	162.00	4.00	40.00	6139.32	0.00015	1000.00	0.00002
Unknown B 32	GENERIC PANEL 6FT	2100	16.39	162.00	4.00	40.00	6968.19	0.00016	1000.00	0.00002
Unknown C 33	GENERIC PANEL 6FT	700	12.33	162.00	4.00	40.00	2736.02	0.00000	466.67	0.00000
Unknown C 34	GENERIC PANEL 6FT	850	12.62	162.00	4.00	40.00	2924.96	0.00000	566.67	0.00000
Unknown C 35	GENERIC PANEL 6FT	1900	15.84	162.00	4.00	40.00	6139.32	0.00000	1000.00	0.00000
Unknown C 36	GENERIC PANEL 6FT	2100	16.39	162.00	4.00	40.00	6968.19	0.00000	1000.00	0.00000
Unknown D 37	GENERIC OMNI 9.5FT	450	5.96	195.00	1.00	25.25	99.60	0.00000	300.00	0.00000
Unknown D 38	GENERIC OMNI 9.5FT	450	5.96	185.00	1.00	25.25	99.60	0.00000	300.00	0.00000
Unknown D 39	GENERIC OMNI 5FT	850	5.96	125.70	1.00	25.25	99.60	0.00001	566.67	0.00000
Unknown D 40	GENERIC OMNI 5FT	850	5.96	95.00	1.00	25.25	99.60	0.00001	566.67	0.00000
Unknown E 41	GENERIC MICROWAVE 4FT	18000	42.95	206.00	1.00	0.10	1972.42	0.00000	1000.00	0.00000
Unknown F 42	GENERIC MICROWAVE 4FT	18000	42.95	124.00	1.00	0.10	1972.42	0.00000	1000.00	0.00000
Unknown G 43	GENERIC MICROWAVE 4FT	18000	42.95	206.00	1.00	0.10	1972.42	0.00000	1000.00	0.00000
							Cumulative Power Density:	13.88793 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	1.38890%



Summary

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

Matt Schulzinger
RF EME Technical Writer
Centerline Communications, LLC

Matt Schulzinger



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by




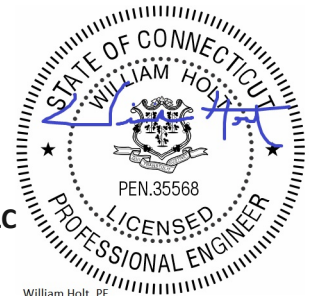
Antenna Mount Analysis Report

ATC Site Name : SHELTON-TRUMBULL
ATC Asset Number : 88017
Engineering Number : 13755484_C8_01
Mount Elevation : 144 ft
Carrier : AT&T Mobility
Carrier Site Name : MRCTB055062
Carrier Site Number : NA
Site Location : 14 Oxford Drive-Booth Hill Rd
Shelton, CT 06484-3455
41.28016389, -73.18546667
County : FAIRFIELD
Date : April 4, 2022
Max Usage : 69%
Result : Contingent Pass*
*See conclusion for requirements

Prepared By:
Prathamesh Padwal
Telamon Tower Engineering, PLLC

Reviewed By:
William Holt, P.E.
Telamon Tower Engineering, PLLC


Digitally signed by William
Holt
Date: 2022.04.04 12:18:51
-04'00'



William Holt, PE
Director of Engineering
License No. 35568 Expires: 01/31/2023

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Calculations Attached

Introduction

The proposed equipment is to be mounted to the existing Pipe Mount and Proposed Site Pro 1 VFA14-WLL-30120. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

Supporting Documents

Structural Data	Site Photos, dated March 18, 2022 Mount Mapping by Infinigy, Project #1009-Z0003-H, dated March 29, 2022 Spec Sheet by Site Pro 1 VFA14-WLL-30120, dated September 21, 2020 Spec Sheet by Site Pro 1 PUCK, dated September 01, 2010
Previous Analyses	Structural Analysis by AiroSmith Engineering, Engineering #13755484_C3_04, dated March 22, 2022
Construction Drawings	Construction Drawings by NB+C Engineering Services, L.L.C., project #13755484, Rev. A, dated March 30, 2022
Loading Data	ATC Application, Project #13755484, dated March 18, 2022 AT&T Mobility RFDS ID: 4852154, Ver. 2.00, dated October 02, 2022

Analysis

Codes	TIA-222-H
Basic Wind Speed	118 mph, V_{ult} (3-Second Gust)
Basic Wind Speed w/ Ice	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
Exposure Category	B
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Risk Category	II
Spectral Response	S_5 : 0.21; S_1 : 0.05; Site Class: D

Conclusion

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

AT&T CONMAT does not have parts which connect pipe to pipe and non-perpendicular pipe intersections. Hence proposing modifications parts which are not listed in the CONMAT list.

Alpha Sector:

- **Install (1) Site Pro 1 P296 secondary mount pipe at Position 3 at Alpha Sector. Connect to existing primary mount pipe using (1) Site Pro 1 DCP18K Pipe to Pipe clamp Set.**

Beta and Gamma Sector:

- **Install (1) Valmont VFA14-WLL-30120 (CONMAT CEQ.53332) at Beta and Gamma sectors (2 total) at 144 ft elevation.**
- **Install (2) Site Pro 1 P2150 stiff arm pipe in lieu of P2126 pipe provided in proposed sector frame kit at beta and Gamma Sector (6 total). Connect Stiff arm pipe to upper face horizontal members using (2) Site Pro 1 PUCK adjustable clamp set at beta and gamma sector in lieu of connection provided with proposed sector frame kit.**
- **Install (4) Mount pipes as shown in following sketches.**
- **Install proposed antennas such that they are vertically centered on the mounts. Install proposed RRUS and TMAs behind the antennas.**

No structural failures were addressed with the noted contingencies. Contingencies address Carrier's antenna azimuth requirements.

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

Antenna Loading

Elevation (ft)		Antennas	
Mount	Rad.	#	Name
144.0	146.0	3	Ericsson AIR 6449 B77D/ C-Band
	144.0	6	CCI DMP65R-BU6DA
		1	Raycap DC9-48-60-24-8C-EV
		3	Ericsson RRUS 32 B66
		3	Ericsson RRUS 32 B2
		3	Ericsson RRUS 32 B30
		3	Ericsson RRUS 4449 B5/B12
		3	Ericsson RRUS 4478 B14
		3	Commscope WCS-IMFQ-AMT
		6	Powerwave LGP21401
		2	Raycap DC6-48-60-18-8F
	142.0	3	Ericsson AIR 6419 B77G

Structure Usages

Alpha Sector

Structural Component	Controlling Usage	Pass/Fail
Threaded Rods	69%	Pass
Connections	47%	Pass
Mount Pipes	38%	Pass

Beta & Gamma Sector

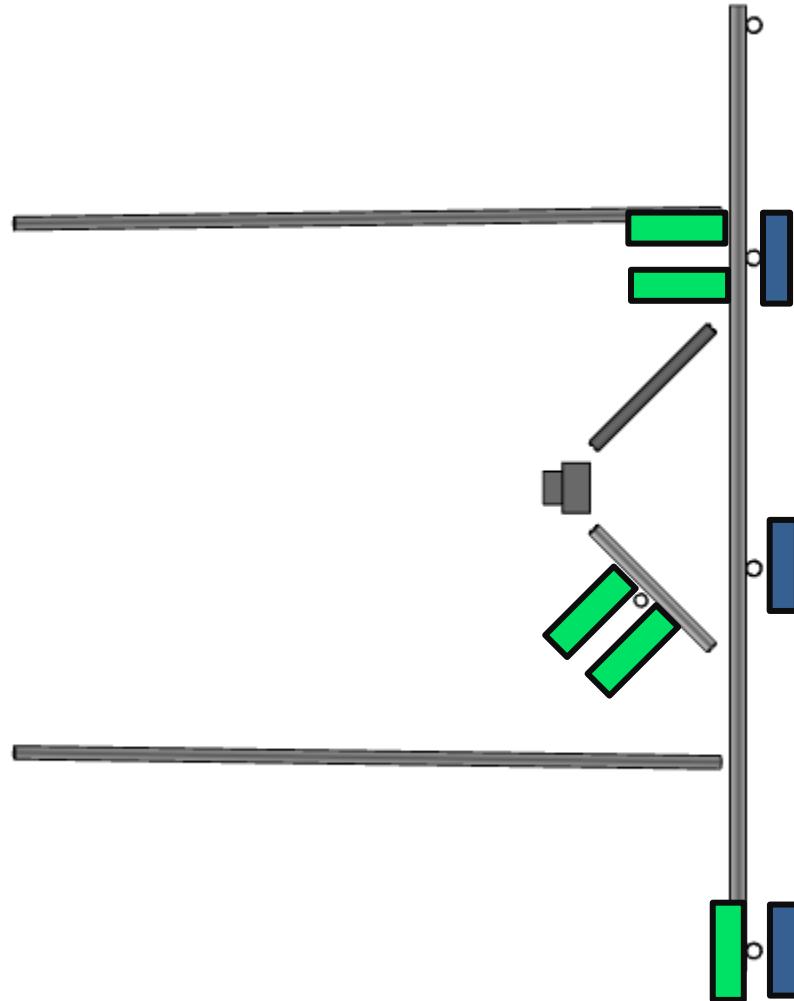
Structural Component	Controlling Usage	Pass/Fail
Bracing Members	38%	Pass
Face Horizontals	38%	Pass
Mount Pipes	36%	Pass
Connections	31%	Pass
Stand-Off Horizontals	18%	Pass
Stiff Arms	15%	Pass

Equipment Layout Plan View

Alpha Sector

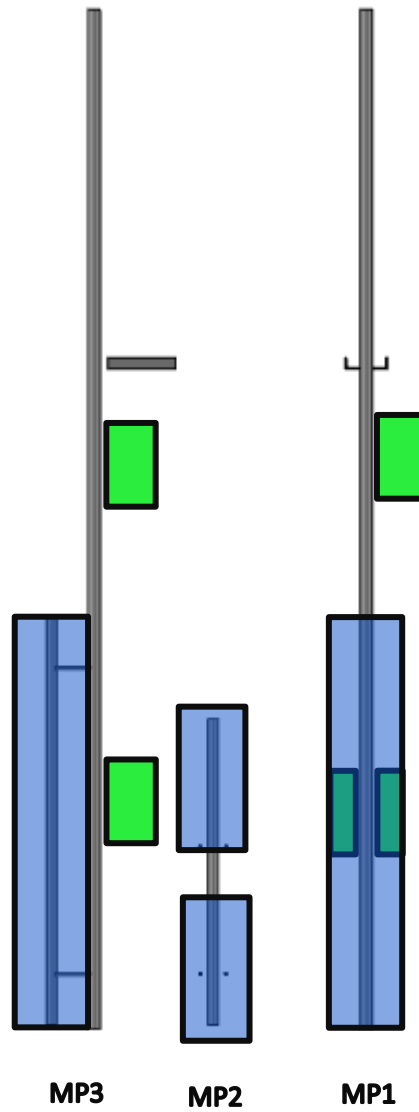


Beta & Gamma Sector

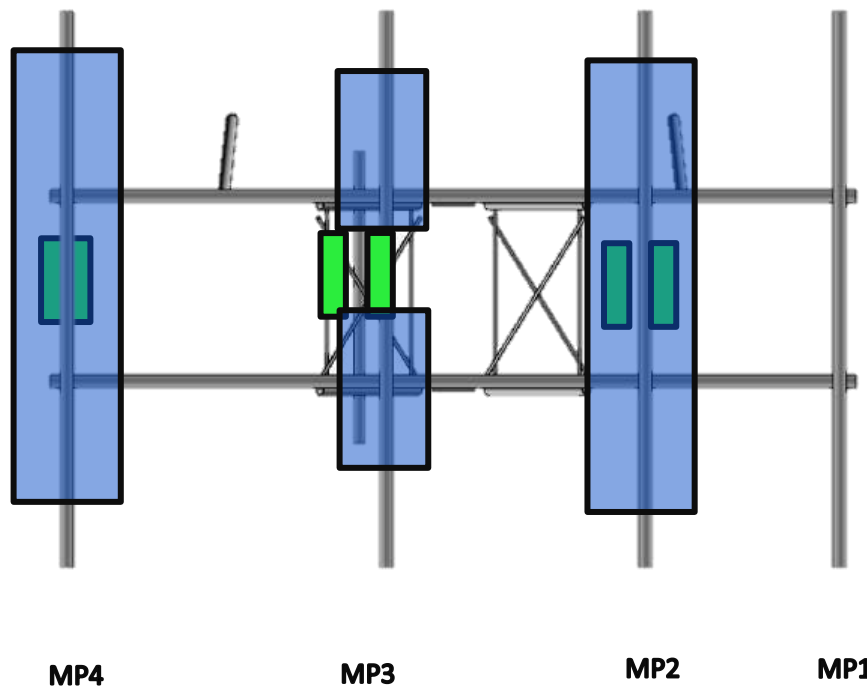


Equipment Layout Front Elevation View

Alpha Sector



Beta & Gamma Sector



Total #	Equipment	Mount Pipe Position
6	Cci Antennas DMP65R-BU6DA	P1, P3 (Alpha) P2, P4 (Beta & Gamma)
3	Ericsson AIR 6449 B77D/C-Band	P2 (Alpha) P3 (Beta & Gamma)
3	Ericsson RRUS 4478 B14	P1 (Alpha) Stand-off (Beta & Gamma)
3	Ericsson RRUS 4449 B5/B12	P3 (Alpha) Stand-off (Beta & Gamma)
6	Powerwave Technologies LGP21401	P1 (Alpha) P2 (Beta & Gamma)
3	Ericsson RRUS 32 B66	P1 (Alpha) P2 (Beta & Gamma)
3	Ericsson RRUS 32 B30	P3 (Alpha) P4 (Beta & Gamma)
3	Ericsson RRUS 32 B2	P1 (Alpha) P2 (Beta & Gamma)
3	Commscope WCS-IMFQ-AMT	P3 (Alpha) P4 (Beta & Gamma)
3	Ericsson AIR 6419 B77G	P2 (Alpha) P3 (Beta & Gamma)
1	Raycap DC9-48-60-24-8C-EV	Tower
2	Raycap DC6-48-60-18-8F	Tower

Standard Conditions

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, Telamon Tower Engineering, PLLC should be notified immediately to revise results.

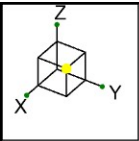
This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.
7. Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

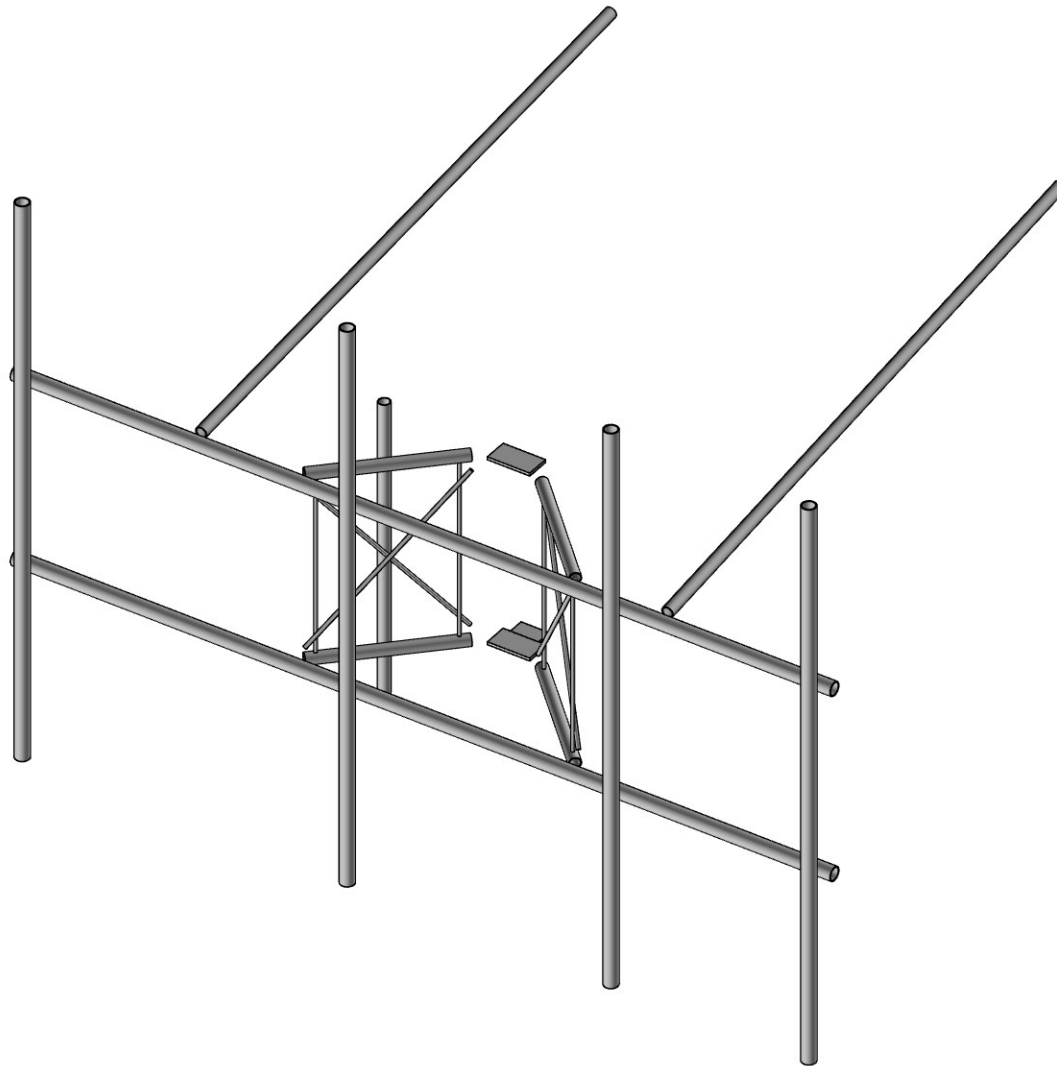
All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from Telamon Tower Engineering, PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. Telamon Tower Engineering, PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by Telamon Tower Engineering, PLLC verifies the adequacy of the primary members of the structure. Telamon Tower Engineering, PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.



Install (1) Valmont VFA14-WLL-30120 (CONMAT CEQ.53332) at Beta and Gamma sectors (2 total) at 144 ft elevation



Telamon CLS

PSP

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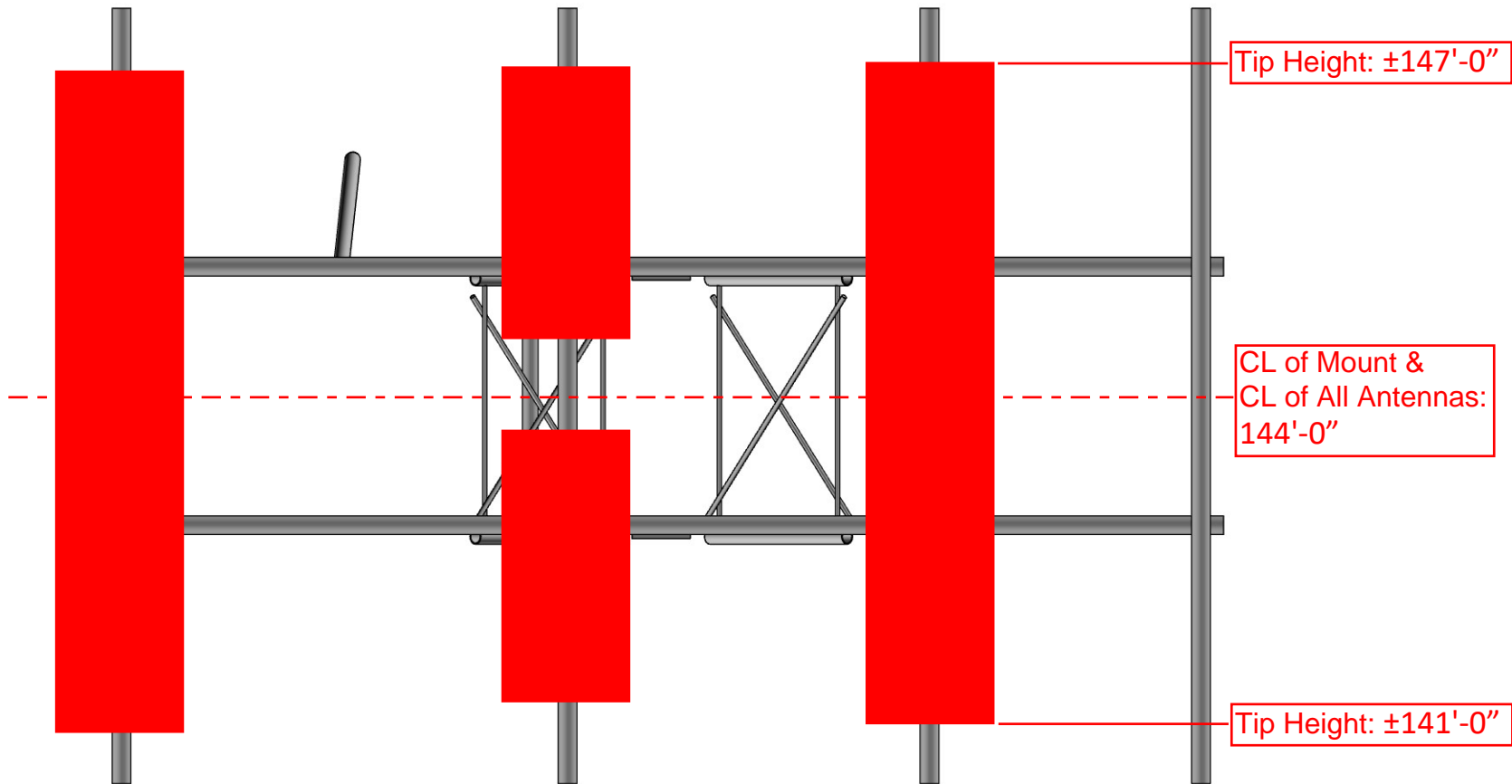
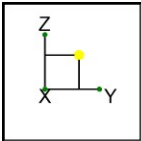
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Proposed Replacement Mount - Rendered

IN-1

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Telamon CLS

PSP

41124-13755484_C8_01-01-MA

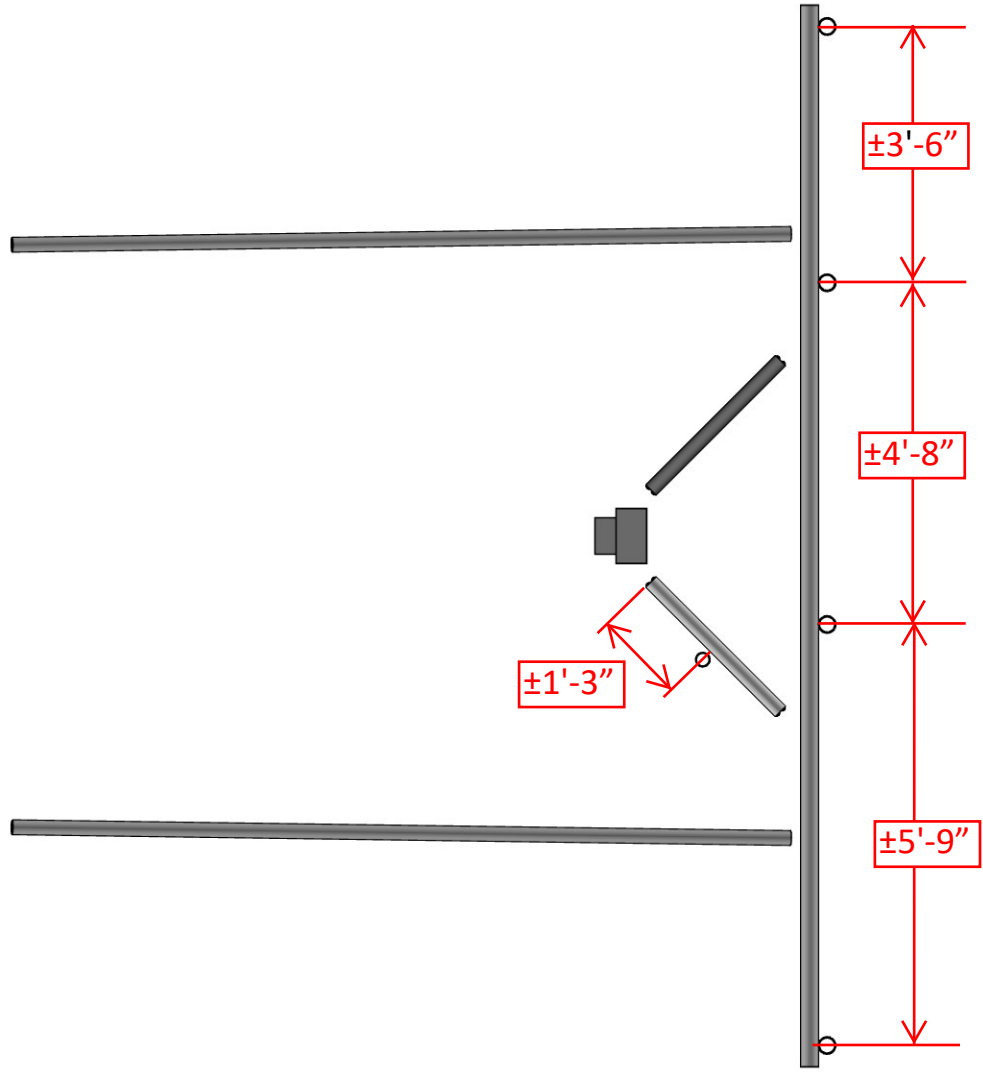
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Proposed Replacement Mount - Elevation

IN-2

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Telamon CLS

PSP

41124-13755484_C8_01-01-MA

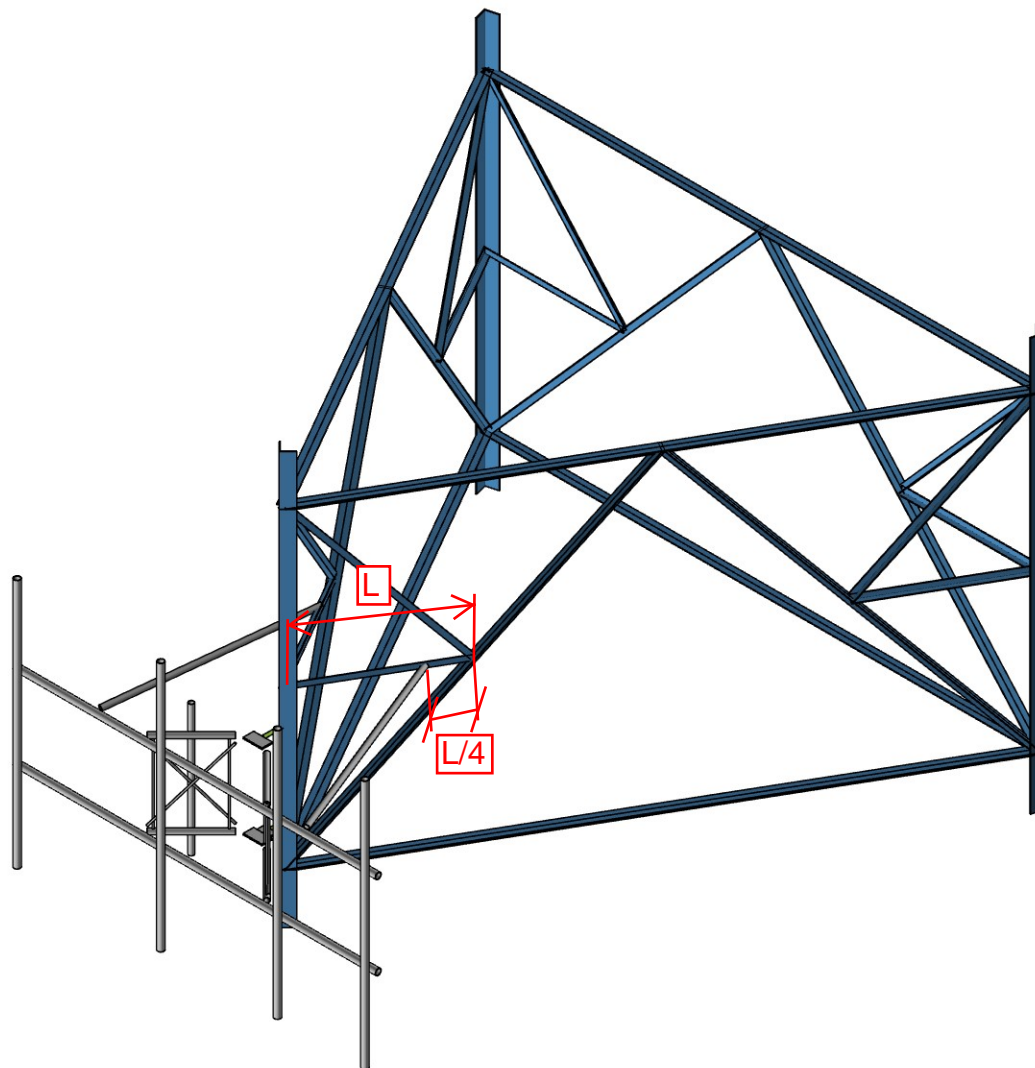
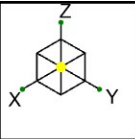
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Proposed Replacement Mount - Plan View

IN-3

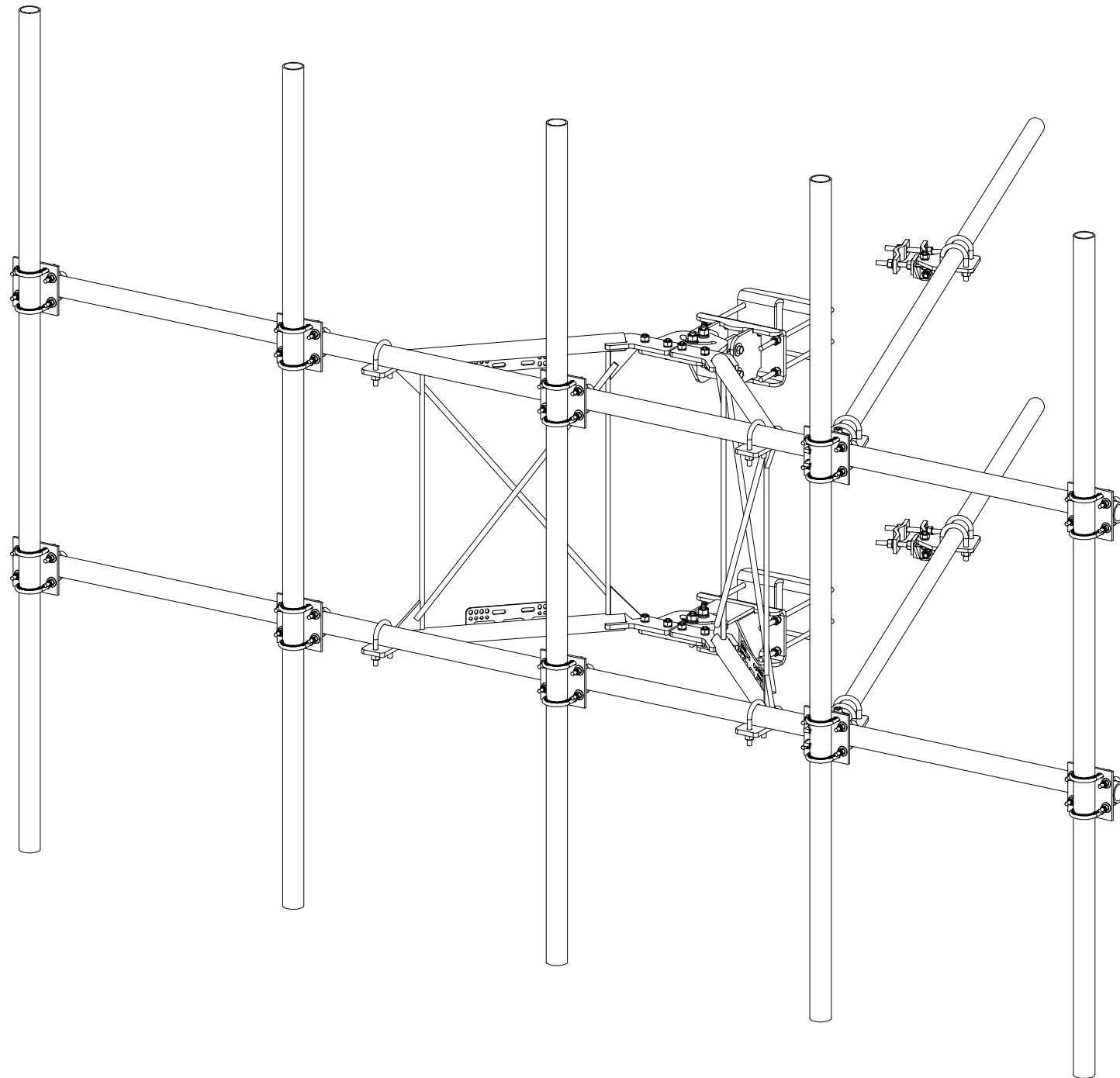
Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Note: Install stiff arm connection to tower horizontal members within given limit

Telamon CLS	41124-13755484_C8_01-SHELTON-TRUMBULL	IN-4
PSP		Apr 04, 2022
41124-13755484_C8_01-01-MA	Proposed Replacement Mount - Rendered	41124-13755484_C8_01_AT&T Mobility.r3d



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.86	33.86
3	1	X-MHTPHD	MULTI-HOLE TAPER PLATE WELDMENT		36.24	36.24
4	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
5	2	X-VFAPL4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
6	2	X-LCBP4	BENT BACKING PLATE	13 in	20.04	40.09
7	4	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.49
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.01	8.02
10	10	SCX2	CROSSOVER PLATE	7 in	4.80	47.96
11	4	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CENTER TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	81.50
14	2	SCH80-P30174	2-1/2" SCH. 80 PIPE (2.875" O.D. x 0.276" WALL) A500	174 in	118.03	236.05
15	4	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)		1.57	12.54
20	4	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
25	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.76
30	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	48	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	35.45
33	20	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" GALV. U-BOLT		0.66	13.25
34	80	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.73
35	80	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.11
36	80	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	5.73
37	5	P30120	2-7/8" x 120" (2-1/2" SCH. 40) GALVANIZED PIPE	120 in	58.07	290.33
					TOTAL WT. #	1139.79

TOLERANCE NOTES

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

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
**14' 6" HEAVY DUTY
 V-FRAME ASSEMBLY
 W/ 2 STIFF ARMS
 & MOUNT PIPES**

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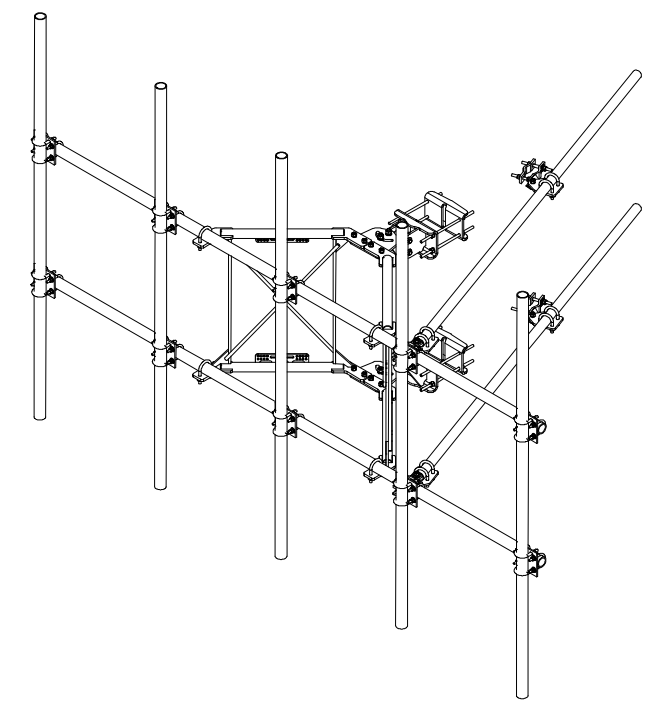
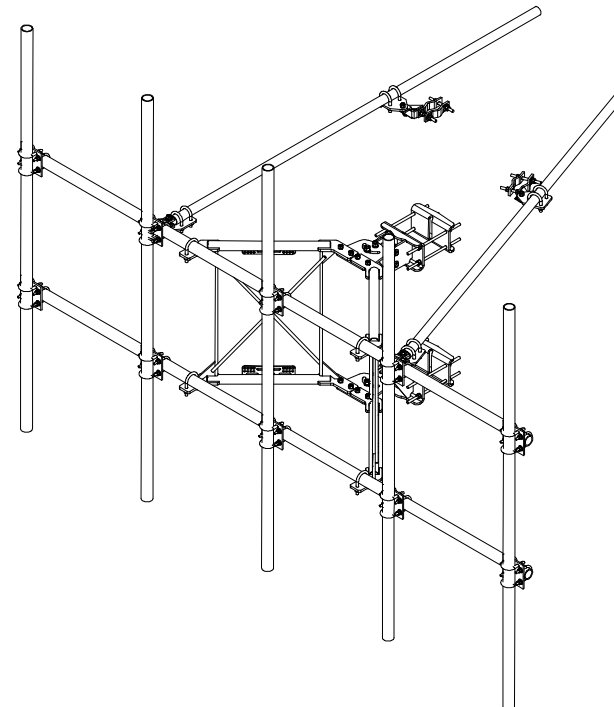
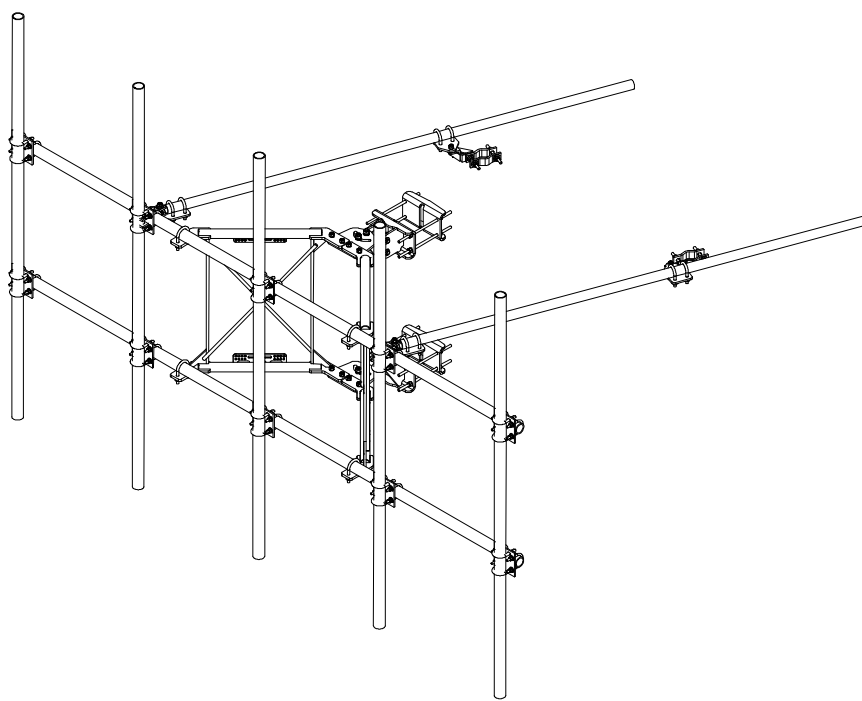
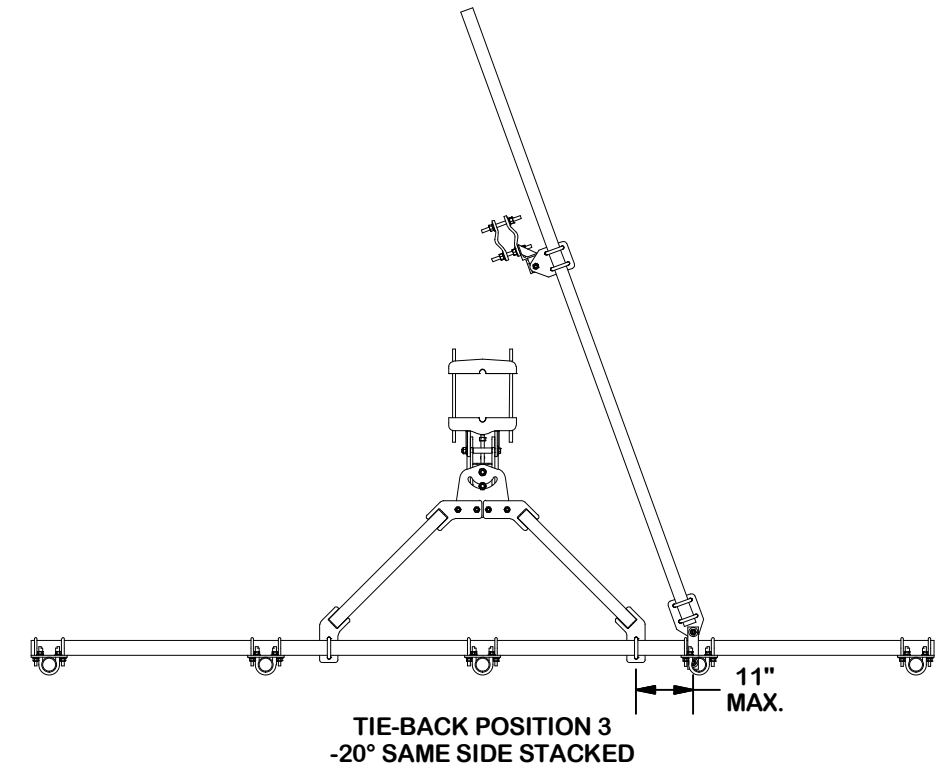
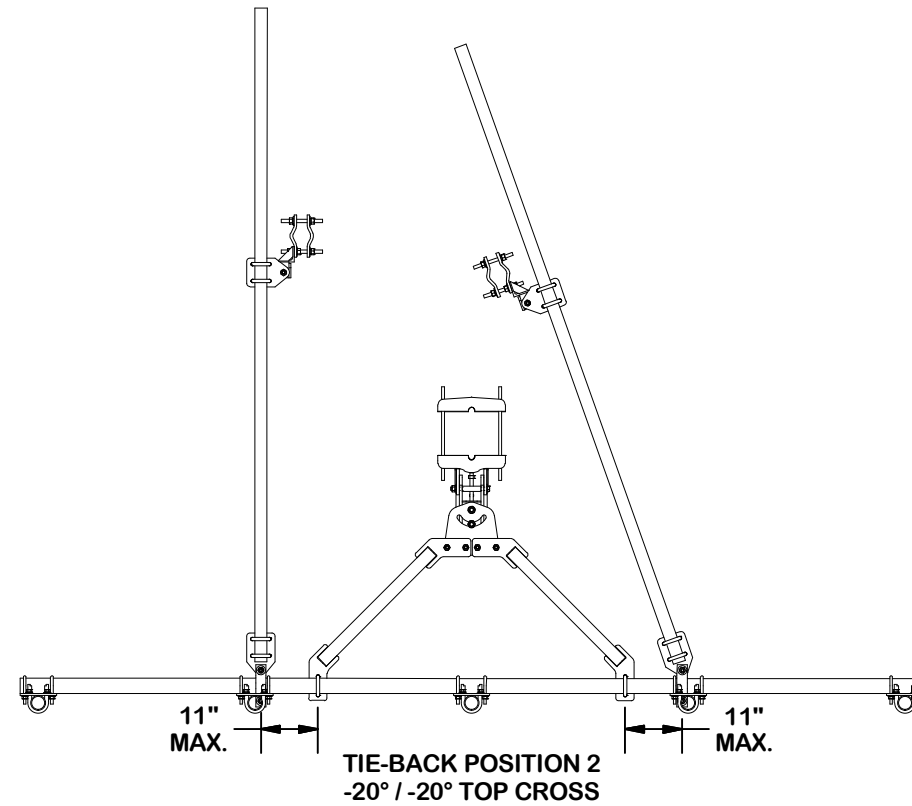
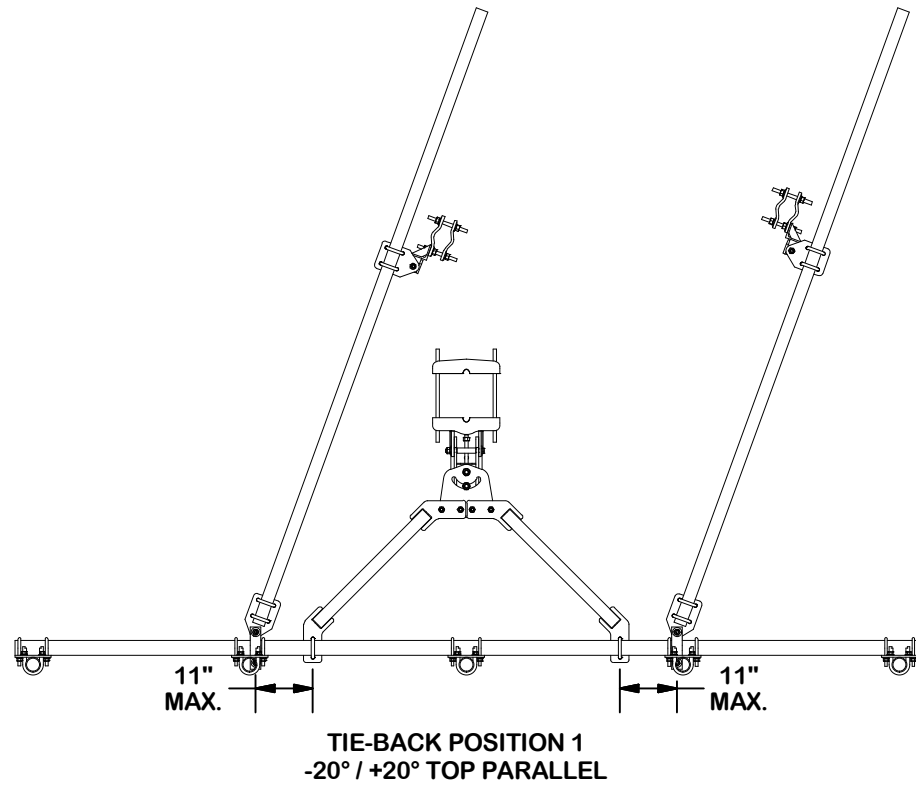
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Engineering Support Team:
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Locations:
 New York, NY
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 Los Angeles, CA
 Plymouth, IN
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 Dallas, TX

PART NO. VFA14-WLL-30120	PAGE 1 OF 5
DWG. NO. VFA14-WLL-30120	

TIE-BACK POSITIONS



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
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 DRILLED AND GAS CUT HOLES ($\pm 0.030''$) - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES ($\pm 0.010''$) - NO CONING OF HOLES
 BENDS ARE $\pm 1/2$ DEGREE
 ALL OTHER MACHINING ($\pm 0.030''$)
 ALL OTHER ASSEMBLY ($\pm 0.060''$)

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**14' 6" HEAVY DUTY
 V-FRAME ASSEMBLY
 W/ 2 STIFF ARMS
 & MOUNT PIPES**

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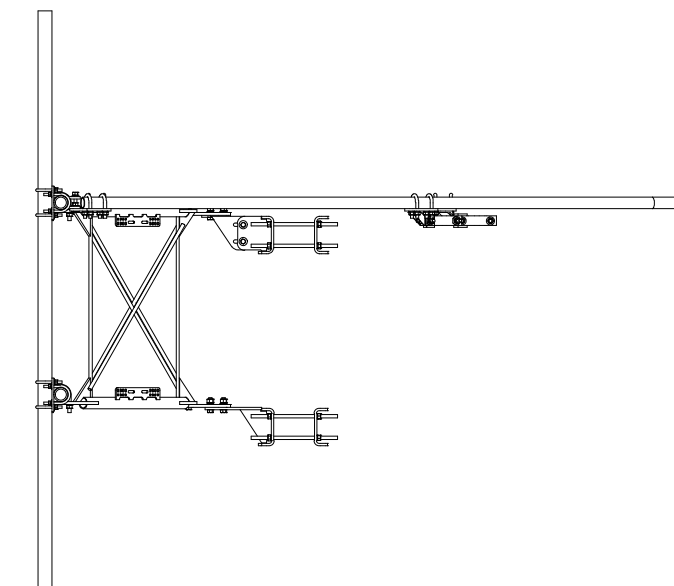
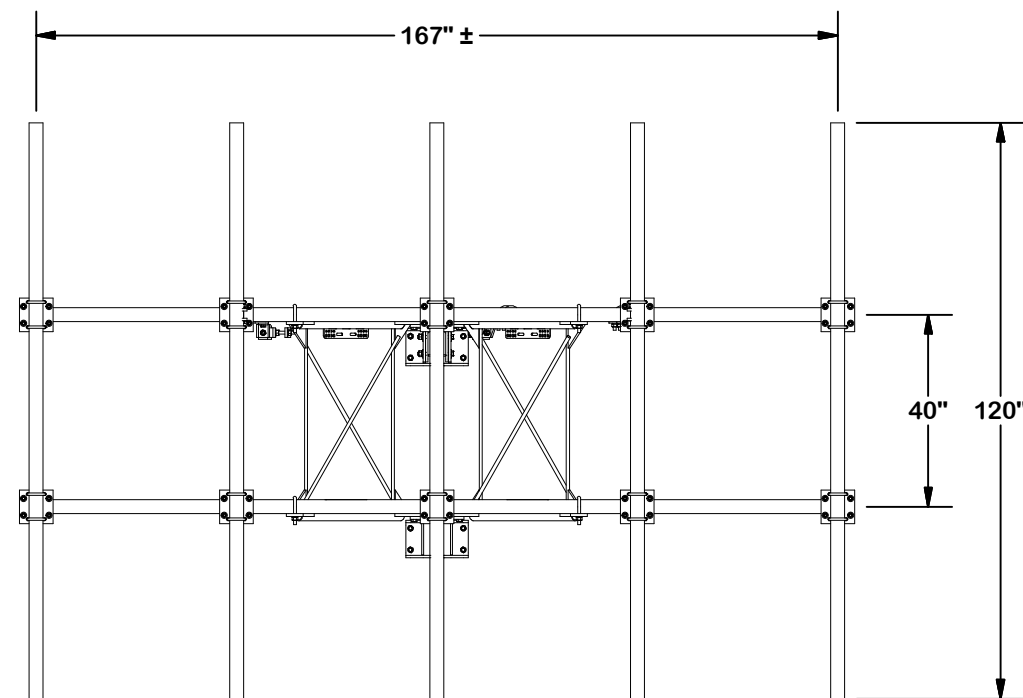
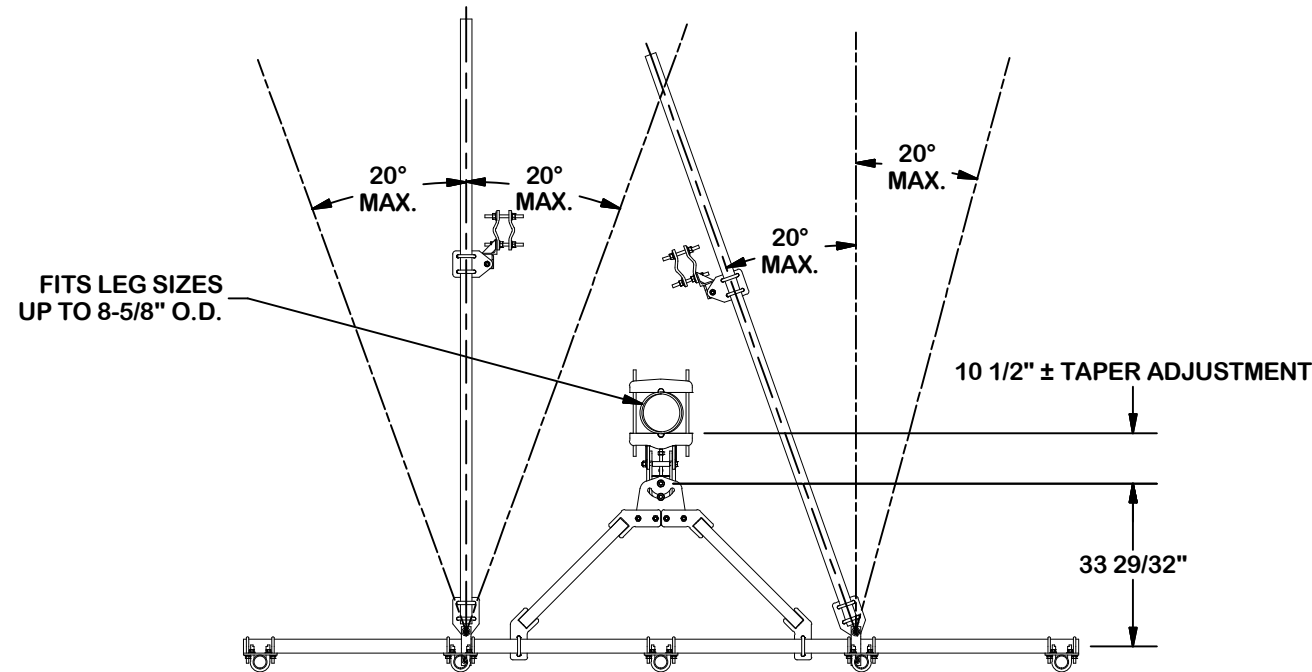
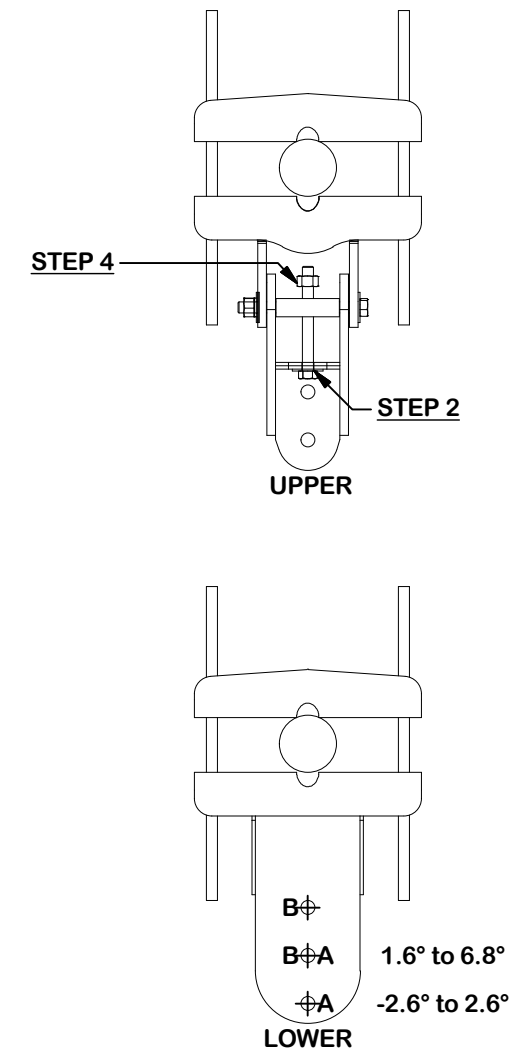
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PART NO. VFA14-WLL-30120	PAGE 2 OF 5
DWG. NO. VFA14-WLL-30120	

ANGLE CALIBRATING PROCEDURE:

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
 - HOLE A = -2.6° TO 2.6°
 - HOLE B = 1.6° TO 6.8°
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
 SAWED, SHEARED AND GAS CUT EDGES (± 0.030 "")
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DESCRIPTION
14' 6" HEAVY DUTY V-FRAME ASSEMBLY W/ 2 STIFF ARMS & MOUNT PIPES

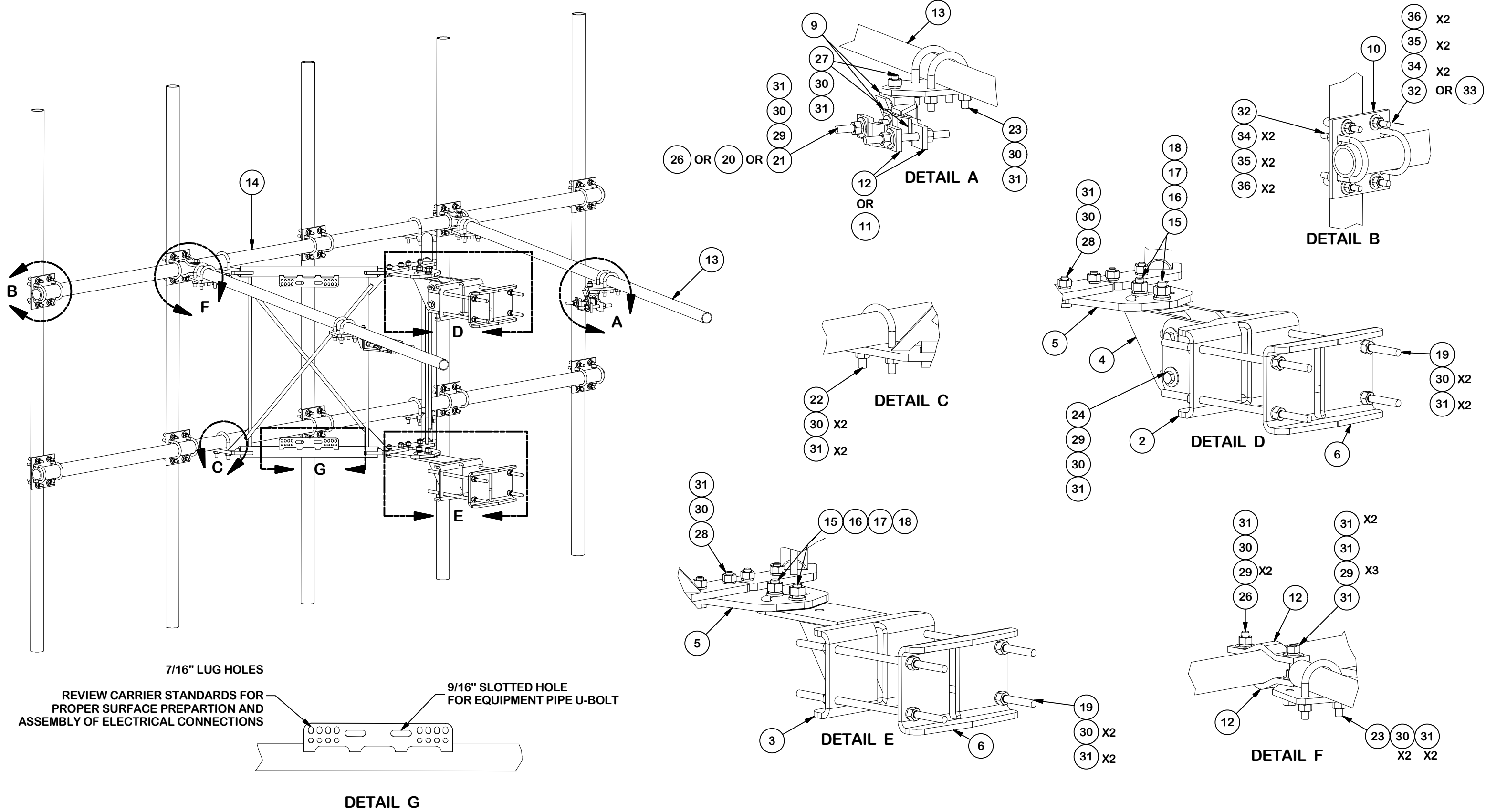
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PART NO. VFA14-WLL-30120	PAGE 3 OF 5
DWG. NO. VFA14-WLL-30120	



7/16" LUG HOLES
 REVIEW CARRIER STANDARDS FOR PROPER SURFACE PREPARATION AND ASSEMBLY OF ELECTRICAL CONNECTIONS

9/16" SLOTTED HOLE FOR EQUIPMENT PIPE U-BOLT

TOLERANCE NOTES

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 DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES
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DESCRIPTION
14' 6" HEAVY DUTY V-FRAME ASSEMBLY W/ 2 STIFF ARMS & MOUNT PIPES

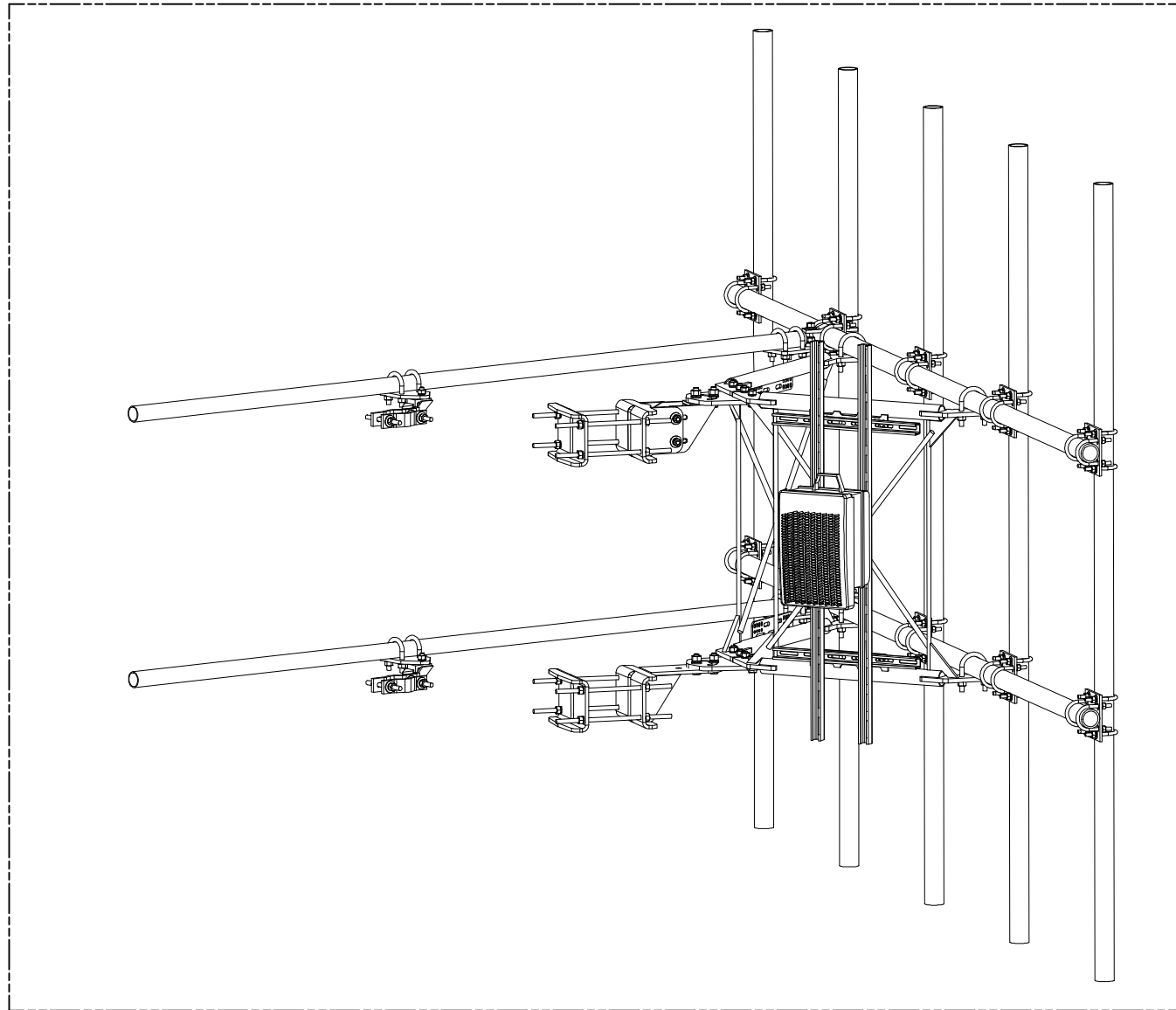
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CLASS 87	SUB 02	DRAWING USAGE CUSTOMER
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SITE PRO 1
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Engineering Support Team:
 1-888-753-7446

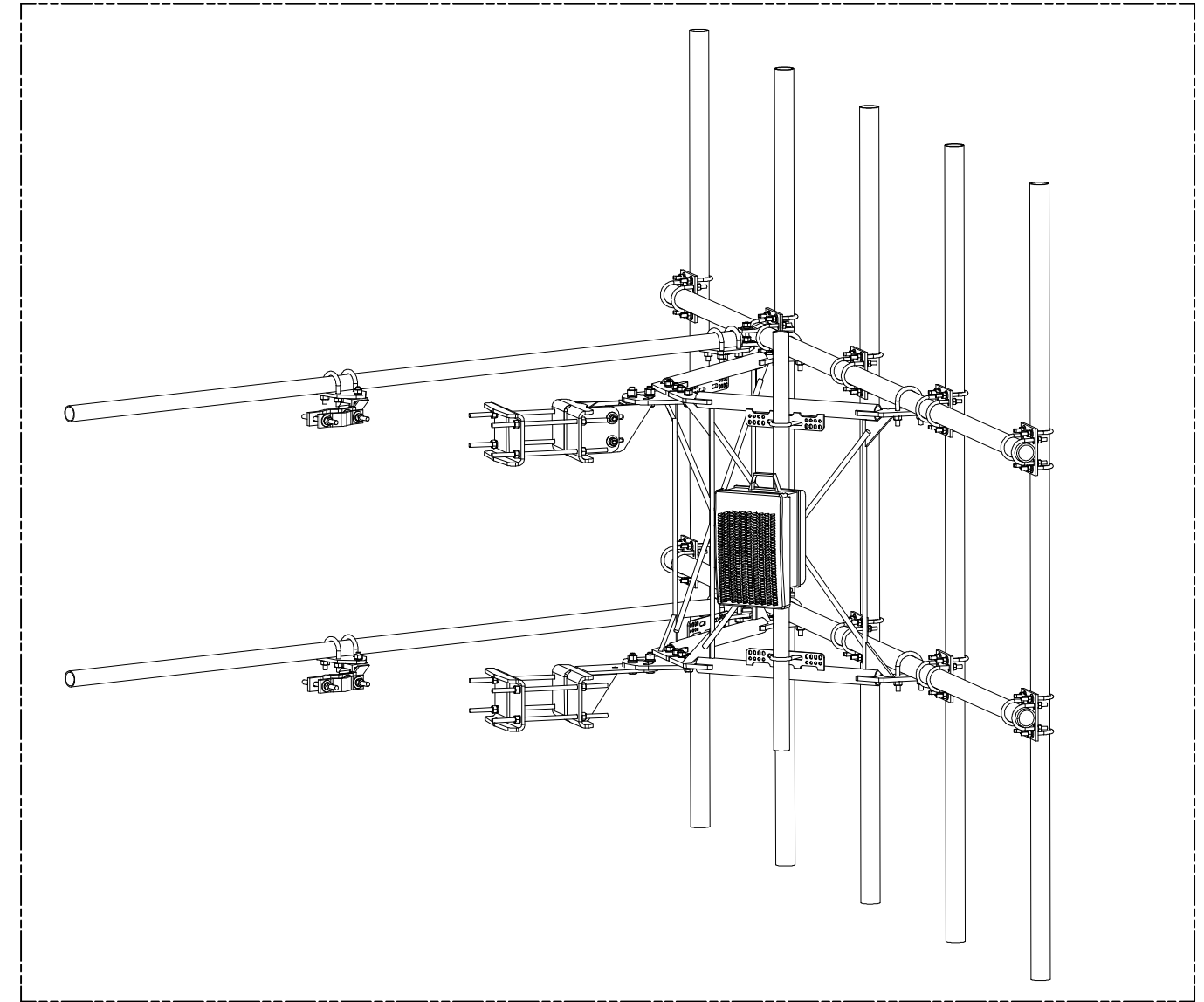
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PART NO. VFA14-WLL-30120	PAGE 4 OF 5
DWG. NO. VFA14-WLL-30120	



**UNISTRUT AND HARDWARE
SOLD SEPARATELY.**

REQUIRES 3/8" HARDWARE



**EQUIPMENT PIPE AND HARDWARE
SOLD SEPARATELY.**

**REQUIRES 1/2" HARDWARE
AND 2-3/8" TO 4-1/2" O.D. PIPE**

TOLERANCE NOTES

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

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT
 INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF
 VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
**14' 6" HEAVY DUTY
 V-FRAME ASSEMBLY
 W/ 2 STIFF ARMS
 & MOUNT PIPES**

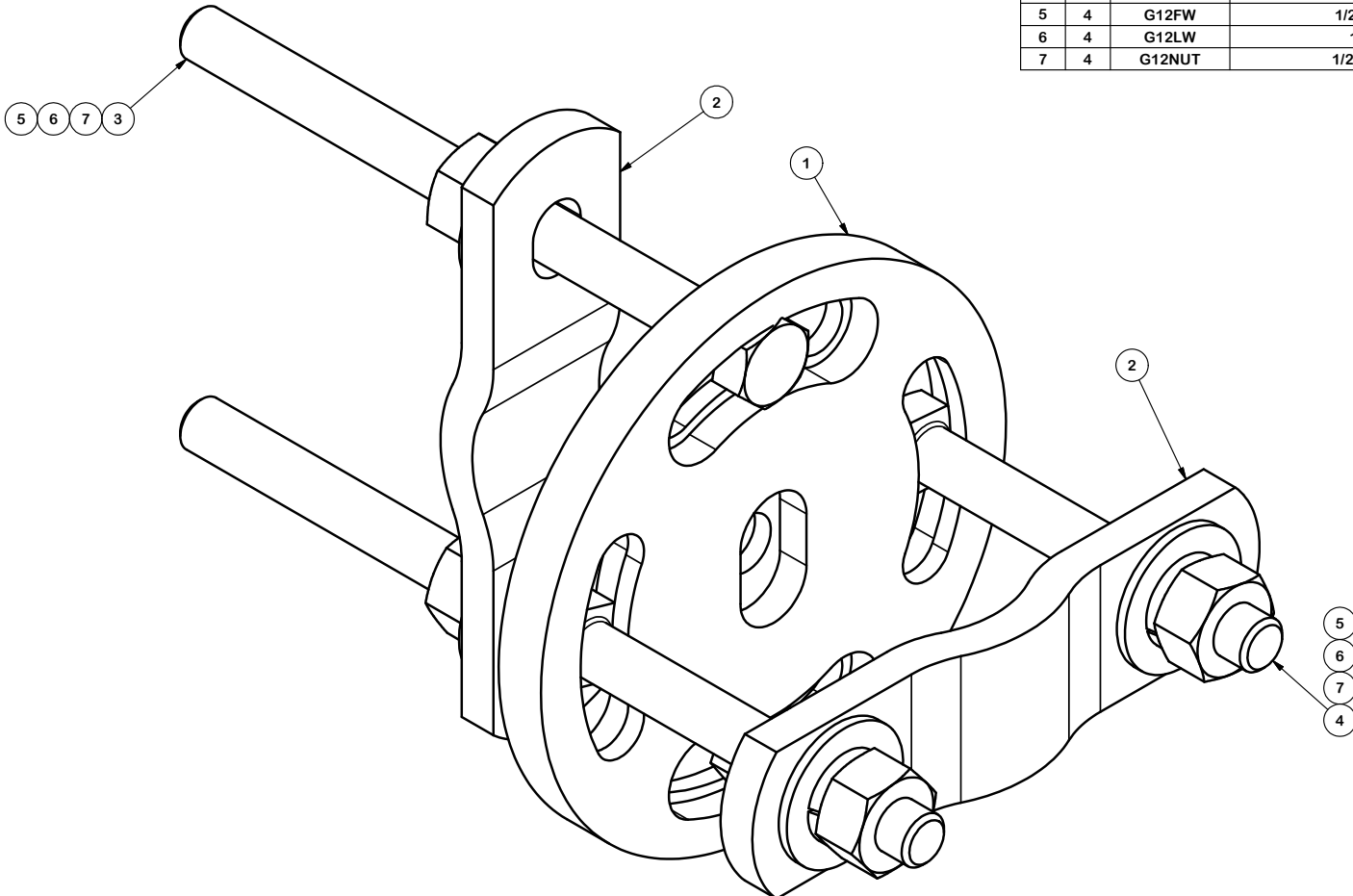
CPD NO. SP1	DRAWN BY CMFL 9/21/2020	ENG. APPROVAL
CLASS 87	SUB 02	DRAWING USAGE CUSTOMER
CHECKED BY		



Locations:
 New York, NY
 Atlanta, GA
 Los Angeles, CA
 Plymouth, IN
 Salem, OR
 Dallas, TX

Engineering
 Support Team:
 1-888-753-7446

PART NO. VFA14-WLL-30120	PAGE 5 OF 5
DWG. NO. VFA14-WLL-30120	




PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	6.16

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

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION		ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY	
CPD NO.	DRAWN BY	ENG. APPROVAL	
	CEK 8/30/2010		
CLASS	SUB	DRAWING USAGE	CHECKED BY
81	01	CUSTOMER	BMC 9/1/2010

 A valmont COMPANY	Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX
	Engineering Support Team: 1-888-753-7446
PART NO.	PUCK
DWG. NO.	PUCK

Wind & Ice Loading			
Nominal Mount Elevation (AGL), z_{mount}	144 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	144 ft	K_d	0.95
Elevation AMSL (ft)	516 ft	K_e	0.98
TIA Standard	H	K_z	1.10
Basic Wind Speed, V_{ult} (bare)	118 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	1.00
Design Ice Thickness, t_i	1 in	t_{iz}	1.16 in
Exposure Category	B	G_h	1.00
Risk Category	II	q_z (bare)	36.5 psf
Seismic Response Coeff., C_s	0.11	q_z (ice)	6.5 psf

Member Distributed Loading				
Section Set Label	Shape Label	F _A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Mount Pipe 1	PIPE_2.5	9.43	3.06	5.71
Top MP Conn.	C10X15.3	54.68	2.10	14.90
Mount Pipe 2	PIPE_2.0	7.79	2.76	5.00
TRs	0.625"SR	2.05	1.73	2.53
Mod Mount Pipe	PIPE_2.0	7.79	2.76	5.00
Mod TR	0.625"SR	2.05	1.73	2.53

Alpha Sector

Appurtenances																									
Appurtenance Model	Status	Azimuth Offset (°, ⊂)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty.	Total Qty. Override	0° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA _A (Bare) (ft²)		EPA _A (Ice) (ft²)		F _A (Bare) (lb)		F _A (Ice) (lb)		
					Front	Side			0°	1							2	N	T	N	T	N	T	N	T
DMP65R-BU6D				<input type="checkbox"/>			1	3	a1	a2	71.2	20.7	7.7	89.3	Generic	171.40	11.93	4.48	13.67	5.96	391.39	146.98	80.51	35.13	
AIR 6449 B77D			146	<input type="checkbox"/>			1	3	a3	a4	30.4	15.9	10.6	81.6	Flat	77.62	4.03	2.72	4.97	3.53	132.67	89.65	29.38	20.86	
DMP65R-BU6D				<input type="checkbox"/>			1	3	a7	a8	71.2	20.7	7.7	89.3	Generic	171.40	11.93	4.48	13.67	5.96	391.39	146.98	80.51	35.13	
DC6-48-60-18-8F				<input type="checkbox"/>				2			24	11	11	18.9	Round	41.05	1.28	1.28	1.70	1.70	42.10	42.10	10.04	10.04	
DC9-48-60-24-8C-EV				<input type="checkbox"/>				1			31.41	10.24	18.28	26.2	Flat	85.91	2.74	4.78	3.55	5.79	89.78	156.98	20.93	34.10	
RRUS 4478 B14				<input type="checkbox"/>			1	3	r3		16.5	13.4	7.7	59.9	Flat	36.80	1.84	1.06	2.46	1.57	60.45	34.73	14.52	9.25	
RRUS 4449 B5/B12				<input checked="" type="checkbox"/>			1	3	r4		17.9	13.19	9.44	71	Flat	42.89	1.41	1.97	1.98	2.61	46.20	64.55	11.67	15.39	
LGP21401				<input checked="" type="checkbox"/>	0	0.5	2	6	t1		9.2	14.4	2.6	14.1	Flat	16.60	0.00	0.55	0.00	0.80	0.00	18.11	0.00	4.73	
RRUS 32 B66				<input checked="" type="checkbox"/>	0.5	0.5	1	3	r1		27.2	12.1	7	53	Flat	48.93	0.83	1.37	1.17	1.77	27.36	44.99	6.92	10.44	
RRUS 32 B30				<input checked="" type="checkbox"/>			1	3	r2		26.7	12.1	6.7	60	Flat	47.28	1.57	2.69	2.24	3.49	51.60	88.33	13.19	20.54	
RRUS 32 B2				<input checked="" type="checkbox"/>	0.5	0.5	1	3	r1		27.2	12.05	7	52.9	Flat	48.80	0.83	1.37	1.17	1.77	27.36	44.80	6.92	10.41	
WCS-IMFQ-AMT				<input checked="" type="checkbox"/>			1	3	t2		11.2	10.6	6.9	29.5	Flat	22.44	0.64	0.99	1.04	1.46	21.13	32.46	6.12	8.57	
AIR 6419 B77G			142	<input type="checkbox"/>			1	3	a5	a6	28.3	16.1	7.9	66.1	Flat	64.48	3.80	1.94	4.70	2.65	124.07	63.32	27.56	15.57	
NNVV-65B-R4		90		<input type="checkbox"/>			1	0	o1	o2	72	19.6	7.8	77.4	Generic	167.18	7.62	3.01	8.78	4.03	249.99	98.75	51.71	23.74	

Wind & Ice Loading			
Nominal Mount Elevation (AGL), z_{mount}	144 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	144 ft	K_d	0.95
Elevation AMSL (ft)	516 ft	K_e	0.98
TIA Standard	H	K_z	1.10
Basic Wind Speed, V_{ult} (bare)	118 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	1.00
Design Ice Thickness, t_i	1 in	t_{iz}	1.16 in
Exposure Category	B	G_h	1.00
Risk Category	II	q_z (bare)	36.5 psf
Seismic Response Coeff., C_s	0.11	q_z (ice)	6.5 psf

Live Loading	
At Mount Pipes, L_M	500 lb
Joint Labels Considered	1_M1
	1_M2
	1_M3
	1_M4

Member Distributed Loading				
Section Set Label	Shape Label	F_A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Front Horizontal	PIPE_2.5	9.43	3.06	5.71
VFA-HD Pivot PL	PL5/8X9	49.21	6.68	10.31
Stiff Arm	PIPE_2.0	7.79	2.76	5.00
V-Frame Diagonal	.75 DIA.	2.46	1.81	2.70
V-Frame Horizontal	PIPE_2.0	7.79	2.76	5.00
V-Frame Vertical	.625 DIA. HRA	2.05	1.73	2.53
Taper PL	PL1/2X6	32.81	4.91	7.50
MOUNT PIPE 2.5	PIPE 2.5	9.43	3.06	5.71
Additional Pipe	PIPE 2.0	7.79	2.76	5.00

Beta And Gamma Sector

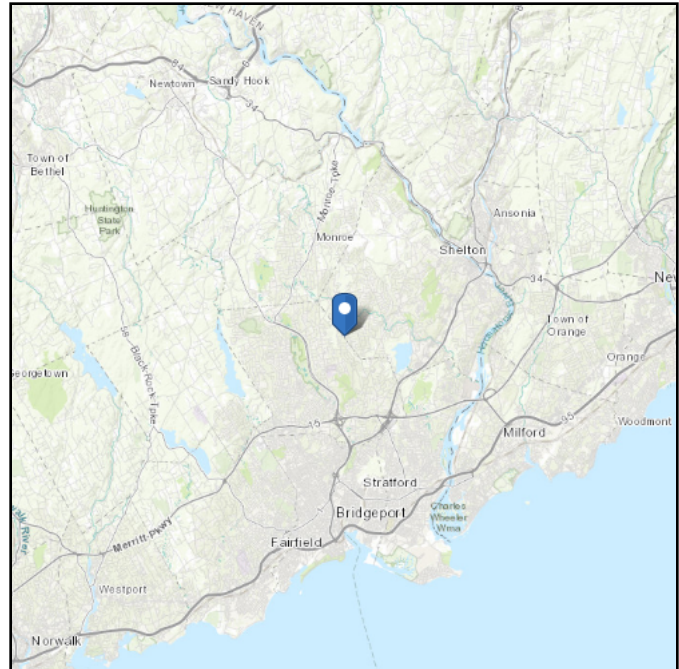
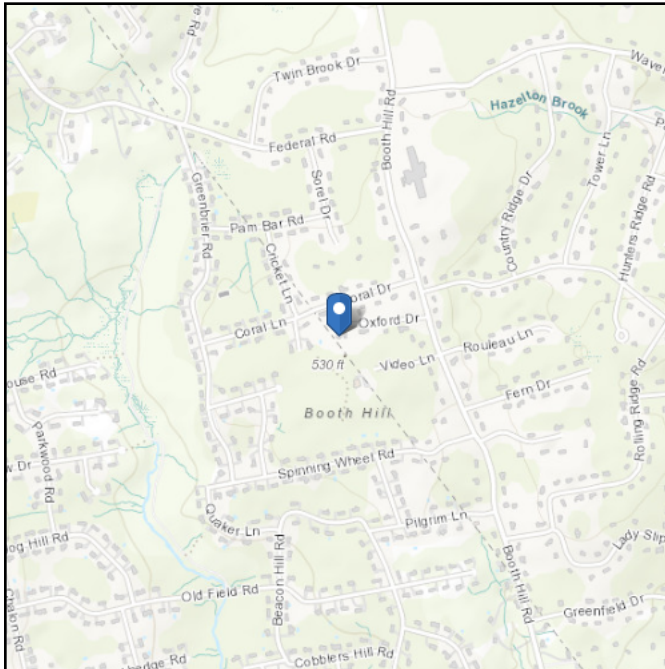
Appurtenances																									
Appurtenance Model	Status	Azimuth Offset (°, ⊂)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty.	Total Qty. Override	0° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA_A (Bare) (ft²)		EPA_A (Ice) (ft²)		F_A (Bare) (lb)		F_A (Ice) (lb)		
					Front	Side			0°	1							2	N	T	N	T	N	T	N	T
DMP65R-BU6D				<input type="checkbox"/>			1	3	1_A2T	1_A2B	71.2	20.7	7.7	89.3	Generic	171.40	11.93	4.48	13.67	5.96	391.39	146.98	80.51	35.13	
AIR 6449 B77D			146	<input type="checkbox"/>			1	3	1_A3T	1_A3B	30.4	15.9	10.6	81.6	Flat	77.62	4.03	2.72	4.97	3.53	132.67	89.65	29.38	20.86	
DMP65R-BU6D				<input type="checkbox"/>			1	3	1_A4T	1_A4B	71.2	20.7	7.7	89.3	Generic	171.40	11.93	4.48	13.67	5.96	391.39	146.98	80.51	35.13	
DC6-48-60-18-8F				<input type="checkbox"/>				2			24	11	11	18.9	Round	41.05	1.28	1.28	1.70	1.70	42.10	42.10	10.04	10.04	
DC9-48-60-24-8C-EV				<input type="checkbox"/>				1			31.41	10.24	18.28	26.2	Flat	85.91	2.74	4.78	3.55	5.79	89.78	156.98	20.93	34.10	
RRUS 4478 B14				<input checked="" type="checkbox"/>		0.5	1	3	R1		16.5	13.4	7.7	59.9	Flat	36.80	1.06	0.92	1.57	1.23	34.73	30.22	9.25	7.26	
RRUS 4449 B5/B12				<input checked="" type="checkbox"/>		0.5	1	3	R1		17.9	13.19	9.44	71	Flat	42.89	1.41	0.98	1.98	1.31	46.20	32.27	11.67	7.69	
LGP21401				<input checked="" type="checkbox"/>	0	0.5	2	6	1_T2BT		9.2	14.4	2.6	14.1	Flat	16.60	0.00	0.55	0.00	0.80	0.00	18.11	0.00	4.73	
RRUS 32 B66				<input checked="" type="checkbox"/>	0.5	0.5	1	3	1_R2TT		27.2	12.1	7	53	Flat	48.93	0.83	1.37	1.17	1.77	27.36	44.99	6.92	10.44	
RRUS 32 B30				<input type="checkbox"/>	0.5		1	3	1_R4TN		26.7	12.1	6.7	60	Flat	47.28	1.35	1.57	1.74	2.24	44.16	51.60	10.27	13.19	
RRUS 32 B2				<input checked="" type="checkbox"/>	0.5	0.5	1	3	1_R2TT		27.2	12.05	7	52.9	Flat	48.80	0.83	1.37	1.17	1.77	27.36	44.80	6.92	10.41	
WCS-IMFQ-AMT				<input type="checkbox"/>	0		1	3	1_T4BN		11.2	10.6	6.9	29.5	Flat	22.44	0.00	0.64	0.00	1.04	0.00	21.13	0.00	6.12	
AIR 6419 B77G			142	<input type="checkbox"/>			1	3	A1	A2	28.3	16.1	7.9	66.1	Flat	64.48	3.80	1.94	4.70	2.65	124.07	63.32	27.56	15.57	

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 515.6 ft (NAVD 88)
Latitude: 41.280164
Longitude: -73.185467



Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Mon Apr 04 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

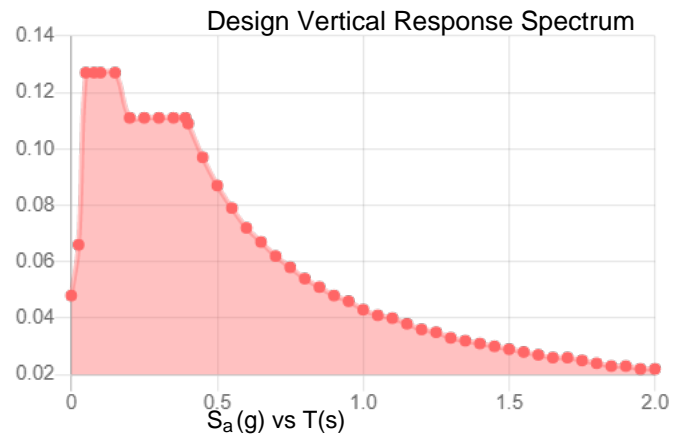
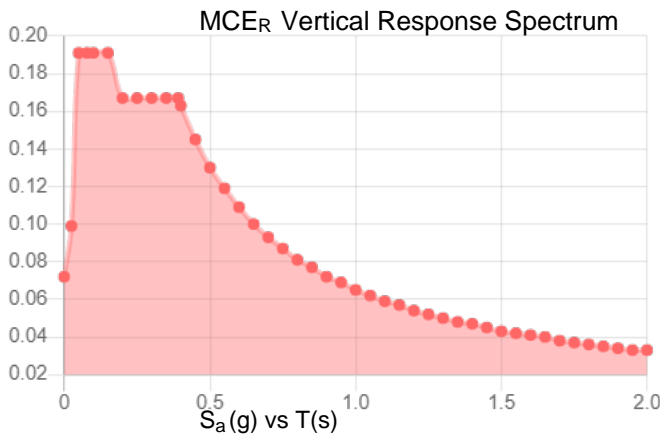
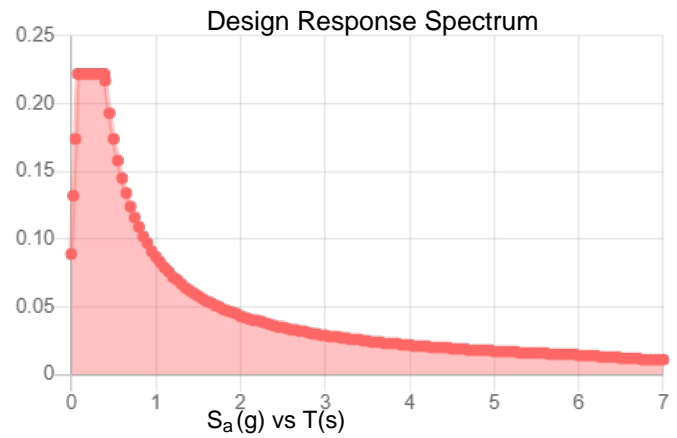
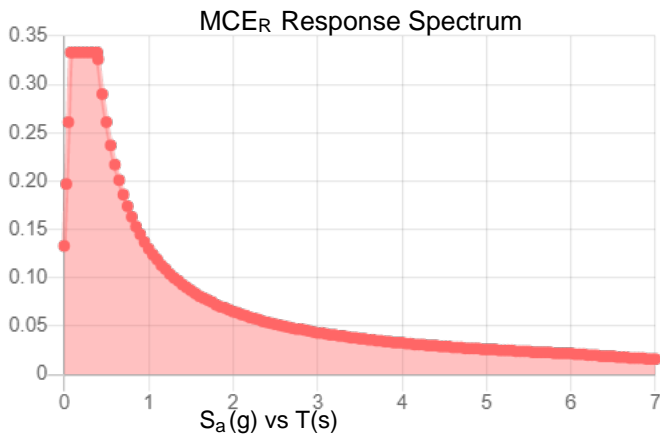
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_s :	0.208	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.118
F_v :	2.4	PGA _M :	0.185
S_{MS} :	0.333	F_{PGA} :	1.564
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.222	C_v :	0.717

Seismic Design Category B



Data Accessed: Mon Apr 04 2022

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 15 F
Gust Speed 50 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Mon Apr 04 2022

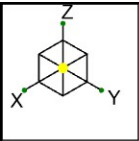
Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

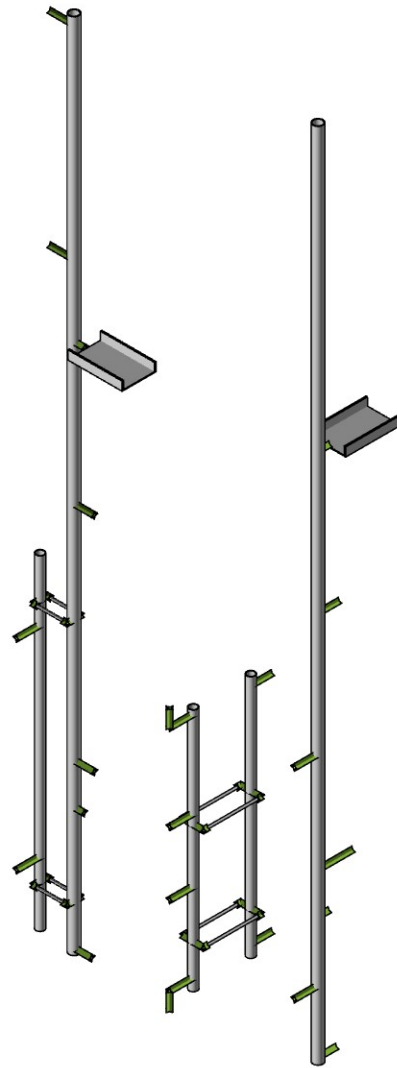
The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.



Alpha Sector



Telamon CLS

Prathamesh Padwal

41124-13755484_C8_01-01-MA

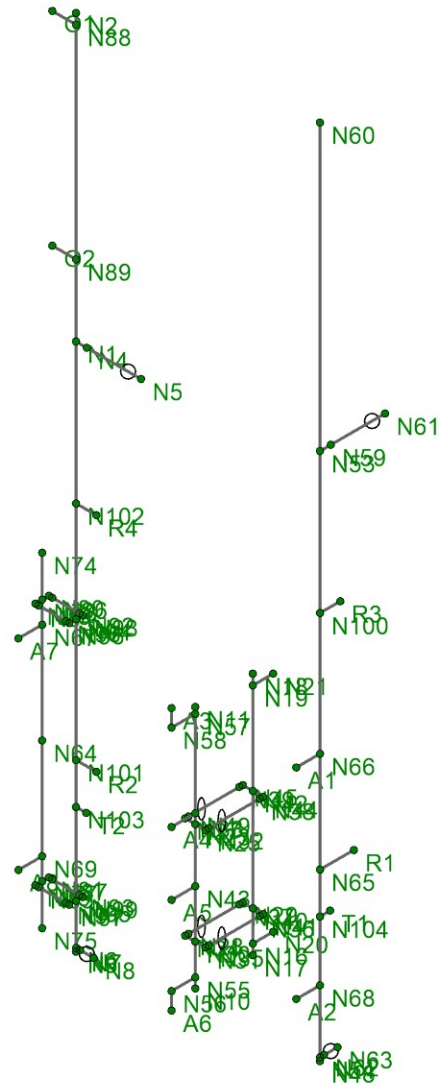
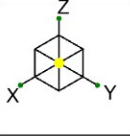
41124-13755484_C8_01-SHELTON-TRUMBULL

Rendered

SK-1

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Telamon CLS

Prathamesh Padwal

41124-13755484_C8_01-01-MA

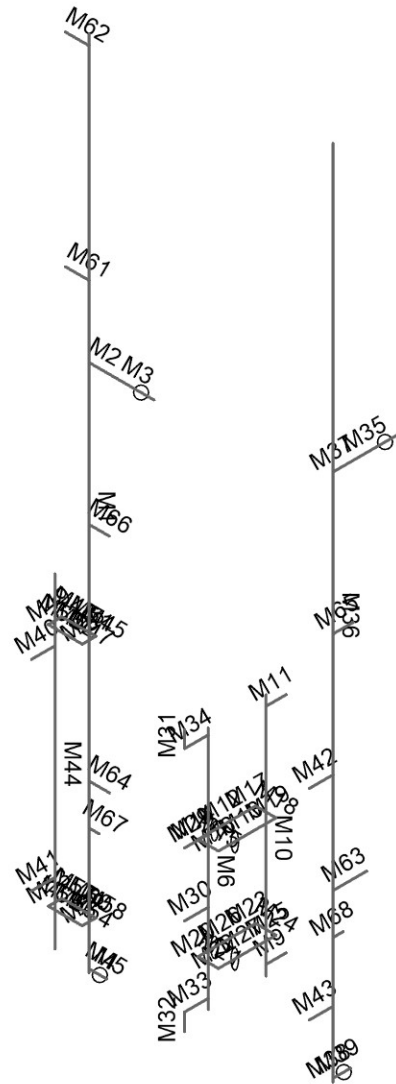
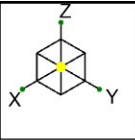
41124-13755484_C8_01-SHELTON-TRUMBULL

Joint Labels

SK-2

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Telamon CLS

Prathamesh Padwal

41124-13755484_C8_01-01-MA

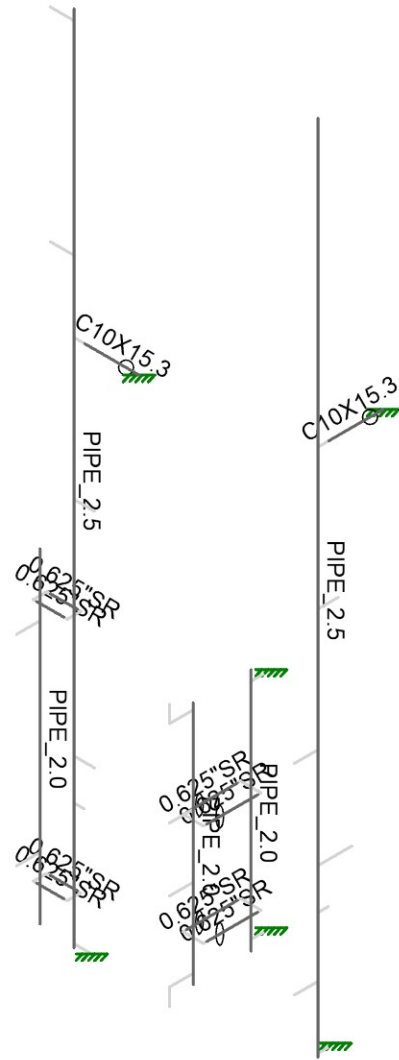
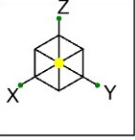
41124-13755484_C8_01-SHELTON-TRUMBULL

Member Labels

SK-3

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d

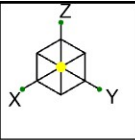


Envelope Only Solution

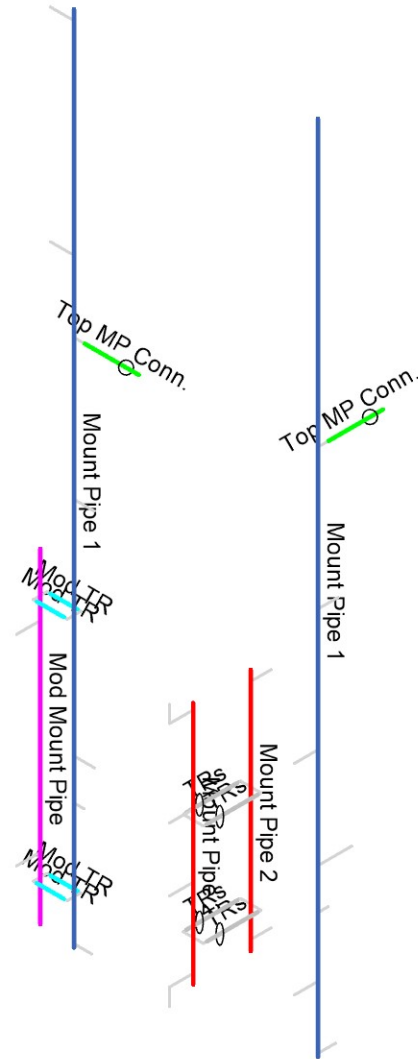
Telamon CLS
Prathamesh Padwal
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
Member Shapes

SK-3.1
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d



Section Sets	
█	Mount Pipe 1
█	Top MP Conn.
█	Mount Pipe 2
█	TRs
█	Mod Mount Pipe
█	Mod TR
█	RIGID



Telamon CLS

Prathamesh Padwal

41124-13755484_C8_01-01-MA

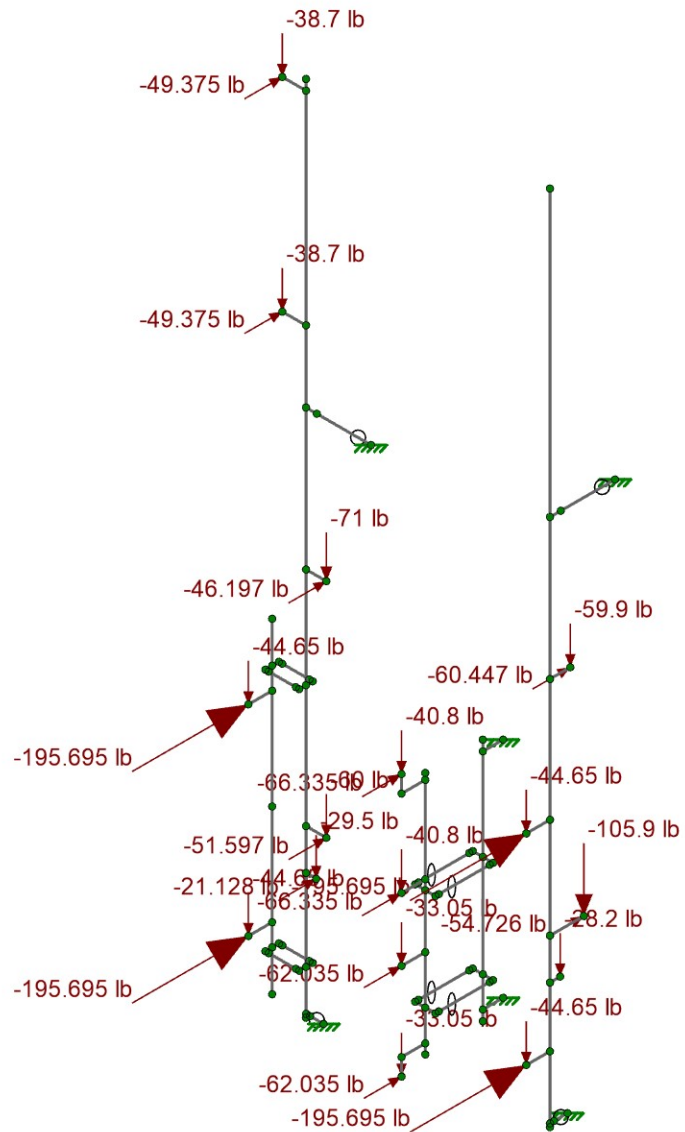
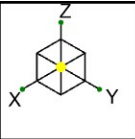
41124-13755484_C8_01-SHELTON-TRUMBULL

Section Sets

SK-4

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d

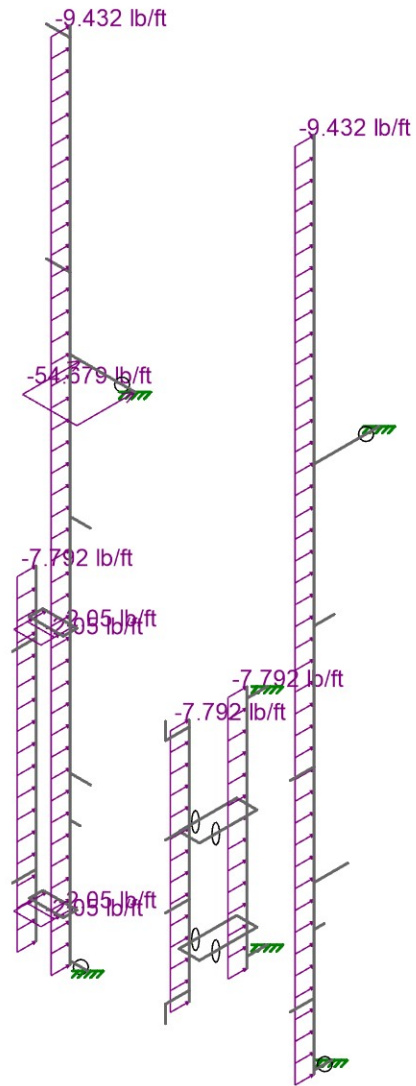
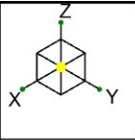


Loads: LC 1, DISPLAY (1.0D + 1.0W_0)

Telamon CLS
 Prathamesh Padwal
 41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
 Joint Loads – Dead and Normal Wind

SK-5
 Apr 04, 2022
 41124-13755484_C8_01_AT&T Mobility.r3d

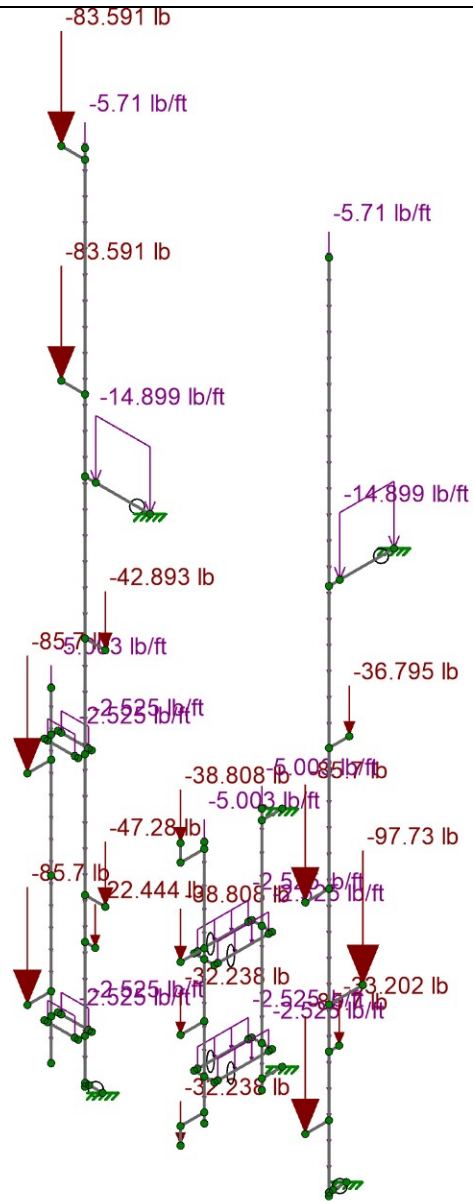
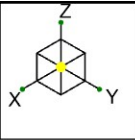


Loads: BLC 5, Structure Wind 0

Telamon CLS
 Prathamesh Padwal
 41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
 Distributed Load – Normal Wind

SK-6
 Apr 04, 2022
 41124-13755484_C8_01_AT&T Mobility.r3d

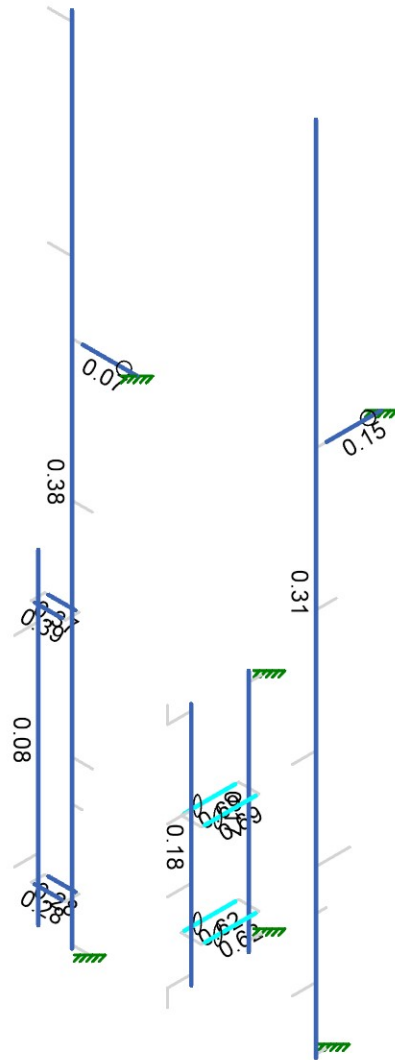
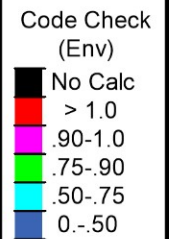
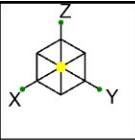


Loads: BLC 2, Ice Dead

Telamon CLS
Prathamesh Padwal
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
Ice Dead Loads

SK-7
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS

Prathamesh Padwal

41124-13755484_C8_01-01-MA

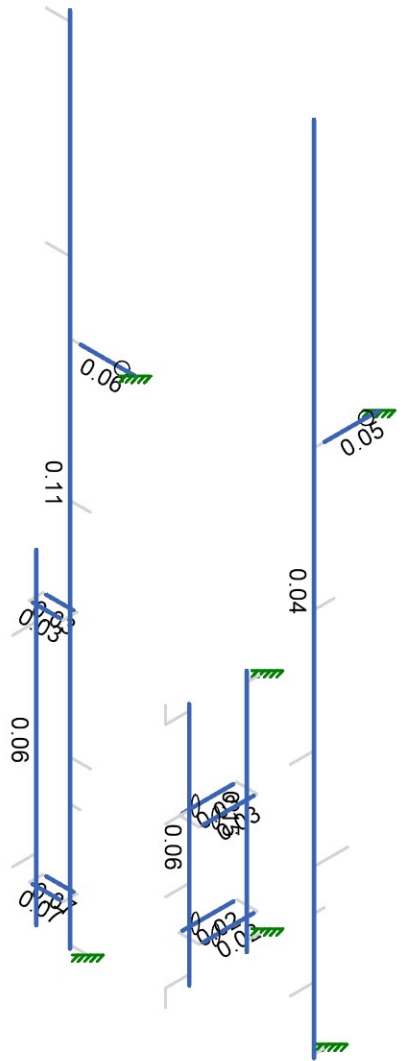
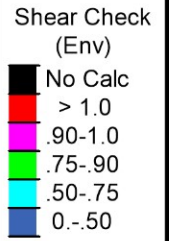
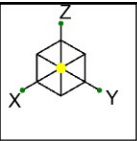
41124-13755484_C8_01-SHELTON-TRUMBULL

Envelope Member Unity Check Results – Bending

SK-8

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS	41124-13755484_C8_01-SHELTON-TRUMBULL	SK-9
Prathamesh Padwal		Apr 04, 2022
41124-13755484_C8_01-01-MA	Envelope Member Check Results – Shear	41124-13755484_C8_01_AT&T Mobility.r3d

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed
1	Dead	DL	-1	17	
2	Ice Dead	RL		17	15
5	Structure Wind 0°	None			10
6	Structure Wind 30°	None			30
7	Structure Wind 45°	None			30
8	Structure Wind 60°	None			30
9	Structure Wind 90°	None			10
10	Structure Wind 120°	None			30
11	Structure Wind 135°	None			30
12	Structure Wind 150°	None			30
13	Structure Wind 180°	None			10
14	Structure Wind 210°	None			30
15	Structure Wind 225°	None			30
16	Structure Wind 240°	None			30
17	Structure Wind 270°	None			10
18	Structure Wind 300°	None			30
19	Structure Wind 315°	None			30
20	Structure Wind 330°	None			30
21	Structure Wind w/ Ice 0°	None			10
22	Structure Wind w/ Ice 30°	None			30
23	Structure Wind w/ Ice 45°	None			30
24	Structure Wind w/ Ice 60°	None			30
25	Structure Wind w/ Ice 90°	None			10
26	Structure Wind w/ Ice 120°	None			30
27	Structure Wind w/ Ice 135°	None			30
28	Structure Wind w/ Ice 150°	None			30
29	Structure Wind w/ Ice 180°	None			10
30	Structure Wind w/ Ice 210°	None			30
31	Structure Wind w/ Ice 225°	None			30
32	Structure Wind w/ Ice 240°	None			30
33	Structure Wind w/ Ice 270°	None			10
34	Structure Wind w/ Ice 300°	None			30
35	Structure Wind w/ Ice 315°	None			30
36	Structure Wind w/ Ice 330°	None			30
37	Antenna Wind 0°	None		16	
38	Antenna Wind 30°	None		34	
39	Antenna Wind 45°	None		34	
40	Antenna Wind 60°	None		34	
41	Antenna Wind 90°	None		17	
42	Antenna Wind 120°	None		34	
43	Antenna Wind 135°	None		34	
44	Antenna Wind 150°	None		34	
45	Antenna Wind 180°	None		16	
46	Antenna Wind 210°	None		34	
47	Antenna Wind 225°	None		34	
48	Antenna Wind 240°	None		34	
49	Antenna Wind 270°	None		17	
50	Antenna Wind 300°	None		34	
51	Antenna Wind 315°	None		34	
52	Antenna Wind 330°	None		34	
53	Antenna Wind w/ Ice 0°	None		16	
54	Antenna Wind w/ Ice 30°	None		34	
55	Antenna Wind w/ Ice 45°	None		34	
56	Antenna Wind w/ Ice 60°	None		34	
57	Antenna Wind w/ Ice 90°	None		17	

Basic Load Cases (Continued)

	BLC Description	Category	Z Gravity	Nodal	Distributed
58	Antenna Wind w/ Ice 120°	None		34	
59	Antenna Wind w/ Ice 135°	None		34	
60	Antenna Wind w/ Ice 150°	None		34	
61	Antenna Wind w/ Ice 180°	None		16	
62	Antenna Wind w/ Ice 210°	None		34	
63	Antenna Wind w/ Ice 225°	None		34	
64	Antenna Wind w/ Ice 240°	None		34	
65	Antenna Wind w/ Ice 270°	None		17	
66	Antenna Wind w/ Ice 300°	None		34	
67	Antenna Wind w/ Ice 315°	None		34	
68	Antenna Wind w/ Ice 330°	None		34	
69	Seismic X	ELX		17	15
70	Seismic Y	ELY		17	15
71	Seismic Z	ELZ		17	15

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DISPLAY (1.0D + 1.0W 0°)	Yes	Y	DL	1	37	1				
2	1.4D	Yes	Y	DL	1.4						
3	1.2D + 1.0W 0°	Yes	Y	DL	1.2	5	1	37	1		
4	1.2D + 1.0W 30°	Yes	Y	DL	1.2	6	1	38	1		
5	1.2D + 1.0W 45°	Yes	Y	DL	1.2	7	1	39	1		
6	1.2D + 1.0W 60°	Yes	Y	DL	1.2	8	1	40	1		
7	1.2D + 1.0W 90°	Yes	Y	DL	1.2	9	1	41	1		
8	1.2D + 1.0W 120°	Yes	Y	DL	1.2	10	1	42	1		
9	1.2D + 1.0W 135°	Yes	Y	DL	1.2	11	1	43	1		
10	1.2D + 1.0W 150°	Yes	Y	DL	1.2	12	1	44	1		
11	1.2D + 1.0W 180°	Yes	Y	DL	1.2	13	-1	45	-1		
12	1.2D + 1.0W 210°	Yes	Y	DL	1.2	14	-1	46	-1		
13	1.2D + 1.0W 225°	Yes	Y	DL	1.2	15	-1	47	-1		
14	1.2D + 1.0W 240°	Yes	Y	DL	1.2	16	-1	48	-1		
15	1.2D + 1.0W 270°	Yes	Y	DL	1.2	17	-1	49	-1		
16	1.2D + 1.0W 300°	Yes	Y	DL	1.2	18	-1	50	-1		
17	1.2D + 1.0W 315°	Yes	Y	DL	1.2	19	-1	51	-1		
18	1.2D + 1.0W 330°	Yes	Y	DL	1.2	20	-1	52	-1		
19	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y	DL	1.2	21	1	53	1	RL	1
20	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y	DL	1.2	22	1	54	1	RL	1
21	1.2D + 1.0Di + 1.0Wi 45°	Yes	Y	DL	1.2	23	1	55	1	RL	1
22	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y	DL	1.2	24	1	56	1	RL	1
23	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y	DL	1.2	25	1	57	1	RL	1
24	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y	DL	1.2	26	1	58	1	RL	1
25	1.2D + 1.0Di + 1.0Wi 135°	Yes	Y	DL	1.2	27	1	59	1	RL	1
26	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y	DL	1.2	28	1	60	1	RL	1
27	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y	DL	1.2	29	-1	61	-1	RL	1
28	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y	DL	1.2	30	-1	62	-1	RL	1
29	1.2D + 1.0Di + 1.0Wi 225°	Yes	Y	DL	1.2	31	-1	63	-1	RL	1
30	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y	DL	1.2	32	-1	64	-1	RL	1
31	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y	DL	1.2	33	-1	65	-1	RL	1
32	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y	DL	1.2	34	-1	66	-1	RL	1
33	1.2D + 1.0Di + 1.0Wi 315°	Yes	Y	DL	1.2	35	-1	67	-1	RL	1
34	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y	DL	1.2	36	-1	68	-1	RL	1
35	1.2D + 1.0Ev + 1.0Eh 0°	Yes	Y	DL	1.244	ELX	-1	ELY			
36	1.2D + 1.0Ev + 1.0Eh 30°	Yes	Y	DL	1.244	ELX	-0.866	ELY	0.5		
37	1.2D + 1.0Ev + 1.0Eh 45°	Yes	Y	DL	1.244	ELX	-0.707	ELY	0.707		
38	1.2D + 1.0Ev + 1.0Eh 60°	Yes	Y	DL	1.244	ELX	-0.5	ELY	0.866		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
39	1.2D + 1.0Ev + 1.0Eh 90°	Yes	Y	DL	1.244	ELX		ELY	1		
40	1.2D + 1.0Ev + 1.0Eh 120°	Yes	Y	DL	1.244	ELX	0.5	ELY	0.866		
41	1.2D + 1.0Ev + 1.0Eh 135°	Yes	Y	DL	1.244	ELX	0.707	ELY	0.707		
42	1.2D + 1.0Ev + 1.0Eh 150°	Yes	Y	DL	1.244	ELX	0.866	ELY	0.5		
43	1.2D + 1.0Ev + 1.0Eh 180°	Yes	Y	DL	1.244	ELX	1	ELY			
44	1.2D + 1.0Ev + 1.0Eh 210°	Yes	Y	DL	1.244	ELX	0.866	ELY	-0.5		
45	1.2D + 1.0Ev + 1.0Eh 225°	Yes	Y	DL	1.244	ELX	0.707	ELY	-0.707		
46	1.2D + 1.0Ev + 1.0Eh 240°	Yes	Y	DL	1.244	ELX	0.5	ELY	-0.866		
47	1.2D + 1.0Ev + 1.0Eh 270°	Yes	Y	DL	1.244	ELX		ELY	-1		
48	1.2D + 1.0Ev + 1.0Eh 300°	Yes	Y	DL	1.244	ELX	-0.5	ELY	-0.866		
49	1.2D + 1.0Ev + 1.0Eh 315°	Yes	Y	DL	1.244	ELX	-0.707	ELY	-0.707		
50	1.2D + 1.0Ev + 1.0Eh 330°	Yes	Y	DL	1.244	ELX	-0.866	ELY	-0.5		
51	0.9D - 1.0Ev + 1.0Eh 0°	Yes	Y	DL	0.856	ELX	-1	ELY			
52	0.9D - 1.0Ev + 1.0Eh 30°	Yes	Y	DL	0.856	ELX	-0.866	ELY	0.5		
53	0.9D - 1.0Ev + 1.0Eh 45°	Yes	Y	DL	0.856	ELX	-0.707	ELY	0.707		
54	0.9D - 1.0Ev + 1.0Eh 60°	Yes	Y	DL	0.856	ELX	-0.5	ELY	0.866		
55	0.9D - 1.0Ev + 1.0Eh 90°	Yes	Y	DL	0.856	ELX		ELY	1		
56	0.9D - 1.0Ev + 1.0Eh 120°	Yes	Y	DL	0.856	ELX	0.5	ELY	0.866		
57	0.9D - 1.0Ev + 1.0Eh 135°	Yes	Y	DL	0.856	ELX	0.707	ELY	0.707		
58	0.9D - 1.0Ev + 1.0Eh 150°	Yes	Y	DL	0.856	ELX	0.866	ELY	0.5		
59	0.9D - 1.0Ev + 1.0Eh 180°	Yes	Y	DL	0.856	ELX	1	ELY			
60	0.9D - 1.0Ev + 1.0Eh 210°	Yes	Y	DL	0.856	ELX	0.866	ELY	-0.5		
61	0.9D - 1.0Ev + 1.0Eh 225°	Yes	Y	DL	0.856	ELX	0.707	ELY	-0.707		
62	0.9D - 1.0Ev + 1.0Eh 240°	Yes	Y	DL	0.856	ELX	0.5	ELY	-0.866		
63	0.9D - 1.0Ev + 1.0Eh 270°	Yes	Y	DL	0.856	ELX		ELY	-1		
64	0.9D - 1.0Ev + 1.0Eh 300°	Yes	Y	DL	0.856	ELX	-0.5	ELY	-0.866		
65	0.9D - 1.0Ev + 1.0Eh 315°	Yes	Y	DL	0.856	ELX	-0.707	ELY	-0.707		
66	0.9D - 1.0Ev + 1.0Eh 330°	Yes	Y	DL	0.856	ELX	-0.866	ELY	-0.5		

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁻⁶ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	0.3	0.65	0.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	0.3	0.65	0.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
9	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1
11	SAE J429 GR-2	29000	11154	0.3	0.65	0.49	57	1.5	74	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]	
1	Mount Pipe 1	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	Top MP Conn.	C10X15.3	Beam	Channel	A36 Gr.36	Typical	4.48	2.27	67.3	0.209
3	Mount Pipe 2	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
4	TRs	0.625"SR	Beam	BAR	A36 Gr.36	Typical	0.307	0.007	0.007	0.015
5	Mod Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
6	Mod TR	0.625"SR	Beam	BAR	SAE J429 GR-2	Typical	0.307	0.007	0.007	0.015

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Channel Conn.	a [in]	Function
1	M1	Mount Pipe 1	240	Lbyy	N/A	N/A	Lateral
2	M3	Top MP Conn.	16	Lbyy	N/A	N/A	Lateral
3	M6	Mount Pipe 2	72	Lbyy	N/A	N/A	Lateral
4	M10	Mount Pipe 2	72	Lbyy	N/A	N/A	Lateral
5	M12	TRs	15	Lbyy	N/A	N/A	Lateral
6	M13	TRs	15	Lbyy	N/A	N/A	Lateral
7	M26	TRs	15	Lbyy	N/A	N/A	Lateral
8	M27	TRs	15	Lbyy	N/A	N/A	Lateral
9	M35	Top MP Conn.	16	Lbyy	N/A	N/A	Lateral
10	M36	Mount Pipe 1	240	Lbyy	N/A	N/A	Lateral
11	M44	Mod Mount Pipe	96	Lbyy	N/A	N/A	Lateral
12	M51	Mod TR	8	Lbyy	N/A	N/A	Lateral
13	M52	Mod TR	8	Lbyy	N/A	N/A	Lateral
14	M55	Mod TR	8	Lbyy	N/A	N/A	Lateral
15	M60	Mod TR	8	Lbyy	N/A	N/A	Lateral

Member Advanced Data

	Label	J Release	Physical	Deflection Ratio Options	Seismic DR
1	M1		Yes	** NA **	None
2	M2		Yes	** NA **	None
3	M3	O O O O X O	Yes	N/A	None
4	M4		Yes	** NA **	None
5	M5	O O O O O X	Yes	** NA **	None
6	M6		Yes	** NA **	None
7	M9		Yes	** NA **	None
8	M10		Yes	** NA **	None
9	M11		Yes	** NA **	None
10	M12	O O O X O O	Yes	Default	None
11	M13	O O O X O O	Yes	Default	None
12	M14		Yes	** NA **	None
13	M15		Yes	** NA **	None
14	M16		Yes	** NA **	None
15	M17		Yes	** NA **	None
16	M18		Yes	** NA **	None
17	M19		Yes	** NA **	None
18	M20		Yes	** NA **	None
19	M21		Yes	** NA **	None
20	M22		Yes	** NA **	None
21	M23		Yes	** NA **	None
22	M24		Yes	** NA **	None
23	M25		Yes	** NA **	None
24	M26	O O O X O O	Yes	Default	None
25	M27	O O O X O O	Yes	Default	None
26	M29		Yes	** NA **	None
27	M30		Yes	** NA **	None
28	M33		Yes	** NA **	None
29	M34		Yes	** NA **	None
30	M31		Yes	** NA **	None
31	M32		Yes	** NA **	None
32	M35	O O O O X O	Yes	N/A	None
33	M36		Yes	** NA **	None
34	M37		Yes	** NA **	None
35	M38		Yes	** NA **	None
36	M39	O O O O O X	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	J Release	Physical	Deflection Ratio Options	Seismic DR
37	M40		Yes	** NA **	None
38	M41		Yes	** NA **	None
39	M42		Yes	** NA **	None
40	M43		Yes	** NA **	None
41	M44		Yes	** NA **	None
42	M45		Yes	** NA **	None
43	M46		Yes	** NA **	None
44	M47		Yes	** NA **	None
45	M48		Yes	** NA **	None
46	M49		Yes	** NA **	None
47	M50		Yes	** NA **	None
48	M51		Yes	Default	None
49	M52		Yes	Default	None
50	M53		Yes	** NA **	None
51	M54		Yes	** NA **	None
52	M55		Yes	Default	None
53	M56		Yes	** NA **	None
54	M57		Yes	** NA **	None
55	M58		Yes	** NA **	None
56	M59		Yes	** NA **	None
57	M60		Yes	Default	None
58	M61		Yes	** NA **	None
59	M62		Yes	** NA **	None
60	M63		Yes	** NA **	None
61	M64		Yes	** NA **	None
62	M65		Yes	** NA **	None
63	M66		Yes	** NA **	None
64	M67		Yes	** NA **	None
65	M68		Yes	** NA **	None

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N8	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N5	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N20	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N21	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N61	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N63	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N8	max	462.0718	3	194.1439	14	1076.5514	31	0	66	845.3919	3	449.7856	3
2		min	-454.2725	11	-258.5402	8	302.0908	7	0	1	-873.3291	11	-439.8132	11
3	N5	max	476.4405	3	640.0018	15	283.0845	7	0	66	43.6094	16	828.2616	3
4		min	-484.2475	11	-575.3337	7	-102.8716	15	0	1	-38.6377	8	-846.466	11
5	N20	max	252.524	3	113.8709	15	277.8788	27	133.824	7	102.3525	3	275.5951	15
6		min	-80.0206	11	-113.8709	7	103.3327	51	-133.824	15	-274.2892	11	-275.595	7
7	N21	max	97.7182	3	142.8313	15	171.5761	19	166.7517	15	270.8051	11	230.8539	15
8		min	-270.2245	11	-142.8313	7	62.6838	59	-166.7517	7	-171.5921	3	-230.8539	7
9	N61	max	357.6154	3	274.7458	15	569.4357	11	30.931	17	0	66	359.516	15
10		min	-387.2453	11	-274.7458	7	-434.1045	1	-30.931	5	0	1	-359.516	7
11	N63	max	337.5786	3	294.5249	15	912.1232	3	679.8517	7	0	66	153.1555	17
12		min	-307.9469	11	-294.5249	7	-73.6001	11	-679.8517	15	0	1	-153.1555	5

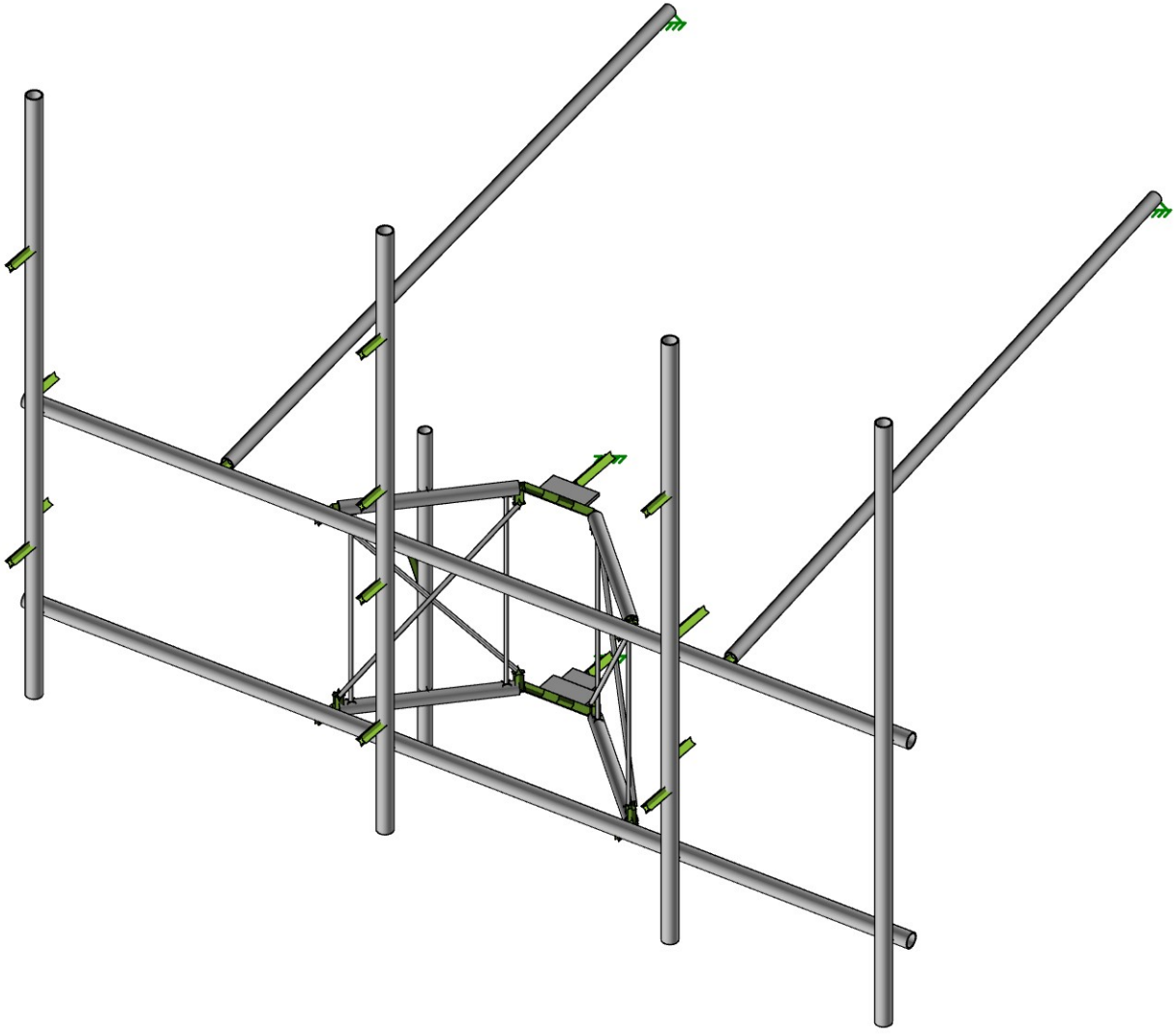
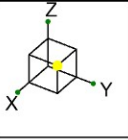
Envelope Node Reactions (Continued)

Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
13	Totals:	max	1983.9486	3	1659.6968	15	2634.429	33					
14		min	-1983.9573	11	-1659.5414	7	937.2466	60					

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

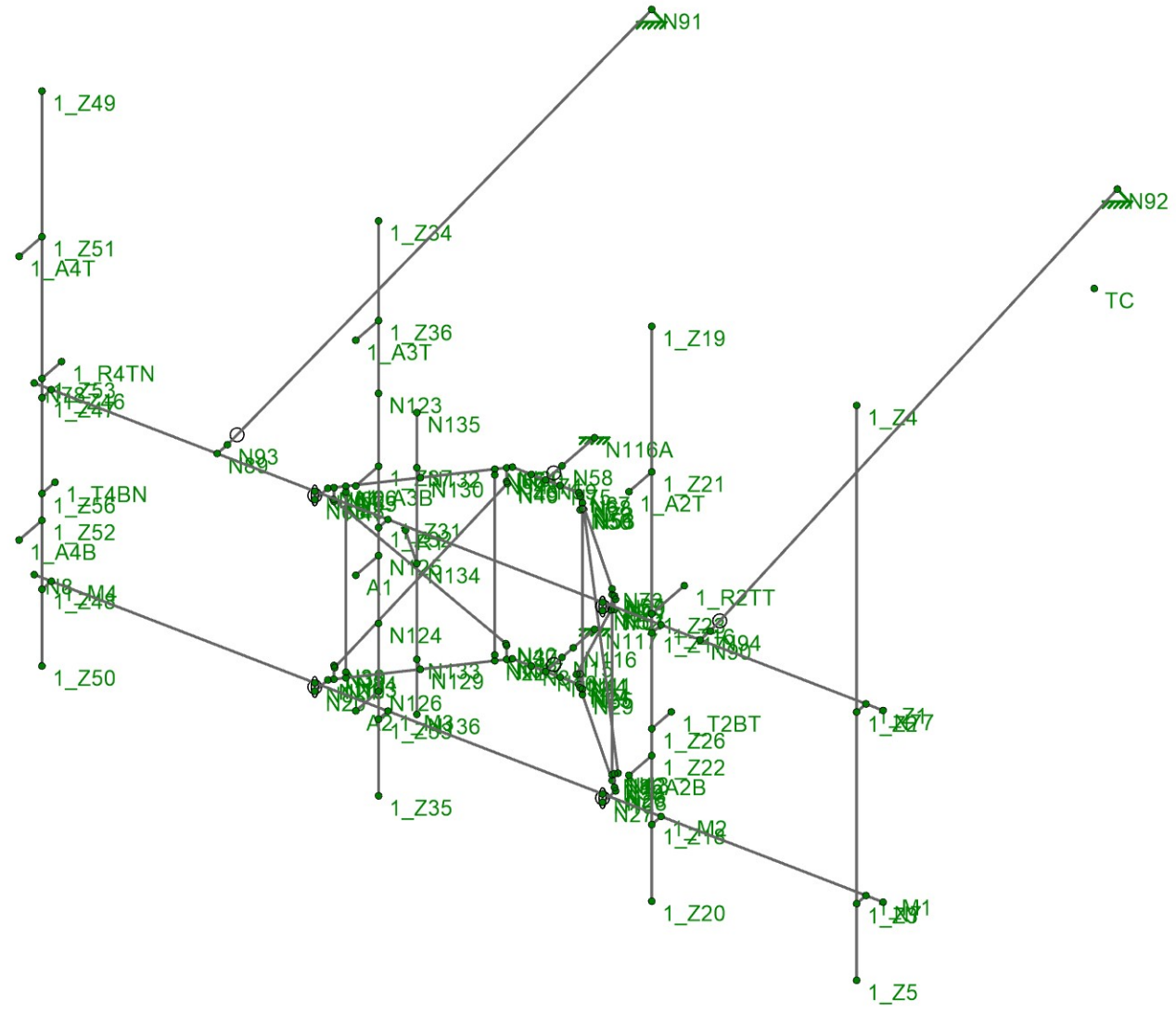
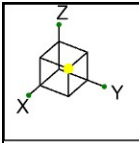
Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn	
1	M12	0.625"SR	0.6905	0	15	0.0251	0		15	6119.0461	9940.1904	103.5418	103.5418	1	H1-1b
2	M13	0.625"SR	0.6905	0	7	0.0251	0		7	6119.0461	9940.1904	103.5418	103.5418	1	H1-1b
3	M27	0.625"SR	0.6159	0	23	0.0226	0		23	6119.0461	9940.1904	103.5418	103.5418	1	H1-1b
4	M26	0.625"SR	0.6159	0	31	0.0226	0		31	6119.0461	9940.1904	103.5418	103.5418	1	H1-1b
5	M52	0.625"SR	0.3854	0	15	0.0347	0		28	12649.3752	15738.6348	163.9411	163.9411	1	H1-1b
6	M1	PIPE 2.5	0.3837	83.3684	15	0.1093	238.7368		3	5687.028	50715	3596.25	3596.25	1	H1-1b
7	M51	0.625"SR	0.3743	0	15	0.0328	0		29	12649.3752	15738.6348	163.9411	163.9411	1	H1-1b
8	M36	PIPE 2.5	0.3111	84.6316	11	0.0363	238.7368		18	5687.028	50715	3596.25	3596.25	1	H1-1b
9	M60	0.625"SR	0.2787	8	3	0.0662	0		11	12649.3752	15738.6348	163.9411	163.9411	1	H1-1b
10	M55	0.625"SR	0.2756	0	10	0.0674	0		11	12649.3752	15738.6348	163.9411	163.9411	1	H1-1b
11	M6	PIPE 2.0	0.1789	30.3158	11	0.0629	45.8526		15	20866.7334	32130	1871.625	1871.625	1	H1-1b
12	M10	PIPE 2.0	0.1685	3.0316	11	0.1502	68.9684		6	20866.7334	32130	1871.625	1871.625	1	H1-1b
13	M35	C10X15.3	0.15	0	11	0.0471	16	z	13	141342.1771	145152	4987.9959	42930	1	H1-1b
14	M44	PIPE 2.0	0.0767	23.2421	3	0.0617	83.8737		10	14916.0955	32130	1871.625	1871.625	1	H1-1b
15	M3	C10X15.3	0.0749	0	7	0.0621	16	y	16	141342.1771	145152	4987.9959	42930	1.0678	H1-1b

Beta And Gamma Sector



Envelope Only Solution

Telamon CLS	41124-13755484_C8_01-SHELTON-TRUMBULL	SK-1
PSP		Apr 04, 2022
41124-13755484_C8_01-01-MA	Rendered	41124-13755484_C8_01_AT&T Mobility.r3d

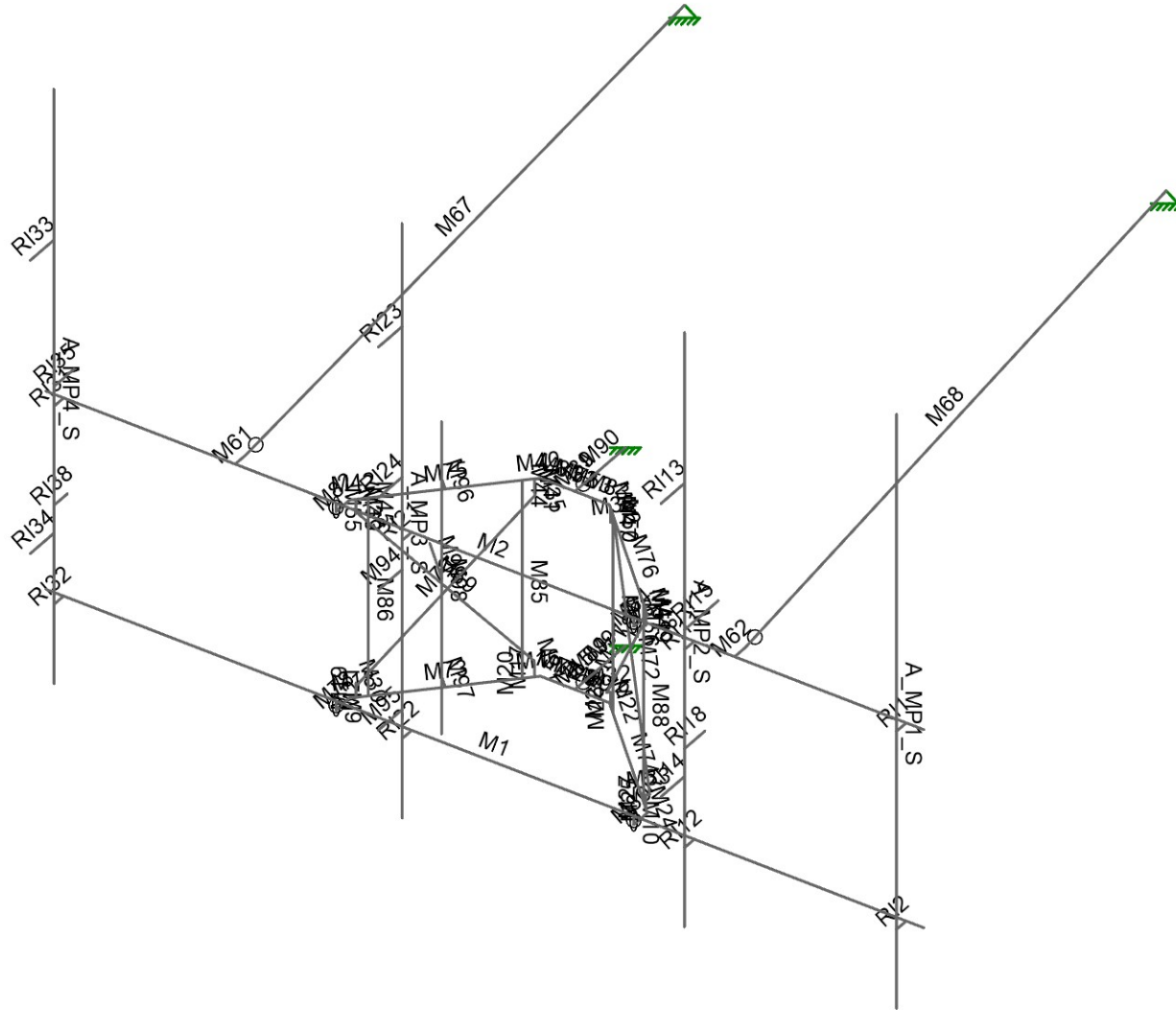
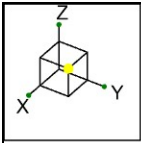


Envelope Only Solution

Telamon CLS
 PSP
 41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
 Joint Labels

SK-2
 Apr 04, 2022
 41124-13755484_C8_01_AT&T Mobility.r3d

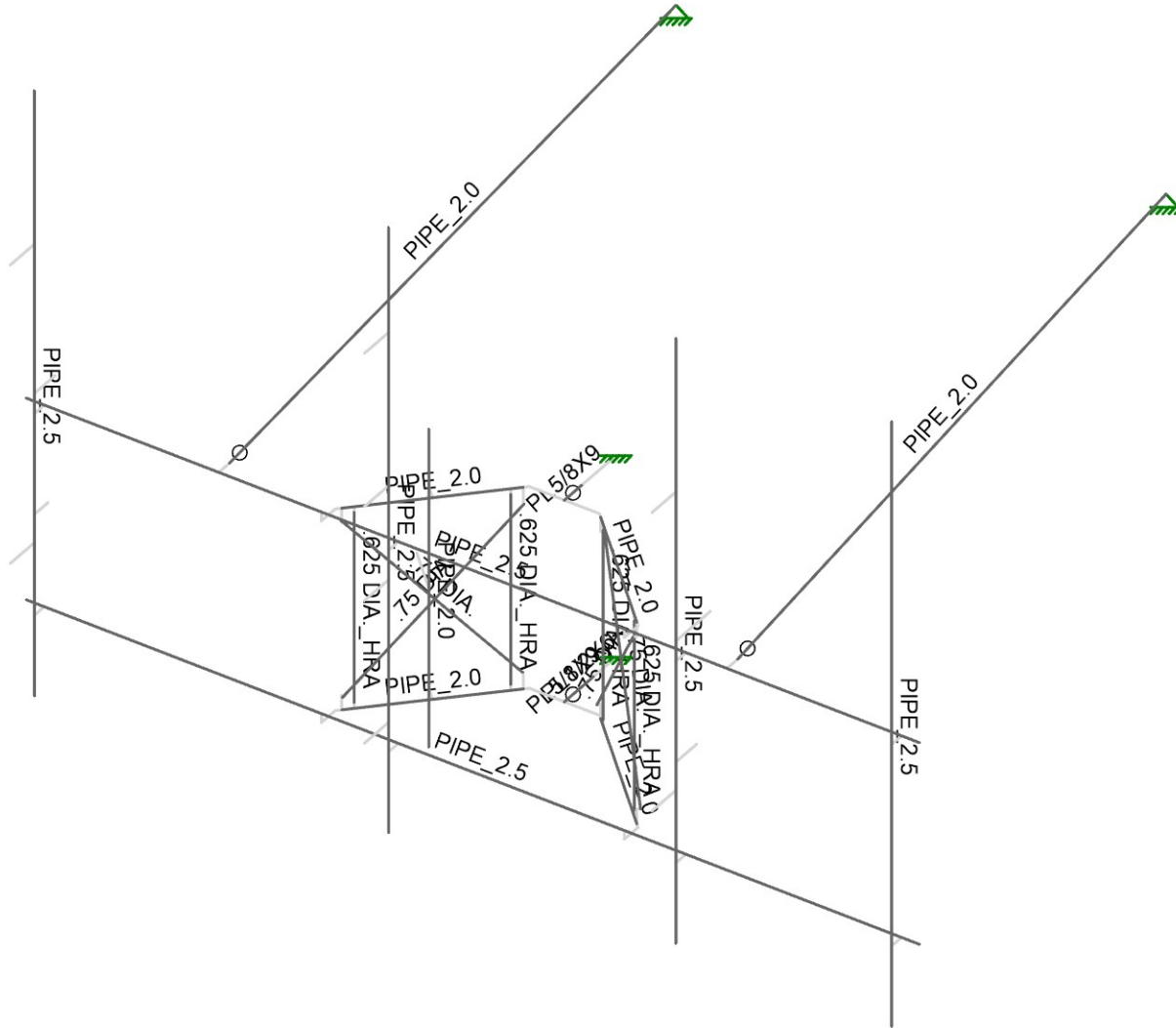
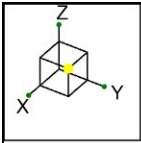


Envelope Only Solution

Telamon CLS
PSP
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
Member Labels

SK-3
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d

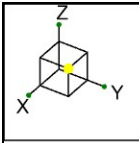


Envelope Only Solution

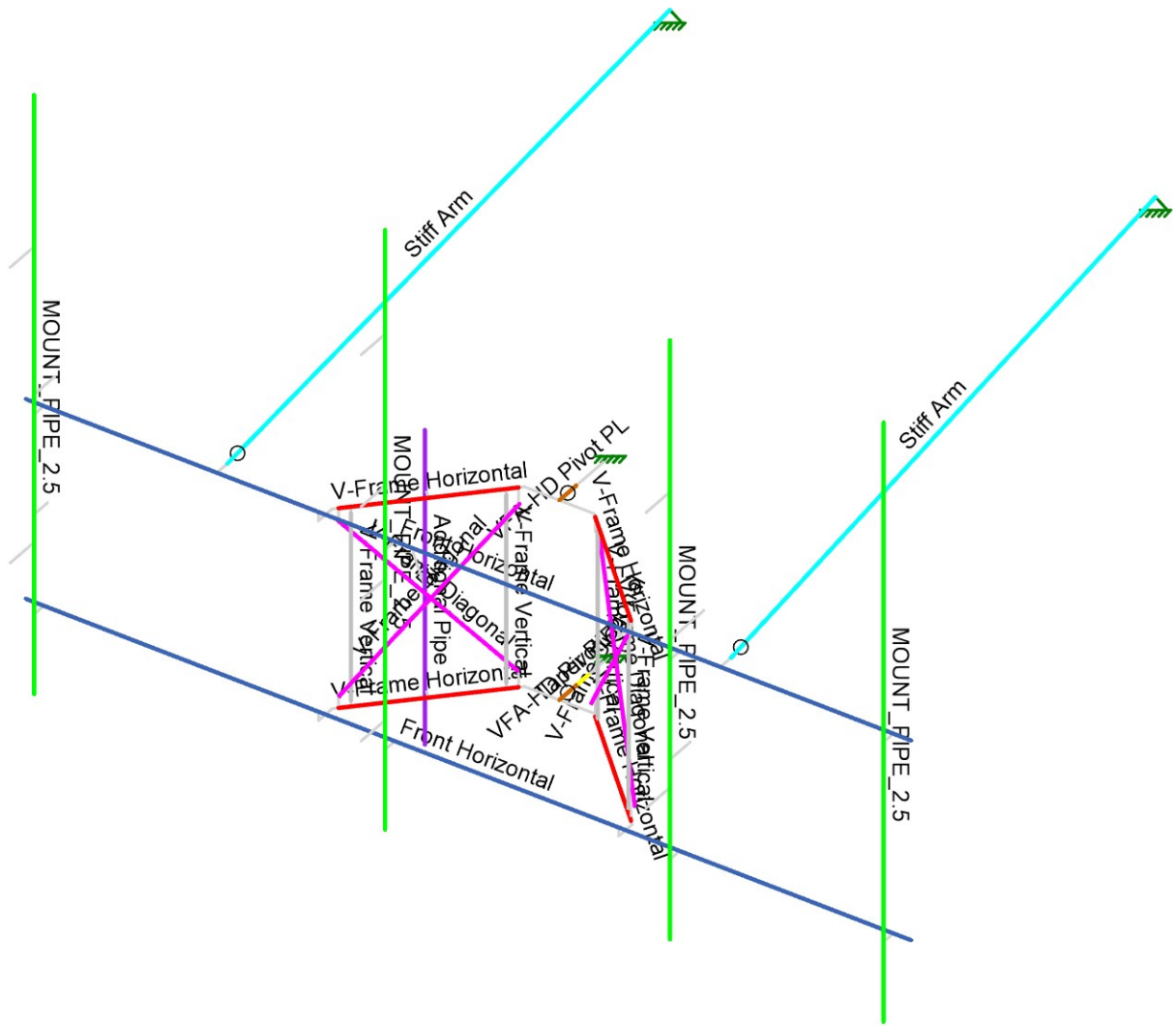
Telamon CLS
PSP
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
Member Shapes

SK-3.1
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d



- Section Sets
- Front Horizontal
 - MOUNT_PIPE_2.5
 - V-Frame Horizontal
 - V-Frame Vertical
 - V-Frame Diagonal
 - Stiff Arm
 - VFA-HD Pivot PL
 - Taper PL
 - Additional Pipe
 - RIGID

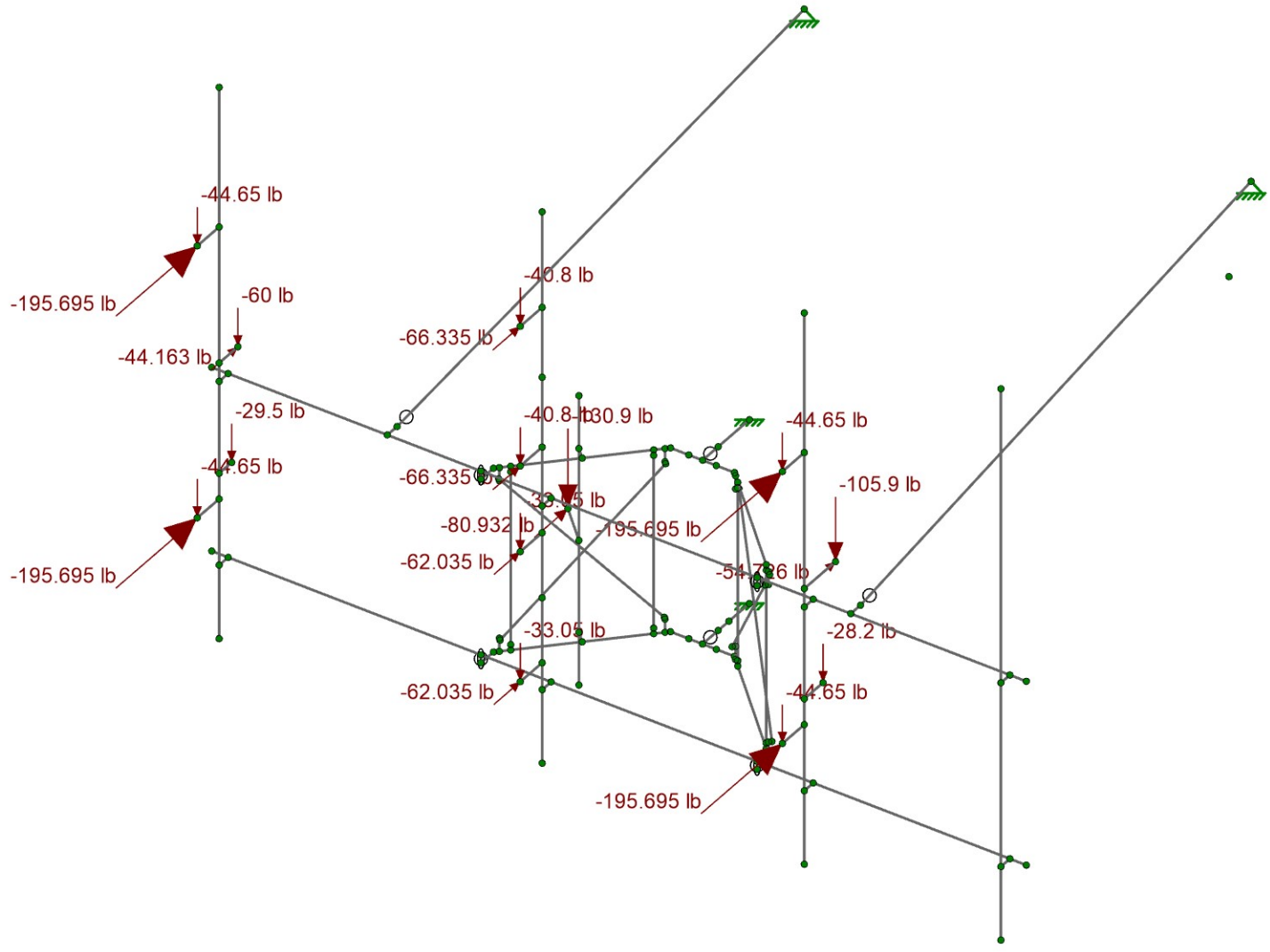
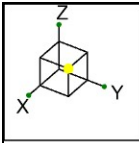


Envelope Only Solution

Telamon CLS
 PSP
 41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
 Section Sets

SK-4
 Apr 04, 2022
 41124-13755484_C8_01_AT&T Mobility.r3d

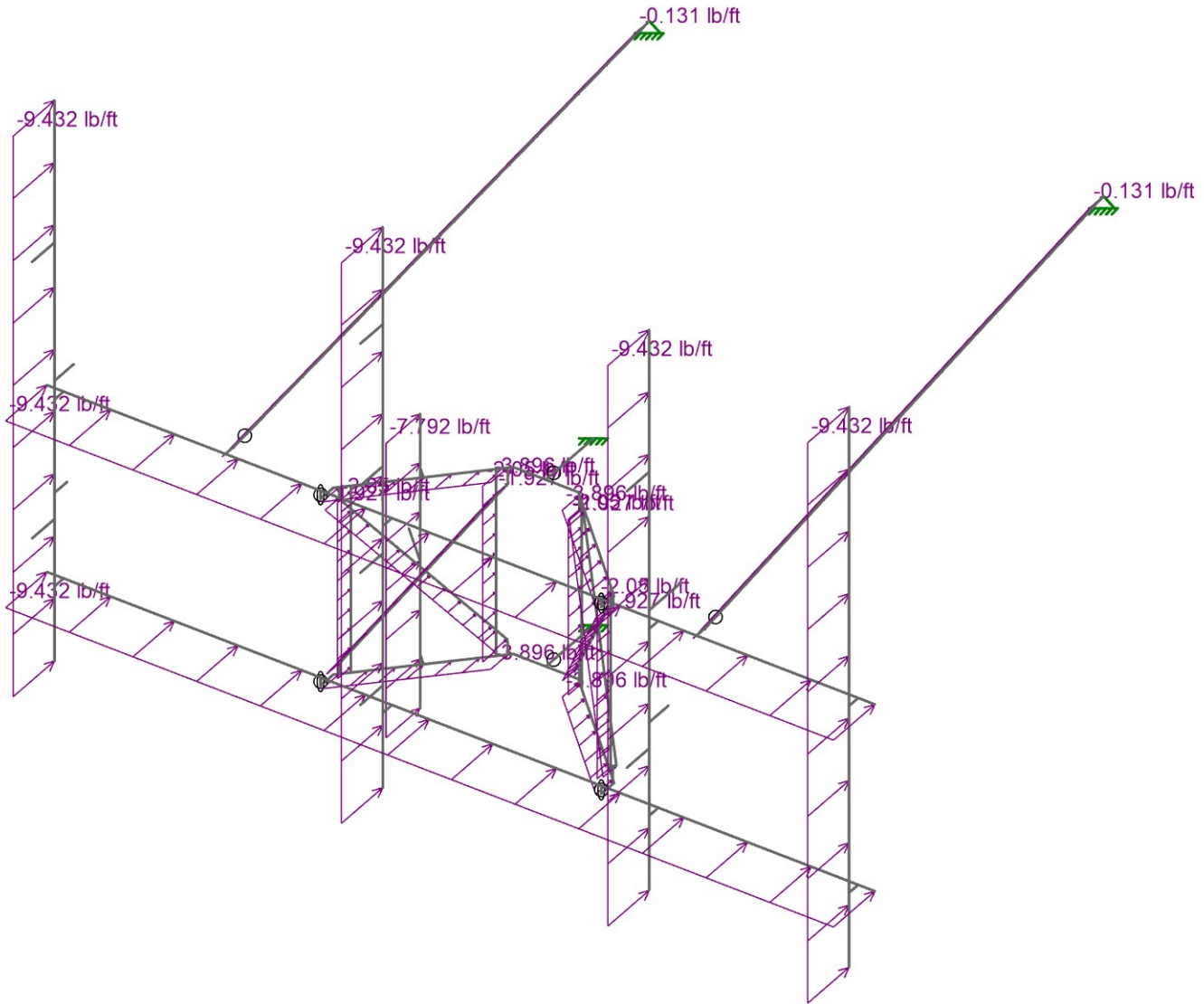
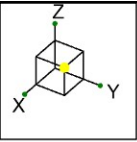


Loads: LC 1, DISPLAY (1.0D + 1.0W_0)
Envelope Only Solution

Telamon CLS
PSP
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL
Joint Loads – Dead and Normal Wind

SK-5
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d



Loads: BLC 5, Structure Wind 0
Envelope Only Solution

Telamon CLS

PSP

41124-13755484_C8_01-01-MA

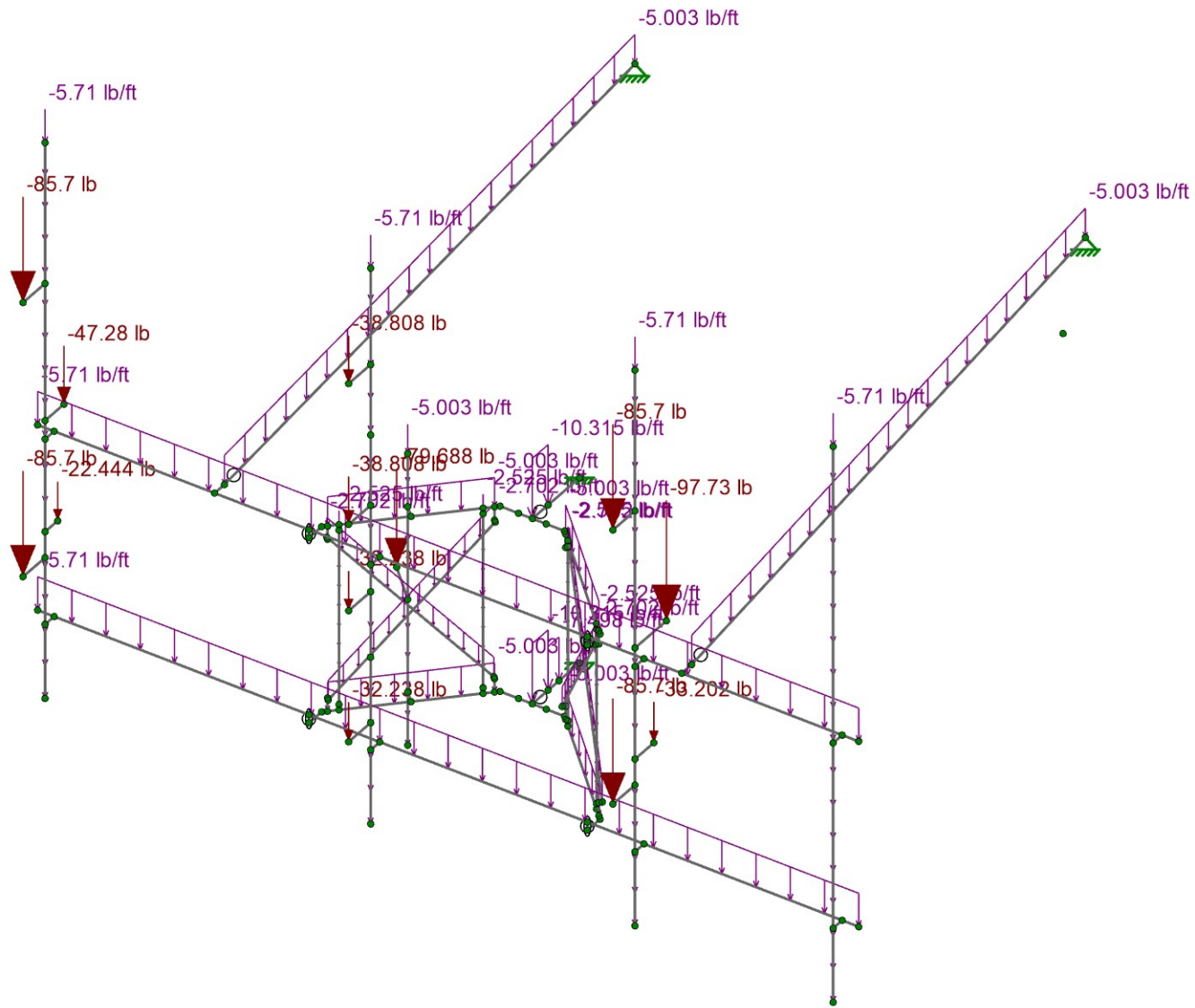
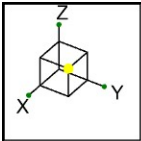
41124-13755484_C8_01-SHELTON-TRUMBULL

Distributed Load – Normal Wind

SK-6

Apr 04, 2022

41124-13755484_C8_01_AT&T Mobility.r3d

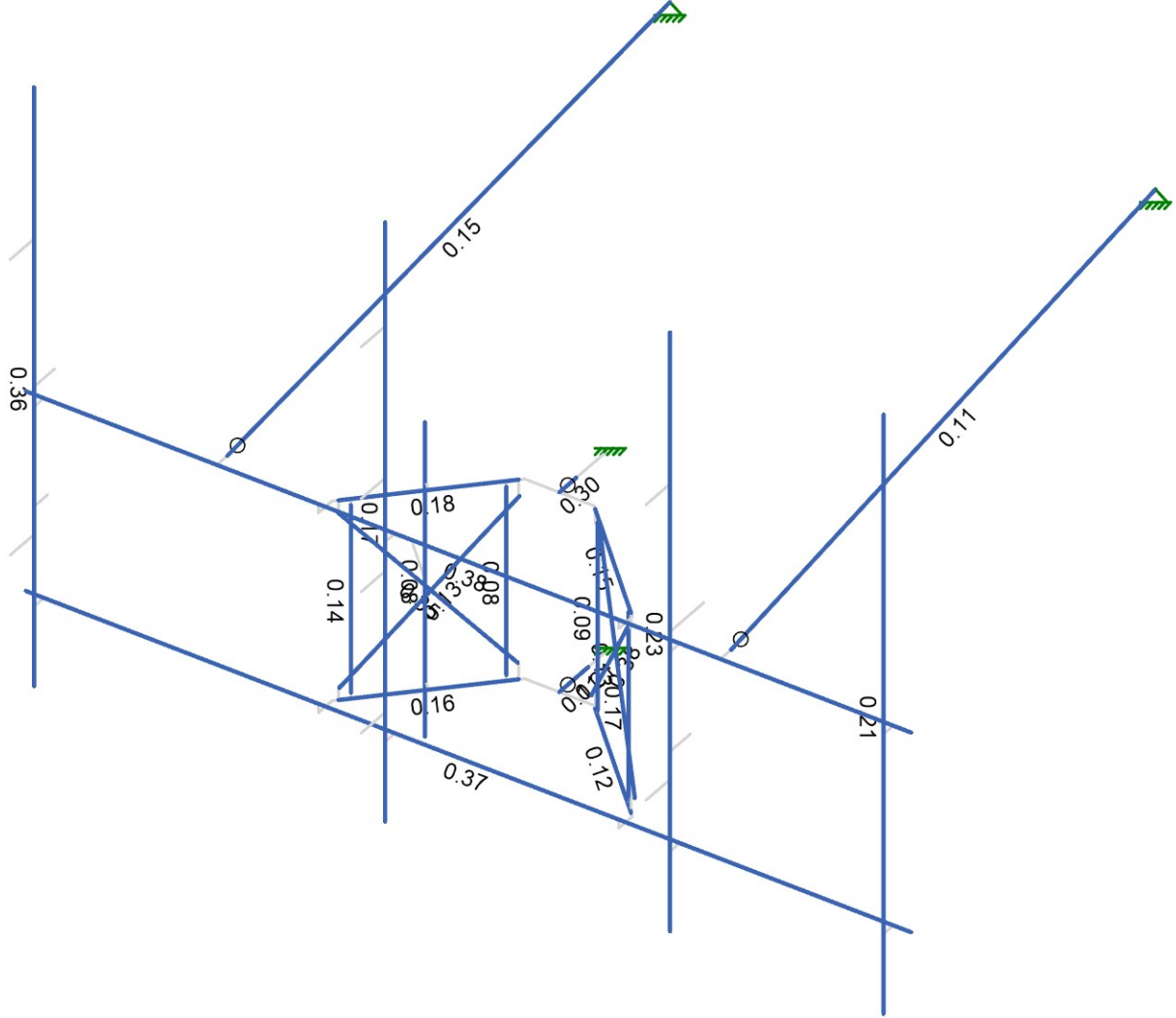
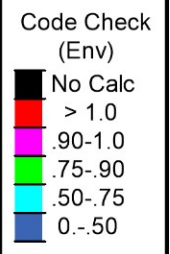
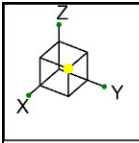


Loads: BLC 2, Ice Dead
Envelope Only Solution

Telamon CLS
PSP
41124-13755484_C8_01-01-MA

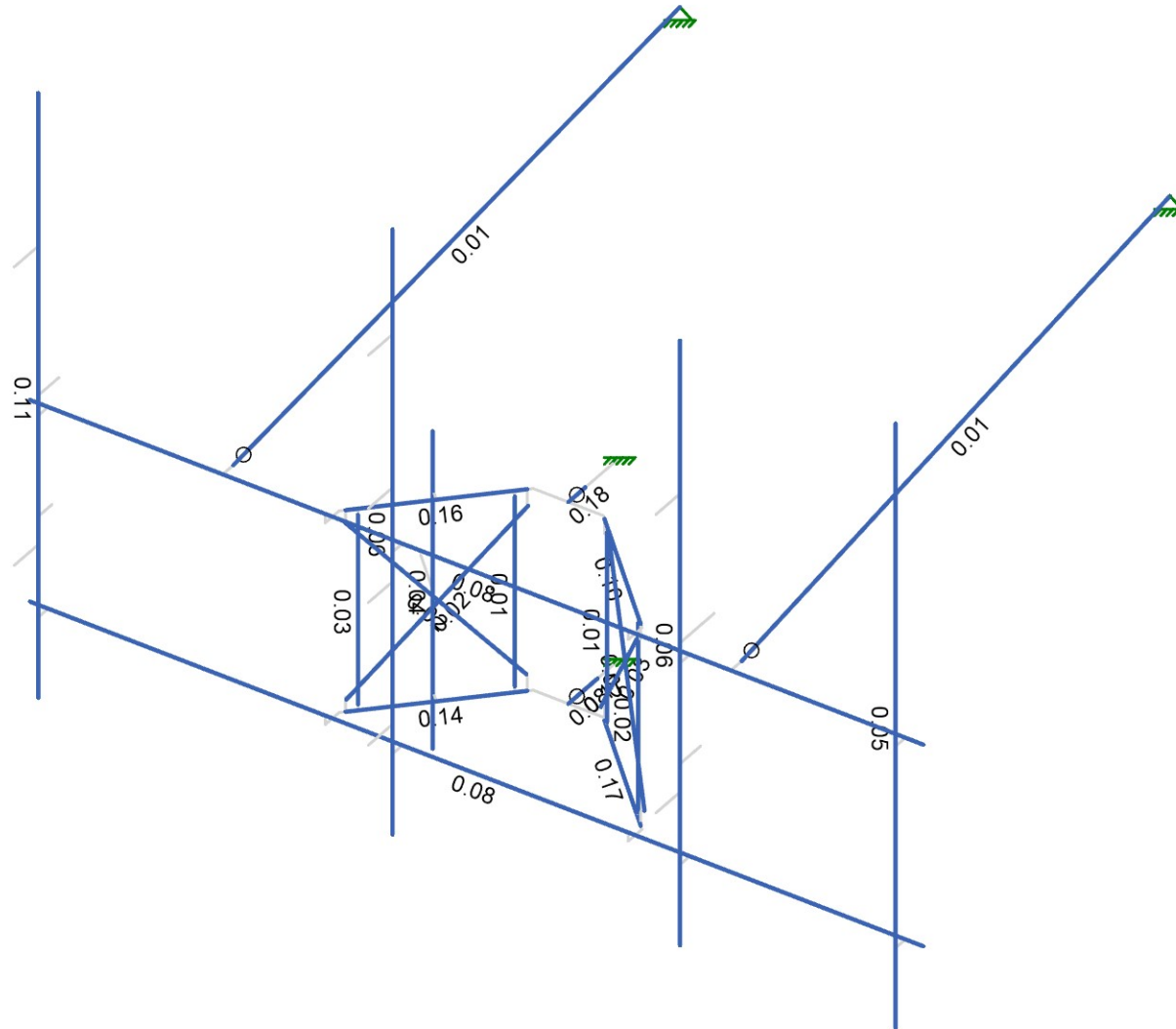
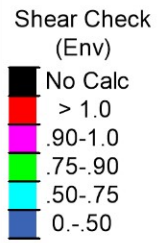
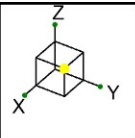
41124-13755484_C8_01-SHELTON-TRUMBULL
Ice Dead Loads

SK-7
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS	41124-13755484_C8_01-SHELTON-TRUMBULL	SK-8
PSP		Apr 04, 2022
41124-13755484_C8_01-01-MA	Envelope Member Unity Check Results – Bending	41124-13755484_C8_01_AT&T Mobility.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS
PSP
41124-13755484_C8_01-01-MA

41124-13755484_C8_01-SHELTON-TRUMBULL

Envelope Member Check Results – Shear

SK-9
Apr 04, 2022
41124-13755484_C8_01_AT&T Mobility.r3d

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed
1	Dead	DL	-1	15	
2	Ice Dead	RL		15	24
5	Structure Wind 0°	None			21
6	Structure Wind 30°	None			48
7	Structure Wind 45°	None			44
8	Structure Wind 60°	None			48
9	Structure Wind 90°	None			22
10	Structure Wind 120°	None			48
11	Structure Wind 135°	None			44
12	Structure Wind 150°	None			48
13	Structure Wind 180°	None			21
14	Structure Wind 210°	None			48
15	Structure Wind 225°	None			44
16	Structure Wind 240°	None			48
17	Structure Wind 270°	None			22
18	Structure Wind 300°	None			48
19	Structure Wind 315°	None			44
20	Structure Wind 330°	None			48
21	Structure Wind w/ Ice 0°	None			21
22	Structure Wind w/ Ice 30°	None			48
23	Structure Wind w/ Ice 45°	None			44
24	Structure Wind w/ Ice 60°	None			48
25	Structure Wind w/ Ice 90°	None			22
26	Structure Wind w/ Ice 120°	None			48
27	Structure Wind w/ Ice 135°	None			44
28	Structure Wind w/ Ice 150°	None			48
29	Structure Wind w/ Ice 180°	None			21
30	Structure Wind w/ Ice 210°	None			48
31	Structure Wind w/ Ice 225°	None			44
32	Structure Wind w/ Ice 240°	None			48
33	Structure Wind w/ Ice 270°	None			22
34	Structure Wind w/ Ice 300°	None			48
35	Structure Wind w/ Ice 315°	None			44
36	Structure Wind w/ Ice 330°	None			48
37	Antenna Wind 0°	None		13	
38	Antenna Wind 30°	None		30	
39	Antenna Wind 45°	None		30	
40	Antenna Wind 60°	None		30	
41	Antenna Wind 90°	None		15	
42	Antenna Wind 120°	None		30	
43	Antenna Wind 135°	None		30	
44	Antenna Wind 150°	None		30	
45	Antenna Wind 180°	None		13	
46	Antenna Wind 210°	None		30	
47	Antenna Wind 225°	None		30	
48	Antenna Wind 240°	None		30	
49	Antenna Wind 270°	None		15	
50	Antenna Wind 300°	None		30	
51	Antenna Wind 315°	None		30	
52	Antenna Wind 330°	None		30	
53	Antenna Wind w/ Ice 0°	None		13	
54	Antenna Wind w/ Ice 30°	None		30	
55	Antenna Wind w/ Ice 45°	None		30	
56	Antenna Wind w/ Ice 60°	None		30	
57	Antenna Wind w/ Ice 90°	None		15	

Basic Load Cases (Continued)

	BLC Description	Category	Z Gravity	Nodal	Distributed
58	Antenna Wind w/ Ice 120°	None		30	
59	Antenna Wind w/ Ice 135°	None		30	
60	Antenna Wind w/ Ice 150°	None		30	
61	Antenna Wind w/ Ice 180°	None		13	
62	Antenna Wind w/ Ice 210°	None		30	
63	Antenna Wind w/ Ice 225°	None		30	
64	Antenna Wind w/ Ice 240°	None		30	
65	Antenna Wind w/ Ice 270°	None		15	
66	Antenna Wind w/ Ice 300°	None		30	
67	Antenna Wind w/ Ice 315°	None		30	
68	Antenna Wind w/ Ice 330°	None		30	
69	Seismic X	ELX		15	24
70	Seismic Y	ELY		15	24
71	Seismic Z	ELZ		15	24
72	Maintenance Live 500 (1)	OL1		1	
73	Maintenance Live 500 (2)	OL2		1	
74	Maintenance Live 500 (3)	OL3		1	
75	Maintenance Live 500 (4)	OL4		1	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DISPLAY (1.0D + 1.0W 0°)	Yes	Y	DL	1	37	1				
2	1.4D	Yes	Y	DL	1.4						
3	1.2D + 1.0W 0°	Yes	Y	DL	1.2	5	1	37	1		
4	1.2D + 1.0W 30°	Yes	Y	DL	1.2	6	1	38	1		
5	1.2D + 1.0W 45°	Yes	Y	DL	1.2	7	1	39	1		
6	1.2D + 1.0W 60°	Yes	Y	DL	1.2	8	1	40	1		
7	1.2D + 1.0W 90°	Yes	Y	DL	1.2	9	1	41	1		
8	1.2D + 1.0W 120°	Yes	Y	DL	1.2	10	1	42	1		
9	1.2D + 1.0W 135°	Yes	Y	DL	1.2	11	1	43	1		
10	1.2D + 1.0W 150°	Yes	Y	DL	1.2	12	1	44	1		
11	1.2D + 1.0W 180°	Yes	Y	DL	1.2	13	-1	45	-1		
12	1.2D + 1.0W 210°	Yes	Y	DL	1.2	14	-1	46	-1		
13	1.2D + 1.0W 225°	Yes	Y	DL	1.2	15	-1	47	-1		
14	1.2D + 1.0W 240°	Yes	Y	DL	1.2	16	-1	48	-1		
15	1.2D + 1.0W 270°	Yes	Y	DL	1.2	17	-1	49	-1		
16	1.2D + 1.0W 300°	Yes	Y	DL	1.2	18	-1	50	-1		
17	1.2D + 1.0W 315°	Yes	Y	DL	1.2	19	-1	51	-1		
18	1.2D + 1.0W 330°	Yes	Y	DL	1.2	20	-1	52	-1		
19	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y	DL	1.2	21	1	53	1	RL	1
20	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y	DL	1.2	22	1	54	1	RL	1
21	1.2D + 1.0Di + 1.0Wi 45°	Yes	Y	DL	1.2	23	1	55	1	RL	1
22	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y	DL	1.2	24	1	56	1	RL	1
23	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y	DL	1.2	25	1	57	1	RL	1
24	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y	DL	1.2	26	1	58	1	RL	1
25	1.2D + 1.0Di + 1.0Wi 135°	Yes	Y	DL	1.2	27	1	59	1	RL	1
26	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y	DL	1.2	28	1	60	1	RL	1
27	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y	DL	1.2	29	-1	61	-1	RL	1
28	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y	DL	1.2	30	-1	62	-1	RL	1
29	1.2D + 1.0Di + 1.0Wi 225°	Yes	Y	DL	1.2	31	-1	63	-1	RL	1
30	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y	DL	1.2	32	-1	64	-1	RL	1
31	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y	DL	1.2	33	-1	65	-1	RL	1
32	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y	DL	1.2	34	-1	66	-1	RL	1
33	1.2D + 1.0Di + 1.0Wi 315°	Yes	Y	DL	1.2	35	-1	67	-1	RL	1
34	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y	DL	1.2	36	-1	68	-1	RL	1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
35	1.2D + 1.0Ev + 1.0Eh 0°	Yes	Y	DL	1.244	ELX	-1	ELY			
36	1.2D + 1.0Ev + 1.0Eh 30°	Yes	Y	DL	1.244	ELX	-0.866	ELY	0.5		
37	1.2D + 1.0Ev + 1.0Eh 45°	Yes	Y	DL	1.244	ELX	-0.707	ELY	0.707		
38	1.2D + 1.0Ev + 1.0Eh 60°	Yes	Y	DL	1.244	ELX	-0.5	ELY	0.866		
39	1.2D + 1.0Ev + 1.0Eh 90°	Yes	Y	DL	1.244	ELX		ELY	1		
40	1.2D + 1.0Ev + 1.0Eh 120°	Yes	Y	DL	1.244	ELX	0.5	ELY	0.866		
41	1.2D + 1.0Ev + 1.0Eh 135°	Yes	Y	DL	1.244	ELX	0.707	ELY	0.707		
42	1.2D + 1.0Ev + 1.0Eh 150°	Yes	Y	DL	1.244	ELX	0.866	ELY	0.5		
43	1.2D + 1.0Ev + 1.0Eh 180°	Yes	Y	DL	1.244	ELX	1	ELY			
44	1.2D + 1.0Ev + 1.0Eh 210°	Yes	Y	DL	1.244	ELX	0.866	ELY	-0.5		
45	1.2D + 1.0Ev + 1.0Eh 225°	Yes	Y	DL	1.244	ELX	0.707	ELY	-0.707		
46	1.2D + 1.0Ev + 1.0Eh 240°	Yes	Y	DL	1.244	ELX	0.5	ELY	-0.866		
47	1.2D + 1.0Ev + 1.0Eh 270°	Yes	Y	DL	1.244	ELX		ELY	-1		
48	1.2D + 1.0Ev + 1.0Eh 300°	Yes	Y	DL	1.244	ELX	-0.5	ELY	-0.866		
49	1.2D + 1.0Ev + 1.0Eh 315°	Yes	Y	DL	1.244	ELX	-0.707	ELY	-0.707		
50	1.2D + 1.0Ev + 1.0Eh 330°	Yes	Y	DL	1.244	ELX	-0.866	ELY	-0.5		
51	0.9D - 1.0Ev + 1.0Eh 0°	Yes	Y	DL	0.856	ELX	-1	ELY			
52	0.9D - 1.0Ev + 1.0Eh 30°	Yes	Y	DL	0.856	ELX	-0.866	ELY	0.5		
53	0.9D - 1.0Ev + 1.0Eh 45°	Yes	Y	DL	0.856	ELX	-0.707	ELY	0.707		
54	0.9D - 1.0Ev + 1.0Eh 60°	Yes	Y	DL	0.856	ELX	-0.5	ELY	0.866		
55	0.9D - 1.0Ev + 1.0Eh 90°	Yes	Y	DL	0.856	ELX		ELY	1		
56	0.9D - 1.0Ev + 1.0Eh 120°	Yes	Y	DL	0.856	ELX	0.5	ELY	0.866		
57	0.9D - 1.0Ev + 1.0Eh 135°	Yes	Y	DL	0.856	ELX	0.707	ELY	0.707		
58	0.9D - 1.0Ev + 1.0Eh 150°	Yes	Y	DL	0.856	ELX	0.866	ELY	0.5		
59	0.9D - 1.0Ev + 1.0Eh 180°	Yes	Y	DL	0.856	ELX	1	ELY			
60	0.9D - 1.0Ev + 1.0Eh 210°	Yes	Y	DL	0.856	ELX	0.866	ELY	-0.5		
61	0.9D - 1.0Ev + 1.0Eh 225°	Yes	Y	DL	0.856	ELX	0.707	ELY	-0.707		
62	0.9D - 1.0Ev + 1.0Eh 240°	Yes	Y	DL	0.856	ELX	0.5	ELY	-0.866		
63	0.9D - 1.0Ev + 1.0Eh 270°	Yes	Y	DL	0.856	ELX		ELY	-1		
64	0.9D - 1.0Ev + 1.0Eh 300°	Yes	Y	DL	0.856	ELX	-0.5	ELY	-0.866		
65	0.9D - 1.0Ev + 1.0Eh 315°	Yes	Y	DL	0.856	ELX	-0.707	ELY	-0.707		
66	0.9D - 1.0Ev + 1.0Eh 330°	Yes	Y	DL	0.856	ELX	-0.866	ELY	-0.5		
67	1.2D + 1.5Lm 1 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.068	37	0.068	OL1	1.5
68	1.2D + 1.5Lm 1 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.068	38	0.068	OL1	1.5
69	1.2D + 1.5Lm 1 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.068	39	0.068	OL1	1.5
70	1.2D + 1.5Lm 1 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.068	40	0.068	OL1	1.5
71	1.2D + 1.5Lm 1 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.068	41	0.068	OL1	1.5
72	1.2D + 1.5Lm 1 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.068	42	0.068	OL1	1.5
73	1.2D + 1.5Lm 1 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.068	43	0.068	OL1	1.5
74	1.2D + 1.5Lm 1 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.068	44	0.068	OL1	1.5
75	1.2D + 1.5Lm 1 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.068	45	-0.068	OL1	1.5
76	1.2D + 1.5Lm 1 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.068	46	-0.068	OL1	1.5
77	1.2D + 1.5Lm 1 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.068	47	-0.068	OL1	1.5
78	1.2D + 1.5Lm 1 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.068	48	-0.068	OL1	1.5
79	1.2D + 1.5Lm 1 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.068	49	-0.068	OL1	1.5
80	1.2D + 1.5Lm 1 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.068	50	-0.068	OL1	1.5
81	1.2D + 1.5Lm 1 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.068	51	-0.068	OL1	1.5
82	1.2D + 1.5Lm 1 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.068	52	-0.068	OL1	1.5
83	1.2D + 1.5Lm 2 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.068	37	0.068	OL2	1.5
84	1.2D + 1.5Lm 2 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.068	38	0.068	OL2	1.5
85	1.2D + 1.5Lm 2 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.068	39	0.068	OL2	1.5
86	1.2D + 1.5Lm 2 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.068	40	0.068	OL2	1.5
87	1.2D + 1.5Lm 2 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.068	41	0.068	OL2	1.5
88	1.2D + 1.5Lm 2 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.068	42	0.068	OL2	1.5
89	1.2D + 1.5Lm 2 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.068	43	0.068	OL2	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
90	1.2D + 1.5Lm 2 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.068	44	0.068	OL2	1.5
91	1.2D + 1.5Lm 2 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.068	45	-0.068	OL2	1.5
92	1.2D + 1.5Lm 2 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.068	46	-0.068	OL2	1.5
93	1.2D + 1.5Lm 2 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.068	47	-0.068	OL2	1.5
94	1.2D + 1.5Lm 2 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.068	48	-0.068	OL2	1.5
95	1.2D + 1.5Lm 2 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.068	49	-0.068	OL2	1.5
96	1.2D + 1.5Lm 2 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.068	50	-0.068	OL2	1.5
97	1.2D + 1.5Lm 2 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.068	51	-0.068	OL2	1.5
98	1.2D + 1.5Lm 2 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.068	52	-0.068	OL2	1.5
99	1.2D + 1.5Lm 3 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.068	37	0.068	OL3	1.5
100	1.2D + 1.5Lm 3 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.068	38	0.068	OL3	1.5
101	1.2D + 1.5Lm 3 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.068	39	0.068	OL3	1.5
102	1.2D + 1.5Lm 3 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.068	40	0.068	OL3	1.5
103	1.2D + 1.5Lm 3 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.068	41	0.068	OL3	1.5
104	1.2D + 1.5Lm 3 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.068	42	0.068	OL3	1.5
105	1.2D + 1.5Lm 3 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.068	43	0.068	OL3	1.5
106	1.2D + 1.5Lm 3 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.068	44	0.068	OL3	1.5
107	1.2D + 1.5Lm 3 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.068	45	-0.068	OL3	1.5
108	1.2D + 1.5Lm 3 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.068	46	-0.068	OL3	1.5
109	1.2D + 1.5Lm 3 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.068	47	-0.068	OL3	1.5
110	1.2D + 1.5Lm 3 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.068	48	-0.068	OL3	1.5
111	1.2D + 1.5Lm 3 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.068	49	-0.068	OL3	1.5
112	1.2D + 1.5Lm 3 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.068	50	-0.068	OL3	1.5
113	1.2D + 1.5Lm 3 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.068	51	-0.068	OL3	1.5
114	1.2D + 1.5Lm 3 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.068	52	-0.068	OL3	1.5
115	1.2D + 1.5Lm 4 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.068	37	0.068	OL4	1.5
116	1.2D + 1.5Lm 4 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.068	38	0.068	OL4	1.5
117	1.2D + 1.5Lm 4 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.068	39	0.068	OL4	1.5
118	1.2D + 1.5Lm 4 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.068	40	0.068	OL4	1.5
119	1.2D + 1.5Lm 4 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.068	41	0.068	OL4	1.5
120	1.2D + 1.5Lm 4 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.068	42	0.068	OL4	1.5
121	1.2D + 1.5Lm 4 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.068	43	0.068	OL4	1.5
122	1.2D + 1.5Lm 4 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.068	44	0.068	OL4	1.5
123	1.2D + 1.5Lm 4 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.068	45	-0.068	OL4	1.5
124	1.2D + 1.5Lm 4 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.068	46	-0.068	OL4	1.5
125	1.2D + 1.5Lm 4 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.068	47	-0.068	OL4	1.5
126	1.2D + 1.5Lm 4 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.068	48	-0.068	OL4	1.5
127	1.2D + 1.5Lm 4 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.068	49	-0.068	OL4	1.5
128	1.2D + 1.5Lm 4 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.068	50	-0.068	OL4	1.5
129	1.2D + 1.5Lm 4 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.068	51	-0.068	OL4	1.5
130	1.2D + 1.5Lm 4 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.068	52	-0.068	OL4	1.5

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁵ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
3	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	Front Horizontal	PIPE 2.5	Beam	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	MOUNT PIPE 2.5	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	V-Frame Horizontal	PIPE 2.0	Beam	None	Q235	Typical	1.02	0.627	0.627	1.25
4	V-Frame Vertical	.625 DIA. HRA	Beam	None	Q235	Typical	0.307	0.007	0.007	0.015
5	V-Frame Diagonal	.75 DIA.	Beam	None	Q235	Typical	0.442	0.016	0.016	0.031
6	Stiff Arm	PIPE 2.0	Beam	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	VFA-HD Pivot PL	PL5/8X9	Beam	None	Q235	Typical	5.625	0.183	37.969	0.7
8	Taper PL	PL1/2X6	Beam	None	Q235	Typical	3	0.063	9	0.237
9	Additional Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
1	M1	Front Horizontal	174	59	69				N/A	N/A	Lateral
2	M2	Front Horizontal	174	59	69				N/A	N/A	Lateral
3	M15	VFA-HD Pivot PL	5						N/A	N/A	Lateral
4	M39	VFA-HD Pivot PL	5						N/A	N/A	Lateral
5	M67	Stiff Arm	128.608						N/A	N/A	Lateral
6	M68	Stiff Arm	128.608						N/A	N/A	Lateral
7	M69	V-Frame Diagonal	45.538				0.65	0.65	N/A	N/A	Lateral
8	M70	V-Frame Diagonal	45.538				0.65	0.65	N/A	N/A	Lateral
9	M71	V-Frame Diagonal	45.538				0.65	0.65	N/A	N/A	Lateral
10	M72	V-Frame Diagonal	45.538				0.65	0.65	N/A	N/A	Lateral
11	M73	V-Frame Horizontal	30		15				N/A	N/A	Lateral
12	M74	V-Frame Horizontal	30						N/A	N/A	Lateral
13	M75	V-Frame Horizontal	30		15				N/A	N/A	Lateral
14	M76	V-Frame Horizontal	30						N/A	N/A	Lateral
15	M85	V-Frame Vertical	37.625				0.65	0.65	N/A	N/A	Lateral
16	M86	V-Frame Vertical	37.625				0.65	0.65	N/A	N/A	Lateral
17	M87	V-Frame Vertical	37.625				0.65	0.65	N/A	N/A	Lateral
18	M88	V-Frame Vertical	37.625				0.65	0.65	N/A	N/A	Lateral
19	M89	Taper PL	3.46						N/A	N/A	Lateral
20A	MP1 S	MOUNT PIPE 2.5	120				Lbyy		N/A	N/A	Lateral
21A	MP2 S	MOUNT PIPE 2.5	120				Lbyy		N/A	N/A	Lateral
22A	MP3 S	MOUNT PIPE 2.5	120				Lbyy		N/A	N/A	Lateral
23A	MP4 S	MOUNT PIPE 2.5	120				Lbyy		N/A	N/A	Lateral
24	M98	Additional Pipe	63				Lbyy		N/A	N/A	Lateral

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	M1			Yes	Default	None
2	M2			Yes	Default	None
3	M9	AII PIN		Yes	** NA **	None
4	M10	AII PIN		Yes	** NA **	None
5	M15	O O O O O X		Yes	Default	None
6	M16			Yes	** NA **	None
7	M17			Yes	** NA **	None
8	M18			Yes	** NA **	None
9	M19			Yes	** NA **	None
10	M20			Yes	** NA **	None
11	M21			Yes	** NA **	None
12	M22			Yes	** NA **	None
13	M23			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
14	M24			Yes	** NA **	None
15	M25			Yes	** NA **	None
16	M26			Yes	** NA **	None
17	M27			Yes	** NA **	None
18	M28			Yes	** NA **	None
19	M29			Yes	** NA **	None
20	M30			Yes	** NA **	None
21	M31			Yes	** NA **	None
22	M32			Yes	** NA **	None
23	M33			Yes	** NA **	None
24	M35			Yes	** NA **	None
25	M36			Yes	** NA **	None
26	M37			Yes	** NA **	None
27	M38			Yes	** NA **	None
28	M39	OOOOOX		Yes	Default	None
29	M40			Yes	** NA **	None
30	M41			Yes	** NA **	None
31	M42			Yes	** NA **	None
32	M43			Yes	** NA **	None
33	M44			Yes	** NA **	None
34	M45			Yes	** NA **	None
35	M46			Yes	** NA **	None
36	M47			Yes	** NA **	None
37	M48			Yes	** NA **	None
38	M49			Yes	** NA **	None
39	M50			Yes	** NA **	None
40	M51			Yes	** NA **	None
41	M52			Yes	** NA **	None
42	M53			Yes	** NA **	None
43	M55	AIPIN		Yes	** NA **	None
44	M56	AIPIN		Yes	** NA **	None
45	M61			Yes	** NA **	None
46	M62			Yes	** NA **	None
47	M67		BenPIN	Yes	N/A	None
48	M68		BenPIN	Yes	N/A	None
49	M69			Yes	N/A	None
50	M70			Yes	N/A	None
51	M71			Yes	N/A	None
52	M72			Yes	N/A	None
53	M73			Yes	Default	None
54	M74			Yes	N/A	None
55	M75			Yes	Default	None
56	M76			Yes	N/A	None
57	M77			Yes	** NA **	None
58	M78			Yes	** NA **	None
59	M79			Yes	** NA **	None
60	M80			Yes	** NA **	None
61	M81			Yes	** NA **	None
62	M82			Yes	** NA **	None
63	M83			Yes	** NA **	None
64	M84			Yes	** NA **	None
65	M85			Yes	N/A	None
66	M86			Yes	N/A	None
67	M87			Yes	N/A	None
68	M88			Yes	N/A	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
69	M89			Yes	Default	None
70	M90			Yes	** NA **	None
71	M91			Yes	** NA **	None
72	RI2			Yes	** NA **	None
73	RI1			Yes	** NA **	None
74	A MP1 S			Yes	** NA **	None
75	RI12			Yes	** NA **	None
76	RI11			Yes	** NA **	None
77	A MP2 S			Yes	** NA **	None
78	RI13			Yes	** NA **	None
79	RI14			Yes	** NA **	None
80	RI15			Yes	** NA **	None
81	RI18			Yes	** NA **	None
82	RI22			Yes	** NA **	None
83	RI21			Yes	** NA **	None
84	A MP3 S			Yes	** NA **	None
85	RI23			Yes	** NA **	None
86	RI24			Yes	** NA **	None
87	RI32			Yes	** NA **	None
88	RI31			Yes	** NA **	None
89	A MP4 S			Yes	** NA **	None
90	RI33			Yes	** NA **	None
91	RI34			Yes	** NA **	None
92	RI35			Yes	** NA **	None
93	RI38			Yes	** NA **	None
94	M94			Yes	** NA **	None
95	M95			Yes	** NA **	None
96	M96			Yes	** NA **	None
97	M97			Yes	** NA **	None
98	M98			Yes	** NA **	None
99	M99			Yes	** NA **	None

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N91	Reaction	Reaction	Reaction			
2	N92	Reaction	Reaction	Reaction			
3	N58						
4	N15						
5	N116						
6	N116A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N117	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N91	max	1245.2383	18	35.8218	15	190.7012	10	0	130	0	130	0	130
2		min	-1302.6301	10	-35.4564	7	-139.4246	18	0	1	0	1	0	1
3	N92	max	907.9895	4	35.8133	15	145.8785	12	0	130	0	130	0	130
4		min	-960.6522	12	-36.1923	7	-94.8462	4	0	1	0	1	0	1
5	N116A	max	-637.4157	53	1869.0258	127	2293.6377	19	63.7498	82	-923.3103	60	1557.5215	127
6		min	-1829.9059	19	-1333.8891	71	820.4935	60	-267.0384	122	-2585.6836	19	-1111.5742	71
7	N117	max	2028.1444	19	1242.9532	73	570.5871	19	22.4562	82	-145.2733	11	1035.856	73
8		min	657.2634	59	-1778.2151	129	162.1182	11	-89.696	122	-490.1421	19	-1481.9207	129
9	Totals:	max	2007.7557	3	1437.7156	15	2915.3725	19						

Envelope Node Reactions (Continued)

Node Label	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
10	min	-2007.7679	11	-1437.7233	7	1061.7938	59					

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

Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn	
1	M71	.75 DIA.	0.3783	0	68	0.0256	0	69	4004.8349	13916.259	173.9584	173.9584	1	H1-1a	
2	M2	PIPE 2.5	0.3756	37.5474	11	0.083	117.2211	82	38692.8644	50715	3596.25	3596.25	1	H1-1b	
3	M1	PIPE 2.5	0.3716	3.6632	129	0.0762	117.2211	76	38692.8644	50715	3596.25	3596.25	1	H1-1b	
4	A MP4 S	PIPE 2.5	0.3575	103.5789	130	0.1116	64.4211	3	22373.407	50715	3596.25	3596.25	1	H1-1b	
5	M69	.75 DIA.	0.3463	0	128	0.0231	0	127	4004.8349	13916.259	173.9584	173.9584	1	H1-1a	
6	M39	PL5/8X9	0.2974	0	19	0.1772	0	y	127	170357.7349	177187.5	2307.1283	33222.6563	1.6702	H1-1b
7	A MP2 S	PIPE 2.5	0.2274	64.4211	73	0.0611	89.0526	77	22373.407	50715	3596.25	3596.25	1	H1-1b	
8	A MP1 S	PIPE 2.5	0.2084	103.5789	70	0.0486	103.5789	67	22373.407	50715	3596.25	3596.25	1	H1-1b	
9	M89	PL1/2X6	0.2061	0	19	0.167	3.46	y	127	91761.124	94500	984.375	11812.5	1.6632	H1-1b
10	M75	PIPE 2.0	0.1836	2.0526	128	0.1628	27.7895	130	29810.2924	32130	1871.625	1871.625	1	H1-1b	
11	M88	.625 DIA. HRA	0.1741	37.625	67	0.0215	37.625	70	2829.0585	9664.074	100.6656	100.6656	1	H1-1b	
12	A MP3 S	PIPE 2.5	0.1676	64.4211	82	0.0587	64.4211	11	22373.407	50715	3596.25	3596.25	1	H1-1b	
13	M73	PIPE 2.0	0.1619	0	128	0.1356	30	128	29810.2924	32130	1871.625	1871.625	1	H1-1b	
14	M76	PIPE 2.0	0.1528	2.0526	69	0.0984	0	68	29810.2924	32130	1871.625	1871.625	1	H1-1b	
15	M67	PIPE 2.0	0.1463	0	18	0.0053	128.6084	23	8563.8386	32130	1871.625	1871.625	1	H1-1b*	
16	M86	.625 DIA. HRA	0.1381	0	115	0.0253	37.625	127	2829.0585	9664.074	100.6656	100.6656	1	H1-1b	
17	M72	.75 DIA.	0.1337	45.5384	68	0.0213	45.5384	82	4004.8349	13916.259	173.9584	173.9584	1	H1-1b	
18	M70	.75 DIA.	0.1264	0	128	0.0193	45.5384	122	4004.8349	13916.259	173.9584	173.9584	1	H1-1b*	
19	M74	PIPE 2.0	0.1249	0	71	0.1674	2.0526	70	29810.2924	32130	1871.625	1871.625	1	H1-1b	
20	M15	PL5/8X9	0.108	5	19	0.0758	5	y	127	170357.7349	177187.5	2307.1283	33222.6563	1.6702	H1-1b
21	M68	PIPE 2.0	0.1066	0	4	0.0053	128.6084	31	8563.8386	32130	1871.625	1871.625	1	H1-1b*	
22	M87	.625 DIA. HRA	0.0921	0	29	0.0087	0	10	2829.0585	9664.074	100.6656	100.6656	1	H1-1b	
23	M85	.625 DIA. HRA	0.0832	0	28	0.0087	0	10	2829.0585	9664.074	100.6656	100.6656	1	H1-1b	
24	M98	PIPE 2.0	0.0754	31.5	34	0.043	11.6053	124	23088.1709	32130	1871.625	1871.625	1	H1-1b	

Description	LC	Tensile Load, T_u (kips)	Shear Load, V_u (kips)	Bolt Diameter (in)	Number of Bolts	Shear Planes per Bolt	U-Bolt?	Bolt Grade	Connected Member Thickness (in)	Connected Member Edge Clear Distance (in)	Connected Member Ultimate Strength, F_u (ksi)	Bolt Tensile Usage	Bolt Shear Usage	Combined Tensile & Shear Usage	Member Bearing Usage
Top MP Connection	Env.	0.590	0.302	0.375	1	1	No	A36	0.25	0.75	58	16%	14%	-	3%
Bottom MP Connection	Env.	0.669	1.022	0.375	1	1	No	A36	0.25	0.75	58	19%	47%	-	10%

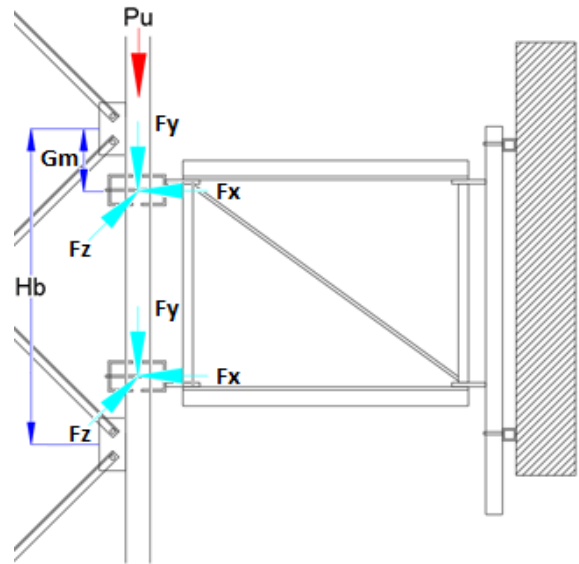
Tower Leg Reaction Analysis

Applied Loads from RISA 3D

Controlling Load Combination		11		
Leg Node Label(s)	n21	n20		
Node Elevations	72	0		in
Force in X, F_x	0.0	0.0		lbs
Force in Y, F_y	85.1	148.4		lbs
Force in Z, F_z	-270.2	-80.0		lbs
Moment about X, M_x	-270.8	274.3		lb-ft
Moment about Y, M_y	0.0	0.0		lb-ft
Moment about Z, M_z	0.0	0.0		lb-ft

Tower Leg Properties

Leg Type		Single Angle	
Leg Member		L6x6x3/4	
Leg Bay Height	Hb	6.25	ft
Upper Mount Offset	Gm	8.00	in
Tower Axial Load	P_{uT}	58.473	k
Leg Grade		A572-50	
Leg Yield Strength	F_y	50	ksi
Cross Sectional Area	A_g	8.460	in ²
Radius of Gyration	r	1.170	in
Moment of Inertia	I	11.600	in ⁴
Section Modulus	S_{min}	4.630	in ³
Torsional Constant	J	1.610	in ⁴
Elastic Modulus	E	29,000	ksi
Shear Modulus	G	11,200	ksi
Slenderness Limit	$4.71 \sqrt{E/F_y}$	113.4	-
Member Slenderness	KL/r	64.1	-
Rotation of Leg	θ	#NAME?	rads
Leg Torsional Stiffness	k	#NAME?	k-in/rad



Tower Leg Analysis

Critical Stress	F_{cr}	41.0	ksi
Axial Stress	σ_a	6.92	ksi
Shear Stress	τ_b	0.02	ksi
Bending Stress	σ_b	0.99	ksi
Torsional Stress	τ_t	0.00	ksi
Normal Stress Limit State	f_{un}	45.0	ksi
Shear Stress Limit State	f_{uv}	27.0	ksi
Buckling Limit State	$f_{un} \& f_{uv}$	41.0	ksi
Torsional/Shear Capacity	$\Sigma \tau / f_{uv}$	0%	Pass
Buckling/Axial Capacity	$\Sigma \sigma / f_{un}$	19%	Pass

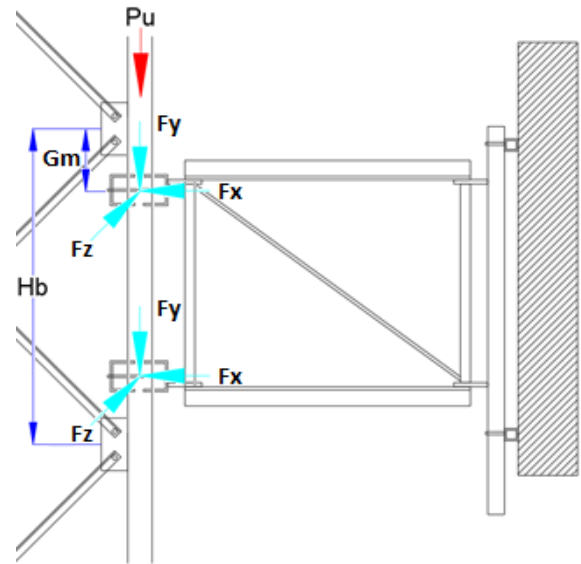
Tower Leg Reaction Analysis

Applied Loads from RISA 3D

Controlling Load Combination		11		
Leg Node Label(s)	n116A	n117		
Node Elevations	40	0		in
Force in X, F_x	-533.8	532.5		lbs
Force in Y, F_y	2293.6	570.6		lbs
Force in Z, F_z	-1829.9	2028.1		lbs
Moment about X, M_x	2585.7	490.1		lb-ft
Moment about Y, M_y	444.8	-443.8		lb-ft
Moment about Z, M_z	-154.0	-51.2		lb-ft

Tower Leg Properties

Leg Type		Single Angle	
Leg Member		L6x6x3/4	
Leg Bay Height	H_b	6.25	ft
Upper Mount Offset	G_m	17.50	in
Tower Axial Load	P_{uT}	58.473	k
Leg Grade		A572-50	
Leg Yield Strength	F_y	50	ksi
Cross Sectional Area	A_g	8.460	in ²
Radius of Gyration	r	1.170	in
Moment of Inertia	I	11.600	in ⁴
Section Modulus	S_{min}	4.630	in ³
Torsional Constant	J	1.610	in ⁴
Elastic Modulus	E	29,000	ksi
Shear Modulus	G	11,200	ksi
Slenderness Limit	$4.71 \sqrt{E/F_y}$	113.4	-
Member Slenderness	KL/r	64.1	-
Rotation of Leg	θ	#NAME?	rad
Leg Torsional Stiffness	k	#NAME?	k-in/rad



Tower Leg Analysis

Critical Stress	F_{cr}	41.0	ksi
Axial Stress	σ_a	7.25	ksi
Shear Stress	τ_b	0.19	ksi
Bending Stress	σ_b	5.31	ksi
Torsional Stress	τ_t	1.32	ksi
Normal Stress Limit State	f_{un}	45.0	ksi
Shear Stress Limit State	f_{uv}	27.0	ksi
Buckling Limit State	$f_{un} \& f_{uv}$	41.0	ksi
Torsional/Shear Capacity	$\Sigma \tau / f_{uv}$	6%	Pass
Buckling/Axial Capacity	$\Sigma \sigma / f_{un}$	31%	Pass



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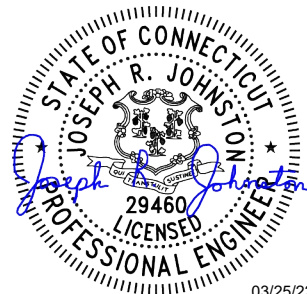


Structural Analysis Report

Structure : 200 ft Self Supported Tower
ATC Site Name : SHELTON-TRUMBULL, CT
ATC Site Number : 88017
Engineering Number : 13755484_C3_04
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : MRCTB055062
Carrier Site Number : N/A
Site Location : 14 OXFORD DRIVE-BOOTH HILL RD
SHELTON, CT 06484-3455
41.280200, -73.185500
County : Fairfield
Date : March 22, 2022
Max Usage : 89%
Result : Pass

Prepared By:
Tiffany Ta
Airosmith Engineering

Reviewed By:



03/25/22

COA: PEC.0001553



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Calculations Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 200 ft self supported tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	TEP Job #070851, dated May 30, 2007
Foundation Drawing	Radio Relay Drawing #MS 10478, dated January 27, 1965
Geotechnical Report	Radio Relay Drawing #MS 10478, dated January 27, 1965
Modifications	ATC Project #40480232, dated July 13, 2007

Analysis

The tower was analyzed using Power Line Systems Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	118 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Risk Category:	II
Exposure Category:	B
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height:	0 ft

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
217.0	1	Sinclair SC442D-HF1LDF(DXX-I30-G9-NUFP)	Platform with Handrails	(2) 1 5/8" Coax (2) EW65	STATE OF CT
210.0	1	Telewave ANT900D6-9			
206.0	2	RFS PA6-65AC w/ Radome			
190.0	1	Sinclair SC479-HF1LDF	Sector Frame	(10) 1 5/8" Coax (5) 0.63" (16mm) LDF4-50A	
189.0	1	Sinclair SC479-HF1LDF			
187.0	1	Sinclair SC479-HF1LDF			
186.1	1	Generic 5' Dipole			
185.0	1	Generic TTA			
	2	Kathrein Scala AP14-850/105			
182.0	2	Generic TTA			
180.0	2	Generic TTA			
	1	Sinclair SC479-HF1LDF			
177.0	1	TX RX Systems 101-83B-09-0-03	Stand-Off	(4) 1/2" Coax (6) 5/16" (0.31"- 7.9mm) Coax	CLEARWIRE CORPORATION
175.0	2	Sinclair SC479-HF1LDF			
	4	DragonWave Horizon Compact			
	1	DragonWave A-ANT-11G-2-C			
	1	Andrew Microwaves PX2F-52			
157.4	2	DragonWave A-ANT-11G-3-C	Sector Frame	(3) 1 1/4" Hybriflex Cable (1) 1.7" (43.2mm) Hybrid	SPRINT NEXTEL
	3	Argus LLPX310R			
155.0	3	Nokia 2.5G MAA - AAHC(64T64R)			
	3	Alcatel-Lucent RRH2x50-08			
	3	Commscope NNVV-65B-R4			
153.6	3	NextNet BTS-2500	Stand-Off	(1) 2" conduit	CLEARWIRE CORPORATION
150.8	3	Alcatel-Lucent 1900 MHz 4X45 RRH	Sector Frame	-	SPRINT NEXTEL
147.6	3	Alcatel-Lucent 800 MHz RRH w/ Notch Filter			
144.0	6	Powerwave Allgon LGP21401	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (3) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax	AT&T MOBILITY
	1	Commscope WCS-IMFQ-AMT			
	2	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS 32 B2			
	3	Ericsson RRUS 32 B66			
125.7	1	Procom CXL 900-3LW	Side Arm	(1) 1/2" Coax	SIGFOX S.A.
124.0	1	Generic 5" x 3" x 2" Cavity Filter			
	1	Generic Low Noise Amplifier			
110.0	1	RFS PA6-65AC w/ Radome	Side Arm	(1) EW65	STATE OF CT
	1	Andrew DB616E-BC	Side Arm	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
90.0	1	Kathrein Scala 750 10074	Stand-Off	(1) 1 5/8" Coax	LIGADO NETWORKS LLC
56.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL



Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
144.0	6	Powerwave Allgon 7020.00 Dual Band RET	-	(1) 0.78" (19.7mm) 8 AWG 6 (2) 3" conduit	AT&T MOBILITY
	3	Ericsson RRUS 11 (Band 12) (55 lb)			
	3	CCI HPA-65R-BUU-H6			
	3	Powerwave Allgon 7770.00			
	3	Quintel QS66512-6			
	3	Ericsson RRUS 32 (50.8 lbs)			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
146.0	3	Ericsson AIR 6449 B77D/ C-Band	Sector Frame	(1) 0.41" (10.3mm) Fiber (4) 0.92" (23.4mm) Cable (2) 2" conduit (3) 3/8" (0.38"- 9.5mm) RET Control Cable	AT&T MOBILITY
144.0	2	Commscope WCS-IMFQ-AMT			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 32 B30			
	1	Raycap DC9-48-60-24-8C-EV			
	6	CCI DMP65R-BU6DA			
142.0	3	Ericsson AIR 6419 B77G			

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

Install proposed lines alongside existing AT&T Mobility lines.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	48%	Pass
Diagonals	89%	Pass
Truss Diagonals	78%	Pass
Horizontals	83%	Pass
Truss Horizontals	44%	Pass
Anchor Bolts	38%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	161.16	46%
Axial (Kips)	265.04	9%

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.



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:

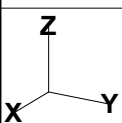
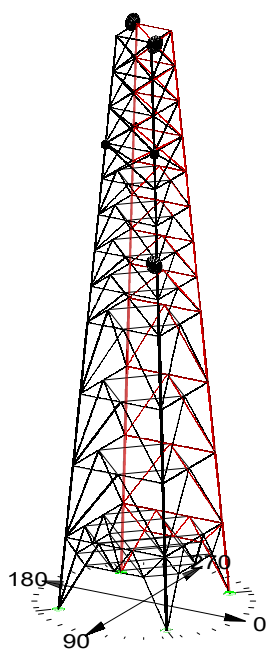
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.



Horiz 5	B/B L2.5"x2.5"x0.25"	DAE 2.5X2.5X0.25	33.0 52.83	Comp 15.66	H 9P 11.068	W 90 70.686	0.000	0.000	0.000 12.827	0 0.000	0
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE 2.5X2.5X0.25	33.0 41.26	Comp 14.18	H 11P 10.026	W 90 70.686	0.000	0.000	0.000 11.947	0 0.000	0
Horiz 7	B/B L3"x2.5"x0.25"	DAL 3X2.5X0.25	33.0 21.57	Comp 11.85	H 13P 9.253	W 90 78.111	0.000	0.000	0.000 11.067	0 0.000	0
Horiz 8	B/B L3"x2.5"x0.25"	DAL 3X2.5X0.25	33.0 33.78	Comp 2.07	H 16P 1.615	W 0 78.111	0.000	0.000	0.000 10.186	0 0.000	0
Horiz 9	B/B L3"x2.5"x0.25"	DAL 3X2.5X0.25	33.0 56.75	Comp 0.00	H 18X 0.000	78.111	0.000	0.000	0.000 18.612	0 0.000	0
Horiz 10	B/B L3"x2.5"x0.25"	DAL 3X2.5X0.25	33.0 38.99	Comp 0.00	H 20X 0.000	78.111	0.000	0.000	0.000 16.951	0 0.000	0
Horiz 11	L 4" x 3" x 0.3125"	SAU 4X3X0.31	33.0 43.81	Comp 0.00	H 22X 0.000	62.073	0.000	0.000	0.000 15.091	0 0.000	0
Horiz 12	L 4" x 3" x 0.3125"	SAU 4X3X0.31	33.0 28.70	Comp 0.00	H 24X 0.000	62.073	0.000	0.000	0.000 13.330	0 0.000	0
LD 1	B/B L2.5"x2"x0.25"	DAL 2.5X2X0.25	33.0 45.41	Tens 45.41	LD 1P 28.728	W -90 63.261	0.000	0.000	0.000 11.465	0 0.000	0
LD 2	B/B L2.5"x2.5"x0.25"	DAE 2.5X2.5X0.25	33.0 77.50	Comp 29.54	LD 3P 20.879	W -90 70.686	0.000	0.000	0.000 8.638	0 0.000	0
LD 3	B/B L3"x3"x0.25"	DAE 3X3X0.25	33.0 52.16	Comp 30.04	LD 5X 25.695	W -90 85.536	0.000	0.000	0.000 10.481	0 0.000	0
LH 1	B/B L2.5"x2.5"x0.25"	DAE 2.5X2.5X0.25	33.0 43.92	Tens 43.92	LH 1P 31.044	W -90 70.686	0.000	0.000	0.000 11.136	0 0.000	0
DUM 1	Dummy Bracing Member	DUM 0.1X0.1X1	36.0 0.00	0.00	BR 5X 0.810	W -45 0.324	0.000	0.000	0.000 21.875	0 0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type
W 0	87.94	D 6P	Angle
W 180	89.22	D 6Y	Angle
W 45	63.89	D 5P	Angle
W -45	87.87	D 5X	Angle
W 90	88.44	D 5P	Angle
W -90	89.40	D 5X	Angle
W 0 Ice	29.06	D 1P	Angle
W 180 Ice	30.18	D 1Y	Angle
W 45 Ice	24.03	D 2P	Angle
W -45 Ice	25.53	D 2X	Angle
W 90 Ice	29.18	D 2P	Angle
W -90 Ice	30.17	D 2X	Angle

*** Weight of structure (lbs):
Weight of Angles*Section DLF: 91885.3
Weight of Equipment: 1160.0
Total: 93045.3

*** End of Report

Legs

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/2022
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	33
2	25.00-50.00	L	8	1	33
3	50.00-75.00	L	8	0.875	33
4	75.00-100.0	L	8	0.75	33
5	100.0-112.5	L	6	0.875	33
6	112.5-125.0	L	6	0.875	33
7	125.0-137.5	L	6	0.75	33
8	137.5-150.0	L	6	0.75	33
9	150.0-162.5	L	6	0.75	33
10	162.5-175.0	L	6	0.75	33
11	175.0-187.5	L	6	0.5	33
12	187.5-200.0	L	6	0.5	33

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifferized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/2022
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	3	0.25	33	
2	25.00-50.00	2L		2.5	3	0.3125	33	
3	50.00-75.00	2L		2.5	3	0.25	33	
4	75.00-100.0	2L		2.5	3	0.25	33	
5	100.0-112.5	2L		2.5	2.5	0.25	33	
6	112.5-125.0	2L		2.5	2.5	0.25	33	
7	125.0-137.5	2L		2.5	2.5	0.25	33	
8	137.5-150.0	2L		2.5	2.5	0.25	33	
9	150.0-162.5	L		3	4	0.25	33	Y
10	162.5-175.0	L		3	4	0.25	33	Y
11	175.0-187.5	L		3.5	3.5	0.25	33	Y
12	187.5-200.0	L		3.5	3.5	0.25	33	Y

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/2022
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	B/B Spacing (in.)
1	0.000-25.00	2L		3	3	0.3125	33	
2	25.00-50.00	2L		3.5	2.5	0.3125	33	
3	50.00-75.00	2L		3	2.5	0.25	33	
4	75.00-100.0	2L		3	2.5	0.25	33	
5	100.0-112.5	2L		2.5	2.5	0.25	33	
6	112.5-125.0	2L		2.5	2.5	0.25	33	
7	125.0-137.5	2L		3	2.5	0.25	33	
8	137.5-150.0	2L		3	2.5	0.25	33	
9	150.0-162.5	2L		3	2.5	0.25	33	
10	162.5-175.0	2L		3	2.5	0.25	33	
11	175.0-187.5	L		4	3	0.3125	33	
12	187.5-200.0	L		4	3	0.3125	33	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/2022
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		2.5	2	0.25	33
2	0.000-25.00	2L		2.5	2.5	0.25	33
3	0.000-25.00	2L		3	3	0.25	33

Notes:

^[1] Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/2022
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Horiz. Tension Only? (Y/N)
1	0.000-25.00	2L		2.5	2.5	0.25	33	Y

Notes:

- ^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

Site No.: 88017
 Engineer: Tiffany To
 Date: 03/24/12
 Carrier: AT&T Mobility

Ke 0.981459
 K1 7
 K2 1200
 K3 2.01
 K4 0.7
 K5 0.9
 K6

Site No.: 88017
 Engineer: Tiffany To
 Date: 03/24/12
 Carrier: AT&T Mobility

Exposure B
 Topo Cat: 1
 Tia Code: TIA-222-M
 f

Description	From	To	Quantity	Shape	Width or Diameter**	Perimeter	Unit Weight	In Face Zone?	Include in Wind Load
(ft)	(ft)	(ft)			(ft)	(lb/ft)	(Yes/No)	(Yes/No)	
1 Ladder	0	13	1	Flat	2,000	8.0	6	No	Yes
2 OTHER	10	200	1	Round	2,000	2.0	0.15	No	Yes
3 STATE OF CT	10	200	1	Round	2,000	6.2	0.82	No	Yes
4 STATE OF CT	10	200	1	Round	2,000	6.2	0.82	No	Yes
5 STATE OF CT	10	200	2	Round	2,000	6.3	0.57	No	Yes
6 STATE OF CT	10	182	1	Flat	2,000	25.8	4.1	No	Yes
7 STATE OF CT	10	182	1	Flat	2,000	12.3	0.75	No	Yes
8 STATE OF CT	10	182	1	Flat	2,000	25.8	4.1	No	Yes
10 CLEARWIRE	10	158	1	Round	2,000	5.8	0.6	Yes	Yes
11 CLEARWIRE	10	158	1	Round	2,000	4.1	0.3	Yes	Yes
12 SPRINT NEXTEL	10	155	3	Round	2,000	4.8	1	Yes	Yes
13 SPRINT NEXTEL	10	155	1	Round	2,000	5.3	1.78	Yes	Yes
14 CLEARWIRE	10	150	1	Round	2,000	9.5	3.65	Yes	Yes
15 AT&T MOBILITY	10	145	6	Round	2,000	6.2	0.82	No	Yes
16 AT&T MOBILITY	10	145	3	Round	2,000	2.5	0.59	No	Yes
17 AT&T MOBILITY	10	145	3	Round	2,000	1.2	0.23	No	Yes
18 AT&T MOBILITY	10	145	2	Round	2,000	7.5	3.65	No	Yes
19 AT&T MOBILITY	10	145	1	Round	2,000	1.3	0.09	No	Yes
20 AT&T MOBILITY	10	145	2	Round	2,000	1.2	0.17	No	Yes
21 STATE OF CT	10	127	1	Round	2,000	6.3	0.57	No	Yes
22 US DEPT OF HS	10	110	1	Round	2,000	4.4	0.33	Yes	Yes
23 LIGADO	10	90	1	Round	2,000	7.9	0.82	Yes	Yes
24 SPRINT NEXTEL	10	56	1	Round	2,000	2.0	0.15	Yes	Yes
25 SMOCK	10	155	1	Round	2,000	2.0	0.15	Yes	Yes
26 AT&T MOBILITY	10	145	4	Round	2,000	2.9	0.89	No	Yes
35 Waveguide	10	176	1	Flat	2,000	8.0	6	No	Yes
36 Waveguide	10	165	1	Flat	2,000	8.0	6	Yes	Yes
37 Waveguide	10	155	1	Flat	2,000	8.0	6	Yes	Yes
38 Waveguide	10	143	1	Flat	2,000	8.0	6	No	Yes

Description	From	To	Quantity	Face #	Face	Block Width	Coax Shape	Block / Flat / Ind	% Exposed	Spacing	Shape	Block Width	Block Depth	Perimeter	Unit Weight	In Face Zone	Include in Wind Load
(ft)	(ft)	(ft)		(1-A, A-D)	(ft)	(ft)	(ft)	(ft)	(%)	(ft)	(Round/Flat)	(ft)	(ft)	(ft)	(lb/ft)	(Yes/No)	(Yes/No)
Ladder	0	13	1	A	2,000	Flat	100				Flat	1	1	8.0	6	No	Yes
OTHER	10	200	1	B	0.63	Ind	100				Round	1	1	2.0	0.15	No	Yes
STATE OF CT	10	200	1	B	1.98	Ind	100				Round	1	1	6.2	0.82	No	Yes
STATE OF CT	10	200	1	B	1.98	Ind	100				Round	1	1	6.2	0.82	No	Yes
STATE OF CT	10	200	2	B	2.01	Ind	100				Round	2	1	6.3	0.57	No	Yes
STATE OF CT	10	182	5	B	1.98	Block	50				Flat	3	2	25.8	4.1	No	Yes
STATE OF CT	10	182	5	B	0.63	Block	50				Flat	3	2	12.3	0.75	No	Yes
STATE OF CT	10	182	5	B	1.98	Block	50				Flat	3	2	25.8	4.1	No	Yes
CLEARWIRE	10	158	4	C	0.63	Ind	0				Round	1	4	5.8	0.6	Yes	Yes
CLEARWIRE	10	158	6	C	0.31	Ind	0				Round	1	6	4.1	0.3	Yes	Yes
SPRINT NEXTEL	10	155	3	C	1.54	Ind	100				Round	3	1	4.8	1	Yes	Yes
SPRINT NEXTEL	10	155	1	C	1.70	Ind	0				Round	1	1	5.3	1.78	Yes	Yes
CLEARWIRE	10	150	1	C	2.38	Ind	100				Round	1	1	7.5	3.65	Yes	Yes
AT&T MOBILITY	10	145	6	C	1.98	Ind	100				Round	6	1	6.2	0.82	No	Yes
AT&T MOBILITY	10	145	3	C	0.78	Ind	100				Round	3	1	2.5	0.59	No	Yes
AT&T MOBILITY	10	145	3	C	0.39	Ind	100				Round	3	1	1.2	0.23	No	Yes
AT&T MOBILITY	10	145	2	C	2.38	Ind	100				Round	2	1	7.5	3.65	No	Yes
AT&T MOBILITY	10	145	1	C	0.41	Ind	100				Round	1	1	1.3	0.09	No	Yes
AT&T MOBILITY	10	145	2	C	0.39	Ind	100				Round	2	1	1.2	0.17	No	Yes
STATE OF CT	10	127	1	C	1.98	Ind	100				Round	1	1	6.3	0.57	No	Yes
US DEPT OF HS	10	110	1	C	1.00	Ind	100				Round	1	1	3.4	0.33	Yes	Yes
LIGADO	10	90	1	C	1.98	Ind	100				Round	1	1	6.2	0.82	Yes	Yes
SPRINT NEXTEL	10	56	1	C	0.63	Ind	100				Round	1	1	2.0	0.15	Yes	Yes
SNOCK	10	155	1	C	0.63	Ind	100				Round	1	1	2.0	0.15	Yes	Yes
AT&T MOBILITY	10	145	4	C	0.92	Ind	100				Round	4	1	2.9	0.89	No	Yes
Waveguide	10	176	1	A	2.00	Flat	100				Flat	1	1	8.0	6	No	Yes
Waveguide	10	165	1	B	2.00	Flat	100				Flat	1	1	8.0	6	Yes	Yes
Waveguide	10	155	1	B	2.00	Flat	100				Flat	1	1	8.0	6	Yes	Yes
Waveguide	10	143	1	C	2.00	Flat	100				Flat	1	1	8.0	6	No	Yes

**Note: Actual block width multiplied by 0.75 (1.5 block drag factor actual divided by 2.0)

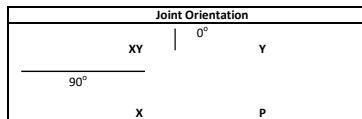
Dishes

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/22
Carrier:	AT&T Mobility

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Status
1	200	6	68	R	XY	
2	200	6	240	R	P	
3	158	2	343.6664	H	XY	
4	158	2	126.6024	S	XY	
5	158	3	212.6351	H	P	
6	158	3	212.6351	H	X	
7	127	6	182	R	P	
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Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
6' RAD 1 @ 200'	12XY	6 ft RAD Dish	68
6' RAD 2 @ 200'	12P	6 ft RAD Dish	240
2' HP 3 @ 158'	9XY	2 ft HP Dish	343.6664
2' STD 4 @ 158'	9XY	2 ft STD Dish	126.6024
3' HP 5 @ 158'	9P	3 ft HP Dish	212.6351
3' HP 6 @ 158'	9X	3 ft HP Dish	212.6351
6' RAD 7 @ 127'	6P	6 ft RAD Dish	182



Task: Determine Point Loads	200	ft
Tower Height:	0.85	ft
GH:	11	mph/Vult
Wind Speed:	50	
Ice Wind Speed:	56	
Ice Density:	5	
Tower Type:	S	

Ice Thick:	1	in
Topographic Category (1-4):	1	
Exposure Category (B-D):	B	
Risk Category (1-4):	2	
Height of Crest (H) if Topo Cat. <1:	0	ft
Load Factor; Wind:	1	
Load Factor; Dead:	1.2	

Rooftop Speed Up Factor (Ks):	1	
Ground Elevation (AMSL):	517	ft
Topographic Factor Procedure:	Method 1	

Site No.:	
Engineer:	
Date:	
Carrier:	

No.	Carrier	Elevation (ft)	Quantity	# of Azimuths	Proposed?	Manufacturer	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction	C _u C _e (ft ²)	Weight (lb)	Ka
1		200	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
2		200	1	4			Platform w/ HR	0.001	0.001	0.001	0.001	F	1.000	80.00	9.00	1
3		200	1	1			Mounting Frames	0.001	0.001	0.001	0.001	F	1.000	20.00	0.20	1
3		187.5	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
4		187.5	1	4			Access Platform	0.001	0.001	0.001	0.001	F	1.000	45.00	5.00	1
4		175	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
5		175	1	4			Catwalk	0.001	0.001	0.001	0.001	F	1.000	70.00	8.00	1
5		112.5	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
6		112.5	1	3			Catwalk	0.001	0.001	0.001	0.001	F	1.000	70.00	8.00	1
6		100	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
7		100	1	1			Rest Platform	0.001	0.001	0.001	0.001	F	1.000	15.00	0.50	1
7		75	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
8		75	1	1			Catwalk	0.001	0.001	0.001	0.001	F	1.000	70.00	8.00	1
8		50	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
9		50	1	1			Rest Platform	0.001	0.001	0.001	0.001	F	1.000	15.00	0.50	1
9	STATE OF CT	200	1	1		Generic	20' Omni	240	3	3	55	R	1.000			1
10	STATE OF CT	200	1	1			-	0.001	0.001	0.001	0.001	F	1.000	0.00	0.00	1
10	OTHER	212	1	1		Generic	5' Yagi	0.001	0.001	0.001	0.001	F	1.000	7.29	0.02	1
11	OTHER	210	1	1		Generic	5' Yagi	0.001	0.001	0.001	0.001	F	1.000	7.29	0.02	1
11	OTHER	210	1	1			-	0.001	0.001	0.001	0.001	F	1.000			1
12	STATE OF CT	210	1	1		Telewave	ANT900D6-9	0.001	0.001	0.001	0.001	F	1.000	0.98	0.01	1
13	STATE OF CT	205	1	1		Sinclair	SC442D-HF1LDF(DXX-130-G9-NUPF)	251.5	5	5	79	R	1.000	0.00	0.00	1
14	STATE OF CT	190	1	1		Sinclair	SC479-HF1LDF	172.5	3.5	3.5	34	R	1.000	6.30	0.15	1
15	STATE OF CT	189	1	1		Sinclair	SC479-HF1LDF Side Arm	172.5	3.5	3.5	34	R	1.000	17.90	0.40	1
16	STATE OF CT	187	1	1		Sinclair	SC479-HF1LDF	172.5	3.5	3.5	34	R	1.000	0.00	0.00	1
17	STATE OF CT	185	1	1		Generic	TTA	12	12	6	10	F	1.000	0.00	0.00	1
18	STATE OF CT	185	2	2		Kathrein Scala	AP14-850/10S	101.5	10	4	26.8	F	1.000	0.00	0.00	1
19	STATE OF CT	185	1	1		Generic	TTA	12	12	6	10	F	1.000	0.00	0.00	1
20	STATE OF CT	182	1	1		Generic	TTA	12	12	6	10	F	1.000	0.00	0.00	1
21	STATE OF CT	180	1	1		Generic	TTA	12	12	6	10	F	1.000	0.00	0.00	1
21	STATE OF CT	180	1	1		Generic	-	0.001	0.001	0.001	0.001	R	1.000	1.75	0.02	1
22	STATE OF CT	180	1	1		Sinclair	SC479-HF1LDF	172.5	3.5	3.5	34	R	1.000	0.00	0.00	1
23	STATE OF CT	177	1	1		TX RX Systems	101-838-09-0-03	120	3.6	3.6	45	R	1.000	0.00	0.00	1
24	STATE OF CT	175	2	2		Sinclair	SC479-HF1LDF	172.5	3.5	3.5	34	R	1.000	0.00	0.00	1
25	SPRINT NEXTEL	169	12	3		Decibel	DB844H90E-A	48	6	8.5	10	F	0.500	17.90	0.40	0.75
26	CLEARWIRE CORPORATION	158	4	3		DragonWave	Flat Sector Frames	4.7	9.3	9.3	10.6	F	0.500	0.00	0.00	1
27	CLEARWIRE CORPORATION	156	3	3		NextNet	Horizon Compact	19.3	11.3	5.1	35	F	0.500	17.90	0.40	0.75
28	CLEARWIRE CORPORATION	156	3	3		Argus	BTS-2500	42	11.8	4.5	28.6	F	0.500	0.00	0.00	1
29	SPRINT NEXTEL	155	3	3		Alcatel-Lucent	LLPX10R	15.7	13	9.8	52.9	F	0.500	0.00	0.00	1
30	SPRINT NEXTEL	155	3	3		Alcatel-Lucent	RRH2x50-08	25.1	11.1	10.7	60	F	0.500	17.90	0.40	0.75
31	SPRINT NEXTEL	155	3	3		Alcatel-Lucent	1900 MHz 4X45 RRH	19.7	13	15.2	61.8	F	0.500	0.00	0.00	1
32	SPRINT NEXTEL	155	1	1		Nokia	800 MHz RRH w/ Notch Filter	25.6	19.7	9.6	103.6	F	0.500	0.00	0.00	1
33	SIGFOX S.A.	135	1	1		Procom	2.5G MAA - AAHC(64T64R)	27.6	0.6	0.6	1.5	R	1.000	0.00	0.00	0.001
34	SPRINT NEXTEL	135	1	1		Commscope	Side Arm	72	19.6	7.8	77.4	F	0.500	6.30	0.15	1
35	SPRINT NEXTEL	155	1	1		Commscope	NNVV-65B-R4	18	12	8	15	F	1.000	0.00	0.00	1
36	CLEARWIRE CORPORATION	150	1	1		Generic	18" x 12" Junction Box	18	12	8	15	F	1.000	0.00	0.00	1
37	AT&T MOBILITY	144	3	3	Proposed	Ericsson	AIR 6449 B77D/C-Band Round Sector Frames	30.4	15.9	10.6	81.6	F	0.700	14.40	0.30	0.75
38	AT&T MOBILITY	144	3	3	Proposed	Powerwave Alligon	LG21401	14.4	9.2	2.6	14.1	F	0.500	0.99	0.03	0.8
39	AT&T MOBILITY	144	2	2	Proposed	Commscope	WCS-IMFQ-AMT	24	11	11	31.8	R	1.000	0.00	0.00	1
40	AT&T MOBILITY	144	3	3	Proposed	Raycap	DC6-48-60-18-8F "Squid"	16.5	13.4	7.7	59.9	F	0.500	12.71	0.08	0.8
41	AT&T MOBILITY	144	1	1	Proposed	Ericsson	RRUS 4478 B14	17.9	13.2	9.4	71	F	0.500	0.00	0.00	1
42	AT&T MOBILITY	144	3	3	Proposed	Ericsson	RRUS 4449 B5, B12	27.2	12.1	7	53	F	0.670	0.00	0.00	1
43	AT&T MOBILITY	144	1	1	Proposed	Ericsson	RRUS 32 B2	27.2	12.1	7	53	F	0.670	0.00	0.00	1
44	AT&T MOBILITY	144	3	3	Proposed	Ericsson	RRUS 32 B66	27.2	12.1	7	53	F	0.670	0.00	0.00	1
45	AT&T MOBILITY	144	1	1	Proposed	Ericsson	RRUS 32 B30	27.2	12.1	7	60	F	0.670	0.00	0.00	1
46	AT&T MOBILITY	144	1	1	Proposed	Raycap	DC9-48-60-24-8C-EV	31.4	18.3	10.2	16	F	1.000	0.00	0.00	1
47	AT&T MOBILITY	142	3	3	Proposed	Ericsson	AIR 6419 B77G	28.3	16.1	7.9	66.1	F	0.600	0.00	0.00	1
48	AT&T MOBILITY	142	1	1	Proposed	Ericsson	AIR 6419 B77G	28.3	16.1	7.9	66.1	F	0.600	0.00	0.00	1
49	US DEPT OF HOMELAND SECURITY	111	1	1		Andrew	DB616E-BC	231	3.5	3.5	51	R	1.000	0.00	0.00	1
50	LIGADO NETWORKS LLC	86	1	1		Kathrein Scala	750 10074	104.3	2	2	17.6	R	1.000	6.30	0.15	1
50	LIGADO NETWORKS LLC	82	1	1		Generic	Side Arm	12	9	6	10	F	1.000	2.50	0.08	1
50	SPRINT NEXTEL	56	1	1	Proposed	Generic	GPS Stand-Off	5.3	3.2	1.9	1.5	F	1.000	0.00	0.00	1
50	SIGFOX S.A.	135	1	1	Proposed	Generic	5" x 3" x 2" Cavity Filter	5	4	2	2	F	1.000	0.00	0.00	1
50	SIGFOX S.A.	135	1	1	Proposed	Generic	Low Noise Amplifier						0.001	0.00	0.00	1

No.	Elevation (ft)	C _u C _e (ft ²)	C _u C _e (Ice) (ft ²)	Force (lb)	Force (Ice) (lb)	Weight (lb)	Weight (Ice) (lb)	60 Azi Mult.	Force mean	F (Ice) mean	Height Flag	Sum of Forces (No)	
												60 Azi.	180 Azi.
1	200	0.00	0.04	0.000	0.213	10800	14040	1.00	1339.78	324.75	0.0000010	2435.964485	
2	200	0.00	0.04	0.000	0.213	0	0	1.00	0.00	0.12	0.0000020		
3	200	80.00	108.00	2435.964	590.447	960	1248	1.00	1339.78	324.75	1.5050000	4871.928969	
4	187.5	0.00	0.04	0.000	0.209	0	0	1.00	0.00	0.11	1.5050010		
4	187.5	45.00	60.75	1345.195	326.058	6000	7800	1.00	739.86	179.33	1.5053333	1345.195086	
5	175	0.00	0.04	0.000	0.205	0	0	1.00	0.00	0.10	1.5053443		
5	175	70.00	94.50	2051.681	497.301	9600	12480	1.00	1128.42	273.52	1.5057143	2051.681193	
6	112.5	0.00	0.04	0.000	0.181	0	0	1.00	0.00	0.10	1.5057153		
6	112.5	70.00	94.50	1808.362	438.324	9600	12480	1.00	994.60	241.08	1.5088889	1808.362287	
7	100	0.00	0.04	0.000	0.175	0	0	1.00	0.00	0.10	1.5088899		
7	100	15.00	20.25	374.683	90.818	600	780	1.00	206.08	49.95	1.5100000	374.682713	
8	75	0.00	0.04	0.000	0.161	0	0	1.00	0.00	0.09	1.5100010		
8	75	70.00	94.50	1610.548	390.376	9600	12480	1.00	885.80	214.71	1.5133333	1610.547927	
9	50	0.00	0.04	0.000	0.143	0	0	1.00	0.00	0.08	1.5133343		
9	50	15.00	20.25	307.365	74.501	600	780	1.00	169.05	40.98	1.5200000	307.3654754	
10	200	6.00	10.08	182.697	55.127	66	270	1.00	100.48	30.32	1.5200010		
10	200	0.00	0.04	0.000	0.216	0	0	1.00	0.00	0.12	1.5050000	182.697368	
11	212	7.29	9.84	225.704	54.708	24	31	1.00	124.14	30.09	1.5047170	225.7037326	
12	210	0.00	0.04	0.000	0.216	0	0	1.00	0.00	0.12	1.5047180		
12	210	7.29	9.84	225.093	54.560	24	31	1.00	123.80				

19	182	2.40	3.81	71.136	20.282	24	54	1.00	39.12	11.15	1.5054064	
	182	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5054945	71.13607984
	180	2.40	3.81	70.912	20.218	24	54	1.00	39.00	11.12	1.5054955	
	180	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5055556	70.91185055
21	180	0.00	0.02	0.000	0.118	0	0	1.00	0.00	0.06	1.5055566	
	180	1.75	2.36	51.707	12.533	18	23	1.00	28.44	6.89	1.5055556	122.6183869
22	180	5.03	8.00	148.656	42.429	41	202	1.00	81.76	23.34	1.5055566	
	180	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5055556	271.2747078
	177	3.60	5.35	105.858	28.269	54	174	1.00	58.22	15.55	1.5055566	
23	177	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5056497	105.8582039
24	175	10.06	16.00	294.929	84.177	82	251	1.00	162.21	46.30	1.5056507	
	175	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5057143	294.9292008
25	169	19.04	24.50	552.522	127.651	144	253	1.00	303.89	70.21	1.5057153	
	169	30.21	40.78	657.417	159.350	1440	1872	1.00	361.58	87.64	1.5059172	1209.939361
	158	0.68	1.18	19.355	6.019	51	71	1.00	10.65	3.31	1.5059182	
26	158	30.21	40.78	644.896	156.315	1440	1872	1.00	354.69	85.97	1.5063291	664.251144
27	156	2.18	3.31	61.857	16.831	126	189	1.00	34.02	9.26	1.5063301	
	156	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064103	61.856708
28	156	5.15	7.08	146.082	36.075	103	206	1.00	80.34	19.84	1.5064113	
	156	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064103	207.9383504
29	155	2.04	3.10	57.782	15.745	190	268	1.00	31.78	8.66	1.5064113	
	155	30.21	40.78	641.373	155.461	1440	1872	1.00	352.76	85.50	1.5064516	699.1558584
30	155	3.13	4.14	88.707	21.053	216	319	1.00	48.79	11.58	1.5064526	
	155	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064516	787.862739
31	155	3.49	4.35	98.903	22.134	222	326	1.00	54.40	12.17	1.5064526	
	155	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064516	886.7657716
32	155	5.04	6.99	142.777	35.518	373	532	1.00	78.53	19.53	1.5064526	
	155	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064516	1029.543069
33	135	0.00	0.00	0.004	0.002	2	10	1.00	0.00	0.00	1.5064526	
	135	6.30	8.51	171.455	41.559	180	234	1.00	94.30	22.86	1.5074074	171.4591542
	155	14.73	18.65	416.887	94.790	279	563	1.00	229.29	52.13	1.5074084	
34	155	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5064516	416.8867041
35	150	1.80	2.72	50.484	13.708	18	61	1.00	27.77	7.54	1.5064526	
	150	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5066667	50.48436868
36	144	6.77	9.47	187.593	47.148	294	440	1.00	103.18	25.93	1.5066677	
	144	24.30	32.81	505.227	122.461	1080	1404	1.00	277.87	67.35	1.5069444	692.8201792
37	144	2.65	4.29	73.451	21.332	102	144	1.00	40.40	11.73	1.5069454	
	144	2.38	3.21	52.693	12.772	106	138	1.00	28.98	7.02	1.5069444	818.9647014
38	144	2.35	3.00	65.053	14.954	76	148	1.00	35.78	8.22	1.5069454	
	144	38.43	51.88	852.319	206.591	572	743	1.00	468.78	113.63	1.5069444	1736.336752
39	144	2.21	3.32	61.293	16.544	216	298	1.00	33.71	9.10	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	1797.629312
40	144	2.36	3.53	65.501	17.565	256	351	1.00	36.03	9.66	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	1863.130016
41	144	4.41	6.44	122.258	32.037	191	287	1.00	67.24	17.62	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	1985.388215
42	144	4.41	6.44	122.258	32.037	191	287	1.00	67.24	17.62	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	2107.646413
43	144	4.41	6.44	122.258	32.037	216	317	1.00	67.24	17.62	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	2229.904612
44	144	3.83	5.27	106.196	26.248	19	121	1.00	58.41	14.44	1.5069454	
	144	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5069444	2336.100674
45	142	5.92	8.32	163.546	41.235	238	362	1.00	89.95	22.88	1.5069454	
	142	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5070423	163.5456841
46	111	6.74	10.68	173.389	49.344	61	267	1.00	95.36	27.14	1.5070433	
	101	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5099010	173.3886473
47	86	1.74	3.54	41.590	15.221	21	80	1.00	22.87	8.37	1.5099020	
	82	6.30	8.51	148.692	36.041	180	234	1.00	81.78	19.82	1.5121951	190.282422
48	56	0.90	1.50	19.049	5.690	12	33	1.00	10.48	3.13	1.5121961	
	56	2.50	3.38	52.913	12.826	90	117	1.00	29.10	7.05	1.5178571	71.96229976
49	135	0.14	0.37	3.846	1.803	2	6	1.00	2.12	0.99	1.5178581	
	135	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5074074	3.846434038
50	135	0.17	0.41	4.536	1.995	2	7	1.00	2.49	1.10	1.5074084	
	135	0.00	0.00	0.000	0.000	1	2	1.00	0.00	0.00	1.5074074	8.382318357

Foundation

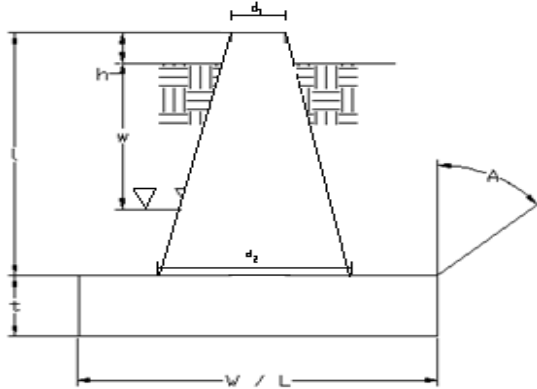
Design Loads (Factored)

Compression/Leg:	265.04	k
Uplift/Leg:	161.16	k
Shear/Leg:	38.60	k

Face Width @ Top of Pier (d_1):	3.50	ft
Face Width @ Bottom of Pier (d_2):	7.00	ft
Total Length of Pier (l):	7.00	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	16.00	ft
Length of Pad (L):	16.00	ft
Thickness of Pad (t):	2.50	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	120.0	pcf
Unit Weight of Soil (Below Water Table):	57.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	16000	psf
Ultimate Skin Friction:	500	psf

Volume Pier (Total):	200.08	ft ³
Volume Pad (Total):	640.00	ft ³
Volume Soil (Total):	2346.93	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	30.01	k
Weight Pad:	96.00	k
Weight Soil:	281.63	k
Uplift Skin Friction:	60.00	k

Site No.:	88017
Engineer:	Tiffany.Ta
Date:	03/24/22
Carrier:	AT&T Mobility



Uplift Check

ϕ_s Uplift Resistance (k)	Ratio	Result
350.73	0.46	OK

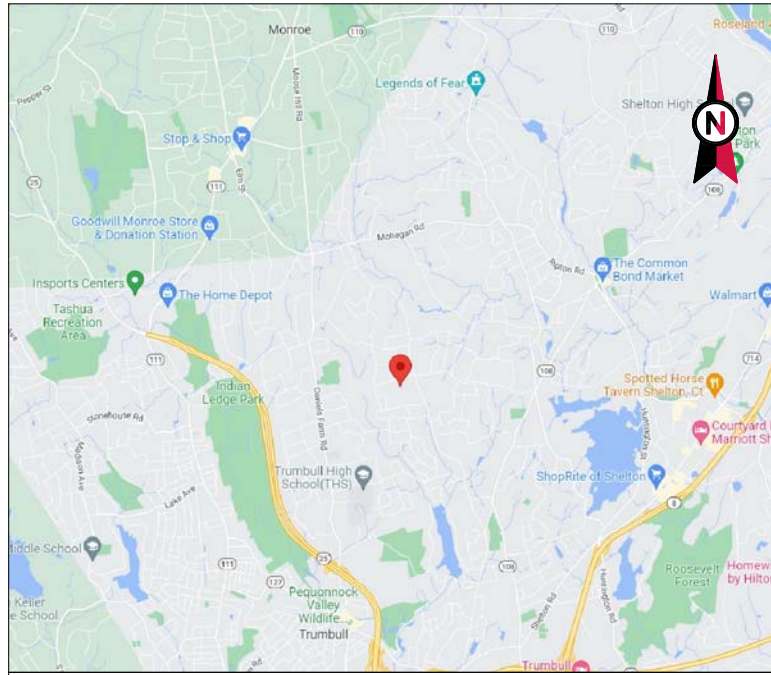
Axial Check

ϕ_s Axial Resistance (k)	Ratio	Result
3072.00	0.09	OK

Anchor Bolt Check

Bolt Diameter (in)	2.25
# of Bolts	4
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	C

Usage Ratio	Result
0.38	OK



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: SHELTON-TRUMBULL
 ATC SITE NUMBER: 88017
 AT&T PACE NUMBERS: MRCTB055062
 AT&T SITE ID: CTL05542
 AT&T FA CODE: 10071232
 AT&T SITE NAME: MRCTB055062
 SITE ADDRESS: 20 OXFORD DRIVE
 SHELTON, CT 06484



LOCATION MAP

**AT&T
 AMENDMENT PLAN**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 20 OXFORD DRIVE SHELTON, CT 06484 COUNTY: FAIRFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.28015986 LONGITUDE: -73.18548811 GROUND ELEVATION: 517' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (9) ANTENNA(S), (3) RRR(S), (2) SQUID(S), (6) TTA(S), (1) 3" CONDUIT(S), (1) CONTROL CABLE(S) AND (3) COAX CABLE(S) INSTALL (12) ANTENNA(S), (6) RRR(S), (3) SQUID(S), (3) FILTER(S), (2) 2" CONDUIT(S), (7) CONTROL CABLE(S) AND (1) FIBER CABLE(S) EXISTING (6) RRR(S), (6) COAX CABLE(S), (3) CONTROL CABLE(S) AND (2) FIBER TRUNK(S) TO REMAIN <u>GROUND WORK:</u> REMOVE (6) DIPLEXER(S) AND (1) 3106 OUTDOOR BBU(S) INSTALL (1) Y-CABLE(S), (1) IDLE XCEDE CABLE(S), (1) BASEBAND 6648(S) AND (1) BASEBAND 6630(S)	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> NB+C ENGINEERING SERVICES, LLC. 8601 SIX FORKS ROAD, SUITE 540 RALEIGH, NC 27615 <u>PROPERTY OWNER:</u> AMERICAN TOWERS INC P O BOX 723597 ATLANTA, GA 31139	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001	TITLE SHEET	A	03/30/22	AMT
<u>UTILITY COMPANIES</u> POWER COMPANY: UNITED ILLUMINATING COMPANY PHONE: 800.722.5584 TELEPHONE COMPANY: UNKNOWN PHONE: XXX.XXX.XXXX	<u>PROJECT TEAM</u> <u>APPLICANT:</u> AT&T MOBILITY	R-601	SUPPLEMENTAL				
	<u>PROJECT TEAM</u> <u>APPLICANT:</u> AT&T MOBILITY	C-201	TOWER ELEVATION	A	03/30/22	AMT	
	<u>PROJECT TEAM</u> <u>APPLICANT:</u> AT&T MOBILITY	<u>PROJECT LOCATION DIRECTIONS</u> FROM RT 8 TAKE EXIT 14 TO 110 SOUTH TO 108 S.W. INTO HUNNINGTON, CT. IN CENTER OF TOWN TAKE RIGHT ONTO WAVERLY ROAD. GO 2.5 MILES TO TO BOOTH HILL RD. TURN LEFT AND PROCEED TO NEXT STOP SIGN. PROCEED STRAIGHT 0.1 MILES. TAKE ACCESS ROAD TO SITE.	C-401	RF SCHEDULE AND ANTENNA INSTALLTION	A	03/30/22	AMT
		C-501	CONSTRUCTION DETAILS	A	03/30/22	AMT	
		E-501	GROUNDING DETAILS	A	03/30/22	AMT	
		R-602	SUPPLEMENTAL				
		R-603	SUPPLEMENTAL				

AMERICAN TOWER®
 A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: 0012746

NB+C™
 TOTALLY COMMITTED.
 NB+C ENGINEERING SERVICES, LLC.
 8601 SIX FORKS ROAD, SUITE 540
 RALEIGH, NC 27615
 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	AMT	03/30/22

ATC SITE NUMBER:
 88017

 ATC SITE NAME:
 SHELTON-TRUMBULL

 AT&T SITE NAME:
 MRCTB055062

 SITE ADDRESS:
 20 OXFORD DRIVE
 SHELTON, CT 06484

SEAL:

**PRELIMINARY:
 NOT FOR
 CONSTRUCTION**



DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

TITLE SHEET

 SHEET NUMBER:
G-001
 REVISION:
A

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T REP TO

- DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T SPECIFICATIONS AND REQUIREMENTS.
 24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
 26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
 27. CONTRACTOR SHALL NOTIFY AT&T REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
 28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
 29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
 30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T REP. ANY WORK FOUND BY THE AT&T REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
 31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
 32. AT&T FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
 33. AT&T OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

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

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



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 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	AMT	03/30/22

ATC SITE NUMBER:
88017

ATC SITE NAME:
SHELTON-TRUMBULL

AT&T SITE NAME:
MRCTB055062

SITE ADDRESS:
 20 OXFORD DRIVE
 SHELTON, CT 06484

SEAL:

PRELIMINARY:
 NOT FOR
 CONSTRUCTION



DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

GENERAL NOTES

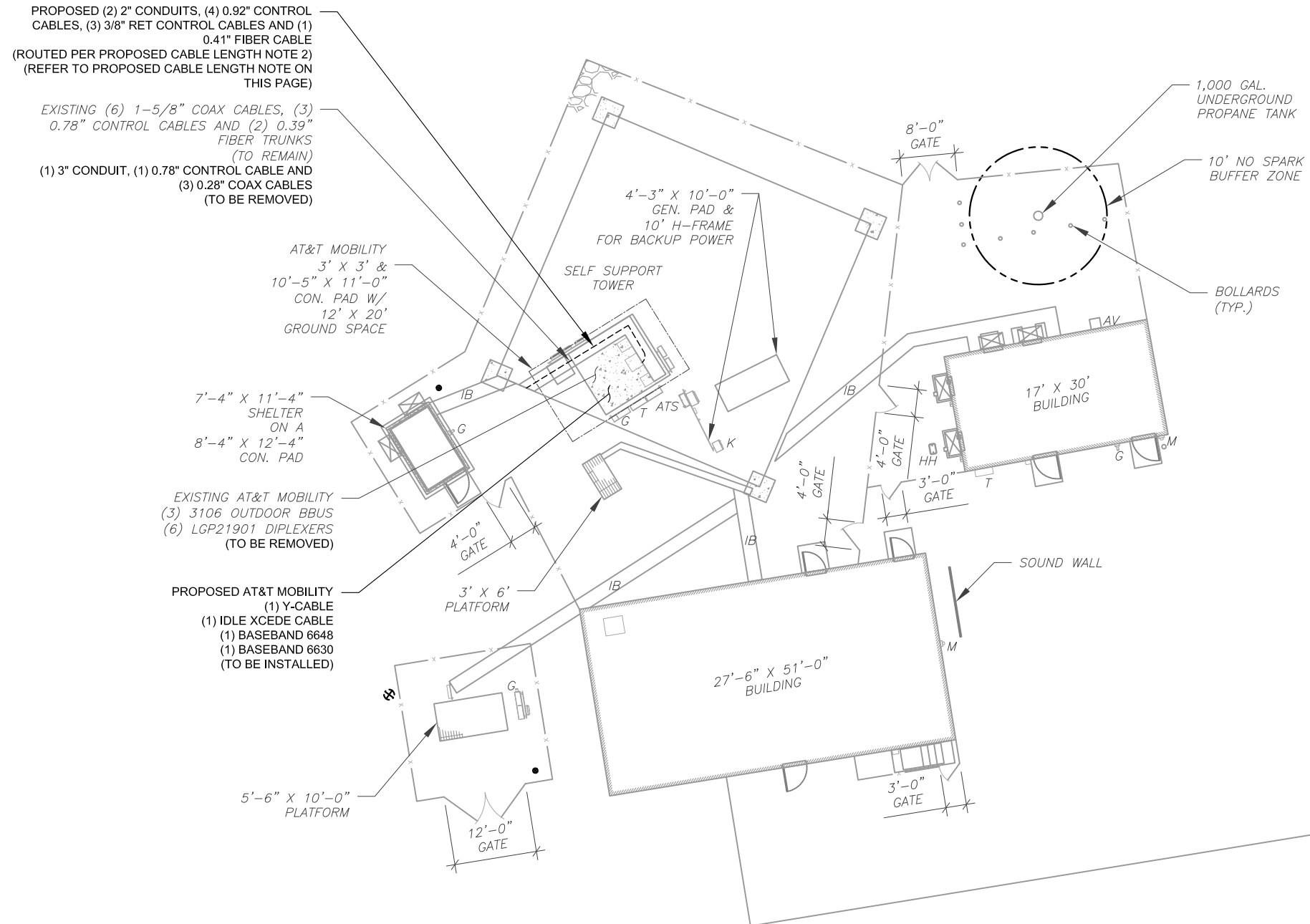
SHEET NUMBER: G-002	REVISION: A
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SITE PLAN NOTES:

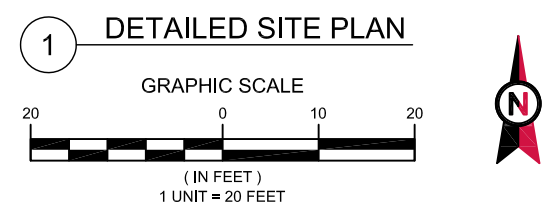
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE 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. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

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



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **195'**. 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. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	AMT	03/30/22

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 SHELTON, CT 06484

SEAL:

PRELIMINARY:
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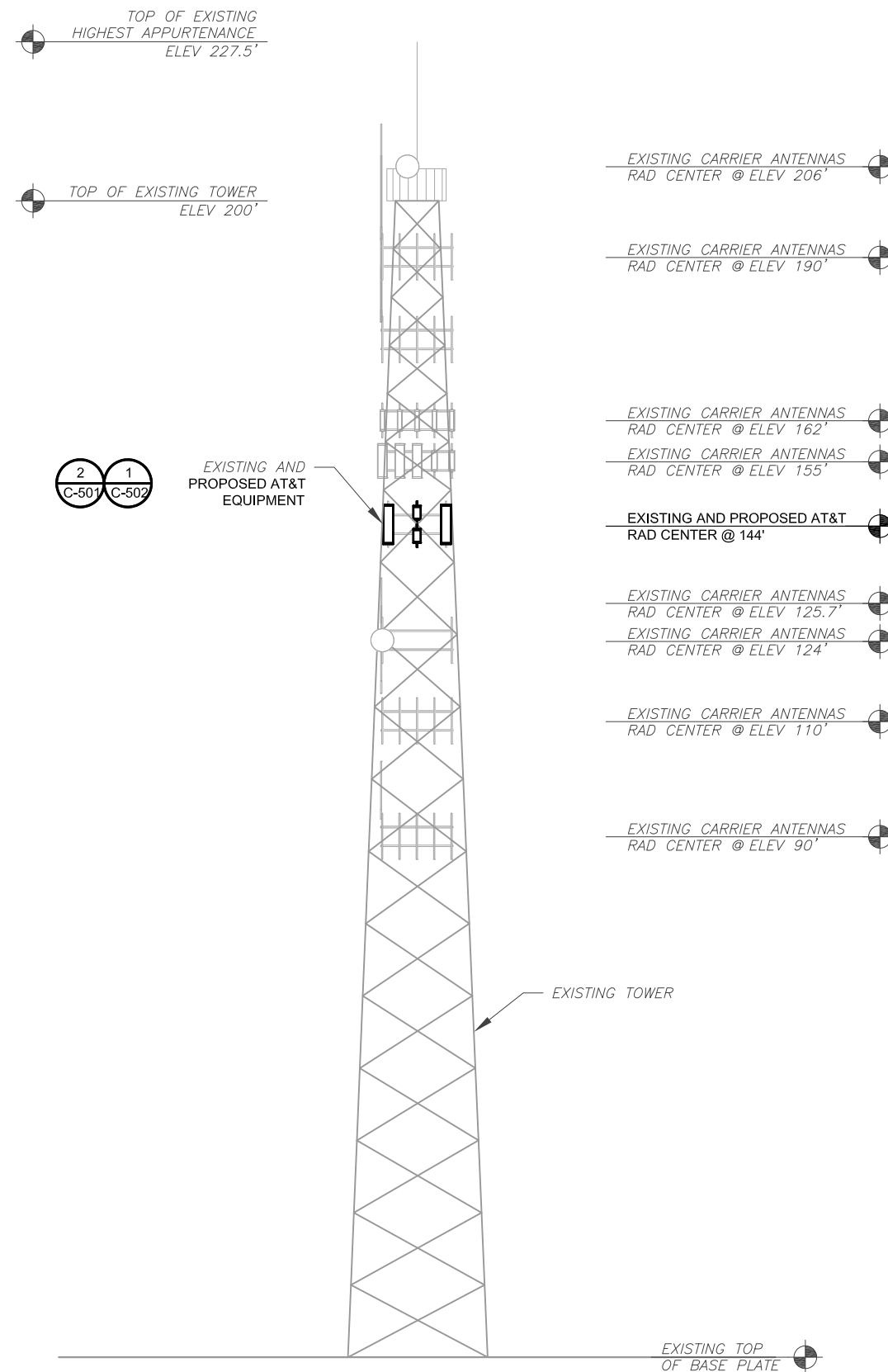
DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

DETAILED SITE PLAN

SHEET NUMBER: C-101	REVISION: A
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ATC HAS NOT ANALYZED THE EXISTING ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.).
- TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	AMT	03/30/22

ATC SITE NUMBER:
88017

ATC SITE NAME:
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AT&T SITE NAME:
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SITE ADDRESS:
20 OXFORD DRIVE
SHELTON, CT 06484

SEAL:

**PRELIMINARY:
NOT FOR
CONSTRUCTION**

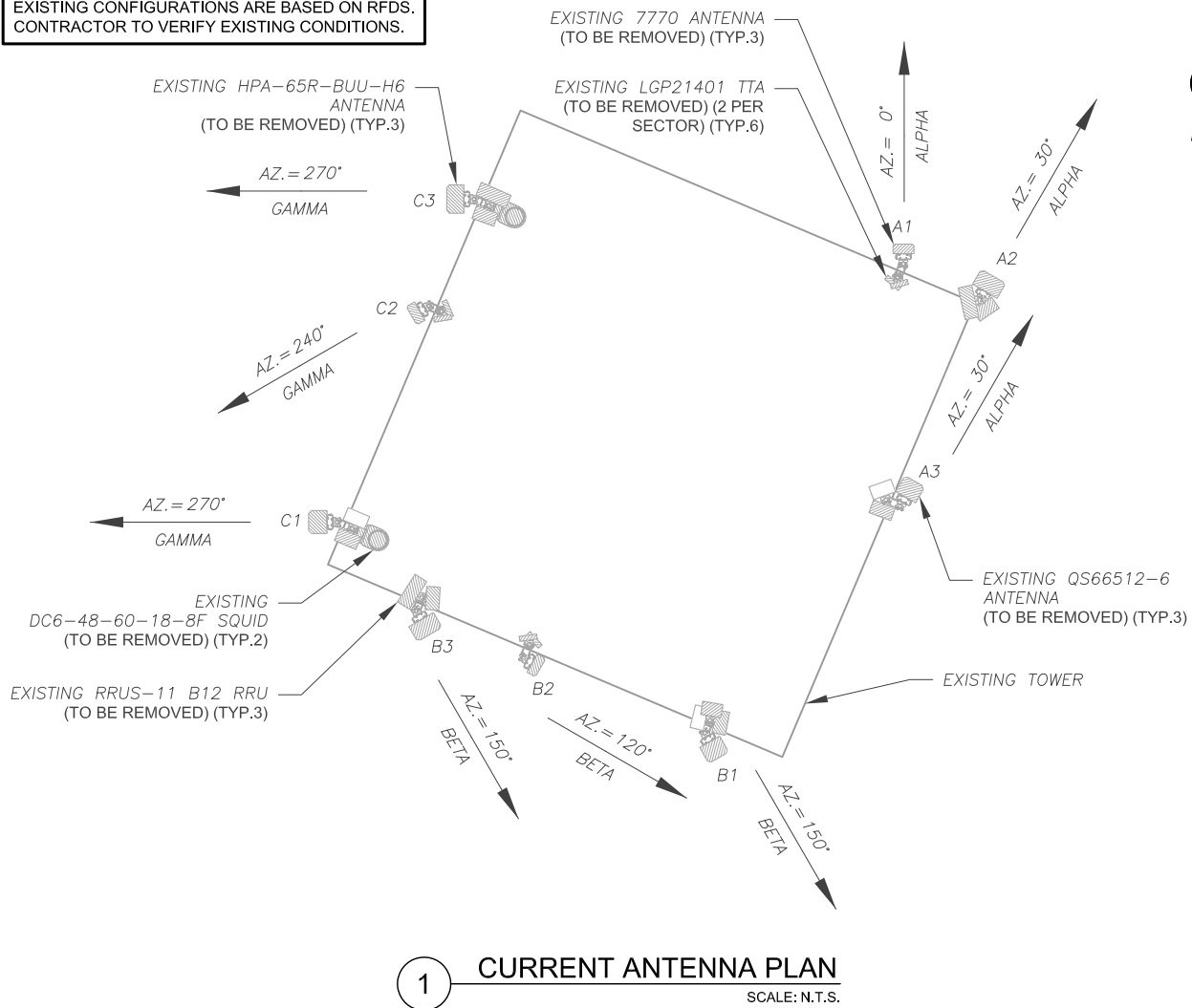


DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

TOWER ELEVATION

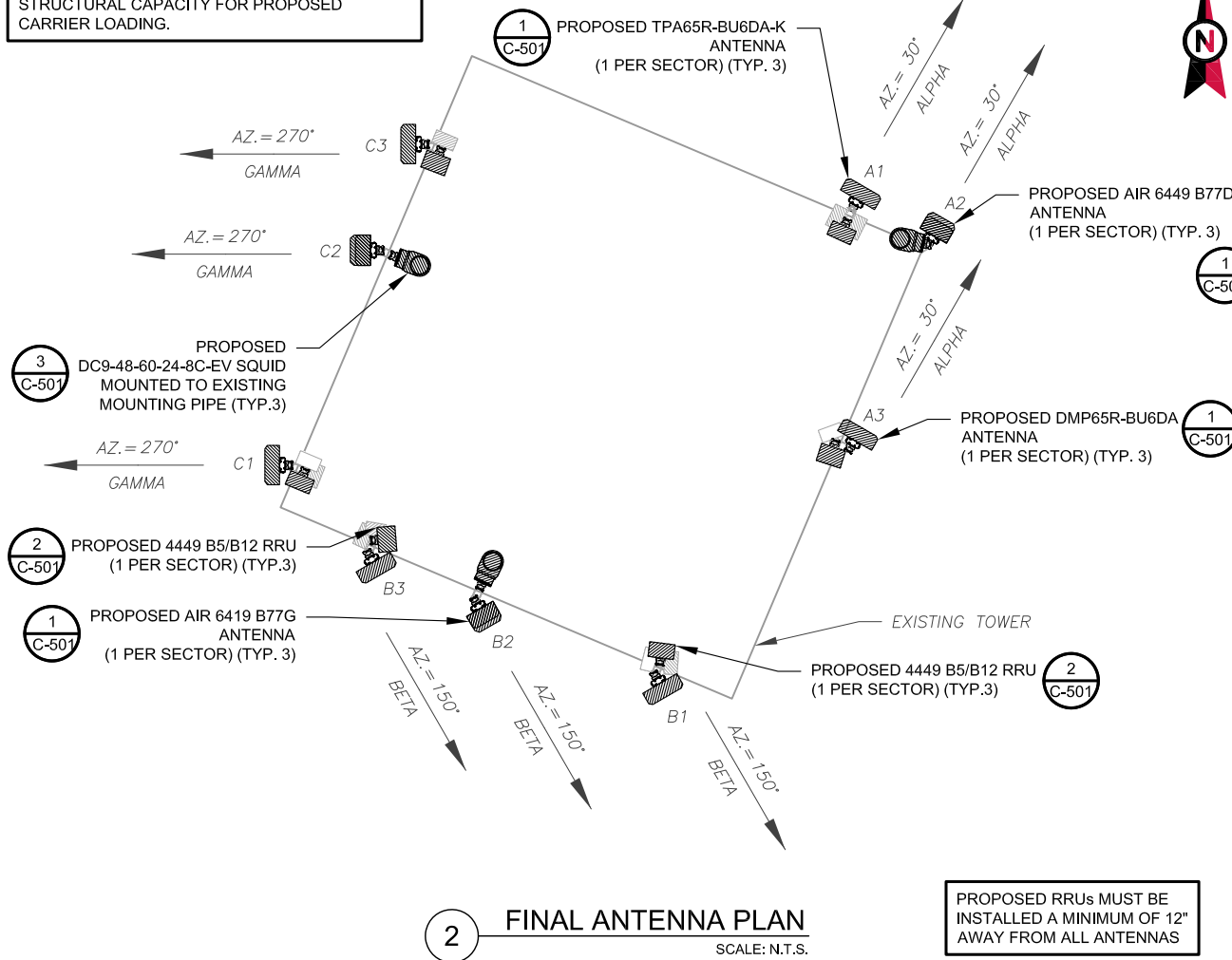
SHEET NUMBER: C-201	REVISION: A
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EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN
SCALE: N.T.S.

ATC HAS NOT ANALYZED THE EXISTING ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	144'	0°	A1	7770	850	RMV	(2) LGP21401	RMV
		30°	A2	HPA-65R-BUU-H6	700	RMV	RRUS-32 B66A RRUS-11 B12	REL RMV
			A3	QS66512-6	WCS/AWS	RMV	RRUS-32 B30 RRUS-32 B2	RMN REL
BETA	144'	150°	B1	QS66512-6	WCS/AWS	RMV	RRUS-32 B30 RRUS-32 B2 WCS-IMFQ-AMT	REL RMN REL
		120°	B2	7770	850	RMV	(2) LGP21401	RMV
		150°	B3	HPA-65R-BUU-H6	700	RMV	RRUS-32 B66A RRUS-11 B12	REL RMV
GAMMA	144'	270°	C1	QS66512-6	WCS/AWS	RMV	RRUS-32 B30 RRUS-32 B2	REL RMN
		240°	C2	7770	850	RMV	(2) LGP21401	RMV
		270°	C3	HPA-65R-BUU-H6	700	RMV	RRUS-32 B66A RRUS-11 B12	REL RMV

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

FINAL ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	144'	30°	A1	TPA65R-BU6DA-K	700/1900/AWS	ADD	4478 B14 RRUS-32 B2 RRUS-32 B66A	ADD REL REL
			A2A	AIR6449 B77D	5G C-BAND	ADD	-	-
			A2B	AIR6419 B77G	5G DOD	ADD	-	-
BETA	144'	150°	A3	DMP65R-BU6DA	700/WCS/850	ADD	4449 B5/B12 RRUS-32 B30	ADD RMN
			B1	TPA65R-BU6DA-K	700/1900/AWS	ADD	4478 B14 RRUS-32 B2 RRUS-32 B66A	ADD RMN REL
			B2A	AIR6449 B77D	5G C-BAND	ADD	-	-
GAMMA	144'	270°	B2B	AIR6419 B77G	5G DOD	ADD	-	-
			B3	DMP65R-BU6DA	700/WCS/850	ADD	4449 B5/B12 RRUS-32 B30 WCS-IMFQ-AMT	ADD REL REL
			C1	TPA65R-BU6DA-K	700/1900/AWS	ADD	4478 B14 RRUS-32 B2 RRUS-32 B66A	ADD RMN REL
GAMMA	144'	270°	C2A	AIR6449 B77D	5G C-BAND	ADD	-	-
			C2B	AIR6419 B77G	5G DOD	ADD	-	-
			C3	DMP65R-BU6DA	700/WCS/850	ADD	4449 B5/B12 RRUS-32 B30	ADD REL

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

EXISTING FIBER DISTRIBUTION/SQUID			EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	CONTROL	FIBER	STATUS
(2) DC6-48-60-18-8F	RMV	(6) 1-5/8"	(3) 0.78"	(2) 0.39"	RMN
-	-	(3) 0.28"	(1) 0.78"	-	RMV

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'

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION/SQUID			FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	CONTROL	FIBER	STATUS
(3) DC9-48-60-24-8C-EV	ADD	(6) 1-5/8"	(3) 0.78"	(2) 0.39"	RMN
-	-	-	(4) 0.92"	(1) 0.41"	ADD
-	-	-	(3) 3/8" RET	-	ADD

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A	PRELIM	AMT	03/30/22

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88017

ATC SITE NAME:
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AT&T SITE NAME:
MRCTB055062

SITE ADDRESS:
20 OXFORD DRIVE
SHELTON, CT 06484

SEAL:

PRELIMINARY:
NOT FOR
CONSTRUCTION

DATE DRAWN: 03/30/22
 ATC JOB NO: 13755484
 CUSTOMER ID: CTL05542
 CUSTOMER #: 10071232

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:
C-401

REVISION:
A



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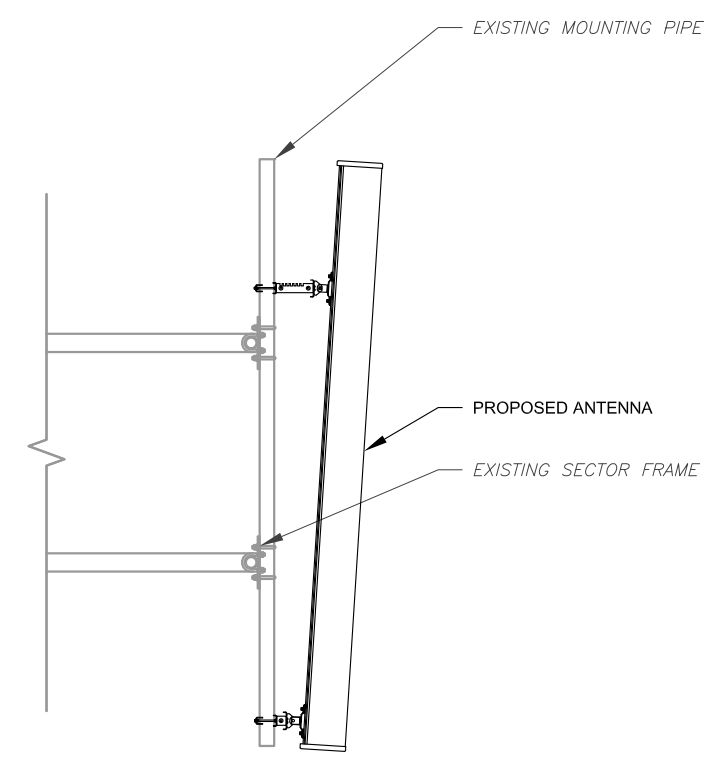
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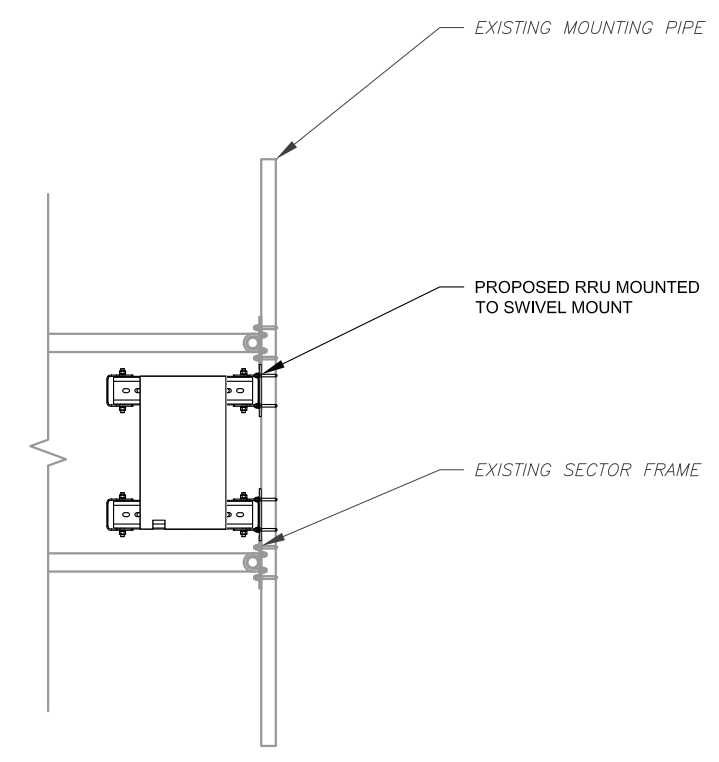
DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

**CONSTRUCTION
DETAILS**

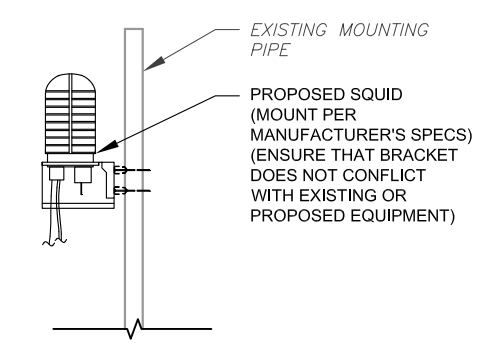
SHEET NUMBER: C-501	REVISION: A
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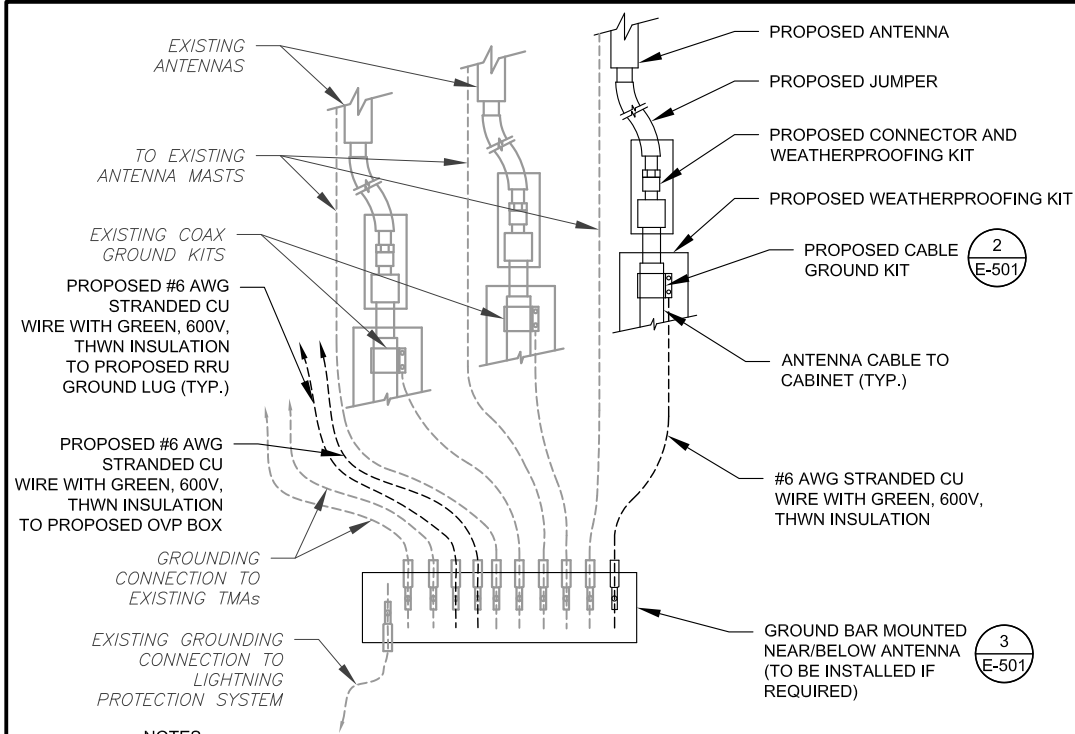
1 ANTENNA DETAIL
SCALE: N.T.S.



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



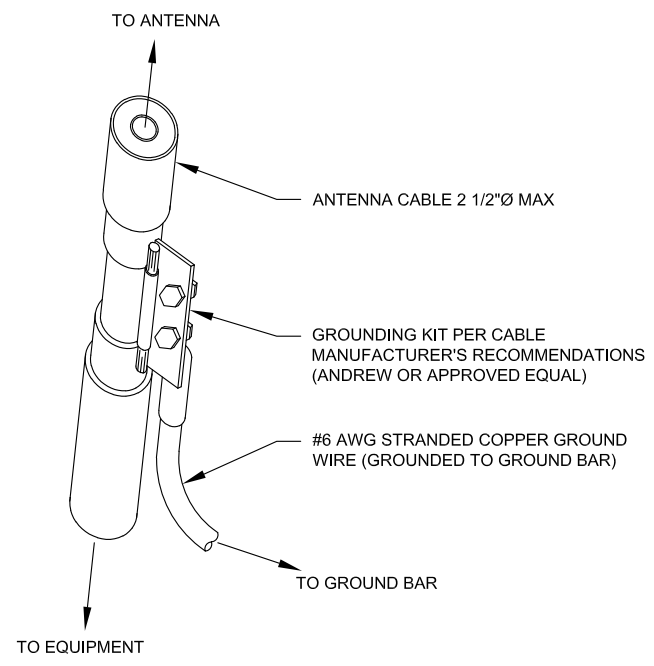
3 PROPOSED SQUID MOUNTING
SCALE: N.T.S.



NOTES:

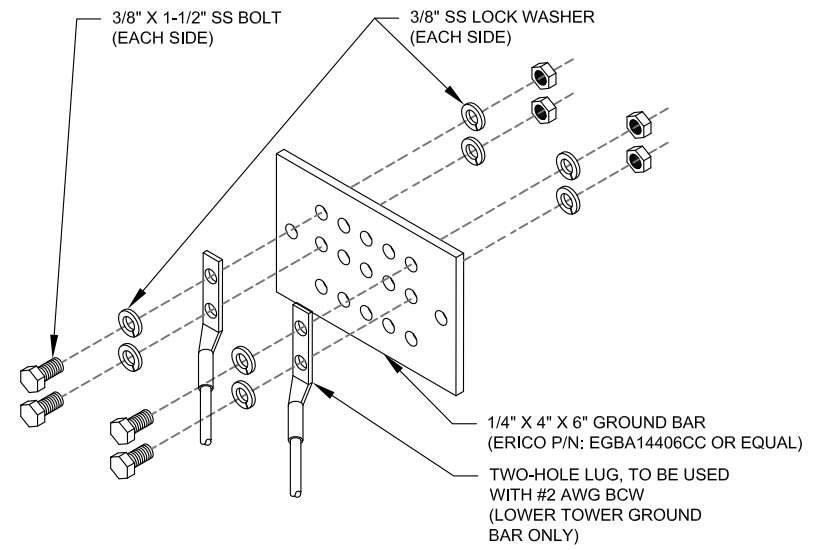
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T GROUNDING STANDARDS,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

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



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

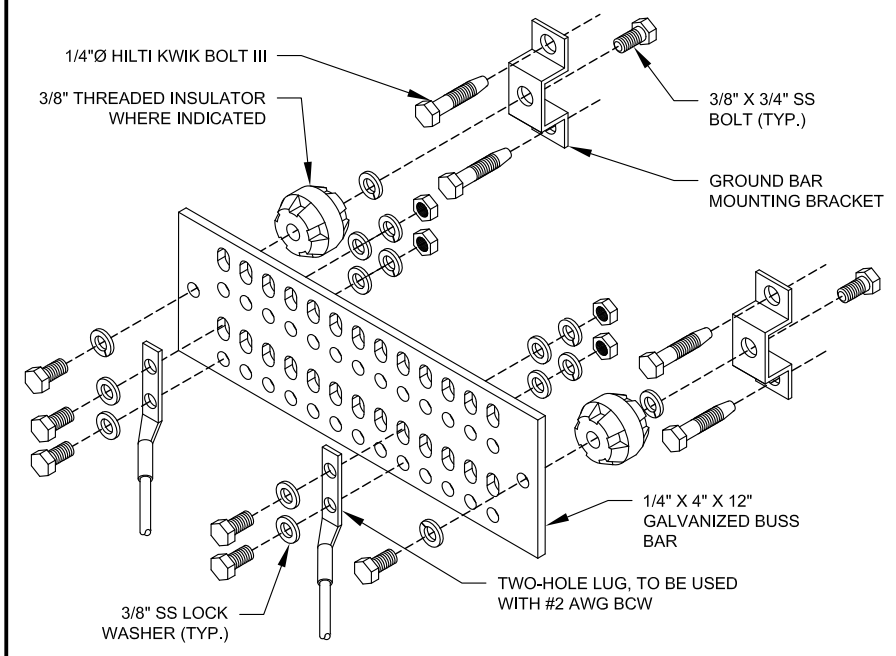
2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

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

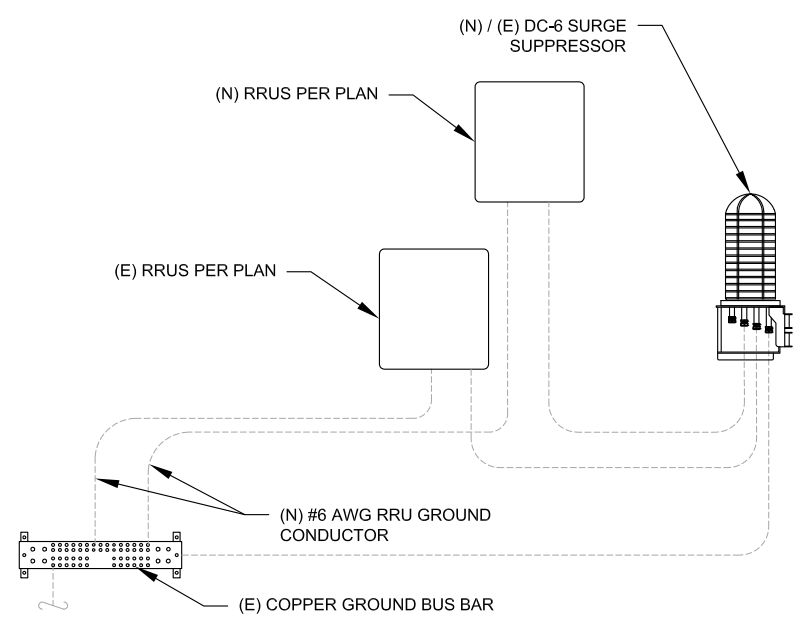
3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.



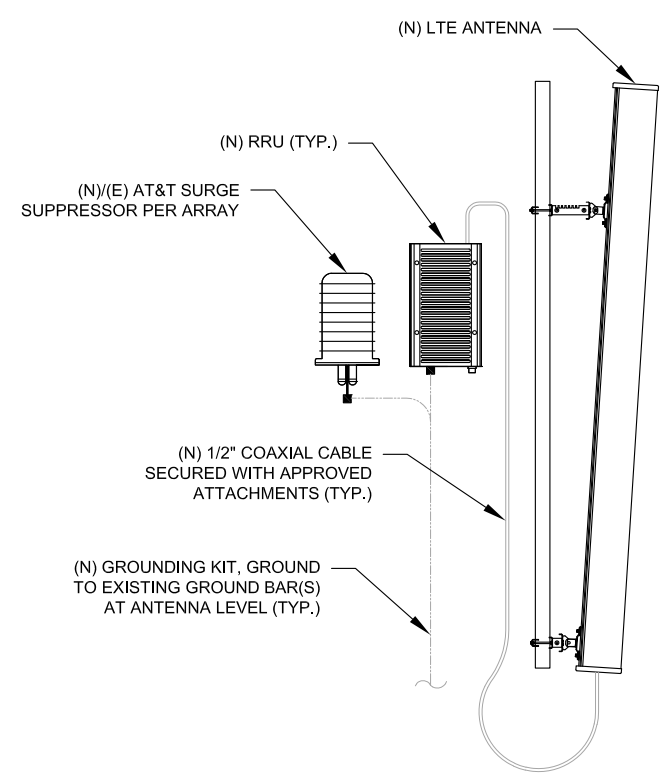
GROUND BAR NOTES

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

4 MAIN GROUND BAR DETAIL
SCALE: N.T.S.



5 RRU GROUNDING
SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING
SCALE: N.T.S.

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COA: 0012746

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8601 SIX FORKS ROAD, SUITE 540
RALEIGH, NC 27615
(919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	AMT	03/30/22

ATC SITE NUMBER:
88017

ATC SITE NAME:
SHELTON-TRUMBULL

AT&T SITE NAME:
MRCTB055062

SITE ADDRESS:
20 OXFORD DRIVE
SHELTON, CT 06484

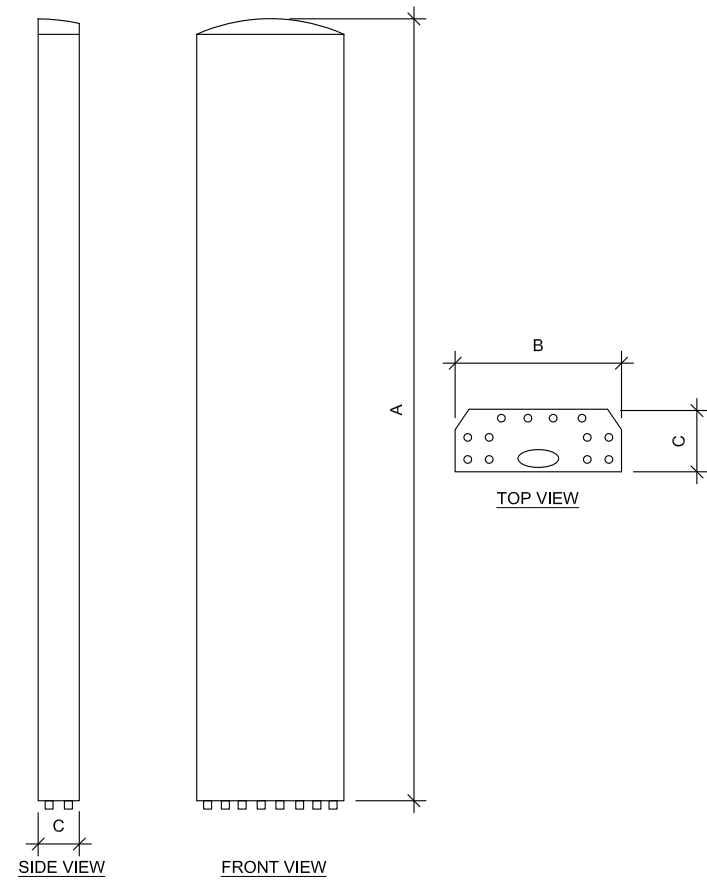
SEAL:

PRELIMINARY:
NOT FOR
CONSTRUCTION

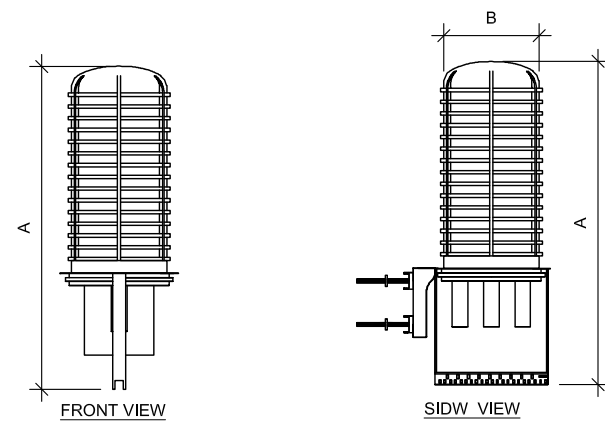
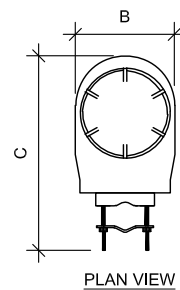
DATE DRAWN:	03/30/22
ATC JOB NO:	13755484
CUSTOMER ID:	CTL05542
CUSTOMER #:	10071232

GROUNDING DETAILS	
SHEET NUMBER: E-501	REVISION: A

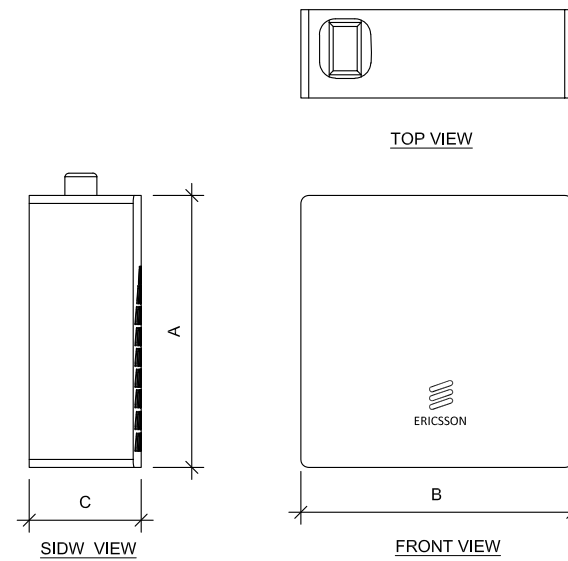
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ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
TPA65R-BU6DA-K	71.2"	20.7"	7.7"	69.0
AIR 6449 B77D	30.4"	15.9"	10.6"	81.6
AIR 6419 B77G	28.3"	16.1"	7.9"	66.1
DMP65R-BU6DA	71.2"	20.7"	7.7"	79.4



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



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RRUS 4449 B5/B12	17.9"	13.2"	9.4"	71.0
4478 B14	16.5	13.4	7.7	59.9

1 EQUIPMENT SPECIFICATIONS
SCALE: N.T.S.

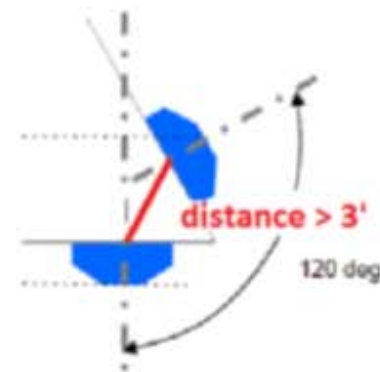
SUPPLEMENTAL

SHEET NUMBER:
R-601

REVISION:
A

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

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



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



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

SUPPLEMENTAL

SHEET NUMBER:
R-602

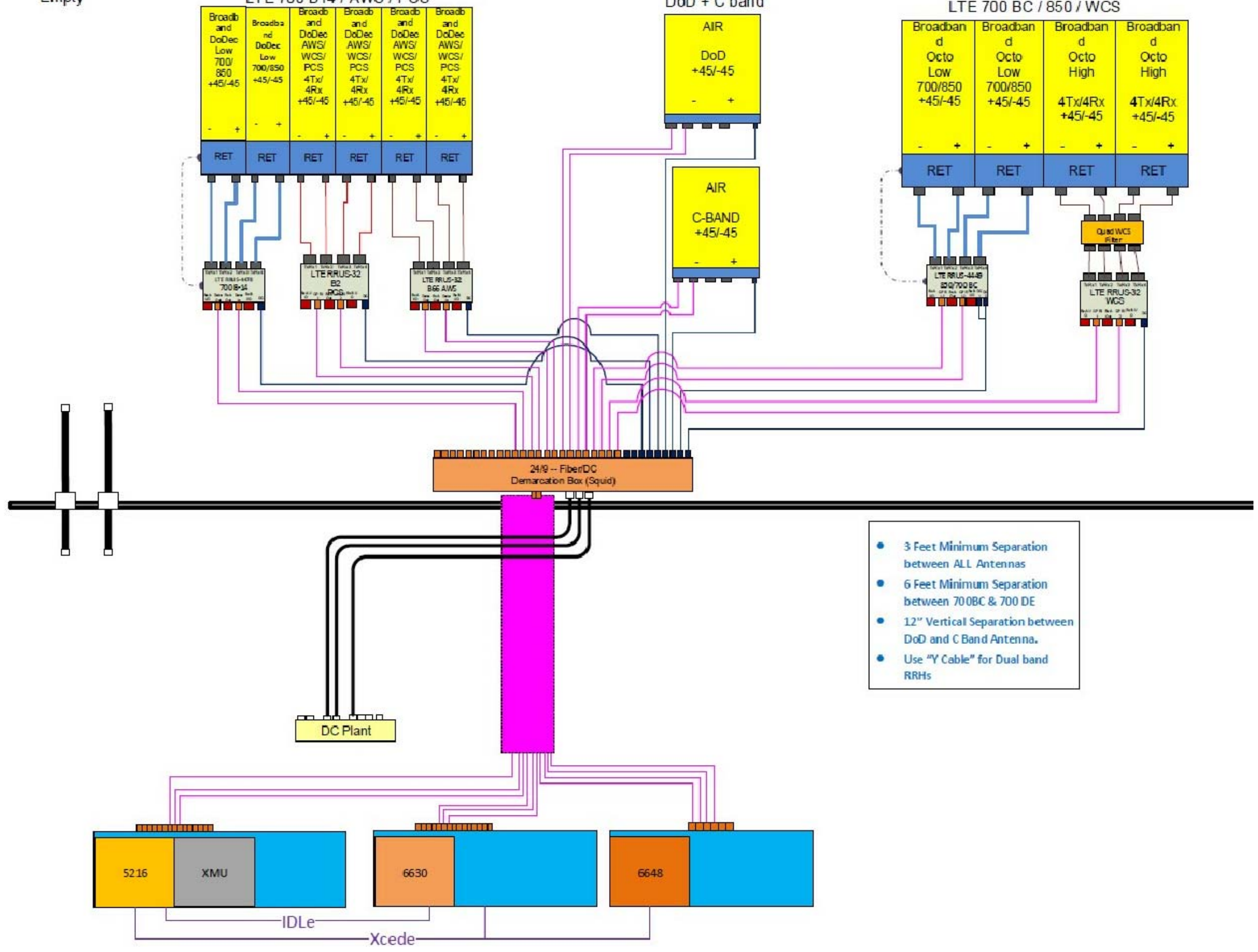
REVISION:
A

Antenna 1
Empty

Antenna 2
LTE 700 B14 / AWS / PCS

Antenna 3
DoD + C band

Antenna 4
LTE 700 BC / 850 / WCS



- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700 BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antenna.
- Use "Y Cable" for Dual band RRHs

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

SUPPLEMENTAL

SHEET NUMBER: R-603	REVISION: A
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July 7, 2022

The Honorable Mark A. Lauretti
City of Shelton
54 Hill Street
Shelton, CT 06484

Re: Exempt Modification Application – AT&T Site 13755484
AT&T Mobility Telecommunications Facility @ 20 Oxford Drive, Shelton, CT 06484
AKA 14 Oxford Drive – Booth Hill Road

Dear Mayor Lauretti:

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

- Remove nine (9) antennas, three (3) RRHs, two (2) squids, six (6) TTAs, one (1) conduit, one (1) control cable and three (3) coax cables;
- Install twelve (12) antennas, six (6) RRHs, three (3) squids, three (3) filters, two (2) conduits, seven (7) control cables, and one (1) fiber cable.
- Ground work includes removal of six (6) diplexers, and one (1) 3160 outdoor BBU; and installing a Y cable, and IDLe cable, a baseband 6648 and a baseband 6630.

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

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

Respectfully Submitted,

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

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

Enclosures



July 7, 2022

Alexander Rosetti, Planning & Zoning Administrator
City Hall
54 Hill Street – Third Floor
Shelton, CT 06484

Re: Exempt Modification Application – AT&T Site 13755484
AT&T Mobility Telecommunications Facility @ 20 Oxford Drive, Shelton, CT 06484
AKA 14 Oxford Drive – Booth Hill Road

Dear Mr. Rosetti::

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

- Remove nine (9) antennas, three (3) RRHs, two (2) squids, six (6) TTAs, one (1) conduit, one (1) control cable and three (3) coax cables;
- Install twelve (12) antennas, six (6) RRHs, three (3) squids, three (3) filters, two (2) conduits, seven (7) control cables, and one (1) fiber cable.
- Ground work includes removal of six (6) diplexers, and one (1) 3160 outdoor BBU; and installing a Y cable, and IDLE cable, a baseband 6648 and a baseband 6630.

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

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

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over the typed name.

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

enclosures



July 7, 2022

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

Re: Exempt Modification Application – AT&T Site 13755484
AT&T Mobility Telecommunications Facility @ 20 Oxford Drive, Shelton, CT 06484
AKA 14 Oxford Drive – Booth Hill Road

Dear Ms. Hall:

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

- Remove nine (9) antennas, three (3) RRHs, two (2) squids, six (6) TTAs, one (1) conduit, one (1) control cable and three (3) coax cables;
- Install twelve (12) antennas, six (6) RRHs, three (3) squids, three (3) filters, two (2) conduits, seven (7) control cables, and one (1) fiber cable.
- Ground work includes removal of six (6) diplexers, and one (1) 3160 outdoor BBU; and installing a Y cable, and IDLe cable, a baseband 6648 and a baseband 6630.

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

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

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over the printed name.

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

Enclosures

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



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Hon. Mark Lauretti, Mayor

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Shelton, CT

Alexander Rosetti, Planning & Zoning Administrator

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