



November 13, 2019

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

Re: Notice of Exempt Modification – Antenna and RRU Add
Property Address: 12 Carpenter Road, Bolton, CT 06043
Applicant: AT&T Mobility, LLC

Dear Ms. Bachman:

On behalf of AT&T, please accept this application 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).

AT&T currently maintains a wireless telecommunications facility consisting of twelve (12) wireless telecommunication antennas at an antenna center line height of 110-feet on an existing 139-foot monopole, which the tower is extending to 150' with a new antenna center line of 150' as well, owned by SBA at 8051 Congress Ave, Boca Raton, FL 33487. AT&T now intends to remove six (6) 4' Kathrein 7770 Panel Antennas, each currently installed in position [1+2+3], as well as remove three (3) 6' AM-X-CD16-65-00T-RET Panel Antennas, currently installed in position [4] all sectors. We are going to swap these for three (3) 8' CCI HPA65-BU8A Panel Antennas, three (3) 8' CCI TPA65R-BU8DA-K Panel Antennas, and three (3) 8' CCI DMP65R-BU8DA Panel Antennas, each to be installed in position [1+3+4], all sectors. In addition, AT&T intends to remove six (6) RRUS-11, and add one (1) RRUS-4478 B14, one (1) RRUS-4449 B5/B12, and (1) RRUS-8843 B2/B66A in positions [3 + 4], all sectors, for a total of nine (9) new RRUs. AT&T is also proposing to add (2) Raycap Squids, as well as one (1) fiber line and (4) DC Power Cables to their equipment configuration. All of the changes will take place on a new antenna mount, due to the tower extension.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Jim Rupert – Building & Zoning Enforcement Officer, Town of Bolton, CT at 22 Bolton Center Road, Bolton, CT 06043 and Sandra Pierog – First Selectman, Town of Branford, CT at 22 Bolton Center Road, Bolton, CT. A copy of this letter is being sent to the property owner, Terry L. Veo at 23 Bolton Center Road, Bolton, CT 06043 and to the tower company, SBA at 8051 Congress Ave, Boca Raton, FL 33487.

The following is a list of subsequent decisions by the Connecticut Siting Council:

- **TS-CING-012-080409** – New Cingular Wireless PCS, LLC request for an order to approve tower sharing at an approved telecommunications facility located at 12 Carpenter Road, Bolton, Connecticut.
- **EM-CING-012-120613A** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 12 Carpenter Road, Bolton, Connecticut.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b) (2).

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 105-foot level of the 147-foot self-support tower.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.



3. The proposed modifications will not increase the 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 (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

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

Sincerely,

Kristina Cottone

CC w/enclosures:

Jim Rupert – Building & Zoning Enforcement Officer, Town of Bolton, CT

Sandra Pierog – First Selectman, Town of Bolton, CT

Terry L. Veo – Property Owner

SBA – Tower Company

DOCKET NO. 323 - MCF Communications bg, Inc. and } Omnipoint Communications, Inc. application for a Certificate of Environmental Compatibility and Public Need for the } construction, maintenance and operation of a telecommunications facility located at 12 Carpenter Road, Bolton, Connecticut. }	Connecticut Siting Council May 22, 2007
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Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to MCF Communications bg, Inc. and Omnipoint Communications, Inc., hereinafter referred to as the Certificate Holders, for a telecommunications facility at 12 Carpenter Road, Bolton, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Omnipoint Communications, Inc. and other entities, both public and private, but such tower shall not exceed a height of 140 feet above ground level. The height at the top of the antennas shall not exceed 140 feet above ground level.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Bolton for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Bolton public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Bolton. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant and the Journal Inquirer.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant

MCF Communications bg, Inc. and
Omnipoint Communications, Inc.

Intervenor

Sprint Nextel Corporation

Intervenor

Cellco Partnership d/b/a Verizon Wireless

Representative

Julie Kohler, Esq.
Carrie Larson, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604

Representative

Thomas Regan
Brown Rudnick Berlack Israels LLP
City Place I, 185 Asylum Avenue
Hartford, CT 06103-3402

Representative

Kenneth C. Baldwin
Robinson and Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

14 CARPENTER RD

Location 14 CARPENTER RD

Mblu 07/ / 5/ /

Owner VEO TERRY L

Assessment \$535,400

Appraisal \$932,600

PID 1129

Building Count 2

Current Value

Appraisal	
Valuation Year	Total
2018	\$932,600
Assessment	
Valuation Year	Total
2018	\$535,400

Owner of Record

Owner	VEO TERRY L	Sale Price	\$0
Co-Owner	VEO TERRY L TRUSTEE	Certificate	salemaster
Address	23 BOLTON CENTER RD BOLTON, CT 06043	Book & Page	0088/1041
		Sale Date	10/21/1996

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
VEO TERRY L	\$0	salemaster	0088/1041	10/21/1996

Building Information

Building 1 : Section 1

Year Built: 1760
Living Area: 4,135
Building Percent 52
Good:

Building Attributes	
Field	Description
STYLE	Apartments
MODEL	Comm/Ind

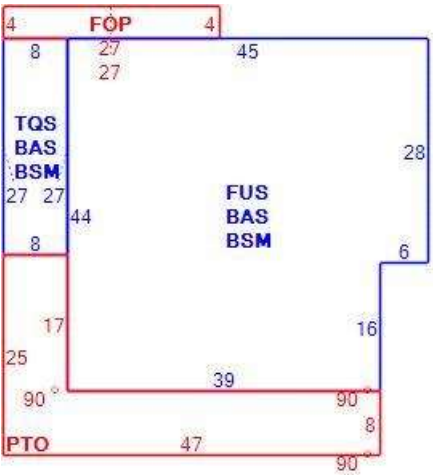
Grade	C-
Stories:	2
Occupancy	4.00
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt
Interior Wall 1	Plaster
Interior Wall 2	
Interior Floor 1	Ceramic Tile
Interior Floor 2	Hardwood
Heating Fuel	Oil
Heating Type	Hot Water
% Central Air	0
Frame Type	WOOD FRAME
Fin. Bsmt. Area	
Wall Height	8.00

Building Photo



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Building Layout



(ParcelSketch.ashx?pid=1129&bid=1129)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	2,100	2,100
FUS	Finished Upper Story	1,884	1,884
TQS	Three Quarter Story	216	151
BSM	Basement	2,100	0
FOP	Open Porch	108	0
PTO	Patio	512	0
		6,920	4,135

Building 2 : Section 1

Year Built: 1966
Living Area: 3,354
Building Percent Good: 61

Building Attributes : Bldg 2 of 2
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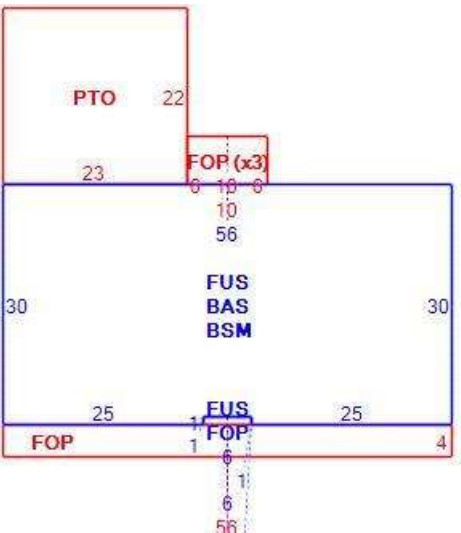
Field	Description
STYLE	Apartments
MODEL	Comm/Ind
Grade	C-
Stories:	2
Occupancy	4.00
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	Brick
Roof Structure	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	Plaster
Interior Floor 1	Concrete
Interior Floor 2	Hardwood
Heating Fuel	Oil
Heating Type	Hot Water
% Central Air	0
Frame Type	WOOD FRAME
Fin. Bsmt. Area	
Wall Height	8.00

Building Photo



(PhotoHandler.ashx?pid=1129&bid=3037)

Building Layout



(ParcelSketch.ashx?pid=1129&bid=3037)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
FUS	Finished Upper Story	1,680	1,680
BAS	First Floor	1,674	1,674
BSM	Basement	1,674	0
FOP	Open Porch	410	0
PTO	Patio	506	0
		5,944	3,354

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use		Land Line Valuation	
Zone	R-2	Size (Acres)	33.00
		Depth	
		Assessed Value	\$288,000
		Appraised Value	\$579,400

Outbuildings

Outbuildings					Legend
Code	Description	Sub Code	Sub Description	Size	Bldg #
FN1	Fence			280.00 L.F.	1
SHD1	Shed	FR	Frame	144.00 S.F.	1
CELL	Cell Tower	FR		140.00 FEET	1
SHD1	Shed	MS	Masonry	360.00 S.F.	1
SHD1	Shed	MS	Masonry	360.00 S.F.	1
PAV1	Paving	CN	Concrete	1332.00 S.F.	1
PAV1	Paving	AS	Asphalt	1632.00 S.F.	1
PAV1	Paving	AS	Asphalt	981.00 S.F.	2

Valuation History

Appraisal	
Valuation Year	Total
2018	\$932,600
2017	\$932,100

Assessment	
Valuation Year	Total
2018	\$535,400
2017	\$533,080



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 139 ft. Nudd Corporation Monopole Plus 10' extension total 149'

Customer Name: SBA Communications Corp

Customer Site Number: CT11558-A

Customer Site Name: Bolton 2, CT

Carrier Name: AT&T (App#: 122425, V4)

Carrier Site ID / Name: CTL01227 / Bolton Carpenter RD

Site Location: 12 Carpenter Road

Bolton, Connecticut

Tolland County

Latitude: 41.779083

Longitude: -72.465303

Analysis Result:

Max Structural Usage: 68.8% [Pass]

Max Foundation Usage: 60.0% [Pass]

Additional Usage Caused by New Mount: +3.6%

Report Prepared By : Delu Zhou





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Report Prepared By : Delu Zhou

Introduction

The purpose of this report is to summarize the analysis results on the 149 ft. Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Fred A Nudd Corporation Project #207-13312, dated September 5, 2007
Foundation Drawing	Fred A Nudd Corporation Project #207-13312, dated September 5, 2007
Geotechnical Report	Subsurface Drilling & Remediation Co., Project # 02910, dated 7/24/07 & Original design soil parameters from Fred A. Nudd Corporation
Modification Drawings	N/A

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft.
Seismic Parameters:	$S_S = 0.177$, $S_1 = 0.063$

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	137.0	1	Antel - BXA-70063-4CF-EDIN-X - Panel	Low Profile Platform	(12) 1 5/8" (3) 1 5/8" Hybrid	Verizon
2		3	Antel - BXA-70063-6CF-2 - Panel			
3		2	Antel - BXA-70080-6BF - Panel			
4		1	DB-T1-6Z-8AB-0Z			
5		1	Generic GPS			
6		3	Alcatel-Lucent - RRH2x60-700U - TTA			
7		3	Alcatel-Lucent - RRH2X60-AWS - TTA			
8		3	Alcatel-Lucent -RRH2x60-PCS-TTA			
9		6	Andrew - SBNHH-1D65B - Panel			
10	126.5	3	Ericsson - AIR 21, 1.3M, B2A B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Hybrid	T-Mobile
11		3	Ericsson - AIR 21, 1.3M, B4A B2P - Panel			
12		3	KRY 112 144/1			
13		3	Andrew - LNX-6515DS-A1M - Panel			
14		3	S11B12			
-	110.0*	9	Powerwave - 7770.00 - Panel	Low Profile Platform	(12) 1 5/8" (1) 3" Conduit (2) 7/8" DC (1) RET	AT&T
-		1	DC6-48-60-18-8F			
-		3	4 LTE - KMW AM-X-CD-16-65-00T			
-		12	LGP2140X			
-		6	RRUS 11			

*AT&T will be relocating equipment from the 110' Rad to the 150' Rad.

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	150.0	3	Powerwave 7770.00 Panel	Low Profile Platform SitePro RMQP-496-HK	(12) 1 5/8" (1) 3" Conduit [housing (1) 1/2" fiber & (2) 3/4" DC] (1) 1/2" Fiber (4) 3/4" DC	AT&T
2		3	Cci HPA65R-BU8A Panel Panel			
3		3	Cci TPA65R-BU8DA-K Panel			
4		3	Cci DMP65R-BU8DA Panel			
5		12	Powerwave LGP21401 TMA			
6		3	Ericsson RRUS 4478 B14			
7		3	Ericsson RRUS 4449 B5/B12			
8		3	Ericsson RRUS 8843 B2 B66A			
9		3	Raycap DC6-48-60-18-8F COVP			

All transmission lines are considered running inside of the pole shafts.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	68.8%	49.2%	43.5%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3015.6	25.9	75.0

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.4088 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure with the proposed extension was found adequate to safely support the existing and proposed equipment per the ANSI/TIA/EIA 222-G standards under a basic wind speed of 97 mph no ice and 50 mph with 1" radial ice.

- Install 10' extension at the top of the existing 139' pole (18" ϕ x 10'-0" Pipe)

A modification packet (including design drawings) can be provided under a separate scope of work.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 68.78% at 50.0ft

Structure: CT11558-A-SBA
Site Name: Bolton 2, CT
Height: 149.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: B
Gh: 1.1

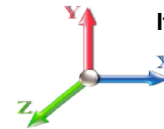
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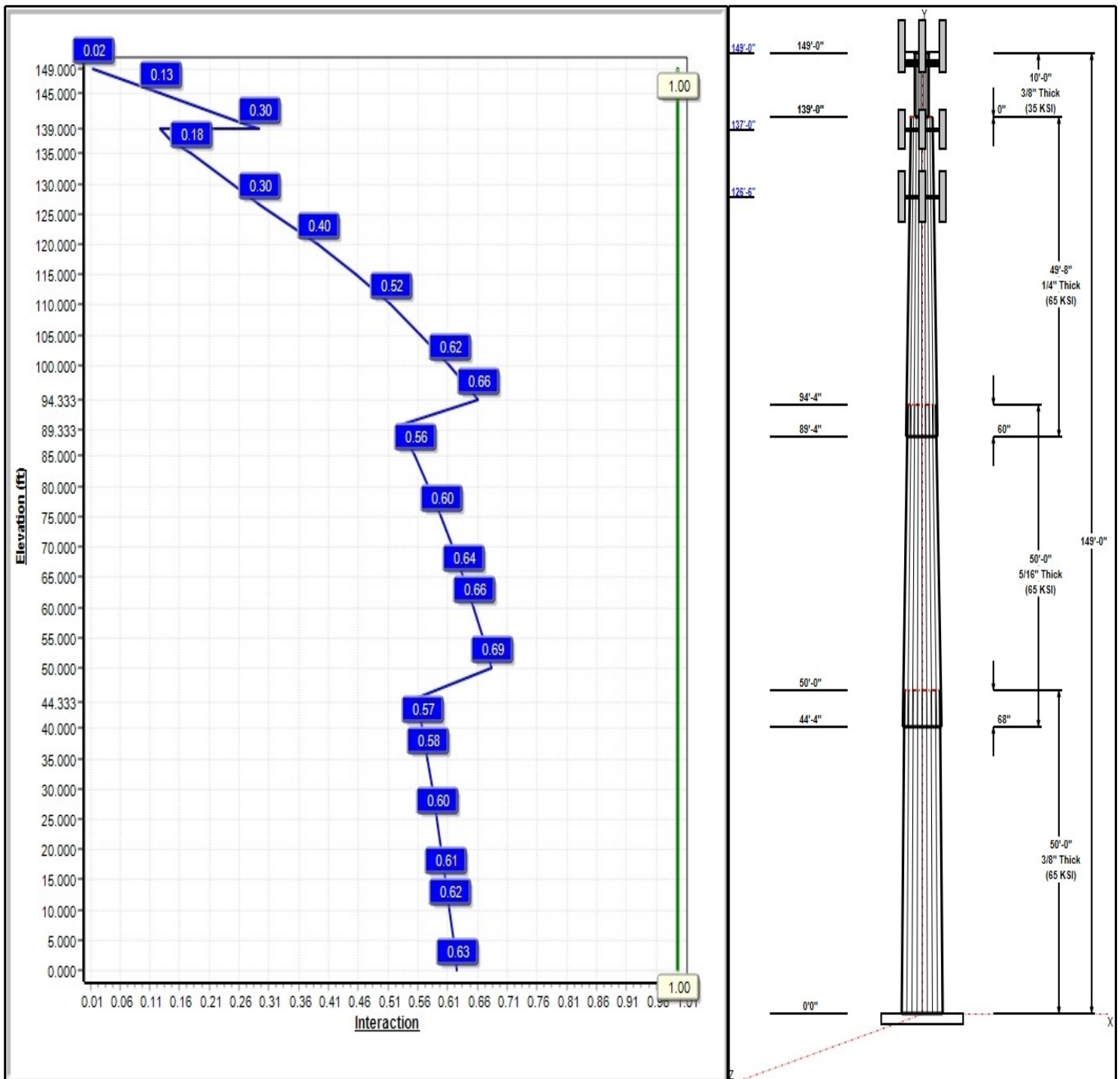
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 24

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Structure: CT11558-A-SBA

Type: Custom
Site Name: Bolton 2, CT
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

11/15/2019



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Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	50.00	43.84	55.63	0.375		0.23561	65
2	50.00	34.02	45.80	0.313	Slip	0.23561	65
3	49.67	24.00	35.70	0.250	Slip	0.23561	65
4	10.00	18.00	18.00	0.375	Butt	0.00000	35

Discrete Appurtenances

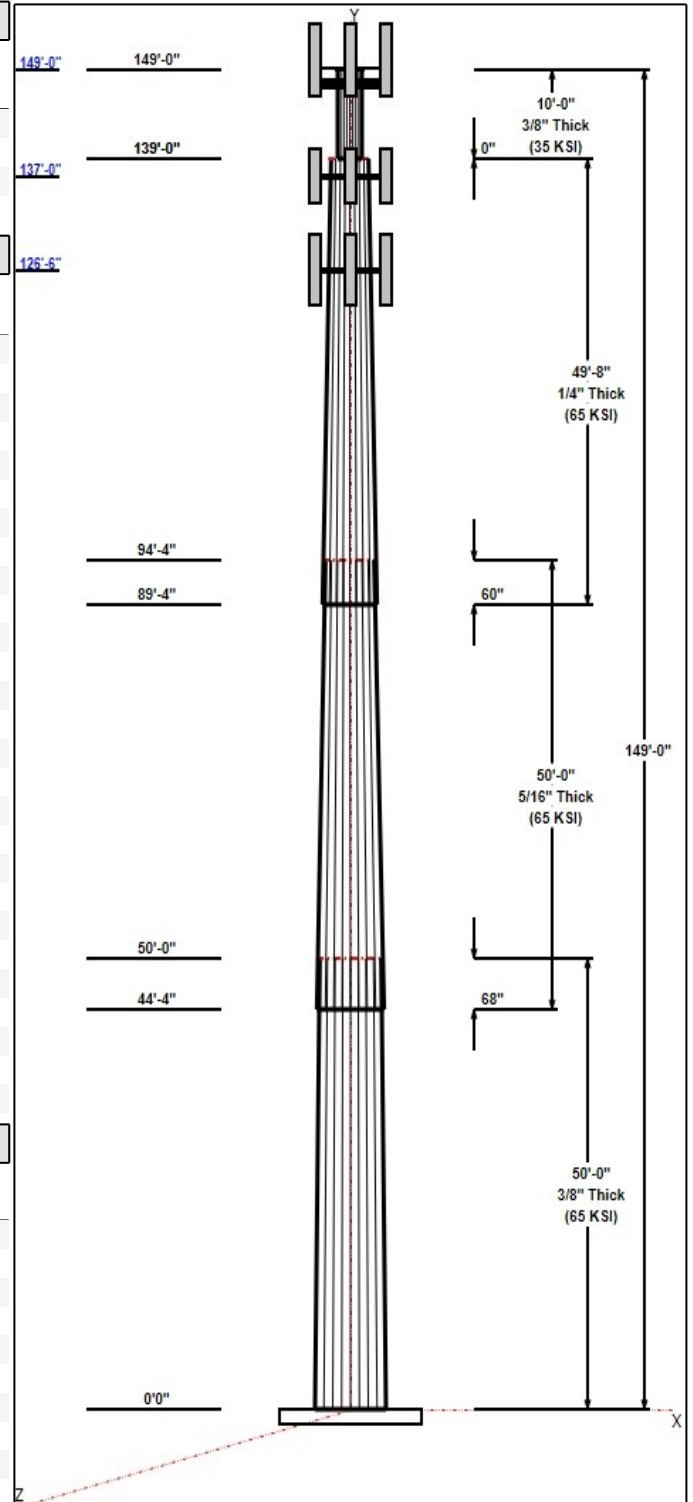
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
149.00	150.00	3	7770.00	AT&T
149.00	150.00	12	LGP21401	AT&T
149.00	150.00	3	Raycap DC6-48-60-18-8F	AT&T
149.00	150.00	3	HPA65R-BU8A	AT&T
149.00	150.00	3	TPA65R-BU8DA-K	AT&T
149.00	150.00	3	DMP65R-BU8DA	AT&T
149.00	150.00	3	RRUS 4478 B14	AT&T
149.00	150.00	3	RRUS 4449 B5/B12	AT&T
149.00	150.00	3	RRUS 8843 B2 B66A	AT&T
149.00	152.00	1	Lightning Rod	
149.00	149.00	1	Low Profile Platform	AT&T
137.00	137.00	3	BXA-70063-6CF-2	Verizon
137.00	137.00	3	RRH2x60-PCS)	Verizon
137.00	137.00	3	RRH2x60-700U	Verizon
137.00	137.00	1	GPS	Verizon
137.00	137.00	1	DB-T1-6Z-8AB-0Z	Verizon
137.00	137.00	6	SBNHH-1D65B	Verizon
137.00	137.00	2	BXA-70080-6BF	Verizon
137.00	137.00	1	BXA-70063-4CF-EDIN-X	Verizon
137.00	137.00	3	RRH2X60-AWS	Verizon
137.00	137.00	1	Low Profile Platform-flat	Verizon
126.50	126.50	3	AIR 21, 1.3M, B2A B4P	T-Mobile
126.50	126.50	3	AIR 21, 1.3M, B4A B2P	T-Mobile
126.50	126.50	3	KRY 112 144/1	T-Mobile
126.50	126.50	3	LNK-6515DS-A1M	T-Mobile
126.50	126.50	1	Low Profile Platform-flat	T-Mobile
126.50	126.50	3	S11B12	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	149.00	Inside	1 5/8" Coax	AT&T
0.00	149.00	Inside	1/2" Fiber	AT&T
0.00	149.00	Inside	3" Conduit	AT&T
0.00	149.00	Inside	3/4" DC	AT&T
0.00	139.00	Inside	Safety Cable	
0.00	139.00	Inside	Step bolts (ladder)	
0.00	137.00	Inside	1 5/8" Coax	Verizon
0.00	137.00	Inside	1 5/8" Hybrid	Verizon
0.00	126.50	Inside	1 5/8" Coax	T-Mobile
0.00	126.50	Inside	1 5/8" Hybrid	T-Mobile

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
20	2.00" F1554 105	105.0	Radial



Structure: CT11558-A-SBA

Type: Custom
Site Name: Bolton 2, CT
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

11/15/2019

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Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.5000	68.0	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	3015.6	25.9	42.8
0.9D + 1.6W 97 mph Wind	2982.1	25.9	32.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	882.3	7.5	75.0
1.2D + 1.0E	254.3	2.0	42.8
0.9D + 1.0E	251.3	2.0	32.1
1.0D + 1.0W 60 mph Wind	716.6	6.2	35.7

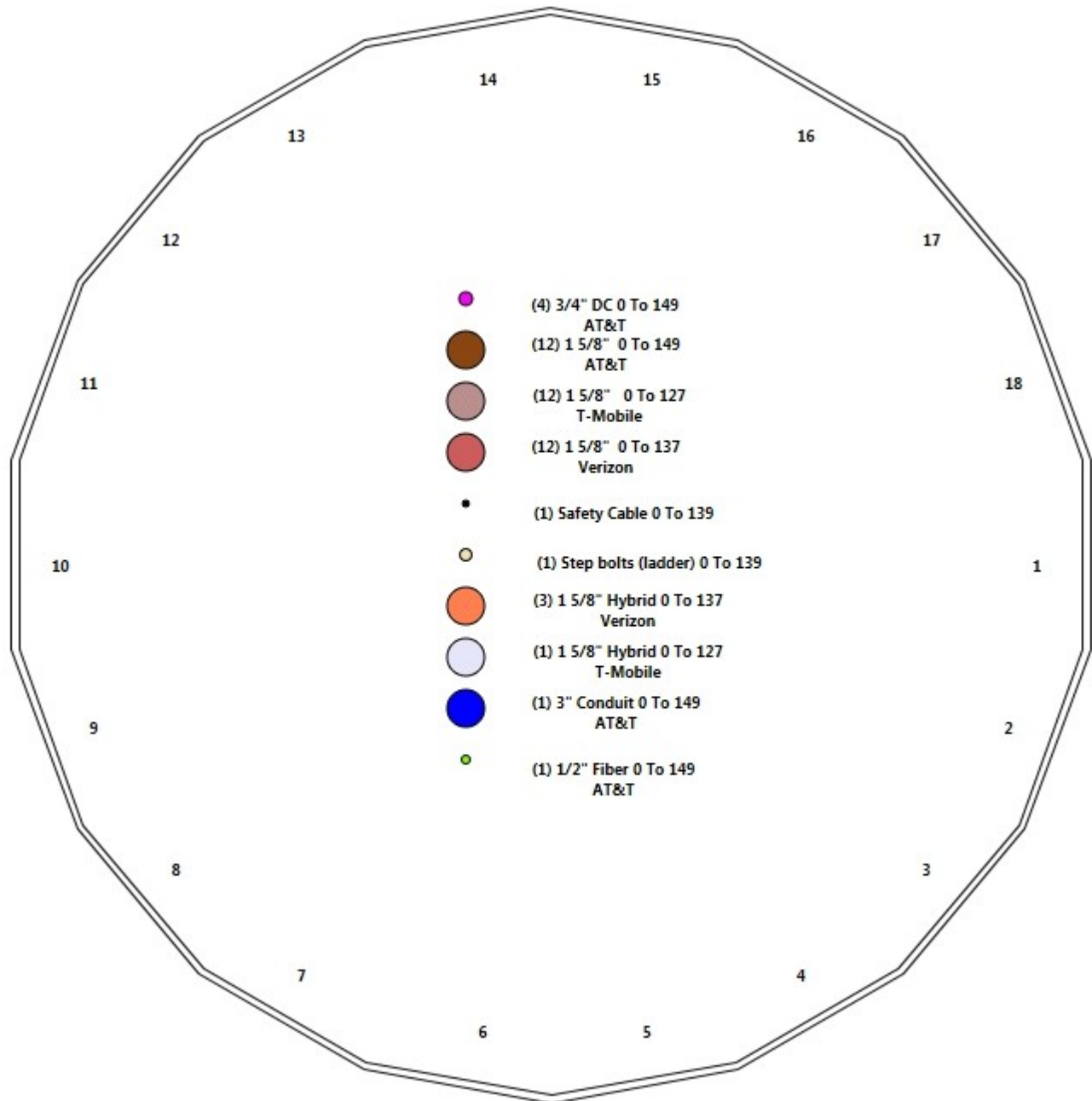
Structure: CT11558-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Bolton 2, CT
Height: 149.00 (ft)

11/15/2019



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Shaft Properties

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	50.000	0.3750	65		0.00	9,995
2	18	50.000	0.3125	65	Slip	68.00	6,683
3	18	49.667	0.2500	65	Slip	60.00	3,970
4	R	10.000	0.3750	35	Flange	0.00	714
Total Shaft Weight:							21,362

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	55.63	0.00	65.76	25361.36	24.74	148.33	43.84	50.00	51.74	12351.7	19.21	116.9	0.235612
2	45.80	44.33	45.12	11797.80	24.43	146.57	34.02	94.33	33.44	4800.96	17.79	108.8	0.235612
3	35.70	89.33	28.13	4466.92	23.77	142.81	24.00	139.00	18.84	1343.00	15.52	96.00	0.235612
4	18.00	139.0	20.98	823.31	8.11	48.00	18.00	149.00	20.98	823.31	8.11	48.00	0.000000

Load Summary

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 6



Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	149.00	7770.00	3	35.00	5.50	0.73	228.95	6.950	0.73	0.00	1.00
2	149.00	LGP21401	12	14.10	1.29	0.50	47.41	2.404	0.50	0.00	1.00
3	149.00	Raycap DC6-48-60-18-8F COVP	3	32.80	0.92	0.57	117.77	1.504	0.57	0.00	1.00
4	149.00	HPA65R-BU8A	3	54.00	11.23	0.86	430.74	13.462	0.86	0.00	1.00
5	149.00	TPA65R-BU8DA-K	3	87.10	15.87	0.72	612.51	20.333	0.72	0.00	1.00
6	149.00	DMP65R-BU8DA	3	95.70	16.30	0.83	621.11	20.333	0.83	0.00	1.00
7	149.00	RRUS 4478 B14	3	59.40	1.65	0.57	114.65	2.341	0.57	0.00	1.00
8	149.00	RRUS 4449 B5/B12	3	73.00	1.97	0.57	146.13	2.699	0.57	0.00	1.00
9	149.00	RRUS 8843 B2 B66A	3	72.00	1.64	0.57	134.42	2.302	0.57	0.00	1.00
10	149.00	Lightning Rod	1	5.00	0.50	1.00	32.90	2.825	1.00	0.00	3.00
11	149.00	Low Profile Platform [RMQP-496-HK]	1	2380.00	43.00	1.00	5700.67	82.997	1.00	0.00	0.00
12	137.00	BXA-70063-6CF-2	3	17.00	7.57	0.73	263.16	9.274	0.73	0.00	0.00
13	137.00	RRH2x60-PCS)	3	50.00	2.48	0.57	147.22	4.010	0.57	0.00	0.00
14	137.00	RRH2x60-700U	3	19.50	1.51	0.57	106.05	2.263	0.57	0.00	0.00
15	137.00	GPS	1	10.00	1.00	1.00	48.74	1.941	1.00	0.00	0.00
16	137.00	DB-T1-6Z-8AB-0Z	1	14.00	4.80	1.00	214.99	5.979	1.00	0.00	0.00
17	137.00	SBNHH-1D65B	6	40.00	8.16	0.83	325.11	9.916	0.83	0.00	0.00
18	137.00	BXA-70080-6BF	2	18.00	5.76	0.87	185.39	8.895	0.87	0.00	0.00
19	137.00	BXA-70063-4CF-EDIN-X	1	9.90	4.72	1.00	144.47	7.162	1.00	0.00	0.00
20	137.00	RRH2X60-AWS	3	60.00	3.50	0.57	175.33	4.543	0.57	0.00	0.00
21	137.00	Low Profile Platform-flat	1	1100.00	25.00	1.00	2368.27	52.671	1.00	0.00	0.00
22	126.50	AIR 21, 1.3M, B2A B4P	3	91.50	6.09	0.86	326.40	7.558	0.86	0.00	0.00
23	126.50	AIR 21, 1.3M, B4A B2P	3	90.40	6.09	0.86	325.30	7.558	0.86	0.00	0.00
24	126.50	KRY 112 144/1	3	11.00	0.41	0.57	25.13	1.033	0.57	0.00	0.00
25	126.50	LNK-6515DS-A1M	3	49.80	11.47	0.80	350.70	15.752	0.80	0.00	0.00
26	126.50	Low Profile Platform-flat	1	1100.00	25.00	1.00	2358.20	52.452	1.00	0.00	0.00
27	126.50	S11B12	3	50.70	2.52	0.67	175.99	3.397	0.67	0.00	0.00
Totals:			78	7,910.80			26,663.33				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	149.00	(12) 1 5/8" Coax	0.00	Inside
0.00	149.00	(1) 1/2" Fiber	0.00	Inside
0.00	149.00	(1) 3" Conduit	0.00	Inside
0.00	149.00	(4) 3/4" DC	0.00	Inside
0.00	139.00	(1) Safety Cable	0.00	Inside
0.00	139.00	(1) Step bolts (ladder)	0.00	Inside
0.00	137.00	(12) 1 5/8" Coax	0.00	Inside
0.00	137.00	(3) 1 5/8" Hybrid	0.00	Inside
0.00	126.50	(12) 1 5/8" Coax	0.00	Inside
0.00	126.50	(1) 1 5/8" Hybrid	0.00	Inside

Shaft Section Properties

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.3750	55.625	65.759	25361.4	24.74	148.33	72.3	898.0	0.0
5.00		0.3750	54.447	64.357	23773.4	24.19	145.19	72.9	860.0	1106.9
10.00		0.3750	53.269	62.955	22253.2	23.64	142.05	73.6	822.8	1083.0
15.00		0.3750	52.091	61.553	20799.2	23.08	138.91	74.3	786.4	1059.2
20.00		0.3750	50.913	60.150	19409.9	22.53	135.77	74.9	750.9	1035.3
25.00		0.3750	49.735	58.748	18084.0	21.97	132.63	75.6	716.2	1011.5
30.00		0.3750	48.557	57.346	16819.8	21.42	129.48	76.2	682.3	987.6
35.00		0.3750	47.379	55.944	15616.0	20.87	126.34	76.9	649.2	963.8
40.00		0.3750	46.201	54.542	14471.0	20.31	123.20	77.5	616.9	939.9
44.33	Bot - Section 2	0.3750	45.180	53.327	13525.2	19.83	120.48	78.1	589.6	795.3
45.00		0.3750	45.022	53.140	13383.4	19.76	120.06	78.2	585.5	222.9
50.00	Top - Section 1	0.3125	44.469	43.797	10789.2	23.68	142.30	0.0	0.0	1647.3
55.00		0.3125	43.291	42.628	9948.5	23.02	138.53	74.3	452.6	735.2
60.00		0.3125	42.113	41.460	9152.7	22.35	134.76	75.1	428.1	715.3
65.00		0.3125	40.935	40.291	8400.4	21.69	130.99	75.9	404.2	695.5
70.00		0.3125	39.757	39.123	7690.6	21.02	127.22	76.7	381.0	675.6
75.00		0.3125	38.579	37.954	7021.9	20.36	123.45	77.5	358.5	655.7
80.00		0.3125	37.401	36.786	6393.2	19.69	119.68	78.2	336.7	635.8
85.00		0.3125	36.223	35.617	5803.1	19.03	115.91	79.0	315.5	615.9
89.33	Bot - Section 3	0.3125	35.202	34.605	5322.1	18.45	112.65	79.7	297.8	517.7
90.00		0.3125	35.045	34.449	5250.5	18.36	112.14	79.8	295.1	142.0
94.33	Top - Section 2	0.2500	34.524	27.195	4036.2	22.94	138.10	0.0	0.0	907.5
95.00		0.2500	34.367	27.071	3981.0	22.83	137.47	74.6	228.2	61.6
100.00		0.2500	33.189	26.136	3582.7	22.00	132.76	75.5	212.6	452.6
105.00		0.2500	32.011	25.201	3211.9	21.17	128.04	76.5	197.6	436.7
110.00		0.2500	30.833	24.267	2867.6	20.34	123.33	77.5	183.2	420.8
115.00		0.2500	29.655	23.332	2548.8	19.51	118.62	78.5	169.3	404.9
120.00		0.2500	28.477	22.397	2254.6	18.67	113.91	79.4	155.9	389.0
125.00		0.2500	27.299	21.462	1983.9	17.84	109.19	80.4	143.1	373.1
126.50		0.2500	26.945	21.182	1907.1	17.59	107.78	80.7	139.4	108.8
130.00		0.2500	26.121	20.528	1735.8	17.01	104.48	81.4	130.9	248.4
135.00		0.2500	24.942	19.593	1509.3	16.18	99.77	82.4	119.2	341.3
137.00		0.2500	24.471	19.219	1424.5	15.85	97.88	82.5	114.7	132.1
139.00	Top - Section 3	0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	129.5
139.00	Bot - Section 4	0.3750	18.000	20.977	823.3	10.34	64.00	44.5	90.1	
140.00		0.3750	18.000	20.977	823.3	8.11	48.00	44.5	90.1	71.4
145.00		0.3750	18.000	20.977	823.3	8.11	48.00	44.5	90.1	356.9
149.00		0.3750	18.000	20.977	823.3	8.11	48.00	44.5	90.1	285.5

21361.5

Wind Loading - Shaft

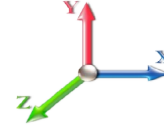
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 8



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	382.00	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	373.91	0.650	0.000	5.00	23.285	15.14	426.7	0.0	1328.3
10.00		1.00	0.70	16.018	17.62	365.82	0.650	0.000	5.00	22.787	14.81	417.6	0.0	1299.6
15.00		1.00	0.70	16.018	17.62	357.73	0.650	0.000	5.00	22.289	14.49	408.4	0.0	1271.0
20.00		1.00	0.70	16.018	17.62	349.63	0.650	0.000	5.00	21.790	14.16	399.3	0.0	1242.4
25.00		1.00	0.70	16.018	17.62	341.54	0.650	0.000	5.00	21.292	13.84	390.2	0.0	1213.8
30.00		1.00	0.70	16.031	17.63	333.60	0.650	0.000	5.00	20.793	13.52	381.3	0.0	1185.1
35.00		1.00	0.73	16.753	18.43	332.75	0.650	0.000	5.00	20.295	13.19	389.0	0.0	1156.5
40.00		1.00	0.76	17.405	19.15	330.72	0.650	0.000	5.00	19.796	12.87	394.2	0.0	1127.9
44.33	Bot - Section 2	1.00	0.78	17.924	19.72	328.20	0.650	0.000	4.33	16.754	10.89	343.5	0.0	954.3
45.00		1.00	0.79	18.000	19.80	327.76	0.650	0.000	0.67	2.580	1.68	53.1	0.0	267.5
50.00	Top - Section 1	1.00	0.81	18.551	20.41	324.02	0.650	0.000	5.00	19.064	12.39	404.6	0.0	1976.7
55.00		1.00	0.83	19.063	20.97	324.32	0.650	0.000	5.00	18.566	12.07	404.9	0.0	882.3
60.00		1.00	0.85	19.543	21.50	319.44	0.650	0.000	5.00	18.067	11.74	403.9	0.0	858.4
65.00		1.00	0.87	19.995	21.99	314.08	0.650	0.000	5.00	17.569	11.42	401.9	0.0	834.5
70.00		1.00	0.89	20.422	22.46	308.29	0.650	0.000	5.00	17.070	11.10	398.8	0.0	810.7
75.00		1.00	0.91	20.829	22.91	302.12	0.650	0.000	5.00	16.572	10.77	394.9	0.0	786.8
80.00		1.00	0.93	21.217	23.34	295.60	0.650	0.000	5.00	16.073	10.45	390.1	0.0	763.0
85.00		1.00	0.94	21.587	23.75	288.78	0.650	0.000	5.00	15.575	10.12	384.6	0.0	739.1
89.33	Bot - Section 3	1.00	0.96	21.896	24.09	282.64	0.650	0.000	4.33	13.095	8.51	328.0	0.0	621.3
90.00		1.00	0.96	21.943	24.14	281.68	0.650	0.000	0.67	2.010	1.31	50.4	0.0	170.4
94.33	Top - Section 2	1.00	0.97	22.240	24.46	275.32	0.650	0.000	4.33	12.847	8.35	326.8	0.0	1089.0
95.00		1.00	0.97	22.284	24.51	278.37	0.650	0.000	0.67	1.943	1.26	49.5	0.0	73.9
100.00		1.00	0.99	22.613	24.87	270.81	0.650	0.000	5.00	14.291	9.29	369.7	0.0	543.2
105.00		1.00	1.00	22.931	25.22	263.02	0.650	0.000	5.00	13.793	8.97	361.8	0.0	524.1
110.00		1.00	1.02	23.238	25.56	255.03	0.650	0.000	5.00	13.294	8.64	353.4	0.0	505.0
115.00		1.00	1.03	23.535	25.89	246.85	0.650	0.000	5.00	12.796	8.32	344.5	0.0	485.9
120.00		1.00	1.04	23.823	26.20	238.49	0.650	0.000	5.00	12.298	7.99	335.1	0.0	466.8
125.00		1.00	1.05	24.102	26.51	229.96	0.650	0.000	5.00	11.799	7.67	325.3	0.0	447.7
126.50	Appurtenance(s)	1.00	1.06	24.184	26.60	227.37	0.650	0.000	1.50	3.443	2.24	95.2	0.0	130.6
130.00		1.00	1.07	24.374	26.81	221.27	0.650	0.000	3.50	7.858	5.11	219.1	0.0	298.0
135.00		1.00	1.08	24.638	27.10	212.44	0.650	0.000	5.00	10.802	7.02	304.5	0.0	409.6
137.00	Appurtenance(s)	1.00	1.08	24.742	27.22	208.86	0.650	0.000	2.00	4.181	2.72	118.4	0.0	158.5
139.00	Top - Section 3	1.00	1.09	24.844	27.33	205.26	0.650	0.000	2.00	4.102	2.67	116.6	0.0	155.4
140.00		1.00	1.09	24.895	27.38	154.10	0.650	0.000	1.00	1.523	0.99	43.4	0.0	85.7
145.00		1.00	1.10	25.146	27.66	154.88	0.650	0.000	5.00	7.616	4.95	219.1	0.0	428.3
149.00	Appurtenance(s)	1.00	1.11	25.342	27.88	155.48	0.650	0.000	4.00	6.093	3.96	176.6	0.0	342.6
Totals:									149.00			10,924.6		25,633.8

Discrete Appurtenance Forces

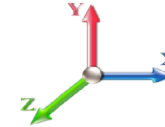
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRUS 4449 B5/B12	3	25.391	27.930	0.51	0.90	3.03	262.80	0.000	1.000	135.49	0.00	135.49
2	149.00	HPA65R-BU8A	3	25.391	27.930	0.77	0.90	26.08	194.40	0.000	1.000	1165.28	0.00	1165.28
3	149.00	TPA65R-BU8DA-K	3	25.391	27.930	0.65	0.90	30.85	313.56	0.000	1.000	1378.68	0.00	1378.68
4	149.00	DMP65R-BU8DA	3	25.391	27.930	0.75	0.90	36.53	344.52	0.000	1.000	1632.37	0.00	1632.37
5	149.00	RRUS 4478 B14	3	25.391	27.930	0.51	0.90	2.54	213.84	0.000	1.000	113.48	0.00	113.48
6	149.00	Lightning Rod	1	25.487	28.036	1.00	1.00	0.50	6.00	0.000	3.000	22.43	0.00	67.29
7	149.00	RRUS 8843 B2 B66A	3	25.391	27.930	0.51	0.90	2.52	259.20	0.000	1.000	112.79	0.00	112.79
8	149.00	Low Profile Platform	1	25.342	27.877	1.00	1.00	43.00	2856.00	0.000	0.000	1917.91	0.00	0.00
9	149.00	7770.00	3	25.391	27.930	0.66	0.90	10.84	126.00	0.000	1.000	484.44	0.00	484.44
10	149.00	LGP21401	12	25.391	27.930	0.45	0.90	6.97	203.04	0.000	1.000	311.30	0.00	311.30
11	149.00	Raycap DC6-48-60-18-8F	3	25.391	27.930	0.51	0.90	1.42	118.08	0.000	1.000	63.27	0.00	63.27
12	137.00	Low Profile Platform-flat	1	24.742	27.216	1.00	1.00	25.00	1320.00	0.000	0.000	1088.63	0.00	0.00
13	137.00	RRH2X60-AWS	3	24.742	27.216	0.46	0.80	4.79	216.00	0.000	0.000	208.49	0.00	0.00
14	137.00	BXA-70063-4CF-EDIN-X	1	24.742	27.216	1.00	1.00	4.72	11.88	0.000	0.000	205.53	0.00	0.00
15	137.00	RRH2x60-700U	3	24.742	27.216	0.46	0.80	2.07	70.20	0.000	0.000	89.95	0.00	0.00
16	137.00	BXA-70063-6CF-2	3	24.742	27.216	0.58	0.80	13.26	61.20	0.000	0.000	577.53	0.00	0.00
17	137.00	RRH2x60-PCS)	3	24.742	27.216	0.46	0.80	3.39	180.00	0.000	0.000	147.73	0.00	0.00
18	137.00	BXA-70080-6BF	2	24.742	27.216	0.70	0.80	8.02	43.20	0.000	0.000	349.14	0.00	0.00
19	137.00	GPS	1	24.742	27.216	1.00	1.00	1.00	12.00	0.000	0.000	43.55	0.00	0.00
20	137.00	DB-T1-6Z-8AB-OZ	1	24.742	27.216	1.00	1.00	4.80	16.80	0.000	0.000	209.02	0.00	0.00
21	137.00	SBNHH-1D65B	6	24.742	27.216	0.66	0.80	32.51	288.00	0.000	0.000	1415.63	0.00	0.00
22	126.50	S11B12	3	24.184	26.603	0.54	0.80	4.05	182.52	0.000	0.000	172.48	0.00	0.00
23	126.50	Low Profile Platform-flat	1	24.184	26.603	1.00	1.00	25.00	1320.00	0.000	0.000	1064.11	0.00	0.00
24	126.50	LNx-6515DS-A1M	3	24.184	26.603	0.64	0.80	22.02	179.28	0.000	0.000	937.37	0.00	0.00
25	126.50	KRY 112 144/1	3	24.184	26.603	0.46	0.80	0.56	39.60	0.000	0.000	23.87	0.00	0.00
26	126.50	AIR 21, 1.3M, B4A B2P	3	24.184	26.603	0.69	0.80	12.57	325.44	0.000	0.000	535.02	0.00	0.00
27	126.50	AIR 21, 1.3M, B2A B4P	3	24.184	26.603	0.69	0.80	12.57	329.40	0.000	0.000	535.02	0.00	0.00

Totals: 9,492.96

14,940.53

Total Applied Force Summary

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

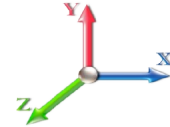


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		426.69	1607.40	0.00	0.00
10.00		417.56	1578.78	0.00	0.00
15.00		408.43	1550.15	0.00	0.00
20.00		399.29	1521.52	0.00	0.00
25.00		390.16	1492.90	0.00	0.00
30.00		381.35	1464.27	0.00	0.00
35.00		388.97	1435.64	0.00	0.00
40.00		394.17	1407.01	0.00	0.00
44.33		343.53	1196.26	0.00	0.00
45.00		53.12	304.75	0.00	0.00
50.00		404.57	2255.87	0.00	0.00
55.00		404.87	1161.39	0.00	0.00
60.00		403.92	1137.53	0.00	0.00
65.00		401.86	1113.68	0.00	0.00
70.00		398.82	1089.82	0.00	0.00
75.00		394.88	1065.97	0.00	0.00
80.00		390.13	1042.11	0.00	0.00
85.00		384.64	1018.26	0.00	0.00
89.33		328.02	863.19	0.00	0.00
90.00		50.45	207.62	0.00	0.00
94.33		326.84	1330.89	0.00	0.00
95.00		49.54	111.08	0.00	0.00
100.00		369.71	822.29	0.00	0.00
105.00		361.82	803.21	0.00	0.00
110.00		353.42	784.12	0.00	0.00
115.00		344.51	765.04	0.00	0.00
120.00		335.14	745.95	0.00	0.00
125.00		325.33	726.87	0.00	0.00
126.50	(16) attachments	3363.13	2590.58	0.00	0.00
130.00		219.11	436.41	0.00	0.00
135.00		304.47	607.22	0.00	0.00
137.00	(24) attachments	4453.56	2456.82	0.00	0.00
139.00		116.57	196.62	0.00	0.00
140.00		43.38	104.68	0.00	0.00
145.00		219.08	523.39	0.00	0.00
149.00	(38) attachments	7514.07	5316.15	0.00	5464.39
Totals:		25,865.12	42,835.43	0.00	5,464.39

Calculated Forces

Structure: CT11558-A-SBA

Code: EIA/TIA-222-G

11/15/2019

Site Name: Bolton 2, CT

Exposure: B

Height: 149.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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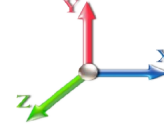


Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.80	-25.93	0.00	-3015.6	0.00	3015.62	4278.74	2139.37	9724.09	4869.27	0.00	0.000	0.000	0.629
5.00	-41.12	-25.62	0.00	-2885.9	0.00	2885.98	4225.25	2112.62	9396.38	4705.17	0.09	-0.166	0.000	0.623
10.00	-39.46	-25.31	0.00	-2757.8	0.00	2757.89	4170.10	2085.05	9070.32	4541.90	0.35	-0.334	0.000	0.617
15.00	-37.84	-25.01	0.00	-2631.3	0.00	2631.33	4113.32	2056.66	8746.14	4379.57	0.80	-0.507	0.000	0.610
20.00	-36.25	-24.70	0.00	-2506.3	0.00	2506.30	4054.89	2027.44	8424.08	4218.30	1.42	-0.682	0.000	0.603
25.00	-34.68	-24.40	0.00	-2382.7	0.00	2382.78	3994.82	1997.41	8104.39	4058.22	2.23	-0.861	0.000	0.596
30.00	-33.15	-24.11	0.00	-2260.7	0.00	2260.76	3933.10	1966.55	7787.31	3899.44	3.23	-1.044	0.000	0.588
35.00	-31.64	-23.79	0.00	-2140.2	0.00	2140.23	3869.73	1934.87	7473.08	3742.09	4.42	-1.230	0.000	0.580
40.00	-30.17	-23.46	0.00	-2021.2	0.00	2021.28	3804.73	1902.36	7161.93	3586.29	5.81	-1.420	0.000	0.572
44.33	-28.95	-23.13	0.00	-1919.6	0.00	1919.62	3747.06	1873.53	6894.95	3452.60	7.18	-1.588	0.000	0.564
45.00	-28.60	-23.13	0.00	-1904.2	0.00	1904.20	3738.08	1869.04	6854.11	3432.15	7.41	-1.614	0.000	0.563
50.00	-26.28	-22.75	0.00	-1788.5	0.00	1788.56	2899.02	1449.51	5264.11	2635.97	9.20	-1.811	0.000	0.688
55.00	-25.04	-22.40	0.00	-1674.8	0.00	1674.83	2851.67	1425.83	5039.02	2523.25	11.20	-2.010	0.000	0.673
60.00	-23.83	-22.05	0.00	-1562.8	0.00	1562.85	2802.68	1401.34	4815.72	2411.44	13.43	-2.242	0.000	0.657
65.00	-22.65	-21.70	0.00	-1452.6	0.00	1452.60	2752.04	1376.02	4594.46	2300.64	15.91	-2.476	0.000	0.640
70.00	-21.49	-21.34	0.00	-1344.1	0.00	1344.13	2699.76	1349.88	4375.47	2190.99	18.63	-2.713	0.000	0.622
75.00	-20.36	-20.97	0.00	-1237.4	0.00	1237.45	2645.83	1322.92	4159.00	2082.59	21.59	-2.951	0.000	0.602
80.00	-19.25	-20.61	0.00	-1132.5	0.00	1132.58	2590.26	1295.13	3945.28	1975.57	24.81	-3.192	0.000	0.581
85.00	-18.18	-20.24	0.00	-1029.5	0.00	1029.53	2533.05	1266.52	3734.57	1870.06	28.28	-3.432	0.000	0.558
89.33	-17.29	-19.89	0.00	-941.83	0.00	941.83	2482.13	1241.07	3554.56	1779.92	31.50	-3.641	0.000	0.536
90.00	-17.05	-19.87	0.00	-928.56	0.00	928.56	2474.19	1237.09	3527.09	1766.17	32.01	-3.675	0.000	0.533
94.33	-15.70	-19.49	0.00	-842.47	0.00	842.47	1821.49	910.75	2566.69	1285.25	35.44	-3.883	0.000	0.665
95.00	-15.54	-19.47	0.00	-829.48	0.00	829.48	1816.32	908.16	2547.59	1275.69	35.98	-3.916	0.000	0.659
100.00	-14.65	-19.12	0.00	-732.12	0.00	732.12	1776.59	888.29	2405.19	1204.38	40.23	-4.195	0.000	0.617
105.00	-13.79	-18.76	0.00	-636.54	0.00	636.54	1735.21	867.61	2264.53	1133.95	44.77	-4.466	0.000	0.570
110.00	-12.96	-18.40	0.00	-542.75	0.00	542.75	1692.20	846.10	2125.83	1064.50	49.58	-4.728	0.000	0.518
115.00	-12.15	-18.04	0.00	-450.75	0.00	450.75	1647.53	823.77	1989.35	996.15	54.66	-4.974	0.000	0.460
120.00	-11.37	-17.69	0.00	-360.53	0.00	360.53	1601.22	800.61	1855.32	929.04	59.99	-5.200	0.000	0.396
125.00	-10.64	-17.32	0.00	-272.10	0.00	272.10	1553.27	776.64	1723.99	863.28	65.54	-5.400	0.000	0.323
126.50	-8.36	-13.74	0.00	-246.12	0.00	246.12	1538.57	769.28	1685.15	843.83	67.25	-5.456	0.000	0.297
130.00	-7.92	-13.50	0.00	-198.04	0.00	198.04	1503.68	751.84	1595.59	798.98	71.28	-5.572	0.000	0.253
135.00	-7.32	-13.14	0.00	-130.57	0.00	130.57	1452.44	726.22	1470.36	736.27	77.19	-5.706	0.000	0.183
137.00	-5.32	-8.47	0.00	-104.28	0.00	104.28	1427.86	713.93	1417.63	709.87	79.58	-5.751	0.000	0.151
139.00	-5.13	-8.34	0.00	-87.34	0.00	87.34	1400.09	700.04	1362.73	682.38	82.00	-5.789	0.000	0.132
139.00	-5.13	-8.34	0.00	-87.34	0.00	87.34	839.20	419.60	599.78	300.33	82.00	-5.789	0.000	0.297
140.00	-5.02	-8.29	0.00	-79.00	0.00	79.00	839.20	419.60	599.78	300.33	83.21	-5.807	0.000	0.269
145.00	-4.51	-8.02	0.00	-37.56	0.00	37.56	839.20	419.60	599.78	300.33	89.34	-5.907	0.000	0.131
149.00	0.00	-7.51	0.00	-5.46	0.00	5.46	839.20	419.60	599.78	300.33	94.30	-5.937	0.000	0.019

Wind Loading - Shaft

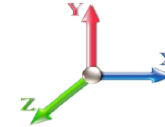
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 12



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	382.00	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	373.91	0.650	0.000	5.00	23.285	15.14	426.7	0.0	996.2
10.00		1.00	0.70	16.018	17.62	365.82	0.650	0.000	5.00	22.787	14.81	417.6	0.0	974.7
15.00		1.00	0.70	16.018	17.62	357.73	0.650	0.000	5.00	22.289	14.49	408.4	0.0	953.3
20.00		1.00	0.70	16.018	17.62	349.63	0.650	0.000	5.00	21.790	14.16	399.3	0.0	931.8
25.00		1.00	0.70	16.018	17.62	341.54	0.650	0.000	5.00	21.292	13.84	390.2	0.0	910.3
30.00		1.00	0.70	16.031	17.63	333.60	0.650	0.000	5.00	20.793	13.52	381.3	0.0	888.8
35.00		1.00	0.73	16.753	18.43	332.75	0.650	0.000	5.00	20.295	13.19	389.0	0.0	867.4
40.00		1.00	0.76	17.405	19.15	330.72	0.650	0.000	5.00	19.796	12.87	394.2	0.0	845.9
44.33	Bot - Section 2	1.00	0.78	17.924	19.72	328.20	0.650	0.000	4.33	16.754	10.89	343.5	0.0	715.8
45.00		1.00	0.79	18.000	19.80	327.76	0.650	0.000	0.67	2.580	1.68	53.1	0.0	200.6
50.00	Top - Section 1	1.00	0.81	18.551	20.41	324.02	0.650	0.000	5.00	19.064	12.39	404.6	0.0	1482.5
55.00		1.00	0.83	19.063	20.97	324.32	0.650	0.000	5.00	18.566	12.07	404.9	0.0	661.7
60.00		1.00	0.85	19.543	21.50	319.44	0.650	0.000	5.00	18.067	11.74	403.9	0.0	643.8
65.00		1.00	0.87	19.995	21.99	314.08	0.650	0.000	5.00	17.569	11.42	401.9	0.0	625.9
70.00		1.00	0.89	20.422	22.46	308.29	0.650	0.000	5.00	17.070	11.10	398.8	0.0	608.0
75.00		1.00	0.91	20.829	22.91	302.12	0.650	0.000	5.00	16.572	10.77	394.9	0.0	590.1
80.00		1.00	0.93	21.217	23.34	295.60	0.650	0.000	5.00	16.073	10.45	390.1	0.0	572.2
85.00		1.00	0.94	21.587	23.75	288.78	0.650	0.000	5.00	15.575	10.12	384.6	0.0	554.3
89.33	Bot - Section 3	1.00	0.96	21.896	24.09	282.64	0.650	0.000	4.33	13.095	8.51	328.0	0.0	466.0
90.00		1.00	0.96	21.943	24.14	281.68	0.650	0.000	0.67	2.010	1.31	50.4	0.0	127.8
94.33	Top - Section 2	1.00	0.97	22.240	24.46	275.32	0.650	0.000	4.33	12.847	8.35	326.8	0.0	816.7
95.00		1.00	0.97	22.284	24.51	278.37	0.650	0.000	0.67	1.943	1.26	49.5	0.0	55.4
100.00		1.00	0.99	22.613	24.87	270.81	0.650	0.000	5.00	14.291	9.29	369.7	0.0	407.4
105.00		1.00	1.00	22.931	25.22	263.02	0.650	0.000	5.00	13.793	8.97	361.8	0.0	393.1
110.00		1.00	1.02	23.238	25.56	255.03	0.650	0.000	5.00	13.294	8.64	353.4	0.0	378.7
115.00		1.00	1.03	23.535	25.89	246.85	0.650	0.000	5.00	12.796	8.32	344.5	0.0	364.4
120.00		1.00	1.04	23.823	26.20	238.49	0.650	0.000	5.00	12.298	7.99	335.1	0.0	350.1
125.00		1.00	1.05	24.102	26.51	229.96	0.650	0.000	5.00	11.799	7.67	325.3	0.0	335.8
126.50	Appurtenance(s)	1.00	1.06	24.184	26.60	227.37	0.650	0.000	1.50	3.443	2.24	95.2	0.0	97.9
130.00		1.00	1.07	24.374	26.81	221.27	0.650	0.000	3.50	7.858	5.11	219.1	0.0	223.5
135.00		1.00	1.08	24.638	27.10	212.44	0.650	0.000	5.00	10.802	7.02	304.5	0.0	307.2
137.00	Appurtenance(s)	1.00	1.08	24.742	27.22	208.86	0.650	0.000	2.00	4.181	2.72	118.4	0.0	118.9
139.00	Top - Section 3	1.00	1.09	24.844	27.33	205.26	0.650	0.000	2.00	4.102	2.67	116.6	0.0	116.6
140.00		1.00	1.09	24.895	27.38	154.10	0.650	0.000	1.00	1.523	0.99	43.4	0.0	64.2
145.00		1.00	1.10	25.146	27.66	154.88	0.650	0.000	5.00	7.616	4.95	219.1	0.0	321.2
149.00	Appurtenance(s)	1.00	1.11	25.342	27.88	155.48	0.650	0.000	4.00	6.093	3.96	176.6	0.0	257.0
Totals:									149.00			10,924.6		19,225.4

Discrete Appurtenance Forces

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

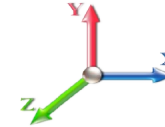


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRUS 4449 B5/B12	3	25.391	27.930	0.51	0.90	3.03	197.10	0.000	1.000	135.49	0.00	135.49
2	149.00	HPA65R-BU8A	3	25.391	27.930	0.77	0.90	26.08	145.80	0.000	1.000	1165.28	0.00	1165.28
3	149.00	TPA65R-BU8DA-K	3	25.391	27.930	0.65	0.90	30.85	235.17	0.000	1.000	1378.68	0.00	1378.68
4	149.00	DMP65R-BU8DA	3	25.391	27.930	0.75	0.90	36.53	258.39	0.000	1.000	1632.37	0.00	1632.37
5	149.00	RRUS 4478 B14	3	25.391	27.930	0.51	0.90	2.54	160.38	0.000	1.000	113.48	0.00	113.48
6	149.00	Lightning Rod	1	25.487	28.036	1.00	1.00	0.50	4.50	0.000	3.000	22.43	0.00	67.29
7	149.00	RRUS 8843 B2 B66A	3	25.391	27.930	0.51	0.90	2.52	194.40	0.000	1.000	112.79	0.00	112.79
8	149.00	Low Profile Platform	1	25.342	27.877	1.00	1.00	43.00	2142.00	0.000	0.000	1917.91	0.00	0.00
9	149.00	7770.00	3	25.391	27.930	0.66	0.90	10.84	94.50	0.000	1.000	484.44	0.00	484.44
10	149.00	LGP21401	12	25.391	27.930	0.45	0.90	6.97	152.28	0.000	1.000	311.30	0.00	311.30
11	149.00	Raycap DC6-48-60-18-8F	3	25.391	27.930	0.51	0.90	1.42	88.56	0.000	1.000	63.27	0.00	63.27
12	137.00	Low Profile Platform-flat	1	24.742	27.216	1.00	1.00	25.00	990.00	0.000	0.000	1088.63	0.00	0.00
13	137.00	RRH2X60-AWS	3	24.742	27.216	0.46	0.80	4.79	162.00	0.000	0.000	208.49	0.00	0.00
14	137.00	BXA-70063-4CF-EDIN-X	1	24.742	27.216	1.00	1.00	4.72	8.91	0.000	0.000	205.53	0.00	0.00
15	137.00	RRH2x60-700U	3	24.742	27.216	0.46	0.80	2.07	52.65	0.000	0.000	89.95	0.00	0.00
16	137.00	BXA-70063-6CF-2	3	24.742	27.216	0.58	0.80	13.26	45.90	0.000	0.000	577.53	0.00	0.00
17	137.00	RRH2x60-PCS)	3	24.742	27.216	0.46	0.80	3.39	135.00	0.000	0.000	147.73	0.00	0.00
18	137.00	BXA-70080-6BF	2	24.742	27.216	0.70	0.80	8.02	32.40	0.000	0.000	349.14	0.00	0.00
19	137.00	GPS	1	24.742	27.216	1.00	1.00	1.00	9.00	0.000	0.000	43.55	0.00	0.00
20	137.00	DB-T1-6Z-8AB-0Z	1	24.742	27.216	1.00	1.00	4.80	12.60	0.000	0.000	209.02	0.00	0.00
21	137.00	SBNHH-1D65B	6	24.742	27.216	0.66	0.80	32.51	216.00	0.000	0.000	1415.63	0.00	0.00
22	126.50	S11B12	3	24.184	26.603	0.54	0.80	4.05	136.89	0.000	0.000	172.48	0.00	0.00
23	126.50	Low Profile Platform-flat	1	24.184	26.603	1.00	1.00	25.00	990.00	0.000	0.000	1064.11	0.00	0.00
24	126.50	LNx-6515DS-A1M	3	24.184	26.603	0.64	0.80	22.02	134.46	0.000	0.000	937.37	0.00	0.00
25	126.50	KRY 112 144/1	3	24.184	26.603	0.46	0.80	0.56	29.70	0.000	0.000	23.87	0.00	0.00
26	126.50	AIR 21, 1.3M, B4A B2P	3	24.184	26.603	0.69	0.80	12.57	244.08	0.000	0.000	535.02	0.00	0.00
27	126.50	AIR 21, 1.3M, B2A B4P	3	24.184	26.603	0.69	0.80	12.57	247.05	0.000	0.000	535.02	0.00	0.00

Totals: 7,119.72

14,940.53

Total Applied Force Summary

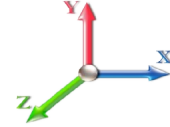
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 14



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		426.69	1205.55	0.00	0.00
10.00		417.56	1184.08	0.00	0.00
15.00		408.43	1162.61	0.00	0.00
20.00		399.29	1141.14	0.00	0.00
25.00		390.16	1119.67	0.00	0.00
30.00		381.35	1098.20	0.00	0.00
35.00		388.97	1076.73	0.00	0.00
40.00		394.17	1055.26	0.00	0.00
44.33		343.53	897.19	0.00	0.00
45.00		53.12	228.56	0.00	0.00
50.00		404.57	1691.90	0.00	0.00
55.00		404.87	871.04	0.00	0.00
60.00		403.92	853.15	0.00	0.00
65.00		401.86	835.26	0.00	0.00
70.00		398.82	817.37	0.00	0.00
75.00		394.88	799.48	0.00	0.00
80.00		390.13	781.58	0.00	0.00
85.00		384.64	763.69	0.00	0.00
89.33		328.02	647.39	0.00	0.00
90.00		50.45	155.71	0.00	0.00
94.33		326.84	998.17	0.00	0.00
95.00		49.54	83.31	0.00	0.00
100.00		369.71	616.72	0.00	0.00
105.00		361.82	602.40	0.00	0.00
110.00		353.42	588.09	0.00	0.00
115.00		344.51	573.78	0.00	0.00
120.00		335.14	559.46	0.00	0.00
125.00		325.33	545.15	0.00	0.00
126.50	(16) attachments	3363.13	1942.93	0.00	0.00
130.00		219.11	327.31	0.00	0.00
135.00		304.47	455.41	0.00	0.00
137.00	(24) attachments	4453.56	1842.62	0.00	0.00
139.00		116.57	147.46	0.00	0.00
140.00		43.38	78.51	0.00	0.00
145.00		219.08	392.54	0.00	0.00
149.00	(38) attachments	7514.07	3987.11	0.00	5464.39
Totals:		25,865.12	32,126.57	0.00	5,464.39

Calculated Forces

Structure: CT11558-A-SBA

Code: EIA/TIA-222-G

11/15/2019

Site Name: Bolton 2, CT

Exposure: B

Height: 149.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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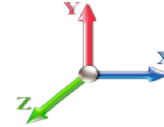


Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 0.90

Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-32.09	-25.91	0.00	-2982.0	0.00	2982.09	4278.74	2139.37	9724.09	4869.27	0.00	0.000	0.000	0.620
5.00	-30.81	-25.57	0.00	-2852.5	0.00	2852.53	4225.25	2112.62	9396.38	4705.17	0.09	-0.164	0.000	0.614
10.00	-29.55	-25.24	0.00	-2724.6	0.00	2724.67	4170.10	2085.05	9070.32	4541.90	0.35	-0.330	0.000	0.607
15.00	-28.32	-24.90	0.00	-2598.4	0.00	2598.49	4113.32	2056.66	8746.14	4379.57	0.79	-0.501	0.000	0.600
20.00	-27.11	-24.58	0.00	-2473.9	0.00	2473.97	4054.89	2027.44	8424.08	4218.30	1.40	-0.674	0.000	0.593
25.00	-25.92	-24.25	0.00	-2351.0	0.00	2351.09	3994.82	1997.41	8104.39	4058.22	2.20	-0.851	0.000	0.586
30.00	-24.75	-23.93	0.00	-2229.8	0.00	2229.83	3933.10	1966.55	7787.31	3899.44	3.19	-1.031	0.000	0.578
35.00	-23.60	-23.60	0.00	-2110.1	0.00	2110.17	3869.73	1934.87	7473.08	3742.09	4.37	-1.215	0.000	0.570
40.00	-22.49	-23.25	0.00	-1992.1	0.00	1992.18	3804.73	1902.36	7161.93	3586.29	5.74	-1.401	0.000	0.562
44.33	-21.56	-22.92	0.00	-1891.4	0.00	1891.43	3747.06	1873.53	6894.95	3452.60	7.09	-1.567	0.000	0.554
45.00	-21.29	-22.90	0.00	-1876.1	0.00	1876.15	3738.08	1869.04	6854.11	3432.15	7.31	-1.593	0.000	0.552
50.00	-19.53	-22.51	0.00	-1761.6	0.00	1761.65	2899.02	1449.51	5264.11	2635.97	9.09	-1.787	0.000	0.675
55.00	-18.60	-22.15	0.00	-1649.0	0.00	1649.09	2851.67	1425.83	5039.02	2523.25	11.06	-1.983	0.000	0.660
60.00	-17.67	-21.78	0.00	-1538.3	0.00	1538.35	2802.68	1401.34	4815.72	2411.44	13.26	-2.211	0.000	0.644
65.00	-16.77	-21.42	0.00	-1429.4	0.00	1429.43	2752.04	1376.02	4594.46	2300.64	15.70	-2.442	0.000	0.628
70.00	-15.88	-21.05	0.00	-1322.3	0.00	1322.35	2699.76	1349.88	4375.47	2190.99	18.38	-2.675	0.000	0.610
75.00	-15.02	-20.68	0.00	-1217.1	0.00	1217.12	2645.83	1322.92	4159.00	2082.59	21.31	-2.909	0.000	0.590
80.00	-14.17	-20.30	0.00	-1113.7	0.00	1113.74	2590.26	1295.13	3945.28	1975.57	24.48	-3.145	0.000	0.569
85.00	-13.36	-19.93	0.00	-1012.2	0.00	1012.22	2533.05	1266.52	3734.57	1870.06	27.90	-3.382	0.000	0.547
89.33	-12.69	-19.59	0.00	-925.87	0.00	925.87	2482.13	1241.07	3554.56	1779.92	31.07	-3.588	0.000	0.526
90.00	-12.50	-19.55	0.00	-912.81	0.00	912.81	2474.19	1237.09	3527.09	1766.17	31.57	-3.621	0.000	0.522
94.33	-11.48	-19.19	0.00	-828.09	0.00	828.09	1821.49	910.75	2566.69	1285.25	34.95	-3.825	0.000	0.651
95.00	-11.35	-19.16	0.00	-815.30	0.00	815.30	1816.32	908.16	2547.59	1275.69	35.48	-3.857	0.000	0.646
100.00	-10.67	-18.80	0.00	-719.49	0.00	719.49	1776.59	888.29	2405.19	1204.38	39.67	-4.132	0.000	0.604
105.00	-10.01	-18.44	0.00	-625.49	0.00	625.49	1735.21	867.61	2264.53	1133.95	44.14	-4.399	0.000	0.558
110.00	-9.38	-18.08	0.00	-533.29	0.00	533.29	1692.20	846.10	2125.83	1064.50	48.88	-4.655	0.000	0.507
115.00	-8.76	-17.73	0.00	-442.87	0.00	442.87	1647.53	823.77	1989.35	996.15	53.88	-4.897	0.000	0.450
120.00	-8.17	-17.37	0.00	-354.24	0.00	354.24	1601.22	800.61	1855.32	929.04	59.13	-5.120	0.000	0.387
125.00	-7.62	-17.02	0.00	-267.36	0.00	267.36	1553.27	776.64	1723.99	863.28	64.59	-5.316	0.000	0.315
126.50	-5.98	-13.50	0.00	-241.84	0.00	241.84	1538.57	769.28	1685.15	843.83	66.27	-5.371	0.000	0.291
130.00	-5.65	-13.26	0.00	-194.60	0.00	194.60	1503.68	751.84	1595.59	798.98	70.25	-5.485	0.000	0.248
135.00	-5.20	-12.92	0.00	-128.30	0.00	128.30	1452.44	726.22	1470.36	736.27	76.06	-5.617	0.000	0.178
137.00	-3.80	-8.31	0.00	-102.46	0.00	102.46	1427.86	713.93	1417.63	709.87	78.42	-5.660	0.000	0.147
139.00	-3.66	-8.18	0.00	-85.84	0.00	85.84	1400.09	700.04	1362.73	682.38	80.79	-5.698	0.000	0.129
139.00	-3.66	-8.18	0.00	-85.84	0.00	85.84	839.20	419.60	599.78	300.33	80.79	-5.698	0.000	0.291
140.00	-3.58	-8.13	0.00	-77.66	0.00	77.66	839.20	419.60	599.78	300.33	81.99	-5.715	0.000	0.263
145.00	-3.20	-7.88	0.00	-36.99	0.00	36.99	839.20	419.60	599.78	300.33	88.02	-5.814	0.000	0.127
149.00	0.00	-7.51	0.00	-5.46	0.00	5.46	839.20	419.60	599.78	300.33	92.90	-5.844	0.000	0.019

Wind Loading - Shaft

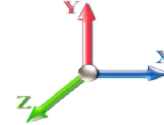
Structure: CT11558-A-SBA **Code:** EIA/TIA-222-G 11/15/2019
Site Name: Bolton 2, CT **Exposure:** B
Height: 149.00 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 16



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.68	0.00	1.200	1.656	5.00	24.665	29.60	138.6	582.0	1910.2
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.775	5.00	24.266	29.12	136.3	611.9	1911.6
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.848	5.00	23.829	28.59	133.9	624.5	1895.5
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.902	5.00	23.375	28.05	131.3	629.3	1871.7
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.945	5.00	22.913	27.50	128.7	629.6	1843.4
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.981	5.00	22.444	26.93	126.2	627.0	1812.2
35.00		1.00	0.73	4.451	4.90	0.00	1.200	2.012	5.00	21.971	26.37	129.1	622.3	1778.8
40.00		1.00	0.76	4.625	5.09	0.00	1.200	2.039	5.00	21.495	25.79	131.2	615.9	1743.8
44.33	Bot - Section 2	1.00	0.78	4.762	5.24	0.00	1.200	2.060	4.33	18.241	21.89	114.7	528.1	1482.5
45.00		1.00	0.79	4.783	5.26	0.00	1.200	2.063	0.67	2.809	3.37	17.7	82.2	349.7
50.00	Top - Section 1	1.00	0.81	4.929	5.42	0.00	1.200	2.085	5.00	20.801	24.96	135.3	607.8	2584.6
55.00		1.00	0.83	5.065	5.57	0.00	1.200	2.105	5.00	20.320	24.38	135.9	598.4	1480.6
60.00		1.00	0.85	5.193	5.71	0.00	1.200	2.123	5.00	19.836	23.80	136.0	588.2	1446.6
65.00		1.00	0.87	5.313	5.84	0.00	1.200	2.140	5.00	19.352	23.22	135.7	577.3	1411.8
70.00		1.00	0.89	5.426	5.97	0.00	1.200	2.156	5.00	18.867	22.64	135.1	565.9	1376.6
75.00		1.00	0.91	5.534	6.09	0.00	1.200	2.171	5.00	18.381	22.06	134.3	554.0	1340.8
80.00		1.00	0.93	5.637	6.20	0.00	1.200	2.185	5.00	17.894	21.47	133.2	541.6	1304.6
85.00		1.00	0.94	5.736	6.31	0.00	1.200	2.198	5.00	17.407	20.89	131.8	528.9	1268.0
89.33	Bot - Section 3	1.00	0.96	5.818	6.40	0.00	1.200	2.209	4.33	14.691	17.63	112.8	448.5	1069.8
90.00		1.00	0.96	5.830	6.41	0.00	1.200	2.211	0.67	2.255	2.71	17.4	69.7	240.1
94.33	Top - Section 2	1.00	0.97	5.909	6.50	0.00	1.200	2.221	4.33	14.451	17.34	112.7	442.9	1531.9
95.00		1.00	0.97	5.921	6.51	0.00	1.200	2.223	0.67	2.190	2.63	17.1	67.9	141.8
100.00		1.00	0.99	6.008	6.61	0.00	1.200	2.234	5.00	16.153	19.38	128.1	495.5	1038.7
105.00		1.00	1.00	6.093	6.70	0.00	1.200	2.245	5.00	15.664	18.80	126.0	481.5	1005.6
110.00		1.00	1.02	6.174	6.79	0.00	1.200	2.256	5.00	15.174	18.21	123.7	467.3	972.3
115.00		1.00	1.03	6.253	6.88	0.00	1.200	2.266	5.00	14.684	17.62	121.2	452.8	938.7
120.00		1.00	1.04	6.330	6.96	0.00	1.200	2.276	5.00	14.194	17.03	118.6	438.0	904.9
125.00		1.00	1.05	6.404	7.04	0.00	1.200	2.285	5.00	13.703	16.44	115.8	423.1	870.8
126.50	Appurtenance(s)	1.00	1.06	6.426	7.07	0.00	1.200	2.288	1.50	4.014	4.82	34.1	125.6	256.2
130.00		1.00	1.07	6.476	7.12	0.00	1.200	2.294	3.50	9.196	11.04	78.6	285.6	583.6
135.00		1.00	1.08	6.546	7.20	0.00	1.200	2.303	5.00	12.721	15.27	109.9	392.6	802.2
137.00	Appurtenance(s)	1.00	1.08	6.574	7.23	0.00	1.200	2.306	2.00	4.950	5.94	43.0	154.6	313.1
139.00	Top - Section 3	1.00	1.09	6.601	7.26	0.00	1.200	2.309	2.00	4.871	5.85	42.4	152.1	307.5
140.00		1.00	1.09	6.615	7.28	0.00	1.200	2.311	1.00	1.908	2.29	16.7	58.7	144.4
145.00		1.00	1.10	6.681	7.35	0.00	1.200	2.319	5.00	9.548	11.46	84.2	294.8	723.1
149.00	Appurtenance(s)	1.00	1.11	6.734	7.41	0.00	1.200	2.325	4.00	7.643	9.17	67.9	236.5	579.2
Totals:									149.00			3,735.2		41,236.5

Discrete Appurtenance Forces

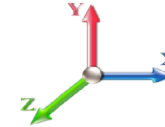
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRUS 4449 B5/B12	3	6.746	7.421	0.51	0.90	4.15	447.39	0.000	1.000	30.83	0.00	30.83
2	149.00	HPA65R-BU8A	3	6.746	7.421	0.77	0.90	31.26	1324.61	0.000	1.000	231.98	0.00	231.98
3	149.00	TPA65R-BU8DA-K	3	6.746	7.421	0.65	0.90	39.53	1889.78	0.000	1.000	293.34	0.00	293.34
4	149.00	DMP65R-BU8DA	3	6.746	7.421	0.75	0.90	45.57	1920.74	0.000	1.000	338.16	0.00	338.16
5	149.00	RRUS 4478 B14	3	6.746	7.421	0.51	0.90	3.60	351.39	0.000	1.000	26.73	0.00	26.73
6	149.00	Lightning Rod	1	6.772	7.449	1.00	1.00	2.83	27.90	0.000	3.000	21.05	0.00	63.14
7	149.00	RRUS 8843 B2 B66A	3	6.746	7.421	0.51	0.90	3.54	410.45	0.000	1.000	26.29	0.00	26.29
8	149.00	Low Profile Platform	1	6.734	7.407	1.00	1.00	83.00	5317.67	0.000	0.000	614.75	0.00	0.00
9	149.00	7770.00	3	6.746	7.421	0.66	0.90	13.70	707.86	0.000	1.000	101.66	0.00	101.66
10	149.00	LGP21401	12	6.746	7.421	0.45	0.90	12.98	517.59	0.000	1.000	96.32	0.00	96.32
11	149.00	Raycap DC6-48-60-18-8F	3	6.746	7.421	0.51	0.90	2.31	322.88	0.000	1.000	17.17	0.00	17.17
12	137.00	Low Profile Platform-flat	1	6.574	7.231	1.00	1.00	52.67	2288.27	0.000	0.000	380.88	0.00	0.00
13	137.00	RRH2X60-AWS	3	6.574	7.231	0.46	0.80	6.21	501.70	0.000	0.000	44.94	0.00	0.00
14	137.00	BXA-70063-4CF-EDIN-X	1	6.574	7.231	1.00	1.00	7.16	117.35	0.000	0.000	51.79	0.00	0.00
15	137.00	RRH2x60-700U	3	6.574	7.231	0.46	0.80	3.10	329.86	0.000	0.000	22.39	0.00	0.00
16	137.00	BXA-70063-6CF-2	3	6.574	7.231	0.58	0.80	16.25	799.68	0.000	0.000	117.49	0.00	0.00
17	137.00	RRH2x60-PCS)	3	6.574	7.231	0.46	0.80	5.49	408.36	0.000	0.000	39.67	0.00	0.00
18	137.00	BXA-70080-6BF	2	6.574	7.231	0.70	0.80	12.38	305.38	0.000	0.000	89.53	0.00	0.00
19	137.00	GPS	1	6.574	7.231	1.00	1.00	1.94	42.74	0.000	0.000	14.03	0.00	0.00
20	137.00	DB-T1-6Z-8AB-0Z	1	6.574	7.231	1.00	1.00	5.98	217.79	0.000	0.000	43.24	0.00	0.00
21	137.00	SBNHH-1D65B	6	6.574	7.231	0.66	0.80	39.50	1998.67	0.000	0.000	285.66	0.00	0.00
22	126.50	S11B12	3	6.426	7.068	0.54	0.80	5.46	558.39	0.000	0.000	38.62	0.00	0.00
23	126.50	Low Profile Platform-flat	1	6.426	7.068	1.00	1.00	52.45	2278.20	0.000	0.000	370.75	0.00	0.00
24	126.50	LNx-6515DS-A1M	3	6.426	7.068	0.64	0.80	30.24	884.57	0.000	0.000	213.78	0.00	0.00
25	126.50	KRY 112 144/1	3	6.426	7.068	0.46	0.80	1.41	72.70	0.000	0.000	9.99	0.00	0.00
26	126.50	AIR 21, 1.3M, B4A B2P	3	6.426	7.068	0.69	0.80	15.60	1030.14	0.000	0.000	110.27	0.00	0.00
27	126.50	AIR 21, 1.3M, B2A B4P	3	6.426	7.068	0.69	0.80	15.60	1034.10	0.000	0.000	110.27	0.00	0.00

Totals: 26,106.19

3,741.58

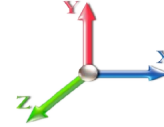
Total Applied Force Summary

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 18



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		138.57	2189.38	0.00	0.00
10.00		136.32	2190.72	0.00	0.00
15.00		133.87	2174.60	0.00	0.00
20.00		131.32	2150.79	0.00	0.00
25.00		128.72	2122.52	0.00	0.00
30.00		126.20	2091.29	0.00	0.00
35.00		129.10	2057.93	0.00	0.00
40.00		131.22	2022.96	0.00	0.00
44.33		114.67	1724.41	0.00	0.00
45.00		17.73	386.93	0.00	0.00
50.00		135.34	2863.69	0.00	0.00
55.00		135.85	1759.75	0.00	0.00
60.00		135.96	1725.69	0.00	0.00
65.00		135.71	1690.99	0.00	0.00
70.00		135.14	1655.72	0.00	0.00
75.00		134.28	1619.95	0.00	0.00
80.00		133.16	1583.74	0.00	0.00
85.00		131.79	1547.13	0.00	0.00
89.33		112.82	1311.71	0.00	0.00
90.00		17.36	277.31	0.00	0.00
94.33		112.72	1773.82	0.00	0.00
95.00		17.12	178.98	0.00	0.00
100.00		128.11	1317.84	0.00	0.00
105.00		125.98	1284.75	0.00	0.00
110.00		123.67	1251.41	0.00	0.00
115.00		121.21	1217.82	0.00	0.00
120.00		118.59	1184.00	0.00	0.00
125.00		115.84	1149.97	0.00	0.00
126.50	(16) attachments	887.72	6198.02	0.00	0.00
130.00		78.61	721.98	0.00	0.00
135.00		109.93	999.84	0.00	0.00
137.00	(24) attachments	1132.60	7401.92	0.00	0.00
139.00		42.45	348.71	0.00	0.00
140.00		16.66	163.40	0.00	0.00
145.00		84.21	818.17	0.00	0.00
149.00	(38) attachments	1866.21	13893.53	0.00	1225.62
Totals:		7,476.75	75,051.39	0.00	1,225.62

Calculated Forces

Structure: CT11558-A-SBA

Code: EIA/TIA-222-G

11/15/2019

Site Name: Bolton 2, CT

Exposure: B

Height: 149.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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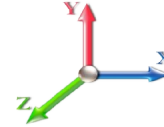


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-75.05	-7.51	0.00	-882.33	0.00	882.33	4278.74	2139.37	9724.09	4869.27	0.00	0.000	0.000	0.199
5.00	-72.85	-7.43	0.00	-844.79	0.00	844.79	4225.25	2112.62	9396.38	4705.17	0.03	-0.048	0.000	0.197
10.00	-70.66	-7.35	0.00	-807.63	0.00	807.63	4170.10	2085.05	9070.32	4541.90	0.10	-0.098	0.000	0.195
15.00	-68.47	-7.28	0.00	-770.86	0.00	770.86	4113.32	2056.66	8746.14	4379.57	0.23	-0.148	0.000	0.193
20.00	-66.32	-7.20	0.00	-734.48	0.00	734.48	4054.89	2027.44	8424.08	4218.30	0.42	-0.200	0.000	0.190
25.00	-64.19	-7.12	0.00	-698.49	0.00	698.49	3994.82	1997.41	8104.39	4058.22	0.65	-0.252	0.000	0.188
30.00	-62.09	-7.04	0.00	-662.89	0.00	662.89	3933.10	1966.55	7787.31	3899.44	0.95	-0.306	0.000	0.186
35.00	-60.03	-6.96	0.00	-627.68	0.00	627.68	3869.73	1934.87	7473.08	3742.09	1.30	-0.360	0.000	0.183
40.00	-58.00	-6.87	0.00	-592.88	0.00	592.88	3804.73	1902.36	7161.93	3586.29	1.70	-0.416	0.000	0.181
44.33	-56.27	-6.77	0.00	-563.12	0.00	563.12	3747.06	1873.53	6894.95	3452.60	2.10	-0.465	0.000	0.178
45.00	-55.88	-6.78	0.00	-558.61	0.00	558.61	3738.08	1869.04	6854.11	3432.15	2.17	-0.473	0.000	0.178
50.00	-53.01	-6.67	0.00	-524.72	0.00	524.72	2899.02	1449.51	5264.11	2635.97	2.70	-0.531	0.000	0.217
55.00	-51.25	-6.58	0.00	-491.36	0.00	491.36	2851.67	1425.83	5039.02	2523.25	3.28	-0.589	0.000	0.213
60.00	-49.52	-6.48	0.00	-458.48	0.00	458.48	2802.68	1401.34	4815.72	2411.44	3.94	-0.657	0.000	0.208
65.00	-47.82	-6.38	0.00	-426.08	0.00	426.08	2752.04	1376.02	4594.46	2300.64	4.66	-0.726	0.000	0.203
70.00	-46.16	-6.28	0.00	-394.17	0.00	394.17	2699.76	1349.88	4375.47	2190.99	5.46	-0.795	0.000	0.197
75.00	-44.53	-6.18	0.00	-362.77	0.00	362.77	2645.83	1322.92	4159.00	2082.59	6.33	-0.865	0.000	0.191
80.00	-42.94	-6.07	0.00	-331.88	0.00	331.88	2590.26	1295.13	3945.28	1975.57	7.27	-0.936	0.000	0.185
85.00	-41.39	-5.96	0.00	-301.52	0.00	301.52	2533.05	1266.52	3734.57	1870.06	8.29	-1.006	0.000	0.178
89.33	-40.08	-5.85	0.00	-275.69	0.00	275.69	2482.13	1241.07	3554.56	1779.92	9.23	-1.067	0.000	0.171
90.00	-39.80	-5.85	0.00	-271.79	0.00	271.79	2474.19	1237.09	3527.09	1766.17	9.38	-1.077	0.000	0.170
94.33	-38.02	-5.73	0.00	-246.43	0.00	246.43	1821.49	910.75	2566.69	1285.25	10.39	-1.138	0.000	0.213
95.00	-37.84	-5.74	0.00	-242.61	0.00	242.61	1816.32	908.16	2547.59	1275.69	10.55	-1.148	0.000	0.211
100.00	-36.52	-5.63	0.00	-213.92	0.00	213.92	1776.59	888.29	2405.19	1204.38	11.80	-1.229	0.000	0.198
105.00	-35.23	-5.53	0.00	-185.75	0.00	185.75	1735.21	867.61	2264.53	1133.95	13.13	-1.309	0.000	0.184
110.00	-33.97	-5.42	0.00	-158.11	0.00	158.11	1692.20	846.10	2125.83	1064.50	14.54	-1.385	0.000	0.169
115.00	-32.75	-5.31	0.00	-131.02	0.00	131.02	1647.53	823.77	1989.35	996.15	16.03	-1.456	0.000	0.151
120.00	-31.57	-5.19	0.00	-104.49	0.00	104.49	1601.22	800.61	1855.32	929.04	17.59	-1.522	0.000	0.132
125.00	-30.42	-5.06	0.00	-78.53	0.00	78.53	1553.27	776.64	1723.99	863.28	19.22	-1.580	0.000	0.111
126.50	-24.24	-4.01	0.00	-70.94	0.00	70.94	1538.57	769.28	1685.15	843.83	19.72	-1.596	0.000	0.100
130.00	-23.52	-3.93	0.00	-56.89	0.00	56.89	1503.68	751.84	1595.59	798.98	20.90	-1.629	0.000	0.087
135.00	-22.52	-3.80	0.00	-37.23	0.00	37.23	1452.44	726.22	1470.36	736.27	22.63	-1.668	0.000	0.066
137.00	-15.16	-2.46	0.00	-29.63	0.00	29.63	1427.86	713.93	1417.63	709.87	23.33	-1.681	0.000	0.052
139.00	-14.81	-2.41	0.00	-24.72	0.00	24.72	1400.09	700.04	1362.73	682.38	24.03	-1.691	0.000	0.047
139.00	-14.81	-2.41	0.00	-24.72	0.00	24.72	839.20	419.60	599.78	300.33	24.03	-1.691	0.000	0.100
140.00	-14.65	-2.39	0.00	-22.31	0.00	22.31	839.20	419.60	599.78	300.33	24.39	-1.696	0.000	0.092
145.00	-13.83	-2.28	0.00	-10.36	0.00	10.36	839.20	419.60	599.78	300.33	26.18	-1.725	0.000	0.051
149.00	0.00	-1.87	0.00	-1.23	0.00	1.23	839.20	419.60	599.78	300.33	27.63	-1.733	0.000	0.004

Seismic Segment Forces (Factored)

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 20



Load Case: 1.2D + 1.0E

Iterations 22

Gust Response Factor 1.10

Sds 0.19

Ss 0.18

Dead Load Factor 1.20 **Seismic Load Factor** 1.00

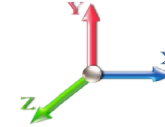
Sd1 0.10

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.39

SA 0.04

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1106.8	0.00	0.03	0.02	18.56	
10.00		1083.0	0.01	0.05	0.03	26.70	
15.00		1059.1	0.02	0.06	0.04	30.31	
20.00		1035.3	0.03	0.07	0.04	31.77	
25.00		1011.4	0.05	0.07	0.04	32.27	
30.00		987.61	0.08	0.07	0.04	32.40	
35.00		963.75	0.10	0.07	0.04	32.42	
40.00		939.90	0.14	0.07	0.03	32.34	
44.33	Bot - Section 2	795.28	0.17	0.07	0.03	27.75	
45.00		222.94	0.17	0.07	0.03	7.79	
50.00	Top - Section 1	1647.2	0.21	0.06	0.02	57.43	
55.00		735.21	0.26	0.05	0.02	24.75	
60.00		715.33	0.31	0.04	0.01	21.97	
65.00		695.45	0.36	0.03	0.01	17.65	
70.00		675.57	0.42	0.01	0.01	11.71	
75.00		655.69	0.48	-0.01	0.01	4.44	
80.00		635.81	0.54	-0.03	0.01	-3.29	
85.00		615.93	0.62	-0.06	0.02	-10.26	
89.33	Bot - Section 3	517.73	0.68	-0.08	0.03	-12.79	
90.00		142.00	0.69	-0.08	0.03	-3.65	
94.33	Top - Section 2	907.48	0.76	-0.10	0.04	-27.58	
95.00		61.55	0.77	-0.11	0.05	-1.90	
100.00		452.63	0.85	-0.12	0.07	-14.09	
105.00		436.72	0.94	-0.12	0.10	-11.53	
110.00		420.82	1.03	-0.10	0.15	-6.96	
115.00		404.92	1.13	-0.05	0.20	-0.64	
120.00		389.01	1.23	0.03	0.27	7.20	
125.00		373.11	1.33	0.16	0.36	16.30	
126.50	Appurtenance(s)	2089.0	1.36	0.22	0.39	109.18	
130.00		248.37	1.44	0.36	0.47	18.40	
135.00		341.30	1.55	0.64	0.61	37.45	
137.00	Appurtenance(s)	1981.4	1.60	0.77	0.67	248.65	
139.00	Top - Section 3	129.52	1.64	0.92	0.73	18.41	
140.00		71.38	1.67	1.01	0.77	10.76	
145.00		356.91	1.79	1.49	0.96	70.40	
149.00	Appurtenance(s)	4366.7	1.89	1.98	1.14	1041.44	
Totals:		29,272.3				1,895.8	
						Total Wind:	25,865.1

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT11558-A-SBA **Code:** EIA/TIA-222-G 11/15/2019
Site Name: Bolton 2, CT **Exposure:** B
Height: 149.00 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 21



Load Case: 1.2D + 1.0E

Iterations 22

Gust Response Factor 1.10

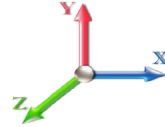
Sds 0.19

Ss 0.18

Dead Load Factor 1.20 **Seismic Load Factor** 1.00 **Sd1** 0.10

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.39 **SA** 0.04 **Seismic Importance Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.84	-1.99	0.00	-254.34	0.00	254.34	4278.74	2139.37	9724.09	4869.27		0.00	0.00	0.062
5.00	-41.23	-1.98	0.00	-244.37	0.00	244.37	4225.25	2112.62	9396.38	4705.17		0.01	-0.01	0.062
10.00	-39.65	-1.97	0.00	-234.45	0.00	234.45	4170.10	2085.05	9070.32	4541.90		0.03	-0.03	0.061
15.00	-38.10	-1.95	0.00	-224.61	0.00	224.61	4113.32	2056.66	8746.14	4379.57		0.07	-0.04	0.061
20.00	-36.58	-1.92	0.00	-214.88	0.00	214.88	4054.89	2027.44	8424.08	4218.30		0.12	-0.06	0.060
25.00	-35.08	-1.90	0.00	-205.27	0.00	205.27	3994.82	1997.41	8104.39	4058.22		0.19	-0.07	0.059
30.00	-33.62	-1.87	0.00	-195.78	0.00	195.78	3933.10	1966.55	7787.31	3899.44		0.27	-0.09	0.059
35.00	-32.18	-1.85	0.00	-186.41	0.00	186.41	3869.73	1934.87	7473.08	3742.09		0.38	-0.11	0.058
40.00	-30.77	-1.82	0.00	-177.17	0.00	177.17	3804.73	1902.36	7161.93	3586.29		0.50	-0.12	0.057
44.33	-29.58	-1.79	0.00	-169.28	0.00	169.28	3747.06	1873.53	6894.95	3452.60		0.61	-0.14	0.057
45.00	-29.27	-1.79	0.00	-168.09	0.00	168.09	3738.08	1869.04	6854.11	3432.15		0.63	-0.14	0.057
50.00	-27.02	-1.74	0.00	-159.13	0.00	159.13	2899.02	1449.51	5264.11	2635.97		0.79	-0.16	0.070
55.00	-25.85	-1.72	0.00	-150.45	0.00	150.45	2851.67	1425.83	5039.02	2523.25		0.96	-0.17	0.069
60.00	-24.72	-1.70	0.00	-141.87	0.00	141.87	2802.68	1401.34	4815.72	2411.44		1.15	-0.20	0.068
65.00	-23.60	-1.69	0.00	-133.36	0.00	133.36	2752.04	1376.02	4594.46	2300.64		1.37	-0.22	0.067
70.00	-22.51	-1.68	0.00	-124.93	0.00	124.93	2699.76	1349.88	4375.47	2190.99		1.61	-0.24	0.065
75.00	-21.44	-1.68	0.00	-116.52	0.00	116.52	2645.83	1322.92	4159.00	2082.59		1.87	-0.26	0.064
80.00	-20.40	-1.68	0.00	-108.13	0.00	108.13	2590.26	1295.13	3945.28	1975.57		2.16	-0.28	0.063
85.00	-19.38	-1.69	0.00	-99.71	0.00	99.71	2533.05	1266.52	3734.57	1870.06		2.47	-0.31	0.061
89.33	-18.52	-1.68	0.00	-92.41	0.00	92.41	2482.13	1241.07	3554.56	1779.92		2.75	-0.33	0.059
90.00	-18.31	-1.69	0.00	-91.29	0.00	91.29	2474.19	1237.09	3527.09	1766.17		2.80	-0.33	0.059
94.33	-16.98	-1.68	0.00	-83.98	0.00	83.98	1821.49	910.75	2566.69	1285.25		3.11	-0.35	0.075
95.00	-16.87	-1.69	0.00	-82.86	0.00	82.86	1816.32	908.16	2547.59	1275.69		3.16	-0.35	0.074
100.00	-16.05	-1.69	0.00	-74.43	0.00	74.43	1776.59	888.29	2405.19	1204.38		3.54	-0.38	0.071
105.00	-15.24	-1.69	0.00	-65.98	0.00	65.98	1735.21	867.61	2264.53	1133.95		3.96	-0.41	0.067
110.00	-14.46	-1.69	0.00	-57.53	0.00	57.53	1692.20	846.10	2125.83	1064.50		4.40	-0.44	0.063
115.00	-13.69	-1.69	0.00	-49.07	0.00	49.07	1647.53	823.77	1989.35	996.15		4.88	-0.46	0.058
120.00	-12.94	-1.68	0.00	-40.61	0.00	40.61	1601.22	800.61	1855.32	929.04		5.38	-0.49	0.052
125.00	-12.22	-1.66	0.00	-32.19	0.00	32.19	1553.27	776.64	1723.99	863.28		5.90	-0.51	0.045
126.50	-9.63	-1.53	0.00	-29.69	0.00	29.69	1538.57	769.28	1685.15	843.83		6.06	-0.52	0.041
130.00	-9.19	-1.51	0.00	-24.32	0.00	24.32	1503.68	751.84	1595.59	798.98		6.45	-0.53	0.037
135.00	-8.58	-1.47	0.00	-16.76	0.00	16.76	1452.44	726.22	1470.36	736.27		7.02	-0.55	0.029
137.00	-6.13	-1.20	0.00	-13.81	0.00	13.81	1427.86	713.93	1417.63	709.87		7.25	-0.56	0.024
139.00	-5.93	-1.18	0.00	-11.41	0.00	11.41	1400.09	700.04	1362.73	682.38		7.48	-0.56	0.021
139.00	-5.93	-1.18	0.00	-11.41	0.00	11.41	839.20	419.60	599.78	300.33		7.48	-0.56	0.045
140.00	-5.83	-1.17	0.00	-10.23	0.00	10.23	839.20	419.60	599.78	300.33		7.60	-0.56	0.041
145.00	-5.31	-1.09	0.00	-4.38	0.00	4.38	839.20	419.60	599.78	300.33		8.20	-0.58	0.021
149.00	0.00	-1.04	0.00	0.00	0.00	0.00	839.20	419.60	599.78	300.33		8.68	-0.58	0.000

Seismic Segment Forces (Factored)

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 22



Load Case: 0.9D + 1.0E

Iterations 22

Gust Response Factor 1.10

Sds 0.19

Ss 0.18

Dead Load Factor 0.90 **Seismic Load Factor** 1.00

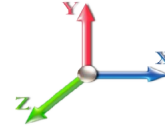
Sd1 0.10

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.39

SA 0.04

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1106.8	0.00	0.03	0.02	18.56	
10.00		1083.0	0.01	0.05	0.03	26.70	
15.00		1059.1	0.02	0.06	0.04	30.31	
20.00		1035.3	0.03	0.07	0.04	31.77	
25.00		1011.4	0.05	0.07	0.04	32.27	
30.00		987.61	0.08	0.07	0.04	32.40	
35.00		963.75	0.10	0.07	0.04	32.42	
40.00		939.90	0.14	0.07	0.03	32.34	
44.33	Bot - Section 2	795.28	0.17	0.07	0.03	27.75	
45.00		222.94	0.17	0.07	0.03	7.79	
50.00	Top - Section 1	1647.2	0.21	0.06	0.02	57.43	
55.00		735.21	0.26	0.05	0.02	24.75	
60.00		715.33	0.31	0.04	0.01	21.97	
65.00		695.45	0.36	0.03	0.01	17.65	
70.00		675.57	0.42	0.01	0.01	11.71	
75.00		655.69	0.48	-0.01	0.01	4.44	
80.00		635.81	0.54	-0.03	0.01	-3.29	
85.00		615.93	0.62	-0.06	0.02	-10.26	
89.33	Bot - Section 3	517.73	0.68	-0.08	0.03	-12.79	
90.00		142.00	0.69	-0.08	0.03	-3.65	
94.33	Top - Section 2	907.48	0.76	-0.10	0.04	-27.58	
95.00		61.55	0.77	-0.11	0.05	-1.90	
100.00		452.63	0.85	-0.12	0.07	-14.09	
105.00		436.72	0.94	-0.12	0.10	-11.53	
110.00		420.82	1.03	-0.10	0.15	-6.96	
115.00		404.92	1.13	-0.05	0.20	-0.64	
120.00		389.01	1.23	0.03	0.27	7.20	
125.00		373.11	1.33	0.16	0.36	16.30	
126.50	Appurtenance(s)	2089.0	1.36	0.22	0.39	109.18	
130.00		248.37	1.44	0.36	0.47	18.40	
135.00		341.30	1.55	0.64	0.61	37.45	
137.00	Appurtenance(s)	1981.4	1.60	0.77	0.67	248.65	
139.00	Top - Section 3	129.52	1.64	0.92	0.73	18.41	
140.00		71.38	1.67	1.01	0.77	10.76	
145.00		356.91	1.79	1.49	0.96	70.40	
149.00	Appurtenance(s)	4366.7	1.89	1.98	1.14	1041.44	
Totals:		29,272.3				1,895.8	
						Total Wind:	25,865.1

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT11558-A-SBA **Code:** EIA/TIA-222-G 11/15/2019
Site Name: Bolton 2, CT **Exposure:** B
Height: 149.00 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 23



Load Case: 0.9D + 1.0E

Iterations 22

Gust Response Factor 1.10

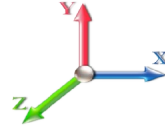
Sds 0.19

Ss 0.18

Dead Load Factor 0.90 **Seismic Load Factor** 1.00 **Sd1** 0.10

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.39 **SA** 0.04 **Seismic Importance Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-32.13	-1.99	0.00	-251.30	0.00	251.30	4278.74	2139.37	9724.09	4869.27	0.00	0.00	0.00	0.059
5.00	-30.92	-1.98	0.00	-241.34	0.00	241.34	4225.25	2112.62	9396.38	4705.17	0.01	-0.01	0.059	
10.00	-29.74	-1.96	0.00	-231.44	0.00	231.44	4170.10	2085.05	9070.32	4541.90	0.03	-0.03	0.058	
15.00	-28.57	-1.94	0.00	-221.63	0.00	221.63	4113.32	2056.66	8746.14	4379.57	0.07	-0.04	0.058	
20.00	-27.43	-1.91	0.00	-211.95	0.00	211.95	4054.89	2027.44	8424.08	4218.30	0.12	-0.06	0.057	
25.00	-26.31	-1.89	0.00	-202.39	0.00	202.39	3994.82	1997.41	8104.39	4058.22	0.19	-0.07	0.056	
30.00	-25.21	-1.86	0.00	-192.96	0.00	192.96	3933.10	1966.55	7787.31	3899.44	0.27	-0.09	0.056	
35.00	-24.13	-1.83	0.00	-183.67	0.00	183.67	3869.73	1934.87	7473.08	3742.09	0.37	-0.10	0.055	
40.00	-23.08	-1.80	0.00	-174.52	0.00	174.52	3804.73	1902.36	7161.93	3586.29	0.49	-0.12	0.055	
44.33	-22.18	-1.78	0.00	-166.71	0.00	166.71	3747.06	1873.53	6894.95	3452.60	0.61	-0.13	0.054	
45.00	-21.95	-1.77	0.00	-165.52	0.00	165.52	3738.08	1869.04	6854.11	3432.15	0.62	-0.14	0.054	
50.00	-20.26	-1.72	0.00	-156.67	0.00	156.67	2899.02	1449.51	5264.11	2635.97	0.78	-0.15	0.066	
55.00	-19.39	-1.70	0.00	-148.09	0.00	148.09	2851.67	1425.83	5039.02	2523.25	0.95	-0.17	0.065	
60.00	-18.54	-1.68	0.00	-139.61	0.00	139.61	2802.68	1401.34	4815.72	2411.44	1.14	-0.19	0.065	
65.00	-17.70	-1.66	0.00	-131.22	0.00	131.22	2752.04	1376.02	4594.46	2300.64	1.35	-0.21	0.063	
70.00	-16.88	-1.65	0.00	-122.91	0.00	122.91	2699.76	1349.88	4375.47	2190.99	1.59	-0.23	0.062	
75.00	-16.08	-1.65	0.00	-114.63	0.00	114.63	2645.83	1322.92	4159.00	2082.59	1.84	-0.26	0.061	
80.00	-15.30	-1.66	0.00	-106.37	0.00	106.37	2590.26	1295.13	3945.28	1975.57	2.13	-0.28	0.060	
85.00	-14.54	-1.66	0.00	-98.09	0.00	98.09	2533.05	1266.52	3734.57	1870.06	2.43	-0.30	0.058	
89.33	-13.89	-1.66	0.00	-90.91	0.00	90.91	2482.13	1241.07	3554.56	1779.92	2.71	-0.32	0.057	
90.00	-13.73	-1.66	0.00	-89.81	0.00	89.81	2474.19	1237.09	3527.09	1766.17	2.76	-0.33	0.056	
94.33	-12.73	-1.66	0.00	-82.62	0.00	82.62	1821.49	910.75	2566.69	1285.25	3.06	-0.35	0.071	
95.00	-12.65	-1.66	0.00	-81.52	0.00	81.52	1816.32	908.16	2547.59	1275.69	3.11	-0.35	0.071	
100.00	-12.03	-1.66	0.00	-73.23	0.00	73.23	1776.59	888.29	2405.19	1204.38	3.49	-0.38	0.068	
105.00	-11.43	-1.66	0.00	-64.93	0.00	64.93	1735.21	867.61	2264.53	1133.95	3.90	-0.40	0.064	
110.00	-10.84	-1.66	0.00	-56.62	0.00	56.62	1692.20	846.10	2125.83	1064.50	4.34	-0.43	0.060	
115.00	-10.27	-1.66	0.00	-48.31	0.00	48.31	1647.53	823.77	1989.35	996.15	4.80	-0.46	0.055	
120.00	-9.71	-1.65	0.00	-40.00	0.00	40.00	1601.22	800.61	1855.32	929.04	5.30	-0.48	0.049	
125.00	-9.16	-1.64	0.00	-31.73	0.00	31.73	1553.27	776.64	1723.99	863.28	5.81	-0.50	0.043	
126.50	-7.22	-1.51	0.00	-29.28	0.00	29.28	1538.57	769.28	1685.15	843.83	5.97	-0.51	0.039	
130.00	-6.89	-1.49	0.00	-23.99	0.00	23.99	1503.68	751.84	1595.59	798.98	6.35	-0.52	0.035	
135.00	-6.43	-1.45	0.00	-16.53	0.00	16.53	1452.44	726.22	1470.36	736.27	6.91	-0.54	0.027	
137.00	-4.59	-1.19	0.00	-13.63	0.00	13.63	1427.86	713.93	1417.63	709.87	7.14	-0.55	0.022	
139.00	-4.45	-1.17	0.00	-11.26	0.00	11.26	1400.09	700.04	1362.73	682.38	7.37	-0.55	0.020	
139.00	-4.45	-1.17	0.00	-11.26	0.00	11.26	839.20	419.60	599.78	300.33	7.37	-0.55	0.043	
140.00	-4.37	-1.15	0.00	-10.10	0.00	10.10	839.20	419.60	599.78	300.33	7.49	-0.55	0.039	
145.00	-3.98	-1.08	0.00	-4.32	0.00	4.32	839.20	419.60	599.78	300.33	8.07	-0.57	0.019	
149.00	0.00	-1.04	0.00	0.00	0.00	0.00	839.20	419.60	599.78	300.33	8.55	-0.57	0.000	

Wind Loading - Shaft

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 24

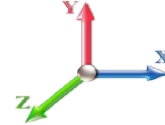


Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 22



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.74	236.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	231.28	0.650	0.000	5.00	23.285	15.14	102.0	0.0	1106.9
10.00		1.00	0.70	6.129	6.74	226.28	0.650	0.000	5.00	22.787	14.81	99.9	0.0	1083.0
15.00		1.00	0.70	6.129	6.74	221.27	0.650	0.000	5.00	22.289	14.49	97.7	0.0	1059.2
20.00		1.00	0.70	6.129	6.74	216.27	0.650	0.000	5.00	21.790	14.16	95.5	0.0	1035.3
25.00		1.00	0.70	6.129	6.74	211.26	0.650	0.000	5.00	21.292	13.84	93.3	0.0	1011.5
30.00		1.00	0.70	6.134	6.75	206.35	0.650	0.000	5.00	20.793	13.52	91.2	0.0	987.6
35.00		1.00	0.73	6.410	7.05	205.82	0.650	0.000	5.00	20.295	13.19	93.0	0.0	963.8
40.00		1.00	0.76	6.659	7.33	204.57	0.650	0.000	5.00	19.796	12.87	94.3	0.0	939.9
44.33	Bot - Section 2	1.00	0.78	6.858	7.54	203.01	0.650	0.000	4.33	16.754	10.89	82.1	0.0	795.3
45.00		1.00	0.79	6.887	7.58	202.74	0.650	0.000	0.67	2.580	1.68	12.7	0.0	222.9
50.00	Top - Section 1	1.00	0.81	7.098	7.81	200.43	0.650	0.000	5.00	19.064	12.39	96.7	0.0	1647.3
55.00		1.00	0.83	7.294	8.02	200.61	0.650	0.000	5.00	18.566	12.07	96.8	0.0	735.2
60.00		1.00	0.85	7.477	8.22	197.59	0.650	0.000	5.00	18.067	11.74	96.6	0.0	715.3
65.00		1.00	0.87	7.650	8.42	194.28	0.650	0.000	5.00	17.569	11.42	96.1	0.0	695.5
70.00		1.00	0.89	7.814	8.60	190.69	0.650	0.000	5.00	17.070	11.10	95.4	0.0	675.6
75.00		1.00	0.91	7.969	8.77	186.88	0.650	0.000	5.00	16.572	10.77	94.4	0.0	655.7
80.00		1.00	0.93	8.118	8.93	182.85	0.650	0.000	5.00	16.073	10.45	93.3	0.0	635.8
85.00		1.00	0.94	8.260	9.09	178.63	0.650	0.000	5.00	15.575	10.12	92.0	0.0	615.9
89.33	Bot - Section 3	1.00	0.96	8.378	9.22	174.83	0.650	0.000	4.33	13.095	8.51	78.4	0.0	517.7
90.00		1.00	0.96	8.396	9.24	174.24	0.650	0.000	0.67	2.010	1.31	12.1	0.0	142.0
94.33	Top - Section 2	1.00	0.97	8.509	9.36	170.30	0.650	0.000	4.33	12.847	8.35	78.2	0.0	907.5
95.00		1.00	0.97	8.526	9.38	172.19	0.650	0.000	0.67	1.943	1.26	11.8	0.0	61.6
100.00		1.00	0.99	8.652	9.52	167.51	0.650	0.000	5.00	14.291	9.29	88.4	0.0	452.6
105.00		1.00	1.00	8.774	9.65	162.69	0.650	0.000	5.00	13.793	8.97	86.5	0.0	436.7
110.00		1.00	1.02	8.891	9.78	157.75	0.650	0.000	5.00	13.294	8.64	84.5	0.0	420.8
115.00		1.00	1.03	9.005	9.91	152.69	0.650	0.000	5.00	12.796	8.32	82.4	0.0	404.9
120.00		1.00	1.04	9.115	10.03	147.52	0.650	0.000	5.00	12.298	7.99	80.1	0.0	389.0
125.00		1.00	1.05	9.222	10.14	142.24	0.650	0.000	5.00	11.799	7.67	77.8	0.0	373.1
126.50	Appurtenance(s)	1.00	1.06	9.253	10.18	140.64	0.650	0.000	1.50	3.443	2.24	22.8	0.0	108.8
130.00		1.00	1.07	9.326	10.26	136.87	0.650	0.000	3.50	7.858	5.11	52.4	0.0	248.4
135.00		1.00	1.08	9.427	10.37	131.40	0.650	0.000	5.00	10.802	7.02	72.8	0.0	341.3
137.00	Appurtenance(s)	1.00	1.08	9.466	10.41	129.19	0.650	0.000	2.00	4.181	2.72	28.3	0.0	132.1
139.00	Top - Section 3	1.00	1.09	9.506	10.46	126.97	0.650	0.000	2.00	4.102	2.67	27.9	0.0	129.5
140.00		1.00	1.09	9.525	10.48	95.32	0.650	0.000	1.00	1.523	0.99	10.4	0.0	71.4
145.00		1.00	1.10	9.621	10.58	95.80	0.650	0.000	5.00	7.616	4.95	52.4	0.0	356.9
149.00	Appurtenance(s)	1.00	1.11	9.696	10.67	96.17	0.650	0.000	4.00	6.093	3.96	42.2	0.0	285.5
Totals:									149.00			2,612.4		21,361.5

Discrete Appurtenance Forces

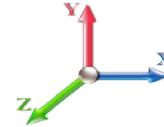
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRUS 4449 B5/B12	3	9.715	10.686	0.51	0.90	3.03	219.00	0.000	1.000	32.40	0.00	32.40
2	149.00	HPA65R-BU8A	3	9.715	10.686	0.77	0.90	26.08	162.00	0.000	1.000	278.66	0.00	278.66
3	149.00	TPA65R-BU8DA-K	3	9.715	10.686	0.65	0.90	30.85	261.30	0.000	1.000	329.69	0.00	329.69
4	149.00	DMP65R-BU8DA	3	9.715	10.686	0.75	0.90	36.53	287.10	0.000	1.000	390.35	0.00	390.35
5	149.00	RRUS 4478 B14	3	9.715	10.686	0.51	0.90	2.54	178.20	0.000	1.000	27.14	0.00	27.14
6	149.00	Lightning Rod	1	9.752	10.727	1.00	1.00	0.50	5.00	0.000	3.000	5.36	0.00	16.09
7	149.00	RRUS 8843 B2 B66A	3	9.715	10.686	0.51	0.90	2.52	216.00	0.000	1.000	26.97	0.00	26.97
8	149.00	Low Profile Platform	1	9.696	10.666	1.00	1.00	43.00	2380.00	0.000	0.000	458.64	0.00	0.00
9	149.00	7770.00	3	9.715	10.686	0.66	0.90	10.84	105.00	0.000	1.000	115.85	0.00	115.85
10	149.00	LGP21401	12	9.715	10.686	0.45	0.90	6.97	169.20	0.000	1.000	74.44	0.00	74.44
11	149.00	Raycap DC6-48-60-18-8F	3	9.715	10.686	0.51	0.90	1.42	98.40	0.000	1.000	15.13	0.00	15.13
12	137.00	Low Profile Platform-flat	1	9.466	10.413	1.00	1.00	25.00	1100.00	0.000	0.000	260.33	0.00	0.00
13	137.00	RRH2X60-AWS	3	9.466	10.413	0.46	0.80	4.79	180.00	0.000	0.000	49.86	0.00	0.00
14	137.00	BXA-70063-4CF-EDIN-X	1	9.466	10.413	1.00	1.00	4.72	9.90	0.000	0.000	49.15	0.00	0.00
15	137.00	RRH2x60-700U	3	9.466	10.413	0.46	0.80	2.07	58.50	0.000	0.000	21.51	0.00	0.00
16	137.00	BXA-70063-6CF-2	3	9.466	10.413	0.58	0.80	13.26	51.00	0.000	0.000	138.11	0.00	0.00
17	137.00	RRH2x60-PCS)	3	9.466	10.413	0.46	0.80	3.39	150.00	0.000	0.000	35.33	0.00	0.00
18	137.00	BXA-70080-6BF	2	9.466	10.413	0.70	0.80	8.02	36.00	0.000	0.000	83.49	0.00	0.00
19	137.00	GPS	1	9.466	10.413	1.00	1.00	1.00	10.00	0.000	0.000	10.41	0.00	0.00
20	137.00	DB-T1-6Z-8AB-0Z	1	9.466	10.413	1.00	1.00	4.80	14.00	0.000	0.000	49.98	0.00	0.00
21	137.00	SBNHH-1D65B	6	9.466	10.413	0.66	0.80	32.51	240.00	0.000	0.000	338.52	0.00	0.00
22	126.50	S11B12	3	9.253	10.179	0.54	0.80	4.05	152.10	0.000	0.000	41.25	0.00	0.00
23	126.50	Low Profile Platform-flat	1	9.253	10.179	1.00	1.00	25.00	1100.00	0.000	0.000	254.46	0.00	0.00
24	126.50	LNx-6515DS-A1M	3	9.253	10.179	0.64	0.80	22.02	149.40	0.000	0.000	224.16	0.00	0.00
25	126.50	KRY 112 144/1	3	9.253	10.179	0.46	0.80	0.56	33.00	0.000	0.000	5.71	0.00	0.00
26	126.50	AIR 21, 1.3M, B4A B2P	3	9.253	10.179	0.69	0.80	12.57	271.20	0.000	0.000	127.94	0.00	0.00
27	126.50	AIR 21, 1.3M, B2A B4P	3	9.253	10.179	0.69	0.80	12.57	274.50	0.000	0.000	127.94	0.00	0.00

Totals: 7,910.80

3,572.77

Total Applied Force Summary

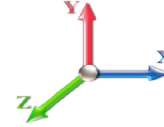
Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 26



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		102.04	1339.50	0.00	0.00
10.00		99.85	1315.65	0.00	0.00
15.00		97.67	1291.79	0.00	0.00
20.00		95.48	1267.94	0.00	0.00
25.00		93.30	1244.08	0.00	0.00
30.00		91.19	1220.22	0.00	0.00
35.00		93.01	1196.37	0.00	0.00
40.00		94.26	1172.51	0.00	0.00
44.33		82.15	996.88	0.00	0.00
45.00		12.70	253.96	0.00	0.00
50.00		96.75	1879.89	0.00	0.00
55.00		96.82	967.83	0.00	0.00
60.00		96.59	947.95	0.00	0.00
65.00		96.10	928.07	0.00	0.00
70.00		95.37	908.19	0.00	0.00
75.00		94.43	888.31	0.00	0.00
80.00		93.29	868.43	0.00	0.00
85.00		91.98	848.55	0.00	0.00
89.33		78.44	719.33	0.00	0.00
90.00		12.06	173.01	0.00	0.00
94.33		78.16	1109.08	0.00	0.00
95.00		11.85	92.57	0.00	0.00
100.00		88.41	685.24	0.00	0.00
105.00		86.52	669.34	0.00	0.00
110.00		84.51	653.43	0.00	0.00
115.00		82.38	637.53	0.00	0.00
120.00		80.14	621.63	0.00	0.00
125.00		77.80	605.72	0.00	0.00
126.50	(16) attachments	804.23	2158.82	0.00	0.00
130.00		52.40	363.67	0.00	0.00
135.00		72.81	506.02	0.00	0.00
137.00	(24) attachments	1064.99	2047.35	0.00	0.00
139.00		27.88	163.85	0.00	0.00
140.00		10.37	87.23	0.00	0.00
145.00		52.39	436.16	0.00	0.00
149.00	(38) attachments	1796.86	4430.13	0.00	1306.71
Totals:		6,185.20	35,696.19	0.00	1,306.71

Calculated Forces

Structure: CT11558-A-SBA

Code: EIA/TIA-222-G

11/15/2019

Site Name: Bolton 2, CT

Exposure: B

Height: 149.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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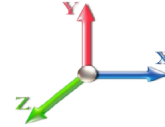


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 22

Dead Load Factor 1.00

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-35.69	-6.20	0.00	-716.64	0.00	716.64	4278.74	2139.37	9724.09	4869.27	0.00	0.000	0.000	0.156
5.00	-34.35	-6.12	0.00	-685.66	0.00	685.66	4225.25	2112.62	9396.38	4705.17	0.02	-0.039	0.000	0.154
10.00	-33.03	-6.04	0.00	-655.07	0.00	655.07	4170.10	2085.05	9070.32	4541.90	0.08	-0.079	0.000	0.152
15.00	-31.73	-5.96	0.00	-624.87	0.00	624.87	4113.32	2056.66	8746.14	4379.57	0.19	-0.120	0.000	0.150
20.00	-30.46	-5.89	0.00	-595.06	0.00	595.06	4054.89	2027.44	8424.08	4218.30	0.34	-0.162	0.000	0.149
25.00	-29.21	-5.81	0.00	-565.63	0.00	565.63	3994.82	1997.41	8104.39	4058.22	0.53	-0.205	0.000	0.147
30.00	-27.99	-5.74	0.00	-536.57	0.00	536.57	3933.10	1966.55	7787.31	3899.44	0.77	-0.248	0.000	0.145
35.00	-26.79	-5.66	0.00	-507.89	0.00	507.89	3869.73	1934.87	7473.08	3742.09	1.05	-0.292	0.000	0.143
40.00	-25.61	-5.58	0.00	-479.60	0.00	479.60	3804.73	1902.36	7161.93	3586.29	1.38	-0.337	0.000	0.140
44.33	-24.62	-5.50	0.00	-455.43	0.00	455.43	3747.06	1873.53	6894.95	3452.60	1.71	-0.377	0.000	0.138
45.00	-24.36	-5.50	0.00	-451.76	0.00	451.76	3738.08	1869.04	6854.11	3432.15	1.76	-0.383	0.000	0.138
50.00	-22.48	-5.40	0.00	-424.29	0.00	424.29	2899.02	1449.51	5264.11	2635.97	2.19	-0.430	0.000	0.169
55.00	-21.50	-5.32	0.00	-397.27	0.00	397.27	2851.67	1425.83	5039.02	2523.25	2.66	-0.477	0.000	0.165
60.00	-20.55	-5.23	0.00	-370.68	0.00	370.68	2802.68	1401.34	4815.72	2411.44	3.19	-0.532	0.000	0.161
65.00	-19.62	-5.15	0.00	-344.51	0.00	344.51	2752.04	1376.02	4594.46	2300.64	3.78	-0.588	0.000	0.157
70.00	-18.71	-5.06	0.00	-318.77	0.00	318.77	2699.76	1349.88	4375.47	2190.99	4.42	-0.644	0.000	0.152
75.00	-17.82	-4.97	0.00	-293.47	0.00	293.47	2645.83	1322.92	4159.00	2082.59	5.13	-0.700	0.000	0.148
80.00	-16.94	-4.89	0.00	-268.60	0.00	268.60	2590.26	1295.13	3945.28	1975.57	5.89	-0.757	0.000	0.143
85.00	-16.09	-4.80	0.00	-244.17	0.00	244.17	2533.05	1266.52	3734.57	1870.06	6.72	-0.814	0.000	0.137
89.33	-15.37	-4.72	0.00	-223.38	0.00	223.38	2482.13	1241.07	3554.56	1779.92	7.48	-0.864	0.000	0.132
90.00	-15.20	-4.71	0.00	-220.24	0.00	220.24	2474.19	1237.09	3527.09	1766.17	7.60	-0.872	0.000	0.131
94.33	-14.09	-4.62	0.00	-199.83	0.00	199.83	1821.49	910.75	2566.69	1285.25	8.41	-0.921	0.000	0.163
95.00	-13.99	-4.62	0.00	-196.75	0.00	196.75	1816.32	908.16	2547.59	1275.69	8.54	-0.929	0.000	0.162
100.00	-13.30	-4.53	0.00	-173.67	0.00	173.67	1776.59	888.29	2405.19	1204.38	9.55	-0.995	0.000	0.152
105.00	-12.63	-4.45	0.00	-151.01	0.00	151.01	1735.21	867.61	2264.53	1133.95	10.63	-1.060	0.000	0.140
110.00	-11.97	-4.36	0.00	-128.77	0.00	128.77	1692.20	846.10	2125.83	1064.50	11.77	-1.122	0.000	0.128
115.00	-11.33	-4.28	0.00	-106.96	0.00	106.96	1647.53	823.77	1989.35	996.15	12.98	-1.180	0.000	0.114
120.00	-10.71	-4.20	0.00	-85.56	0.00	85.56	1601.22	800.61	1855.32	929.04	14.25	-1.234	0.000	0.099
125.00	-10.10	-4.11	0.00	-64.59	0.00	64.59	1553.27	776.64	1723.99	863.28	15.56	-1.281	0.000	0.081
126.50	-7.96	-3.26	0.00	-58.42	0.00	58.42	1538.57	769.28	1685.15	843.83	15.97	-1.295	0.000	0.074
130.00	-7.60	-3.20	0.00	-47.01	0.00	47.01	1503.68	751.84	1595.59	798.98	16.93	-1.322	0.000	0.064
135.00	-7.09	-3.12	0.00	-31.00	0.00	31.00	1452.44	726.22	1470.36	736.27	18.33	-1.354	0.000	0.047
137.00	-5.07	-2.01	0.00	-24.76	0.00	24.76	1427.86	713.93	1417.63	709.87	18.90	-1.365	0.000	0.038
139.00	-4.91	-1.98	0.00	-20.74	0.00	20.74	1400.09	700.04	1362.73	682.38	19.48	-1.374	0.000	0.034
139.00	-4.91	-1.98	0.00	-20.74	0.00	20.74	839.20	419.60	599.78	300.33	19.48	-1.374	0.000	0.075
140.00	-4.82	-1.97	0.00	-18.76	0.00	18.76	839.20	419.60	599.78	300.33	19.76	-1.378	0.000	0.068
145.00	-4.38	-1.90	0.00	-8.93	0.00	8.93	839.20	419.60	599.78	300.33	21.22	-1.402	0.000	0.035
149.00	0.00	-1.80	0.00	-1.31	0.00	1.31	839.20	419.60	599.78	300.33	22.40	-1.409	0.000	0.004

Final Analysis Summary

Structure: CT11558-A-SBA	Code: EIA/TIA-222-G	11/15/2019	
Site Name: Bolton 2, CT	Exposure: B		
Height: 149.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 28



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	25.9	0.00	42.80	0.00	0.00	3015.62
0.9D + 1.6W 97 mph Wind	25.9	0.00	32.09	0.00	0.00	2982.09
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.5	0.00	75.05	0.00	0.00	882.33
1.2D + 1.0E	2.0	0.00	42.84	0.00	0.00	254.34
0.9D + 1.0E	2.0	0.00	32.13	0.00	0.00	251.30
1.0D + 1.0W 60 mph Wind	6.2	0.00	35.69	0.00	0.00	716.64

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-26.28	-22.75	0.00	-1788.5	0.00	-1788.5	2899.02	1449.5	5264.11	2635.97	50.00	0.688
0.9D + 1.6W 97 mph Wind	-19.53	-22.51	0.00	-1761.6	0.00	-1761.6	2899.02	1449.5	5264.11	2635.97	50.00	0.675
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-53.01	-6.67	0.00	-524.72	0.00	-524.72	2899.02	1449.5	5264.11	2635.97	50.00	0.217
1.2D + 1.0E	-16.98	-1.68	0.00	-83.98	0.00	-83.98	1821.49	910.75	2566.69	1285.25	94.33	0.075
0.9D + 1.0E	-12.73	-1.66	0.00	-82.62	0.00	-82.62	1821.49	910.75	2566.69	1285.25	94.33	0.071
1.0D + 1.0W 60 mph Wind	-22.48	-5.40	0.00	-424.29	0.00	-424.29	2899.02	1449.5	5264.11	2635.97	50.00	0.169

Base Plate Summary

Structure: CT11558-A-SB	Code: EIA/TIA-222-G	11/15/2019
Site Name: Bolton 2, CT	Exposure: B	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 29



Reactions		Base Plate		Anchor Bolts	
Original Design		Yield (ksi):	60.00	Bolt Circle:	62.00
Moment (kip-ft):	3019.20	Width (in):	68.00	Number Bolts:	20.00
Axial (kip):	29.11	Style:	Round	Bolt Type:	2.00" F1554 105
Shear (kip):	49.50	Polygon Sides:	0.00	Bolt Diameter (in):	2.00
Analysis		Clip Length (in):	0.00	Yield (ksi):	105.00
Moment (kip-ft):	3015.62	Effective Len (in):	10.47	Ultimate (ksi):	125.00
Axial (kip):	75.05	Moment (kip-in):	384.05	Arrangement:	Radial
Shear (kip):	25.93	Allow Stress (ksi):	81.00	Cluster Dist (in):	0.00
		Applied Stress (ksi):	0.00	Start Angle (deg):	0.00
Moment Design %:	99.88	Stress Ratio:	0.43	Compression	
				Force (kip):	120.49
				Allowable (kip):	250.00
				Ratio:	0.49
				Tension	
				Force (kip):	112.98
				Allowable (kip):	250.00
				Ratio:	0.46

	Monopole Mat Foundation Design		Date	
			11/5/2019	
	Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-G
	Site Name:		Structure Height (Ft.):	149
	Site Number:	CT11558-A-SBA	Engineer Name:	D. Zhou
	Engr. Number:	88656	Engineer Login ID:	

Foundation Info Obtained from:

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	75.1	Shear Force (Kips):	25.9
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3015.6

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.00	Thickness of Pad (ft):	2.50
Length of Pad (ft.):	23	Width of Pad (ft.):	23

Final Length of pad (ft) 23.0 Final width of pad (ft): 23.0

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	35	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	10	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L): 18 Qty. of Rebar in Pad (W): 18

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L): 18 Qty. of Rebar in Pad (W): 18

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

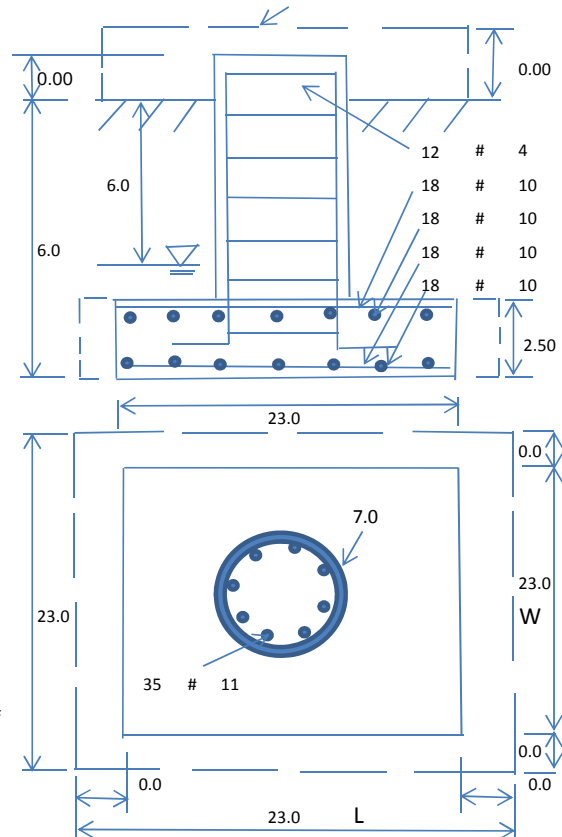
Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	6.0	Unit Weight of Water:	62.4	pcf	
Ultimate Bearing Pressure (psf):	25000	Ultimate Skin Friction:	1200	Psf	
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		
		Angle from Top of Pad:	30		
		Angle from Botm of Pad:	25		
		Angle from Botm of Pad:	25		

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1716.80	Total Dry Soil Weight (Kips):	206.02
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	206.02	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1457.39	Total Dry Concrete Weight (Kips):	218.61
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	218.61	Total Vertical Load on Base (Kips):	499.67

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	3270	< Allowable Factored Soil Bearing (psf):	18750	0.17	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5257.9	> Design Factored Momont (kips-ft):	3171	0.60	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.66				OK!



Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75	
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00	

Load/
Capacity
Ratio**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):	1.56	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	8781.7	> Design Factored Moment (Mu, Kips-F	3106.3	0.35	OK!
Calculated Shear Capacity (Kips):	794.5	> Design Factored Shear (Kips):	25.9	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	2948.4	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9701.3	> Design Factored Axial Load (Pu Kips):	75.1	0.01	OK!
Moment & Axial Strength Combination:	0.35	OK! Check Tie Spacing (Design/Required):	0.5	OK!	
Pier Reinforcement Ratio:	0.010	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	690.6	> One-Way Factored Shear (L-D. Kips):	266.5	0.39	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	690.6	> One-Way Factored Shear (W-D., Kips)	266.5	0.39	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	634.5	> One-Way Factored Shear (C-C, Kips):	252.4	0.40	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0031	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0031		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2638.0	> Moment at Bottom (L-Dir. K-Ft):	1320.6	0.50	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2638.0	> Moment at Bottom (W-Dir. K-Ft):	1320.6	0.50	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3701.6	> Moment at Bottom (C-C Dir. K-Ft):	1867.7	0.50	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0031	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0031		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	2638.0	> Moment at the top (L-Dir K-Ft):	423.5	0.16	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	2638.0	> Moment at the top (W-Dir K-Ft):	423.5	0.16	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	3701.6	> Moment at the top (C-C Dir. K-Ft):	398.8	0.11	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1206.2	k-ft.	Max. factored shear stress v_{u_CD} :	0.3	Psi
Max. factored shear stress v_{u_AB} :	13.5	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	13.5	Psi	Check Usage of Punching Shear Capacity:	0.07	OK!

FLANGE MAPPING
139'-11" Monopole
9/24/2019

Site Name: Bolton 2, CT
Site Number: CT11558-A
SGS Number: 1923612
Site Location: 12 Carpenter Road
Bolton, CT 06043
41° 46' 44.70" N
-72° 27' 55.09" W
Date(s) On Site: 9/19/2019

Prepared By:



Prepared For:



SGS Towers #: 1923612
Site #: CT11558-A
Site Name: Bolton 2, CT

Flange Mapping

Mari Heisler-Reyes
Tower Engineering Solutions
972-464-1584
Mari.heisler-reyes@testtower.us



SGS Towers
10834 Old Mill Rd Suite 8
Omaha, NE 68154
Mappings@sgstowers.com

Sinnott Gering and Schmitt Towers, Inc. (SGS) is pleased to submit this Flange Mapping Report” to Tower Engineering Solutions for the subject Monopole structure. The purpose of this Flange Report is to provide “sufficient dimensional and geometric data to perform a structural analysis (SA) of the tower”. The Flange Mapping is not a review of the structural integrity of the subject structure.

Tower/Site Information

FCC#	1260531
Tower MFR ID	N/A
Gate Combo	4722
Special Access Info	N/A

Crew Information

Crew Lead: Tyler Bayley
Crew Member: Robert Begue
Report Writer: Bridgett Powers

Typical Abbreviations

AGL	Above Ground Level	FND	Foundation	PL	Plate
AB	Anchor Bolt	H	Height	Qty	Quantity
BP	Bent Plate	HSS	Hollow Structural Section	S.B.	Stitch Bolt
B.C.	Bolt Circle	L	Single Angle	S.C.	Safety Cable
C.L.	Center Line	2L	Double Angle	SM	Smooth Helix
CNR	Could Not Record	LLH	Long Leg Horizontal	SR	Solid Rod
C-C	Center-to-Center	LLV	Long Leg Vertical	Th	Thickness
C	Channel	Mfr	Manufacturer	TME	Tower Mounted Equipment
D	Depth	MP	Mast Pipe	T.O.T	Top of Tower
DIA,ø	Diameter	MOD	Modification	T.R.	Threaded Rod
EW	Elliptical Waveguide	N/A	Not Applicable	W	Width
FH	Foam Helix	N.R.	Not Recorded	-	-

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Site Layout and Site Access



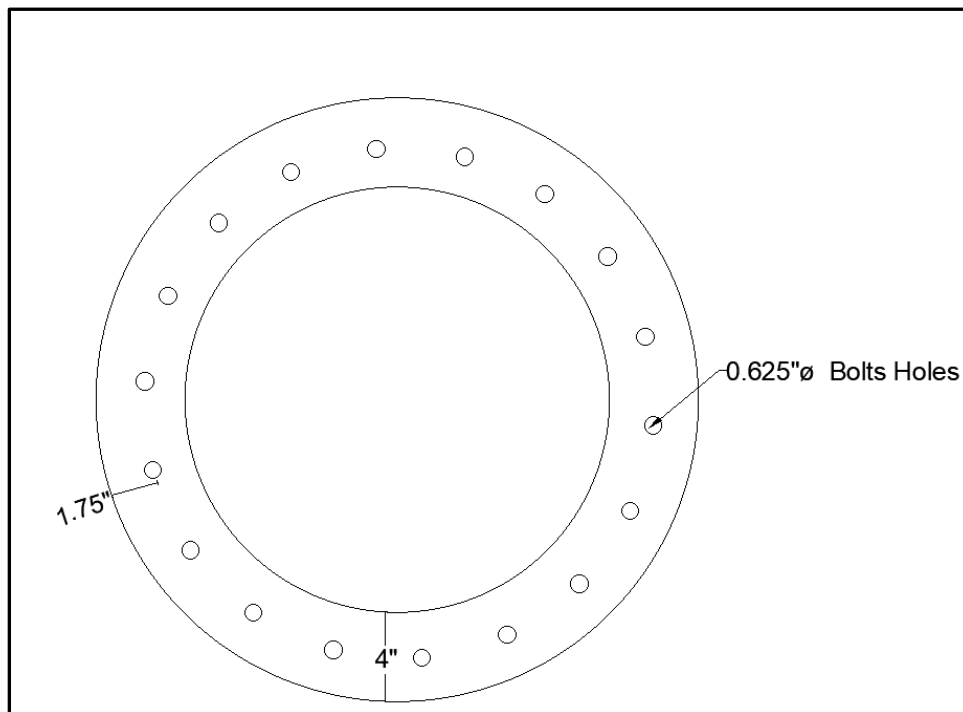
Tower Details

Tower Details			
Number of Flats	18	Base Plate Weld Size	-
Seam Weld Locations	Flats 14/15 & 5/6	Flat Width @ Base	-
Tower Finish	Galvanized	Flat Width @ TOT	4.25"

Flange Details

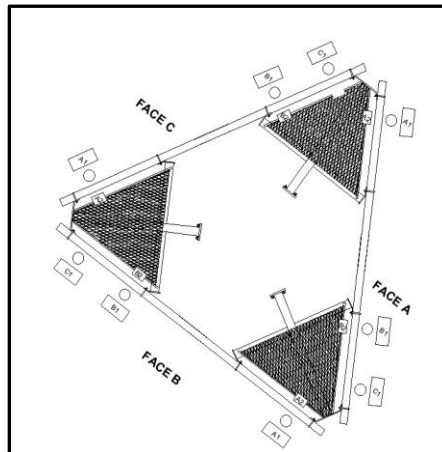
139'-10"			
Flange Plate Details		Bolt Hole Details	
Shape	Round	Quantity	18 Holes
Dimensions	4" Wide x 30" Dia.	Diameter	0.625"
Flange TH	0.625"	Bolt-to-Bolt (c-to-c)	4.5"

Note: 22" Dia. inside Flange.

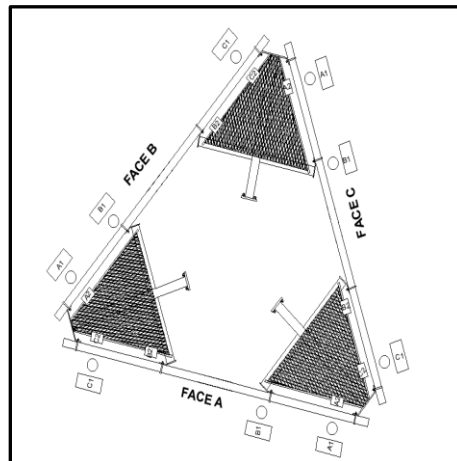


Antenna & Line Detail

Model/Serial No.	Elevation	Feed Lines	Carrier
(6) AXCM800/1900-90	105'-8"	(12) 1.875" Fiber (2) 0.375" TW (1) 0.375" SR	AT&T
(3) PW/ RA21 7770.00			
(6) PW-TMA-DDD 850/1900			
(6) PW- TMD 900/1800			
(3) RUS 11 B12			
(1) DC6-48-60-8F			

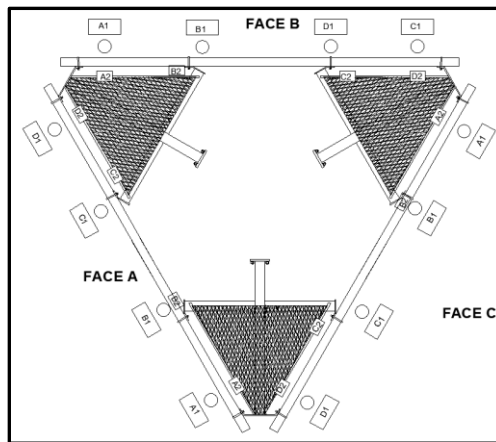


Model/Serial No.	Elevation	Feed Lines	Carrier
(6) AIR21B4AB2P	124'-2"	(1) 1.25" TW (6) 1.875" FH (1) 1.5" TW	T-Mobile
(3) TMA 17/21-M			
(3) LNX-6515DS-A1M			
(3) RRUS 11 B12			



Antenna & Line Detail

Model/Serial No.	Elevation	Feed Lines	Carrier
(3) BXA-70080-6BF-EDIN	134'-9"	(1) 1.5" FH (12) 1.875" FH	Verizon
(6) Commscope SBNHH-1D65B			
(3) BXA70063/6CFEDIN6			
(3) B13 RRH4X30			
(3) B4 RRH260-4R			
(1) RRFDC-3315-PF-48			



Miscellaneous Photos





FROM ZERO TO INFINIGY
the solutions are endless

1033 WATERVLIT SHAKER RD, ALBANY, NY 12205

Mount Analysis Report

October 29, 2019

Site Name	Bolton – Carpenter RD
Site Number	CTL01227
FA Number	10126687
PACE Number	MRCTB042114/ MRCTB024529/ MRCTB024383/ MRCTB042129/ MRCTB042127/ MRCTB040244
PTN Number	2051A0QB14/ 2051A0BGBJ/ 2051A0BG3F/ 2051A0QB1L/ 2051A0QAZZ/ 2051A0NZL8
Client	Smartlink
Carrier	AT&T
Infinigy Job Number	1106-A0001-B
Site Location	12-14 Carpenter Road, Bolton, CT, 06043 41° 46' 44.69" N NAD83 72° 27' 55.10" N NAD83
Mount Type	Mount Platform
Mount Centerline E.L.	150.0 ft.
Mount Usage	54.2%
Overall Result	Pass
Note:	Install (1) Site Pro-1 RMQP-496-HK prior to installation of proposed appurtenances.

Upon reviewing the results of this analysis, it is our opinion that the proposed mount meets the specified TIA and ASCE code requirements. The proposed mount and connections are therefore deemed adequate to support the final loading as listed in this report.



Ishan Patel, E.I.T
Project Engineer I | INFINIGY

AZ CA CO FL GA MD NC NH NJ NY TX WA



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Calculations.....	Appended

Introduction

Infinigy Engineering has been requested to perform a mount analysis on the proposed AT&T mounts. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 17.0.4 analysis software.

Supporting Documentation

RFDS APP	AT&T ID #3089119, dated August 6, 2019
Mount Photos	Infinigy Engineering, dated June 9, 2019
Construction Drawings	Hudson Design Group, dated June 6, 2012
Mount Specifications	Site Pro 1, Part # RMQP-496-HK, dated July 14, 2014

Analysis Code Requirements

Wind Speed	124 mph (3-Second Gust, V_{ULT})
Wind Speed w/ ice	50 mph (3-Second Gust, V_{ASD}) w/ 2" ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2015 IBC/ 2018 Connecticut State Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Spectral Response	$S_s=0.18$ g, $S_1=0.06$ g
Site Class	D=Stiff Soil (Assumed)
HMSL	596 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the proposed mount meets the specified TIA and ASCE code requirements. The proposed mount and connections are therefore deemed adequate to support the final loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Ishan Patel, M.S., E.I.T

Project Engineer I | **INFINIGY**

2500 W Higgins Road Suite 500, Hoffman Estates, IL 60169

(M) (832) -7167721

ipatel@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Rad. HT (ft)	Horiz. O/S (ft) ⁽¹⁾	Qty	Appurtenance ^{(2), (3)}	Carrier
150.0	150.0	12.0	3	CCI HPA65R-BU8A	AT&T
		8.0	3	CCI TPA65R-BU8DA-K	
		0.5	3	CCI DMP65R-BU8D	
		8.0	3	Ericsson RRUS 4478 B14	
		12.0	3	Ericsson RRUS 4449 B12	
		0.5	3	Ericsson RRUS 8843 B2/B66A	
		12.0	6	Powerwave LGP21401	
		12.0	3	Raycap DC Squid	

(1) Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower.

(2) Radios are mounted behind antennas at respective locations see appended documents for vertical locations.

(3) Raycaps are mounted on tower legs.

Structure Usages

Stand-off	24.2%	Pass
Horizontal	37.7%	Pass
Mount Pipe	54.2%	Pass
Results	54.2%	Pass

Mount Connections

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (Kips)	40.68	3.54	8.7%
Max Shear (Kips)	24.84	1.84	7.4%
Unity Check	--	--	1.3%

*Assumed (4) 5/8" A307 threaded rods. Contractor to field verify anchors diameter prior to proposed installation.

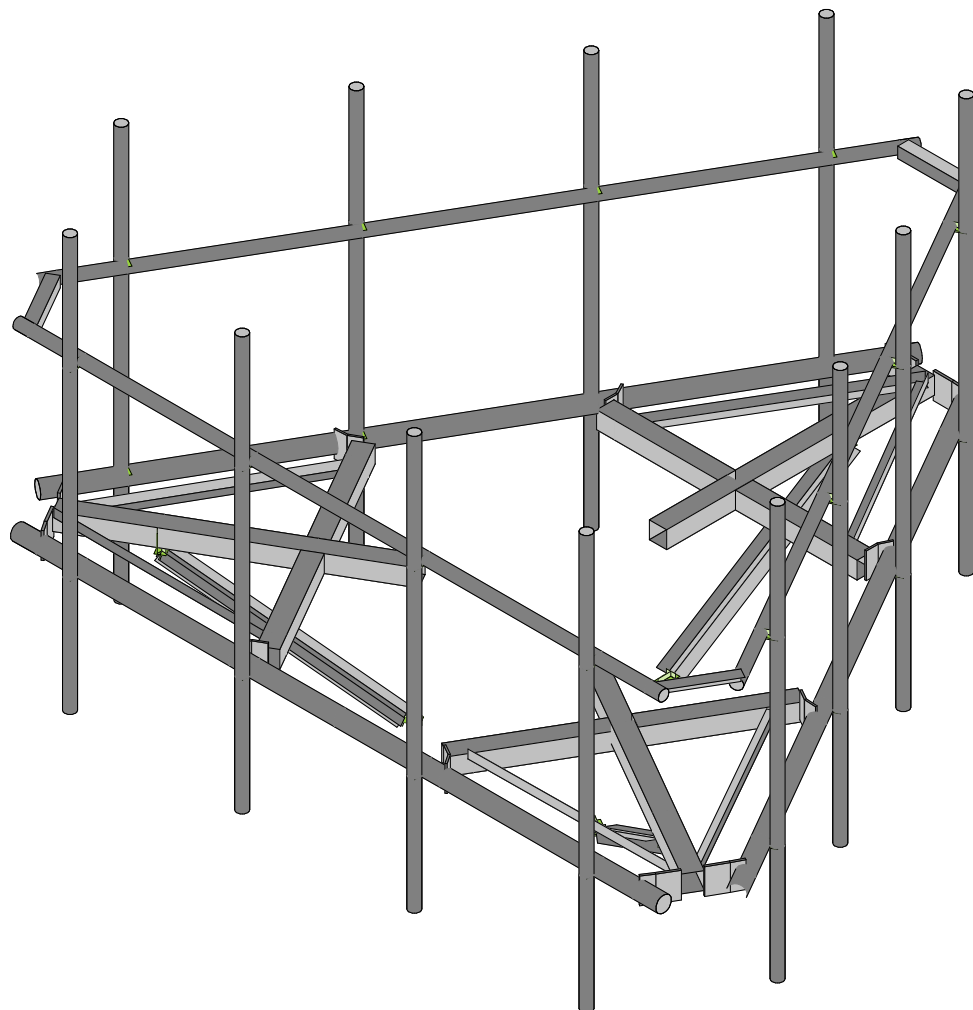
- Anchors reactions are acceptable when compare to code calculated capacities.

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

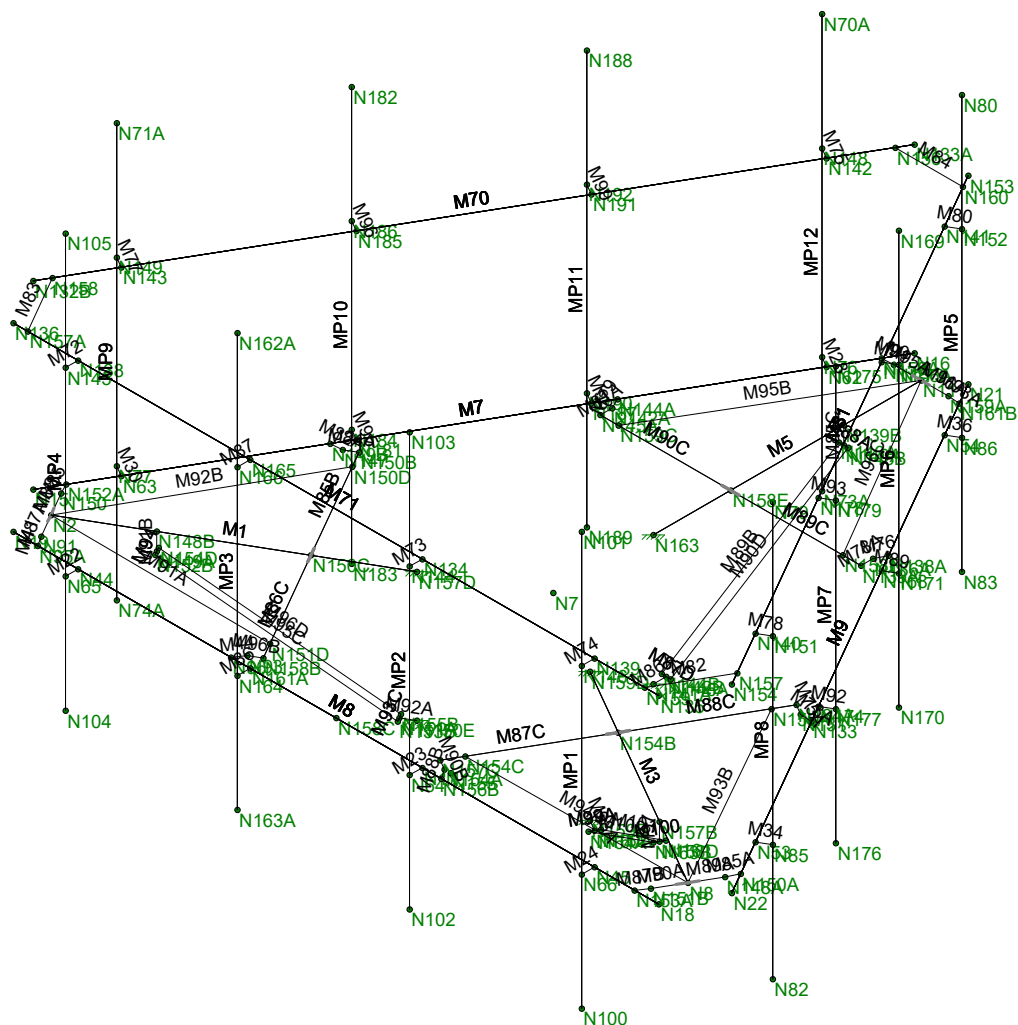
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

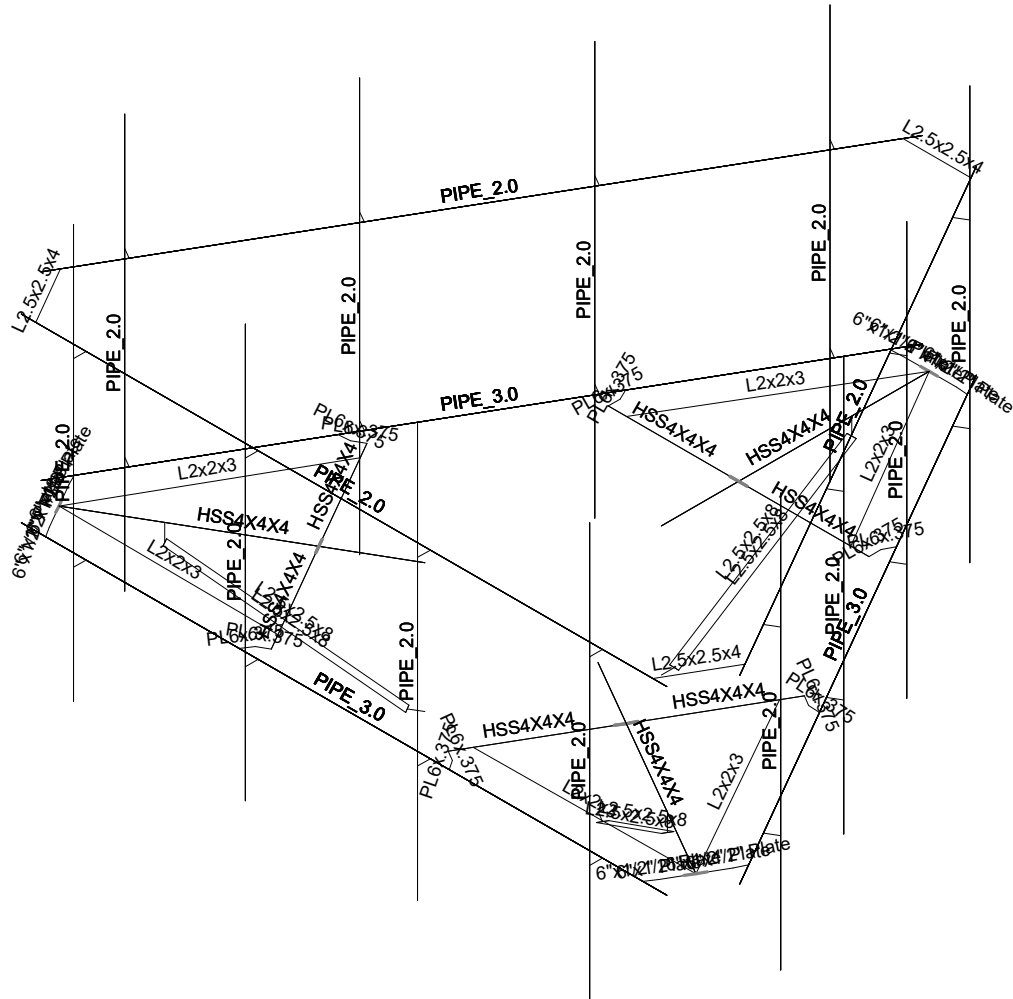
This report is an evaluation of the proposed carriers mount structure only and does not reflect adequacy of the existing tower, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.



Envelope Only Solution

Infinigy Engineering, LLP	CTL01227	Proposed Configuration
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Envelope Only Solution

Infinigy Engineering, LLP

IP

1106-A0001-B

CTL01227

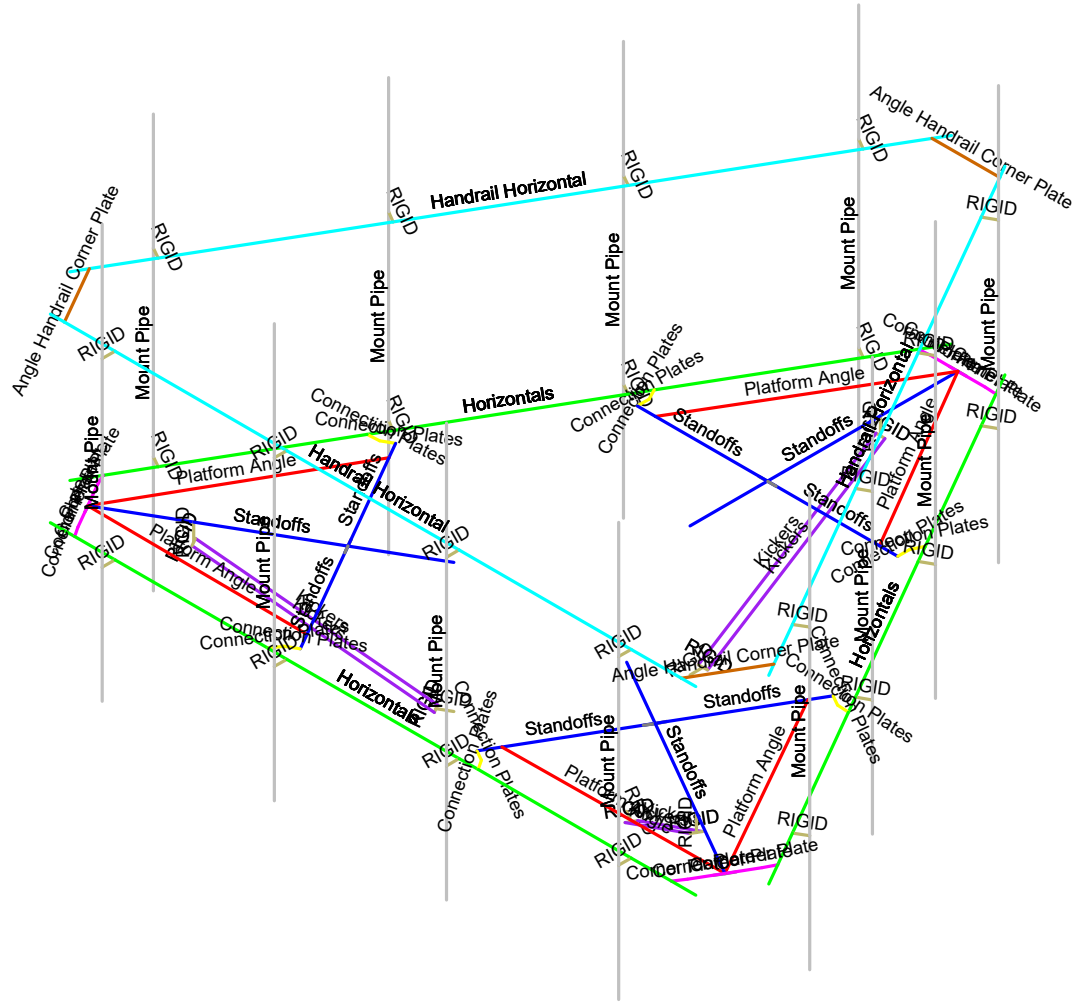
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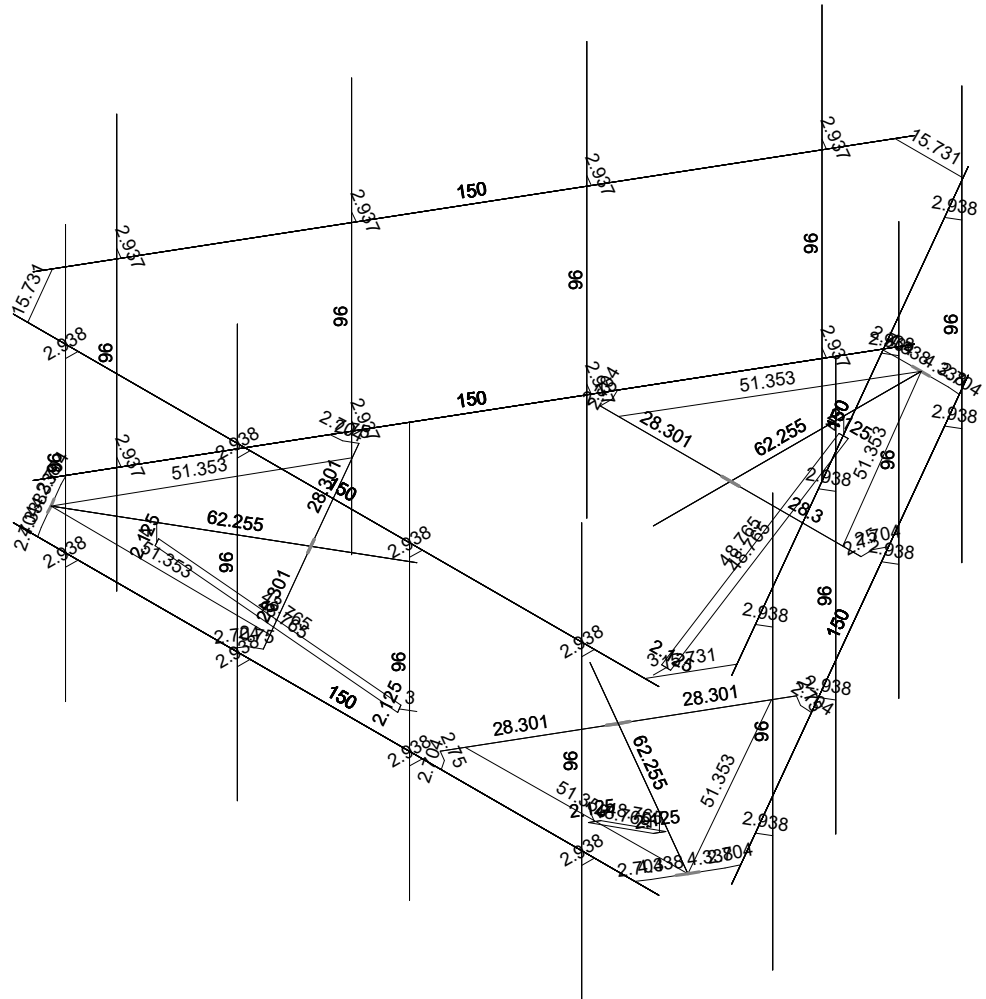


- Section Sets
- Standoffs
 - Horizontals
 - Platform Angle
 - Mount Pipe
 - Corner Plate
 - Handrail Horizontal
 - Angle Handrail Corner Plate
 - Connection Plates
 - Kickers
 - RIGID

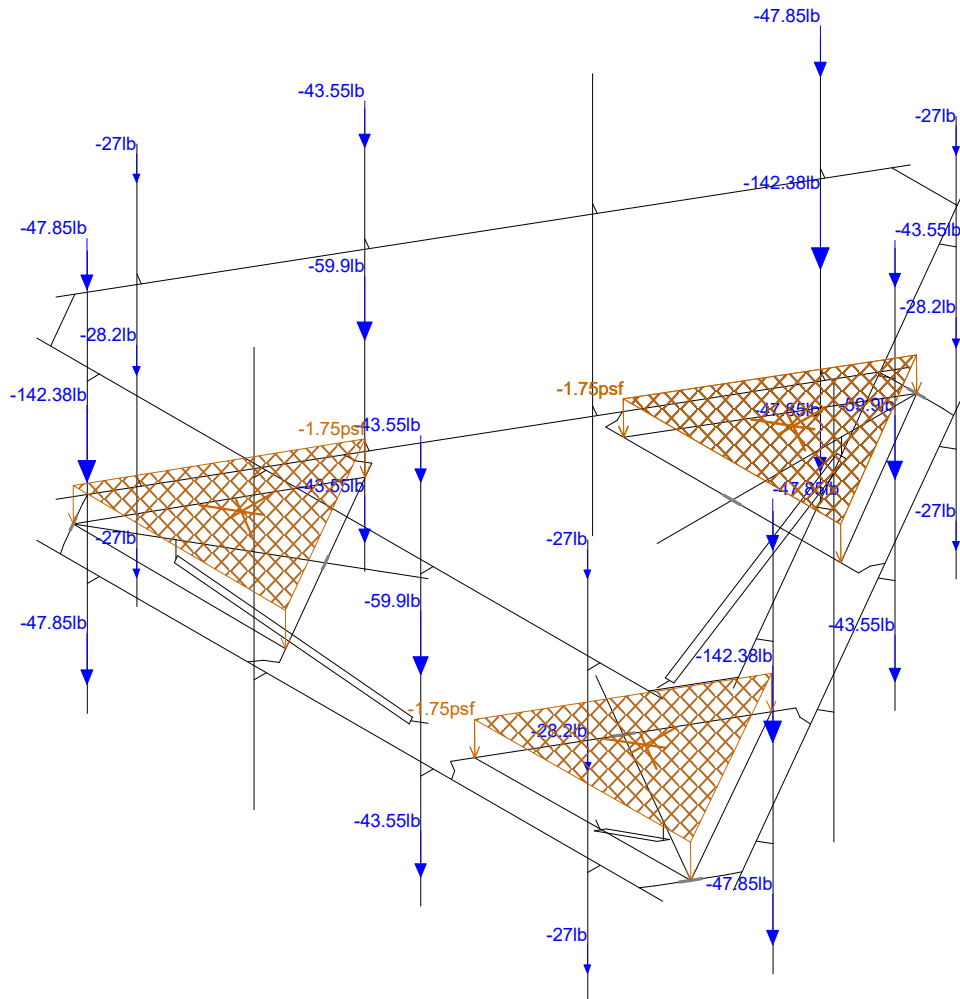


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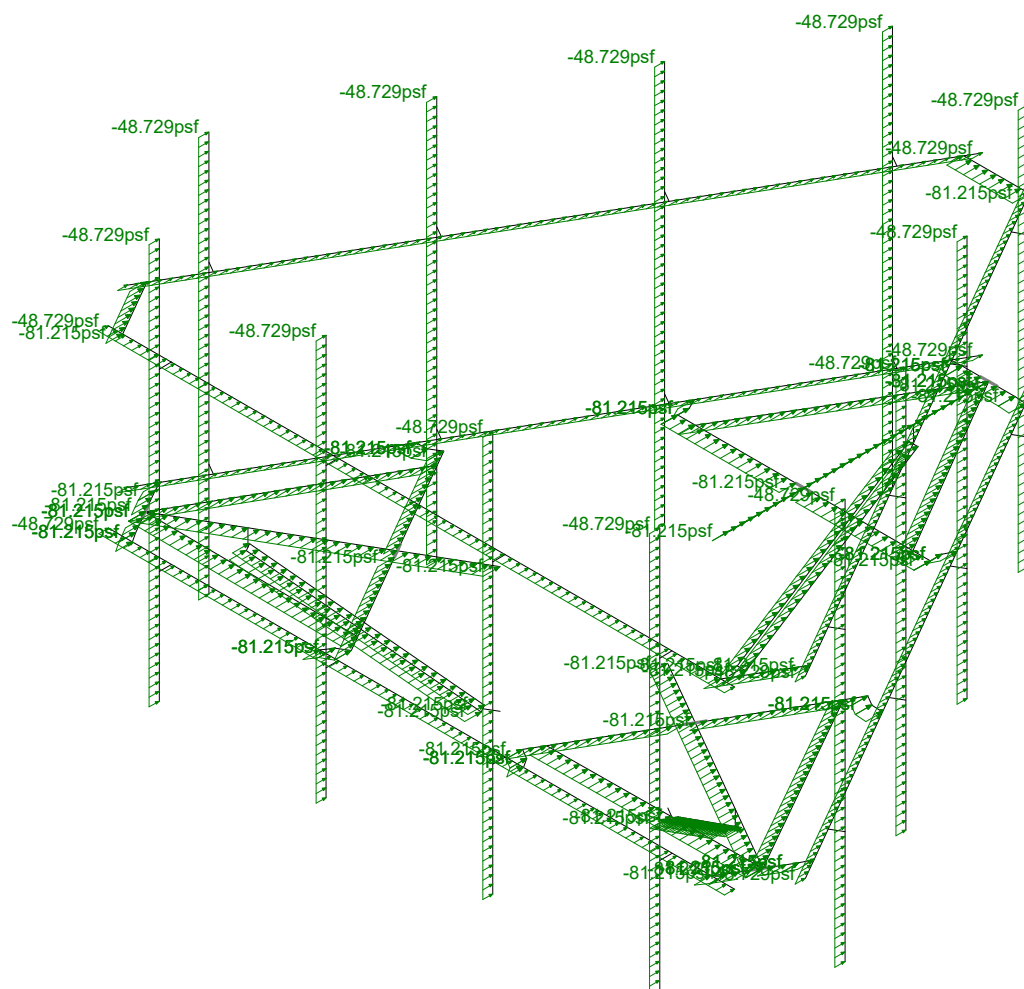
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CTL01227_RISA 3D_loaded.r3d

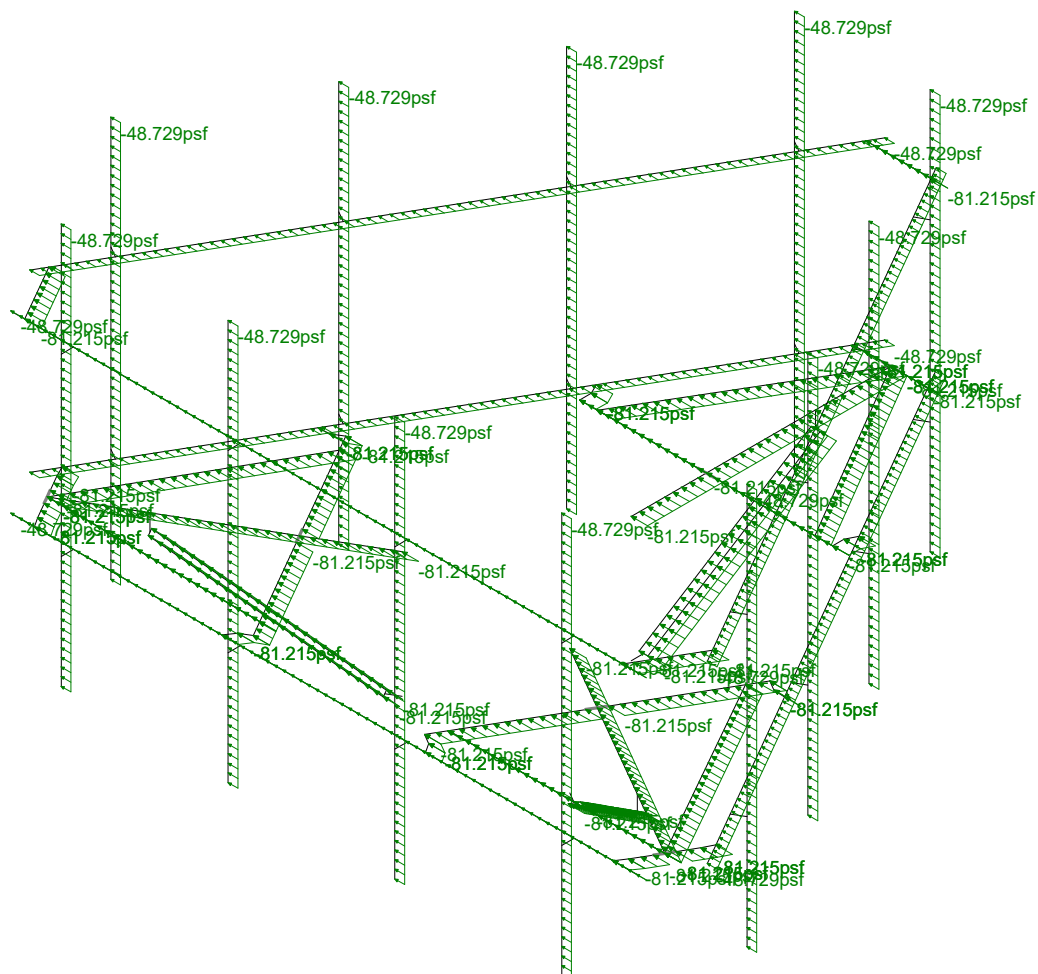


CTL01227_RISA 3D_loaded.r3d



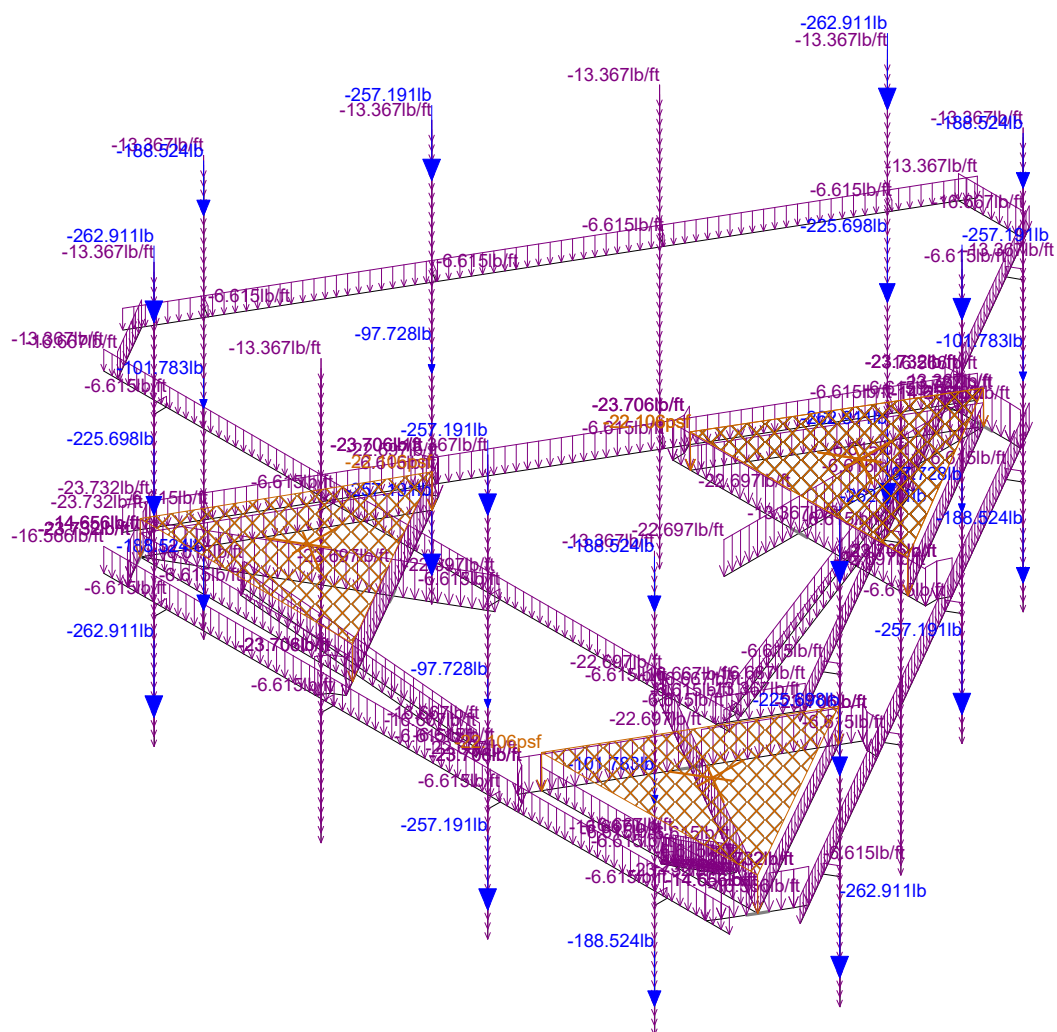
Loads: BLC 14, Distr. Wind Load Z
Envelope Only Solution

Infinigy Engineering, LLP	CTL01227	Proposed Configuration
IP		Oct 28, 2019 at 4:47 PM
1106-A0001-B		CTL01227_RISA 3D_loaded.r3d

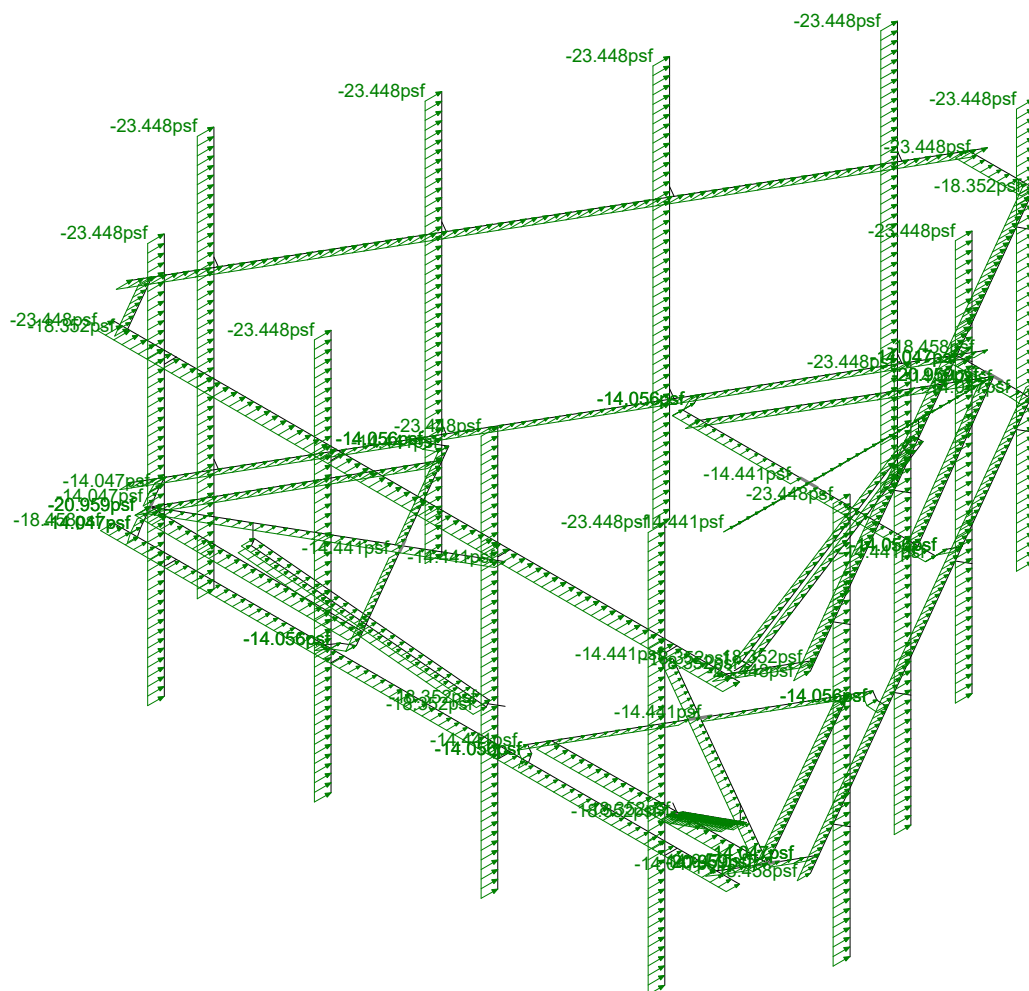


Loads: BLC 15, Distr. Wind Load X
Envelope Only Solution

Infinigy Engineering, LLP	CTL01227	Proposed Configuration
IP		Oct 28, 2019 at 4:47 PM
1106-A0001-B		CTL01227_RISA 3D_loaded.r3d



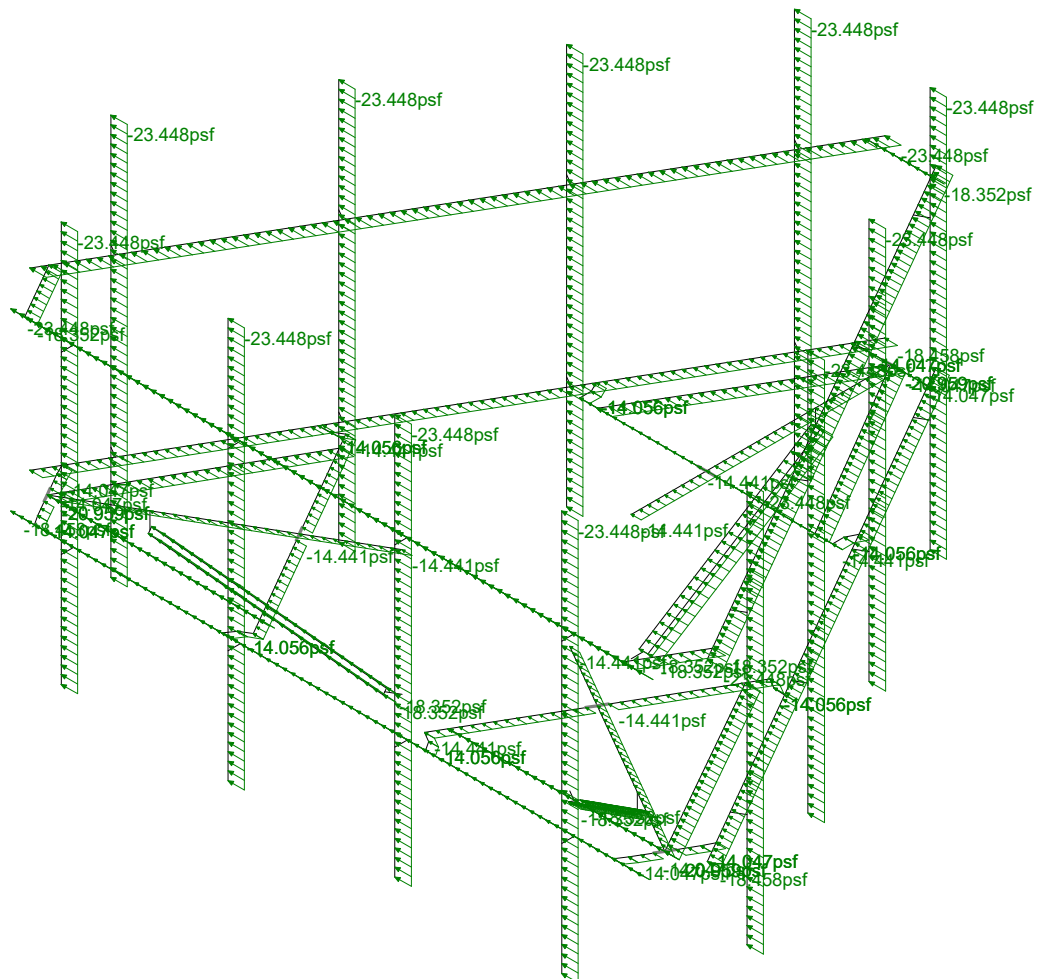
CTL01227_RISA 3D_loaded.r3d



Infinigy Engineering, LLP

1106-A0001-B

CTL01227_RISA 3D_loaded.r3d



Loads: BLC 30, Distr. Ice Wind Load X
Envelope Only Solution

Infinigy Engineering, LLP	CTL01227	Proposed Configuration
IP		Oct 28, 2019 at 4:48 PM
1106-A0001-B		CTL01227_RISA 3D_loaded.r3d

Program Inputs

Project Information		
Client:	Smartlink	
Carrier:	AT&T Mobility	
Engineer:	IP	



Infinigy Wind Load Calculator V1.2.0

Code Standards		
Building Code:	2015 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-10	

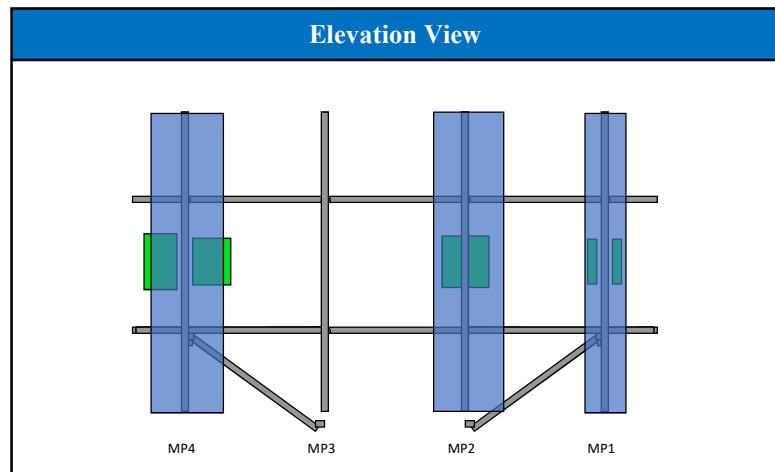
Mount Information		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	150.0	ft
Roof Height AGL:	0.0	ft

Site Information		
Risk Category:	II	
Exposure Category:	B	
Topo Category:	1	
Site Class:	D - Stiff Soil	
Ground Elevation:	596	ft

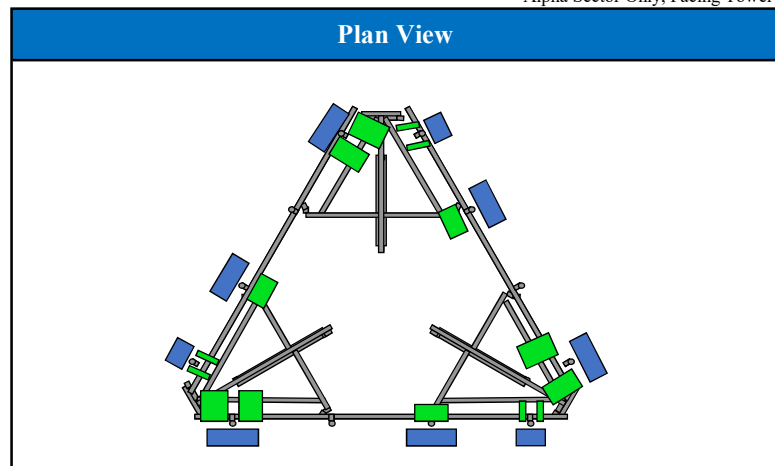
Wind and Ice Data		
Ultimate Wind:	124	mph
Basic Wind:	N/A	mph
Ice Wind:	50	mph
Ice Thickness:	2	in

Topographic Data		
Topo Feature:	N/A	
Crest Height:	N/A	ft
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft

Seismic Data		
S_s	0.18	σ_2
S_1	0.06	
a_p	1.0	
R_p	2.50	
Ω_0	1.0	
S_{DS}	0.19	
S_{D1}	0.10	
F_a	1.60	
F_v	2.40	



*Alpha Sector Only, Facing Tower



*Alpha Sector at Bottom

[illegible]

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N157D	N2			Standoffs	Beam	None	Q235-GB	Typical
2	M3	N159D	N8			Standoffs	Beam	None	Q235-GB	Typical
3	M5	N163	N11			Standoffs	Beam	None	Q235-GB	Typical
4	M85B	N150B	N150C			Standoffs	Beam	None	Q235-GB	Typical
5	M86C	N150C	N158B			Standoffs	Beam	None	Q235-GB	Typical
6	M87C	N157C	N154B			Standoffs	Beam	None	Q235-GB	Typical
7	M88C	N154B	N134A			Standoffs	Beam	None	Q235-GB	Typical
8	M89C	N139A	N158E			Standoffs	Beam	None	Q235-GB	Typical
9	M90C	N158E	N145A			Standoffs	Beam	None	Q235-GB	Typical
10	M22	N44	N65			RIGID	None	None	RIGID	Typical
11	M23	N17	N64			RIGID	None	None	RIGID	Typical
12	M24	N45	N66			RIGID	None	None	RIGID	Typical
13	M28	N62	N76			RIGID	None	None	RIGID	Typical
14	M30	N63	N77			RIGID	None	None	RIGID	Typical
15	M34	N53	N85			RIGID	None	None	RIGID	Typical
16	M36	N54	N86			RIGID	None	None	RIGID	Typical
17	M72	N138	N145			RIGID	None	None	RIGID	Typical
18	M73	N134	N144			RIGID	None	None	RIGID	Typical
19	M74	N139	N146			RIGID	None	None	RIGID	Typical
20	M75	N142	N148			RIGID	None	None	RIGID	Typical
21	M77	N143	N149			RIGID	None	None	RIGID	Typical
22	M78	N140	N151			RIGID	None	None	RIGID	Typical
23	M80	N141	N152			RIGID	None	None	RIGID	Typical
24	M86	N161A	N164			RIGID	None	None	RIGID	Typical
25	M87	N165	N166			RIGID	None	None	RIGID	Typical
26	M89	N168	N171			RIGID	None	None	RIGID	Typical
27	M90	N172	N173			RIGID	None	None	RIGID	Typical
28	M92	N174	N177			RIGID	None	None	RIGID	Typical
29	M93	N178	N179			RIGID	None	None	RIGID	Typical
30	M95	N181	N184			RIGID	None	None	RIGID	Typical
31	M96	N185	N186			RIGID	None	None	RIGID	Typical
32	M98	N187	N190			RIGID	None	None	RIGID	Typical
33	M99	N191	N192			RIGID	None	None	RIGID	Typical
34	M91A	N2	N151D		270	Platform Angle	Beam	None	Q345	Typical
35	M92B	N2	N150D			Platform Angle	Beam	None	Q345	Typical
36	M93B	N8	N155A		270	Platform Angle	Beam	None	Q345	Typical
37	M94A	N8	N154C			Platform Angle	Beam	None	Q345	Typical
38	M95B	N11	N159C		270	Platform Angle	Beam	None	Q345	Typical
39	M96C	N11	N158F			Platform Angle	Beam	None	Q345	Typical
40	MP1	N101	N100			Mount Pipe	Column	None	Q235-GB	Typical
41	MP2	N103	N102			Mount Pipe	Column	None	Q235-GB	Typical
42	MP4	N105	N104			Mount Pipe	Column	None	Q235-GB	Typical
43	MP9	N71A	N74A			Mount Pipe	Column	None	Q235-GB	Typical
44	MP12	N70A	N73A			Mount Pipe	Column	None	Q235-GB	Typical
45	MP5	N80	N83			Mount Pipe	Column	None	Q235-GB	Typical
46	MP8	N79	N82			Mount Pipe	Column	None	Q235-GB	Typical
47	MP3	N162A	N163A			Mount Pipe	Column	None	Q235-GB	Typical
48	MP6	N169	N170			Mount Pipe	Column	None	Q235-GB	Typical
49	MP7	N175	N176			Mount Pipe	Column	None	Q235-GB	Typical
50	MP10	N182	N183			Mount Pipe	Column	None	Q235-GB	Typical
51	MP11	N188	N189			Mount Pipe	Column	None	Q235-GB	Typical
52	M7	N16	N15			Horizontals	Beam	None	Q235-GB	Typical
53	M8	N19	N18			Horizontals	Beam	None	Q235-GB	Typical
54	M9	N22	N21			Horizontals	Beam	None	Q235-GB	Typical
55	M70	N133A	N132B			Handrail Horiz...	Beam	None	Q235-GB	Typical
56	M71	N136	N135			Handrail Horiz...	Beam	None	Q235-GB	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
57	M81	N154	N153			Handrail Horiz...	Beam	None	Q235-GB	Typical
58	M41	N91	N95A			Corner Plate	Beam	None	Q345	Typical
59	M85	N150	N152A			Corner Plate	Beam	None	Q345	Typical
60	M87A	N91	N2			Corner Plate	Beam	None	Q345	Typical
61	M88	N2	N150			Corner Plate	Beam	None	Q345	Typical
62	M85A	N148A	N150A			Corner Plate	Beam	None	Q345	Typical
63	M87B	N151B	N153A			Corner Plate	Beam	None	Q345	Typical
64	M89A	N148A	N8			Corner Plate	Beam	None	Q345	Typical
65	M90A	N8	N151B			Corner Plate	Beam	None	Q345	Typical
66	M91	N156A	N158A			Corner Plate	Beam	None	Q345	Typical
67	M93A	N159A	N161B			Corner Plate	Beam	None	Q345	Typical
68	M95A	N156A	N11			Corner Plate	Beam	None	Q345	Typical
69	M96A	N11	N159A			Corner Plate	Beam	None	Q345	Typical
70	M44	N93	N96			Connection Pl...	Beam	None	Q345	Typical
71	M96B	N93	N158B			Connection Pl...	Beam	None	Q345	Typical
72	M88B	N154A	N156B			Connection Pl...	Beam	None	Q345	Typical
73	M90B	N154A	N157C			Connection Pl...	Beam	None	Q345	Typical
74	M73A	N131	N133			Connection Pl...	Beam	None	Q345	Typical
75	M75A	N131	N134A			Connection Pl...	Beam	None	Q345	Typical
76	M76	N136A	N138A			Connection Pl...	Beam	None	Q345	Typical
77	M78A	N136A	N139A			Connection Pl...	Beam	None	Q345	Typical
78	M79	N142A	N144A			Connection Pl...	Beam	None	Q345	Typical
79	M81A	N142A	N145A			Connection Pl...	Beam	None	Q345	Typical
80	M82A	N147	N149B			Connection Pl...	Beam	None	Q345	Typical
81	M84A	N147	N150B			Connection Pl...	Beam	None	Q345	Typical
82	M82	N157	N159		180	Angle Handrail...	Beam	None	Q345	Typical
83	M83	N157A	N158		180	Angle Handrail...	Beam	None	Q345	Typical
84	M84	N160	N156		90	Angle Handrail...	Beam	None	Q345	Typical
85	M85C	N139B	N140A			RIGID	None	None	RIGID	Typical
86	M86A	N141A	N142B			RIGID	None	None	RIGID	Typical
87	M87D	N144B	N146A			RIGID	None	None	RIGID	Typical
88	M88A	N143A	N145B			RIGID	None	None	RIGID	Typical
89	M89B	N144B	N143A		180	Kickers	Beam	None	Q345	Typical
90	M90D	N146A	N145B		90	Kickers	Beam	None	Q345	Typical
91	M91B	N148B	N149A			RIGID	None	None	RIGID	Typical
92	M92A	N150E	N151A			RIGID	None	None	RIGID	Typical
93	M93C	N153B	N155B			RIGID	None	None	RIGID	Typical
94	M94	N152B	N154D			RIGID	None	None	RIGID	Typical
95	M95C	N153B	N152B		180	Kickers	Beam	None	Q345	Typical
96	M96D	N155B	N154D		90	Kickers	Beam	None	Q345	Typical
97	M97	N157B	N158D			RIGID	None	None	RIGID	Typical
98	M98A	N159B	N160A			RIGID	None	None	RIGID	Typical
99	M99A	N162	N164A			RIGID	None	None	RIGID	Typical
100	M100	N161	N163B			RIGID	None	None	RIGID	Typical
101	M101	N162	N161		180	Kickers	Beam	None	Q345	Typical
102	M102	N164A	N163B		90	Kickers	Beam	None	Q345	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		36	104.3	0
3	Total General		36	104.3	0
4					
5	Hot Rolled Steel				
6	Q235-GB	HSS4X4X4	9	356.6	.341

Material Takeoff (Continued)

	Material	Size	Pieces	Length[in]	Weight[K]
7	Q235-GB	PIPE 2.0	15	1602	.463
8	Q235-GB	PIPE 3.0	3	450	.264
9	Q345	6"x1/2" Plate	12	42.3	.036
10	Q345	L2.5x2.5x4	3	47.2	.016
11	Q345	L2.5x2.5x8	6	292.6	.188
12	Q345	L2x2x3	6	308.1	.063
13	Q345	PL6x.375	12	32.7	.021
14	Total HR Steel		66	3131.4	1.392

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Self Weight	DL		-1			33	4	
2	Wind Load AZI 0	WLZ					66		
3	Wind Load AZI 30	None					66		
4	Wind Load AZI 60	None					66		
5	Wind Load AZI 90	WLX					66		
6	Wind Load AZI 120	None					66		
7	Wind Load AZI 150	None					66		
8	Wind Load AZI 180	None					66		
9	Wind Load AZI 210	None					66		
10	Wind Load AZI 240	None					66		
11	Wind Load AZI 270	None					66		
12	Wind Load AZI 300	None					66		
13	Wind Load AZI 330	None					66		
14	Distr. Wind Load Z	WLZ						102	
15	Distr. Wind Load X	WLX						102	
16	Ice Weight	OL1					33	102	4
17	Ice Wind Load AZI 0	OL2					66		
18	Ice Wind Load AZI 30	None					66		
19	Ice Wind Load AZI 60	None					66		
20	Ice Wind Load AZI 90	OL3					66		
21	Ice Wind Load AZI 120	None					66		
22	Ice Wind Load AZI 150	None					66		
23	Ice Wind Load AZI 180	None					66		
24	Ice Wind Load AZI 210	None					66		
25	Ice Wind Load AZI 240	None					66		
26	Ice Wind Load AZI 270	None					66		
27	Ice Wind Load AZI 300	None					66		
28	Ice Wind Load AZI 330	None					66		
29	Distr. Ice Wind Load Z	OL2						102	
30	Distr. Ice Wind Load X	OL3						102	
31	Seismic Load Z	ELZ			-.095		33		
32	Seismic Load X	ELX	-.095				33		
33	Service Live Loads	LL							
34	Maintenance Load 1	LL				1			
35	Maintenance Load 2	LL				1			
36	Maintenance Load 3	LL				1			
37	Maintenance Load 4	LL				1			
38	Maintenance Load 5	LL				1			
39	Maintenance Load 6	LL				1			
40	Maintenance Load 7	LL				1			
41	Maintenance Load 8	LL				1			
42	Maintenance Load 9	LL				1			
43	Maintenance Load 10	LL				1			
44	Maintenance Load 11	LL				1			

Page 4

Load Combinations (Continued)

[illegible]

	Description	Solve	PDelta	S...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Fa.....												
107	1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	9	.059	14	-0.0.....	-											
108	1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	10	.059	14	-0.0.....	-											
109	1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	11	.059	14		-	-										
110	1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	12	.059	14	.029	-	-										
111	1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	13	.059	14	.051	-	-										
112	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	2	.059	14	.059	-	-										
113	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	3	.059	14	.051	-	-										
114	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	4	.059	14	.029	-	-										
115	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	5	.059	14		-	-										
116	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	6	.059	14	-0.0.....	-	-										
117	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	7	.059	14	-0.0.....	-	-										
118	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	8	.059	14	-0.0.....	-	-										
119	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	9	.059	14	-0.0.....	-	-										
120	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	10	.059	14	-0.0.....	-	-										
121	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	11	.059	14		-	-										
122	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	12	.059	14	.029	-	-										
123	1.2DL + 1.5LM-MP4 + 1S...	Yes	Y		1	1.2	37	1.5	13	.059	14	.051	-	-										
124	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	2	.059	14	.059	-	-										
125	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	3	.059	14	.051	-	-										
126	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	4	.059	14	.029	-	-										
127	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	5	.059	14		-	-										
128	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	6	.059	14	-0.0.....	-	-										
129	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	7	.059	14	-0.0.....	-	-										
130	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	8	.059	14	-0.0.....	-	-										
131	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	9	.059	14	-0.0.....	-	-										
132	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	10	.059	14	-0.0.....	-	-										
133	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	11	.059	14		-	-										
134	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	12	.059	14	.029	-	-										
135	1.2DL + 1.5LM-MP5 + 1S...	Yes	Y		1	1.2	38	1.5	13	.059	14	.051	-	-										
136	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	2	.059	14	.059	-	-										
137	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	3	.059	14	.051	-	-										
138	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	4	.059	14	.029	-	-										
139	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	5	.059	14		-	-										
140	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	6	.059	14	-0.0.....	-	-										
141	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	7	.059	14	-0.0.....	-	-										
142	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	8	.059	14	-0.0.....	-	-										
143	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	9	.059	14	-0.0.....	-	-										
144	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	10	.059	14	-0.0.....	-	-										
145	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	11	.059	14		-	-										
146	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	12	.059	14	.029	-	-										
147	1.2DL + 1.5LM-MP6 + 1S...	Yes	Y		1	1.2	39	1.5	13	.059	14	.051	-	-										
148	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	2	.059	14	.059	-	-										
149	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	3	.059	14	.051	-	-										
150	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	4	.059	14	.029	-	-										
151	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	5	.059	14		-	-										
152	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	6	.059	14	-0.0.....	-	-										
153	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	7	.059	14	-0.0.....	-	-										
154	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	8	.059	14	-0.0.....	-	-										
155	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	9	.059	14	-0.0.....	-	-										
156	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	10	.059	14	-0.0.....	-	-										
157	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	11	.059	14		-	-										
158	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	12	.059	14	.029	-	-										
159	1.2DL + 1.5LM-MP7 + 1S...	Yes	Y		1	1.2	40	1.5	13	.059	14	.051	-	-										
160	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	2	.059	14	.059	-	-										
161	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	3	.059	14	.051	-	-										
162	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	4	.059	14	.029	-	-										
163	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	5	.059	14		-	-										

	Description	Solve	PDelta	S...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Fa.....										
164	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	6	.059	14	-0.										
165	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	7	.059	14	-0.										
166	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	8	.059	14	-0.										
167	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	9	.059	14	-0.	-..									
168	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	10	.059	14	-0.	-..									
169	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	11	.059	14	-..										
170	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	12	.059	14	.029 ...	-..									
171	1.2DL + 1.5LM-MP8 + 1S...	Yes	Y		1	1.2	41	1.5	13	.059	14	.051 ...	-..									
172	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	2	.059	14	.059 ...										
173	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	3	.059	14	.051 ...										
174	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	4	.059	14	.029 ...										
175	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	5	.059	14											
176	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	6	.059	14	-0.										
177	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	7	.059	14	-0.										
178	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	8	.059	14	-0.										
179	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	9	.059	14	-0.	-..									
180	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	10	.059	14	-0.	-..									
181	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	11	.059	14	...-..										
182	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	12	.059	14	.029 ...	-..									
183	1.2DL + 1.5LM-MP9 + 1S...	Yes	Y		1	1.2	42	1.5	13	.059	14	.051 ...	-..									
184	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	2	.059	14	.059 ...										
185	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	3	.059	14	.051 ...										
186	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	4	.059	14	.029 ...										
187	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	5	.059	14											
188	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	6	.059	14	-0.										
189	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	7	.059	14	-0.										
190	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	8	.059	14	-0.										
191	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	9	.059	14	-0.	-..									
192	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	10	.059	14	-0.	-..									
193	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	11	.059	14	-..										
194	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	12	.059	14	.029 ...	-..									
195	1.2DL + 1.5LM-MP10 + 1...	Yes	Y		1	1.2	43	1.5	13	.059	14	.051 ...	-..									
196	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	2	.059	14	.059 ...										
197	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	3	.059	14	.051 ...										
198	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	4	.059	14	.029 ...										
199	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	5	.059	14											
200	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	6	.059	14	-0.										
201	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	7	.059	14	-0.										
202	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	8	.059	14	-0.										
203	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	9	.059	14	-0.	-..									
204	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	10	.059	14	-0.	-..									
205	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	11	.059	14	...-..										
206	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	12	.059	14	.029 ...	-..									
207	1.2DL + 1.5LM-MP11 + 1...	Yes	Y		1	1.2	44	1.5	13	.059	14	.051 ...	-..									
208	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	2	.059	14	.059 ...										
209	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	3	.059	14	.051 ...										
210	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	4	.059	14	.029 ...										
211	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	5	.059	14											
212	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	6	.059	14	-0.										
213	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	7	.059	14	-0.										
214	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	8	.059	14	-0.										
215	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	9	.059	14	-0.	-..									
216	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	10	.059	14	-0.	-..									
217	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	11	.059	14	...-..										
218	1.2DL + 1.5LM-MP12 + 1...	Yes	Y		1	1.2	45	1.5	12	.059	14	.029 ...	-..									

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1 N163	max 1853.857	5	1241.302	33	5840.562	2	1224.988	27	2127.039	23	635.353	181
2	min -1847.105	23	157.847	15	-3799.136	20	138.681	19	-2134.558	5	-598.316	211
3 N157D	max 5339.675	6	1168.36	37	2552.205	25	353.694	14	1376.976	14	85.654	22
4	min -3596.82	24	150.768	19	-3568.729	7	-830.745	166	-1380.836	8	-1131.521	28
5 N159D	max 3478.188	16	1167.514	29	2696.675	15	387.655	14	1318.735	20	956.209	38
6	min -5227.34	10	171.223	22	-3701.353	9	-866.239	94	-1329.571	2	-61.464	19
7 N141A	max 60.29	177	3685.393	27	513.024	20	1008.569	27	329.507	11	224.24	11
8	min -69.624	215	-302.186	20	-5681.72	27	-65.693	20	-324.675	17	-223.589	17
9 N150E	max 479.343	24	3573.992	31	2742.611	31	146.708	24	222.89	12	11.204	24
10	min -4775.186	31	-323.351	24	-200.267	24	-503.137	32	-217.063	18	-835.411	31
11 N159B	max 4769.25	35	3573.102	35	2749.283	35	129.995	16	181.703	10	836.256	35
12	min -443.702	16	-310.654	16	-209.235	16	-501.709	35	-177.214	16	-22.734	16
13 Totals:	max 7298.657	17	13788.743	33	7404.276	14						
14	min -7298.659	11	2456.309	51	-7404.278	8						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
1	MP2	PIPE 2.0	.542	69	2	.069	69		11	14916.0...	32130	1871.625	1871.625	4...	H1-1b
2	MP6	PIPE 2.0	.501	69	5	.074	69		2	14916.0...	32130	1871.625	1871.625	1...	H1-1b
3	MP10	PIPE 2.0	.501	69	12	.083	69		6	14916.0...	32130	1871.625	1871.625	1...	H1-1b
4	MP7	PIPE 2.0	.462	69	4	.087	69		11	14916.0...	32130	1871.625	1871.625	3...	H1-1b
5	MP3	PIPE 2.0	.454	69	2	.077	69		8	14916.0...	32130	1871.625	1871.625	4...	H1-1b
6	MP11	PIPE 2.0	.453	69	12	.077	69		2	14916.0...	32130	1871.625	1871.625	3...	H1-1b
7	MP12	PIPE 2.0	.416	69	12	.132	69		5	14916.0...	32130	1871.625	1871.625	1...	H1-1b
8	MP5	PIPE 2.0	.406	69	4	.149	69		11	14916.0...	32130	1871.625	1871.625	2...	H1-1b
9	MP8	PIPE 2.0	.404	69	9	.131	27		11	14916.0...	32130	1871.625	1871.625	1...	H1-1b
10	MP9	PIPE 2.0	.404	69	7	.140	27		5	14916.0...	32130	1871.625	1871.625	2...	H1-1b
11	M70	PIPE 2.0	.377	14.062	11	.242	4.687		11	25978.8...	32130	1871.625	1871.625	1	H1-1b
12	M81	PIPE 2.0	.358	15.625	4	.225	135....		11	25978.8...	32130	1871.625	1871.625	1	H1-1b
13	MP4	PIPE 2.0	.354	69	4	.160	27		8	14916.0...	32130	1871.625	1871.625	2...	H1-1b
14	M71	PIPE 2.0	.340	14.062	2	.243	4.687		2	25978.8...	32130	1871.625	1871.625	1	H1-1b
15	MP1	PIPE 2.0	.334	69	12	.172	27		8	14916.0...	32130	1871.625	1871.625	2...	H1-1b
16	M82	L2.5x2.5x4	.298	15.731	8	.152	15.7...	y	8	36453.4...	38556	1113.554	2537.388	2...	H2-1
17	M83	L2.5x2.5x4	.297	0	2	.157	15.7...	y	2	36453.4...	38556	1113.554	2537.388	2...	H2-1
18	M73A	PL6x.375	.283	2.704	5	.143	0	y	12	70544.2	72900	569.533	9112.5	1...	H1-1b
19	M89A	6"x1/2" Plate	.253	4.338	10	.163	4.338	y	33	92686.4...	97200	1012.5	12150	1...	H1-1b
20	M5	HSS4X4X4	.245	44.746	27	.124	0	z	11	101755...	106155	12311.25	12311.25	1	H1-1b
21	M88	6"x1/2" Plate	.242	0	6	.174	0	y	33	92686.4...	97200	1012.5	12150	1...	H1-1b
22	M3	HSS4X4X4	.242	44.746	35	.106	44.7...	y	8	101755...	106155	12311.25	12311.25	1	H1-1b
23	M1	HSS4X4X4	.241	44.746	31	.112	44.7...	y	8	101755...	106155	12311.25	12311.25	1	H1-1b
24	M84	L2.5x2.5x4	.241	0	12	.181	0	z	11	36453.5...	38556	1113.554	2537.388	2...	H2-1
25	M82A	PL6x.375	.241	2.704	12	.138	0	y	9	70544.2	72900	569.533	9112.5	1...	H1-1b
26	M94A	L2x2x3	.238	51.353	9	.014	0	y	37	9346.209	23392.8	557.717	1239.29	2...	H2-1
27	M95A	6"x1/2" Plate	.238	4.338	2	.164	4.338	y	37	92685.8...	97200	1012.5	12150	1...	H1-1b
28	M87A	6"x1/2" Plate	.234	4.338	6	.162	4.338	y	29	92686.4...	97200	1012.5	12150	1...	H1-1b
29	M96C	L2x2x3	.230	0	30	.017	0	y	29	9346.27	23392.8	557.717	1239.29	3...	H2-1
30	M91A	L2x2x3	.228	51.353	19	.012	0	z	29	9346.076	23392.8	557.717	1239.29	2...	H2-1
31	M79	PL6x.375	.227	2.704	8	.158	0	y	4	70544.2	72900	569.533	9112.5	1...	H1-1b
32	M96A	6"x1/2" Plate	.223	0	2	.176	0	y	29	92687.0...	97200	1012.5	12150	1...	H1-1b
33	M92B	L2x2x3	.222	51.353	5	.014	0	y	33	9346.21	23392.8	557.717	1239.29	2...	H2-1
34	M90A	6"x1/2" Plate	.222	0	10	.174	0	y	37	92686.4...	97200	1012.5	12150	1...	H1-1b
35	M44	PL6x.375	.215	2.704	13	.172	0	y	8	70544.2	72900	569.533	9112.5	1...	H1-1b
36	M93B	L2x2x3	.214	51.353	23	.012	0	z	33	9346.076	23392.8	557.717	1239.29	2...	H2-1
37	M78A	PL6x.375	.213	2.75	11	.370	2.75	y	5	70464.9...	72900	569.533	9112.5	1...	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
38	M95B	L2x2x3	.205	0	36	.015	0	z	37	9346.157	23392.8	557.717	1239.29	3.3	H2-1
39	M89C	HSS4X4X4	.205	28.3	38	.082	4.127	z	12	104291...	106155	12311.25	12311.25	1...	H1-1b
40	M85B	HSS4X4X4	.204	28.301	30	.081	4.127	z	5	104291...	106155	12311.25	12311.25	1...	H1-1b
41	M85A	6"x1/2" Plate	.202	2.704	10	.105	0	y	32	95420.3...	97200	1012.5	12150	1...	H1-1b
42	M87C	HSS4X4X4	.202	28.301	33	.091	4.127	z	8	104291...	106155	12311.25	12311.25	1...	H1-1b
43	M76	PL6x.375	.194	2.704	10	.164	0	y	5	70544.2	72900	569.533	9112.5	1...	H1-1b
44	M85	6"x1/2" Plate	.194	2.704	6	.117	0	y	34	95420.3...	97200	1012.5	12150	1...	H1-1b
45	M91	6"x1/2" Plate	.193	2.704	2	.106	0	y	36	95420.3...	97200	1012.5	12150	1...	H1-1b
46	M41	6"x1/2" Plate	.193	2.704	6	.104	0	y	28	95420.3...	97200	1012.5	12150	1...	H1-1b
47	M81A	PL6x.375	.185	2.75	6	.411	2.75	y	11	70465.57	72900	569.533	9112.5	1...	H1-1b
48	M87B	6"x1/2" Plate	.184	2.704	10	.117	0	y	38	95420.3...	97200	1012.5	12150	1...	H1-1b
49	M90C	HSS4X4X4	.183	0	28	.082	24.1...	z	4	104291...	106155	12311.25	12311.25	1...	H1-1b
50	M93A	6"x1/2" Plate	.183	2.704	2	.118	0	y	30	95420.3...	97200	1012.5	12150	1...	H1-1b
51	M88C	HSS4X4X4	.182	0	36	.084	24.1...	z	11	104291...	106155	12311.25	12311.25	1...	H1-1b
52	M86C	HSS4X4X4	.180	0	32	.092	24.1...	z	8	104291...	106155	12311.25	12311.25	1...	H1-1b
53	M88B	PL6x.375	.176	2.704	3	.156	0	y	8	70544.2	72900	569.533	9112.5	1...	H1-1b
54	M75A	PL6x.375	.154	2.75	4	.373	2.75	y	12	70464.9...	72900	569.533	9112.5	1...	H1-1b
55	M90B	PL6x.375	.150	2.75	8	.392	2.75	y	2	70464.9...	72900	569.533	9112.5	1...	H1-1b
56	M89B	L2.5x2.5x8	.147	48.765	5	.011	48.7...	z	5	42624.5...	73224	1864.761	4392.178	1...	H2-1
57	M84A	PL6x.375	.145	2.75	13	.341	2.75	y	10	70464.9...	72900	569.533	9112.5	1...	H1-1b
58	M90D	L2.5x2.5x8	.141	48.765	11	.011	48.7...	y	5	42624.5...	73224	1864.761	4392.178	1...	H2-1
59	M95C	L2.5x2.5x8	.132	48.765	8	.012	48.7...	z	9	42624.5...	73224	1864.761	4392.178	2...	H2-1
60	M102	L2.5x2.5x8	.129	48.765	8	.013	48.7...	y	13	42624.5...	73224	1864.761	4392.178	2...	H2-1
61	M101	L2.5x2.5x8	.122	48.765	13	.013	48.7...	z	13	42624.5...	73224	1864.761	4392.178	2...	H2-1
62	M96D	L2.5x2.5x8	.116	48.765	3	.012	48.7...	y	9	42624.5...	73224	1864.761	4392.178	2...	H2-1
63	M96B	PL6x.375	.106	0	2	.442	2.75	y	8	70464.9...	72900	569.533	9112.5	1...	H1-1b
64	M7	PIPE 3.0	.101	56.25	12	.154	6.25		29	59302.8...	65205	5748.75	5748.75	1	H1-1b
65	M9	PIPE 3.0	.100	56.25	9	.151	6.25		37	59302.8...	65205	5748.75	5748.75	1	H1-1b
66	M8	PIPE 3.0	.098	15.625	8	.152	6.25		32	59302.8...	65205	5748.75	5748.75	1	H1-1b

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoffs	HSS4X4X4	Beam	None	Q235-GB	Typical	3.37	7.8	7.8	12.8
2	Horizontals	PIPE 3.0	Beam	None	Q235-GB	Typical	2.07	2.85	2.85	5.69
3	Platform Angle	L2x2x3	Beam	None	Q345	Typical	.722	.271	.271	.009
4	Mount Pipe	PIPE 2.0	Column	None	Q235-GB	Typical	1.02	.627	.627	1.25
5	Corner Plate	6"x1/2" Plate	Beam	None	Q345	Typical	3	.063	9	.237
6	Handrail Horizo...	PIPE 2.0	Beam	None	Q235-GB	Typical	1.02	.627	.627	1.25
7	Angle Handrail ...	L2.5x2.5x4	Beam	None	Q345	Typical	1.19	.692	.692	.026
8	Platform Braces	HSS4X4X4	Beam	None	Q235-GB	Typical	3.37	7.8	7.8	12.8
9	Connection Plat...	PL6x.375	Beam	None	Q345	Typical	2.25	.026	6.75	.101
10	Kickers	L2.5x2.5x8	Beam	None	Q345	Typical	2.26	1.22	1.22	.188

Joint Boundary Conditions

Joint 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	N163	Reaction	Reaction	Reaction	Reaction	Reaction
2	N157D	Reaction	Reaction	Reaction	Reaction	Reaction
3	N159D	Reaction	Reaction	Reaction	Reaction	Reaction
4	N141A	Reaction	Reaction	Reaction	Reaction	Reaction
5	N142B					
6	N144B					
7	N146A					
8	N150E	Reaction	Reaction	Reaction	Reaction	Reaction
9	N151A					

Joint Boundary Conditions (Continued)

	Joint 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]
10	N153B						
11	N155B						
12	N159B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
13	N160A						
14	N162						
15	N164A						

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat.	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M3						Yes				None
3	M5						Yes				None
4	M85B				2		Yes	Default			None
5	M86C			2			Yes	Default			None
6	M87C				2		Yes	Default			None
7	M88C			2			Yes	Default			None
8	M89C				2		Yes	Default			None
9	M90C			2			Yes	Default			None
10	M22						Yes	** NA **			None
11	M23						Yes	** NA **			None
12	M24						Yes	** NA **			None
13	M28						Yes	** NA **			None
14	M30						Yes	** NA **			None
15	M34						Yes	** NA **			None
16	M36						Yes	** NA **			None
17	M72						Yes	** NA **			None
18	M73						Yes	** NA **			None
19	M74						Yes	** NA **			None
20	M75						Yes	** NA **			None
21	M77						Yes	** NA **			None
22	M78						Yes	** NA **			None
23	M80						Yes	** NA **			None
24	M86						Yes	** NA **			None
25	M87						Yes	** NA **			None
26	M89						Yes	** NA **			None
27	M90						Yes	** NA **			None
28	M92						Yes	** NA **			None
29	M93						Yes	** NA **			None
30	M95						Yes	** NA **			None
31	M96						Yes	** NA **			None
32	M98						Yes	** NA **			None
33	M99						Yes	** NA **			None
34	M91A						Yes				None
35	M92B						Yes				None
36	M93B						Yes				None
37	M94A						Yes				None
38	M95B						Yes				None
39	M96C						Yes				None
40	MP1						Yes	** NA **			None
41	MP2						Yes	** NA **			None
42	MP4						Yes	** NA **			None
43	MP9						Yes	** NA **			None
44	MP12						Yes	** NA **			None
45	MP5						Yes	** NA **			None
46	MP8						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
47	MP3						Yes	** NA **			None
48	MP6						Yes	** NA **			None
49	MP7						Yes	** NA **			None
50	MP10						Yes	** NA **			None
51	MP11						Yes	** NA **			None
52	M7						Yes				None
53	M8						Yes				None
54	M9						Yes				None
55	M70						Yes				None
56	M71						Yes				None
57	M81						Yes				None
58	M41						Yes	Default			None
59	M85						Yes	Default			None
60	M87A				2		Yes				None
61	M88			2			Yes	Default			None
62	M85A						Yes	Default			None
63	M87B						Yes	Default			None
64	M89A				2		Yes				None
65	M90A			2			Yes	Default			None
66	M91						Yes	Default			None
67	M93A						Yes	Default			None
68	M95A				2		Yes				None
69	M96A			2			Yes	Default			None
70	M44						Yes	Default			None
71	M96B						Yes				None
72	M88B						Yes	Default			None
73	M90B						Yes				None
74	M73A						Yes	Default			None
75	M75A						Yes				None
76	M76						Yes	Default			None
77	M78A						Yes				None
78	M79						Yes	Default			None
79	M81A						Yes				None
80	M82A						Yes	Default			None
81	M84A						Yes	Default			None
82	M82						Yes				None
83	M83						Yes				None
84	M84						Yes				None
85	M85C						Yes	** NA **			None
86	M86A						Yes	** NA **			None
87	M87D						Yes	** NA **			None
88	M88A						Yes	** NA **			None
89	M89B						Yes				None
90	M90D						Yes				None
91	M91B						Yes	** NA **			None
92	M92A						Yes	** NA **			None
93	M93C						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	M95C						Yes				None
96	M96D						Yes				None
97	M97						Yes	** NA **			None
98	M98A						Yes	** NA **			None
99	M99A						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	M101						Yes				None
102	M102						Yes				None

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/...	Density[k/ft^3]	Yield[psi]	Ry	Fu[psi]	Rt
1	A992	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36000	1.5	58000	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42000	1.4	58000	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46000	1.4	58000	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35000	1.6	60000	1.2
7	A1085	29000	11154	.3	.65	.49	50000	1.4	65000	1.3
8	Q235-GB	29000	11154	.3	.65	.49	35000	1.5	58000	1.2
9	Q345	29000	11154	.3	.65	.49	36000	1.1	58000	1.1

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N45	L	Y	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N17	L	Y	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N44	L	Y	-500

Joint Loads and Enforced Displacements (BLC 37 : Maintenance Load 4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N63	L	Y	-500

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Load 5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N62	L	Y	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Load 6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N54	L	Y	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Load 7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N53	L	Y	-500

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N161A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 42 : Maintenance Load 9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N168	L	Y	-500

Joint Loads and Enforced Displacements (BLC 43 : Maintenance Load 10)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N174	L	Y	-500

Joint Loads and Enforced Displacements (BLC 44 : Maintenance Load 11)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...]
1	N181	L	Y	-500

Joint Loads and Enforced Displacements (BLC 45 : Maintenance Load 12)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...]
1	N187	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[(lb,lb-ft)]	Location[in, %]
1	MP1	Y	-27	8
2	MP1	Y	-27	90
3	MP2	Y	-43.55	8
4	MP2	Y	-43.55	90
5	MP4	Y	-47.85	8
6	MP4	Y	-47.85	90
7	MP2	Y	-59.9	48
8	MP4	Y	-70.51	48
9	MP4	Y	-71.87	48
10	MP1	Y	-14.1	48
11	MP1	Y	-14.1	48
12	MP5	Y	-27	8
13	MP5	Y	-27	90
14	MP6	Y	-43.55	8
15	MP6	Y	-43.55	90
16	MP8	Y	-47.85	8
17	MP8	Y	-47.85	90
18	MP6	Y	-59.9	48
19	MP8	Y	-70.51	48
20	MP8	Y	-71.87	48
21	MP5	Y	-14.1	48
22	MP5	Y	-14.1	48
23	MP9	Y	-27	8
24	MP9	Y	-27	90
25	MP10	Y	-43.55	8
26	MP10	Y	-43.55	90
27	MP12	Y	-47.85	8
28	MP12	Y	-47.85	90
29	MP10	Y	-59.9	48
30	MP12	Y	-70.51	48
31	MP12	Y	-71.87	48
32	MP9	Y	-14.1	48
33	MP9	Y	-14.1	48

Member Point Loads (BLC 2 : Wind Load AZI 0)

	Member Label	Direction	Magnitude[(lb,lb-ft)]	Location[in, %]
1	MP1	X	0	8
2	MP1	Z	-205.27	8
3	MP1	X	0	90
4	MP1	Z	-205.27	90
5	MP2	X	0	8
6	MP2	Z	-317.28	8
7	MP2	X	0	90
8	MP2	Z	-317.28	90
9	MP4	X	0	8
10	MP4	Z	-326.57	8

Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP4	X	0	90
12	MP4	Z	-326.57	90
13	MP2	X	0	48
14	MP2	Z	-67.34	48
15	MP4	X	0	48
16	MP4	Z	-76.2	48
17	MP4	X	0	48
18	MP4	Z	-63.65	48
19	MP1	X	0	48
20	MP1	Z	-40.35	48
21	MP1	X	0	48
22	MP1	Z	-40.35	48
23	MP5	X	0	8
24	MP5	Z	-161.57	8
25	MP5	X	0	90
26	MP5	Z	-161.57	90
27	MP6	X	0	8
28	MP6	Z	-190.64	8
29	MP6	X	0	90
30	MP6	Z	-190.64	90
31	MP8	X	0	8
32	MP8	Z	-192.96	8
33	MP8	X	0	90
34	MP8	Z	-192.96	90
35	MP6	X	0	48
36	MP6	Z	-45.85	48
37	MP8	X	0	48
38	MP8	Z	-57.67	48
39	MP8	X	0	48
40	MP8	Z	-53.16	48
41	MP5	X	0	48
42	MP5	Z	-19.6	48
43	MP5	X	0	48
44	MP5	Z	-19.6	48
45	MP9	X	0	8
46	MP9	Z	-161.57	8
47	MP9	X	0	90
48	MP9	Z	-161.57	90
49	MP10	X	0	8
50	MP10	Z	-190.64	8
51	MP10	X	0	90
52	MP10	Z	-190.64	90
53	MP12	X	0	8
54	MP12	Z	-192.96	8
55	MP12	X	0	90
56	MP12	Z	-192.96	90
57	MP10	X	0	48
58	MP10	Z	-45.85	48
59	MP12	X	0	48
60	MP12	Z	-57.67	48
61	MP12	X	0	48
62	MP12	Z	-53.16	48
63	MP9	X	0	48
64	MP9	Z	-19.6	48
65	MP9	X	0	48
66	MP9	Z	-19.6	48

Member Point Loads (BLC 3 : Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-95.35	8
2	MP1	Z	-165.15	8
3	MP1	X	-95.35	90
4	MP1	Z	-165.15	90
5	MP2	X	-137.53	8
6	MP2	Z	-238.21	8
7	MP2	X	-137.53	90
8	MP2	Z	-238.21	90
9	MP4	X	-141.01	8
10	MP4	Z	-244.25	8
11	MP4	X	-141.01	90
12	MP4	Z	-244.25	90
13	MP2	X	-30.09	48
14	MP2	Z	-52.11	48
15	MP4	X	-35.01	48
16	MP4	Z	-60.64	48
17	MP4	X	-30.08	48
18	MP4	Z	-52.09	48
19	MP1	X	-16.72	48
20	MP1	Z	-28.95	48
21	MP1	X	-16.72	48
22	MP1	Z	-28.95	48
23	MP5	X	-95.35	8
24	MP5	Z	-165.15	8
25	MP5	X	-95.35	90
26	MP5	Z	-165.15	90
27	MP6	X	-137.53	8
28	MP6	Z	-238.21	8
29	MP6	X	-137.53	90
30	MP6	Z	-238.21	90
31	MP8	X	-141.01	8
32	MP8	Z	-244.25	8
33	MP8	X	-141.01	90
34	MP8	Z	-244.25	90
35	MP6	X	-30.09	48
36	MP6	Z	-52.11	48
37	MP8	X	-35.01	48
38	MP8	Z	-60.64	48
39	MP8	X	-30.08	48
40	MP8	Z	-52.09	48
41	MP5	X	-16.72	48
42	MP5	Z	-28.95	48
43	MP5	X	-16.72	48
44	MP5	Z	-28.95	48
45	MP9	X	-73.5	8
46	MP9	Z	-127.31	8
47	MP9	X	-73.5	90
48	MP9	Z	-127.31	90
49	MP10	X	-74.21	8
50	MP10	Z	-128.54	8
51	MP10	X	-74.21	90
52	MP10	Z	-128.54	90
53	MP12	X	-74.21	8
54	MP12	Z	-128.54	8
55	MP12	X	-74.21	90
56	MP12	Z	-128.54	90
57	MP10	X	-19.35	48

Member Point Loads (BLC 3 : Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP10	Z	-33.51	48
59	MP12	X	-25.75	48
60	MP12	Z	-44.59	48
61	MP12	X	-24.83	48
62	MP12	Z	-43.01	48
63	MP9	X	-6.34	48
64	MP9	Z	-10.99	48
65	MP9	X	-6.34	48
66	MP9	Z	-10.99	48

Member Point Loads (BLC 4 : Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-139.92	8
2	MP1	Z	-80.78	8
3	MP1	X	-139.92	90
4	MP1	Z	-80.78	90
5	MP2	X	-165.1	8
6	MP2	Z	-95.32	8
7	MP2	X	-165.1	90
8	MP2	Z	-95.32	90
9	MP4	X	-167.11	8
10	MP4	Z	-96.48	8
11	MP4	X	-167.11	90
12	MP4	Z	-96.48	90
13	MP2	X	-39.71	48
14	MP2	Z	-22.93	48
15	MP4	X	-49.94	48
16	MP4	Z	-28.83	48
17	MP4	X	-46.04	48
18	MP4	Z	-26.58	48
19	MP1	X	-16.98	48
20	MP1	Z	-9.8	48
21	MP1	X	-16.98	48
22	MP1	Z	-9.8	48
23	MP5	X	-177.77	8
24	MP5	Z	-102.64	8
25	MP5	X	-177.77	90
26	MP5	Z	-102.64	90
27	MP6	X	-274.77	8
28	MP6	Z	-158.64	8
29	MP6	X	-274.77	90
30	MP6	Z	-158.64	90
31	MP8	X	-282.81	8
32	MP8	Z	-163.28	8
33	MP8	X	-282.81	90
34	MP8	Z	-163.28	90
35	MP6	X	-58.32	48
36	MP6	Z	-33.67	48
37	MP8	X	-65.99	48
38	MP8	Z	-38.1	48
39	MP8	X	-55.12	48
40	MP8	Z	-31.82	48
41	MP5	X	-34.94	48
42	MP5	Z	-20.17	48
43	MP5	X	-34.94	48
44	MP5	Z	-20.17	48

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
45	MP9	X	-139.92	8
46	MP9	Z	-80.78	8
47	MP9	X	-139.92	90
48	MP9	Z	-80.78	90
49	MP10	X	-165.1	8
50	MP10	Z	-95.32	8
51	MP10	X	-165.1	90
52	MP10	Z	-95.32	90
53	MP12	X	-167.11	8
54	MP12	Z	-96.48	8
55	MP12	X	-167.11	90
56	MP12	Z	-96.48	90
57	MP10	X	-39.71	48
58	MP10	Z	-22.93	48
59	MP12	X	-49.94	48
60	MP12	Z	-28.83	48
61	MP12	X	-46.04	48
62	MP12	Z	-26.58	48
63	MP9	X	-16.98	48
64	MP9	Z	-9.8	48
65	MP9	X	-16.98	48
66	MP9	Z	-9.8	48

Member Point Loads (BLC 5 : Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-147	8
2	MP1	Z	0	8
3	MP1	X	-147	90
4	MP1	Z	0	90
5	MP2	X	-148.42	8
6	MP2	Z	0	8
7	MP2	X	-148.42	90
8	MP2	Z	0	90
9	MP4	X	-148.42	8
10	MP4	Z	0	8
11	MP4	X	-148.42	90
12	MP4	Z	0	90
13	MP2	X	-38.69	48
14	MP2	Z	0	48
15	MP4	X	-51.49	48
16	MP4	Z	0	48
17	MP4	X	-49.66	48
18	MP4	Z	0	48
19	MP1	X	-12.69	48
20	MP1	Z	0	48
21	MP1	X	-12.69	48
22	MP1	Z	0	48
23	MP5	X	-190.7	8
24	MP5	Z	0	8
25	MP5	X	-190.7	90
26	MP5	Z	0	90
27	MP6	X	-275.07	8
28	MP6	Z	0	8
29	MP6	X	-275.07	90
30	MP6	Z	0	90
31	MP8	X	-282.03	8

Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
32	MP8	Z	0	8
33	MP8	X	-282.03	90
34	MP8	Z	0	90
35	MP6	X	-60.18	48
36	MP6	Z	0	48
37	MP8	X	-70.02	48
38	MP8	Z	0	48
39	MP8	X	-60.15	48
40	MP8	Z	0	48
41	MP5	X	-33.43	48
42	MP5	Z	0	48
43	MP5	X	-33.43	48
44	MP5	Z	0	48
45	MP9	X	-190.7	8
46	MP9	Z	0	8
47	MP9	X	-190.7	90
48	MP9	Z	0	90
49	MP10	X	-275.07	8
50	MP10	Z	0	8
51	MP10	X	-275.07	90
52	MP10	Z	0	90
53	MP12	X	-282.03	8
54	MP12	Z	0	8
55	MP12	X	-282.03	90
56	MP12	Z	0	90
57	MP10	X	-60.18	48
58	MP10	Z	0	48
59	MP12	X	-70.02	48
60	MP12	Z	0	48
61	MP12	X	-60.15	48
62	MP12	Z	0	48
63	MP9	X	-33.43	48
64	MP9	Z	0	48
65	MP9	X	-33.43	48
66	MP9	Z	0	48

Member Point Loads (BLC 6 : Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-139.92	8
2	MP1	Z	80.78	8
3	MP1	X	-139.92	90
4	MP1	Z	80.78	90
5	MP2	X	-165.1	8
6	MP2	Z	95.32	8
7	MP2	X	-165.1	90
8	MP2	Z	95.32	90
9	MP4	X	-167.11	8
10	MP4	Z	96.48	8
11	MP4	X	-167.11	90
12	MP4	Z	96.48	90
13	MP2	X	-39.71	48
14	MP2	Z	22.93	48
15	MP4	X	-49.94	48
16	MP4	Z	28.83	48
17	MP4	X	-46.04	48
18	MP4	Z	26.58	48

Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
19	MP1	X	-16.98	48
20	MP1	Z	9.8	48
21	MP1	X	-16.98	48
22	MP1	Z	9.8	48
23	MP5	X	-139.92	8
24	MP5	Z	80.78	8
25	MP5	X	-139.92	90
26	MP5	Z	80.78	90
27	MP6	X	-165.1	8
28	MP6	Z	95.32	8
29	MP6	X	-165.1	90
30	MP6	Z	95.32	90
31	MP8	X	-167.11	8
32	MP8	Z	96.48	8
33	MP8	X	-167.11	90
34	MP8	Z	96.48	90
35	MP6	X	-39.71	48
36	MP6	Z	22.93	48
37	MP8	X	-49.94	48
38	MP8	Z	28.83	48
39	MP8	X	-46.04	48
40	MP8	Z	26.58	48
41	MP5	X	-16.98	48
42	MP5	Z	9.8	48
43	MP5	X	-16.98	48
44	MP5	Z	9.8	48
45	MP9	X	-177.77	8
46	MP9	Z	102.64	8
47	MP9	X	-177.77	90
48	MP9	Z	102.64	90
49	MP10	X	-274.77	8
50	MP10	Z	158.64	8
51	MP10	X	-274.77	90
52	MP10	Z	158.64	90
53	MP12	X	-282.81	8
54	MP12	Z	163.28	8
55	MP12	X	-282.81	90
56	MP12	Z	163.28	90
57	MP10	X	-58.32	48
58	MP10	Z	33.67	48
59	MP12	X	-65.99	48
60	MP12	Z	38.1	48
61	MP12	X	-55.12	48
62	MP12	Z	31.82	48
63	MP9	X	-34.94	48
64	MP9	Z	20.17	48
65	MP9	X	-34.94	48
66	MP9	Z	20.17	48

Member Point Loads (BLC 7 : Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-95.35	8
2	MP1	Z	165.15	8
3	MP1	X	-95.35	90
4	MP1	Z	165.15	90
5	MP2	X	-137.53	8

Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP2	Z	238.21	8
7	MP2	X	-137.53	90
8	MP2	Z	238.21	90
9	MP4	X	-141.01	8
10	MP4	Z	244.25	8
11	MP4	X	-141.01	90
12	MP4	Z	244.25	90
13	MP2	X	-30.09	48
14	MP2	Z	52.11	48
15	MP4	X	-35.01	48
16	MP4	Z	60.64	48
17	MP4	X	-30.08	48
18	MP4	Z	52.09	48
19	MP1	X	-16.72	48
20	MP1	Z	28.95	48
21	MP1	X	-16.72	48
22	MP1	Z	28.95	48
23	MP5	X	-73.5	8
24	MP5	Z	127.31	8
25	MP5	X	-73.5	90
26	MP5	Z	127.31	90
27	MP6	X	-74.21	8
28	MP6	Z	128.54	8
29	MP6	X	-74.21	90
30	MP6	Z	128.54	90
31	MP8	X	-74.21	8
32	MP8	Z	128.54	8
33	MP8	X	-74.21	90
34	MP8	Z	128.54	90
35	MP6	X	-19.35	48
36	MP6	Z	33.51	48
37	MP8	X	-25.75	48
38	MP8	Z	44.59	48
39	MP8	X	-24.83	48
40	MP8	Z	43.01	48
41	MP5	X	-6.34	48
42	MP5	Z	10.99	48
43	MP5	X	-6.34	48
44	MP5	Z	10.99	48
45	MP9	X	-95.35	8
46	MP9	Z	165.15	8
47	MP9	X	-95.35	90
48	MP9	Z	165.15	90
49	MP10	X	-137.53	8
50	MP10	Z	238.21	8
51	MP10	X	-137.53	90
52	MP10	Z	238.21	90
53	MP12	X	-141.01	8
54	MP12	Z	244.25	8
55	MP12	X	-141.01	90
56	MP12	Z	244.25	90
57	MP10	X	-30.09	48
58	MP10	Z	52.11	48
59	MP12	X	-35.01	48
60	MP12	Z	60.64	48
61	MP12	X	-30.08	48
62	MP12	Z	52.09	48

Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
63	MP9	X	-16.72	48
64	MP9	Z	28.95	48
65	MP9	X	-16.72	48
66	MP9	Z	28.95	48

Member Point Loads (BLC 8 : Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	205.27	8
3	MP1	X	0	90
4	MP1	Z	205.27	90
5	MP2	X	0	8
6	MP2	Z	317.28	8
7	MP2	X	0	90
8	MP2	Z	317.28	90
9	MP4	X	0	8
10	MP4	Z	326.57	8
11	MP4	X	0	90
12	MP4	Z	326.57	90
13	MP2	X	0	48
14	MP2	Z	67.34	48
15	MP4	X	0	48
16	MP4	Z	76.2	48
17	MP4	X	0	48
18	MP4	Z	63.65	48
19	MP1	X	0	48
20	MP1	Z	40.35	48
21	MP1	X	0	48
22	MP1	Z	40.35	48
23	MP5	X	0	8
24	MP5	Z	161.57	8
25	MP5	X	0	90
26	MP5	Z	161.57	90
27	MP6	X	0	8
28	MP6	Z	190.64	8
29	MP6	X	0	90
30	MP6	Z	190.64	90
31	MP8	X	0	8
32	MP8	Z	192.96	8
33	MP8	X	0	90
34	MP8	Z	192.96	90
35	MP6	X	0	48
36	MP6	Z	45.85	48
37	MP8	X	0	48
38	MP8	Z	57.67	48
39	MP8	X	0	48
40	MP8	Z	53.16	48
41	MP5	X	0	48
42	MP5	Z	19.6	48
43	MP5	X	0	48
44	MP5	Z	19.6	48
45	MP9	X	0	8
46	MP9	Z	161.57	8
47	MP9	X	0	90
48	MP9	Z	161.57	90
49	MP10	X	0	8

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
50	MP10	Z	190.64	8
51	MP10	X	0	90
52	MP10	Z	190.64	90
53	MP12	X	0	8
54	MP12	Z	192.96	8
55	MP12	X	0	90
56	MP12	Z	192.96	90
57	MP10	X	0	48
58	MP10	Z	45.85	48
59	MP12	X	0	48
60	MP12	Z	57.67	48
61	MP12	X	0	48
62	MP12	Z	53.16	48
63	MP9	X	0	48
64	MP9	Z	19.6	48
65	MP9	X	0	48
66	MP9	Z	19.6	48

Member Point Loads (BLC 9 : Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	95.35	8
2	MP1	Z	165.15	8
3	MP1	X	95.35	90
4	MP1	Z	165.15	90
5	MP2	X	137.53	8
6	MP2	Z	238.21	8
7	MP2	X	137.53	90
8	MP2	Z	238.21	90
9	MP4	X	141.01	8
10	MP4	Z	244.25	8
11	MP4	X	141.01	90
12	MP4	Z	244.25	90
13	MP2	X	30.09	48
14	MP2	Z	52.11	48
15	MP4	X	35.01	48
16	MP4	Z	60.64	48
17	MP4	X	30.08	48
18	MP4	Z	52.09	48
19	MP1	X	16.72	48
20	MP1	Z	28.95	48
21	MP1	X	16.72	48
22	MP1	Z	28.95	48
23	MP5	X	95.35	8
24	MP5	Z	165.15	8
25	MP5	X	95.35	90
26	MP5	Z	165.15	90
27	MP6	X	137.53	8
28	MP6	Z	238.21	8
29	MP6	X	137.53	90
30	MP6	Z	238.21	90
31	MP8	X	141.01	8
32	MP8	Z	244.25	8
33	MP8	X	141.01	90
34	MP8	Z	244.25	90
35	MP6	X	30.09	48
36	MP6	Z	52.11	48

Member Point Loads (BLC 9 : Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
37	MP8	X	35.01	48
38	MP8	Z	60.64	48
39	MP8	X	30.08	48
40	MP8	Z	52.09	48
41	MP5	X	16.72	48
42	MP5	Z	28.95	48
43	MP5	X	16.72	48
44	MP5	Z	28.95	48
45	MP9	X	73.5	8
46	MP9	Z	127.31	8
47	MP9	X	73.5	90
48	MP9	Z	127.31	90
49	MP10	X	74.21	8
50	MP10	Z	128.54	8
51	MP10	X	74.21	90
52	MP10	Z	128.54	90
53	MP12	X	74.21	8
54	MP12	Z	128.54	8
55	MP12	X	74.21	90
56	MP12	Z	128.54	90
57	MP10	X	19.35	48
58	MP10	Z	33.51	48
59	MP12	X	25.75	48
60	MP12	Z	44.59	48
61	MP12	X	24.83	48
62	MP12	Z	43.01	48
63	MP9	X	6.34	48
64	MP9	Z	10.99	48
65	MP9	X	6.34	48
66	MP9	Z	10.99	48

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	139.92	8
2	MP1	Z	80.78	8
3	MP1	X	139.92	90
4	MP1	Z	80.78	90
5	MP2	X	165.1	8
6	MP2	Z	95.32	8
7	MP2	X	165.1	90
8	MP2	Z	95.32	90
9	MP4	X	167.11	8
10	MP4	Z	96.48	8
11	MP4	X	167.11	90
12	MP4	Z	96.48	90
13	MP2	X	39.71	48
14	MP2	Z	22.93	48
15	MP4	X	49.94	48
16	MP4	Z	28.83	48
17	MP4	X	46.04	48
18	MP4	Z	26.58	48
19	MP1	X	16.98	48
20	MP1	Z	9.8	48
21	MP1	X	16.98	48
22	MP1	Z	9.8	48
23	MP5	X	177.77	8

Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
24	MP5	Z	102.64	8
25	MP5	X	177.77	90
26	MP5	Z	102.64	90
27	MP6	X	274.77	8
28	MP6	Z	158.64	8
29	MP6	X	274.77	90
30	MP6	Z	158.64	90
31	MP8	X	282.81	8
32	MP8	Z	163.28	8
33	MP8	X	282.81	90
34	MP8	Z	163.28	90
35	MP6	X	58.32	48
36	MP6	Z	33.67	48
37	MP8	X	65.99	48
38	MP8	Z	38.1	48
39	MP8	X	55.12	48
40	MP8	Z	31.82	48
41	MP5	X	34.94	48
42	MP5	Z	20.17	48
43	MP5	X	34.94	48
44	MP5	Z	20.17	48
45	MP9	X	139.92	8
46	MP9	Z	80.78	8
47	MP9	X	139.92	90
48	MP9	Z	80.78	90
49	MP10	X	165.1	8
50	MP10	Z	95.32	8
51	MP10	X	165.1	90
52	MP10	Z	95.32	90
53	MP12	X	167.11	8
54	MP12	Z	96.48	8
55	MP12	X	167.11	90
56	MP12	Z	96.48	90
57	MP10	X	39.71	48
58	MP10	Z	22.93	48
59	MP12	X	49.94	48
60	MP12	Z	28.83	48
61	MP12	X	46.04	48
62	MP12	Z	26.58	48
63	MP9	X	16.98	48
64	MP9	Z	9.8	48
65	MP9	X	16.98	48
66	MP9	Z	9.8	48

Member Point Loads (BLC 11 : Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	147	8
2	MP1	Z	0	8
3	MP1	X	147	90
4	MP1	Z	0	90
5	MP2	X	148.42	8
6	MP2	Z	0	8
7	MP2	X	148.42	90
8	MP2	Z	0	90
9	MP4	X	148.42	8
10	MP4	Z	0	8

Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP4	X	148.42	90
12	MP4	Z	0	90
13	MP2	X	38.69	48
14	MP2	Z	0	48
15	MP4	X	51.49	48
16	MP4	Z	0	48
17	MP4	X	49.66	48
18	MP4	Z	0	48
19	MP1	X	12.69	48
20	MP1	Z	0	48
21	MP1	X	12.69	48
22	MP1	Z	0	48
23	MP5	X	190.7	8
24	MP5	Z	0	8
25	MP5	X	190.7	90
26	MP5	Z	0	90
27	MP6	X	275.07	8
28	MP6	Z	0	8
29	MP6	X	275.07	90
30	MP6	Z	0	90
31	MP8	X	282.03	8
32	MP8	Z	0	8
33	MP8	X	282.03	90
34	MP8	Z	0	90
35	MP6	X	60.18	48
36	MP6	Z	0	48
37	MP8	X	70.02	48
38	MP8	Z	0	48
39	MP8	X	60.15	48
40	MP8	Z	0	48
41	MP5	X	33.43	48
42	MP5	Z	0	48
43	MP5	X	33.43	48
44	MP5	Z	0	48
45	MP9	X	190.7	8
46	MP9	Z	0	8
47	MP9	X	190.7	90
48	MP9	Z	0	90
49	MP10	X	275.07	8
50	MP10	Z	0	8
51	MP10	X	275.07	90
52	MP10	Z	0	90
53	MP12	X	282.03	8
54	MP12	Z	0	8
55	MP12	X	282.03	90
56	MP12	Z	0	90
57	MP10	X	60.18	48
58	MP10	Z	0	48
59	MP12	X	70.02	48
60	MP12	Z	0	48
61	MP12	X	60.15	48
62	MP12	Z	0	48
63	MP9	X	33.43	48
64	MP9	Z	0	48
65	MP9	X	33.43	48
66	MP9	Z	0	48

Member Point Loads (BLC 12 : Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	139.92	8
2	MP1	Z	-80.78	8
3	MP1	X	139.92	90
4	MP1	Z	-80.78	90
5	MP2	X	165.1	8
6	MP2	Z	-95.32	8
7	MP2	X	165.1	90
8	MP2	Z	-95.32	90
9	MP4	X	167.11	8
10	MP4	Z	-96.48	8
11	MP4	X	167.11	90
12	MP4	Z	-96.48	90
13	MP2	X	39.71	48
14	MP2	Z	-22.93	48
15	MP4	X	49.94	48
16	MP4	Z	-28.83	48
17	MP4	X	46.04	48
18	MP4	Z	-26.58	48
19	MP1	X	16.98	48
20	MP1	Z	-9.8	48
21	MP1	X	16.98	48
22	MP1	Z	-9.8	48
23	MP5	X	139.92	8
24	MP5	Z	-80.78	8
25	MP5	X	139.92	90
26	MP5	Z	-80.78	90
27	MP6	X	165.1	8
28	MP6	Z	-95.32	8
29	MP6	X	165.1	90
30	MP6	Z	-95.32	90
31	MP8	X	167.11	8
32	MP8	Z	-96.48	8
33	MP8	X	167.11	90
34	MP8	Z	-96.48	90
35	MP6	X	39.71	48
36	MP6	Z	-22.93	48
37	MP8	X	49.94	48
38	MP8	Z	-28.83	48
39	MP8	X	46.04	48
40	MP8	Z	-26.58	48
41	MP5	X	16.98	48
42	MP5	Z	-9.8	48
43	MP5	X	16.98	48
44	MP5	Z	-9.8	48
45	MP9	X	177.77	8
46	MP9	Z	-102.64	8
47	MP9	X	177.77	90
48	MP9	Z	-102.64	90
49	MP10	X	274.77	8
50	MP10	Z	-158.64	8
51	MP10	X	274.77	90
52	MP10	Z	-158.64	90
53	MP12	X	282.81	8
54	MP12	Z	-163.28	8
55	MP12	X	282.81	90
56	MP12	Z	-163.28	90
57	MP10	X	58.32	48

Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP10	Z	-33.67	48
59	MP12	X	65.99	48
60	MP12	Z	-38.1	48
61	MP12	X	55.12	48
62	MP12	Z	-31.82	48
63	MP9	X	34.94	48
64	MP9	Z	-20.17	48
65	MP9	X	34.94	48
66	MP9	Z	-20.17	48

Member Point Loads (BLC 13 : Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	95.35	8
2	MP1	Z	-165.15	8
3	MP1	X	95.35	90
4	MP1	Z	-165.15	90
5	MP2	X	137.53	8
6	MP2	Z	-238.21	8
7	MP2	X	137.53	90
8	MP2	Z	-238.21	90
9	MP4	X	141.01	8
10	MP4	Z	-244.25	8
11	MP4	X	141.01	90
12	MP4	Z	-244.25	90
13	MP2	X	30.09	48
14	MP2	Z	-52.11	48
15	MP4	X	35.01	48
16	MP4	Z	-60.64	48
17	MP4	X	30.08	48
18	MP4	Z	-52.09	48
19	MP1	X	16.72	48
20	MP1	Z	-28.95	48
21	MP1	X	16.72	48
22	MP1	Z	-28.95	48
23	MP5	X	73.5	8
24	MP5	Z	-127.31	8
25	MP5	X	73.5	90
26	MP5	Z	-127.31	90
27	MP6	X	74.21	8
28	MP6	Z	-128.54	8
29	MP6	X	74.21	90
30	MP6	Z	-128.54	90
31	MP8	X	74.21	8
32	MP8	Z	-128.54	8
33	MP8	X	74.21	90
34	MP8	Z	-128.54	90
35	MP6	X	19.35	48
36	MP6	Z	-33.51	48
37	MP8	X	25.75	48
38	MP8	Z	-44.59	48
39	MP8	X	24.83	48
40	MP8	Z	-43.01	48
41	MP5	X	6.34	48
42	MP5	Z	-10.99	48
43	MP5	X	6.34	48
44	MP5	Z	-10.99	48

Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
45	MP9	X	95.35	8
46	MP9	Z	-165.15	8
47	MP9	X	95.35	90
48	MP9	Z	-165.15	90
49	MP10	X	137.53	8
50	MP10	Z	-238.21	8
51	MP10	X	137.53	90
52	MP10	Z	-238.21	90
53	MP12	X	141.01	8
54	MP12	Z	-244.25	8
55	MP12	X	141.01	90
56	MP12	Z	-244.25	90
57	MP10	X	30.09	48
58	MP10	Z	-52.11	48
59	MP12	X	35.01	48
60	MP12	Z	-60.64	48
61	MP12	X	30.08	48
62	MP12	Z	-52.09	48
63	MP9	X	16.72	48
64	MP9	Z	-28.95	48
65	MP9	X	16.72	48
66	MP9	Z	-28.95	48

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Y	-188.524	8
2	MP1	Y	-188.524	90
3	MP2	Y	-257.191	8
4	MP2	Y	-257.191	90
5	MP4	Y	-262.911	8
6	MP4	Y	-262.911	90
7	MP2	Y	-97.728	48
8	MP4	Y	-115.394	48
9	MP4	Y	-110.303	48
10	MP1	Y	-50.892	48
11	MP1	Y	-50.892	48
12	MP5	Y	-188.524	8
13	MP5	Y	-188.524	90
14	MP6	Y	-257.191	8
15	MP6	Y	-257.191	90
16	MP8	Y	-262.911	8
17	MP8	Y	-262.911	90
18	MP6	Y	-97.728	48
19	MP8	Y	-115.394	48
20	MP8	Y	-110.303	48
21	MP5	Y	-50.892	48
22	MP5	Y	-50.892	48
23	MP9	Y	-188.524	8
24	MP9	Y	-188.524	90
25	MP10	Y	-257.191	8
26	MP10	Y	-257.191	90
27	MP12	Y	-262.911	8
28	MP12	Y	-262.911	90
29	MP10	Y	-97.728	48
30	MP12	Y	-115.394	48
31	MP12	Y	-110.303	48

Member Point Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
32	MP9	Y	-50.892	48
33	MP9	Y	-50.892	48

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	-20.55	8
3	MP1	X	0	90
4	MP1	Z	-20.55	90
5	MP2	X	0	8
6	MP2	Z	-27.4	8
7	MP2	X	0	90
8	MP2	Z	-27.4	90
9	MP4	X	0	8
10	MP4	Z	-28.05	8
11	MP4	X	0	90
12	MP4	Z	-28.05	90
13	MP2	X	0	48
14	MP2	Z	-7.88	48
15	MP4	X	0	48
16	MP4	Z	-8.67	48
17	MP4	X	0	48
18	MP4	Z	-7.54	48
19	MP1	X	0	48
20	MP1	Z	-6.18	48
21	MP1	X	0	48
22	MP1	Z	-6.18	48
23	MP5	X	0	8
24	MP5	Z	-18.79	8
25	MP5	X	0	90
26	MP5	Z	-18.79	90
27	MP6	X	0	8
28	MP6	Z	-20.55	8
29	MP6	X	0	90
30	MP6	Z	-20.55	90
31	MP8	X	0	8
32	MP8	Z	-20.71	8
33	MP8	X	0	90
34	MP8	Z	-20.71	90
35	MP6	X	0	48
36	MP6	Z	-6.82	48
37	MP8	X	0	48
38	MP8	Z	-7.71	48
39	MP8	X	0	48
40	MP8	Z	-6.95	48
41	MP5	X	0	48
42	MP5	Z	-4.55	48
43	MP5	X	0	48
44	MP5	Z	-4.55	48
45	MP9	X	0	8
46	MP9	Z	-18.79	8
47	MP9	X	0	90
48	MP9	Z	-18.79	90
49	MP10	X	0	8
50	MP10	Z	-20.55	8
51	MP10	X	0	90

Member Point Loads (BLC 17 : Ice Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
52	MP10	Z	-20.55	90
53	MP12	X	0	8
54	MP12	Z	-20.71	8
55	MP12	X	0	90
56	MP12	Z	-20.71	90
57	MP10	X	0	48
58	MP10	Z	-6.82	48
59	MP12	X	0	48
60	MP12	Z	-7.71	48
61	MP12	X	0	48
62	MP12	Z	-6.95	48
63	MP9	X	0	48
64	MP9	Z	-4.55	48
65	MP9	X	0	48
66	MP9	Z	-4.55	48

Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-9.98	8
2	MP1	Z	-17.29	8
3	MP1	X	-9.98	90
4	MP1	Z	-17.29	90
5	MP2	X	-12.56	8
6	MP2	Z	-21.75	8
7	MP2	X	-12.56	90
8	MP2	Z	-21.75	90
9	MP4	X	-12.8	8
10	MP4	Z	-22.17	8
11	MP4	X	-12.8	90
12	MP4	Z	-22.17	90
13	MP2	X	-3.76	48
14	MP2	Z	-6.52	48
15	MP4	X	-4.17	48
16	MP4	Z	-7.23	48
17	MP4	X	-3.67	48
18	MP4	Z	-6.36	48
19	MP1	X	-2.82	48
20	MP1	Z	-4.88	48
21	MP1	X	-2.82	48
22	MP1	Z	-4.88	48
23	MP5	X	-9.98	8
24	MP5	Z	-17.29	8
25	MP5	X	-9.98	90
26	MP5	Z	-17.29	90
27	MP6	X	-12.56	8
28	MP6	Z	-21.75	8
29	MP6	X	-12.56	90
30	MP6	Z	-21.75	90
31	MP8	X	-12.8	8
32	MP8	Z	-22.17	8
33	MP8	X	-12.8	90
34	MP8	Z	-22.17	90
35	MP6	X	-3.76	48
36	MP6	Z	-6.52	48
37	MP8	X	-4.17	48
38	MP8	Z	-7.23	48

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP8	X	-3.67	48
40	MP8	Z	-6.36	48
41	MP5	X	-2.82	48
42	MP5	Z	-4.88	48
43	MP5	X	-2.82	48
44	MP5	Z	-4.88	48
45	MP9	X	-9.1	8
46	MP9	Z	-15.76	8
47	MP9	X	-9.1	90
48	MP9	Z	-15.76	90
49	MP10	X	-9.13	8
50	MP10	Z	-15.82	8
51	MP10	X	-9.13	90
52	MP10	Z	-15.82	90
53	MP12	X	-9.13	8
54	MP12	Z	-15.82	8
55	MP12	X	-9.13	90
56	MP12	Z	-15.82	90
57	MP10	X	-3.24	48
58	MP10	Z	-5.6	48
59	MP12	X	-3.69	48
60	MP12	Z	-6.4	48
61	MP12	X	-3.38	48
62	MP12	Z	-5.85	48
63	MP9	X	-2	48
64	MP9	Z	-3.47	48
65	MP9	X	-2	48
66	MP9	Z	-3.47	48

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-16.27	8
2	MP1	Z	-9.4	8
3	MP1	X	-16.27	90
4	MP1	Z	-9.4	90
5	MP2	X	-17.8	8
6	MP2	Z	-10.27	8
7	MP2	X	-17.8	90
8	MP2	Z	-10.27	90
9	MP4	X	-17.94	8
10	MP4	Z	-10.36	8
11	MP4	X	-17.94	90
12	MP4	Z	-10.36	90
13	MP2	X	-5.91	48
14	MP2	Z	-3.41	48
15	MP4	X	-6.68	48
16	MP4	Z	-3.85	48
17	MP4	X	-6.02	48
18	MP4	Z	-3.48	48
19	MP1	X	-3.94	48
20	MP1	Z	-2.28	48
21	MP1	X	-3.94	48
22	MP1	Z	-2.28	48
23	MP5	X	-17.8	8
24	MP5	Z	-10.28	8
25	MP5	X	-17.8	90

Member Point Loads (BLC 19 : Ice Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
26	MP5	Z	-10.28	90
27	MP6	X	-23.73	8
28	MP6	Z	-13.7	8
29	MP6	X	-23.73	90
30	MP6	Z	-13.7	90
31	MP8	X	-24.29	8
32	MP8	Z	-14.02	8
33	MP8	X	-24.29	90
34	MP8	Z	-14.02	90
35	MP6	X	-6.82	48
36	MP6	Z	-3.94	48
37	MP8	X	-7.51	48
38	MP8	Z	-4.34	48
39	MP8	X	-6.53	48
40	MP8	Z	-3.77	48
41	MP5	X	-5.35	48
42	MP5	Z	-3.09	48
43	MP5	X	-5.35	48
44	MP5	Z	-3.09	48
45	MP9	X	-16.27	8
46	MP9	Z	-9.4	8
47	MP9	X	-16.27	90
48	MP9	Z	-9.4	90
49	MP10	X	-17.8	8
50	MP10	Z	-10.27	8
51	MP10	X	-17.8	90
52	MP10	Z	-10.27	90
53	MP12	X	-17.94	8
54	MP12	Z	-10.36	8
55	MP12	X	-17.94	90
56	MP12	Z	-10.36	90
57	MP10	X	-5.91	48
58	MP10	Z	-3.41	48
59	MP12	X	-6.68	48
60	MP12	Z	-3.85	48
61	MP12	X	-6.02	48
62	MP12	Z	-3.48	48
63	MP9	X	-3.94	48
64	MP9	Z	-2.28	48
65	MP9	X	-3.94	48
66	MP9	Z	-2.28	48

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-18.2	8
2	MP1	Z	0	8
3	MP1	X	-18.2	90
4	MP1	Z	0	90
5	MP2	X	-18.27	8
6	MP2	Z	0	8
7	MP2	X	-18.27	90
8	MP2	Z	0	90
9	MP4	X	-18.27	8
10	MP4	Z	0	8
11	MP4	X	-18.27	90
12	MP4	Z	0	90

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
13	MP2	X	-6.47	48
14	MP2	Z	0	48
15	MP4	X	-7.39	48
16	MP4	Z	0	48
17	MP4	X	-6.76	48
18	MP4	Z	0	48
19	MP1	X	-4.01	48
20	MP1	Z	0	48
21	MP1	X	-4.01	48
22	MP1	Z	0	48
23	MP5	X	-19.97	8
24	MP5	Z	0	8
25	MP5	X	-19.97	90
26	MP5	Z	0	90
27	MP6	X	-25.12	8
28	MP6	Z	0	8
29	MP6	X	-25.12	90
30	MP6	Z	0	90
31	MP8	X	-25.6	8
32	MP8	Z	0	8
33	MP8	X	-25.6	90
34	MP8	Z	0	90
35	MP6	X	-7.53	48
36	MP6	Z	0	48
37	MP8	X	-8.35	48
38	MP8	Z	0	48
39	MP8	X	-7.34	48
40	MP8	Z	0	48
41	MP5	X	-5.64	48
42	MP5	Z	0	48
43	MP5	X	-5.64	48
44	MP5	Z	0	48
45	MP9	X	-19.97	8
46	MP9	Z	0	8
47	MP9	X	-19.97	90
48	MP9	Z	0	90
49	MP10	X	-25.12	8
50	MP10	Z	0	8
51	MP10	X	-25.12	90
52	MP10	Z	0	90
53	MP12	X	-25.6	8
54	MP12	Z	0	8
55	MP12	X	-25.6	90
56	MP12	Z	0	90
57	MP10	X	-7.53	48
58	MP10	Z	0	48
59	MP12	X	-8.35	48
60	MP12	Z	0	48
61	MP12	X	-7.34	48
62	MP12	Z	0	48
63	MP9	X	-5.64	48
64	MP9	Z	0	48
65	MP9	X	-5.64	48
66	MP9	Z	0	48

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-16.27	8
2	MP1	Z	9.4	8
3	MP1	X	-16.27	90
4	MP1	Z	9.4	90
5	MP2	X	-17.8	8
6	MP2	Z	10.27	8
7	MP2	X	-17.8	90
8	MP2	Z	10.27	90
9	MP4	X	-17.94	8
10	MP4	Z	10.36	8
11	MP4	X	-17.94	90
12	MP4	Z	10.36	90
13	MP2	X	-5.91	48
14	MP2	Z	3.41	48
15	MP4	X	-6.68	48
16	MP4	Z	3.85	48
17	MP4	X	-6.02	48
18	MP4	Z	3.48	48
19	MP1	X	-3.94	48
20	MP1	Z	2.28	48
21	MP1	X	-3.94	48
22	MP1	Z	2.28	48
23	MP5	X	-16.27	8
24	MP5	Z	9.4	8
25	MP5	X	-16.27	90
26	MP5	Z	9.4	90
27	MP6	X	-17.8	8
28	MP6	Z	10.27	8
29	MP6	X	-17.8	90
30	MP6	Z	10.27	90
31	MP8	X	-17.94	8
32	MP8	Z	10.36	8
33	MP8	X	-17.94	90
34	MP8	Z	10.36	90
35	MP6	X	-5.91	48
36	MP6	Z	3.41	48
37	MP8	X	-6.68	48
38	MP8	Z	3.85	48
39	MP8	X	-6.02	48
40	MP8	Z	3.48	48
41	MP5	X	-3.94	48
42	MP5	Z	2.28	48
43	MP5	X	-3.94	48
44	MP5	Z	2.28	48
45	MP9	X	-17.8	8
46	MP9	Z	10.28	8
47	MP9	X	-17.8	90
48	MP9	Z	10.28	90
49	MP10	X	-23.73	8
50	MP10	Z	13.7	8
51	MP10	X	-23.73	90
52	MP10	Z	13.7	90
53	MP12	X	-24.29	8
54	MP12	Z	14.02	8
55	MP12	X	-24.29	90
56	MP12	Z	14.02	90
57	MP10	X	-6.82	48

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP10	Z	3.94	48
59	MP12	X	-7.51	48
60	MP12	Z	4.34	48
61	MP12	X	-6.53	48
62	MP12	Z	3.77	48
63	MP9	X	-5.35	48
64	MP9	Z	3.09	48
65	MP9	X	-5.35	48
66	MP9	Z	3.09	48

Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-9.98	8
2	MP1	Z	17.29	8
3	MP1	X	-9.98	90
4	MP1	Z	17.29	90
5	MP2	X	-12.56	8
6	MP2	Z	21.75	8
7	MP2	X	-12.56	90
8	MP2	Z	21.75	90
9	MP4	X	-12.8	8
10	MP4	Z	22.17	8
11	MP4	X	-12.8	90
12	MP4	Z	22.17	90
13	MP2	X	-3.76	48
14	MP2	Z	6.52	48
15	MP4	X	-4.17	48
16	MP4	Z	7.23	48
17	MP4	X	-3.67	48
18	MP4	Z	6.36	48
19	MP1	X	-2.82	48
20	MP1	Z	4.88	48
21	MP1	X	-2.82	48
22	MP1	Z	4.88	48
23	MP5	X	-9.1	8
24	MP5	Z	15.76	8
25	MP5	X	-9.1	90
26	MP5	Z	15.76	90
27	MP6	X	-9.13	8
28	MP6	Z	15.82	8
29	MP6	X	-9.13	90
30	MP6	Z	15.82	90
31	MP8	X	-9.13	8
32	MP8	Z	15.82	8
33	MP8	X	-9.13	90
34	MP8	Z	15.82	90
35	MP6	X	-3.24	48
36	MP6	Z	5.6	48
37	MP8	X	-3.69	48
38	MP8	Z	6.4	48
39	MP8	X	-3.38	48
40	MP8	Z	5.85	48
41	MP5	X	-2	48
42	MP5	Z	3.47	48
43	MP5	X	-2	48
44	MP5	Z	3.47	48

Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
45	MP9	X	-9.98	8
46	MP9	Z	17.29	8
47	MP9	X	-9.98	90
48	MP9	Z	17.29	90
49	MP10	X	-12.56	8
50	MP10	Z	21.75	8
51	MP10	X	-12.56	90
52	MP10	Z	21.75	90
53	MP12	X	-12.8	8
54	MP12	Z	22.17	8
55	MP12	X	-12.8	90
56	MP12	Z	22.17	90
57	MP10	X	-3.76	48
58	MP10	Z	6.52	48
59	MP12	X	-4.17	48
60	MP12	Z	7.23	48
61	MP12	X	-3.67	48
62	MP12	Z	6.36	48
63	MP9	X	-2.82	48
64	MP9	Z	4.88	48
65	MP9	X	-2.82	48
66	MP9	Z	4.88	48

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	8
2	MP1	Z	20.55	8
3	MP1	X	0	90
4	MP1	Z	20.55	90
5	MP2	X	0	8
6	MP2	Z	27.4	8
7	MP2	X	0	90
8	MP2	Z	27.4	90
9	MP4	X	0	8
10	MP4	Z	28.05	8
11	MP4	X	0	90
12	MP4	Z	28.05	90
13	MP2	X	0	48
14	MP2	Z	7.88	48
15	MP4	X	0	48
16	MP4	Z	8.67	48
17	MP4	X	0	48
18	MP4	Z	7.54	48
19	MP1	X	0	48
20	MP1	Z	6.18	48
21	MP1	X	0	48
22	MP1	Z	6.18	48
23	MP5	X	0	8
24	MP5	Z	18.79	8
25	MP5	X	0	90
26	MP5	Z	18.79	90
27	MP6	X	0	8
28	MP6	Z	20.55	8
29	MP6	X	0	90
30	MP6	Z	20.55	90
31	MP8	X	0	8

Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
32	MP8	Z	20.71	8
33	MP8	X	0	90
34	MP8	Z	20.71	90
35	MP6	X	0	48
36	MP6	Z	6.82	48
37	MP8	X	0	48
38	MP8	Z	7.71	48
39	MP8	X	0	48
40	MP8	Z	6.95	48
41	MP5	X	0	48
42	MP5	Z	4.55	48
43	MP5	X	0	48
44	MP5	Z	4.55	48
45	MP9	X	0	8
46	MP9	Z	18.79	8
47	MP9	X	0	90
48	MP9	Z	18.79	90
49	MP10	X	0	8
50	MP10	Z	20.55	8
51	MP10	X	0	90
52	MP10	Z	20.55	90
53	MP12	X	0	8
54	MP12	Z	20.71	8
55	MP12	X	0	90
56	MP12	Z	20.71	90
57	MP10	X	0	48
58	MP10	Z	6.82	48
59	MP12	X	0	48
60	MP12	Z	7.71	48
61	MP12	X	0	48
62	MP12	Z	6.95	48
63	MP9	X	0	48
64	MP9	Z	4.55	48
65	MP9	X	0	48
66	MP9	Z	4.55	48

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	9.98	8
2	MP1	Z	17.29	8
3	MP1	X	9.98	90
4	MP1	Z	17.29	90
5	MP2	X	12.56	8
6	MP2	Z	21.75	8
7	MP2	X	12.56	90
8	MP2	Z	21.75	90
9	MP4	X	12.8	8
10	MP4	Z	22.17	8
11	MP4	X	12.8	90
12	MP4	Z	22.17	90
13	MP2	X	3.76	48
14	MP2	Z	6.52	48
15	MP4	X	4.17	48
16	MP4	Z	7.23	48
17	MP4	X	3.67	48
18	MP4	Z	6.36	48

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
19	MP1	X	2.82	48
20	MP1	Z	4.88	48
21	MP1	X	2.82	48
22	MP1	Z	4.88	48
23	MP5	X	9.98	8
24	MP5	Z	17.29	8
25	MP5	X	9.98	90
26	MP5	Z	17.29	90
27	MP6	X	12.56	8
28	MP6	Z	21.75	8
29	MP6	X	12.56	90
30	MP6	Z	21.75	90
31	MP8	X	12.8	8
32	MP8	Z	22.17	8
33	MP8	X	12.8	90
34	MP8	Z	22.17	90
35	MP6	X	3.76	48
36	MP6	Z	6.52	48
37	MP8	X	4.17	48
38	MP8	Z	7.23	48
39	MP8	X	3.67	48
40	MP8	Z	6.36	48
41	MP5	X	2.82	48
42	MP5	Z	4.88	48
43	MP5	X	2.82	48
44	MP5	Z	4.88	48
45	MP9	X	9.1	8
46	MP9	Z	15.76	8
47	MP9	X	9.1	90
48	MP9	Z	15.76	90
49	MP10	X	9.13	8
50	MP10	Z	15.82	8
51	MP10	X	9.13	90
52	MP10	Z	15.82	90
53	MP12	X	9.13	8
54	MP12	Z	15.82	8
55	MP12	X	9.13	90
56	MP12	Z	15.82	90
57	MP10	X	3.24	48
58	MP10	Z	5.6	48
59	MP12	X	3.69	48
60	MP12	Z	6.4	48
61	MP12	X	3.38	48
62	MP12	Z	5.85	48
63	MP9	X	2	48
64	MP9	Z	3.47	48
65	MP9	X	2	48
66	MP9	Z	3.47	48

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	16.27	8
2	MP1	Z	9.4	8
3	MP1	X	16.27	90
4	MP1	Z	9.4	90
5	MP2	X	17.8	8

Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP2	Z	10.27	8
7	MP2	X	17.8	90
8	MP2	Z	10.27	90
9	MP4	X	17.94	8
10	MP4	Z	10.36	8
11	MP4	X	17.94	90
12	MP4	Z	10.36	90
13	MP2	X	5.91	48
14	MP2	Z	3.41	48
15	MP4	X	6.68	48
16	MP4	Z	3.85	48
17	MP4	X	6.02	48
18	MP4	Z	3.48	48
19	MP1	X	3.94	48
20	MP1	Z	2.28	48
21	MP1	X	3.94	48
22	MP1	Z	2.28	48
23	MP5	X	17.8	8
24	MP5	Z	10.28	8
25	MP5	X	17.8	90
26	MP5	Z	10.28	90
27	MP6	X	23.73	8
28	MP6	Z	13.7	8
29	MP6	X	23.73	90
30	MP6	Z	13.7	90
31	MP8	X	24.29	8
32	MP8	Z	14.02	8
33	MP8	X	24.29	90
34	MP8	Z	14.02	90
35	MP6	X	6.82	48
36	MP6	Z	3.94	48
37	MP8	X	7.51	48
38	MP8	Z	4.34	48
39	MP8	X	6.53	48
40	MP8	Z	3.77	48
41	MP5	X	5.35	48
42	MP5	Z	3.09	48
43	MP5	X	5.35	48
44	MP5	Z	3.09	48
45	MP9	X	16.27	8
46	MP9	Z	9.4	8
47	MP9	X	16.27	90
48	MP9	Z	9.4	90
49	MP10	X	17.8	8
50	MP10	Z	10.27	8
51	MP10	X	17.8	90
52	MP10	Z	10.27	90
53	MP12	X	17.94	8
54	MP12	Z	10.36	8
55	MP12	X	17.94	90
56	MP12	Z	10.36	90
57	MP10	X	5.91	48
58	MP10	Z	3.41	48
59	MP12	X	6.68	48
60	MP12	Z	3.85	48
61	MP12	X	6.02	48
62	MP12	Z	3.48	48

Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
63	MP9	X	3.94	48
64	MP9	Z	2.28	48
65	MP9	X	3.94	48
66	MP9	Z	2.28	48

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	18.2	8
2	MP1	Z	0	8
3	MP1	X	18.2	90
4	MP1	Z	0	90
5	MP2	X	18.27	8
6	MP2	Z	0	8
7	MP2	X	18.27	90
8	MP2	Z	0	90
9	MP4	X	18.27	8
10	MP4	Z	0	8
11	MP4	X	18.27	90
12	MP4	Z	0	90
13	MP2	X	6.47	48
14	MP2	Z	0	48
15	MP4	X	7.39	48
16	MP4	Z	0	48
17	MP4	X	6.76	48
18	MP4	Z	0	48
19	MP1	X	4.01	48
20	MP1	Z	0	48
21	MP1	X	4.01	48
22	MP1	Z	0	48
23	MP5	X	19.97	8
24	MP5	Z	0	8
25	MP5	X	19.97	90
26	MP5	Z	0	90
27	MP6	X	25.12	8
28	MP6	Z	0	8
29	MP6	X	25.12	90
30	MP6	Z	0	90
31	MP8	X	25.6	8
32	MP8	Z	0	8
33	MP8	X	25.6	90
34	MP8	Z	0	90
35	MP6	X	7.53	48
36	MP6	Z	0	48
37	MP8	X	8.35	48
38	MP8	Z	0	48
39	MP8	X	7.34	48
40	MP8	Z	0	48
41	MP5	X	5.64	48
42	MP5	Z	0	48
43	MP5	X	5.64	48
44	MP5	Z	0	48
45	MP9	X	19.97	8
46	MP9	Z	0	8
47	MP9	X	19.97	90
48	MP9	Z	0	90
49	MP10	X	25.12	8

Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
50	MP10	Z	0	8
51	MP10	X	25.12	90
52	MP10	Z	0	90
53	MP12	X	25.6	8
54	MP12	Z	0	8
55	MP12	X	25.6	90
56	MP12	Z	0	90
57	MP10	X	7.53	48
58	MP10	Z	0	48
59	MP12	X	8.35	48
60	MP12	Z	0	48
61	MP12	X	7.34	48
62	MP12	Z	0	48
63	MP9	X	5.64	48
64	MP9	Z	0	48
65	MP9	X	5.64	48
66	MP9	Z	0	48

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	16.27	8
2	MP1	Z	-9.4	8
3	MP1	X	16.27	90
4	MP1	Z	-9.4	90
5	MP2	X	17.8	8
6	MP2	Z	-10.27	8
7	MP2	X	17.8	90
8	MP2	Z	-10.27	90
9	MP4	X	17.94	8
10	MP4	Z	-10.36	8
11	MP4	X	17.94	90
12	MP4	Z	-10.36	90
13	MP2	X	5.91	48
14	MP2	Z	-3.41	48
15	MP4	X	6.68	48
16	MP4	Z	-3.85	48
17	MP4	X	6.02	48
18	MP4	Z	-3.48	48
19	MP1	X	3.94	48
20	MP1	Z	-2.28	48
21	MP1	X	3.94	48
22	MP1	Z	-2.28	48
23	MP5	X	16.27	8
24	MP5	Z	-9.4	8
25	MP5	X	16.27	90
26	MP5	Z	-9.4	90
27	MP6	X	17.8	8
28	MP6	Z	-10.27	8
29	MP6	X	17.8	90
30	MP6	Z	-10.27	90
31	MP8	X	17.94	8
32	MP8	Z	-10.36	8
33	MP8	X	17.94	90
34	MP8	Z	-10.36	90
35	MP6	X	5.91	48
36	MP6	Z	-3.41	48

Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
37	MP8	X	6.68	48
38	MP8	Z	-3.85	48
39	MP8	X	6.02	48
40	MP8	Z	-3.48	48
41	MP5	X	3.94	48
42	MP5	Z	-2.28	48
43	MP5	X	3.94	48
44	MP5	Z	-2.28	48
45	MP9	X	17.8	8
46	MP9	Z	-10.28	8
47	MP9	X	17.8	90
48	MP9	Z	-10.28	90
49	MP10	X	23.73	8
50	MP10	Z	-13.7	8
51	MP10	X	23.73	90
52	MP10	Z	-13.7	90
53	MP12	X	24.29	8
54	MP12	Z	-14.02	8
55	MP12	X	24.29	90
56	MP12	Z	-14.02	90
57	MP10	X	6.82	48
58	MP10	Z	-3.94	48
59	MP12	X	7.51	48
60	MP12	Z	-4.34	48
61	MP12	X	6.53	48
62	MP12	Z	-3.77	48
63	MP9	X	5.35	48
64	MP9	Z	-3.09	48
65	MP9	X	5.35	48
66	MP9	Z	-3.09	48

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	9.98	8
2	MP1	Z	-17.29	8
3	MP1	X	9.98	90
4	MP1	Z	-17.29	90
5	MP2	X	12.56	8
6	MP2	Z	-21.75	8
7	MP2	X	12.56	90
8	MP2	Z	-21.75	90
9	MP4	X	12.8	8
10	MP4	Z	-22.17	8
11	MP4	X	12.8	90
12	MP4	Z	-22.17	90
13	MP2	X	3.76	48
14	MP2	Z	-6.52	48
15	MP4	X	4.17	48
16	MP4	Z	-7.23	48
17	MP4	X	3.67	48
18	MP4	Z	-6.36	48
19	MP1	X	2.82	48
20	MP1	Z	-4.88	48
21	MP1	X	2.82	48
22	MP1	Z	-4.88	48
23	MP5	X	9.1	8

Member Point Loads (BLC 28 : Ice Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
24	MP5	Z	-15.76	8
25	MP5	X	9.1	90
26	MP5	Z	-15.76	90
27	MP6	X	9.13	8
28	MP6	Z	-15.82	8
29	MP6	X	9.13	90
30	MP6	Z	-15.82	90
31	MP8	X	9.13	8
32	MP8	Z	-15.82	8
33	MP8	X	9.13	90
34	MP8	Z	-15.82	90
35	MP6	X	3.24	48
36	MP6	Z	-5.6	48
37	MP8	X	3.69	48
38	MP8	Z	-6.4	48
39	MP8	X	3.38	48
40	MP8	Z	-5.85	48
41	MP5	X	2	48
42	MP5	Z	-3.47	48
43	MP5	X	2	48
44	MP5	Z	-3.47	48
45	MP9	X	9.98	8
46	MP9	Z	-17.29	8
47	MP9	X	9.98	90
48	MP9	Z	-17.29	90
49	MP10	X	12.56	8
50	MP10	Z	-21.75	8
51	MP10	X	12.56	90
52	MP10	Z	-21.75	90
53	MP12	X	12.8	8
54	MP12	Z	-22.17	8
55	MP12	X	12.8	90
56	MP12	Z	-22.17	90
57	MP10	X	3.76	48
58	MP10	Z	-6.52	48
59	MP12	X	4.17	48
60	MP12	Z	-7.23	48
61	MP12	X	3.67	48
62	MP12	Z	-6.36	48
63	MP9	X	2.82	48
64	MP9	Z	-4.88	48
65	MP9	X	2.82	48
66	MP9	Z	-4.88	48

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-2.563	8
2	MP1	Z	-2.563	90
3	MP2	Z	-4.134	8
4	MP2	Z	-4.134	90
5	MP4	Z	-4.543	8
6	MP4	Z	-4.543	90
7	MP2	Z	-5.687	48
8	MP4	Z	-6.694	48
9	MP4	Z	-6.823	48
10	MP1	Z	-1.339	48

Member Point Loads (BLC 31 : Seismic Load Z) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP1	Z	-1.339	48
12	MP5	Z	-2.563	8
13	MP5	Z	-2.563	90
14	MP6	Z	-4.134	8
15	MP6	Z	-4.134	90
16	MP8	Z	-4.543	8
17	MP8	Z	-4.543	90
18	MP6	Z	-5.687	48
19	MP8	Z	-6.694	48
20	MP8	Z	-6.823	48
21	MP5	Z	-1.339	48
22	MP5	Z	-1.339	48
23	MP9	Z	-2.563	8
24	MP9	Z	-2.563	90
25	MP10	Z	-4.134	8
26	MP10	Z	-4.134	90
27	MP12	Z	-4.543	8
28	MP12	Z	-4.543	90
29	MP10	Z	-5.687	48
30	MP12	Z	-6.694	48
31	MP12	Z	-6.823	48
32	MP9	Z	-1.339	48
33	MP9	Z	-1.339	48

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-2.563	8
2	MP1	X	-2.563	90
3	MP2	X	-4.134	8
4	MP2	X	-4.134	90
5	MP4	X	-4.543	8
6	MP4	X	-4.543	90
7	MP2	X	-5.687	48
8	MP4	X	-6.694	48
9	MP4	X	-6.823	48
10	MP1	X	-1.339	48
11	MP1	X	-1.339	48
12	MP5	X	-2.563	8
13	MP5	X	-2.563	90
14	MP6	X	-4.134	8
15	MP6	X	-4.134	90
16	MP8	X	-4.543	8
17	MP8	X	-4.543	90
18	MP6	X	-5.687	48
19	MP8	X	-6.694	48
20	MP8	X	-6.823	48
21	MP5	X	-1.339	48
22	MP5	X	-1.339	48
23	MP9	X	-2.563	8
24	MP9	X	-2.563	90
25	MP10	X	-4.134	8
26	MP10	X	-4.134	90
27	MP12	X	-4.543	8
28	MP12	X	-4.543	90
29	MP10	X	-5.687	48
30	MP12	X	-6.694	48

Member Point Loads (BLC 32 : Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
31	MP12	X	-6.823	48
32	MP9	X	-1.339	48
33	MP9	X	-1.339	48

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-81.215	-81.215	0	%100
2	M3	SZ	-81.215	-81.215	0	%100
3	M5	SZ	-81.215	-81.215	0	%100
4	M85B	SZ	-81.215	-81.215	0	%100
5	M86C	SZ	-81.215	-81.215	0	%100
6	M87C	SZ	-81.215	-81.215	0	%100
7	M88C	SZ	-81.215	-81.215	0	%100
8	M89C	SZ	-81.215	-81.215	0	%100
9	M90C	SZ	-81.215	-81.215	0	%100
10	M22	SZ	0	0	0	%100
11	M23	SZ	0	0	0	%100
12	M24	SZ	0	0	0	%100
13	M28	SZ	0	0	0	%100
14	M30	SZ	0	0	0	%100
15	M34	SZ	0	0	0	%100
16	M36	SZ	0	0	0	%100
17	M72	SZ	0	0	0	%100
18	M73	SZ	0	0	0	%100
19	M74	SZ	0	0	0	%100
20	M75	SZ	0	0	0	%100
21	M77	SZ	0	0	0	%100
22	M78	SZ	0	0	0	%100
23	M80	SZ	0	0	0	%100
24	M86	SZ	0	0	0	%100
25	M87	SZ	0	0	0	%100
26	M89	SZ	0	0	0	%100
27	M90	SZ	0	0	0	%100
28	M92	SZ	0	0	0	%100
29	M93	SZ	0	0	0	%100
30	M95	SZ	0	0	0	%100
31	M96	SZ	0	0	0	%100
32	M98	SZ	0	0	0	%100
33	M99	SZ	0	0	0	%100
34	M91A	SZ	-81.215	-81.215	0	%100
35	M92B	SZ	-81.215	-81.215	0	%100
36	M93B	SZ	-81.215	-81.215	0	%100
37	M94A	SZ	-81.215	-81.215	0	%100
38	M95B	SZ	-81.215	-81.215	0	%100
39	M96C	SZ	-81.215	-81.215	0	%100
40	MP1	SZ	-48.729	-48.729	0	%100
41	MP2	SZ	-48.729	-48.729	0	%100
42	MP4	SZ	-48.729	-48.729	0	%100
43	MP9	SZ	-48.729	-48.729	0	%100
44	MP12	SZ	-48.729	-48.729	0	%100
45	MP5	SZ	-48.729	-48.729	0	%100
46	MP8	SZ	-48.729	-48.729	0	%100
47	MP3	SZ	-48.729	-48.729	0	%100
48	MP6	SZ	-48.729	-48.729	0	%100
49	MP7	SZ	-48.729	-48.729	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
50	MP10	SZ	-48.729	-48.729	0	%100
51	MP11	SZ	-48.729	-48.729	0	%100
52	M7	SZ	-48.729	-48.729	0	%100
53	M8	SZ	-48.729	-48.729	0	%100
54	M9	SZ	-48.729	-48.729	0	%100
55	M70	SZ	-48.729	-48.729	0	%100
56	M71	SZ	-48.729	-48.729	0	%100
57	M81	SZ	-48.729	-48.729	0	%100
58	M41	SZ	-81.215	-81.215	0	%100
59	M85	SZ	-81.215	-81.215	0	%100
60	M87A	SZ	-81.215	-81.215	0	%100
61	M88	SZ	-81.215	-81.215	0	%100
62	M85A	SZ	-81.215	-81.215	0	%100
63	M87B	SZ	-81.215	-81.215	0	%100
64	M89A	SZ	-81.215	-81.215	0	%100
65	M90A	SZ	-81.215	-81.215	0	%100
66	M91	SZ	-81.215	-81.215	0	%100
67	M93A	SZ	-81.215	-81.215	0	%100
68	M95A	SZ	-81.215	-81.215	0	%100
69	M96A	SZ	-81.215	-81.215	0	%100
70	M44	SZ	-81.215	-81.215	0	%100
71	M96B	SZ	-81.215	-81.215	0	%100
72	M88B	SZ	-81.215	-81.215	0	%100
73	M90B	SZ	-81.215	-81.215	0	%100
74	M73A	SZ	-81.215	-81.215	0	%100
75	M75A	SZ	-81.215	-81.215	0	%100
76	M76	SZ	-81.215	-81.215	0	%100
77	M78A	SZ	-81.215	-81.215	0	%100
78	M79	SZ	-81.215	-81.215	0	%100
79	M81A	SZ	-81.215	-81.215	0	%100
80	M82A	SZ	-81.215	-81.215	0	%100
81	M84A	SZ	-81.215	-81.215	0	%100
82	M82	SZ	-81.215	-81.215	0	%100
83	M83	SZ	-81.215	-81.215	0	%100
84	M84	SZ	-81.215	-81.215	0	%100
85	M85C	SZ	0	0	0	%100
86	M86A	SZ	0	0	0	%100
87	M87D	SZ	0	0	0	%100
88	M88A	SZ	0	0	0	%100
89	M89B	SZ	-81.215	-81.215	0	%100
90	M90D	SZ	-81.215	-81.215	0	%100
91	M91B	SZ	0	0	0	%100
92	M92A	SZ	0	0	0	%100
93	M93C	SZ	0	0	0	%100
94	M94	SZ	0	0	0	%100
95	M95C	SZ	-81.215	-81.215	0	%100
96	M96D	SZ	-81.215	-81.215	0	%100
97	M97	SZ	0	0	0	%100
98	M98A	SZ	0	0	0	%100
99	M99A	SZ	0	0	0	%100
100	M100	SZ	0	0	0	%100
101	M101	SZ	-81.215	-81.215	0	%100
102	M102	SZ	-81.215	-81.215	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
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Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
1	M1	SX	-81.215	-81.215	0	%100
2	M3	SX	-81.215	-81.215	0	%100
3	M5	SX	-81.215	-81.215	0	%100
4	M85B	SX	-81.215	-81.215	0	%100
5	M86C	SX	-81.215	-81.215	0	%100
6	M87C	SX	-81.215	-81.215	0	%100
7	M88C	SX	-81.215	-81.215	0	%100
8	M89C	SX	-81.215	-81.215	0	%100
9	M90C	SX	-81.215	-81.215	0	%100
10	M22	SX	0	0	0	%100
11	M23	SX	0	0	0	%100
12	M24	SX	0	0	0	%100
13	M28	SX	0	0	0	%100
14	M30	SX	0	0	0	%100
15	M34	SX	0	0	0	%100
16	M36	SX	0	0	0	%100
17	M72	SX	0	0	0	%100
18	M73	SX	0	0	0	%100
19	M74	SX	0	0	0	%100
20	M75	SX	0	0	0	%100
21	M77	SX	0	0	0	%100
22	M78	SX	0	0	0	%100
23	M80	SX	0	0	0	%100
24	M86	SX	0	0	0	%100
25	M87	SX	0	0	0	%100
26	M89	SX	0	0	0	%100
27	M90	SX	0	0	0	%100
28	M92	SX	0	0	0	%100
29	M93	SX	0	0	0	%100
30	M95	SX	0	0	0	%100
31	M96	SX	0	0	0	%100
32	M98	SX	0	0	0	%100
33	M99	SX	0	0	0	%100
34	M91A	SX	-81.215	-81.215	0	%100
35	M92B	SX	-81.215	-81.215	0	%100
36	M93B	SX	-81.215	-81.215	0	%100
37	M94A	SX	-81.215	-81.215	0	%100
38	M95B	SX	-81.215	-81.215	0	%100
39	M96C	SX	-81.215	-81.215	0	%100
40	MP1	SX	-48.729	-48.729	0	%100
41	MP2	SX	-48.729	-48.729	0	%100
42	MP4	SX	-48.729	-48.729	0	%100
43	MP9	SX	-48.729	-48.729	0	%100
44	MP12	SX	-48.729	-48.729	0	%100
45	MP5	SX	-48.729	-48.729	0	%100
46	MP8	SX	-48.729	-48.729	0	%100
47	MP3	SX	-48.729	-48.729	0	%100
48	MP6	SX	-48.729	-48.729	0	%100
49	MP7	SX	-48.729	-48.729	0	%100
50	MP10	SX	-48.729	-48.729	0	%100
51	MP11	SX	-48.729	-48.729	0	%100
52	M7	SX	-48.729	-48.729	0	%100
53	M8	SX	-48.729	-48.729	0	%100
54	M9	SX	-48.729	-48.729	0	%100
55	M70	SX	-48.729	-48.729	0	%100
56	M71	SX	-48.729	-48.729	0	%100
57	M81	SX	-48.729	-48.729	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in. %]	End Location[in. %]
58	M41	SX	-81.215	-81.215	0	%100
59	M85	SX	-81.215	-81.215	0	%100
60	M87A	SX	-81.215	-81.215	0	%100
61	M88	SX	-81.215	-81.215	0	%100
62	M85A	SX	-81.215	-81.215	0	%100
63	M87B	SX	-81.215	-81.215	0	%100
64	M89A	SX	-81.215	-81.215	0	%100
65	M90A	SX	-81.215	-81.215	0	%100
66	M91	SX	-81.215	-81.215	0	%100
67	M93A	SX	-81.215	-81.215	0	%100
68	M95A	SX	-81.215	-81.215	0	%100
69	M96A	SX	-81.215	-81.215	0	%100
70	M44	SX	-81.215	-81.215	0	%100
71	M96B	SX	-81.215	-81.215	0	%100
72	M88B	SX	-81.215	-81.215	0	%100
73	M90B	SX	-81.215	-81.215	0	%100
74	M73A	SX	-81.215	-81.215	0	%100
75	M75A	SX	-81.215	-81.215	0	%100
76	M76	SX	-81.215	-81.215	0	%100
77	M78A	SX	-81.215	-81.215	0	%100
78	M79	SX	-81.215	-81.215	0	%100
79	M81A	SX	-81.215	-81.215	0	%100
80	M82A	SX	-81.215	-81.215	0	%100
81	M84A	SX	-81.215	-81.215	0	%100
82	M82	SX	-81.215	-81.215	0	%100
83	M83	SX	-81.215	-81.215	0	%100
84	M84	SX	-81.215	-81.215	0	%100
85	M85C	SX	0	0	0	%100
86	M86A	SX	0	0	0	%100
87	M87D	SX	0	0	0	%100
88	M88A	SX	0	0	0	%100
89	M89B	SX	-81.215	-81.215	0	%100
90	M90D	SX	-81.215	-81.215	0	%100
91	M91B	SX	0	0	0	%100
92	M92A	SX	0	0	0	%100
93	M93C	SX	0	0	0	%100
94	M94	SX	0	0	0	%100
95	M95C	SX	-81.215	-81.215	0	%100
96	M96D	SX	-81.215	-81.215	0	%100
97	M97	SX	0	0	0	%100
98	M98A	SX	0	0	0	%100
99	M99A	SX	0	0	0	%100
100	M100	SX	0	0	0	%100
101	M101	SX	-81.215	-81.215	0	%100
102	M102	SX	-81.215	-81.215	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in. %]	End Location[in. %]
1	M1	Y	-22.697	-22.697	0	%100
2	M3	Y	-22.697	-22.697	0	%100
3	M5	Y	-22.697	-22.697	0	%100
4	M85B	Y	-22.697	-22.697	0	%100
5	M86C	Y	-22.697	-22.697	0	%100
6	M87C	Y	-22.697	-22.697	0	%100
7	M88C	Y	-22.697	-22.697	0	%100
8	M89C	Y	-22.697	-22.697	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
9	M90C	Y	-22.697	-22.697	0	%100
10	M22	Y	-6.615	-6.615	0	%100
11	M23	Y	-6.615	-6.615	0	%100
12	M24	Y	-6.615	-6.615	0	%100
13	M28	Y	-6.615	-6.615	0	%100
14	M30	Y	-6.615	-6.615	0	%100
15	M34	Y	-6.615	-6.615	0	%100
16	M36	Y	-6.615	-6.615	0	%100
17	M72	Y	-6.615	-6.615	0	%100
18	M73	Y	-6.615	-6.615	0	%100
19	M74	Y	-6.615	-6.615	0	%100
20	M75	Y	-6.615	-6.615	0	%100
21	M77	Y	-6.615	-6.615	0	%100
22	M78	Y	-6.615	-6.615	0	%100
23	M80	Y	-6.615	-6.615	0	%100
24	M86	Y	-6.615	-6.615	0	%100
25	M87	Y	-6.615	-6.615	0	%100
26	M89	Y	-6.615	-6.615	0	%100
27	M90	Y	-6.615	-6.615	0	%100
28	M92	Y	-6.615	-6.615	0	%100
29	M93	Y	-6.615	-6.615	0	%100
30	M95	Y	-6.615	-6.615	0	%100
31	M96	Y	-6.615	-6.615	0	%100
32	M98	Y	-6.615	-6.615	0	%100
33	M99	Y	-6.615	-6.615	0	%100
34	M91A	Y	-14.656	-14.656	0	%100
35	M92B	Y	-14.656	-14.656	0	%100
36	M93B	Y	-14.656	-14.656	0	%100
37	M94A	Y	-14.656	-14.656	0	%100
38	M95B	Y	-14.656	-14.656	0	%100
39	M96C	Y	-14.656	-14.656	0	%100
40	MP1	Y	-13.367	-13.367	0	%100
41	MP2	Y	-13.367	-13.367	0	%100
42	MP4	Y	-13.367	-13.367	0	%100
43	MP9	Y	-13.367	-13.367	0	%100
44	MP12	Y	-13.367	-13.367	0	%100
45	MP5	Y	-13.367	-13.367	0	%100
46	MP8	Y	-13.367	-13.367	0	%100
47	MP3	Y	-13.367	-13.367	0	%100
48	MP6	Y	-13.367	-13.367	0	%100
49	MP7	Y	-13.367	-13.367	0	%100
50	MP10	Y	-13.367	-13.367	0	%100
51	MP11	Y	-13.367	-13.367	0	%100
52	M7	Y	-16.566	-16.566	0	%100
53	M8	Y	-16.566	-16.566	0	%100
54	M9	Y	-16.566	-16.566	0	%100
55	M70	Y	-13.367	-13.367	0	%100
56	M71	Y	-13.367	-13.367	0	%100
57	M81	Y	-13.367	-13.367	0	%100
58	M41	Y	-23.732	-23.732	0	%100
59	M85	Y	-23.732	-23.732	0	%100
60	M87A	Y	-23.732	-23.732	0	%100
61	M88	Y	-23.732	-23.732	0	%100
62	M85A	Y	-23.732	-23.732	0	%100
63	M87B	Y	-23.732	-23.732	0	%100
64	M89A	Y	-23.732	-23.732	0	%100
65	M90A	Y	-23.732	-23.732	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
66	M91	Y	-23.732	-23.732	0	%100
67	M93A	Y	-23.732	-23.732	0	%100
68	M95A	Y	-23.732	-23.732	0	%100
69	M96A	Y	-23.732	-23.732	0	%100
70	M44	Y	-23.706	-23.706	0	%100
71	M96B	Y	-23.706	-23.706	0	%100
72	M88B	Y	-23.706	-23.706	0	%100
73	M90B	Y	-23.706	-23.706	0	%100
74	M73A	Y	-23.706	-23.706	0	%100
75	M75A	Y	-23.706	-23.706	0	%100
76	M76	Y	-23.706	-23.706	0	%100
77	M78A	Y	-23.706	-23.706	0	%100
78	M79	Y	-23.706	-23.706	0	%100
79	M81A	Y	-23.706	-23.706	0	%100
80	M82A	Y	-23.706	-23.706	0	%100
81	M84A	Y	-23.706	-23.706	0	%100
82	M82	Y	-16.667	-16.667	0	%100
83	M83	Y	-16.667	-16.667	0	%100
84	M84	Y	-16.667	-16.667	0	%100
85	M85C	Y	-6.615	-6.615	0	%100
86	M86A	Y	-6.615	-6.615	0	%100
87	M87D	Y	-6.615	-6.615	0	%100
88	M88A	Y	-6.615	-6.615	0	%100
89	M89B	Y	-16.667	-16.667	0	%100
90	M90D	Y	-16.667	-16.667	0	%100
91	M91B	Y	-6.615	-6.615	0	%100
92	M92A	Y	-6.615	-6.615	0	%100
93	M93C	Y	-6.615	-6.615	0	%100
94	M94	Y	-6.615	-6.615	0	%100
95	M95C	Y	-16.667	-16.667	0	%100
96	M96D	Y	-16.667	-16.667	0	%100
97	M97	Y	-6.615	-6.615	0	%100
98	M98A	Y	-6.615	-6.615	0	%100
99	M99A	Y	-6.615	-6.615	0	%100
100	M100	Y	-6.615	-6.615	0	%100
101	M101	Y	-16.667	-16.667	0	%100
102	M102	Y	-16.667	-16.667	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-14.441	-14.441	0	%100
2	M3	SZ	-14.441	-14.441	0	%100
3	M5	SZ	-14.441	-14.441	0	%100
4	M85B	SZ	-14.441	-14.441	0	%100
5	M86C	SZ	-14.441	-14.441	0	%100
6	M87C	SZ	-14.441	-14.441	0	%100
7	M88C	SZ	-14.441	-14.441	0	%100
8	M89C	SZ	-14.441	-14.441	0	%100
9	M90C	SZ	-14.441	-14.441	0	%100
10	M22	SZ	0	0	0	%100
11	M23	SZ	0	0	0	%100
12	M24	SZ	0	0	0	%100
13	M28	SZ	0	0	0	%100
14	M30	SZ	0	0	0	%100
15	M34	SZ	0	0	0	%100
16	M36	SZ	0	0	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
17	M72	SZ	0	0	0	%100
18	M73	SZ	0	0	0	%100
19	M74	SZ	0	0	0	%100
20	M75	SZ	0	0	0	%100
21	M77	SZ	0	0	0	%100
22	M78	SZ	0	0	0	%100
23	M80	SZ	0	0	0	%100
24	M86	SZ	0	0	0	%100
25	M87	SZ	0	0	0	%100
26	M89	SZ	0	0	0	%100
27	M90	SZ	0	0	0	%100
28	M92	SZ	0	0	0	%100
29	M93	SZ	0	0	0	%100
30	M95	SZ	0	0	0	%100
31	M96	SZ	0	0	0	%100
32	M98	SZ	0	0	0	%100
33	M99	SZ	0	0	0	%100
34	M91A	SZ	-20.959	-20.959	0	%100
35	M92B	SZ	-20.959	-20.959	0	%100
36	M93B	SZ	-20.959	-20.959	0	%100
37	M94A	SZ	-20.959	-20.959	0	%100
38	M95B	SZ	-20.959	-20.959	0	%100
39	M96C	SZ	-20.959	-20.959	0	%100
40	MP1	SZ	-23.448	-23.448	0	%100
41	MP2	SZ	-23.448	-23.448	0	%100
42	MP4	SZ	-23.448	-23.448	0	%100
43	MP9	SZ	-23.448	-23.448	0	%100
44	MP12	SZ	-23.448	-23.448	0	%100
45	MP5	SZ	-23.448	-23.448	0	%100
46	MP8	SZ	-23.448	-23.448	0	%100
47	MP3	SZ	-23.448	-23.448	0	%100
48	MP6	SZ	-23.448	-23.448	0	%100
49	MP7	SZ	-23.448	-23.448	0	%100
50	MP10	SZ	-23.448	-23.448	0	%100
51	MP11	SZ	-23.448	-23.448	0	%100
52	M7	SZ	-18.458	-18.458	0	%100
53	M8	SZ	-18.458	-18.458	0	%100
54	M9	SZ	-18.458	-18.458	0	%100
55	M70	SZ	-23.448	-23.448	0	%100
56	M71	SZ	-23.448	-23.448	0	%100
57	M81	SZ	-23.448	-23.448	0	%100
58	M41	SZ	-14.047	-14.047	0	%100
59	M85	SZ	-14.047	-14.047	0	%100
60	M87A	SZ	-14.047	-14.047	0	%100
61	M88	SZ	-14.047	-14.047	0	%100
62	M85A	SZ	-14.047	-14.047	0	%100
63	M87B	SZ	-14.047	-14.047	0	%100
64	M89A	SZ	-14.047	-14.047	0	%100
65	M90A	SZ	-14.047	-14.047	0	%100
66	M91	SZ	-14.047	-14.047	0	%100
67	M93A	SZ	-14.047	-14.047	0	%100
68	M95A	SZ	-14.047	-14.047	0	%100
69	M96A	SZ	-14.047	-14.047	0	%100
70	M44	SZ	-14.056	-14.056	0	%100
71	M96B	SZ	-14.056	-14.056	0	%100
72	M88B	SZ	-14.056	-14.056	0	%100
73	M90B	SZ	-14.056	-14.056	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
74	M73A	SZ	-14.056	-14.056	0	%100
75	M75A	SZ	-14.056	-14.056	0	%100
76	M76	SZ	-14.056	-14.056	0	%100
77	M78A	SZ	-14.056	-14.056	0	%100
78	M79	SZ	-14.056	-14.056	0	%100
79	M81A	SZ	-14.056	-14.056	0	%100
80	M82A	SZ	-14.056	-14.056	0	%100
81	M84A	SZ	-14.056	-14.056	0	%100
82	M82	SZ	-18.352	-18.352	0	%100
83	M83	SZ	-18.352	-18.352	0	%100
84	M84	SZ	-18.352	-18.352	0	%100
85	M85C	SZ	0	0	0	%100
86	M86A	SZ	0	0	0	%100
87	M87D	SZ	0	0	0	%100
88	M88A	SZ	0	0	0	%100
89	M89B	SZ	-18.352	-18.352	0	%100
90	M90D	SZ	-18.352	-18.352	0	%100
91	M91B	SZ	0	0	0	%100
92	M92A	SZ	0	0	0	%100
93	M93C	SZ	0	0	0	%100
94	M94	SZ	0	0	0	%100
95	M95C	SZ	-18.352	-18.352	0	%100
96	M96D	SZ	-18.352	-18.352	0	%100
97	M97	SZ	0	0	0	%100
98	M98A	SZ	0	0	0	%100
99	M99A	SZ	0	0	0	%100
100	M100	SZ	0	0	0	%100
101	M101	SZ	-18.352	-18.352	0	%100
102	M102	SZ	-18.352	-18.352	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
1	M1	SX	-14.441	-14.441	0	%100
2	M3	SX	-14.441	-14.441	0	%100
3	M5	SX	-14.441	-14.441	0	%100
4	M85B	SX	-14.441	-14.441	0	%100
5	M86C	SX	-14.441	-14.441	0	%100
6	M87C	SX	-14.441	-14.441	0	%100
7	M88C	SX	-14.441	-14.441	0	%100
8	M89C	SX	-14.441	-14.441	0	%100
9	M90C	SX	-14.441	-14.441	0	%100
10	M22	SX	0	0	0	%100
11	M23	SX	0	0	0	%100
12	M24	SX	0	0	0	%100
13	M28	SX	0	0	0	%100
14	M30	SX	0	0	0	%100
15	M34	SX	0	0	0	%100
16	M36	SX	0	0	0	%100
17	M72	SX	0	0	0	%100
18	M73	SX	0	0	0	%100
19	M74	SX	0	0	0	%100
20	M75	SX	0	0	0	%100
21	M77	SX	0	0	0	%100
22	M78	SX	0	0	0	%100
23	M80	SX	0	0	0	%100
24	M86	SX	0	0	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in. %]	End Location[in. %]
25	M87	SX	0	0	0	%100
26	M89	SX	0	0	0	%100
27	M90	SX	0	0	0	%100
28	M92	SX	0	0	0	%100
29	M93	SX	0	0	0	%100
30	M95	SX	0	0	0	%100
31	M96	SX	0	0	0	%100
32	M98	SX	0	0	0	%100
33	M99	SX	0	0	0	%100
34	M91A	SX	-20.959	-20.959	0	%100
35	M92B	SX	-20.959	-20.959	0	%100
36	M93B	SX	-20.959	-20.959	0	%100
37	M94A	SX	-20.959	-20.959	0	%100
38	M95B	SX	-20.959	-20.959	0	%100
39	M96C	SX	-20.959	-20.959	0	%100
40	MP1	SX	-23.448	-23.448	0	%100
41	MP2	SX	-23.448	-23.448	0	%100
42	MP4	SX	-23.448	-23.448	0	%100
43	MP9	SX	-23.448	-23.448	0	%100
44	MP12	SX	-23.448	-23.448	0	%100
45	MP5	SX	-23.448	-23.448	0	%100
46	MP8	SX	-23.448	-23.448	0	%100
47	MP3	SX	-23.448	-23.448	0	%100
48	MP6	SX	-23.448	-23.448	0	%100
49	MP7	SX	-23.448	-23.448	0	%100
50	MP10	SX	-23.448	-23.448	0	%100
51	MP11	SX	-23.448	-23.448	0	%100
52	M7	SX	-18.458	-18.458	0	%100
53	M8	SX	-18.458	-18.458	0	%100
54	M9	SX	-18.458	-18.458	0	%100
55	M70	SX	-23.448	-23.448	0	%100
56	M71	SX	-23.448	-23.448	0	%100
57	M81	SX	-23.448	-23.448	0	%100
58	M41	SX	-14.047	-14.047	0	%100
59	M85	SX	-14.047	-14.047	0	%100
60	M87A	SX	-14.047	-14.047	0	%100
61	M88	SX	-14.047	-14.047	0	%100
62	M85A	SX	-14.047	-14.047	0	%100
63	M87B	SX	-14.047	-14.047	0	%100
64	M89A	SX	-14.047	-14.047	0	%100
65	M90A	SX	-14.047	-14.047	0	%100
66	M91	SX	-14.047	-14.047	0	%100
67	M93A	SX	-14.047	-14.047	0	%100
68	M95A	SX	-14.047	-14.047	0	%100
69	M96A	SX	-14.047	-14.047	0	%100
70	M44	SX	-14.056	-14.056	0	%100
71	M96B	SX	-14.056	-14.056	0	%100
72	M88B	SX	-14.056	-14.056	0	%100
73	M90B	SX	-14.056	-14.056	0	%100
74	M73A	SX	-14.056	-14.056	0	%100
75	M75A	SX	-14.056	-14.056	0	%100
76	M76	SX	-14.056	-14.056	0	%100
77	M78A	SX	-14.056	-14.056	0	%100
78	M79	SX	-14.056	-14.056	0	%100
79	M81A	SX	-14.056	-14.056	0	%100
80	M82A	SX	-14.056	-14.056	0	%100
81	M84A	SX	-14.056	-14.056	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
82	M82	SX	-18.352	-18.352	0	%100
83	M83	SX	-18.352	-18.352	0	%100
84	M84	SX	-18.352	-18.352	0	%100
85	M85C	SX	0	0	0	%100
86	M86A	SX	0	0	0	%100
87	M87D	SX	0	0	0	%100
88	M88A	SX	0	0	0	%100
89	M89B	SX	-18.352	-18.352	0	%100
90	M90D	SX	-18.352	-18.352	0	%100
91	M91B	SX	0	0	0	%100
92	M92A	SX	0	0	0	%100
93	M93C	SX	0	0	0	%100
94	M94	SX	0	0	0	%100
95	M95C	SX	-18.352	-18.352	0	%100
96	M96D	SX	-18.352	-18.352	0	%100
97	M97	SX	0	0	0	%100
98	M98A	SX	0	0	0	%100
99	M99A	SX	0	0	0	%100
100	M100	SX	0	0	0	%100
101	M101	SX	-18.352	-18.352	0	%100
102	M102	SX	-18.352	-18.352	0	%100

Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
1	M1	Y	-1.979	-1.979	29.433	49.703
2	M85B	Y	-1.893	-1.893	18.63	28.301
3	M86C	Y	-1.893	-1.893	2	11.671
4	M91A	Y	-.211	-.89	0	25.677
5	M91A	Y	-.89	-1.569	25.677	51.353
6	M92B	Y	-.211	-.89	0	25.677
7	M92B	Y	-.89	-1.569	25.677	51.353
8	M5	Y	-3.957	-3.957	29.433	49.703
9	M89C	Y	-3.786	-3.786	18.63	28.3
10	M90C	Y	-3.786	-3.786	2	11.671
11	M95B	Y	-.423	-1.78	0	25.677
12	M95B	Y	-1.78	-3.137	25.677	51.353
13	M96C	Y	-.423	-1.78	0	25.676
14	M96C	Y	-1.78	-3.137	25.676	51.353
15	M3	Y	-1.979	-1.979	29.433	49.703
16	M87C	Y	-1.893	-1.893	18.63	28.301
17	M88C	Y	-1.893	-1.893	2	11.671
18	M93B	Y	-.211	-.89	0	25.677
19	M93B	Y	-.89	-1.569	25.677	51.353
20	M94A	Y	-.211	-.89	0	25.677
21	M94A	Y	-.89	-1.569	25.677	51.353

Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/f...	Start Location[in.%]	End Location[in.%]
1	M1	Y	-24.995	-24.995	29.433	49.703
2	M85B	Y	-23.915	-23.915	18.63	28.301
3	M86C	Y	-23.916	-23.916	2	11.671
4	M91A	Y	-2.67	-11.242	0	25.677
5	M91A	Y	-11.242	-19.814	25.677	51.353
6	M92B	Y	-2.67	-11.242	0	25.677
7	M92B	Y	-11.242	-19.813	25.677	51.353
8	M5	Y	-49.99	-49.99	29.433	49.703

Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/f...	Start Location[in, %]	End Location[in, %]
9	M89C	Y	-47.83	-47.83	18.63	28.3
10	M90C	Y	-47.831	-47.831	2	11.671
11	M95B	Y	-5.34	-22.484	0	25.677
12	M95B	Y	-22.484	-39.628	25.677	51.353
13	M96C	Y	-5.34	-22.483	0	25.676
14	M96C	Y	-22.483	-39.627	25.676	51.353
15	M3	Y	-24.995	-24.995	29.433	49.703
16	M87C	Y	-23.915	-23.915	18.63	28.301
17	M88C	Y	-23.916	-23.916	2	11.671
18	M93B	Y	-2.67	-11.242	0	25.677
19	M93B	Y	-11.242	-19.814	25.677	51.353
20	M94A	Y	-2.67	-11.242	0	25.677
21	M94A	Y	-11.242	-19.813	25.677	51.353

Site Name:	10/28/2019
Client:	Smartlink
Carrier:	AT&T
Engineer:	IP
Date:	10/28/2019
Job #:	1106-A0001-B
Site #	CTL01227

Code:	LRFD
Bolt Diameter	0.625
Bolt Grade:	A307
Threads Excluded?:	N
Axial (lbs):	3541.84
Shear (lbs):	1841.71

Bolt Info:	
Yield Strength (F_{yb})	36.0 ksi
Ultimate Strength (F_{ub})	60.0 ksi
Threads/in (n)	11
Gross Area (A_{gb})	0.307 in ²
Net Area (A_{nb})	0.226 in ²

Bolt Capacity (Assumed 5/8" A307 threaded rods)				
	Ult Load / Bolt	Factored Load ($\phi=0.75$)	# of Bolts	Factor Joint Capacity
Axial (lb)	13560.1	10170.1	4	40680
Shear(lb)	8283.5	6212.6	4	24850

Interaction Check		
$T / \phi T_n$		8.7%
$V / \phi V_n$		7.4%
≤ 1.0		1.3%
		OK



Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Bolton - Carpenter Road

Site FA: 10126687

Site ID: CTL01227

12-14 Carpenter Road, Bolton, CT 06043

Latitude: 41.7790833 Longitude: -72.4653056

Structure Type: Monopole

Report Date: October 4, 2019



Status: AT&T will be compliant with FCC rules on RF Exposure with the signage recommendation in section 4 of this report.

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1. Executive Summary:

Smartlink on behalf of AT&T has contracted Infinigy Solutions, LLC to determine whether the site Bolton - Carpenter Road located at 12-14 Carpenter Road in Bolton, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as "Occupational or Controlled" and "General Public or Uncontrolled" (see Appendix A and B).

This document and the conclusions herein are based on information provided by Smartlink on behalf of AT&T.

As a result of the analysis, **AT&T Will Be Compliant with FCC rules with the installation of signage recommended in section 4.**

Engineering assumptions were made regarding the collation operator(s). The assumptions were made based upon typical deployment configurations and practices of the operator(s).

All Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0342
	% Exposure	2.54%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0180
	% Exposure	0.54%

2. Site Summary:

Site Information	
Site Name: Bolton - Carpenter Road	
Site Address: 12-14 Carpenter Road, Bolton, CT 06043	
Site Type: Monopole	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Caution 2 sign.

Note: The above signage recommendation is moot if there is an existing caution 2 sign at the base of the tower.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
1a	Alpha	AT&T	CCI	HPA65R-BU8	850	150	2120
2a	Alpha	AT&T	CCI	TPA65R-BU8A	700	150	2951
2b	Alpha	AT&T	CCI	TPA65R-BU8A	2100	150	3837
3a	Alpha	AT&T	CCI	DMP65R-BU8D	700	150	1476
3b	Alpha	AT&T	CCI	DMP65R-BU8D	1900	150	3664
3c	Alpha	AT&T	CCI	DMP65R-BU8D	850	150	1000
3d	Alpha	AT&T	CCI	DMP65R-BU8D	850	150	1000
4a	Beta	AT&T	CCI	HPA65R-BU8	850	150	2120
4b	Beta	AT&T	CCI	HPA65R-BU8	1900	150	2070
5a	Beta	AT&T	CCI	TPA65R-BU8A	700	150	2951
5b	Beta	AT&T	CCI	TPA65R-BU8A	2100	150	3837
6a	Beta	AT&T	CCI	DMP65R-BU8D	700	150	1476
6b	Beta	AT&T	CCI	DMP65R-BU8D	1900	150	3664
6c	Beta	AT&T	CCI	DMP65R-BU8D	850	150	1000
6d	Beta	AT&T	CCI	DMP65R-BU8D	850	150	1000
7a	Gamma	AT&T	CCI	HPA65R-BU8	850	150	2120
7b	Gamma	AT&T	CCI	HPA65R-BU8	1900	150	2070
8a	Gamma	AT&T	CCI	TPA65R-BU8A	700	150	2951
8b	Gamma	AT&T	CCI	TPA65R-BU8A	2100	150	3837
9a	Gamma	AT&T	CCI	DMP65R-BU8D	700	150	1476
9b	Gamma	AT&T	CCI	DMP65R-BU8D	1900	150	3664
9c	Gamma	AT&T	CCI	DMP65R-BU8D	850	150	1000
9d	Gamma	AT&T	CCI	DMP65R-BU8D	850	150	1000
10	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	700	134.75	1548
11	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	2100	134.75	2124

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
12	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	1900	134.75	1911
13	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	850	134.75	1549
14	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	700	134.75	1548
17	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	850	134.75	1549
18	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	700	134.75	1548
19	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	2100	134.75	2124
20	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	1900	134.75	1911
21	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	850	134.75	1549
22a	Alpha	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100	124.1	3347
22b	Alpha	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900	124.1	3449
23a	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	600	124.1	2920
23b	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	700	124.1	3143
24a	Alpha	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	2587
24b	Alpha	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	1724
25a	Beta	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100	124.1	3347
25b	Beta	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900	124.1	3449
26a	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	600	124.1	2920
26b	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	700	124.1	3143
27a	Beta	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	2587
27b	Beta	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	1724
28a	Gamma	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100	124.1	3347

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
28b	Gamma	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900	124.1	3449
29a	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	600	124.1	2920
29b	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	700	124.1	3143
30a	Gamma	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	2587
30b	Gamma	T-Mobile	Ericsson	AIRKRC118023-1	1900	124.1	1724

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

- a) **Worksite:** Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.
- b) **RF Safety Training and Awareness:** All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.
- c) **Site Access:** Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:
 - Locked doors/gates/ladder access
 - Alarmed doors
 - Restrictive barriers
- d) **Three-foot Buffer:** There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.
- e) **Antennas:** Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

Attachment 1: AT&T Exposure Analysis

AT&T 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.5
	Exposure values at the site (mW/cm ²)	0.0032
	% Exposure	0.64%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0032
	% Exposure	0.14%

AT&T 850 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0015
	% Exposure	0.26%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0015
	% Exposure	0.05%

AT&T 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0007
	% Exposure	0.12%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0007
	% Exposure	0.03%

AT&T 850 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0007
	% Exposure	0.12%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0007
	% Exposure	0.03%

AT&T 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0027
	% Exposure	0.27%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0027
	% Exposure	0.05%

AT&T 1900 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0015
	% Exposure	0.15%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0015
	% Exposure	0.03%

AT&T 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0028
	% Exposure	0.28%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0028
	% Exposure	0.06%

Attachment 2: Verizon Wireless Exposure Analysis

Verizon Wireless 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.5
	Exposure values at the site (mW/cm ²)	0.0014
	% Exposure	0.27%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0014
	% Exposure	0.06%

Verizon Wireless 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0014
	% Exposure	0.23%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0014
	% Exposure	0.05%

Verizon Wireless 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0017
	% Exposure	0.17%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0017
	% Exposure	0.03%

Verizon Wireless 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0019
	% Exposure	0.19%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0019
	% Exposure	0.04%

Attachment 3: T-Mobile Exposure Analysis

T-Mobile 600 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.4
	Exposure values at the site (mW/cm ²)	0.0037
	% Exposure	0.92%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0037
	% Exposure	0.1608%

T-Mobile 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.5
	Exposure values at the site (mW/cm ²)	0.0040
	% Exposure	0.80%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0040
	% Exposure	0.1731%

T-Mobile 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0044
	% Exposure	0.44%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0044
	% Exposure	0.0874%

T-Mobile 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0042
	% Exposure	0.42%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0042
	% Exposure	0.0848%

Attachment 4: Combined Exposure Analysis for each Carrier

AT&T All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0131
	% Exposure	1.69%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0131
	% Exposure	0.36%

Verizon Wireless All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0063
	% Exposure	0.86%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0063
	% Exposure	0.18%

T-Mobile All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0163
	% Exposure	2.58%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0203
	% Exposure	0.51%

7. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm².

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when 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 (see below), 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. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

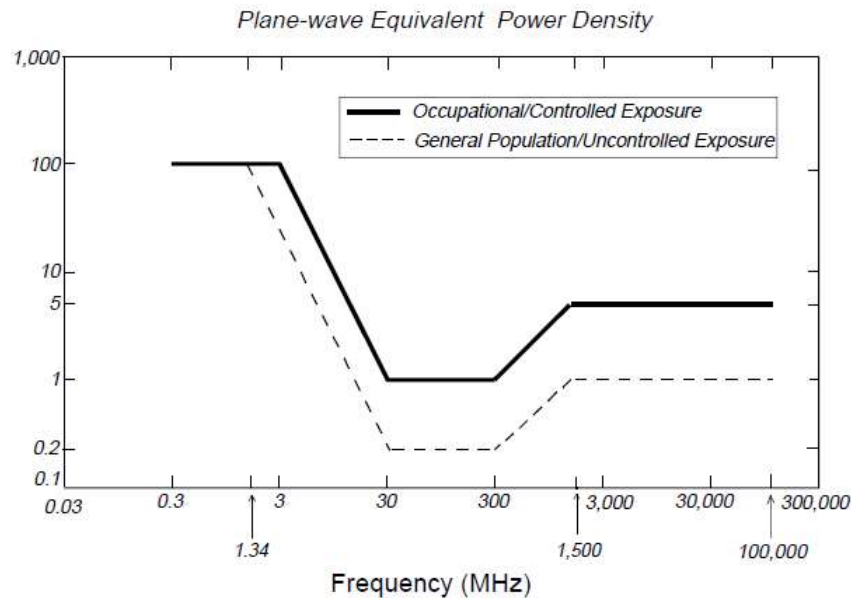
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(a) Each employer

- 1) Shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious harm to his employees
- 2) Shall comply with occupational safety and health standards promulgated under this act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

8. Appendix B: Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Health Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in 1) RF safety and 2) RF modeling using RoofView modeling software.

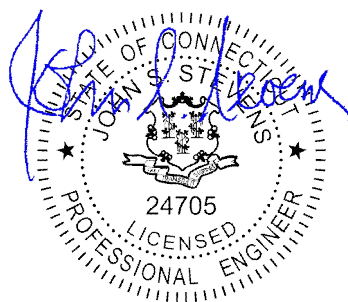
I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris

10/4/2019

Signature

Date



10/07/2019

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Friday, November 15, 2019 10:14 AM
To: Kristina Cottone
Subject: FedEx Shipment 776759911739 Delivered

Your package has been delivered

Tracking # 776759911739

Ship date:
Thu, 11/14/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Fri, 11/15/2019 10:13 am

Terry L. Veo
TERRY L. VEO
23 BOLTON CENTER RD
BOLTON, CT 06043720523
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776759911739](#)

Status: Delivered: 11/15/2019 10:13 AM
Signed for By: Signature Not Req

Reference: CTL01227 Bolton

Signed for by: Signature Not Req

Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 11/15/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:14 AM CST on 11/15/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Tuesday, November 19, 2019 12:21 PM
To: Kristina Cottone
Subject: FedEx Shipment 776759862737 Delivered

Your package has been delivered

Tracking # 776759862737

Ship date:
Thu, 11/14/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Tue, 11/19/2019 12:19 pm

ATTN: Jim Rupert
TOWN OF BOLTON, CT
222 BOLTON CENTER RD
BOLTON, CT 06043763622
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776759862737](#)

Status: Delivered: 11/19/2019 12:19 PM
Signed for By: Signature on File

Reference: CTL01227 Bolton

Signed for by: Signature on File

Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 11/15/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 11:21 AM CST on 11/19/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Tuesday, November 19, 2019 12:21 PM
To: Kristina Cottone
Subject: FedEx Shipment 776759889126 Delivered

Your package has been delivered

Tracking # 776759889126

Ship date:
Thu, 11/14/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Tue, 11/19/2019 12:19 pm

Sandra Pierog
TOWN OF BOLTON
222 BOLTON CENTER RD
BOLTON, CT 06043763622
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776759889126](#)

Status: Delivered: 11/19/2019 12:19 PM
Signed for By: Signature on File

Reference: CTL01227 Bolton

Signed for by: Signature on File

Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 11/15/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 11:20 AM CST on 11/19/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Monday, November 18, 2019 5:33 PM
To: Kristina Cottone
Subject: FedEx Shipment 776759925584 Delivered

Your package has been delivered

Tracking # 776759925584

Ship date:
Thu, 11/14/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Mon, 11/18/2019 5:30 pm

Carla Shorter
SBA COMMUNICATIONS
CORP.
8051 CONGRESS AVE
BOCA RATON, FL
33487131099
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776759925584](#)

Status: Delivered: 11/18/2019 5:30 PM
Signed for By: JMEETZ

Reference: CTL01227 Bolton

Signed for by: JMEETZ

Delivery location: Boca Raton, FL

Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 11/19/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 4:32 PM CST on 11/18/2019.

All weights are estimated.

SHEET INDEX

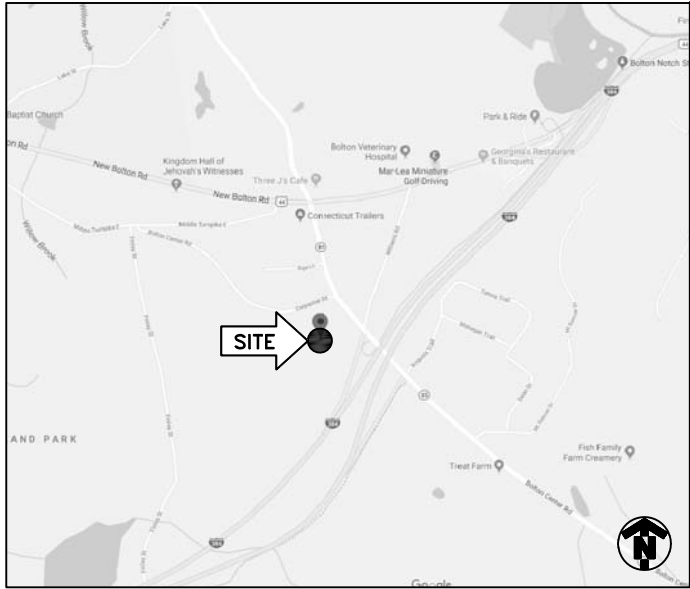
NO.	DESCRIPTION
T1	TITLE SHEET
C1	GENERAL NOTES
C2	OVERALL SITE PLAN
C2A	ENLARGED SITE PLAN
C3	ELEVATION VIEW
C4	ANTENNA ORIENTATION PLAN
C5	EQUIPMENT DETAILS
C5A	EQUIPMENT DETAILS
C6	PLUMBING DIAGRAM
C7	GROUNDING DETAILS

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUSETTS TURNPIKE. HEAD NORTHEAST TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO LEGGATT MCCALL CONN. CONTINUE ONTO BURR STREET. TURN LEFT ONTO COCHITUATE ROAD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 EAST/MASSPIKE WEST/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 WEST/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. FOLLOW I-90 WEST/MASSACHUSETTS TURNPIKE AND I-84 TO STATE HWY 542 IN VERNON. TAKE EXIT 66 FROM I-84. MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD US-20/HARTFORD/NEW YORK CITY. CONTINUE ONTO I-84. TAKE EXIT 66 TOWARD TUNNEL ROAD/VERNON/BOLTON. TAKE STATE HWY 533 TO CARPENTER ROAD IN BOLTON. TURN LEFT ONTO STATE HWY 542. TURN LEFT ONTO STATE HWY 533. TURN LEFT ONTO STATE HWY 533/LAKE STREET. SLIGHT LEFT ONTO STATE HWY 533. CONTINUE ONTO CT-85 SOUTH. TURN RIGHT ONTO CARPENTER ROAD.

LOCATION MAP





PROJECT

LTE 2C/3C/4C/5C/RETROFIT/DUS UPGRADE

SITE NAME

BOLTON - CARPENTER ROAD

CELL SITE ID

CTL01227

FA SITE NUMBER

10126687

PACE ID

MRCTB042114/MRCTB024529/MRCTB024383
MRCTB042129/MRCTB042127/MRCTB040244

SITE ADDRESS

12-14 CARPENTER ROAD
BOLTON, CT 06043

STRUCTURE TYPE

MONOPOLE



PROJECT MANAGER



1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED 08/06/2019 V5.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

TOWER

- REMOVE (9) PANEL ANTENNAS
- INSTALL (9) PANEL ANTENNAS
- REMOVE (3) RRUS-11 B12
- REMOVE (12) 1-5/8" COAX & REPLACE WITH (6) NEW 1-5/8" COAX
- REMOVE (2) DC & (1) FIBER CABLE
- REMOVE (6) DIPLEXERS
- INSTALL (3) B14 4478
- INSTALL (3) 8843 B2/B66A
- INSTALL (3) 4449 B5/B12
- INSTALL (2) DC6 SQUID W/ (2) FIBER AND (6) DC CABLES
- INSTALL MONOPOLE EXTENSION (BY OTHERS)
- RELOCATE AT&T RAD CENTER TO 150', INSTALL NEW RMQP-496-HK PLATFORM MOUNT

GROUND

- SWAP BB W/ (2) 6630
- ADD IDLE CABLE
- RIP AND REPLACE EXISTING POWER PLANT WITH NEW NETSURE 7100 W/ BATTERIES
- INSTALL (1) RACK MOUNTED DC12
- REMOVE (6) DIPLEXERS
- INSTALL (1) FIBER MANAGEMENT BOX

PROJECT SUMMARY

SITE NAME: BOLTON - CARPENTER ROAD

CELL SITE ID: CTL01227

FA SITE #: 10126687

SITE ADDRESS: 12-14 CARPENTER ROAD
BOLTON, CT 06043

COUNTY: TOLLAND

SITE COORDINATES:
LATITUDE: 41.7790833° N (NAD 83)
LONGITUDE: 72.4653056° W (NAD 83)

RAD CENTER ±150' (AGL)

LANDLORD: TBD

APPLICANT: AT&T MOBILITY
550 COCHITUATE RD.
FRAMINGHAM, MA 01701

CLIENT REPRESENTATIVE: SMARTLINK, LLC
85 RANGEWAY RD., BUILDING 3, SUITE 102
NORTH BILLERICA, MA 01862

CONTACT: SHARON KEEFE
SMARTLINK, LLC

ENGINEER: INFINIGY
1033 WATERVLIET SHAKER ROAD
ALBANY, NY 12205

CONTACT: ALEX WELLER
(518) 690-0790

BUILDING CODE: 2018 CT STATE BUILDING CODE
2015 INTERNATIONAL BUILDING CODE
ANSI/TIA-222 G
2015 INTERNATIONAL PLUMBING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2017 NFPA 70

ELECTRICAL CODE: NATIONAL ELECTRICAL CODE (LATEST EDITION)



Know what's below.
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TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG TOLL FREE: 1-800-922-4455 OR www.cbyd.com

CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE



INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793



10/30/2019
24705
PROFESSIONAL ENGINEER

3	REVISED FOR PERMIT	ASW	10/30/19
2	REVISED FOR PERMIT	BMM	10/16/19
1	ISSUED FOR PERMIT	ASW	10/04/19
0	ISSUED FOR REVIEW	BMM	09/13/19

No. Submittal / Revision App'd Date

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AD Date: 09/13/19

Project Number: 499-006

Project Title: BOLTON - CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

Prepared For: smartlink

Drawing Scale: AS NOTED

Date: 10/30/19

Drawing Title: TITLE PAGE

Drawing Number: T1

GENERAL NOTES			
<u>PART 1 – GENERAL REQUIREMENTS</u> 1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING: A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT. C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC"). D. AND NFPA 101 (LIFE SAFETY CODE). E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM). F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).		F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS. G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.	
1.2 DEFINITIONS: A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS. B: COMPANY: AT&T CORPORATION C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT. D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK. E: THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.		<u>PART 6 – TRENCHING AND BACKFILLING</u> 6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.	
1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.		A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.	
1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.		B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.	
1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION. A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.		C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.	
1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.		D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.	
1.7 NOTICE TO PROCEED: A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED. B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.		E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.	
<u>PART 2 – EXECUTION</u> 2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.		F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.	
2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.		G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.	
2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HERewith, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.			

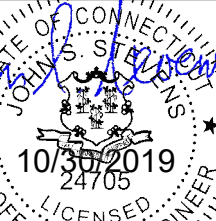
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
	TRANSFORMER
	KILOWATT HOUR METER
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
-----	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
 OR 	GROUND ROD
 OR 	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
	REPRESENTS DETAIL NUMBER
	REF. DRAWING NUMBER

ABBREVIATIONS	
CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

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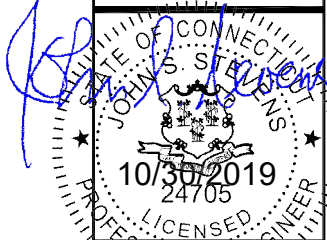


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Checked: <u>AJD</u> Date: <u>09/13/19</u>		
Project Number: <u>499-006</u>		
Project Title: BOLTON - CARPENTER ROAD		
CTL01227 FA# 10126687 12-14 CARPENTER ROAD BOLTON, CT 06043		
Prepared For: 		
Drawing Scale: <u>AS NOTED</u>		
Drawing Title: GENERAL NOTES		
Drawing Number: C1		



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Project Number:
499-006

Project Title:
BOLTON - CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

Prepared For:

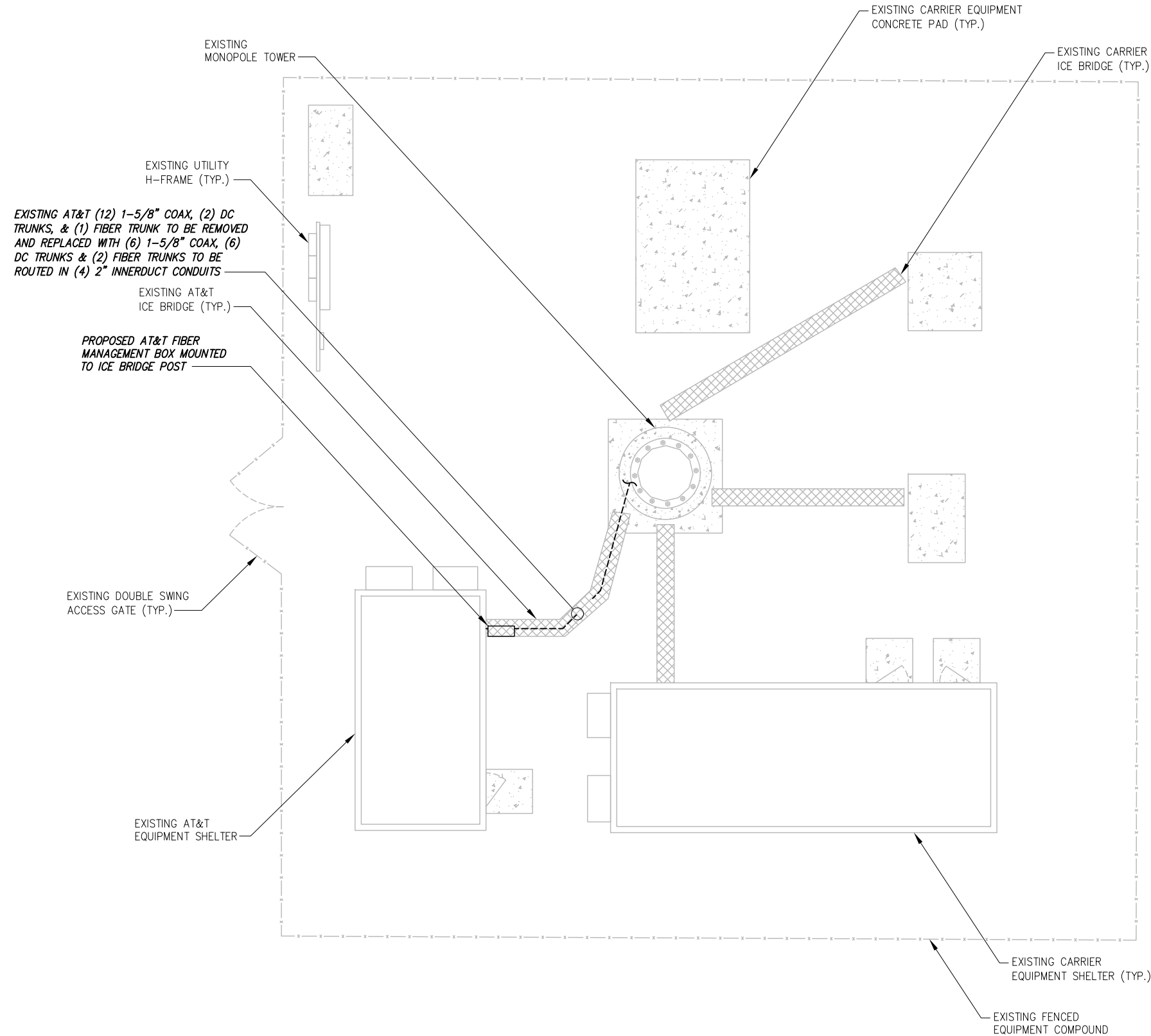

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Date:
10/30/19



Drawing Title
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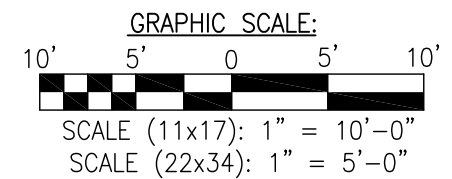
Drawing Number
C1



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



1 SITE PLAN
SCALE: AS NOTED



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BOLTON - CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

Prepared For:

Drawing Scale: <u>AS NOTED</u>	CD
Date: <u>10/30/19</u>	

Drawing Title
OVERALL SITE PLAN

Drawing Number
C2

EXISTING AT&T DIPLEXER
RACK, REMOVE (6) GSM
DIPLEXERS TO BE REMOVED

EXISTING HVAC
UNIT (TYP.)

EXISTING AT&T (12) 1-5/8" COAX, (2) DC TRUNKS, &
(1) FIBER TRUNK TO BE REMOVED AND REPLACED WITH
(6) 1-5/8" COAX, (6) DC TRUNKS & (2) FIBER
TRUNKS TO BE ROUTED IN (4) 2" INNERDUCT CONDUITS

EXISTING COAX
ENTRY PORT

EXISTING AT&T
BATTERY RACK

RIP AND REPLACE EXISTING AT&T
DC POWER PLANT WITH NEW
NETSURE 7100 WITH BATTERIES

EXISTING AT&T
GSM CABINET

EXISTING AT&T LTE RACK TO
REMAIN, INSTALL:
• SWAP BB WITH (2) 6630
• ADD IDLe CABLE
• INSTALL DC 12

EXISTING AT&T
UMTS CABINET

EXISTING AT&T
FIF RACK

EXISTING
TELCO BOARD

EXISTING
AC PANEL

EXISTING AT&T
EQUIPMENT SHELTER



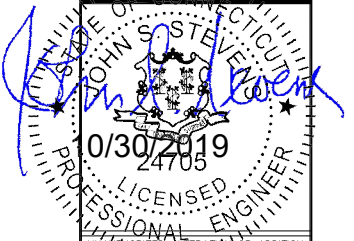
2 ENLARGED EQUIPMENT PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
3' 1'-6" 0 1'-6" 3'
SCALE (11x17): 1" = 3'-0"
SCALE (22x34): 1" = 1'-6"

BASEMAPPING PREPARED FROM A SITE WALK
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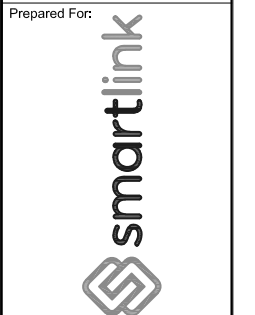
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499-006

Project Title:
BOLTON -
CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043



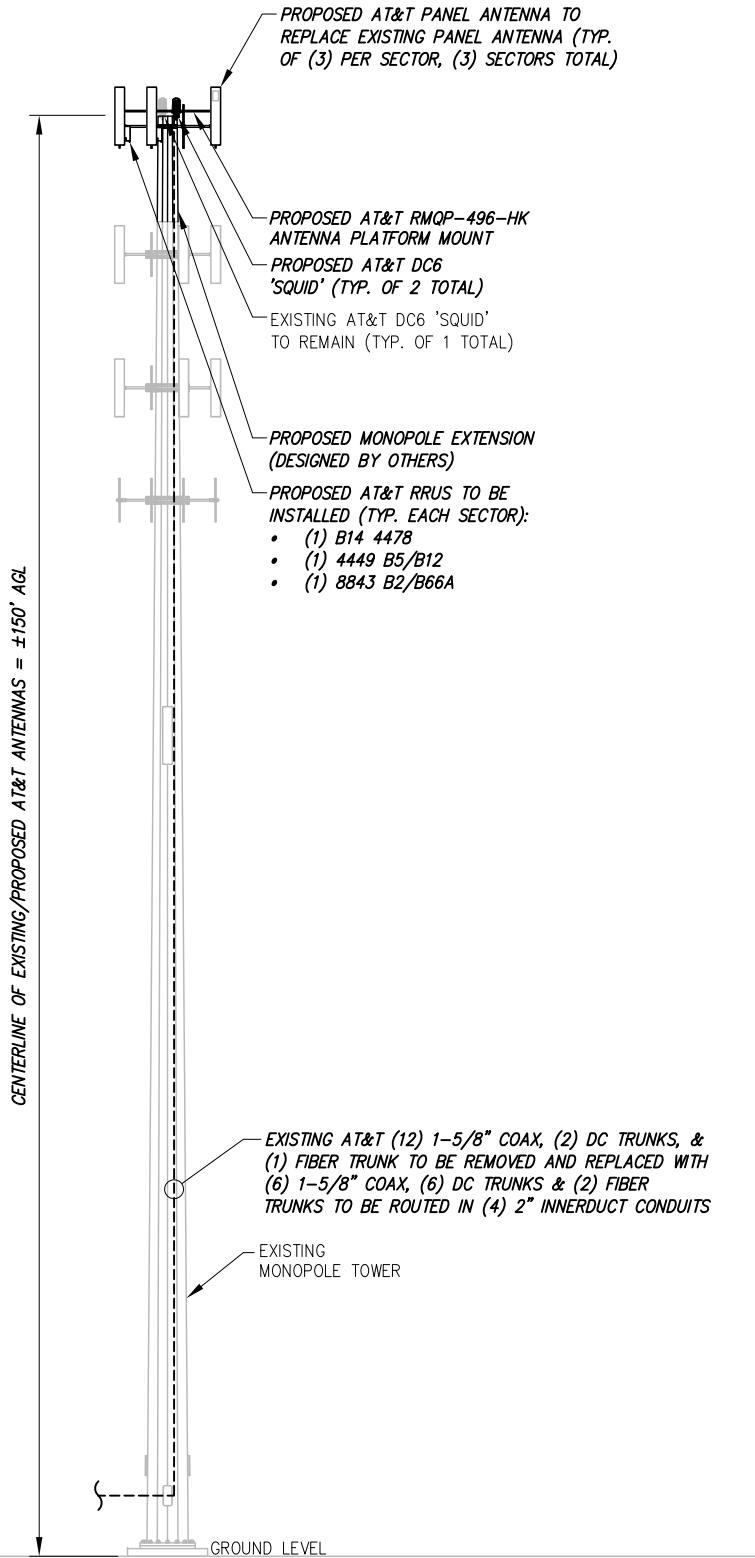
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Drawing Title
ENLARGED
SITE PLAN

Drawing Number
C2A

NOTE:
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• FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 10/29/19.

NOTE:
• 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
• 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



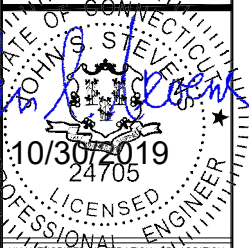
1 ELEVATION VIEW
-- NOT TO SCALE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 08/06/19, V 5.00										
SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/DIPLEXER	RRUS	AZIMUTH	ANTENNA CL HEIGHT	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(P) UMTS 850/1900	CCI HPA65R-BU8A	(2) (E) LGP21401	--	0°	±150'	(2) (P) 1-5/8" COAX CABLES	±240'	(1) (E) DC6 'SQUID' (2) (P) DC6 'SQUID'
	A-2	--	--	--	--	--	--	--	--	
	A-3	(P) LTE 700 B14/AWS	CCI TPA65R-BU8DA-K	--	(1) (P) B14 4478	30°	±150'	(2) (P) FIBER CABLE (6) (P) DC CABLES	--	
	A-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	30°	±150'	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(P) UMTS 850/1900	CCI HPA65R-BU8A	(2) (E) LGP21401	--	120°	±150'	(2) (P) 1-5/8" COAX CABLES	±240'	
	B-2	--	--	--	--	--	--	--	--	
	B-3	(P) LTE 700 B14/AWS	CCI TPA65R-BU8DA-K	--	(1) (P) B14 4478	150°	±150'	SEE A-3 FOR CABLE INFORMATION	--	
	B-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	150°	±150'	SEE A-3 FOR CABLE INFORMATION	--	
GAMMA	G-1	(P) UMTS 850/1900	CCI HPA65R-BU8A	(2) (E) LGP21401	--	240°	±150'	(2) (P) 1-5/8" COAX CABLES	±240'	
	G-2	--	--	--	--	--	--	--	--	
	G-3	(P) LTE 700 B14/AWS	CCI TPA65R-BU8DA-K	--	(1) (P) B14 4478	270°	±150'	SEE A-3 FOR CABLE INFORMATION	--	
	G-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	270°	±150'	SEE A-3 FOR CABLE INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
-- NOT TO SCALE

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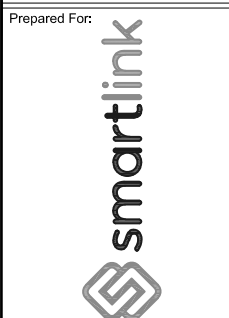
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Project Number:			
499-006			

Project Title:
BOLTON - CARPENTER ROAD
CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

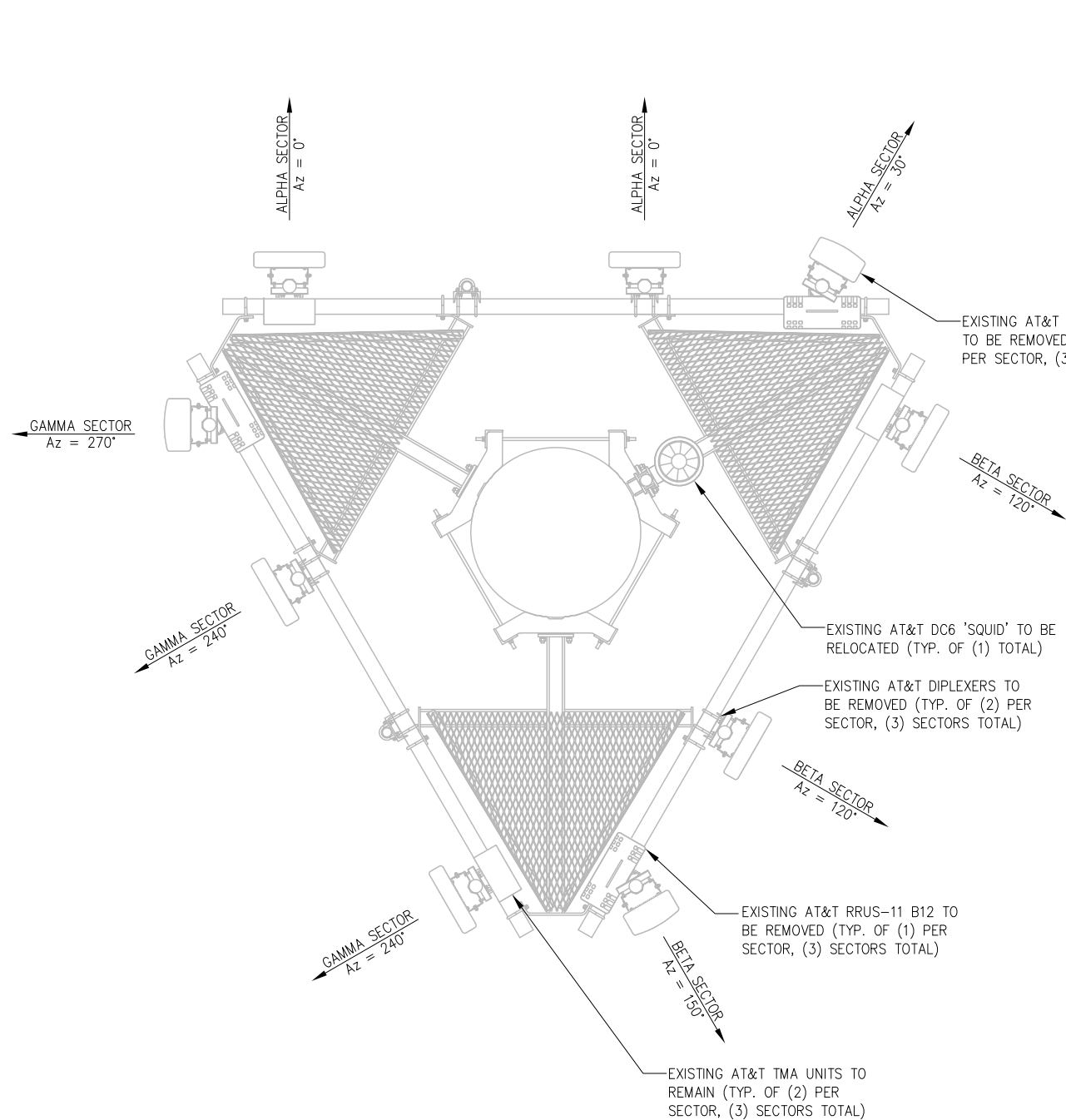


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Date:
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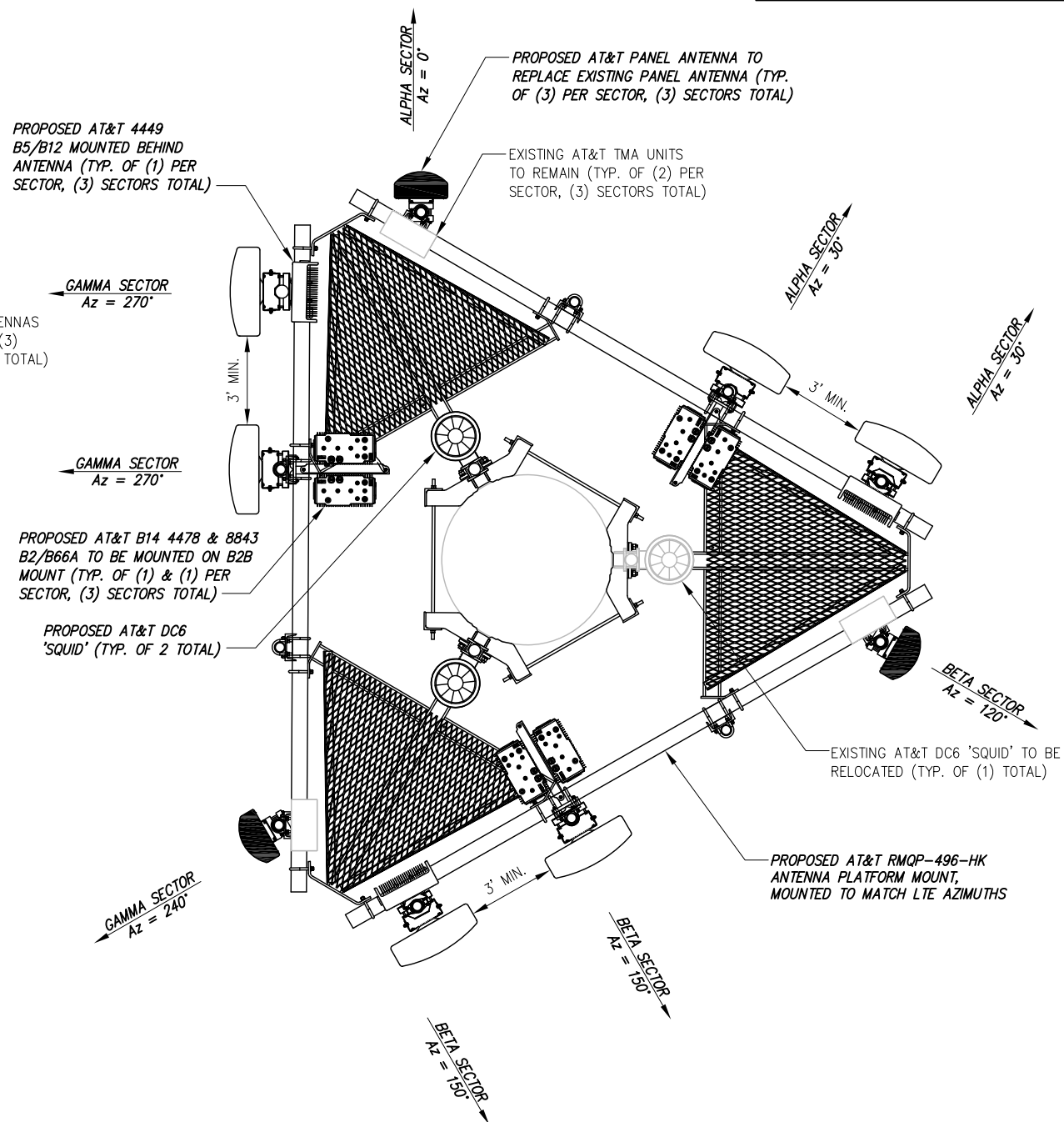
CD

Drawing Title
ELEVATION VIEW

Drawing Number
C3



1 EXISTING ANTENNA ORIENTATION PLAN @ 110' AGL
NOT TO SCALE



2 PROPOSED ANTENNA ORIENTATION PLAN @ 150' AGL
NOT TO SCALE

NOTE:

- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:

- INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.
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Project Number: 499-006

Project Title: BOLTON - CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

Prepared For: smartlink

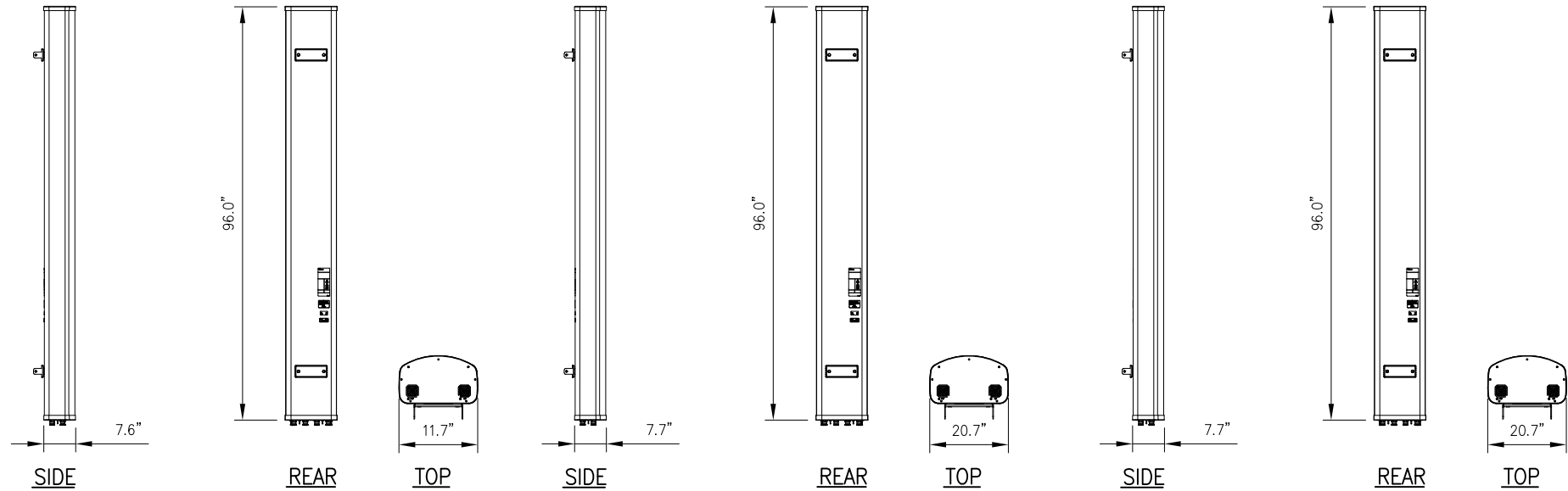
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CD

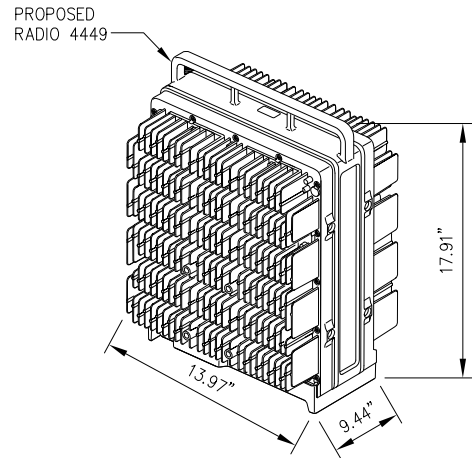
Drawing Title: ANTENNA ORIENTATION PLAN

Drawing Number: C4



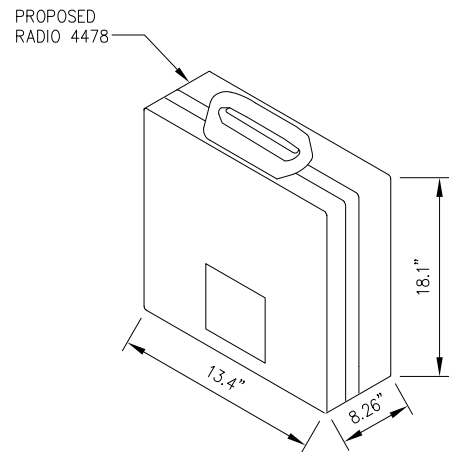
CCI MODEL NO.:	HPA65R-BU8A	CCI MODEL NO.:	TPA65R-BU8DA-K	CCI MODEL NO.:	DMP65R-BU8DA
RADOME MATERIAL:	FIBERGLASS	RADOME MATERIAL:	FIBERGLASS	RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY	RADOME COLOR:	LIGHT GRAY	RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(96.0"x11.7"x7.6")	DIMENSIONS, HxWxD:	(96.0"x20.7"x7.7")	DIMENSIONS, HxWxD:	(96.0"x20.7"x7.7")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	54.0 LBS	WEIGHT, W/ PRE-MOUNTED BRACKETS:	87.1 LBS	WEIGHT, W/ PRE-MOUNTED BRACKETS:	95.7 LBS
CONNECTOR:	7-16 DIN FEMALE	CONNECTOR:	7-16 DIN FEMALE	CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
-- NOT TO SCALE



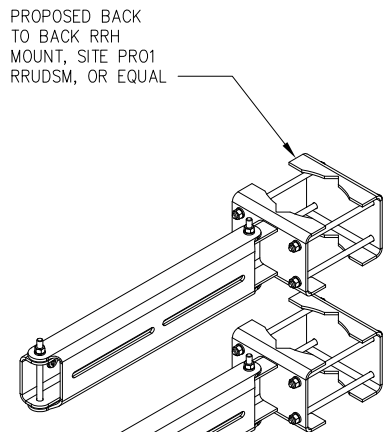
RADIO 4449 SPECIFICATIONS	
• HxWxD, (INCHES) :	17.91"x13.97"x9.44"
• WEIGHT (LBS) :	70.54
• COLOR :	GRAY

2 ERICSSON RADIO 4449 DETAIL
-- NOT TO SCALE

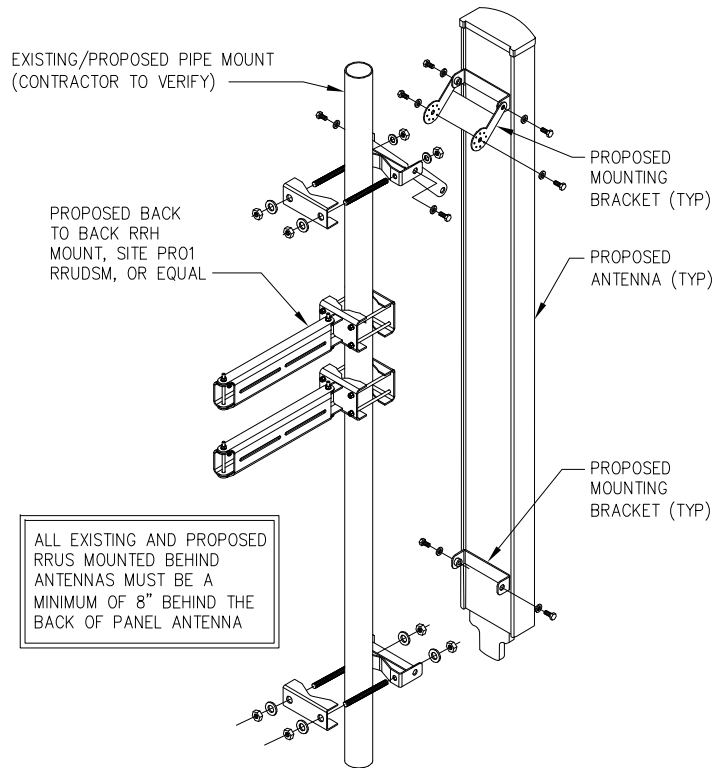


RADIO 4478-B14 SPECIFICATIONS	
• HxWxD, (INCHES) :	18.1"x13.4"x8.26"
• WEIGHT (LBS) :	59.5
• COLOR :	GRAY
• MOUNTING BRACKET:	SXK1250244/1

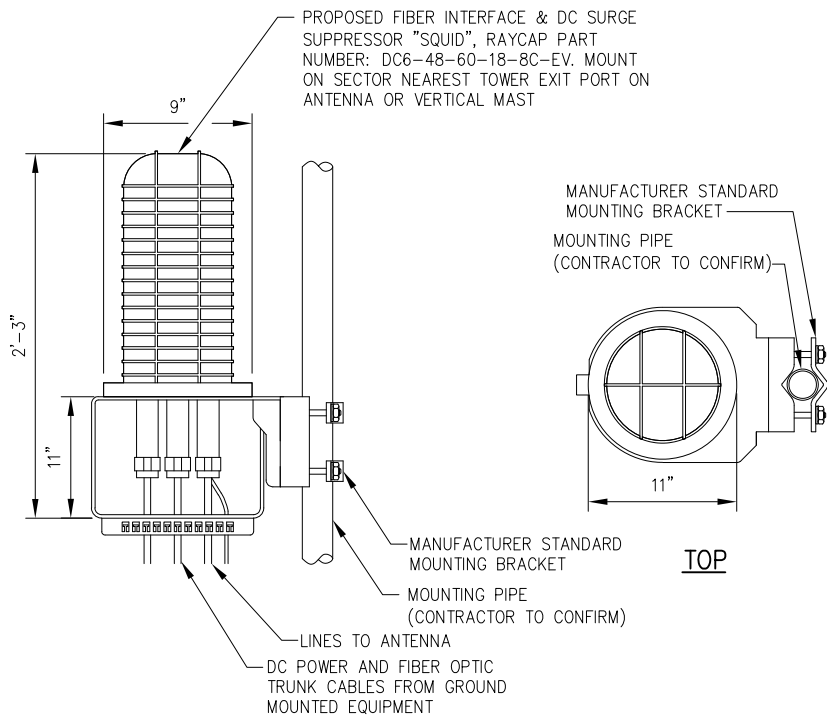
3 ERICSSON RADIO 4478-B14 DETAIL
-- NOT TO SCALE



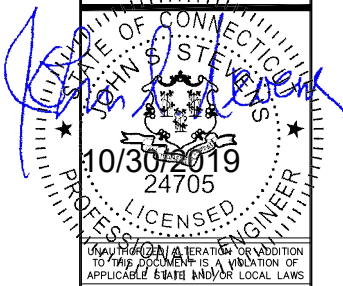
4 BACK TO BACK PIPE MOUNT DETAIL
-- NOT TO SCALE



5 ANTENNA MOUNTING DETAIL
-- NOT TO SCALE



6 SQUID DETAIL
-- NOT TO SCALE



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Designed: ASW Date: 09/13/19			
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Project Number: 499-006			

Project Title:
**BOLTON -
CARPENTER ROAD**

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043



Drawing Scale:
AS NOTED

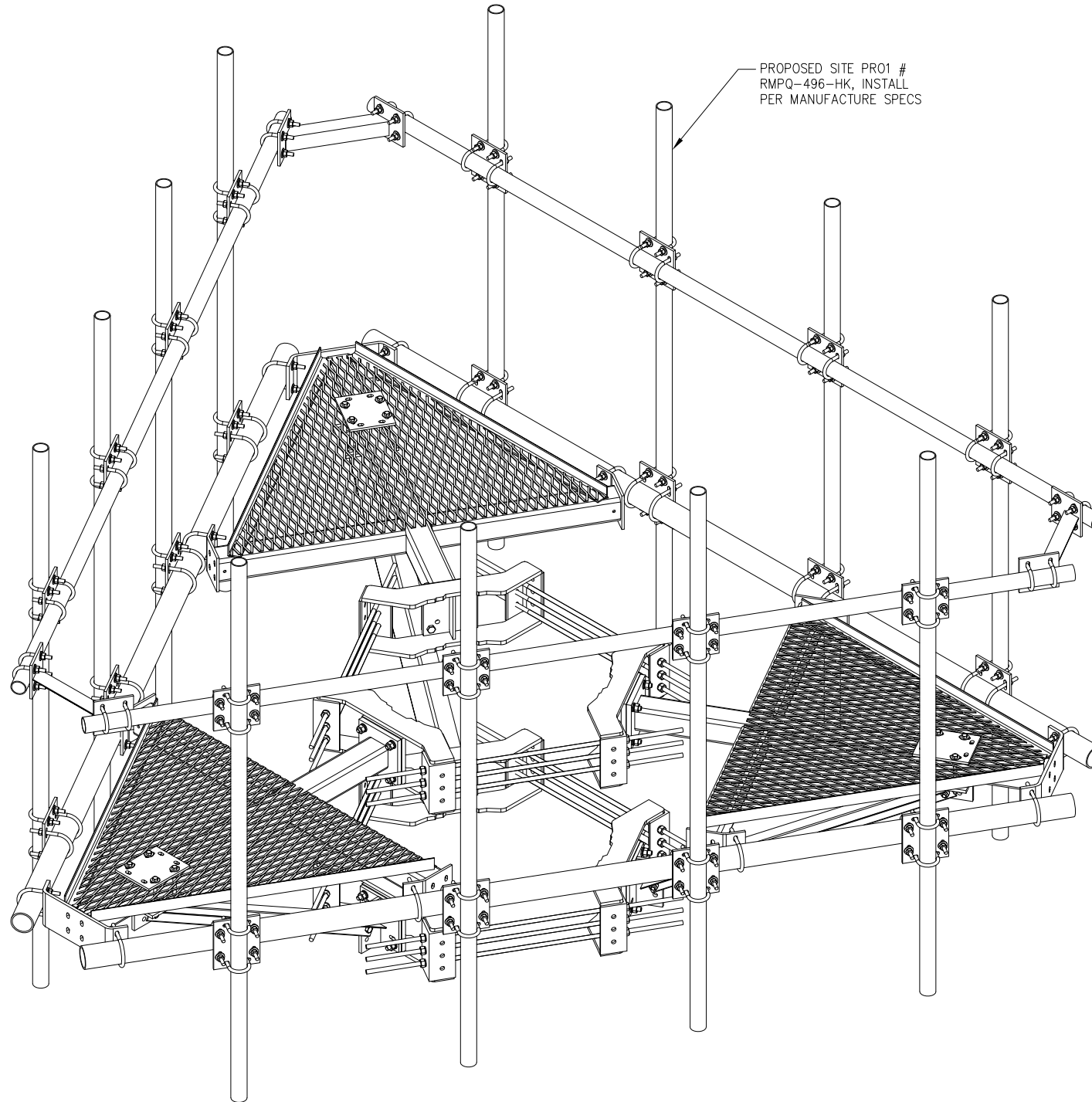
Date:
10/30/19

Drawing Title
**EQUIPMENT
DETAILS**

Drawing Number
C5

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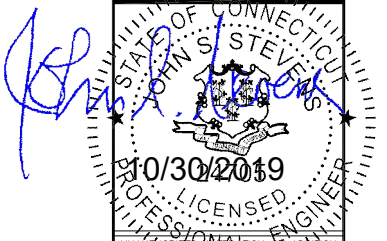




1 ANTENNA MOUNT PLATFORM DETAIL
--- NOT TO SCALE

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CARPENTER ROAD**

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12-14 CARPENTER ROAD
BOLTON, CT 06043

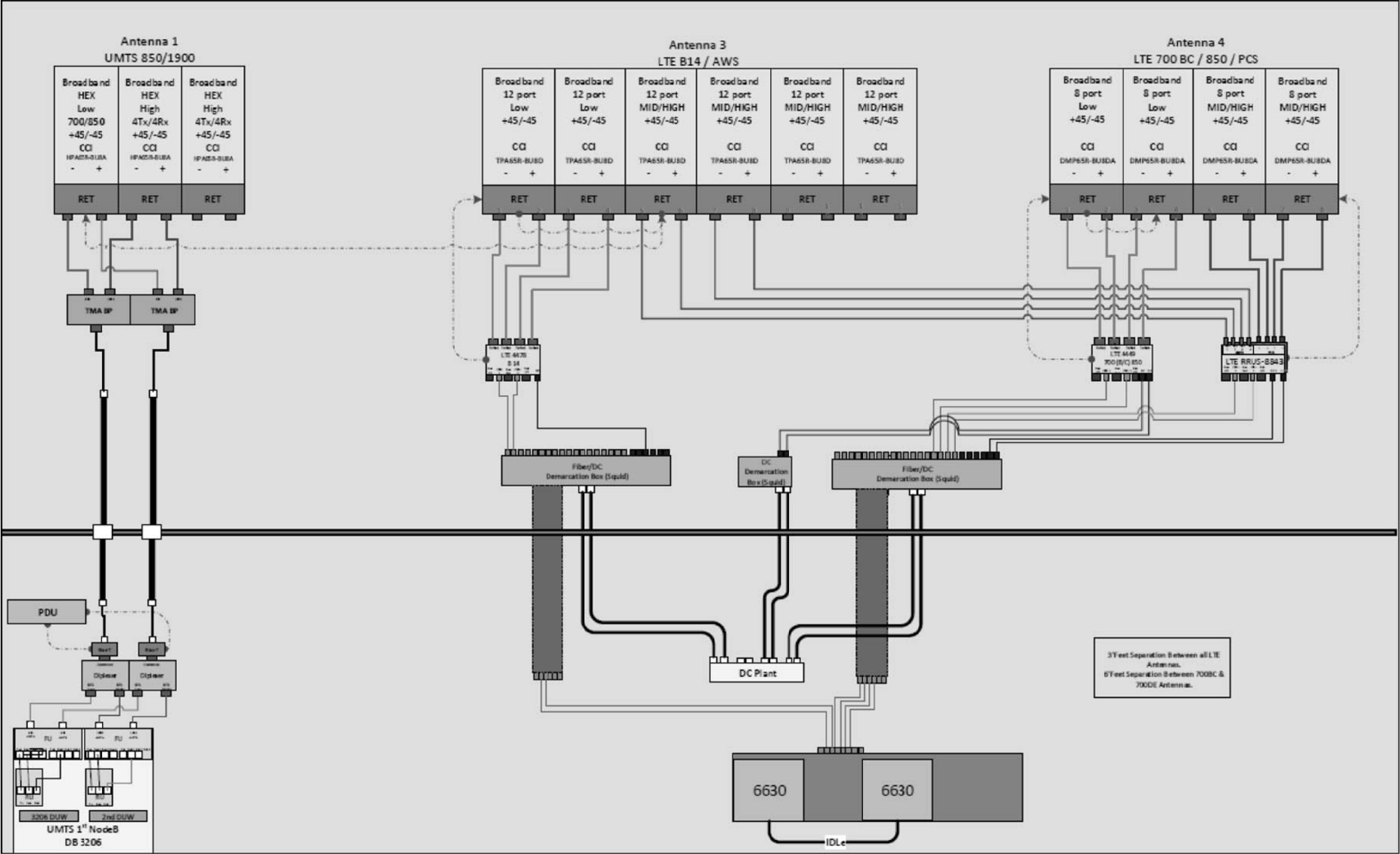
Prepared For:
smartlink

Drawing Scale:
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Date:
10/30/19

CD

Drawing Title
**EQUIPMENT
DETAILS**

Drawing Number
C5A



ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS,
DATED 08/06/2019, V5.00

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499-006			

Project Title:
**BOLTON -
CARPENTER ROAD**

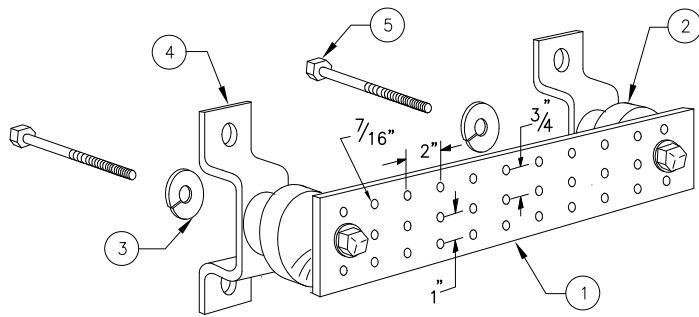
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FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043

Prepared For:
smartlink

Drawing Scale:
AS NOTED
Date:
10/30/19
CD

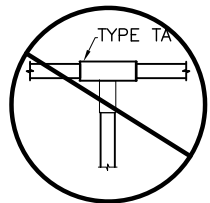
Drawing Title
**PLUMBING
DIAGRAM**

Drawing Number
C6

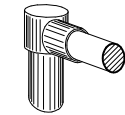


LEGEND

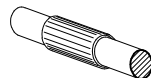
- 1 - SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- 2 - INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
- 3 - 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
- 4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
- 5 - 5/8-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
- 6 - GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
- 7 - GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
- 8 - GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
- 9 - HARDWARE DIAMETER SHALL BE MINIMUM 3/8"



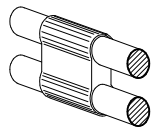
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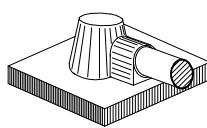
TYPE GR



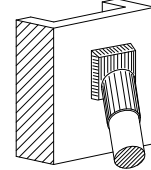
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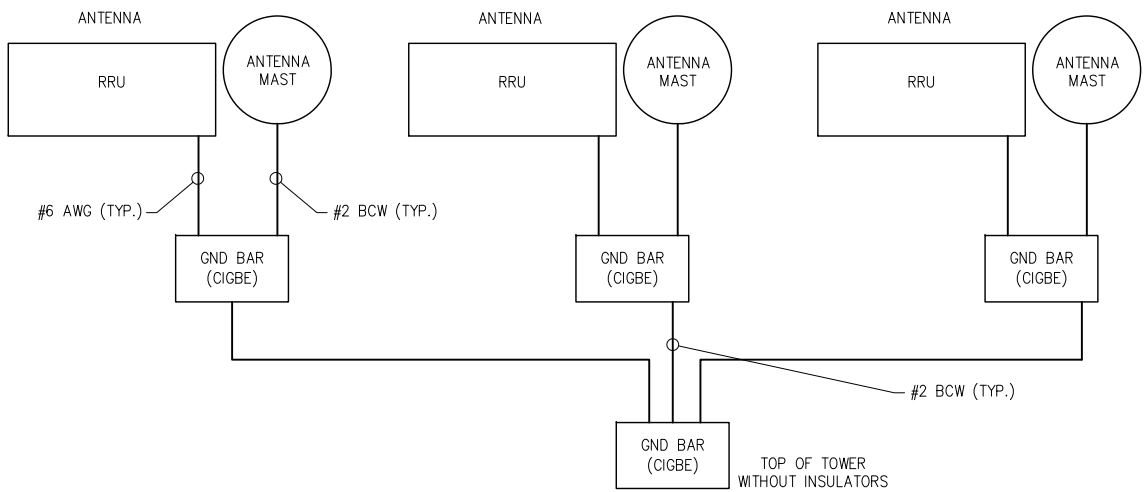
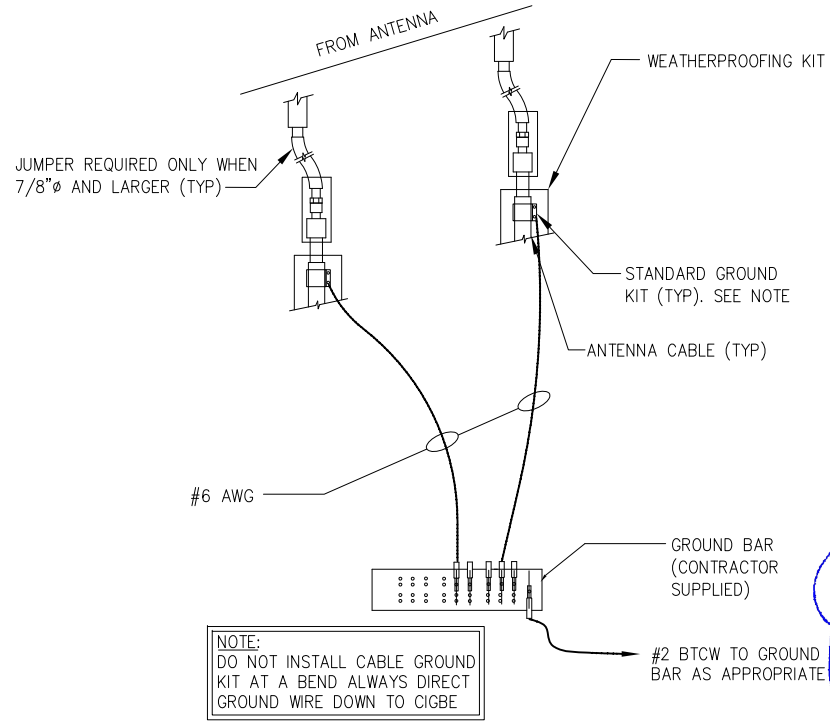
TYPE PH



TYPE KA



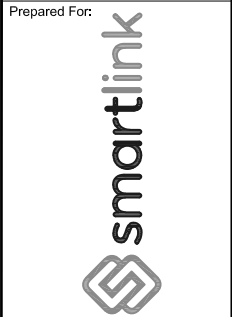
TYPE VS



3	REVISED FOR PERMIT	ASW	10/30/19
2	REVISED FOR PERMIT	BMM	10/16/19
1	ISSUED FOR PERMIT	ASW	10/04/19
0	ISSUED FOR REVIEW	BMM	09/13/19
No.	Submittal / Revision	App'd	Date
Drawn:	BMM	Date:	09/13/19
Designed:	ASW	Date:	09/13/19
Checked:	AJD	Date:	09/13/19
Project Number:			
499-006			

Project Title:
BOLTON -
CARPENTER ROAD

CTL01227
FA# 10126687
12-14 CARPENTER ROAD
BOLTON, CT 06043



Drawing Scale:	AS NOTED	CD
Date:	10/30/19	

Drawing Title
**GROUNDING
DETAILS**

Drawing Number
C7