Filed by:
G. Scott Shepherd, Site Development Specialist II - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - GShepherd@sbasite.com

October 21, 2021

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

Notice of Exempt Modification
310 Watertown Rd., (A.K.A.) 2579 Litchfield Rd, Watertown) Bethlehem, CT 06763-1902
Latitude: 41.667219
Longitude: -73.170516
T-Mobile #: CTNH357C_Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 155-foot level of the existing 195-foot monopole Tower at 310 Watertown Rd., **(A.K.A. 2579 Litchfield Rd, Watertown)** Bethlehem, CT. The tower is owned by SBA Properties, LLC,. The property is owned by Gary J. & Amy Swingle. T-Mobile intends to remove six (6) antennas and replace with six (6) new 2500 MHz and L700/600/1900 MHz antennas and install an additional three (3) antennas for a total of nine (9) antennas.

- T-Mobile is also proposing Tower Modifications on the tower as shown on the Modification and Design Drawings in Exhibit 8.

- The new antennas would support 5G services and would be installed at the 155-foot level of the tower.

Planned Modifications:

TOWER

<u>Remove:</u>
- (3) Generic Style TMAs

<u>Remove and Replace:</u>
- (3) RFS APX18-209014-CT2 (remove) - (3) Ericsson AIR6449 B41 2500 MHz antennas (replace)
- (3) Commscope LNX-6515DS (remove) – (3) APX16DWV-16DWVS-E-A20 L700/L600/L1900 (replace)

Install New:

- (3) Ericsson 4449 B71+B85 RRUs
- (3) Ericsson 4415 B66A RRUs
- (3) Ericsson 4424 B25 RRUs
- (3) 1.9" Fiber
- (1) SitePro1 HRK12 (Support Rail Kit)

Existing Equipment to Remain:

- (3) REMC – S20057A1 – TMAs
- (3) Ericsson KRY 112 144/1 – TMAs
- (3) Kathrein 782 11056 – Bias Ts
- (1) Low Profile Platform

Entitlements:

- (12) 1-5/8" coax
- (1) 3" conduit
- (2) ¾" DC
- (1) 7/16" Fiber

GROUND

Install New:

- (1) 1" RGS Conduit for 48 Power
- T-Mobile Ericsson 6160 equip. cabinet
- T-Mobile 3' 6" x 3' 6" concrete pad extension
- T-Mobile Ericsson B160 Battery Cabinet
- (1) 2" RGS conduit for power from exist. PPC
- (1) 2" RGS conduit for AAV from exist. Fiber cabinet
- (2) 2" RGS conduit for alarm & Spare
- (1) 2" RGS conduit w/LBs for DC power wiring

Existing Equipment to Remain:

- T-Mobile PPC
- Ciena 3931 Delivery Switch
- 2' x 12' concrete pad
- T-Mobile PTS 8003 Battery cabinet
- T-Mobile Emerson Nextend Compact 2416 fiber cabinet
- T-Mobile Ice bridge
- 3' 9" x 6' 11" concrete pad
- T-Mobile GPS antenna mounted to exist. Ice bridge
- Existing T-Mobile Generator on exist. Pad
- Ericsson RBS 6201 Equip. cabinet

Remove:

- N/A

Entitlements:

- N/A

At a Special Board of Selectman meeting held on Friday, August 25, 2000, the Town of Bethlehem Board of Selectman decided to approve the application of SBA, Inc. for the construction of a telecommunications facility on property owned by Gary and Amy Swingle and having a street address of 310 Watertown Rd., Watertown, CT. with the following conditions:

1. The facility, including but not limited to the tower and all associated equipment and structures, shall be developed and constructed in accordance with the plans written materials submitted to the Board of Selectman as of the date of the public hearing (July 31, 2000).
2. The Board of Selectman finds that the applicant's plans and written materials for the telecommunications facility, submitted as of July 31, 2000, adequately addressed and satisfied the standards set forth in the Bethlehem Telecommunications Ordinance.
3. The applicant has supplemented its proposal regarding the availability of emergency equipment by offering, by letter dated August 25, 2000, contributions of $5,000 to the capital fund of the fire services of the Town for the purchase of future equipment and training for the firefighters, and an additional $5,000 to the Bethlehem Ambulance Associations.
4. The Board of Selectman finds that the remaining deficiencies in the application can be satisfactorily addressed by the imposition of the following conditions;
    a. A surety bond for the restoration shall be provided in the sum of $125,000.
    b. Tower access for multiple antenna for use by the Town of Bethlehem emergency services.

Please see attached.

- **Please note the address on the Property Card as 2579 Litchfield Rd., Watertown, CT. This is due to the fact the driveway to the site located at 310 Watertown Rd., crosses through Watertown, and Morris CT. This is per the Town of Bethlem's Assessor. I have confirmed with the Assessor that the enclosed property card is in fact the correct property card for this site.**

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Bethlehem's First Selectman, Leonard Assard, the Town of Bethlehem's Building Official Chris Zibell and property owners Gary J. & Amy Swingle. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the 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 structure.
2. The proposed modification will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading with certain modifications.

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

Sincerely,

G. Scott Shepherd
Site Development Specialist II
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581
508.251.0720 x3804 + T
508.366.2610 + F
508.868.6000 + C
GShepherd@sbasite.com

Attachments

cc: Leonard Assard, First Selectman /with attachments
Town of Bethlehem, 36 Main St. South, Bethlehem, CT 06751
Chris Zibell, Building Official / with attachments
Town of Bethlehem, 36 Main St. South, Bethlehem, CT 06751
Gary J. & Amy Swingle /with attachments
310 Watertown Rd., Morris, CT 06763-19020 *(SBA Address on file)*

EXHIBIT LIST

Exhibit 1	Check Copy	x
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	Town of Bethlehem (8/25/00)
Exhibit 6	Construction Drawings	Chappell Engineering 5/10/21
Exhibit 7	Post-Mod Structural Analysis	TES 9/22/21
Exhibit 8	Tower Mod Drawings	TES 9/7/21
Exhibit 9	Post-Mod Mount Analysis	TES 6/21/21
Exhibit 10	Mount Mod Drawings	TES 7/6/21
Exhibit 10	EME Report	EBI Consulting 10/20/21

EXHIBIT 1

Copy of Check

EXHIBIT 2

FedEx Labels

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FedEx

TRACK ANOTHER SHIPMENT

284906455693

ADD NICKNAME

Delivered

DELIVERED

Signature release on file

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION
Rick Woods

134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO

Melanie A. Bachman Exec. Dir
Connecticut Siting Council

Ten Franklin Square
NEW BRITAIN, CT US 06051
508-251-0720

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Monday, October 25, 2021

8:28 AM	NEW BRITAIN, CT	Delivered Package delivered to recipient address - release authorized
6:52 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
5:49 AM	WINDSOR LOCKS, CT	At local FedEx facility

Sunday, October 24, 2021

9:01 PM	EAST GRANBY, CT	At destination sort facility
5:56 PM	MEMPHIS, TN	Departed FedEx hub

Saturday, October 23, 2021

11:17 AM	MEMPHIS, TN	Arrived at FedEx hub
Friday, October 22, 2021		
8:35 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:21 PM	FRAMINGHAM, MA	Picked up
Thursday, October 14, 2021		
2:24 PM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
284906455693

SERVICE
FedEx Priority Overnight

WEIGHT
4 lbs / 1.81 kgs

DELIVERY ATTEMPTS
1

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
4 lbs / 1.81 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Pak

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
10/22/21

STANDARD TRANSIT
11/29/99

ACTUAL DELIVERY
10/25/21 at 8:28 am

All (30) Inbound (1) Outbound (29) Watch list (0)

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FedEx

TRACK ANOTHER SHIPMENT

284906778980

ADD NICKNAME

ON TIME

Scheduled delivery: Pending

IN TRANSIT
At FedEx destination facility
WATERTOWN, CT

GET STATUS UPDATES

FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods

134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Leonard Assard
Town of Bethlehem

First Selectman
36 Main St South
BETHLEHEM, CT US 06751
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Monday, October 25, 2021		
8:55 AM	WATERTOWN, CT	At local FedEx facility
8:47 AM	WATERTOWN, CT	Delay Business closed- No delivery attempt
7:07 AM	WATERTOWN, CT	At local FedEx facility
Sunday, October 24, 2021		
9:01 PM	EAST GRANBY, CT	At destination sort facility

5:56 PM	MEMPHIS, TN	Departed FedEx hub
Saturday, October 23, 2021		
11:17 AM	MEMPHIS, TN	Arrived at FedEx hub
Friday, October 22, 2021		
8:35 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:21 PM	FRAMINGHAM, MA	Picked up
Thursday, October 14, 2021		
2:28 PM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
284906778980

SERVICE
FedEx Priority Overnight

WEIGHT
2 lbs / 0.91 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
10/22/21

STANDARD TRANSIT
10/26/21 before 10:30 am

SCHEDULED DELIVERY
Pending

All (30) Inbound (1) Outbound (29) Watch list (0)

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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FedEx

TRACK ANOTHER SHIPMENT

284906841985

ADD NICKNAME

ON TIME

Scheduled delivery: Pending

IN TRANSIT
At FedEx destination facility
WATERTOWN, CT

GET STATUS UPDATES

FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Chris Zibell
Town of Bethlehem
Building Official
36 Main St South
BETHLEHEM, CT US 06751
508-251-0720

MANAGE DELIVERY

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Monday, October 25, 2021		
8:55 AM	WATERTOWN, CT	At local FedEx facility
8:47 AM	WATERTOWN, CT	Delay Business closed- No delivery attempt
7:05 AM	WATERTOWN, CT	At local FedEx facility
Sunday, October 24, 2021		
9:01 PM	EAST GRANBY, CT	At destination sort facility

5:56 PM	MEMPHIS, TN	Departed FedEx hub
Saturday, October 23, 2021		
11:17 AM	MEMPHIS, TN	Arrived at FedEx hub
Friday, October 22, 2021		
8:35 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:21 PM	FRAMINGHAM, MA	Picked up
Thursday, October 14, 2021		
2:29 PM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
284906841985

SERVICE
FedEx Priority Overnight

WEIGHT
2 lbs / 0.91 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
10/22/21

STANDARD TRANSIT
10/26/21 before 10:30 am

SCHEDULED DELIVERY
Pending

All (30) Inbound (1) Outbound (29) Watch list (0)

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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FedEx

TRACK ANOTHER SHIPMENT

284906953488

ADD NICKNAME

Delivered

DELIVERED
Signature not required

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Gary J & Amy Swingle
310 Watertown Rd.
MORRIS, CT US 06763
508-251-0720

Travel History | Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Monday, October 25, 2021

8:51 AM	MORRIS, CT	Delivered Package delivered to recipient address - release authorized
7:47 AM	WATERTOWN, CT	On FedEx vehicle for delivery
7:07 AM	WATERTOWN, CT	At local FedEx facility

Sunday, October 24, 2021

9:01 PM	EAST GRANBY, CT	At destination sort facility
5:56 PM	MEMPHIS, TN	Departed FedEx hub

Saturday, October 23, 2021

11:17 AM	MEMPHIS, TN	Arrived at FedEx hub
Friday, October 22, 2021		
8:35 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:21 PM	FRAMINGHAM, MA	Picked up
Thursday, October 14, 2021		
2:30 PM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
284906953488

SERVICE
FedEx Priority Overnight

WEIGHT
2 lbs / 0.91 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Residence

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday, Residential Delivery

SHIP DATE
10/22/21

STANDARD TRANSIT
10/25/21 before 12:00 pm

ACTUAL DELIVERY
10/25/21 at 8:51 am

All (30) | Inbound (1) | Outbound (29) | Watch list (0)

EXHIBIT 3

Property Card

2579 LITCHFIELD RD WATERTOWN

Location	2579 LITCHFIELD RD WATERTOWN	**Mblu**	12-7/ 006/ / /
		Acct#	101513
Owner	SWINGLE GARY J & AMY	**Assessment**	$500,580
Appraisal	$763,490	**PID**	1343
Building Count	4		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$426,500	$336,990	$763,490
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$298,600	$201,980	$500,580

Owner of Record

Owner	SWINGLE GARY J & AMY	**Sale Price**	$112,000
Co-Owner		**Certificate**	C
Address	310 WATERTOWN RD MORRIS, CT 06763	**Book & Page**	0097/0222
		Sale Date	07/11/1985

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
SWINGLE GARY J & AMY	$112,000	C	0097/0222	07/11/1985
SYDORIK ROSE	$0		0028/0389	12/04/1942

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:

Building Photo


Building Photo
(http://images.vgsi.com/photos/BethlehemCTPhotos//default.jpg)

Replacement Cost
Less Depreciation: $0

Building Attributes	
Field	**Description**
Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces Plain	
Fireplaces Dtld.	
Whirlpool Tubs	
Fin Raised Bsmt	
Fin Basement	
Fin Bsmt Quality	
Bsmt Garages	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

Building Layout

(ParcelSketch.ashx?pid=1343&bid=1343)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Building 2 : Section 1

Year Built: 1996
Living Area: 16,250

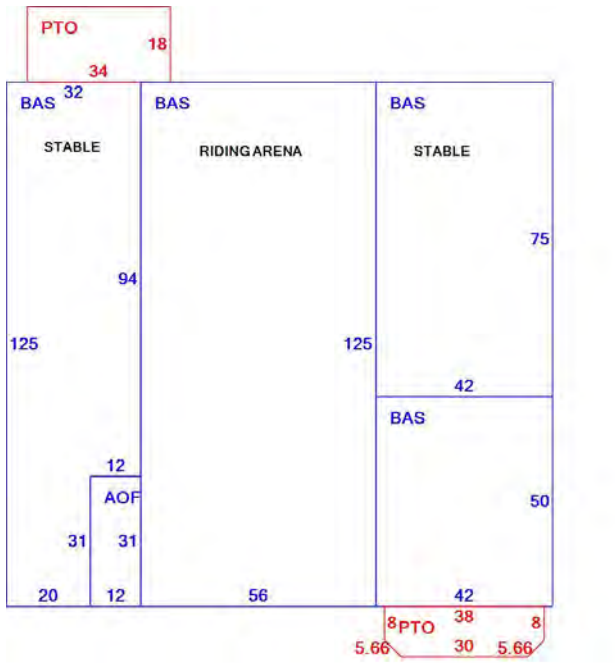
Building Photo

Replacement Cost: $175,749
Building Percent Good: 82
Replacement Cost Less Depreciation: $144,100

Building Attributes : Bldg 2 of 4	
Field	**Description**
Style:	Riding Arena
Model	Commercial
Grade	Good
Stories:	1
Occupancy	1.00
Exterior Wall 1	Minimum
Exterior Wall 2	
Roof Structure	Shed
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	Plastered
Interior Floor 1	Minimum/Plywd
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial C
Sprinkler Type	
Sprinkler %	
Mezzanine Fin.	
Mezzanine Unf.	
1st Floor Use:	
Heat/AC	None
Frame Type	Wood Frame
Baths/Plumbing	None
Ceiling/Walls	None
Rooms/Prtns	Average
Wall Height	20.00
% Comn Wall	

Building Photo
(http://images.vgsi.com/photos/BethlehemCTPhotos//default.jpg)

Building Layout



(ParcelSketch.ashx?pid=1343&bid=20210)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	15,878	15,878
AOF	Office Area	372	372
PTO	Patio	1,052	0
		17,302	16,250

Building 3 : Section 1

Year Built: 2010
Living Area: 4,620
Replacement Cost: $177,089
Building Percent Good: 94

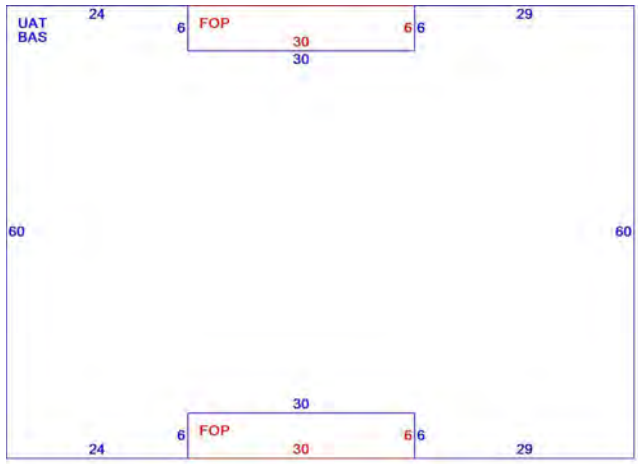
Replacement Cost
Less Depreciation: $166,500

Building Attributes : Bldg 3 of 4	
Field	**Description**
Style:	Warehouse
Model	Commercial
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Single Siding
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Arch. Shingles
Interior Wall 1	Typical
Interior Wall 2	
Interior Floor 1	Concrete
Interior Floor 2	Dirt/None
Heating Fuel	Propane
Heating Type	Hot Air-No Duc
AC Type	None
Struct Class	
Bldg Use	Mixed Use C
Sprinkler Type	
Sprinkler %	
Mezzanine Fin.	
Mezanine Unf.	
1st Floor Use:	
Heat/AC	Heat/AC Pkg
Frame Type	Wood Frame
Baths/Plumbing	Average
Ceiling/Walls	None
Rooms/Prtns	Average
Wall Height	20.00
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/BethlehemCTPhotos//\00\00\27\89.jpg)

Building Layout



(ParcelSketch.ashx?pid=1343&bid=20232)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	4,620	4,620
FOP	Framed Open Porch	360	0
UAT	Unfinished Attic	4,620	0
		9,600	4,620

Building 4 : Section 1

Year Built: 2016
Living Area: 400
Replacement Cost: $118,298
Building Percent Good: 98
Replacement Cost
Less Depreciation: $115,900

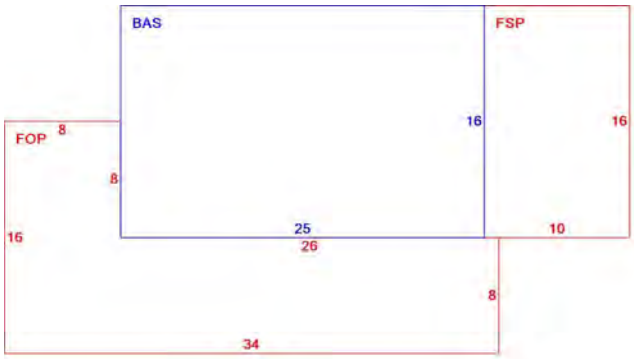
Building Attributes : Bldg 4 of 4

Field	Description
Style:	Ranch
Model	Residential
Grade:	C+ A+10
Stories:	1
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Arch. Shingles
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Ceram Clay Til
Interior Flr 2	Hardwood
Heat Fuel	Electric
Heat Type:	Forced Air
AC Type:	Central
Total Bedrooms:	1 Bedroom
Total Bthrms:	1
Total Half Baths:	0
Total Xtra Fixtrs:	0
Total Rooms:	1
Bath Style:	Average
Kitchen Style:	Average
Fireplaces Plain	0
Fireplaces Dtld.	0
Whirlpool Tubs	0
Fin Raised Bsmt	0
Fin Basement	
Fin Bsmt Quality	
Bsmt Garages	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

Building Photo

(http://images.vgsi.com/photos/BethlehemCTPhotos//\00\00\27\90.jpg)

Building Layout



(ParcelSketch.ashx?pid=1343&bid=20275)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	400	400
FOP	Framed Open Porch	336	0
FSP	Screened Porch	160	0
		896	400

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	201
Description	Commercial V
Zone	
Neighborhood	C1
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	10.00
Assessed Value	$201,980
Appraised Value	$336,990

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$426,500	$336,990	$763,490
2019	$426,500	$336,990	$763,490
2018	$426,500	$336,990	$763,490

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$298,600	$201,980	$500,580
2019	$298,600	$201,980	$500,580
2018	$298,600	$201,980	$500,580

EXHIBIT 4

Property Map

Google Maps 310 Watertown Rd

Imagery ©2021 Maxar Technologies, USDA Farm Service Agency, Map data ©2021 100 ft

310 Watertown Rd

Directions Save Nearby Send to your phone Share

310 Watertown Rd, Morris, CT 06763

MR9M+R4 Morris, Connecticut

Photos

At this place

Sugar Mountain Farm

5.0 ★★★★★ (1)

Horse trainer

EXHIBIT 5

Zoning Documents

SITE ID #4275-012 SITE NAME: Morris CTO 1501-S

JOB COST #001501

ZONING/PERMITTING COMPLETION FORM

Zoning Classification for Site: None

Special Relief (setback, height variance, special use permit, wetlands permit etc.):

Special Permit Approval

* Date of Zoning Decision: 08/25/00

Summary of zoning conditions **(Include details of any conditions relative to time restrictions, expiration dates, renewal obligations, monetary obligations, performance obligation, inspection fees).**

See attached.

Submitted by: Esther McNany Title: Territory Manager

Territory Manager Approval:

* Attach a copy of the Zoning decision and forward to the Regional Compliance Manager as soon as possible, after the decision.

TOWN OF BETHLEHEM

Selectman's Office

36 Main Street South • PO Box 160
Bethlehem, CT 06751-0160
(203) 266-7677

DECISION

At a Special Board of Selectmen meeting held on Friday, August 25, 2000, the Town of Bethlehem Board of Selectmen decided to APPROVE the application of SBA, Inc. for the construction of a telecommunications facility on property owned by Gary and Amy Swingle and having a street address of 310 Watertown Road, Watertown, Connecticut, in accordance with the following terms and conditions:

1. The telecommunications facility, including but not limited to the tower and all associated structures and equipment, shall be developed and constructed in accordance with the plans and written materials submitted to the Board of Selectmen as of the date of the public hearing (July 31, 2000). No changes may be made in the location, height, color, nature, or any other physical aspect of the telecommunications facility as shown on the described in those plans and written materials without further review and approval of the Board of Selectmen.

2. The Board of Selectmen finds that the applicants' plans and written materials for the telecommunications facility, submitted as of July 31, 2000, adequately addressed and satisfied the standards set forth in the Bethlehem Telecommunications Ordinance with the exception of Section I.3 and I.4, regarding the minimization of the need for towers within the Town by appropriate encouragement of co-locations; Section III.1.b(2), as to the availability within the Town of Bethlehem of emergency equipment to handle emergency circumstances occurring on the tower at heights greater than 120 feet; and Section VI, regarding a surety bond for any needed site restoration.

3. The applicant has supplemented its proposal regarding the availability of emergency equipment by offering, by letter dated August 25, 2000, contributions of $5,000 to the capital fund of the fire services of the Town for the purchase of future equipment and training for the firefighters, and an additional $5,000 to the Bethlehem Ambulance Association. Although those contributions do not, in themselves, assure the availability of the necessary emergency equipment, the Board of Selectmen has determined that this specific application cannot be reasonably charged with the full duty to acquire all necessary equipment, since such equipment would also benefit future applicants, who would then have no obligation to share in the burden of providing such equipment. The Board of Selectmen further finds that the proposed contributions reflect a reasonable apportionment of the obligation to provide the necessary emergency services, given the location of the tower and the portion of the Town of Bethlehem the telecommunications facility is likely to be capable of serving.

4. The Board of Selectmen finds that the remaining deficiencies in the application can be satisfactorily addressed by the imposition of the following conditions:

a. A surety bond for the restoration shall be provided in the sum of One Hundred Twenty-Five Thousand Dollars ($ 125,000.00).

b. Tower access for multiple antenna for use by the Town of Bethlehem emergency services, i.e., Volunteer Fire Department, Police and Ambulance Association at no cost to the Town.

Dated at Bethlehem, Connecticut as of this 25th day of August, 2000.

BETHLEHEM BOARD OF SELECTMEN

By _____
Jeffrey C. Nicholas, First Selectman

By _____
Leo Bulvanoski, Selectman

EXHIBIT 6

Construction Drawings

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE T-MOBILE RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

APPROVED
By Stephen Roth at 2:52:00 PM, 5/10/2021

NH357/SBA_BETHLEHEM

APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
SECTOR D:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

310 WATERTOWN ROAD
MORRIS, CT 06763
LITCHFIELD COUNTY

SITE NO.: CTNH357C

SITE TYPE: 195'± MONOPOLE

RF DESIGN GUIDELINE: 67D5A998C ODE+6160

SCOPE OF WORK

REMOVE:
- 6 ANTENNAS
- 3 TMAS
- 12 COAX CABLES

INSTALL:
- 9 ANTENNAS
- 9 RADIOS
- 1 B160 BATTERY CABINET
- 1 6160 EQUIPMENT CABINET
- 3 HYBRID CABLES
- 1 125A-2P BREAKER
- 1 20A-1P BREAKER

SITE NOTES

1. THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
   - ADA COMPLIANCE NOT REQUIRED.
   - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
   - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3. NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
   - BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE
   - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
   - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

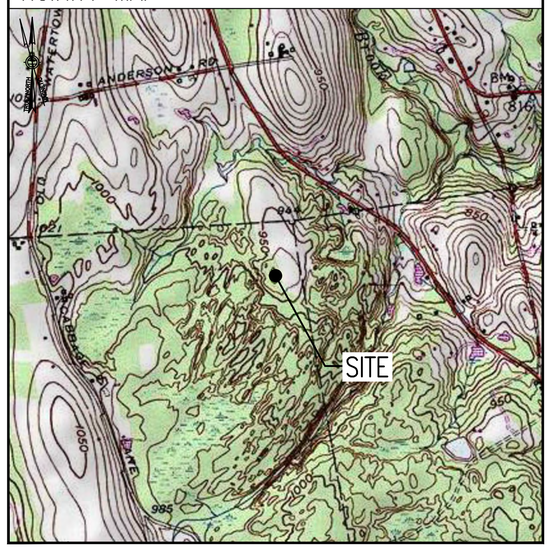
GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOINT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811

VICINITY MAP

SCALE: 1" = 1000'-0"



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	ELEVATION & ANTENNA PLANS	1
A-3	SITE DETAILS	1
A-4	ANTENNA & FEEDLINE CHARTS	1
E-1	ELECTRIC & GROUNDING DETAILS	1

SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

PROJECT SUMMARY

SITE NUMBER:	CTNH357C
SITE NAME:	NH357/SBA_BETHLEHEM
SBA SITE NUMBER:	CT01501-S
SBA SITE NAME:	MORRIS
SITE ADDRESS:	310 WATERTOWN ROAD MORRIS, CT 06763
PROPERTY OWNER:	GARY J. & AMY SWINGLE 310 WATERTOWN ROAD MORRIS, CT 06763
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	LITCHFIELD
ZONING DISTRICT:	N/A
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	195'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.667373° N41°40'02.54" LONGITUDE: -73.170564° W73°10'14.03"

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED PROFESSIONAL CIVIL ENGINEER
5/10/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/10/21	ISSUED FOR CONSTRUCTION	CMC
0	04/20/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNH357C

SITE ADDRESS:
310 WATERTOWN ROAD
MORRIS, CT 06763

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.232

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – T–MOBILE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T–MOBILE
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T–MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

7. CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T–MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾"ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T–MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75'C (90'C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
5/10/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/10/21	ISSUED FOR CONSTRUCTION	CMC
0	04/20/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNH357C

SITE ADDRESS:
310 WATERTOWN ROAD
MORRIS, CT 06763

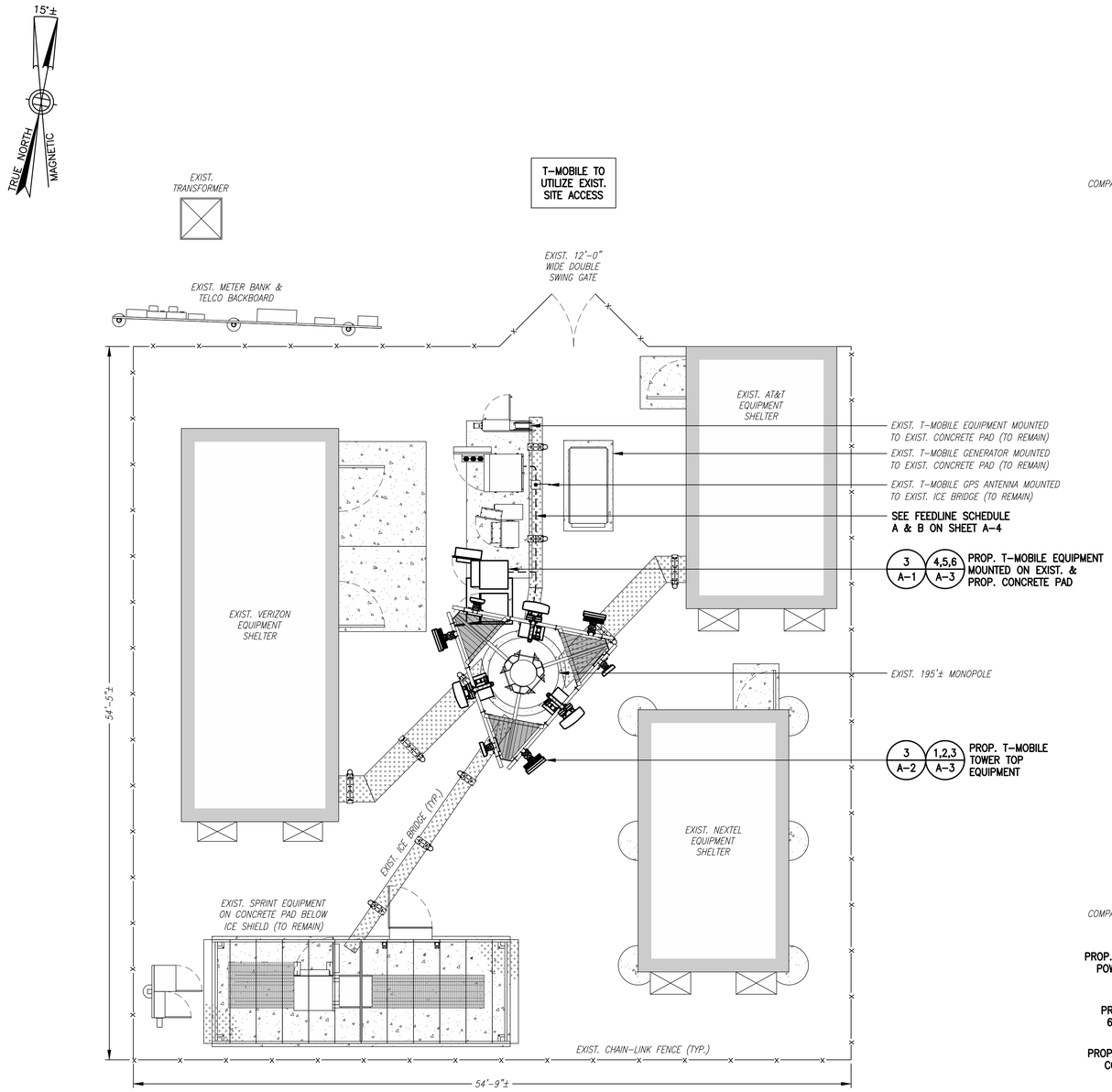
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

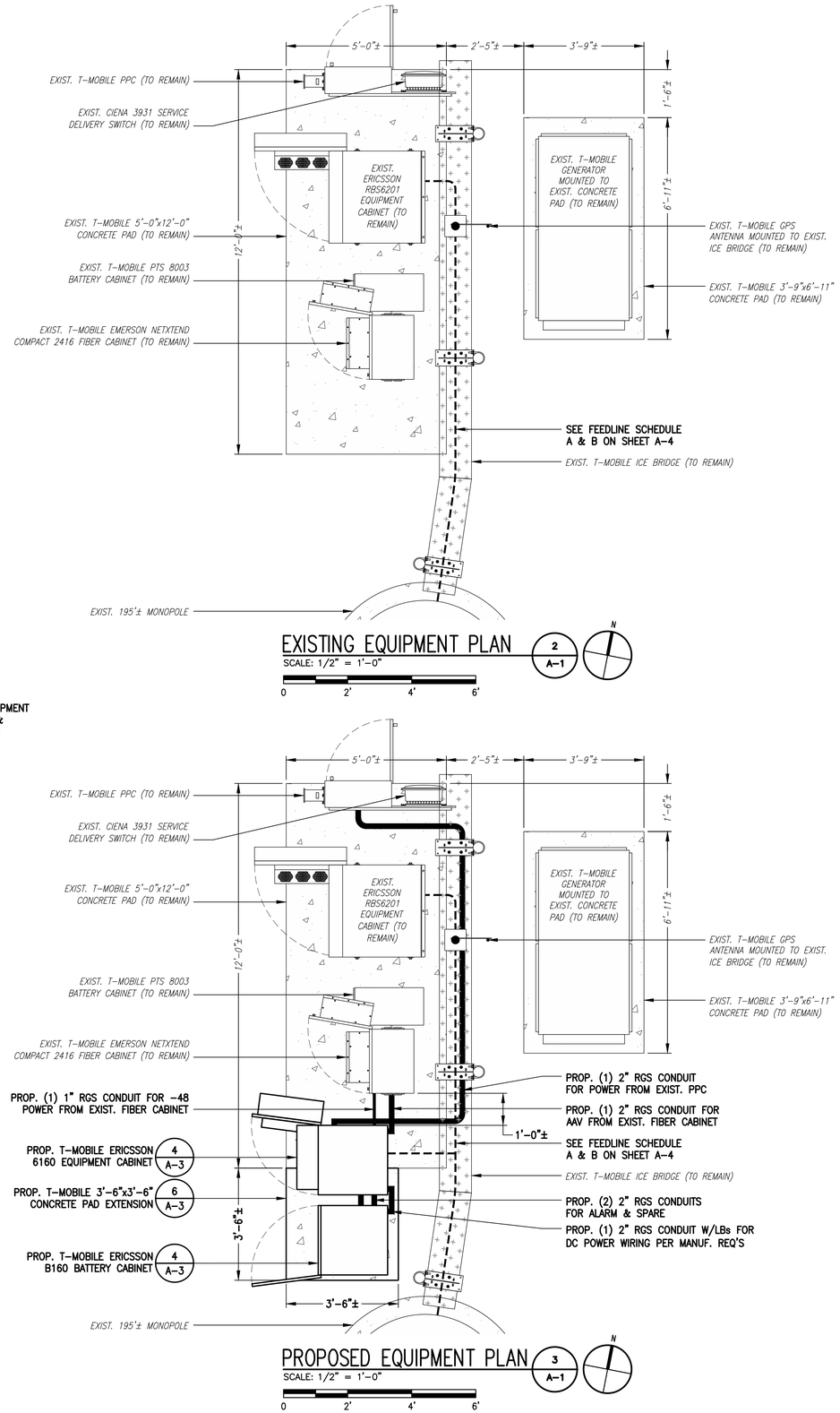
1815.232

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).



COMPOUND PLAN 1 A-1
SCALE: 1" = 5'-0"
0 5' 10' 15'



EXISTING EQUIPMENT PLAN 2 A-1
SCALE: 1/2" = 1'-0"
0 2' 4' 6'
N

PROPOSED EQUIPMENT PLAN 3 A-1
SCALE: 1/2" = 1'-0"
0 2' 4' 6'
N

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STATE OF CONNECTICUT
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No. 25987
LICENSED PROFESSIONAL CIVIL ENGINEER
5/10/2021

CHECKED BY: JMT

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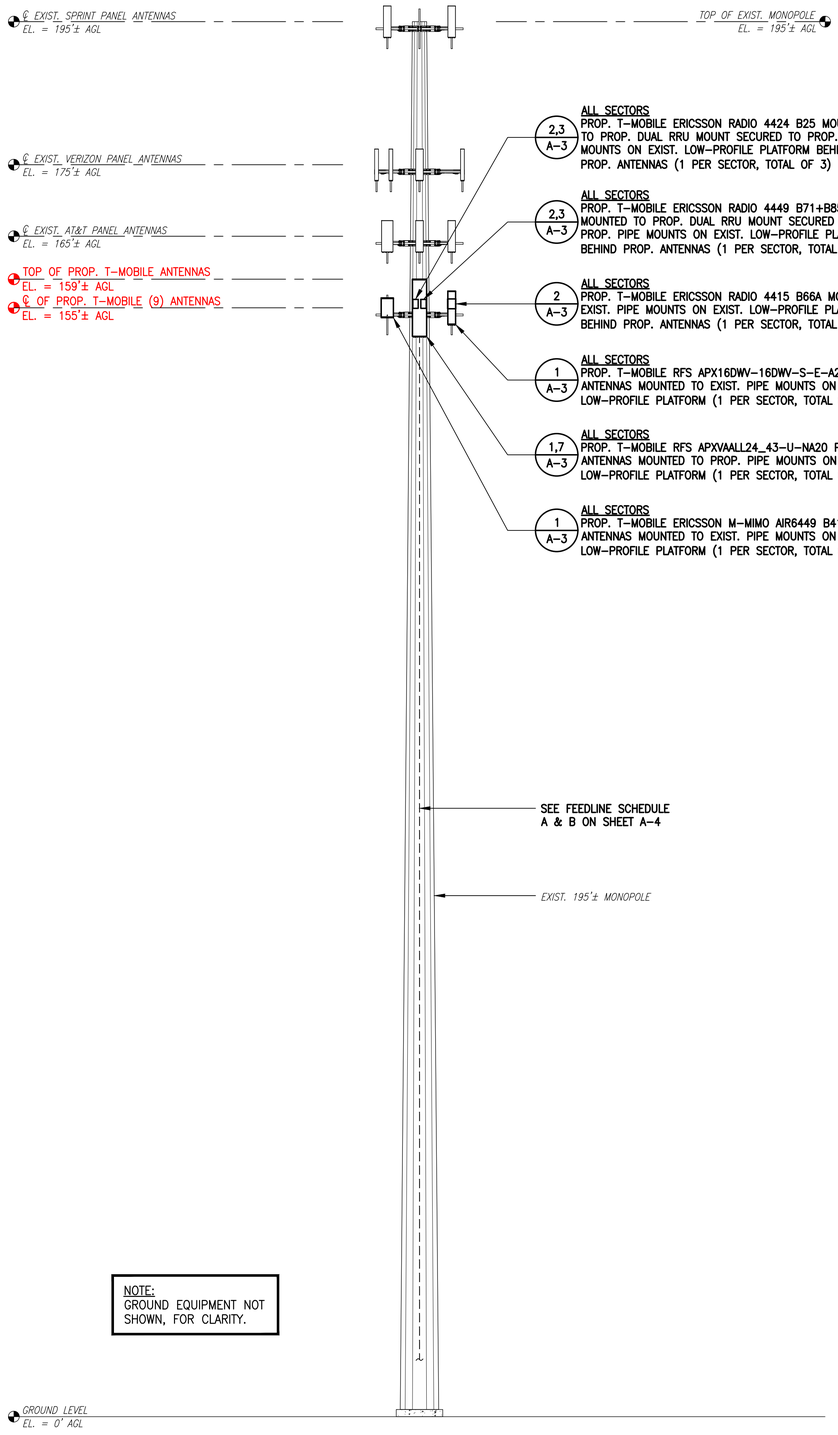
SITE ADDRESS:
310 WATERTOWN ROAD
MORRIS, CT 06763

SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A-1

1815.232



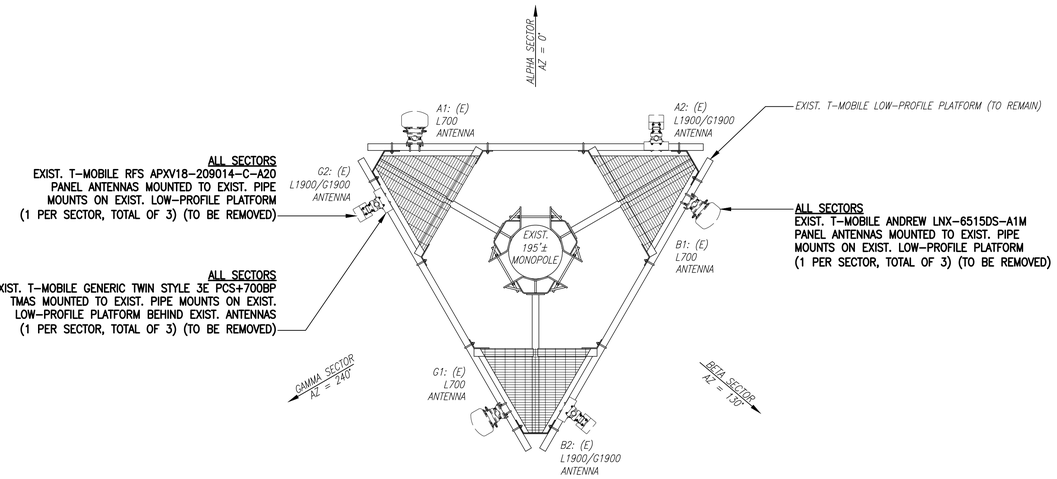
NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

TOWER ELEVATION (1 / A-2)
SCALE: 1" =10'-0"
0 10' 20' 30'

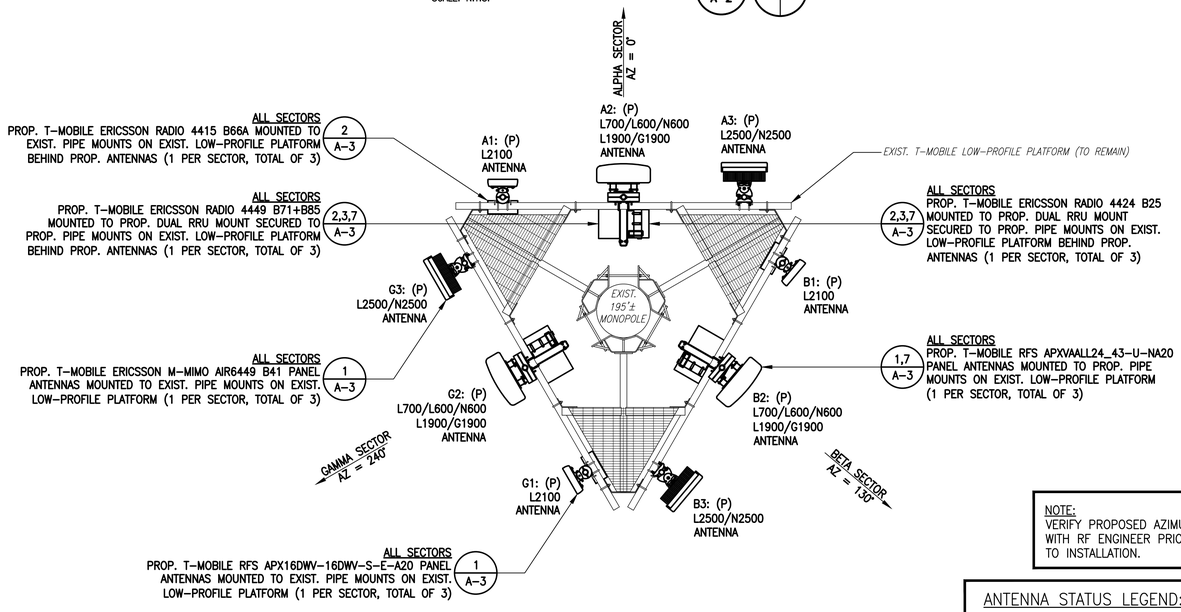
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

RAD CENTER NOTE:
T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE RFDS.

SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).



EXISTING ANTENNA PLAN (2 / A-2)
SCALE: N.T.S.



PROPOSED ANTENNA PLAN (3 / A-2)
SCALE: N.T.S.

NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

ANTENNA STATUS LEGEND:

EMPTY – EMPTY PIPE

(E) – EXISTING
(P) – INSTALL
(F) – FUTURE

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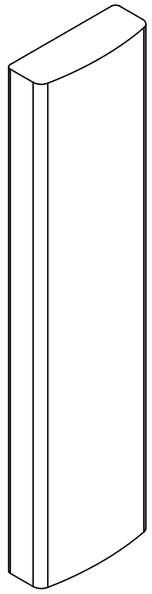
SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLANS

SHEET NUMBER
A-2

1815.232



RFS APXVAALL24_43-U-NA20 ANTENNA

DIMENSIONS: 95.9"H x 24.0"W x 8.7"D
WEIGHT: 128.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON M-MIMO AIR6449 B41 ANTENNA

DIMENSIONS: 33.1"H x 20.5"W x 8.3"D
WEIGHT: 103.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS (1 / A-3)
SCALE: N.T.S.

ERICSSON RADIO 4424 B25

DIMENSIONS: 16.5"H x 13.5"W x 9.6"D
WEIGHT: 88.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

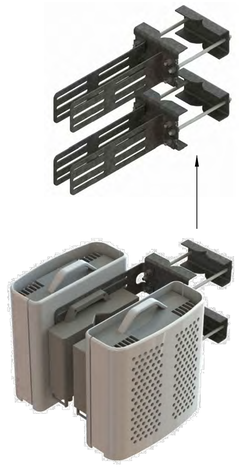
ERICSSON RADIO 4415 B25

DIMENSIONS: 16.5"H x 13.4"W x 5.9"D
WEIGHT: 46.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON RADIO 4449 B71+B85

DIMENSIONS: 17.9"H x 13.1"W x 10.6"D
WEIGHT: 75.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

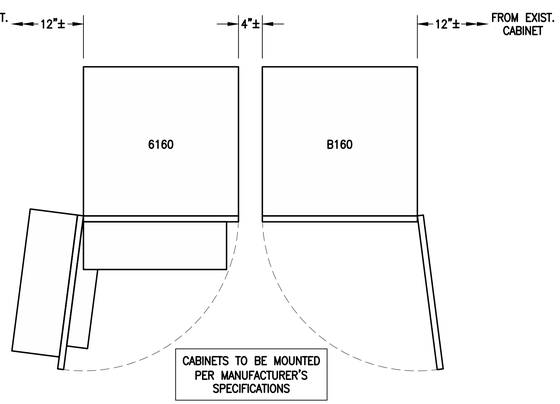
RADIO DETAILS (2 / A-3)
SCALE: N.T.S.



COMMSCOPE RR-FA2 FAST ACCESS DUAL RRU MOUNT KIT

DIMENSIONS: 16.4"H x 8.6"W x 18"L
WEIGHT: 36.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO MOUNT DETAIL (3 / A-3)
SCALE: N.T.S.



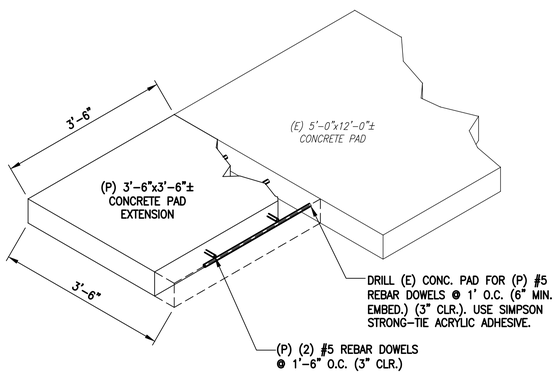
ERICSSON 6160 SITE SUPPORT CABINET

DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
WEIGHT: 680.0 lbs
QUANTITY: TOTAL OF 1

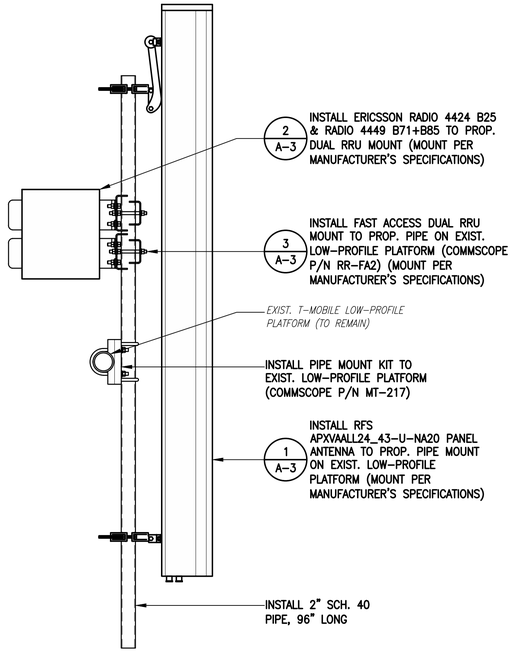
ERICSSON B160 BATTERY CABINET

DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
WEIGHT: 1771.0 lbs
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL (4 / A-3)
SCALE: N.T.S.



CONCRETE PAD EXTENSION (6 / A-3)
SCALE: N.T.S.



ANTENNA MOUNTING DETAIL (7 / A-3)
SCALE: N.T.S.

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SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

1815.232

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1 RFS APX16DWV-16DWV-S-E-A20	155'± AGL	0°	0°	–	L2100	ERICSSON RADIO 4415 B66A	PROP. (3) 2" (6x24) HCS FIBER CABLES
	A2 RFS APXVAALL24_43-U-NA20	155'± AGL	0°	0°	–	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
					–	L1900/G1900	ERICSSON RADIO 4424 B25	
	A3 ERICSSON M-MIMO AIR6449 B41	155'± AGL	0°	0°	–	L2500/N2500	–	
BETA	B1 RFS APX16DWV-16DWV-S-E-A20	155'± AGL	130°	0°	–	L2100	ERICSSON RADIO 4415 B66A	
	B2 RFS APXVAALL24_43-U-NA20	155'± AGL	130°	0°	–	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
					–	L1900/G1900	ERICSSON RADIO 4424 B25	
	B3 ERICSSON M-MIMO AIR6449 B41	155'± AGL	130°	0°	–	L2500/N2500	–	
GAMMA	G1 RFS APX16DWV-16DWV-S-E-A20	155'± AGL	240°	0°	–	L2100	ERICSSON RADIO 4415 B66A	
	G2 RFS APXVAALL24_43-U-NA20	155'± AGL	240°	0°	–	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
					–	L1900/G1900	ERICSSON RADIO 4424 B25	
	G3 ERICSSON M-MIMO AIR6449 B41	155'± AGL	240°	0°	–	L2500/N2500	–	

CABLE NOTE: EXISTING (12) 1-5/8" COAX CABLES TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV4 – 02/02/21

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	*EXISTING TO REMAIN:* *(1) 1/2" COAX FOR GPS ANTENNA* *EXISTING TO BE REMOVED:* *(12) 1-5/8" COAX CABLES*	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 2" (6x24) HCS FIBER CABLES	

NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
5/10/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/10/21	ISSUED FOR CONSTRUCTION	CMC
0	04/20/21	ISSUED FOR REVIEW	CMC

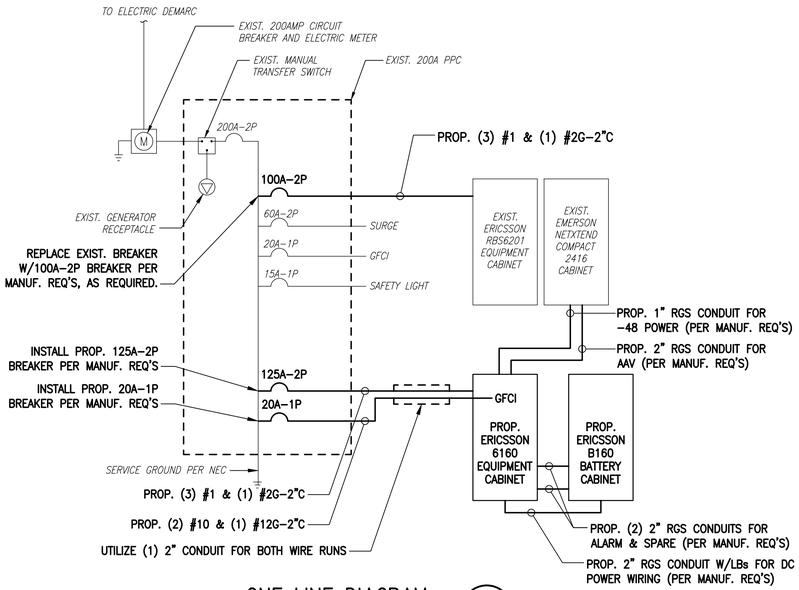
SITE NUMBER:
CTNH357C

SITE ADDRESS:
310 WATERTOWN ROAD
MORRIS, CT 06763

SHEET TITLE
ANTENNA & FEEDLINE CHARTS

SHEET NUMBER
A-4

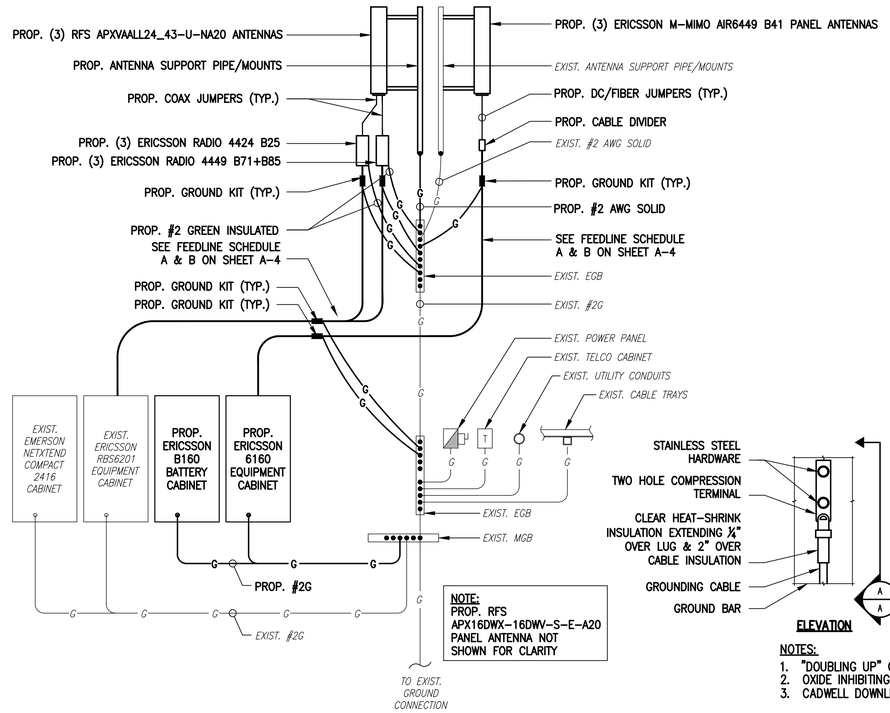
1815.232



ONE LINE DIAGRAM

SCALE: NOT TO SCALE

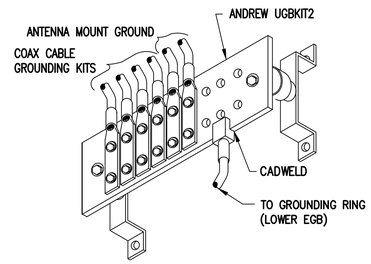
1 E-1



GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

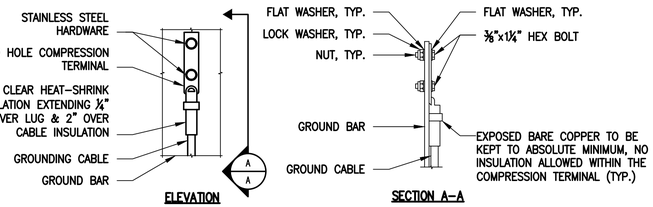
2 E-1



GROUND BAR (EGB)

SCALE: NOT TO SCALE

5 E-1



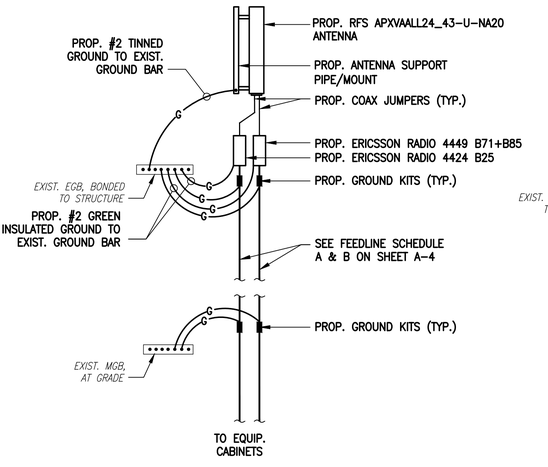
NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

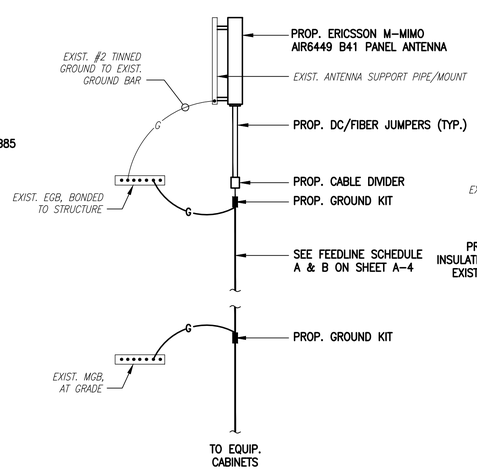
TYPICAL GROUND BAR CONNECTIONS DETAIL

SCALE: NOT TO SCALE

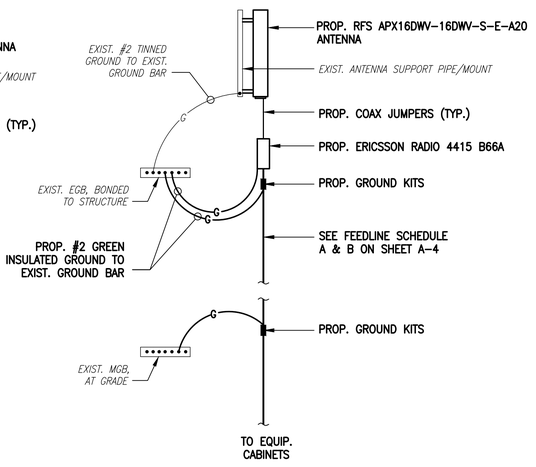
3 E-1



L700/L600/N600/L1900/G1900 ANTENNA



L2500/N2500 ANTENNA



L2100 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE

4 E-1

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

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JAMES M. FITZGERALD
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5/10/2021

CHECKED BY: JMT

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SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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0	04/20/21	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CTNH357C

SITE ADDRESS:
310 WATERTOWN ROAD
MORRIS, CT 06763

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.232

EXHIBIT 7

Post-Mod Structural Analysis

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

Post-Mod Structural Analysis Report

Existing 195 ft Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT01501-S
Customer Site Name: Morris
Carrier Name: T-Mobile (App#: 151085-1)
Carrier Site ID / Name: CTNH357C / Morris
Site Location: 310 Watertown Road
Bethlehem, Connecticut
Litchfield County
Latitude: 41.667219
Longitude: -73.170516

9/22/21

Analysis Result:

Max Structural Usage: 91.6% [Pass]

Max Foundation Usage: 93.5% [Pass]

Report Prepared By : Changzhi Zang

Introduction

The purpose of this report is to summarize the analysis results on the 195 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Tower Drawings	Fred A. Nudd Corporation (Drawing No. 00-7627-1) original design drawings dated May 8, 2000 o2wireless Solutions (Job No. 2230-043) Monopole Tower Structural Analysis Report dated September 4, 2002
Foundation Drawing	Fred A. Nudd Corporation (Drawing No. 00-7627-1) original design drawings dated May 8, 2000
Geotechnical Report	Jaworski Geotech, Inc., Project # 99290G, Dated 11/17/1999
Mount Analysis	TES, Project #109277, dated June 16, 2021
Existing Modification	N/A
Proposed Modification	TES Job # 111743

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** 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} = 120.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 mph (3-Sec. Gust)
Basic Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	SS = 0.188, S1 = 0.0654

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	195.0	3	RFS APXVSPP18-C-A20 - Panel	(1) RRH Collar Mount and Low Profile Platform with: (1) Platform Reinforcement Kit (SitePro1 Part PRK-1245L); (1) Handrail Components- V-Brace Kit (SitePro1 Part PRK-SFS-L); (1) Handrail Components [(3) Pipe 2.0 STD x12.5' Horiz. Rail; Pipe 2.0 STD x (3) 4' long corner braces; (6) Sitepro1 Part # Puck brackets; (9) Pipe2.5 STD mount pipes; (18) Sitepro1 SCX x –K cross-over plates]	(4) 1-1/4" Hybrid	Sprint
2		6	ALU 800 Mhz - RRUs			
3		4	RFS ACU-A20-N RET - RETs			
4		3	ALU 1900 Mhz - RRUs			
5		3	ALU 800 Mhz Filter - Filters			
6		3	Commscope DT465B-2XR - Panel			
7		3	ALU TD-RRH8x20-25 - RRUs			
8	175.0	6	Commscope JAHH-65B-R3B - Panel	Low Profile Platform & [(3) Commscope BSAMNT-SDS-2-2]	(6) 1 5/8" (2) 1 5/8" Hybrid	Verizon
9		6	Antel LPA-80080/6CF - Panel			
10		3	Alcatel-Lucent B66A - RRU			
11		3	Alcatel-Lucent B13 RRH4X30-4R - RRU			
12		1	RFS DB-C1-12C-24AB-0Z			
13	165.0	6	Powerwave 7770.00 - Panel	Low Profile Platform	(12) 1 5/8" *(1) 3" Conduit *(2) 3/4" DC *(1) 7/16" Fiber	AT&T
14		12	Powerwave LGP2140X TMA			
15		6	Ericsson RRUS-11			
16		1	KMW AM-X-CD-16-65-00T-RET - Panel			
17		1	Andrew ABT-DF-DMADBH			
18		1	Raycap DC6-48-60-18-8F			
19		2	Kathrein 800 10764 - Panel			
-	155.0	3	RFS APXV18-209014-CT2 - Panel	Low Profile Platform	(12) 1 5/8"	T-Mobile
-		3	Kathrein 782 11056 Bias T			
-		3	Commscope LNX-6565DS - Panel			
-		3	REMC S20057A1			
-		3	Ericsson KRY 112 144/1 TMA			

* (2) 3/4" DC and (1) 7/16" Fiber are inside (1) 3" Conduit.

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
20	155.0	3	Ericsson - AIR6449 B41 - Panel	Low Profile Platform (1) SitePro1 HRK12 [Support Rail Kit]	(3) 1.9" Fiber (8) 1 5/8"	T-Mobile
21		3	RFS - APX16DWV-16DWVS-E-A20 - Panel			
22		3	RFS - APXVAALL24-43-U-NA20 - Panel			
23		3	Ericsson - 4449 B71 + B85 - RRU			
24		3	Ericsson - 4415 B66A - RRU			
25		3	Ericsson - 4424 B25 - RRU			
26		3	REMC - S20057A1 - TMA			
27		3	Ericsson - KRY 112 144/1 - TMA			
28		3	Kathrein - 782 11056 - Bias T			

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
Max. Usage:	**91.6%**
Pass/Fail	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	5401.4	38.6	64.0

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 TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 2.2400 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222-G-2 Standard after the following proposed modification is successfully completed.

- Proposed modification design drawing by **TES** Job # 111743

Pre-Mod Installation Determination

We have also checked this tower to determine if the proposed T-Mobile equipment loading can be installed prior to the completion of the required modifications. We ran a reduced wind loading case as required by TIA-322 considering a construction period of no more than 6 months.

The tower and/or foundations failed, so the Carrier cannot install their proposed loading prior to the mods completion.

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 91.62% at 81.0ft

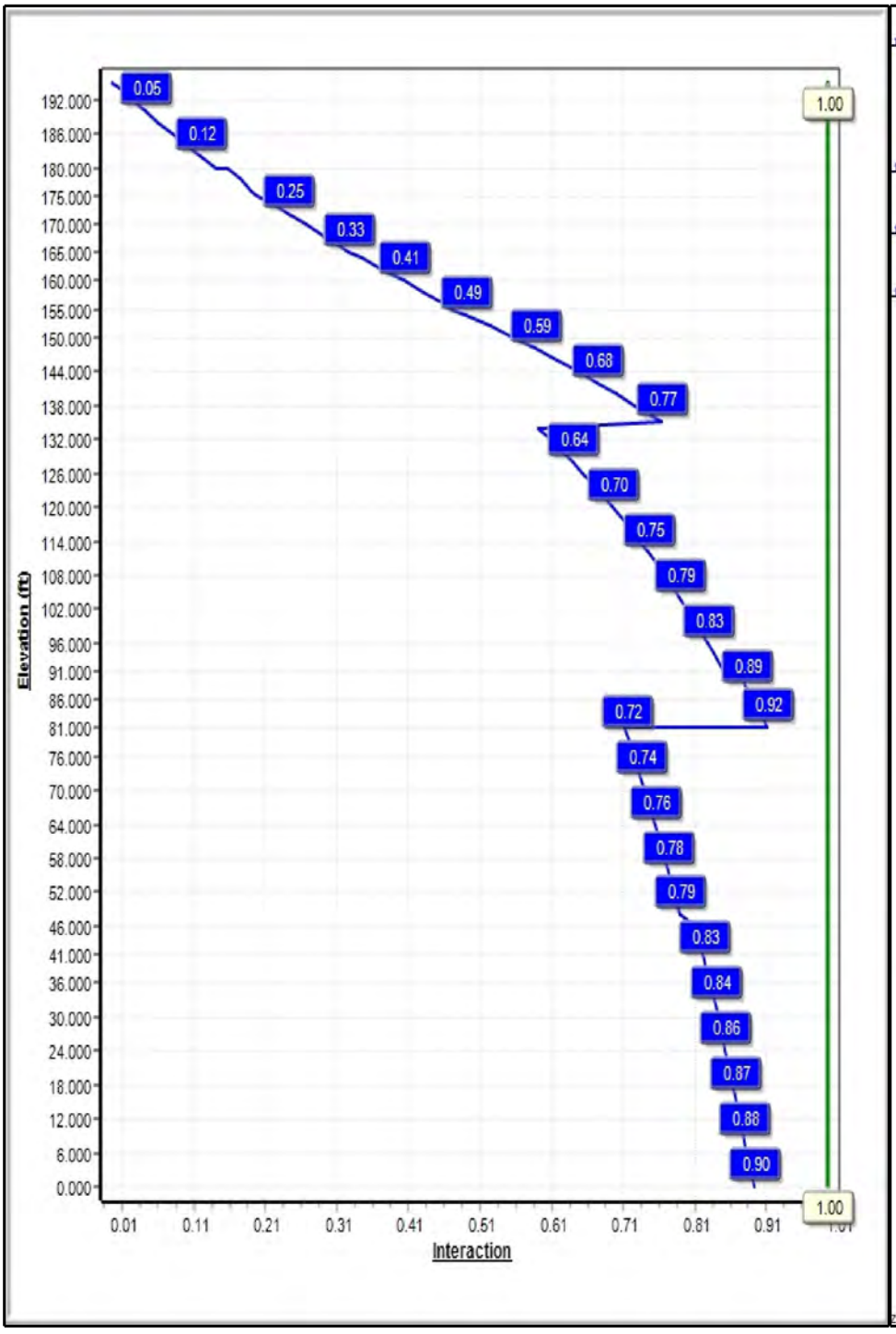
Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris	**Exposure:**	C	
Height:	195.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

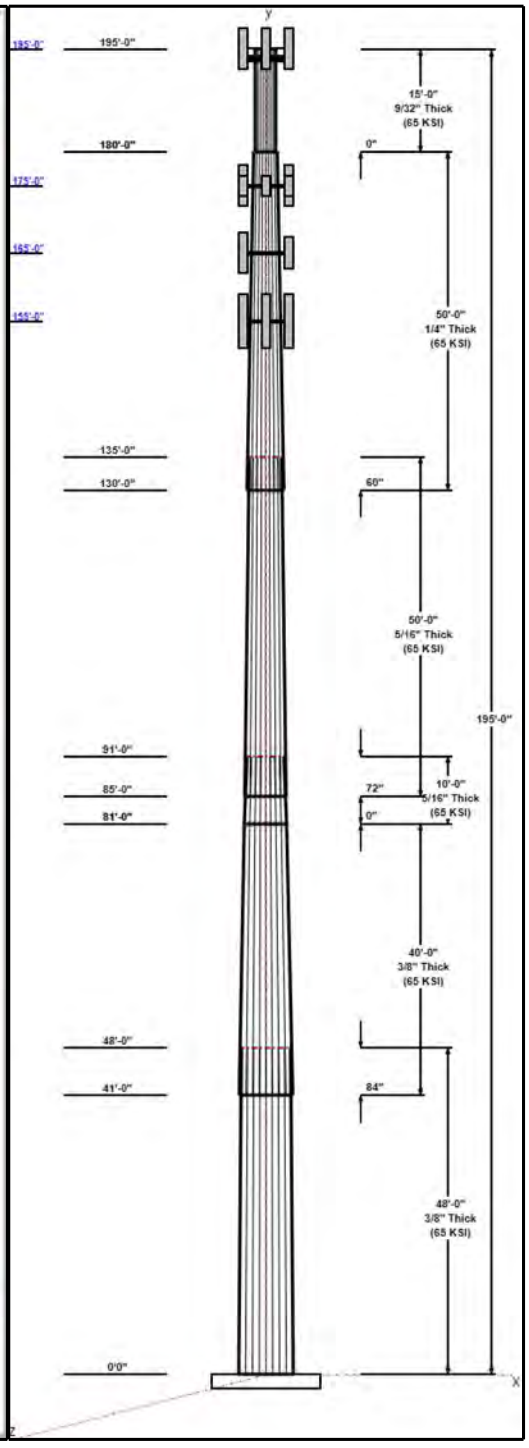
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6 93 mph Wind

Iterations: 32





Structure: CT01501-S-SBA

Type: Custom
Site Name: Morris
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23542

9/7/2021

Tower Engineering Solutions

Shaft Properties

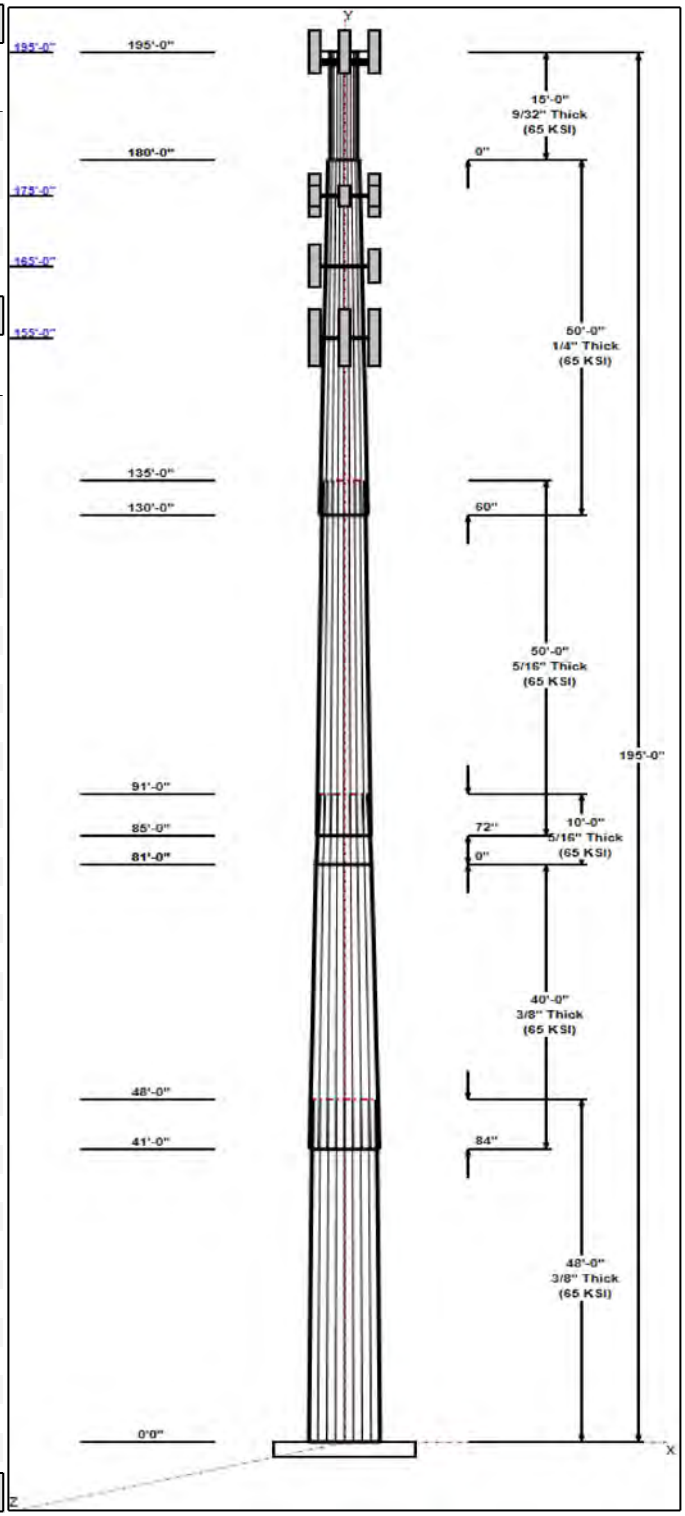
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	65
2	40.00	46.18	55.60	0.375	Slip	0.23542	65
3	10.00	43.83	46.18	0.313	Butt	0.23542	65
4	50.00	34.09	45.86	0.313	Slip	0.23542	65
5	50.00	24.00	35.77	0.250	Slip	0.23542	65
6	15.00	24.00	24.00	0.281	Butt	0.00000	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
195.00	195.00	3	APXVSPP18-C-A20	Sprint Nextel
195.00	195.00	6	800 Mhz	Sprint Nextel
195.00	195.00	4	ACU-A20-N	Sprint Nextel
195.00	195.00	3	1900MHz RRH	Sprint Nextel
195.00	195.00	3	800 Mhz Filter	Sprint Nextel
195.00	195.00	3	Commscope DT465B-2XR	Sprint Nextel
195.00	195.00	3	TD-RRH8x20-25	Sprint Nextel
195.00	195.00	1	Modified Platform + HR &	Sprint Nextel
193.00	193.00	1	Collar Mount	Sprint Nextel
175.00	175.00	1	Low Profile Platform	Verizon
175.00	175.00	3	Commscope	Verizon
175.00	175.00	6	Commscope	Verizon
175.00	175.00	3	Samsung MT6407-77A	Verizon
175.00	175.00	3	Samsung B5/B13	Verizon
175.00	175.00	3	Samsung B2/B66A	Verizon
175.00	175.00	1	HRK14	Verizon
175.00	175.00	1	RFS DB-C1-12C-24AB-0Z	Verizon
175.00	175.00	3	Commscope	Verizon
165.00	165.00	6	7770.00	AT&T
165.00	165.00	12	LGP2140X TMA	AT&T
165.00	165.00	6	RRUS-11	AT&T
165.00	165.00	1	AM-X-CD-16-65-00T-RET	AT&T
165.00	165.00	1	ABT-DF-DMADBH	AT&T
165.00	165.00	1	DC6-48-60-18-8F	AT&T
165.00	165.00	2	800 10764	AT&T
165.00	165.00	1	Low Profile Platform	AT&T
155.00	155.00	3	782 11056	T-Mobile
155.00	155.00	3	S20057A1	T-Mobile
155.00	155.00	3	KRY 112 144/1	T-Mobile
155.00	155.00	1	Low Profile Platform	T-Mobile
155.00	155.00	3	Ericsson AIR6449 B41	T-Mobile
155.00	155.00	3	RFS	T-Mobile
155.00	155.00	3	RFS	T-Mobile
155.00	155.00	3	Ericsson 4449 B71 + B85	T-Mobile
155.00	155.00	3	Ericsson 4415 B66A	T-Mobile
155.00	155.00	3	Ericsson 4424 B25	T-Mobile
155.00	155.00	1	HRK12 (Handrail Kit)	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1-1/4" Hybrid	Sprint Nextel
0.00	175.00	Inside	1 5/8" Coax	Verizon
0.00	175.00	Inside	1 5/8" Hybrid	Verizon



0.00	165.00	Inside	1 5/8" Coax	AT&T
0.00	165.00	Inside	3" Conduit	AT&T
0.00	165.00	Inside	3/4" DC	AT&T
0.00	165.00	Inside	7/16" Fiber	AT&T
0.00	155.00	Inside	1 5/8" Coax	T-Mobile
0.00	155.00	Inside	1.9" Fiber	T-Mobile

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	51.5	45.0	Round

Reactions

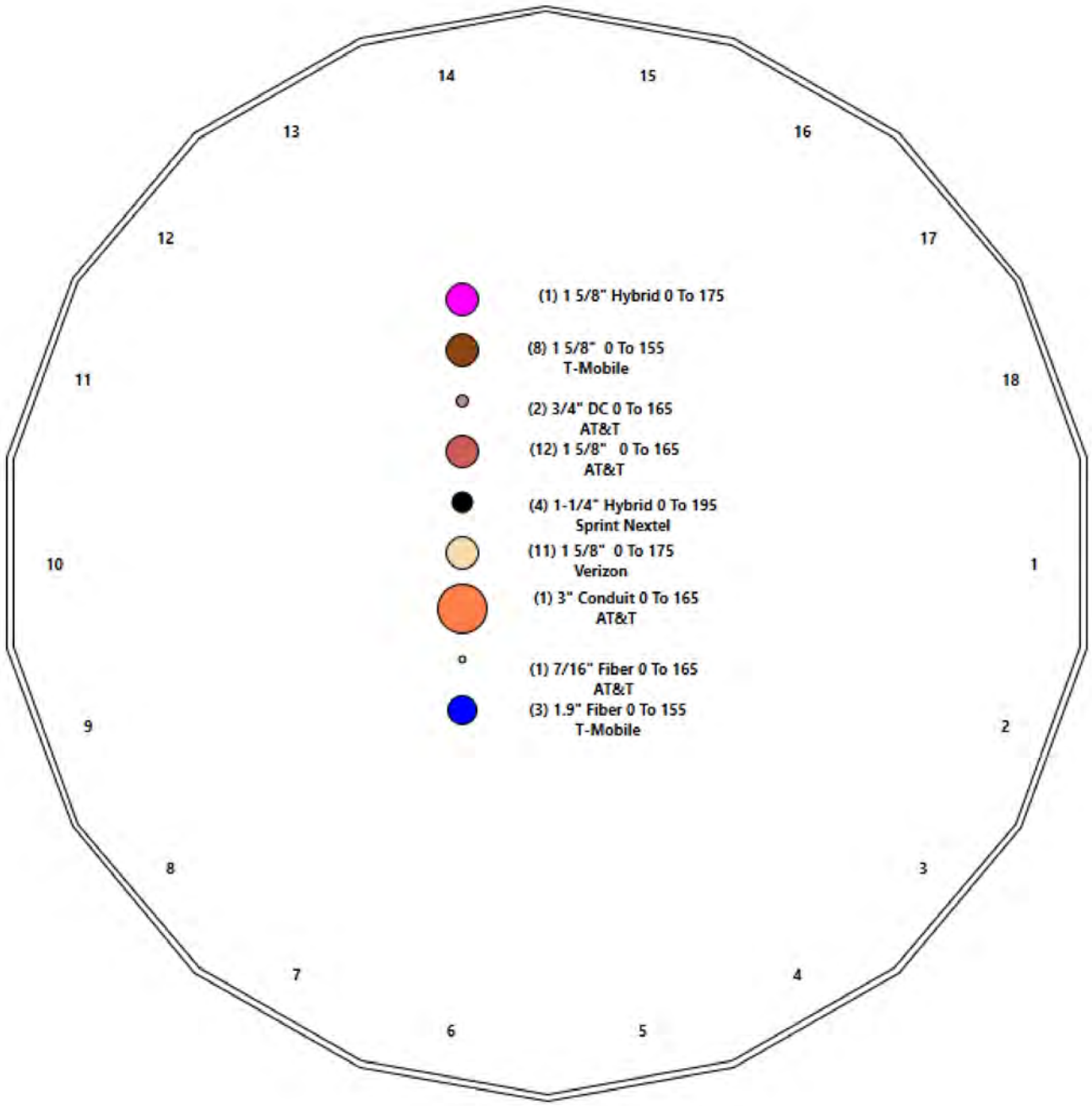
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6 93 mph Wind	5401.4	38.6	64.0
0.9D + 1.6W 93 mph Wind	5307.6	38.6	48.0
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1725.8	12.2	95.7
1.2D + 1.0E	239.5	1.6	64.0
0.9D + 1.0E	235.0	1.6	48.0
1.0D + 1.0W 60 mph Wind	1392.5	10.0	53.3

Structure: CT01501-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Morris
Height: 195.00 (ft)

9/7/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3750	65		0.00	11,368
2	18	40.000	0.3750	65	Slip	84.00	8,183
3	18	10.000	0.3125	65	Flange	0.00	1,508
4	18	50.000	0.3125	65	Slip	72.00	6,694
5	18	50.000	0.2500	65	Slip	60.00	4,001
6	18	15.000	0.2810	65	Flange	0.00	1,080
					Total Shaft Weight:		**32,834**

	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	64.50	0.00	76.32	39651.33	28.92	172.00	53.20	48.00	62.87	22166.3	23.60	141.8	0.235417
2	55.60	41.00	65.73	25324.08	24.73	148.26	46.18	81.00	54.52	14452.7	20.30	123.1	0.235417
3	46.18	81.00	45.49	12093.31	24.65	147.78	43.83	91.00	43.16	10325.2	23.32	140.2	0.235417
4	45.86	85.00	45.18	11844.57	24.47	146.77	34.09	135.00	33.51	4830.83	17.83	109.1	0.235417
5	35.77	130.0	28.18	4492.97	23.82	143.08	24.00	180.00	18.84	1343.00	15.52	96.00	0.235417
6	24.00	180.0	21.15	1503.63	13.65	85.41	24.00	195.00	21.15	1503.63	13.65	85.41	0.000000

Load Summary

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	195.00	APXVSPP18-C-A20	3	57.00	8.02	0.83	234.45	10.888	0.83	0.00	0.00
2	195.00	800 Mhz	6	68.30	3.46	0.67	161.15	4.809	0.67	0.00	0.00
3	195.00	ACU-A20-N	4	1.00	0.14	0.67	5.41	0.445	0.67	0.00	0.00
4	195.00	1900MHz RRH	3	44.00	3.80	0.67	156.07	5.227	0.67	0.00	0.00
5	195.00	800 Mhz Filter	3	10.00	0.49	0.70	26.48	1.066	0.70	0.00	0.00
6	195.00	Commscope DT465B-2XR	3	58.00	9.10	0.83	295.39	10.479	0.83	0.00	0.00
7	195.00	TD-RRH8x20-25	3	70.00	4.05	0.50	184.03	4.886	0.50	0.00	0.00
8	195.00	Modified Platform + HR & Kicker	1	2246.00	51.70	1.00	4660.37	90.974	1.00	0.00	0.00
9	193.00	Collar Mount	1	350.00	5.00	1.00	650.68	8.579	1.00	0.00	0.00
10	175.00	Low Profile Platform	1	1500.00	22.00	1.00	2829.24	39.936	1.00	0.00	0.00
11	175.00	Commscope BSAMNT-SDS-2-2	3	25.35	0.00	1.00	43.32	0.000	1.00	0.00	0.00
12	175.00	Commscope NHH-85B-R2B	6	43.70	8.17	0.85	251.38	9.526	0.85	0.00	0.00
13	175.00	Samsung MT6407-77A	3	79.40	4.69	0.70	201.19	5.653	0.70	0.00	0.00
14	175.00	Samsung B5/B13 RRH-BR04C	3	70.30	1.87	0.67	141.02	2.453	0.67	0.00	0.00
15	175.00	Samsung B2/B66A RRH-BR049	3	84.40	1.87	0.67	162.44	2.453	0.67	0.00	0.00
16	175.00	HRK14	1	504.00	8.13	1.00	1111.41	16.199	1.00	0.00	0.00
17	175.00	RFS DB-C1-12C-24AB-0Z	1	32.00	4.06	1.00	147.70	4.895	1.00	0.00	0.00
18	175.00	Commscope TD-850B-LTE78-43	3	52.90	1.96	0.71	109.53	2.692	0.76	0.00	0.00
19	165.00	7770.00	6	35.00	5.50	0.73	171.77	6.576	0.73	0.00	0.00
20	165.00	LGP2140X TMA	12	19.00	1.30	0.67	44.11	2.162	0.67	0.00	0.00
21	165.00	RRUS-11	6	51.00	2.52	0.71	123.97	3.159	0.71	0.00	0.00
22	165.00	AM-X-CD-16-65-00T-RET	1	48.50	8.02	0.90	212.33	10.841	0.90	0.00	0.00
23	165.00	ABT-DF-DMADBH	1	1.10	0.05	1.00	3.35	0.244	1.00	0.00	0.00
24	165.00	DC6-48-60-18-8F	1	31.80	0.92	1.00	94.22	1.362	1.00	0.00	0.00
25	165.00	800 10764	2	40.80	5.88	0.90	169.53	8.043	0.90	0.00	0.00
26	165.00	Low Profile Platform	1	1500.00	22.00	1.00	2821.45	39.831	1.00	0.00	0.00
27	155.00	782 11056	3	5.30	0.28	0.87	14.78	0.683	0.87	0.00	0.00
28	155.00	S20057A1	3	11.00	0.82	0.73	29.94	1.520	0.73	0.00	0.00
29	155.00	KRY 112 144/1	3	11.00	0.41	0.70	21.82	0.887	0.70	0.00	0.00
30	155.00	Low Profile Platform	1	1500.00	22.00	1.00	2813.21	39.720	1.00	0.00	0.00
31	155.00	Ericsson AIR6449 B41	3	103.00	5.65	0.71	240.57	6.604	0.71	0.00	0.00
32	155.00	RFS APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.67	158.14	8.795	0.67	0.00	0.00
33	155.00	RFS APXVAALL24-43-U-NA20	3	128.00	20.24	0.70	547.48	22.147	0.70	0.00	0.00
34	155.00	Ericsson 4449 B71 + B85	3	73.20	1.97	0.67	131.13	2.541	0.67	0.00	0.00
35	155.00	Ericsson 4415 B66A	3	49.60	1.86	0.67	112.15	2.427	0.67	0.00	0.00
36	155.00	Ericsson 4424 B25	3	88.00	2.05	0.67	174.74	2.648	0.67	0.00	0.00
37	155.00	HRK12 (Handrail Kit)	1	261.72	7.75	1.00	573.34	15.349	1.00	0.00	0.00
		Totals:	**110**	**12,660.17**			**30,010.82**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1-1/4" Hybrid	0.00	Inside
0.00	175.00	(11) 1 5/8" Coax	0.00	Inside
0.00	175.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	165.00	(12) 1 5/8" Coax	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	165.00	(1) 3" Conduit			0.00	Inside					
0.00	165.00	(2) 3/4" DC			0.00	Inside					
0.00	165.00	(1) 7/16" Fiber			0.00	Inside					
0.00	155.00	(8) 1 5/8" Coax			0.00	Inside					
0.00	155.00	(3) 1.9" Fiber			0.00	Inside					

Shaft Section Properties

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Increment Length: **2 (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	64.500	76.322	39651.3	28.92	172.00	67.4	1210.	0.0
2.00		0.3750	64.029	75.762	38784.3	28.70	170.74	67.6	1193.	517.5
4.00		0.3750	63.558	75.201	37930.0	28.47	169.49	67.9	1175.	513.7
6.00		0.3750	63.087	74.641	37088.4	28.25	168.23	68.2	1157.	509.9
8.00		0.3750	62.617	74.080	36259.3	28.03	166.98	68.4	1140.	506.1
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	68.7	1123.	502.3
12.00		0.3750	61.675	72.960	34638.3	27.59	164.47	69.0	1106.	498.4
14.00		0.3750	61.204	72.399	33846.3	27.37	163.21	69.2	1089.	494.6
16.00		0.3750	60.733	71.839	33066.4	27.15	161.96	69.5	1072.	490.8
18.00		0.3750	60.262	71.279	32298.6	26.93	160.70	69.7	1055.	487.0
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	70.0	1039.	483.2
22.00		0.3750	59.321	70.158	30798.9	26.48	158.19	70.3	1022.	479.4
24.00		0.3750	58.850	69.597	30066.7	26.26	156.93	70.5	1006.	475.6
26.00		0.3750	58.379	69.037	29346.3	26.04	155.68	70.8	990.1	471.7
28.00		0.3750	57.908	68.477	28637.4	25.82	154.42	71.0	974.0	467.9
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	71.3	958.1	464.1
32.00		0.3750	56.967	67.356	27254.2	25.38	151.91	71.6	942.3	460.3
34.00		0.3750	56.496	66.795	26579.6	25.15	150.66	71.8	926.6	456.5
36.00		0.3750	56.025	66.235	25916.2	24.93	149.40	72.1	911.1	452.7
38.00		0.3750	55.554	65.675	25263.9	24.71	148.14	72.3	895.7	448.9
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	72.6	880.4	445.0
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	72.7	872.8	221.1
42.00		0.3750	54.612	64.554	23992.5	24.27	145.63	72.9	865.3	443.3
44.00		0.3750	54.142	63.993	23373.0	24.05	144.38	73.1	850.3	880.9
46.00		0.3750	53.671	63.433	22764.4	23.83	143.12	73.4	835.4	873.3
48.00	Top - Section 1	0.3750	53.950	63.765	23124.0	23.96	143.87	0.0	0.0	865.7
50.00		0.3750	53.479	63.205	22519.6	23.74	142.61	73.5	829.4	432.1
52.00		0.3750	53.008	62.645	21925.9	23.51	141.36	73.7	814.7	428.2
54.00		0.3750	52.537	62.084	21342.8	23.29	140.10	74.0	800.1	424.4
56.00		0.3750	52.067	61.524	20770.0	23.07	138.84	74.3	785.7	420.6
58.00		0.3750	51.596	60.963	20207.6	22.85	137.59	74.5	771.4	416.8
60.00		0.3750	51.125	60.403	19655.5	22.63	136.33	74.8	757.2	413.0
62.00		0.3750	50.654	59.843	19113.5	22.41	135.08	75.0	743.2	409.2
64.00		0.3750	50.183	59.282	18581.5	22.19	133.82	75.3	729.3	405.4
66.00		0.3750	49.712	58.722	18059.6	21.96	132.57	75.6	715.5	401.5
68.00		0.3750	49.242	58.161	17547.4	21.74	131.31	75.8	701.9	397.7
70.00		0.3750	48.771	57.601	17045.1	21.52	130.06	76.1	688.4	393.9
72.00		0.3750	48.300	57.041	16552.4	21.30	128.80	76.3	675.0	390.1
74.00		0.3750	47.829	56.480	16069.4	21.08	127.54	76.6	661.7	386.3
76.00		0.3750	47.358	55.920	15595.8	20.86	126.29	76.9	648.6	382.5
78.00		0.3750	46.887	55.360	15131.6	20.64	125.03	77.1	635.6	378.7
80.00		0.3750	46.417	54.799	14676.7	20.41	123.78	77.4	622.8	374.8
81.00	Top - Section 2	0.3750	46.181	54.519	14452.7	20.30	123.15	77.5	616.4	186.0
81.00	Bot - Section 3	0.3125	46.181	45.494	12093.3	24.36	147.78	72.4	515.8	
82.00		0.3125	45.946	45.261	11908.1	24.51	147.03	72.6	510.5	154.4
84.00		0.3125	45.475	44.794	11543.3	24.25	145.52	72.9	500.0	306.4
85.00	Bot - Section 4	0.3125	45.240	44.560	11363.7	24.12	144.77	73.0	494.7	152.0
86.00		0.3125	45.004	44.327	11186.0	23.98	144.01	73.2	489.6	304.6
88.00		0.3125	44.533	43.860	10836.2	23.72	142.51	73.5	479.3	604.4
90.00		0.3125	44.062	43.393	10493.7	23.45	141.00	73.8	469.1	598.0

Increment Length: **2 (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)
91.00	Top - Section 3	0.3125	44.452	43.779	10776.5	23.67	142.25	0.0	0.0	296.6
92.00		0.3125	44.217	43.546	10605.0	23.54	141.49	73.7	472.4	148.6
94.00		0.3125	43.746	43.079	10267.5	23.27	139.99	74.0	462.3	294.8
96.00		0.3125	43.275	42.612	9937.2	23.01	138.48	74.3	452.3	291.6
98.00		0.3125	42.804	42.145	9614.0	22.74	136.97	74.7	442.4	288.4
100.00		0.3125	42.333	41.678	9298.0	22.48	135.47	75.0	432.6	285.2
102.00		0.3125	41.862	41.211	8988.9	22.21	133.96	75.3	422.9	282.1
104.00		0.3125	41.392	40.744	8686.8	21.94	132.45	75.6	413.4	278.9
106.00		0.3125	40.921	40.277	8391.5	21.68	130.95	75.9	403.9	275.7
108.00		0.3125	40.450	39.810	8103.0	21.41	129.44	76.2	394.6	272.5
110.00		0.3125	39.979	39.343	7821.2	21.15	127.93	76.5	385.3	269.3
112.00		0.3125	39.508	38.876	7546.0	20.88	126.43	76.8	376.2	266.2
114.00		0.3125	39.037	38.409	7277.3	20.62	124.92	77.2	367.2	263.0
116.00		0.3125	38.567	37.942	7015.0	20.35	123.41	77.5	358.3	259.8
118.00		0.3125	38.096	37.475	6759.2	20.08	121.91	77.8	349.5	256.6
120.00		0.3125	37.625	37.008	6509.6	19.82	120.40	78.1	340.8	253.4
122.00		0.3125	37.154	36.541	6266.3	19.55	118.89	78.4	332.2	250.3
124.00		0.3125	36.683	36.074	6029.1	19.29	117.39	78.7	323.7	247.1
126.00		0.3125	36.212	35.607	5798.0	19.02	115.88	79.0	315.4	243.9
128.00		0.3125	35.742	35.140	5572.8	18.76	114.37	79.3	307.1	240.7
130.00	Bot - Section 5	0.3125	35.271	34.673	5353.6	18.49	112.87	79.7	299.0	237.6
132.00		0.3125	34.800	34.206	5140.2	18.23	111.36	80.0	290.9	424.9
134.00		0.3125	34.329	33.739	4932.5	17.96	109.85	80.3	283.0	419.2
135.00	Top - Section 4	0.2500	34.594	27.251	4060.9	22.99	138.37	0.0	0.0	207.5
136.00		0.2500	34.358	27.064	3978.0	22.82	137.43	74.6	228.0	92.4
138.00		0.2500	33.887	26.690	3815.5	22.49	135.55	74.9	221.8	182.9
140.00		0.2500	33.417	26.317	3657.5	22.16	133.67	75.3	215.6	180.4
142.00		0.2500	32.946	25.943	3504.0	21.83	131.78	75.7	209.5	177.8
144.00		0.2500	32.475	25.570	3354.8	21.49	129.90	76.1	203.5	175.3
146.00		0.2500	32.004	25.196	3209.9	21.16	128.02	76.5	197.5	172.7
148.00		0.2500	31.533	24.822	3069.2	20.83	126.13	76.9	191.7	170.2
150.00		0.2500	31.062	24.449	2932.7	20.50	124.25	77.3	186.0	167.7
152.00		0.2500	30.592	24.075	2800.3	20.17	122.37	77.7	180.3	165.1
154.00		0.2500	30.121	23.702	2671.9	19.83	120.48	78.1	174.7	162.6
155.00		0.2500	29.885	23.515	2609.3	19.67	119.54	78.3	172.0	80.3
156.00		0.2500	29.650	23.328	2547.6	19.50	118.60	78.5	169.2	79.7
158.00		0.2500	29.179	22.954	2427.1	19.17	116.72	78.9	163.8	157.5
160.00		0.2500	28.708	22.581	2310.5	18.84	114.83	79.2	158.5	154.9
162.00		0.2500	28.237	22.207	2197.7	18.51	112.95	79.6	153.3	152.4
164.00		0.2500	27.767	21.834	2088.7	18.17	111.07	80.0	148.2	149.9
165.00		0.2500	27.531	21.647	2035.5	18.01	110.12	80.2	145.6	74.0
166.00		0.2500	27.296	21.460	1983.3	17.84	109.18	80.4	143.1	73.3
168.00		0.2500	26.825	21.087	1881.5	17.51	107.30	80.8	138.1	144.8
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	81.2	133.3	142.2
172.00		0.2500	25.883	20.339	1688.5	16.85	103.53	81.6	128.5	139.7
174.00		0.2500	25.412	19.966	1597.2	16.51	101.65	82.0	123.8	137.1
175.00		0.2500	25.177	19.779	1552.7	16.35	100.71	82.2	121.5	67.6
176.00		0.2500	24.942	19.592	1509.2	16.18	99.77	82.4	119.2	67.0
178.00		0.2500	24.471	19.219	1424.5	15.85	97.88	82.5	114.7	132.1
180.00	Top - Section 5	0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	129.5
180.00	Bot - Section 6	0.2810	24.000	21.154	1503.6	13.80	85.41	82.5	123.4	
182.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
184.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
186.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
188.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
190.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
192.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	144.0
193.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	72.0
194.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	72.0
195.00		0.2810	24.000	21.154	1503.6	13.65	85.41	82.5	123.4	72.0

Increment Length: **2 (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)
										32833.6

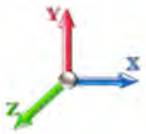
Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 32

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	0.85	17.879	19.67	467.97	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	464.56	0.650	0.000	2.00	10.876	7.07	222.5	0.0	621.0
4.00		1.00	0.85	17.879	19.67	461.14	0.650	0.000	2.00	10.796	7.02	220.8	0.0	616.4
6.00		1.00	0.85	17.879	19.67	457.72	0.650	0.000	2.00	10.717	6.97	219.2	0.0	611.9
8.00		1.00	0.85	17.879	19.67	454.31	0.650	0.000	2.00	10.637	6.91	217.6	0.0	607.3
10.00		1.00	0.85	17.879	19.67	450.89	0.650	0.000	2.00	10.557	6.86	215.9	0.0	602.7
12.00		1.00	0.85	17.879	19.67	447.48	0.650	0.000	2.00	10.478	6.81	214.3	0.0	598.1
14.00		1.00	0.85	17.879	19.67	444.06	0.650	0.000	2.00	10.398	6.76	212.7	0.0	593.5
16.00		1.00	0.86	18.100	19.91	443.36	0.650	0.000	2.00	10.318	6.71	213.7	0.0	589.0
18.00		1.00	0.88	18.554	20.41	445.41	0.650	0.000	2.00	10.239	6.66	217.3	0.0	584.4
20.00		1.00	0.90	18.971	20.87	446.85	0.650	0.000	2.00	10.159	6.60	220.5	0.0	579.8
22.00		1.00	0.92	19.355	21.29	447.81	0.650	0.000	2.00	10.079	6.55	223.2	0.0	575.2
24.00		1.00	0.94	19.713	21.68	448.34	0.650	0.000	2.00	9.999	6.50	225.5	0.0	570.7
26.00		1.00	0.95	20.048	22.05	448.52	0.650	0.000	2.00	9.920	6.45	227.5	0.0	566.1
28.00		1.00	0.97	20.363	22.40	448.38	0.650	0.000	2.00	9.840	6.40	229.2	0.0	561.5
30.00		1.00	0.98	20.661	22.73	447.98	0.650	0.000	2.00	9.760	6.34	230.7	0.0	556.9
32.00		1.00	1.00	20.944	23.04	447.34	0.650	0.000	2.00	9.681	6.29	231.9	0.0	552.4
34.00		1.00	1.01	21.213	23.33	446.48	0.650	0.000	2.00	9.601	6.24	233.0	0.0	547.8
36.00		1.00	1.02	21.470	23.62	445.43	0.650	0.000	2.00	9.521	6.19	233.9	0.0	543.2
38.00		1.00	1.03	21.715	23.89	444.21	0.650	0.000	2.00	9.442	6.14	234.6	0.0	538.6
40.00		1.00	1.04	21.951	24.15	442.83	0.650	0.000	2.00	9.362	6.09	235.1	0.0	534.1
41.00	Bot - Section 2	1.00	1.05	22.065	24.27	442.08	0.650	0.000	1.00	4.651	3.02	117.4	0.0	265.3
42.00		1.00	1.05	22.178	24.40	441.30	0.650	0.000	1.00	4.695	3.05	119.1	0.0	532.0
44.00		1.00	1.06	22.396	24.64	439.64	0.650	0.000	2.00	9.330	6.06	239.0	0.0	1057.1
46.00		1.00	1.07	22.607	24.87	437.87	0.650	0.000	2.00	9.250	6.01	239.2	0.0	1047.9
48.00	Top - Section 1	1.00	1.08	22.810	25.09	435.97	0.650	0.000	2.00	9.170	5.96	239.3	0.0	1038.8
50.00		1.00	1.09	23.007	25.31	440.15	0.650	0.000	2.00	9.091	5.91	239.3	0.0	518.5
52.00		1.00	1.10	23.198	25.52	438.08	0.650	0.000	2.00	9.011	5.86	239.1	0.0	513.9
54.00		1.00	1.11	23.383	25.72	435.92	0.650	0.000	2.00	8.931	5.81	238.9	0.0	509.3
56.00		1.00	1.12	23.562	25.92	433.67	0.650	0.000	2.00	8.851	5.75	238.6	0.0	504.7
58.00		1.00	1.13	23.737	26.11	431.33	0.650	0.000	2.00	8.772	5.70	238.2	0.0	500.2
60.00		1.00	1.14	23.907	26.30	428.93	0.650	0.000	2.00	8.692	5.65	237.7	0.0	495.6
62.00		1.00	1.14	24.073	26.48	426.45	0.650	0.000	2.00	8.612	5.60	237.2	0.0	491.0
64.00		1.00	1.15	24.234	26.66	423.90	0.650	0.000	2.00	8.533	5.55	236.6	0.0	486.4
66.00		1.00	1.16	24.392	26.83	421.28	0.650	0.000	2.00	8.453	5.49	235.9	0.0	481.8
68.00		1.00	1.17	24.545	27.00	418.60	0.650	0.000	2.00	8.373	5.44	235.1	0.0	477.3
70.00		1.00	1.17	24.696	27.17	415.87	0.650	0.000	2.00	8.294	5.39	234.3	0.0	472.7
72.00		1.00	1.18	24.843	27.33	413.08	0.650	0.000	2.00	8.214	5.34	233.4	0.0	468.1
74.00		1.00	1.19	24.986	27.48	410.23	0.650	0.000	2.00	8.134	5.29	232.5	0.0	463.5
76.00		1.00	1.19	25.127	27.64	407.34	0.650	0.000	2.00	8.055	5.24	231.5	0.0	459.0
78.00		1.00	1.20	25.265	27.79	404.39	0.650	0.000	2.00	7.975	5.18	230.5	0.0	454.4
80.00		1.00	1.21	25.400	27.94	401.40	0.650	0.000	2.00	7.895	5.13	229.4	0.0	449.8
81.00	Top - Section 2	1.00	1.21	25.466	28.01	399.88	0.650	0.000	1.00	3.918	2.55	114.1	0.0	223.2
82.00		1.00	1.21	25.532	28.09	398.36	0.650	0.000	1.00	3.898	2.53	113.9	0.0	185.3
84.00		1.00	1.22	25.662	28.23	395.28	0.650	0.000	2.00	7.736	5.03	227.1	0.0	367.7
85.00	Bot - Section 4	1.00	1.22	25.726	28.30	393.72	0.650	0.000	1.00	3.838	2.49	113.0	0.0	182.4
86.00		1.00	1.23	25.789	28.37	392.16	0.650	0.000	1.00	3.871	2.52	114.2	0.0	365.5

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 12

88.00		1.00	1.23	25.915	28.51	388.99	0.650	0.000	2.00	7.682	4.99	227.8	0.0	725.3
90.00		1.00	1.24	26.037	28.64	385.79	0.650	0.000	2.00	7.603	4.94	226.5	0.0	717.6
91.00	Top - Section 3	1.00	1.24	26.098	28.71	384.18	0.650	0.000	1.00	3.771	2.45	112.6	0.0	356.0
92.00		1.00	1.24	26.158	28.77	388.04	0.650	0.000	1.00	3.752	2.44	112.3	0.0	178.3
94.00		1.00	1.25	26.277	28.90	384.78	0.650	0.000	2.00	7.443	4.84	223.8	0.0	353.7
96.00		1.00	1.25	26.394	29.03	381.48	0.650	0.000	2.00	7.364	4.79	222.3	0.0	349.9
98.00		1.00	1.26	26.509	29.16	378.15	0.650	0.000	2.00	7.284	4.73	220.9	0.0	346.1
100.00		1.00	1.27	26.621	29.28	374.79	0.650	0.000	2.00	7.204	4.68	219.4	0.0	342.3
102.00		1.00	1.27	26.733	29.41	371.39	0.650	0.000	2.00	7.125	4.63	217.9	0.0	338.5
104.00		1.00	1.28	26.842	29.53	367.97	0.650	0.000	2.00	7.045	4.58	216.3	0.0	334.6
106.00		1.00	1.28	26.950	29.65	364.51	0.650	0.000	2.00	6.965	4.53	214.7	0.0	330.8
108.00		1.00	1.29	27.056	29.76	361.03	0.650	0.000	2.00	6.886	4.48	213.1	0.0	327.0
110.00		1.00	1.29	27.161	29.88	357.51	0.650	0.000	2.00	6.806	4.42	211.5	0.0	323.2
112.00		1.00	1.30	27.264	29.99	353.97	0.650	0.000	2.00	6.726	4.37	209.8	0.0	319.4
114.00		1.00	1.30	27.366	30.10	350.41	0.650	0.000	2.00	6.646	4.32	208.1	0.0	315.6
116.00		1.00	1.31	27.466	30.21	346.82	0.650	0.000	2.00	6.567	4.27	206.3	0.0	311.8
118.00		1.00	1.31	27.565	30.32	343.20	0.650	0.000	2.00	6.487	4.22	204.6	0.0	308.0
120.00		1.00	1.32	27.663	30.43	339.56	0.650	0.000	2.00	6.407	4.16	202.8	0.0	304.1
122.00		1.00	1.32	27.760	30.54	335.89	0.650	0.000	2.00	6.328	4.11	200.9	0.0	300.3
124.00		1.00	1.32	27.855	30.64	332.20	0.650	0.000	2.00	6.248	4.06	199.1	0.0	296.5
126.00		1.00	1.33	27.949	30.74	328.49	0.650	0.000	2.00	6.168	4.01	197.2	0.0	292.7
128.00		1.00	1.33	28.042	30.85	324.76	0.650	0.000	2.00	6.089	3.96	195.3	0.0	288.9
130.00	Bot - Section 5	1.00	1.34	28.133	30.95	321.00	0.650	0.000	2.00	6.009	3.91	193.4	0.0	285.1
132.00		1.00	1.34	28.224	31.05	317.23	0.650	0.000	2.00	6.014	3.91	194.2	0.0	509.9
134.00		1.00	1.35	28.313	31.14	313.43	0.650	0.000	2.00	5.934	3.86	192.2	0.0	503.0
135.00	Top - Section 4	1.00	1.35	28.358	31.19	311.53	0.650	0.000	1.00	2.937	1.91	95.3	0.0	248.9
136.00		1.00	1.35	28.402	31.24	314.19	0.650	0.000	1.00	2.917	1.90	94.8	0.0	110.9
138.00		1.00	1.35	28.489	31.34	310.36	0.650	0.000	2.00	5.775	3.75	188.2	0.0	219.5
140.00		1.00	1.36	28.576	31.43	306.51	0.650	0.000	2.00	5.695	3.70	186.2	0.0	216.4
142.00		1.00	1.36	28.661	31.53	302.64	0.650	0.000	2.00	5.616	3.65	184.1	0.0	213.4
144.00		1.00	1.37	28.746	31.62	298.76	0.650	0.000	2.00	5.536	3.60	182.0	0.0	210.3
146.00		1.00	1.37	28.829	31.71	294.86	0.650	0.000	2.00	5.456	3.55	179.9	0.0	207.3
148.00		1.00	1.37	28.912	31.80	290.93	0.650	0.000	2.00	5.376	3.49	177.8	0.0	204.2
150.00		1.00	1.38	28.994	31.89	286.99	0.650	0.000	2.00	5.297	3.44	175.7	0.0	201.2
152.00		1.00	1.38	29.075	31.98	283.04	0.650	0.000	2.00	5.217	3.39	173.5	0.0	198.1
154.00		1.00	1.39	29.155	32.07	279.07	0.650	0.000	2.00	5.137	3.34	171.3	0.0	195.1
155.00	Appurtenance(s)	1.00	1.39	29.195	32.11	277.07	0.650	0.000	1.00	2.539	1.65	84.8	0.0	96.4
156.00		1.00	1.39	29.234	32.16	275.08	0.650	0.000	1.00	2.519	1.64	84.2	0.0	95.6
158.00		1.00	1.39	29.313	32.24	271.07	0.650	0.000	2.00	4.978	3.24	166.9	0.0	189.0
160.00		1.00	1.40	29.390	32.33	267.05	0.650	0.000	2.00	4.898	3.18	164.7	0.0	185.9
162.00		1.00	1.40	29.467	32.41	263.02	0.650	0.000	2.00	4.819	3.13	162.4	0.0	182.9
164.00		1.00	1.40	29.544	32.50	258.96	0.650	0.000	2.00	4.739	3.08	160.2	0.0	179.8
165.00	Appurtenance(s)	1.00	1.41	29.581	32.54	256.93	0.650	0.000	1.00	2.340	1.52	79.2	0.0	88.8
166.00		1.00	1.41	29.619	32.58	254.90	0.650	0.000	1.00	2.320	1.51	78.6	0.0	88.0
168.00		1.00	1.41	29.694	32.66	250.82	0.650	0.000	2.00	4.580	2.98	155.6	0.0	173.7
170.00		1.00	1.42	29.768	32.74	246.72	0.650	0.000	2.00	4.500	2.92	153.2	0.0	170.7
172.00		1.00	1.42	29.841	32.83	242.61	0.650	0.000	2.00	4.420	2.87	150.9	0.0	167.6
174.00		1.00	1.42	29.914	32.91	238.49	0.650	0.000	2.00	4.341	2.82	148.5	0.0	164.6
175.00	Appurtenance(s)	1.00	1.42	29.950	32.95	236.42	0.650	0.000	1.00	2.140	1.39	73.3	0.0	81.1
176.00		1.00	1.43	29.986	32.98	234.35	0.650	0.000	1.00	2.120	1.38	72.7	0.0	80.4
178.00		1.00	1.43	30.057	33.06	230.20	0.650	0.000	2.00	4.181	2.72	143.8	0.0	158.5
180.00	Top - Section 5	1.00	1.43	30.128	33.14	226.04	0.650	0.000	2.00	4.102	2.67	141.4	0.0	155.4
182.00		1.00	1.44	30.198	33.22	226.30	0.650	0.000	2.00	4.062	2.64	140.3	0.0	172.8
184.00		1.00	1.44	30.268	33.29	226.56	0.650	0.000	2.00	4.062	2.64	140.6	0.0	172.8
186.00		1.00	1.44	30.337	33.37	226.82	0.650	0.000	2.00	4.062	2.64	141.0	0.0	172.8
188.00		1.00	1.45	30.405	33.45	227.08	0.650	0.000	2.00	4.062	2.64	141.3	0.0	172.8
190.00		1.00	1.45	30.473	33.52	227.33	0.650	0.000	2.00	4.062	2.64	141.6	0.0	172.8

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

192.00		1.00	1.45	30.540	33.59	227.58	0.650	0.000	2.00	4.062	2.64	141.9	0.0	172.8
193.00	Appurtenance(s)	1.00	1.45	30.574	33.63	227.70	0.650	0.000	1.00	2.031	1.32	71.0	0.0	86.4
194.00		1.00	1.46	30.607	33.67	227.83	0.650	0.000	1.00	2.031	1.32	71.1	0.0	86.4
195.00	Appurtenance(s)	1.00	1.46	30.640	33.70	227.95	0.650	0.000	1.00	2.031	1.32	71.2	0.0	86.4
								Totals:	**195.00**			**19,816.1**		**39,400.3**

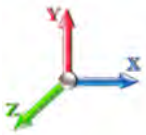
Discrete Appurtenance Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Load Case: 1.2D + 1.6 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 32

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	195.00	Modified Platform + HR &	1	30.640	33.704	1.00	1.00	51.70	2695.20	0.000	0.000	2788.02	0.00	0.00
2	195.00	TD-RRH8x20-25	3	30.640	33.704	0.38	0.75	4.56	252.00	0.000	0.000	245.70	0.00	0.00
3	195.00	Commscope DT465B-2XR	3	30.640	33.704	0.62	0.75	16.99	208.80	0.000	0.000	916.45	0.00	0.00
4	195.00	800 Mhz Filter	3	30.640	33.704	0.52	0.75	0.77	36.00	0.000	0.000	41.62	0.00	0.00
5	195.00	1900MHz RRH	3	30.640	33.704	0.50	0.75	5.73	158.40	0.000	0.000	308.92	0.00	0.00
6	195.00	ACU-A20-N	4	30.640	33.704	0.50	0.75	0.28	4.80	0.000	0.000	15.18	0.00	0.00
7	195.00	800 Mhz	6	30.640	33.704	0.50	0.75	10.43	491.76	0.000	0.000	562.56	0.00	0.00
8	195.00	APXVSPP18-C-A20	3	30.640	33.704	0.62	0.75	14.98	205.20	0.000	0.000	807.68	0.00	0.00
9	193.00	Collar Mount	1	30.574	33.631	1.00	1.00	5.00	420.00	0.000	0.000	269.05	0.00	0.00
10	175.00	Commscope	3	29.950	32.945	0.53	0.75	3.13	190.44	0.000	0.000	164.81	0.00	0.00
11	175.00	RFS DB-C1-12C-24AB-0Z	1	29.950	32.945	0.75	0.75	3.04	38.40	0.000	0.000	160.51	0.00	0.00
12	175.00	HRK14	1	29.950	32.945	1.00	1.00	8.13	604.80	0.000	0.000	428.55	0.00	0.00
13	175.00	Samsung B2/B66A	3	29.950	32.945	0.50	0.75	2.82	303.84	0.000	0.000	148.60	0.00	0.00
14	175.00	Samsung B5/B13	3	29.950	32.945	0.50	0.75	2.82	253.08	0.000	0.000	148.60	0.00	0.00
15	175.00	Samsung MT6407-77A	3	29.950	32.945	0.52	0.75	7.39	285.84	0.000	0.000	389.37	0.00	0.00
16	175.00	Commscope	6	29.950	32.945	0.64	0.75	31.25	314.64	0.000	0.000	1647.27	0.00	0.00
17	175.00	Commscope	3	29.950	32.945	1.00	1.00	0.00	91.26	0.000	0.000	0.00	0.00	0.00
18	175.00	Low Profile Platform	1	29.950	32.945	1.00	1.00	22.00	1800.00	0.000	0.000	1159.67	0.00	0.00
19	165.00	Low Profile Platform	1	29.581	32.540	1.00	1.00	22.00	1800.00	0.000	0.000	1145.39	0.00	0.00
20	165.00	DC6-48-60-18-8F	1	29.581	32.540	1.00	1.00	0.92	38.16	0.000	0.000	47.90	0.00	0.00
21	165.00	ABT-DF-DMADBH	1	29.581	32.540	1.00	1.00	0.05	1.32	0.000	0.000	2.60	0.00	0.00
22	165.00	AM-X-CD-16-65-00T-RET	1	29.581	32.540	0.72	0.80	5.77	58.20	0.000	0.000	300.63	0.00	0.00
23	165.00	RRUS-11	6	29.581	32.540	0.57	0.80	8.59	367.20	0.000	0.000	447.13	0.00	0.00
24	165.00	LGP2140X TMA	12	29.581	32.540	0.54	0.80	8.36	273.60	0.000	0.000	435.33	0.00	0.00
25	165.00	7770.00	6	29.581	32.540	0.58	0.80	19.27	252.00	0.000	0.000	1003.36	0.00	0.00
26	165.00	800 10764	2	29.581	32.540	0.72	0.80	8.47	97.92	0.000	0.000	440.83	0.00	0.00
27	155.00	KRY 112 144/1	3	29.195	32.114	0.52	0.75	0.65	39.60	0.000	0.000	33.18	0.00	0.00
28	155.00	Low Profile Platform	1	29.195	32.114	1.00	1.00	22.00	1800.00	0.000	0.000	1130.41	0.00	0.00
29	155.00	Ericsson AIR6449 B41	3	29.195	32.114	0.53	0.75	9.03	370.80	0.000	0.000	463.77	0.00	0.00
30	155.00	S20057A1	3	29.195	32.114	0.55	0.75	1.35	39.60	0.000	0.000	69.20	0.00	0.00
31	155.00	782 11056	3	29.195	32.114	0.65	0.75	0.55	19.08	0.000	0.000	28.16	0.00	0.00
32	155.00	Ericsson 4424 B25	3	29.195	32.114	0.50	0.75	3.09	316.80	0.000	0.000	158.79	0.00	0.00
33	155.00	RFS	3	29.195	32.114	0.50	0.75	9.96	146.52	0.000	0.000	512.00	0.00	0.00
34	155.00	RFS	3	29.195	32.114	0.52	0.75	31.88	460.80	0.000	0.000	1637.97	0.00	0.00
35	155.00	Ericsson 4449 B71 + B85	3	29.195	32.114	0.50	0.75	2.97	263.52	0.000	0.000	152.59	0.00	0.00
36	155.00	Ericsson 4415 B66A	3	29.195	32.114	0.50	0.75	2.80	178.56	0.000	0.000	144.07	0.00	0.00
37	155.00	HRK12 (Handrail Kit)	1	29.195	32.114	1.00	1.00	7.75	314.06	0.000	0.000	398.21	0.00	0.00
							Totals:		**15,192.20**			**18,754.10**		

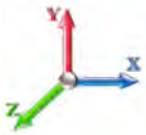
Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 15

Load Case: 1.2D + 1.6 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 32

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
2.00		222.46	734.01	0.00	0.00
4.00		220.83	729.44	0.00	0.00
6.00		219.20	724.86	0.00	0.00
8.00		217.57	720.29	0.00	0.00
10.00		215.94	715.71	0.00	0.00
12.00		214.31	711.13	0.00	0.00
14.00		212.68	706.56	0.00	0.00
16.00		213.65	701.98	0.00	0.00
18.00		217.33	697.40	0.00	0.00
20.00		220.47	692.83	0.00	0.00
22.00		223.18	688.25	0.00	0.00
24.00		225.50	683.67	0.00	0.00
26.00		227.51	679.10	0.00	0.00
28.00		229.23	674.52	0.00	0.00
30.00		230.70	669.94	0.00	0.00
32.00		231.95	665.37	0.00	0.00
34.00		232.99	660.79	0.00	0.00
36.00		233.86	656.21	0.00	0.00
38.00		234.55	651.64	0.00	0.00
40.00		235.10	647.06	0.00	0.00
41.00		117.41	321.81	0.00	0.00
42.00		119.11	588.48	0.00	0.00
44.00		239.03	1170.10	0.00	0.00
46.00		239.22	1160.95	0.00	0.00
48.00		239.29	1151.79	0.00	0.00
50.00		239.26	631.47	0.00	0.00
52.00		239.13	626.89	0.00	0.00
54.00		238.91	622.32	0.00	0.00
56.00		238.60	617.74	0.00	0.00
58.00		238.20	613.16	0.00	0.00
60.00		237.73	608.59	0.00	0.00
62.00		237.18	604.01	0.00	0.00
64.00		236.56	599.43	0.00	0.00
66.00		235.88	594.86	0.00	0.00
68.00		235.12	590.28	0.00	0.00
70.00		234.31	585.70	0.00	0.00
72.00		233.44	581.13	0.00	0.00
74.00		232.51	576.55	0.00	0.00
76.00		231.53	571.97	0.00	0.00
78.00		230.50	567.40	0.00	0.00
80.00		229.42	562.82	0.00	0.00
81.00		114.14	279.69	0.00	0.00
82.00		113.85	241.80	0.00	0.00
84.00		227.11	480.73	0.00	0.00
85.00		112.96	238.94	0.00	0.00
86.00		114.21	421.99	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

88.00		227.75	838.26	0.00	0.00
90.00		226.46	830.63	0.00	0.00
91.00		112.60	412.46	0.00	0.00
92.00		112.26	234.79	0.00	0.00
94.00		223.75	466.72	0.00	0.00
96.00		222.34	462.91	0.00	0.00
98.00		220.89	459.10	0.00	0.00
100.00		219.41	455.28	0.00	0.00
102.00		217.88	451.47	0.00	0.00
104.00		216.33	447.66	0.00	0.00
106.00		214.74	443.84	0.00	0.00
108.00		213.12	440.03	0.00	0.00
110.00		211.47	436.21	0.00	0.00
112.00		209.79	432.40	0.00	0.00
114.00		208.08	428.59	0.00	0.00
116.00		206.34	424.77	0.00	0.00
118.00		204.57	420.96	0.00	0.00
120.00		202.77	417.15	0.00	0.00
122.00		200.95	413.33	0.00	0.00
124.00		199.10	409.52	0.00	0.00
126.00		197.22	405.70	0.00	0.00
128.00		195.32	401.89	0.00	0.00
130.00		193.40	398.08	0.00	0.00
132.00		194.18	622.91	0.00	0.00
134.00		192.21	616.05	0.00	0.00
135.00		95.29	305.45	0.00	0.00
136.00		94.79	167.40	0.00	0.00
138.00		188.21	332.50	0.00	0.00
140.00		186.18	329.45	0.00	0.00
142.00		184.12	326.40	0.00	0.00
144.00		182.05	323.35	0.00	0.00
146.00		179.95	320.30	0.00	0.00
148.00		177.83	317.25	0.00	0.00
150.00		175.69	314.20	0.00	0.00
152.00		173.53	311.15	0.00	0.00
154.00		171.35	308.10	0.00	0.00
155.00	(29) attachments	4813.17	4102.25	0.00	0.00
156.00		84.24	133.23	0.00	0.00
158.00		166.93	264.17	0.00	0.00
160.00		164.70	261.12	0.00	0.00
162.00		162.44	258.07	0.00	0.00
164.00		160.17	255.02	0.00	0.00
165.00	(30) attachments	3902.35	3014.76	0.00	0.00
166.00		78.60	107.64	0.00	0.00
168.00		155.57	212.99	0.00	0.00
170.00		153.24	209.94	0.00	0.00
172.00		150.90	206.88	0.00	0.00
174.00		148.54	203.83	0.00	0.00
175.00	(24) attachments	4320.71	3983.07	0.00	0.00
176.00		72.74	84.96	0.00	0.00
178.00		143.77	167.64	0.00	0.00
180.00		141.37	164.58	0.00	0.00
182.00		140.32	181.92	0.00	0.00
184.00		140.64	181.92	0.00	0.00
186.00		140.96	181.92	0.00	0.00
188.00		141.28	181.92	0.00	0.00
190.00		141.60	181.92	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

192.00		141.91	181.92	0.00	0.00
193.00	(1) attachments	340.08	510.96	0.00	0.00
194.00		71.11	90.96	0.00	0.00
195.00	(26) attachments	5757.31	4143.12	0.00	0.00
	Totals:	**38,570.19**	**64,014.29**	**0.00**	**0.00**

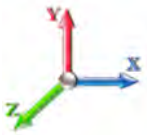
Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 1.2D + 1.6 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 32

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	-63.99	-38.61	0.00	-5401.3	0.00	5401.37	4628.91	2314.46	12221.1	6119.66	0.00	0.000	0.000	0.897
2.00	-63.20	-38.48	0.00	-5324.1	0.00	5324.15	4612.68	2306.34	12088.3	6053.16	0.02	-0.077	0.000	0.894
4.00	-62.42	-38.34	0.00	-5247.2	0.00	5247.20	4596.18	2298.09	11955.5	5986.64	0.07	-0.155	0.000	0.890
6.00	-61.64	-38.20	0.00	-5170.5	0.00	5170.53	4579.43	2289.71	11822.6	5920.10	0.15	-0.233	0.000	0.887
8.00	-60.87	-38.06	0.00	-5094.1	0.00	5094.13	4562.40	2281.20	11689.7	5853.55	0.26	-0.311	0.000	0.884
10.00	-60.11	-37.93	0.00	-5018.0	0.00	5018.00	4545.12	2272.56	11556.8	5787.00	0.41	-0.391	0.000	0.881
12.00	-59.34	-37.79	0.00	-4942.1	0.00	4942.15	4527.57	2263.79	11423.9	5720.46	0.59	-0.471	0.000	0.877
14.00	-58.58	-37.65	0.00	-4866.5	0.00	4866.57	4509.77	2254.88	11291.0	5653.92	0.81	-0.551	0.000	0.874
16.00	-57.83	-37.52	0.00	-4791.2	0.00	4791.26	4491.69	2245.85	11158.2	5587.41	1.06	-0.632	0.000	0.871
18.00	-57.08	-37.37	0.00	-4716.2	0.00	4716.23	4473.36	2236.68	11025.4	5520.93	1.34	-0.714	0.000	0.867
20.00	-56.34	-37.22	0.00	-4641.4	0.00	4641.49	4454.76	2227.38	10892.7	5454.49	1.66	-0.797	0.000	0.864
22.00	-55.60	-37.07	0.00	-4567.0	0.00	4567.04	4435.90	2217.95	10760.1	5388.08	2.01	-0.880	0.000	0.860
24.00	-54.87	-36.92	0.00	-4492.9	0.00	4492.90	4416.78	2208.39	10627.6	5321.73	2.40	-0.963	0.000	0.857
26.00	-54.14	-36.76	0.00	-4419.0	0.00	4419.07	4397.40	2198.70	10495.2	5255.44	2.82	-1.048	0.000	0.853
28.00	-53.41	-36.59	0.00	-4345.5	0.00	4345.56	4377.75	2188.87	10363.0	5189.22	3.27	-1.133	0.000	0.850
30.00	-52.69	-36.43	0.00	-4272.3	0.00	4272.37	4357.84	2178.92	10230.9	5123.07	3.77	-1.218	0.000	0.846
32.00	-51.98	-36.26	0.00	-4199.5	0.00	4199.52	4337.67	2168.83	10099.0	5057.01	4.30	-1.305	0.000	0.843
34.00	-51.27	-36.09	0.00	-4127.0	0.00	4127.00	4317.23	2158.62	9967.25	4991.03	4.86	-1.392	0.000	0.839
36.00	-50.56	-35.92	0.00	-4054.8	0.00	4054.82	4296.53	2148.27	9835.69	4925.16	5.47	-1.479	0.000	0.835
38.00	-49.86	-35.74	0.00	-3982.9	0.00	3982.99	4275.57	2137.79	9704.34	4859.38	6.10	-1.567	0.000	0.832
40.00	-49.18	-35.55	0.00	-3911.5	0.00	3911.50	4254.35	2127.17	9573.22	4793.73	6.78	-1.656	0.000	0.828
41.00	-48.84	-35.46	0.00	-3875.9	0.00	3875.96	4243.64	2121.82	9507.75	4760.94	7.13	-1.701	0.000	0.826
42.00	-48.21	-35.38	0.00	-3840.5	0.00	3840.50	4232.86	2116.43	9442.34	4728.19	7.49	-1.746	0.000	0.824
44.00	-46.99	-35.18	0.00	-3769.7	0.00	3769.74	4211.11	2105.56	9311.72	4662.78	8.24	-1.837	0.000	0.820
46.00	-45.78	-34.97	0.00	-3699.3	0.00	3699.39	4189.10	2094.55	9181.37	4597.51	9.03	-1.928	0.000	0.816
48.00	-44.59	-34.77	0.00	-3629.4	0.00	3629.44	4202.19	2101.09	9258.62	4636.19	9.86	-2.019	0.000	0.794
50.00	-43.91	-34.57	0.00	-3559.9	0.00	3559.91	4180.07	2090.03	9128.39	4570.98	10.73	-2.111	0.000	0.790
52.00	-43.24	-34.38	0.00	-3490.7	0.00	3490.76	4157.69	2078.84	8998.45	4505.91	11.63	-2.200	0.000	0.785
54.00	-42.57	-34.18	0.00	-3422.0	0.00	3422.01	4135.04	2067.52	8868.82	4441.00	12.57	-2.290	0.000	0.781
56.00	-41.91	-33.99	0.00	-3353.6	0.00	3353.64	4112.14	2056.07	8739.51	4376.25	13.55	-2.380	0.000	0.777
58.00	-41.25	-33.79	0.00	-3285.6	0.00	3285.67	4088.97	2044.48	8610.54	4311.67	14.57	-2.471	0.000	0.772
60.00	-40.60	-33.59	0.00	-3218.1	0.00	3218.10	4065.54	2032.77	8481.93	4247.27	15.62	-2.563	0.000	0.768
62.00	-39.96	-33.39	0.00	-3150.9	0.00	3150.93	4041.84	2020.92	8353.69	4183.06	16.72	-2.655	0.000	0.763
64.00	-39.31	-33.19	0.00	-3084.1	0.00	3084.15	4017.89	2008.94	8225.84	4119.03	17.85	-2.748	0.000	0.759
66.00	-38.68	-32.99	0.00	-3017.7	0.00	3017.78	3993.67	1996.83	8098.39	4055.21	19.02	-2.841	0.000	0.754
68.00	-38.05	-32.78	0.00	-2951.8	0.00	2951.81	3969.18	1984.59	7971.36	3991.60	20.23	-2.935	0.000	0.749
70.00	-37.42	-32.58	0.00	-2886.2	0.00	2886.24	3944.44	1972.22	7844.75	3928.21	21.48	-3.030	0.000	0.745
72.00	-36.80	-32.38	0.00	-2821.0	0.00	2821.08	3919.43	1959.72	7718.60	3865.04	22.77	-3.125	0.000	0.740
74.00	-36.18	-32.18	0.00	-2756.3	0.00	2756.32	3894.16	1947.08	7592.91	3802.10	24.10	-3.221	0.000	0.735
76.00	-35.57	-31.97	0.00	-2691.9	0.00	2691.97	3868.63	1934.31	7467.70	3739.40	25.47	-3.318	0.000	0.729
78.00	-34.96	-31.77	0.00	-2628.0	0.00	2628.03	3842.83	1921.42	7342.98	3676.95	26.88	-3.415	0.000	0.724
80.00	-34.37	-31.55	0.00	-2564.4	0.00	2564.49	3816.78	1908.39	7218.77	3614.75	28.33	-3.512	0.000	0.719
81.00	-34.07	-31.45	0.00	-2532.9	0.00	2532.94	3803.65	1901.82	7156.86	3583.75	29.07	-3.562	0.000	0.716
81.00	-34.07	-31.45	0.00	-2532.9	0.00	2532.94	2964.89	1482.44	5593.90	2801.11	29.07	-3.562	0.000	0.916
82.00	-33.79	-31.37	0.00	-2501.5	0.00	2501.50	2956.04	1478.02	5548.38	2778.31	29.82	-3.611	0.000	0.912
84.00	-33.28	-31.16	0.00	-2438.7	0.00	2438.76	2938.13	1469.07	5457.49	2732.80	31.36	-3.729	0.000	0.904
85.00	-33.02	-31.07	0.00	-2407.6	0.00	2407.60	2929.08	1464.54	5412.12	2710.08	32.15	-3.789	0.000	0.900
86.00	-32.56	-30.98	0.00	-2376.5	0.00	2376.53	2919.97	1459.98	5366.81	2687.40	32.95	-3.849	0.000	0.896

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

88.00	-31.67	-30.76	0.00	-2314.5	0.00	2314.58	2901.54	1450.77	5276.37	2642.11	34.58	-3.968	0.000	0.887
90.00	-30.81	-30.52	0.00	-2253.0	0.00	2253.06	2882.85	1441.42	5186.17	2596.94	36.27	-4.088	0.000	0.879
91.00	-30.37	-30.41	0.00	-2222.5	0.00	2222.54	2898.33	1449.17	5260.79	2634.30	37.13	-4.149	0.000	0.855
92.00	-30.10	-30.33	0.00	-2192.1	0.00	2192.12	2889.00	1444.50	5215.68	2611.72	38.01	-4.210	0.000	0.850
94.00	-29.59	-30.13	0.00	-2131.4	0.00	2131.46	2870.13	1435.06	5125.65	2566.64	39.80	-4.326	0.000	0.841
96.00	-29.09	-29.94	0.00	-2071.1	0.00	2071.19	2851.00	1425.50	5035.90	2521.69	41.63	-4.442	0.000	0.832
98.00	-28.59	-29.74	0.00	-2011.3	0.00	2011.32	2831.61	1415.80	4946.44	2476.90	43.52	-4.559	0.000	0.823
100.00	-28.09	-29.54	0.00	-1951.8	0.00	1951.85	2811.95	1405.98	4857.28	2432.25	45.45	-4.676	0.000	0.813
102.00	-27.60	-29.34	0.00	-1892.7	0.00	1892.77	2792.03	1396.02	4768.43	2387.76	47.43	-4.794	0.000	0.803
104.00	-27.11	-29.15	0.00	-1834.0	0.00	1834.08	2771.85	1385.93	4679.92	2343.44	49.46	-4.912	0.000	0.793
106.00	-26.63	-28.95	0.00	-1775.7	0.00	1775.79	2751.41	1375.70	4591.76	2299.29	51.54	-5.030	0.000	0.782
108.00	-26.15	-28.75	0.00	-1717.9	0.00	1717.90	2730.70	1365.35	4503.96	2255.33	53.67	-5.149	0.000	0.772
110.00	-25.67	-28.55	0.00	-1660.4	0.00	1660.40	2709.73	1354.87	4416.54	2211.55	55.85	-5.267	0.000	0.761
112.00	-25.20	-28.36	0.00	-1603.2	0.00	1603.29	2688.50	1344.25	4329.52	2167.98	58.08	-5.386	0.000	0.749
114.00	-24.74	-28.16	0.00	-1546.5	0.00	1546.58	2667.01	1333.50	4242.91	2124.61	60.36	-5.505	0.000	0.738
116.00	-24.28	-27.96	0.00	-1490.2	0.00	1490.26	2645.25	1322.63	4156.72	2081.45	62.69	-5.623	0.000	0.726
118.00	-23.82	-27.77	0.00	-1434.3	0.00	1434.33	2623.23	1311.62	4070.97	2038.51	65.07	-5.742	0.000	0.713
120.00	-23.37	-27.57	0.00	-1378.7	0.00	1378.79	2600.95	1300.48	3985.68	1995.80	67.50	-5.860	0.000	0.700
122.00	-22.92	-27.38	0.00	-1323.6	0.00	1323.65	2578.41	1289.20	3900.86	1953.33	69.97	-5.979	0.000	0.687
124.00	-22.48	-27.18	0.00	-1268.9	0.00	1268.90	2555.60	1277.80	3816.53	1911.10	72.50	-6.096	0.000	0.673
126.00	-22.04	-26.99	0.00	-1214.5	0.00	1214.53	2532.53	1266.26	3732.70	1869.12	75.07	-6.213	0.000	0.659
128.00	-21.61	-26.79	0.00	-1160.5	0.00	1160.56	2509.20	1254.60	3649.39	1827.41	77.70	-6.330	0.000	0.644
130.00	-21.18	-26.60	0.00	-1106.9	0.00	1106.97	2485.60	1242.80	3566.61	1785.96	80.37	-6.446	0.000	0.629
132.00	-20.53	-26.38	0.00	-1053.7	0.00	1053.77	2461.74	1230.87	3484.38	1744.78	83.09	-6.561	0.000	0.613
134.00	-19.91	-26.15	0.00	-1001.0	0.00	1001.01	2437.62	1218.81	3402.71	1703.88	85.85	-6.674	0.000	0.596
135.00	-19.59	-26.03	0.00	-974.87	0.00	974.87	1823.78	911.89	2575.19	1289.51	87.26	-6.731	0.000	0.768
136.00	-19.39	-25.95	0.00	-948.83	0.00	948.83	1816.04	908.02	2546.55	1275.17	88.67	-6.788	0.000	0.756
138.00	-19.02	-25.77	0.00	-896.93	0.00	896.93	1800.35	900.17	2489.45	1246.57	91.53	-6.920	0.000	0.731
140.00	-18.66	-25.59	0.00	-845.39	0.00	845.39	1784.40	892.20	2432.60	1218.11	94.45	-7.050	0.000	0.705
142.00	-18.30	-25.40	0.00	-794.22	0.00	794.22	1768.19	884.09	2376.03	1189.78	97.43	-7.177	0.000	0.679
144.00	-17.95	-25.22	0.00	-743.41	0.00	743.41	1751.71	875.86	2319.73	1161.59	100.45	-7.302	0.000	0.651
146.00	-17.60	-25.04	0.00	-692.97	0.00	692.97	1734.98	867.49	2263.74	1133.55	103.53	-7.424	0.000	0.622
148.00	-17.26	-24.86	0.00	-642.89	0.00	642.89	1717.98	858.99	2208.06	1105.67	106.66	-7.542	0.000	0.592
150.00	-16.93	-24.67	0.00	-593.17	0.00	593.17	1700.71	850.36	2152.72	1077.96	109.84	-7.657	0.000	0.561
152.00	-16.59	-24.49	0.00	-543.83	0.00	543.83	1683.19	841.59	2097.72	1050.42	113.06	-7.767	0.000	0.528
154.00	-16.28	-24.30	0.00	-494.84	0.00	494.84	1665.40	832.70	2043.08	1023.06	116.33	-7.873	0.000	0.494
155.00	-12.86	-18.98	0.00	-470.54	0.00	470.54	1656.41	828.20	2015.90	1009.45	117.98	-7.924	0.000	0.474
156.00	-12.72	-18.90	0.00	-451.56	0.00	451.56	1647.35	823.68	1988.82	995.89	119.64	-7.975	0.000	0.462
158.00	-12.45	-18.72	0.00	-413.77	0.00	413.77	1629.04	814.52	1934.94	968.91	122.99	-8.071	0.000	0.435
160.00	-12.18	-18.53	0.00	-376.34	0.00	376.34	1610.46	805.23	1881.48	942.14	126.38	-8.164	0.000	0.408
162.00	-11.92	-18.36	0.00	-339.27	0.00	339.27	1591.62	795.81	1828.44	915.58	129.81	-8.252	0.000	0.379
164.00	-11.68	-18.17	0.00	-302.56	0.00	302.56	1572.52	786.26	1775.84	889.24	133.27	-8.335	0.000	0.348
165.00	-9.25	-13.88	0.00	-284.38	0.00	284.38	1562.88	781.44	1749.71	876.15	135.01	-8.375	0.000	0.331
166.00	-9.14	-13.80	0.00	-270.51	0.00	270.51	1553.16	776.58	1723.69	863.13	136.77	-8.414	0.000	0.320
168.00	-8.94	-13.62	0.00	-242.92	0.00	242.92	1533.53	766.77	1672.01	837.25	140.29	-8.487	0.000	0.296
170.00	-8.74	-13.45	0.00	-215.67	0.00	215.67	1513.65	756.82	1620.81	811.61	143.85	-8.557	0.000	0.272
172.00	-8.54	-13.28	0.00	-188.78	0.00	188.78	1493.49	746.75	1570.12	786.22	147.44	-8.621	0.000	0.246
174.00	-8.35	-13.11	0.00	-162.22	0.00	162.22	1473.08	736.54	1519.93	761.10	151.05	-8.680	0.000	0.219
175.00	-5.06	-8.24	0.00	-149.12	0.00	149.12	1462.77	731.39	1495.04	748.63	152.86	-8.708	0.000	0.203
176.00	-4.98	-8.15	0.00	-140.88	0.00	140.88	1452.40	726.20	1470.28	736.23	154.68	-8.735	0.000	0.195
178.00	-4.83	-7.99	0.00	-124.57	0.00	124.57	1427.84	713.92	1417.58	709.84	158.34	-8.785	0.000	0.179
180.00	-4.69	-7.83	0.00	-108.59	0.00	108.59	1400.09	700.04	1362.73	682.38	162.01	-8.831	0.000	0.163
180.00	-4.69	-7.83	0.00	-108.59	0.00	108.59	1571.64	785.82	1525.71	763.99	162.01	-8.831	0.000	0.145
182.00	-4.52	-7.67	0.00	-92.93	0.00	92.93	1571.64	785.82	1525.71	763.99	165.71	-8.874	0.000	0.125
184.00	-4.36	-7.50	0.00	-77.60	0.00	77.60	1571.64	785.82	1525.71	763.99	169.42	-8.906	0.000	0.104
186.00	-4.20	-7.34	0.00	-62.60	0.00	62.60	1571.64	785.82	1525.71	763.99	173.14	-8.933	0.000	0.085
188.00	-4.04	-7.17	0.00	-47.93	0.00	47.93	1571.64	785.82	1525.71	763.99	176.87	-8.954	0.000	0.065

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

190.00	-3.88	-7.00	0.00	-33.59	0.00	33.59	1571.64	785.82	1525.71	763.99	180.61	-8.969	0.000	0.047
192.00	-3.72	-6.83	0.00	-19.59	0.00	19.59	1571.64	785.82	1525.71	763.99	184.36	-8.979	0.000	0.028
193.00	-3.27	-6.42	0.00	-12.75	0.00	12.75	1571.64	785.82	1525.71	763.99	186.23	-8.982	0.000	0.019
194.00	-3.19	-6.33	0.00	-6.33	0.00	6.33	1571.64	785.82	1525.71	763.99	188.10	-8.984	0.000	0.010
195.00	0.00	-5.76	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	189.98	-8.985	0.000	0.000

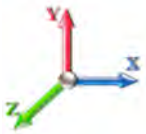
Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 32

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	0.85	17.879	19.67	467.97	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	464.56	0.650	0.000	2.00	10.876	7.07	222.5	0.0	465.8
4.00		1.00	0.85	17.879	19.67	461.14	0.650	0.000	2.00	10.796	7.02	220.8	0.0	462.3
6.00		1.00	0.85	17.879	19.67	457.72	0.650	0.000	2.00	10.717	6.97	219.2	0.0	458.9
8.00		1.00	0.85	17.879	19.67	454.31	0.650	0.000	2.00	10.637	6.91	217.6	0.0	455.5
10.00		1.00	0.85	17.879	19.67	450.89	0.650	0.000	2.00	10.557	6.86	215.9	0.0	452.0
12.00		1.00	0.85	17.879	19.67	447.48	0.650	0.000	2.00	10.478	6.81	214.3	0.0	448.6
14.00		1.00	0.85	17.879	19.67	444.06	0.650	0.000	2.00	10.398	6.76	212.7	0.0	445.2
16.00		1.00	0.86	18.100	19.91	443.36	0.650	0.000	2.00	10.318	6.71	213.7	0.0	441.7
18.00		1.00	0.88	18.554	20.41	445.41	0.650	0.000	2.00	10.239	6.66	217.3	0.0	438.3
20.00		1.00	0.90	18.971	20.87	446.85	0.650	0.000	2.00	10.159	6.60	220.5	0.0	434.9
22.00		1.00	0.92	19.355	21.29	447.81	0.650	0.000	2.00	10.079	6.55	223.2	0.0	431.4
24.00		1.00	0.94	19.713	21.68	448.34	0.650	0.000	2.00	9.999	6.50	225.5	0.0	428.0
26.00		1.00	0.95	20.048	22.05	448.52	0.650	0.000	2.00	9.920	6.45	227.5	0.0	424.6
28.00		1.00	0.97	20.363	22.40	448.38	0.650	0.000	2.00	9.840	6.40	229.2	0.0	421.1
30.00		1.00	0.98	20.661	22.73	447.98	0.650	0.000	2.00	9.760	6.34	230.7	0.0	417.7
32.00		1.00	1.00	20.944	23.04	447.34	0.650	0.000	2.00	9.681	6.29	231.9	0.0	414.3
34.00		1.00	1.01	21.213	23.33	446.48	0.650	0.000	2.00	9.601	6.24	233.0	0.0	410.8
36.00		1.00	1.02	21.470	23.62	445.43	0.650	0.000	2.00	9.521	6.19	233.9	0.0	407.4
38.00		1.00	1.03	21.715	23.89	444.21	0.650	0.000	2.00	9.442	6.14	234.6	0.0	404.0
40.00		1.00	1.04	21.951	24.15	442.83	0.650	0.000	2.00	9.362	6.09	235.1	0.0	400.5
41.00	Bot - Section 2	1.00	1.05	22.065	24.27	442.08	0.650	0.000	1.00	4.651	3.02	117.4	0.0	199.0
42.00		1.00	1.05	22.178	24.40	441.30	0.650	0.000	1.00	4.695	3.05	119.1	0.0	399.0
44.00		1.00	1.06	22.396	24.64	439.64	0.650	0.000	2.00	9.330	6.06	239.0	0.0	792.8
46.00		1.00	1.07	22.607	24.87	437.87	0.650	0.000	2.00	9.250	6.01	239.2	0.0	786.0
48.00	Top - Section 1	1.00	1.08	22.810	25.09	435.97	0.650	0.000	2.00	9.170	5.96	239.3	0.0	779.1
50.00		1.00	1.09	23.007	25.31	440.15	0.650	0.000	2.00	9.091	5.91	239.3	0.0	388.8
52.00		1.00	1.10	23.198	25.52	438.08	0.650	0.000	2.00	9.011	5.86	239.1	0.0	385.4
54.00		1.00	1.11	23.383	25.72	435.92	0.650	0.000	2.00	8.931	5.81	238.9	0.0	382.0
56.00		1.00	1.12	23.562	25.92	433.67	0.650	0.000	2.00	8.851	5.75	238.6	0.0	378.5
58.00		1.00	1.13	23.737	26.11	431.33	0.650	0.000	2.00	8.772	5.70	238.2	0.0	375.1
60.00		1.00	1.14	23.907	26.30	428.93	0.650	0.000	2.00	8.692	5.65	237.7	0.0	371.7
62.00		1.00	1.14	24.073	26.48	426.45	0.650	0.000	2.00	8.612	5.60	237.2	0.0	368.3
64.00		1.00	1.15	24.234	26.66	423.90	0.650	0.000	2.00	8.533	5.55	236.6	0.0	364.8
66.00		1.00	1.16	24.392	26.83	421.28	0.650	0.000	2.00	8.453	5.49	235.9	0.0	361.4
68.00		1.00	1.17	24.545	27.00	418.60	0.650	0.000	2.00	8.373	5.44	235.1	0.0	358.0
70.00		1.00	1.17	24.696	27.17	415.87	0.650	0.000	2.00	8.294	5.39	234.3	0.0	354.5
72.00		1.00	1.18	24.843	27.33	413.08	0.650	0.000	2.00	8.214	5.34	233.4	0.0	351.1
74.00		1.00	1.19	24.986	27.48	410.23	0.650	0.000	2.00	8.134	5.29	232.5	0.0	347.7
76.00		1.00	1.19	25.127	27.64	407.34	0.650	0.000	2.00	8.055	5.24	231.5	0.0	344.2
78.00		1.00	1.20	25.265	27.79	404.39	0.650	0.000	2.00	7.975	5.18	230.5	0.0	340.8
80.00		1.00	1.21	25.400	27.94	401.40	0.650	0.000	2.00	7.895	5.13	229.4	0.0	337.4
81.00	Top - Section 2	1.00	1.21	25.466	28.01	399.88	0.650	0.000	1.00	3.918	2.55	114.1	0.0	167.4
82.00		1.00	1.21	25.532	28.09	398.36	0.650	0.000	1.00	3.898	2.53	113.9	0.0	139.0
84.00		1.00	1.22	25.662	28.23	395.28	0.650	0.000	2.00	7.736	5.03	227.1	0.0	275.8
85.00	Bot - Section 4	1.00	1.22	25.726	28.30	393.72	0.650	0.000	1.00	3.838	2.49	113.0	0.0	136.8
86.00		1.00	1.23	25.789	28.37	392.16	0.650	0.000	1.00	3.871	2.52	114.2	0.0	274.1

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 22

88.00		1.00	1.23	25.915	28.51	388.99	0.650	0.000	2.00	7.682	4.99	227.8	0.0	543.9
90.00		1.00	1.24	26.037	28.64	385.79	0.650	0.000	2.00	7.603	4.94	226.5	0.0	538.2
91.00	Top - Section 3	1.00	1.24	26.098	28.71	384.18	0.650	0.000	1.00	3.771	2.45	112.6	0.0	267.0
92.00		1.00	1.24	26.158	28.77	388.04	0.650	0.000	1.00	3.752	2.44	112.3	0.0	133.7
94.00		1.00	1.25	26.277	28.90	384.78	0.650	0.000	2.00	7.443	4.84	223.8	0.0	265.3
96.00		1.00	1.25	26.394	29.03	381.48	0.650	0.000	2.00	7.364	4.79	222.3	0.0	262.4
98.00		1.00	1.26	26.509	29.16	378.15	0.650	0.000	2.00	7.284	4.73	220.9	0.0	259.6
100.00		1.00	1.27	26.621	29.28	374.79	0.650	0.000	2.00	7.204	4.68	219.4	0.0	256.7
102.00		1.00	1.27	26.733	29.41	371.39	0.650	0.000	2.00	7.125	4.63	217.9	0.0	253.8
104.00		1.00	1.28	26.842	29.53	367.97	0.650	0.000	2.00	7.045	4.58	216.3	0.0	251.0
106.00		1.00	1.28	26.950	29.65	364.51	0.650	0.000	2.00	6.965	4.53	214.7	0.0	248.1
108.00		1.00	1.29	27.056	29.76	361.03	0.650	0.000	2.00	6.886	4.48	213.1	0.0	245.3
110.00		1.00	1.29	27.161	29.88	357.51	0.650	0.000	2.00	6.806	4.42	211.5	0.0	242.4
112.00		1.00	1.30	27.264	29.99	353.97	0.650	0.000	2.00	6.726	4.37	209.8	0.0	239.5
114.00		1.00	1.30	27.366	30.10	350.41	0.650	0.000	2.00	6.646	4.32	208.1	0.0	236.7
116.00		1.00	1.31	27.466	30.21	346.82	0.650	0.000	2.00	6.567	4.27	206.3	0.0	233.8
118.00		1.00	1.31	27.565	30.32	343.20	0.650	0.000	2.00	6.487	4.22	204.6	0.0	231.0
120.00		1.00	1.32	27.663	30.43	339.56	0.650	0.000	2.00	6.407	4.16	202.8	0.0	228.1
122.00		1.00	1.32	27.760	30.54	335.89	0.650	0.000	2.00	6.328	4.11	200.9	0.0	225.2
124.00		1.00	1.32	27.855	30.64	332.20	0.650	0.000	2.00	6.248	4.06	199.1	0.0	222.4
126.00		1.00	1.33	27.949	30.74	328.49	0.650	0.000	2.00	6.168	4.01	197.2	0.0	219.5
128.00		1.00	1.33	28.042	30.85	324.76	0.650	0.000	2.00	6.089	3.96	195.3	0.0	216.7
130.00	Bot - Section 5	1.00	1.34	28.133	30.95	321.00	0.650	0.000	2.00	6.009	3.91	193.4	0.0	213.8
132.00		1.00	1.34	28.224	31.05	317.23	0.650	0.000	2.00	6.014	3.91	194.2	0.0	382.4
134.00		1.00	1.35	28.313	31.14	313.43	0.650	0.000	2.00	5.934	3.86	192.2	0.0	377.3
135.00	Top - Section 4	1.00	1.35	28.358	31.19	311.53	0.650	0.000	1.00	2.937	1.91	95.3	0.0	186.7
136.00		1.00	1.35	28.402	31.24	314.19	0.650	0.000	1.00	2.917	1.90	94.8	0.0	83.2
138.00		1.00	1.35	28.489	31.34	310.36	0.650	0.000	2.00	5.775	3.75	188.2	0.0	164.6
140.00		1.00	1.36	28.576	31.43	306.51	0.650	0.000	2.00	5.695	3.70	186.2	0.0	162.3
142.00		1.00	1.36	28.661	31.53	302.64	0.650	0.000	2.00	5.616	3.65	184.1	0.0	160.0
144.00		1.00	1.37	28.746	31.62	298.76	0.650	0.000	2.00	5.536	3.60	182.0	0.0	157.8
146.00		1.00	1.37	28.829	31.71	294.86	0.650	0.000	2.00	5.456	3.55	179.9	0.0	155.5
148.00		1.00	1.37	28.912	31.80	290.93	0.650	0.000	2.00	5.376	3.49	177.8	0.0	153.2
150.00		1.00	1.38	28.994	31.89	286.99	0.650	0.000	2.00	5.297	3.44	175.7	0.0	150.9
152.00		1.00	1.38	29.075	31.98	283.04	0.650	0.000	2.00	5.217	3.39	173.5	0.0	148.6
154.00		1.00	1.39	29.155	32.07	279.07	0.650	0.000	2.00	5.137	3.34	171.3	0.0	146.3
155.00	Appurtenance(s)	1.00	1.39	29.195	32.11	277.07	0.650	0.000	1.00	2.539	1.65	84.8	0.0	72.3
156.00		1.00	1.39	29.234	32.16	275.08	0.650	0.000	1.00	2.519	1.64	84.2	0.0	71.7
158.00		1.00	1.39	29.313	32.24	271.07	0.650	0.000	2.00	4.978	3.24	166.9	0.0	141.7
160.00		1.00	1.40	29.390	32.33	267.05	0.650	0.000	2.00	4.898	3.18	164.7	0.0	139.5
162.00		1.00	1.40	29.467	32.41	263.02	0.650	0.000	2.00	4.819	3.13	162.4	0.0	137.2
164.00		1.00	1.40	29.544	32.50	258.96	0.650	0.000	2.00	4.739	3.08	160.2	0.0	134.9
165.00	Appurtenance(s)	1.00	1.41	29.581	32.54	256.93	0.650	0.000	1.00	2.340	1.52	79.2	0.0	66.6
166.00		1.00	1.41	29.619	32.58	254.90	0.650	0.000	1.00	2.320	1.51	78.6	0.0	66.0
168.00		1.00	1.41	29.694	32.66	250.82	0.650	0.000	2.00	4.580	2.98	155.6	0.0	130.3
170.00		1.00	1.42	29.768	32.74	246.72	0.650	0.000	2.00	4.500	2.92	153.2	0.0	128.0
172.00		1.00	1.42	29.841	32.83	242.61	0.650	0.000	2.00	4.420	2.87	150.9	0.0	125.7
174.00		1.00	1.42	29.914	32.91	238.49	0.650	0.000	2.00	4.341	2.82	148.5	0.0	123.4
175.00	Appurtenance(s)	1.00	1.42	29.950	32.95	236.42	0.650	0.000	1.00	2.140	1.39	73.3	0.0	60.9
176.00		1.00	1.43	29.986	32.98	234.35	0.650	0.000	1.00	2.120	1.38	72.7	0.0	60.3
178.00		1.00	1.43	30.057	33.06	230.20	0.650	0.000	2.00	4.181	2.72	143.8	0.0	118.9
180.00	Top - Section 5	1.00	1.43	30.128	33.14	226.04	0.650	0.000	2.00	4.102	2.67	141.4	0.0	116.6
182.00		1.00	1.44	30.198	33.22	226.30	0.650	0.000	2.00	4.062	2.64	140.3	0.0	129.6
184.00		1.00	1.44	30.268	33.29	226.56	0.650	0.000	2.00	4.062	2.64	140.6	0.0	129.6
186.00		1.00	1.44	30.337	33.37	226.82	0.650	0.000	2.00	4.062	2.64	141.0	0.0	129.6
188.00		1.00	1.45	30.405	33.45	227.08	0.650	0.000	2.00	4.062	2.64	141.3	0.0	129.6
190.00		1.00	1.45	30.473	33.52	227.33	0.650	0.000	2.00	4.062	2.64	141.6	0.0	129.6

Wind Loading - Shaft

Structure: CT01501-S-SBA | **Code:** EIA/TIA-222-G | 9/7/2021

Site Name: Morris | **Exposure:** C

Height: 195.00 (ft) | **Crest Height:** 0.00

Base Elev: 0.000 (ft) | **Site Class:** B - Competent Rock

Gh: 1.1 | **Topography:** 1 | **Struct Class:** II | Page: 23

192.00		1.00	1.45	30.540	33.59	227.58	0.650	0.000	2.00	4.062	2.64	141.9	0.0	129.6
193.00	Appurtenance(s)	1.00	1.45	30.574	33.63	227.70	0.650	0.000	1.00	2.031	1.32	71.0	0.0	64.8
194.00		1.00	1.46	30.607	33.67	227.83	0.650	0.000	1.00	2.031	1.32	71.1	0.0	64.8
195.00	Appurtenance(s)	1.00	1.46	30.640	33.70	227.95	0.650	0.000	1.00	2.031	1.32	71.2	0.0	64.8
								Totals:	**195.00**			**19,816.1**		**29,550.2**

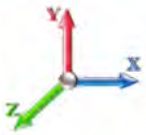
Discrete Appurtenance Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 32

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	195.00	Modified Platform + HR &	1	30.640	33.704	1.00	1.00	51.70	2021.40	0.000	0.000	2788.02	0.00	0.00
2	195.00	TD-RRH8x20-25	3	30.640	33.704	0.38	0.75	4.56	189.00	0.000	0.000	245.70	0.00	0.00
3	195.00	Commscope DT465B-2XR	3	30.640	33.704	0.62	0.75	16.99	156.60	0.000	0.000	916.45	0.00	0.00
4	195.00	800 Mhz Filter	3	30.640	33.704	0.52	0.75	0.77	27.00	0.000	0.000	41.62	0.00	0.00
5	195.00	1900MHz RRH	3	30.640	33.704	0.50	0.75	5.73	118.80	0.000	0.000	308.92	0.00	0.00
6	195.00	ACU-A20-N	4	30.640	33.704	0.50	0.75	0.28	3.60	0.000	0.000	15.18	0.00	0.00
7	195.00	800 Mhz	6	30.640	33.704	0.50	0.75	10.43	368.82	0.000	0.000	562.56	0.00	0.00
8	195.00	APXVSPP18-C-A20	3	30.640	33.704	0.62	0.75	14.98	153.90	0.000	0.000	807.68	0.00	0.00
9	193.00	Collar Mount	1	30.574	33.631	1.00	1.00	5.00	315.00	0.000	0.000	269.05	0.00	0.00
10	175.00	Commscope	3	29.950	32.945	0.53	0.75	3.13	142.83	0.000	0.000	164.81	0.00	0.00
11	175.00	RFS DB-C1-12C-24AB-0Z	1	29.950	32.945	0.75	0.75	3.04	28.80	0.000	0.000	160.51	0.00	0.00
12	175.00	HRK14	1	29.950	32.945	1.00	1.00	8.13	453.60	0.000	0.000	428.55	0.00	0.00
13	175.00	Samsung B2/B66A	3	29.950	32.945	0.50	0.75	2.82	227.88	0.000	0.000	148.60	0.00	0.00
14	175.00	Samsung B5/B13	3	29.950	32.945	0.50	0.75	2.82	189.81	0.000	0.000	148.60	0.00	0.00
15	175.00	Samsung MT6407-77A	3	29.950	32.945	0.52	0.75	7.39	214.38	0.000	0.000	389.37	0.00	0.00
16	175.00	Commscope	6	29.950	32.945	0.64	0.75	31.25	235.98	0.000	0.000	1647.27	0.00	0.00
17	175.00	Commscope	3	29.950	32.945	1.00	1.00	0.00	68.45	0.000	0.000	0.00	0.00	0.00
18	175.00	Low Profile Platform	1	29.950	32.945	1.00	1.00	22.00	1350.00	0.000	0.000	1159.67	0.00	0.00
19	165.00	Low Profile Platform	1	29.581	32.540	1.00	1.00	22.00	1350.00	0.000	0.000	1145.39	0.00	0.00
20	165.00	DC6-48-60-18-8F	1	29.581	32.540	1.00	1.00	0.92	28.62	0.000	0.000	47.90	0.00	0.00
21	165.00	ABT-DF-DMADBH	1	29.581	32.540	1.00	1.00	0.05	0.99	0.000	0.000	2.60	0.00	0.00
22	165.00	AM-X-CD-16-65-00T-RET	1	29.581	32.540	0.72	0.80	5.77	43.65	0.000	0.000	300.63	0.00	0.00
23	165.00	RRUS-11	6	29.581	32.540	0.57	0.80	8.59	275.40	0.000	0.000	447.13	0.00	0.00
24	165.00	LGP2140X TMA	12	29.581	32.540	0.54	0.80	8.36	205.20	0.000	0.000	435.33	0.00	0.00
25	165.00	7770.00	6	29.581	32.540	0.58	0.80	19.27	189.00	0.000	0.000	1003.36	0.00	0.00
26	165.00	800 10764	2	29.581	32.540	0.72	0.80	8.47	73.44	0.000	0.000	440.83	0.00	0.00
27	155.00	KRY 112 144/1	3	29.195	32.114	0.52	0.75	0.65	29.70	0.000	0.000	33.18	0.00	0.00
28	155.00	Low Profile Platform	1	29.195	32.114	1.00	1.00	22.00	1350.00	0.000	0.000	1130.41	0.00	0.00
29	155.00	Ericsson AIR6449 B41	3	29.195	32.114	0.53	0.75	9.03	278.10	0.000	0.000	463.77	0.00	0.00
30	155.00	S20057A1	3	29.195	32.114	0.55	0.75	1.35	29.70	0.000	0.000	69.20	0.00	0.00
31	155.00	782 11056	3	29.195	32.114	0.65	0.75	0.55	14.31	0.000	0.000	28.16	0.00	0.00
32	155.00	Ericsson 4424 B25	3	29.195	32.114	0.50	0.75	3.09	237.60	0.000	0.000	158.79	0.00	0.00
33	155.00	RFS	3	29.195	32.114	0.50	0.75	9.96	109.89	0.000	0.000	512.00	0.00	0.00
34	155.00	RFS	3	29.195	32.114	0.52	0.75	31.88	345.60	0.000	0.000	1637.97	0.00	0.00
35	155.00	Ericsson 4449 B71 + B85	3	29.195	32.114	0.50	0.75	2.97	197.64	0.000	0.000	152.59	0.00	0.00
36	155.00	Ericsson 4415 B66A	3	29.195	32.114	0.50	0.75	2.80	133.92	0.000	0.000	144.07	0.00	0.00
37	155.00	HRK12 (Handrail Kit)	1	29.195	32.114	1.00	1.00	7.75	235.55	0.000	0.000	398.21	0.00	0.00
							Totals:		**11,394.15**			**18,754.10**		

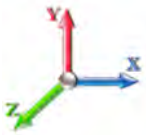
Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 25

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 32

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
2.00		222.46	550.51	0.00	0.00
4.00		220.83	547.08	0.00	0.00
6.00		219.20	543.65	0.00	0.00
8.00		217.57	540.21	0.00	0.00
10.00		215.94	536.78	0.00	0.00
12.00		214.31	533.35	0.00	0.00
14.00		212.68	529.92	0.00	0.00
16.00		213.65	526.48	0.00	0.00
18.00		217.33	523.05	0.00	0.00
20.00		220.47	519.62	0.00	0.00
22.00		223.18	516.19	0.00	0.00
24.00		225.50	512.75	0.00	0.00
26.00		227.51	509.32	0.00	0.00
28.00		229.23	505.89	0.00	0.00
30.00		230.70	502.46	0.00	0.00
32.00		231.95	499.03	0.00	0.00
34.00		232.99	495.59	0.00	0.00
36.00		233.86	492.16	0.00	0.00
38.00		234.55	488.73	0.00	0.00
40.00		235.10	485.30	0.00	0.00
41.00		117.41	241.36	0.00	0.00
42.00		119.11	441.36	0.00	0.00
44.00		239.03	877.57	0.00	0.00
46.00		239.22	870.71	0.00	0.00
48.00		239.29	863.85	0.00	0.00
50.00		239.26	473.60	0.00	0.00
52.00		239.13	470.17	0.00	0.00
54.00		238.91	466.74	0.00	0.00
56.00		238.60	463.30	0.00	0.00
58.00		238.20	459.87	0.00	0.00
60.00		237.73	456.44	0.00	0.00
62.00		237.18	453.01	0.00	0.00
64.00		236.56	449.57	0.00	0.00
66.00		235.88	446.14	0.00	0.00
68.00		235.12	442.71	0.00	0.00
70.00		234.31	439.28	0.00	0.00
72.00		233.44	435.85	0.00	0.00
74.00		232.51	432.41	0.00	0.00
76.00		231.53	428.98	0.00	0.00
78.00		230.50	425.55	0.00	0.00
80.00		229.42	422.12	0.00	0.00
81.00		114.14	209.77	0.00	0.00
82.00		113.85	181.35	0.00	0.00
84.00		227.11	360.55	0.00	0.00
85.00		112.96	179.20	0.00	0.00
86.00		114.21	316.49	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

88.00		227.75	628.70	0.00	0.00
90.00		226.46	622.98	0.00	0.00
91.00		112.60	309.34	0.00	0.00
92.00		112.26	176.09	0.00	0.00
94.00		223.75	350.04	0.00	0.00
96.00		222.34	347.18	0.00	0.00
98.00		220.89	344.32	0.00	0.00
100.00		219.41	341.46	0.00	0.00
102.00		217.88	338.60	0.00	0.00
104.00		216.33	335.74	0.00	0.00
106.00		214.74	332.88	0.00	0.00
108.00		213.12	330.02	0.00	0.00
110.00		211.47	327.16	0.00	0.00
112.00		209.79	324.30	0.00	0.00
114.00		208.08	321.44	0.00	0.00
116.00		206.34	318.58	0.00	0.00
118.00		204.57	315.72	0.00	0.00
120.00		202.77	312.86	0.00	0.00
122.00		200.95	310.00	0.00	0.00
124.00		199.10	307.14	0.00	0.00
126.00		197.22	304.28	0.00	0.00
128.00		195.32	301.42	0.00	0.00
130.00		193.40	298.56	0.00	0.00
132.00		194.18	467.18	0.00	0.00
134.00		192.21	462.04	0.00	0.00
135.00		95.29	229.09	0.00	0.00
136.00		94.79	125.55	0.00	0.00
138.00		188.21	249.38	0.00	0.00
140.00		186.18	247.09	0.00	0.00
142.00		184.12	244.80	0.00	0.00
144.00		182.05	242.51	0.00	0.00
146.00		179.95	240.22	0.00	0.00
148.00		177.83	237.94	0.00	0.00
150.00		175.69	235.65	0.00	0.00
152.00		173.53	233.36	0.00	0.00
154.00		171.35	231.07	0.00	0.00
155.00	(29) attachments	4813.17	3076.69	0.00	0.00
156.00		84.24	99.92	0.00	0.00
158.00		166.93	198.13	0.00	0.00
160.00		164.70	195.84	0.00	0.00
162.00		162.44	193.55	0.00	0.00
164.00		160.17	191.26	0.00	0.00
165.00	(30) attachments	3902.35	2261.07	0.00	0.00
166.00		78.60	80.73	0.00	0.00
168.00		155.57	159.74	0.00	0.00
170.00		153.24	157.45	0.00	0.00
172.00		150.90	155.16	0.00	0.00
174.00		148.54	152.87	0.00	0.00
175.00	(24) attachments	4320.71	2987.30	0.00	0.00
176.00		72.74	63.72	0.00	0.00
178.00		143.77	125.73	0.00	0.00
180.00		141.37	123.44	0.00	0.00
182.00		140.32	136.44	0.00	0.00
184.00		140.64	136.44	0.00	0.00
186.00		140.96	136.44	0.00	0.00
188.00		141.28	136.44	0.00	0.00
190.00		141.60	136.44	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 27

192.00		141.91	136.44	0.00	0.00
193.00	(1) attachments	340.08	383.22	0.00	0.00
194.00		71.11	68.22	0.00	0.00
195.00	(26) attachments	5757.31	3107.34	0.00	0.00
	Totals:	**38,570.19**	**48,010.71**	**0.00**	**0.00**

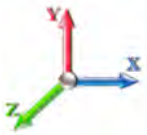
Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 32

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	-47.98	-38.60	0.00	-5307.5	0.00	5307.59	4628.91	2314.46	12221.1	6119.66	0.00	0.000	0.000	0.878
2.00	-47.38	-38.44	0.00	-5230.3	0.00	5230.39	4612.68	2306.34	12088.3	6053.16	0.02	-0.076	0.000	0.875
4.00	-46.78	-38.28	0.00	-5153.5	0.00	5153.51	4596.18	2298.09	11955.5	5986.64	0.07	-0.152	0.000	0.871
6.00	-46.19	-38.12	0.00	-5076.9	0.00	5076.94	4579.43	2289.71	11822.6	5920.10	0.15	-0.229	0.000	0.868
8.00	-45.60	-37.97	0.00	-5000.7	0.00	5000.70	4562.40	2281.20	11689.7	5853.55	0.26	-0.306	0.000	0.865
10.00	-45.01	-37.81	0.00	-4924.7	0.00	4924.77	4545.12	2272.56	11556.8	5787.00	0.40	-0.384	0.000	0.861
12.00	-44.43	-37.65	0.00	-4849.1	0.00	4849.16	4527.57	2263.79	11423.9	5720.46	0.58	-0.462	0.000	0.858
14.00	-43.85	-37.49	0.00	-4773.8	0.00	4773.86	4509.77	2254.88	11291.0	5653.92	0.79	-0.541	0.000	0.854
16.00	-43.27	-37.34	0.00	-4698.8	0.00	4698.87	4491.69	2245.85	11158.2	5587.41	1.04	-0.621	0.000	0.851
18.00	-42.70	-37.17	0.00	-4624.2	0.00	4624.20	4473.36	2236.68	11025.4	5520.93	1.31	-0.701	0.000	0.847
20.00	-42.13	-37.00	0.00	-4549.8	0.00	4549.86	4454.76	2227.38	10892.7	5454.49	1.63	-0.782	0.000	0.844
22.00	-41.57	-36.83	0.00	-4475.8	0.00	4475.85	4435.90	2217.95	10760.1	5388.08	1.97	-0.863	0.000	0.840
24.00	-41.00	-36.66	0.00	-4402.1	0.00	4402.19	4416.78	2208.39	10627.6	5321.73	2.35	-0.945	0.000	0.837
26.00	-40.45	-36.48	0.00	-4328.8	0.00	4328.87	4397.40	2198.70	10495.2	5255.44	2.77	-1.028	0.000	0.833
28.00	-39.89	-36.30	0.00	-4255.9	0.00	4255.91	4377.75	2188.87	10363.0	5189.22	3.21	-1.111	0.000	0.830
30.00	-39.34	-36.12	0.00	-4183.3	0.00	4183.31	4357.84	2178.92	10230.9	5123.07	3.70	-1.195	0.000	0.826
32.00	-38.79	-35.93	0.00	-4111.0	0.00	4111.08	4337.67	2168.83	10099.0	5057.01	4.22	-1.279	0.000	0.822
34.00	-38.25	-35.74	0.00	-4039.2	0.00	4039.22	4317.23	2158.62	9967.25	4991.03	4.77	-1.364	0.000	0.818
36.00	-37.71	-35.56	0.00	-3967.7	0.00	3967.73	4296.53	2148.27	9835.69	4925.16	5.36	-1.450	0.000	0.815
38.00	-37.18	-35.36	0.00	-3896.6	0.00	3896.62	4275.57	2137.79	9704.34	4859.38	5.99	-1.537	0.000	0.811
40.00	-36.66	-35.16	0.00	-3825.8	0.00	3825.89	4254.35	2127.17	9573.22	4793.73	6.65	-1.623	0.000	0.807
41.00	-36.39	-35.06	0.00	-3790.7	0.00	3790.73	4243.64	2121.82	9507.75	4760.94	7.00	-1.667	0.000	0.805
42.00	-35.91	-34.97	0.00	-3755.6	0.00	3755.67	4232.86	2116.43	9442.34	4728.19	7.35	-1.712	0.000	0.803
44.00	-34.99	-34.76	0.00	-3685.7	0.00	3685.73	4211.11	2105.56	9311.72	4662.78	8.09	-1.800	0.000	0.799
46.00	-34.07	-34.55	0.00	-3616.2	0.00	3616.21	4189.10	2094.55	9181.37	4597.51	8.86	-1.889	0.000	0.795
48.00	-33.17	-34.33	0.00	-3547.1	0.00	3547.12	4202.19	2101.09	9258.62	4636.19	9.67	-1.978	0.000	0.773
50.00	-32.65	-34.12	0.00	-3478.4	0.00	3478.47	4180.07	2090.03	9128.39	4570.98	10.52	-2.068	0.000	0.769
52.00	-32.13	-33.92	0.00	-3410.2	0.00	3410.22	4157.69	2078.84	8998.45	4505.91	11.40	-2.156	0.000	0.765
54.00	-31.63	-33.71	0.00	-3342.3	0.00	3342.39	4135.04	2067.52	8868.82	4441.00	12.33	-2.243	0.000	0.761
56.00	-31.12	-33.50	0.00	-3274.9	0.00	3274.97	4112.14	2056.07	8739.51	4376.25	13.29	-2.331	0.000	0.756
58.00	-30.62	-33.29	0.00	-3207.9	0.00	3207.97	4088.97	2044.48	8610.54	4311.67	14.28	-2.420	0.000	0.752
60.00	-30.12	-33.08	0.00	-3141.3	0.00	3141.39	4065.54	2032.77	8481.93	4247.27	15.31	-2.510	0.000	0.747
62.00	-29.63	-32.87	0.00	-3075.2	0.00	3075.23	4041.84	2020.92	8353.69	4183.06	16.39	-2.600	0.000	0.743
64.00	-29.14	-32.66	0.00	-3009.5	0.00	3009.50	4017.89	2008.94	8225.84	4119.03	17.49	-2.690	0.000	0.738
66.00	-28.65	-32.45	0.00	-2944.1	0.00	2944.18	3993.67	1996.83	8098.39	4055.21	18.64	-2.781	0.000	0.733
68.00	-28.17	-32.24	0.00	-2879.2	0.00	2879.28	3969.18	1984.59	7971.36	3991.60	19.82	-2.873	0.000	0.729
70.00	-27.69	-32.03	0.00	-2814.8	0.00	2814.81	3944.44	1972.22	7844.75	3928.21	21.05	-2.965	0.000	0.724
72.00	-27.22	-31.81	0.00	-2750.7	0.00	2750.76	3919.43	1959.72	7718.60	3865.04	22.31	-3.058	0.000	0.719
74.00	-26.75	-31.60	0.00	-2687.1	0.00	2687.14	3894.16	1947.08	7592.91	3802.10	23.61	-3.152	0.000	0.714
76.00	-26.28	-31.39	0.00	-2623.9	0.00	2623.93	3868.63	1934.31	7467.70	3739.40	24.95	-3.246	0.000	0.709
78.00	-25.82	-31.18	0.00	-2561.1	0.00	2561.16	3842.83	1921.42	7342.98	3676.95	26.33	-3.340	0.000	0.704
80.00	-25.37	-30.96	0.00	-2498.8	0.00	2498.80	3816.78	1908.39	7218.77	3614.75	27.75	-3.435	0.000	0.698
81.00	-25.14	-30.85	0.00	-2467.8	0.00	2467.85	3803.65	1901.82	7156.86	3583.75	28.47	-3.484	0.000	0.695
81.00	-25.14	-30.85	0.00	-2467.8	0.00	2467.85	2964.89	1482.44	5593.90	2801.11	28.47	-3.484	0.000	0.890
82.00	-24.92	-30.76	0.00	-2437.0	0.00	2437.00	2956.04	1478.02	5548.38	2778.31	29.21	-3.532	0.000	0.886
84.00	-24.53	-30.55	0.00	-2375.4	0.00	2375.48	2938.13	1469.07	5457.49	2732.80	30.71	-3.647	0.000	0.878
85.00	-24.33	-30.45	0.00	-2344.9	0.00	2344.93	2929.08	1464.54	5412.12	2710.08	31.48	-3.705	0.000	0.874
86.00	-23.97	-30.35	0.00	-2314.4	0.00	2314.48	2919.97	1459.98	5366.81	2687.40	32.26	-3.763	0.000	0.870

Calculated Forces

Structure: CT01501-S-SBA | **Code:** EIA/TIA-222-G | 9/7/2021

Site Name: Morris | **Exposure:** C

Height: 195.00 (ft) | **Crest Height:** 0.00

Base Elev: 0.000 (ft) | **Site Class:** B - Competent Rock

Gh: 1.1 | **Topography:** 1 | **Struct Class:** II | Page: 29

88.00	-23.30	-30.13	0.00	-2253.7	0.00	2253.78	2901.54	1450.77	5276.37	2642.11	33.87	-3.880	0.000	0.861
90.00	-22.65	-29.90	0.00	-2193.5	0.00	2193.52	2882.85	1441.42	5186.17	2596.94	35.52	-3.996	0.000	0.853
91.00	-22.32	-29.78	0.00	-2163.6	0.00	2163.62	2898.33	1449.17	5260.79	2634.30	36.36	-4.055	0.000	0.829
92.00	-22.11	-29.69	0.00	-2133.8	0.00	2133.84	2889.00	1444.50	5215.68	2611.72	37.21	-4.115	0.000	0.825
94.00	-21.71	-29.49	0.00	-2074.4	0.00	2074.45	2870.13	1435.06	5125.65	2566.64	38.96	-4.227	0.000	0.816
96.00	-21.33	-29.28	0.00	-2015.4	0.00	2015.48	2851.00	1425.50	5035.90	2521.69	40.75	-4.341	0.000	0.807
98.00	-20.94	-29.08	0.00	-1956.9	0.00	1956.91	2831.61	1415.80	4946.44	2476.90	42.60	-4.454	0.000	0.798
100.00	-20.56	-28.87	0.00	-1898.7	0.00	1898.76	2811.95	1405.98	4857.28	2432.25	44.48	-4.569	0.000	0.788
102.00	-20.18	-28.67	0.00	-1841.0	0.00	1841.01	2792.03	1396.02	4768.43	2387.76	46.42	-4.683	0.000	0.779
104.00	-19.81	-28.47	0.00	-1783.6	0.00	1783.67	2771.85	1385.93	4679.92	2343.44	48.41	-4.798	0.000	0.769
106.00	-19.44	-28.26	0.00	-1726.7	0.00	1726.74	2751.41	1375.70	4591.76	2299.29	50.44	-4.913	0.000	0.758
108.00	-19.07	-28.06	0.00	-1670.2	0.00	1670.22	2730.70	1365.35	4503.96	2255.33	52.52	-5.028	0.000	0.748
110.00	-18.71	-27.86	0.00	-1614.1	0.00	1614.10	2709.73	1354.87	4416.54	2211.55	54.65	-5.143	0.000	0.737
112.00	-18.35	-27.66	0.00	-1558.3	0.00	1558.39	2688.50	1344.25	4329.52	2167.98	56.82	-5.259	0.000	0.726
114.00	-17.99	-27.46	0.00	-1503.0	0.00	1503.07	2667.01	1333.50	4242.91	2124.61	59.05	-5.374	0.000	0.715
116.00	-17.64	-27.26	0.00	-1448.1	0.00	1448.16	2645.25	1322.63	4156.72	2081.45	61.32	-5.489	0.000	0.703
118.00	-17.29	-27.06	0.00	-1393.6	0.00	1393.65	2623.23	1311.62	4070.97	2038.51	63.64	-5.605	0.000	0.691
120.00	-16.95	-26.86	0.00	-1339.5	0.00	1339.54	2600.95	1300.48	3985.68	1995.80	66.01	-5.720	0.000	0.678
122.00	-16.61	-26.66	0.00	-1285.8	0.00	1285.82	2578.41	1289.20	3900.86	1953.33	68.43	-5.834	0.000	0.665
124.00	-16.27	-26.46	0.00	-1232.5	0.00	1232.50	2555.60	1277.80	3816.53	1911.10	70.90	-5.949	0.000	0.652
126.00	-15.94	-26.27	0.00	-1179.5	0.00	1179.58	2532.53	1266.26	3732.70	1869.12	73.41	-6.063	0.000	0.638
128.00	-15.61	-26.07	0.00	-1127.0	0.00	1127.04	2509.20	1254.60	3649.39	1827.41	75.97	-6.176	0.000	0.623
130.00	-15.28	-25.88	0.00	-1074.9	0.00	1074.90	2485.60	1242.80	3566.61	1785.96	78.57	-6.288	0.000	0.608
132.00	-14.79	-25.66	0.00	-1023.1	0.00	1023.15	2461.74	1230.87	3484.38	1744.78	81.23	-6.400	0.000	0.593
134.00	-14.31	-25.44	0.00	-971.83	0.00	971.83	2437.62	1218.81	3402.71	1703.88	83.93	-6.510	0.000	0.577
135.00	-14.07	-25.33	0.00	-946.39	0.00	946.39	1823.78	911.89	2575.19	1289.51	85.29	-6.565	0.000	0.742
136.00	-13.92	-25.25	0.00	-921.06	0.00	921.06	1816.04	908.02	2546.55	1275.17	86.67	-6.620	0.000	0.731
138.00	-13.64	-25.06	0.00	-870.57	0.00	870.57	1800.35	900.17	2489.45	1246.57	89.47	-6.749	0.000	0.707
140.00	-13.36	-24.87	0.00	-820.45	0.00	820.45	1784.40	892.20	2432.60	1218.11	92.32	-6.875	0.000	0.682
142.00	-13.08	-24.69	0.00	-770.70	0.00	770.70	1768.19	884.09	2376.03	1189.78	95.22	-6.998	0.000	0.656
144.00	-12.81	-24.51	0.00	-721.32	0.00	721.32	1751.71	875.86	2319.73	1161.59	98.17	-7.120	0.000	0.629
146.00	-12.55	-24.32	0.00	-672.31	0.00	672.31	1734.98	867.49	2263.74	1133.55	101.17	-7.238	0.000	0.601
148.00	-12.29	-24.14	0.00	-623.67	0.00	623.67	1717.98	858.99	2208.06	1105.67	104.22	-7.353	0.000	0.572
150.00	-12.03	-23.96	0.00	-575.38	0.00	575.38	1700.71	850.36	2152.72	1077.96	107.31	-7.464	0.000	0.542
152.00	-11.78	-23.78	0.00	-527.46	0.00	527.46	1683.19	841.59	2097.72	1050.42	110.46	-7.571	0.000	0.510
154.00	-11.54	-23.59	0.00	-479.91	0.00	479.91	1665.40	832.70	2043.08	1023.06	113.64	-7.673	0.000	0.477
155.00	-9.12	-18.42	0.00	-456.31	0.00	456.31	1656.41	828.20	2015.90	1009.45	115.25	-7.723	0.000	0.458
156.00	-9.01	-18.33	0.00	-437.90	0.00	437.90	1647.35	823.68	1988.82	995.89	116.87	-7.772	0.000	0.446
158.00	-8.81	-18.16	0.00	-401.23	0.00	401.23	1629.04	814.52	1934.94	968.91	120.13	-7.865	0.000	0.420
160.00	-8.61	-17.98	0.00	-364.92	0.00	364.92	1610.46	805.23	1881.48	942.14	123.44	-7.955	0.000	0.393
162.00	-8.42	-17.80	0.00	-328.96	0.00	328.96	1591.62	795.81	1828.44	915.58	126.78	-8.041	0.000	0.365
164.00	-8.23	-17.63	0.00	-293.36	0.00	293.36	1572.52	786.26	1775.84	889.24	130.15	-8.121	0.000	0.336
165.00	-6.54	-13.45	0.00	-275.73	0.00	275.73	1562.88	781.44	1749.71	876.15	131.85	-8.160	0.000	0.319
166.00	-6.45	-13.36	0.00	-262.28	0.00	262.28	1553.16	776.58	1723.69	863.13	133.56	-8.198	0.000	0.308
168.00	-6.30	-13.19	0.00	-235.56	0.00	235.56	1533.53	766.77	1672.01	837.25	137.00	-8.269	0.000	0.286
170.00	-6.15	-13.03	0.00	-209.17	0.00	209.17	1513.65	756.82	1620.81	811.61	140.47	-8.336	0.000	0.262
172.00	-6.01	-12.86	0.00	-183.11	0.00	183.11	1493.49	746.75	1570.12	786.22	143.96	-8.399	0.000	0.237
174.00	-5.87	-12.70	0.00	-157.39	0.00	157.39	1473.08	736.54	1519.93	761.10	147.48	-8.456	0.000	0.211
175.00	-3.55	-7.98	0.00	-144.69	0.00	144.69	1462.77	731.39	1495.04	748.63	149.25	-8.483	0.000	0.196
176.00	-3.49	-7.91	0.00	-136.71	0.00	136.71	1452.40	726.20	1470.28	736.23	151.02	-8.509	0.000	0.188
178.00	-3.38	-7.75	0.00	-120.90	0.00	120.90	1427.84	713.92	1417.58	709.84	154.58	-8.557	0.000	0.173
180.00	-3.28	-7.59	0.00	-105.40	0.00	105.40	1400.09	700.04	1362.73	682.38	158.16	-8.603	0.000	0.157
180.00	-3.28	-7.59	0.00	-105.40	0.00	105.40	1571.64	785.82	1525.71	763.99	158.16	-8.603	0.000	0.140
182.00	-3.16	-7.43	0.00	-90.22	0.00	90.22	1571.64	785.82	1525.71	763.99	161.76	-8.644	0.000	0.120
184.00	-3.04	-7.28	0.00	-75.35	0.00	75.35	1571.64	785.82	1525.71	763.99	165.38	-8.675	0.000	0.101
186.00	-2.92	-7.12	0.00	-60.79	0.00	60.79	1571.64	785.82	1525.71	763.99	169.00	-8.701	0.000	0.082
188.00	-2.81	-6.96	0.00	-46.56	0.00	46.56	1571.64	785.82	1525.71	763.99	172.64	-8.721	0.000	0.063

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

190.00	-2.69	-6.80	0.00	-32.64	0.00	32.64	1571.64	785.82	1525.71	763.99	176.28	-8.736	0.000	0.045
192.00	-2.58	-6.64	0.00	-19.04	0.00	19.04	1571.64	785.82	1525.71	763.99	179.93	-8.746	0.000	0.027
193.00	-2.25	-6.24	0.00	-12.41	0.00	12.41	1571.64	785.82	1525.71	763.99	181.76	-8.749	0.000	0.018
194.00	-2.20	-6.16	0.00	-6.16	0.00	6.16	1571.64	785.82	1525.71	763.99	183.58	-8.751	0.000	0.010
195.00	0.00	-5.76	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	185.41	-8.752	0.000	0.000

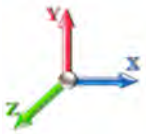
Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	5.168	5.68	0.00	1.200	1.133	2.00	11.254	13.50	76.8	185.1	806.1
4.00		1.00	0.85	5.168	5.68	0.00	1.200	1.215	2.00	11.201	13.44	76.4	197.2	813.6
6.00		1.00	0.85	5.168	5.68	0.00	1.200	1.265	2.00	11.138	13.37	76.0	204.0	815.8
8.00		1.00	0.85	5.168	5.68	0.00	1.200	1.302	2.00	11.071	13.29	75.5	208.5	815.8
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.00	11.001	13.20	75.0	211.7	814.4
12.00		1.00	0.85	5.168	5.68	0.00	1.200	1.356	2.00	10.929	13.12	74.6	214.1	812.2
14.00		1.00	0.85	5.168	5.68	0.00	1.200	1.377	2.00	10.857	13.03	74.1	215.9	809.4
16.00		1.00	0.86	5.232	5.76	0.00	1.200	1.395	2.00	10.783	12.94	74.5	217.2	806.2
18.00		1.00	0.88	5.363	5.90	0.00	1.200	1.412	2.00	10.709	12.85	75.8	218.2	802.6
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	10.634	12.76	77.0	218.9	798.7
22.00		1.00	0.92	5.595	6.15	0.00	1.200	1.440	2.00	10.559	12.67	78.0	219.3	794.5
24.00		1.00	0.94	5.698	6.27	0.00	1.200	1.453	2.00	10.484	12.58	78.9	219.6	790.2
26.00		1.00	0.95	5.795	6.37	0.00	1.200	1.465	2.00	10.408	12.49	79.6	219.6	785.7
28.00		1.00	0.97	5.886	6.47	0.00	1.200	1.476	2.00	10.332	12.40	80.3	219.6	781.1
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	2.00	10.256	12.31	80.8	219.4	776.3
32.00		1.00	1.00	6.054	6.66	0.00	1.200	1.495	2.00	10.179	12.22	81.3	219.1	771.4
34.00		1.00	1.01	6.132	6.74	0.00	1.200	1.504	2.00	10.103	12.12	81.8	218.6	766.4
36.00		1.00	1.02	6.206	6.83	0.00	1.200	1.513	2.00	10.026	12.03	82.1	218.1	761.4
38.00		1.00	1.03	6.277	6.90	0.00	1.200	1.521	2.00	9.949	11.94	82.4	217.6	756.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.00	9.872	11.85	82.7	216.9	751.0
41.00	Bot - Section 2	1.00	1.05	6.378	7.02	0.00	1.200	1.533	1.00	4.907	5.89	41.3	108.3	373.6
42.00		1.00	1.05	6.410	7.05	0.00	1.200	1.537	1.00	4.951	5.94	41.9	109.5	641.5
44.00		1.00	1.06	6.474	7.12	0.00	1.200	1.544	2.00	9.844	11.81	84.1	218.3	1275.4
46.00		1.00	1.07	6.534	7.19	0.00	1.200	1.551	2.00	9.767	11.72	84.2	217.5	1265.4
48.00	Top - Section 1	1.00	1.08	6.593	7.25	0.00	1.200	1.557	2.00	9.689	11.63	84.3	216.6	1255.4
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.00	9.612	11.53	84.4	215.6	734.1
52.00		1.00	1.10	6.705	7.38	0.00	1.200	1.570	2.00	9.534	11.44	84.4	214.7	728.6
54.00		1.00	1.11	6.759	7.43	0.00	1.200	1.576	2.00	9.456	11.35	84.4	213.6	723.0
56.00		1.00	1.12	6.811	7.49	0.00	1.200	1.581	2.00	9.379	11.25	84.3	212.6	717.3
58.00		1.00	1.13	6.861	7.55	0.00	1.200	1.587	2.00	9.301	11.16	84.2	211.5	711.6
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	2.00	9.223	11.07	84.1	210.3	705.9
62.00		1.00	1.14	6.958	7.65	0.00	1.200	1.598	2.00	9.145	10.97	84.0	209.2	700.2
64.00		1.00	1.15	7.005	7.71	0.00	1.200	1.603	2.00	9.067	10.88	83.8	208.0	694.4
66.00		1.00	1.16	7.050	7.76	0.00	1.200	1.608	2.00	8.989	10.79	83.7	206.7	688.6
68.00		1.00	1.17	7.095	7.80	0.00	1.200	1.612	2.00	8.911	10.69	83.5	205.4	682.7
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	2.00	8.833	10.60	83.2	204.2	676.9
72.00		1.00	1.18	7.181	7.90	0.00	1.200	1.622	2.00	8.755	10.51	83.0	202.8	671.0
74.00		1.00	1.19	7.222	7.94	0.00	1.200	1.626	2.00	8.676	10.41	82.7	201.5	665.0
76.00		1.00	1.19	7.263	7.99	0.00	1.200	1.631	2.00	8.598	10.32	82.4	200.1	659.1
78.00		1.00	1.20	7.303	8.03	0.00	1.200	1.635	2.00	8.520	10.22	82.1	198.7	653.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	2.00	8.442	10.13	81.8	197.3	647.1
81.00	Top - Section 2	1.00	1.21	7.361	8.10	0.00	1.200	1.641	1.00	4.191	5.03	40.7	98.3	321.5
82.00		1.00	1.21	7.380	8.12	0.00	1.200	1.643	1.00	4.172	5.01	40.6	97.9	283.2
84.00		1.00	1.22	7.418	8.16	0.00	1.200	1.647	2.00	8.285	9.94	81.1	194.4	562.2
85.00	Bot - Section 4	1.00	1.22	7.436	8.18	0.00	1.200	1.649	1.00	4.113	4.94	40.4	96.8	279.3
86.00		1.00	1.23	7.454	8.20	0.00	1.200	1.651	1.00	4.146	4.98	40.8	97.8	463.3

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

88.00	1.00	1.23	7.491	8.24	0.00	1.200	1.655	2.00	8.234	9.88	81.4	194.1	919.3
90.00	1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	8.155	9.79	81.0	192.5	910.2
91.00 Top - Section 3	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	4.048	4.86	40.3	95.9	451.8
92.00	1.00	1.24	7.561	8.32	0.00	1.200	1.662	1.00	4.029	4.83	40.2	95.5	273.8
94.00	1.00	1.25	7.595	8.35	0.00	1.200	1.666	2.00	7.998	9.60	80.2	189.5	543.2
96.00	1.00	1.25	7.629	8.39	0.00	1.200	1.669	2.00	7.920	9.50	79.8	187.9	537.8
98.00	1.00	1.26	7.662	8.43	0.00	1.200	1.672	2.00	7.841	9.41	79.3	186.4	532.4
100.00	1.00	1.27	7.695	8.46	0.00	1.200	1.676	2.00	7.763	9.32	78.9	184.8	527.0
102.00	1.00	1.27	7.727	8.50	0.00	1.200	1.679	2.00	7.684	9.22	78.4	183.2	521.6
104.00	1.00	1.28	7.759	8.53	0.00	1.200	1.682	2.00	7.606	9.13	77.9	181.6	516.2
106.00	1.00	1.28	7.790	8.57	0.00	1.200	1.686	2.00	7.527	9.03	77.4	179.9	510.8
108.00	1.00	1.29	7.821	8.60	0.00	1.200	1.689	2.00	7.448	8.94	76.9	178.3	505.3
110.00	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	7.370	8.84	76.4	176.6	499.8
112.00	1.00	1.30	7.881	8.67	0.00	1.200	1.695	2.00	7.291	8.75	75.8	175.0	494.3
114.00	1.00	1.30	7.910	8.70	0.00	1.200	1.698	2.00	7.212	8.65	75.3	173.3	488.9
116.00	1.00	1.31	7.939	8.73	0.00	1.200	1.701	2.00	7.134	8.56	74.8	171.6	483.3
118.00	1.00	1.31	7.968	8.76	0.00	1.200	1.704	2.00	7.055	8.47	74.2	169.9	477.8
120.00	1.00	1.32	7.996	8.80	0.00	1.200	1.707	2.00	6.976	8.37	73.6	168.2	472.3
122.00	1.00	1.32	8.024	8.83	0.00	1.200	1.710	2.00	6.898	8.28	73.1	166.4	466.8
124.00	1.00	1.32	8.051	8.86	0.00	1.200	1.712	2.00	6.819	8.18	72.5	164.7	461.2
126.00	1.00	1.33	8.079	8.89	0.00	1.200	1.715	2.00	6.740	8.09	71.9	162.9	455.6
128.00	1.00	1.33	8.105	8.92	0.00	1.200	1.718	2.00	6.661	7.99	71.3	161.2	450.1
130.00 Bot - Section 5	1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.00	6.582	7.90	70.7	159.4	444.5
132.00	1.00	1.34	8.158	8.97	0.00	1.200	1.723	2.00	6.588	7.91	70.9	159.8	669.7
134.00	1.00	1.35	8.184	9.00	0.00	1.200	1.726	2.00	6.509	7.81	70.3	158.0	661.0
135.00 Top - Section 4	1.00	1.35	8.197	9.02	0.00	1.200	1.727	1.00	3.225	3.87	34.9	78.6	327.5
136.00	1.00	1.35	8.210	9.03	0.00	1.200	1.728	1.00	3.205	3.85	34.7	78.1	189.0
138.00	1.00	1.35	8.235	9.06	0.00	1.200	1.731	2.00	6.352	7.62	69.0	154.4	373.9
140.00	1.00	1.36	8.260	9.09	0.00	1.200	1.733	2.00	6.273	7.53	68.4	152.6	369.0
142.00	1.00	1.36	8.285	9.11	0.00	1.200	1.736	2.00	6.194	7.43	67.7	150.8	364.2
144.00	1.00	1.37	8.309	9.14	0.00	1.200	1.738	2.00	6.115	7.34	67.1	148.9	359.3
146.00	1.00	1.37	8.333	9.17	0.00	1.200	1.741	2.00	6.036	7.24	66.4	147.1	354.4
148.00	1.00	1.37	8.357	9.19	0.00	1.200	1.743	2.00	5.957	7.15	65.7	145.3	349.5
150.00	1.00	1.38	8.381	9.22	0.00	1.200	1.745	2.00	5.879	7.05	65.0	143.4	344.6
152.00	1.00	1.38	8.404	9.24	0.00	1.200	1.748	2.00	5.800	6.96	64.3	141.5	339.7
154.00	1.00	1.39	8.427	9.27	0.00	1.200	1.750	2.00	5.721	6.86	63.6	139.7	334.8
155.00 Appurtenance(s)	1.00	1.39	8.439	9.28	0.00	1.200	1.751	1.00	2.831	3.40	31.5	69.4	165.8
156.00	1.00	1.39	8.450	9.30	0.00	1.200	1.752	1.00	2.811	3.37	31.4	68.9	164.5
158.00	1.00	1.39	8.473	9.32	0.00	1.200	1.754	2.00	5.563	6.68	62.2	135.9	324.9
160.00	1.00	1.40	8.495	9.34	0.00	1.200	1.757	2.00	5.484	6.58	61.5	134.0	320.0
162.00	1.00	1.40	8.518	9.37	0.00	1.200	1.759	2.00	5.405	6.49	60.8	132.1	315.0
164.00	1.00	1.40	8.540	9.39	0.00	1.200	1.761	2.00	5.326	6.39	60.0	130.2	310.0
165.00 Appurtenance(s)	1.00	1.41	8.551	9.41	0.00	1.200	1.762	1.00	2.633	3.16	29.7	64.6	153.4
166.00	1.00	1.41	8.561	9.42	0.00	1.200	1.763	1.00	2.614	3.14	29.5	64.1	152.2
168.00	1.00	1.41	8.583	9.44	0.00	1.200	1.765	2.00	5.168	6.20	58.6	126.4	300.1
170.00	1.00	1.42	8.604	9.46	0.00	1.200	1.767	2.00	5.089	6.11	57.8	124.5	295.1
172.00	1.00	1.42	8.626	9.49	0.00	1.200	1.769	2.00	5.010	6.01	57.0	122.5	290.1
174.00	1.00	1.42	8.647	9.51	0.00	1.200	1.771	2.00	4.931	5.92	56.3	120.6	285.2
175.00 Appurtenance(s)	1.00	1.42	8.657	9.52	0.00	1.200	1.772	1.00	2.436	2.92	27.8	59.8	140.9
176.00	1.00	1.43	8.667	9.53	0.00	1.200	1.773	1.00	2.416	2.90	27.6	59.3	139.7
178.00	1.00	1.43	8.688	9.56	0.00	1.200	1.775	2.00	4.773	5.73	54.7	116.7	275.2
180.00 Top - Section 5	1.00	1.43	8.709	9.58	0.00	1.200	1.777	2.00	4.694	5.63	54.0	114.7	270.1
182.00	1.00	1.44	8.729	9.60	0.00	1.200	1.779	2.00	4.655	5.59	53.6	114.9	287.6
184.00	1.00	1.44	8.749	9.62	0.00	1.200	1.781	2.00	4.655	5.59	53.8	115.0	287.7
186.00	1.00	1.44	8.769	9.65	0.00	1.200	1.783	2.00	4.656	5.59	53.9	115.1	287.9
188.00	1.00	1.45	8.789	9.67	0.00	1.200	1.785	2.00	4.657	5.59	54.0	115.3	288.0
190.00	1.00	1.45	8.808	9.69	0.00	1.200	1.787	2.00	4.657	5.59	54.2	115.4	288.1

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

192.00		1.00	1.45	8.828	9.71	0.00	1.200	1.789	2.00	4.658	5.59	54.3	115.5	288.3
193.00	Appurtenance(s)	1.00	1.45	8.837	9.72	0.00	1.200	1.790	1.00	2.329	2.79	27.2	57.8	144.2
194.00		1.00	1.46	8.847	9.73	0.00	1.200	1.791	1.00	2.329	2.80	27.2	57.8	144.2
195.00	Appurtenance(s)	1.00	1.46	8.857	9.74	0.00	1.200	1.792	1.00	2.329	2.80	27.2	57.9	144.2
								Totals:	**195.00**			**7,134.3**		**56,651.6**

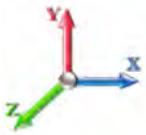
Discrete Appurtenance Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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	195.00	Modified Platform + HR &	1	8.857	9.742	1.00	1.00	90.97	4105.57	0.000	0.000	886.29	0.00	0.00
2	195.00	TD-RRH8x20-25	3	8.857	9.742	0.38	0.75	5.50	594.09	0.000	0.000	53.56	0.00	0.00
3	195.00	Commscope DT465B-2XR	3	8.857	9.742	0.62	0.75	19.57	920.96	0.000	0.000	190.65	0.00	0.00
4	195.00	800 Mhz Filter	3	8.857	9.742	0.52	0.75	1.68	71.63	0.000	0.000	16.36	0.00	0.00
5	195.00	1900MHz RRH	3	8.857	9.742	0.50	0.75	7.88	401.00	0.000	0.000	76.77	0.00	0.00
6	195.00	ACU-A20-N	4	8.857	9.742	0.50	0.75	0.89	17.24	0.000	0.000	8.71	0.00	0.00
7	195.00	800 Mhz	6	8.857	9.742	0.50	0.75	14.50	893.47	0.000	0.000	141.25	0.00	0.00
8	195.00	APXVSPP18-C-A20	3	8.857	9.742	0.62	0.75	20.33	589.04	0.000	0.000	198.09	0.00	0.00
9	193.00	Collar Mount	1	8.837	9.721	1.00	1.00	8.58	620.68	0.000	0.000	83.40	0.00	0.00
10	175.00	Commscope	3	8.657	9.523	0.57	0.75	4.59	385.23	0.000	0.000	43.73	0.00	0.00
11	175.00	RFS DB-C1-12C-24AB-0Z	1	8.657	9.523	0.75	0.75	3.67	125.50	0.000	0.000	34.96	0.00	0.00
12	175.00	HRK14	1	8.657	9.523	1.00	1.00	16.20	1716.21	0.000	0.000	154.26	0.00	0.00
13	175.00	Samsung B2/B66A	3	8.657	9.523	0.50	0.75	3.70	537.96	0.000	0.000	35.21	0.00	0.00
14	175.00	Samsung B5/B13	3	8.657	9.523	0.50	0.75	3.70	465.23	0.000	0.000	35.21	0.00	0.00
15	175.00	Samsung MT6407-77A	3	8.657	9.523	0.52	0.75	8.90	651.22	0.000	0.000	84.78	0.00	0.00
16	175.00	Commscope	6	8.657	9.523	0.64	0.75	36.44	1560.72	0.000	0.000	346.97	0.00	0.00
17	175.00	Commscope	3	8.657	9.523	1.00	1.00	0.00	141.72	0.000	0.000	0.00	0.00	0.00
18	175.00	Low Profile Platform	1	8.657	9.523	1.00	1.00	39.94	2829.24	0.000	0.000	380.30	0.00	0.00
19	165.00	Low Profile Platform	1	8.551	9.406	1.00	1.00	39.83	2821.45	0.000	0.000	374.63	0.00	0.00
20	165.00	DC6-48-60-18-8F	1	8.551	9.406	1.00	1.00	1.36	82.88	0.000	0.000	12.81	0.00	0.00
21	165.00	ABT-DF-DMADBH	1	8.551	9.406	1.00	1.00	0.24	2.87	0.000	0.000	2.30	0.00	0.00
22	165.00	AM-X-CD-16-65-00T-RET	1	8.551	9.406	0.72	0.80	7.81	175.53	0.000	0.000	73.41	0.00	0.00
23	165.00	RRUS-11	6	8.551	9.406	0.57	0.80	10.77	708.99	0.000	0.000	101.27	0.00	0.00
24	165.00	LGP2140X TMA	12	8.551	9.406	0.54	0.80	13.91	489.69	0.000	0.000	130.80	0.00	0.00
25	165.00	7770.00	6	8.551	9.406	0.58	0.80	23.04	1072.60	0.000	0.000	216.73	0.00	0.00
26	165.00	800 10764	2	8.551	9.406	0.72	0.80	11.58	282.39	0.000	0.000	108.94	0.00	0.00
27	155.00	KRY 112 144/1	3	8.439	9.283	0.52	0.75	1.40	62.75	0.000	0.000	12.96	0.00	0.00
28	155.00	Low Profile Platform	1	8.439	9.283	1.00	1.00	39.72	2813.21	0.000	0.000	368.70	0.00	0.00
29	155.00	Ericsson AIR6449 B41	3	8.439	9.283	0.53	0.75	10.55	688.41	0.000	0.000	97.93	0.00	0.00
30	155.00	S20057A1	3	8.439	9.283	0.55	0.75	2.50	80.21	0.000	0.000	23.18	0.00	0.00
31	155.00	782 11056	3	8.439	9.283	0.65	0.75	1.34	39.41	0.000	0.000	12.40	0.00	0.00
32	155.00	Ericsson 4424 B25	3	8.439	9.283	0.50	0.75	3.99	577.03	0.000	0.000	37.05	0.00	0.00
33	155.00	RFS	3	8.439	9.283	0.50	0.75	13.26	398.35	0.000	0.000	123.07	0.00	0.00
34	155.00	RFS	3	8.439	9.283	0.52	0.75	34.88	1719.24	0.000	0.000	323.79	0.00	0.00
35	155.00	Ericsson 4449 B71 + B85	3	8.439	9.283	0.50	0.75	3.83	262.12	0.000	0.000	35.56	0.00	0.00
36	155.00	Ericsson 4415 B66A	3	8.439	9.283	0.50	0.75	3.66	366.20	0.000	0.000	33.96	0.00	0.00
37	155.00	HRK12 (Handrail Kit)	1	8.439	9.283	1.00	1.00	15.35	310.26	0.000	0.000	142.48	0.00	0.00
							Totals:		**29,580.28**			**5,002.46**		

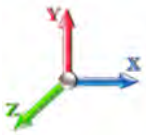
Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 35

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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
2.00		76.77	919.08	0.00	0.00
4.00		76.41	926.59	0.00	0.00
6.00		75.98	928.84	0.00	0.00
8.00		75.52	928.80	0.00	0.00
10.00		75.05	927.45	0.00	0.00
12.00		74.56	925.26	0.00	0.00
14.00		74.06	922.45	0.00	0.00
16.00		74.47	919.19	0.00	0.00
18.00		75.81	915.58	0.00	0.00
20.00		76.97	911.69	0.00	0.00
22.00		77.98	907.55	0.00	0.00
24.00		78.85	903.22	0.00	0.00
26.00		79.61	898.73	0.00	0.00
28.00		80.27	894.08	0.00	0.00
30.00		80.85	889.31	0.00	0.00
32.00		81.34	884.42	0.00	0.00
34.00		81.77	879.44	0.00	0.00
36.00		82.13	874.36	0.00	0.00
38.00		82.43	869.20	0.00	0.00
40.00		82.68	863.97	0.00	0.00
41.00		41.31	430.09	0.00	0.00
42.00		41.89	698.02	0.00	0.00
44.00		84.12	1388.40	0.00	0.00
46.00		84.24	1378.41	0.00	0.00
48.00		84.33	1368.38	0.00	0.00
50.00		84.37	847.12	0.00	0.00
52.00		84.39	841.56	0.00	0.00
54.00		84.37	835.96	0.00	0.00
56.00		84.32	830.31	0.00	0.00
58.00		84.24	824.63	0.00	0.00
60.00		84.13	818.92	0.00	0.00
62.00		84.00	813.17	0.00	0.00
64.00		83.84	807.38	0.00	0.00
66.00		83.66	801.57	0.00	0.00
68.00		83.45	795.73	0.00	0.00
70.00		83.23	789.86	0.00	0.00
72.00		82.98	783.96	0.00	0.00
74.00		82.72	778.04	0.00	0.00
76.00		82.43	772.10	0.00	0.00
78.00		82.13	766.13	0.00	0.00
80.00		81.81	760.14	0.00	0.00
81.00		40.72	377.99	0.00	0.00
82.00		40.64	339.74	0.00	0.00
84.00		81.12	675.16	0.00	0.00
85.00		40.37	335.78	0.00	0.00
86.00		40.80	519.76	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 36

88.00		81.41	1032.31	0.00	0.00
90.00		81.02	1023.18	0.00	0.00
91.00		40.31	508.35	0.00	0.00
92.00		40.21	330.30	0.00	0.00
94.00		80.19	656.21	0.00	0.00
96.00		79.76	650.84	0.00	0.00
98.00		79.31	645.45	0.00	0.00
100.00		78.85	640.05	0.00	0.00
102.00		78.38	634.64	0.00	0.00
104.00		77.89	629.21	0.00	0.00
106.00		77.40	623.76	0.00	0.00
108.00		76.89	618.30	0.00	0.00
110.00		76.37	612.83	0.00	0.00
112.00		75.85	607.35	0.00	0.00
114.00		75.31	601.86	0.00	0.00
116.00		74.76	596.35	0.00	0.00
118.00		74.20	590.83	0.00	0.00
120.00		73.63	585.30	0.00	0.00
122.00		73.06	579.76	0.00	0.00
124.00		72.47	574.21	0.00	0.00
126.00		71.87	568.64	0.00	0.00
128.00		71.27	563.07	0.00	0.00
130.00		70.66	557.49	0.00	0.00
132.00		70.95	782.71	0.00	0.00
134.00		70.32	774.06	0.00	0.00
135.00		34.89	384.01	0.00	0.00
136.00		34.74	245.50	0.00	0.00
138.00		69.04	486.91	0.00	0.00
140.00		68.39	482.05	0.00	0.00
142.00		67.74	477.18	0.00	0.00
144.00		67.07	472.30	0.00	0.00
146.00		66.40	467.41	0.00	0.00
148.00		65.72	462.51	0.00	0.00
150.00		65.03	457.60	0.00	0.00
152.00		64.34	452.69	0.00	0.00
154.00		63.64	447.77	0.00	0.00
155.00	(29) attachments	1242.61	7539.45	0.00	0.00
156.00		31.35	202.13	0.00	0.00
158.00		62.22	400.08	0.00	0.00
160.00		61.50	395.14	0.00	0.00
162.00		60.77	390.19	0.00	0.00
164.00		60.04	385.23	0.00	0.00
165.00	(30) attachments	1050.61	5827.38	0.00	0.00
166.00		29.54	171.79	0.00	0.00
168.00		58.55	339.37	0.00	0.00
170.00		57.80	334.39	0.00	0.00
172.00		57.04	329.40	0.00	0.00
174.00		56.28	324.41	0.00	0.00
175.00	(24) attachments	1143.26	8573.61	0.00	0.00
176.00		27.64	144.28	0.00	0.00
178.00		54.74	284.32	0.00	0.00
180.00		53.96	279.31	0.00	0.00
182.00		53.63	296.77	0.00	0.00
184.00		53.76	296.91	0.00	0.00
186.00		53.89	297.04	0.00	0.00
188.00		54.02	297.17	0.00	0.00
190.00		54.15	297.30	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 37

192.00		54.28	297.43	0.00	0.00
193.00	(1) attachments	110.57	769.43	0.00	0.00
194.00		27.20	148.78	0.00	0.00
195.00	(26) attachments	1598.89	7741.81	0.00	0.00
	Totals:	**12,136.77**	**95,653.61**	**0.00**	**0.00**

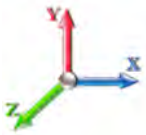
Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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	-95.65	-12.16	0.00	-1725.7	0.00	1725.77	4628.91	2314.46	12221.1	6119.66	0.00	0.000	0.000	0.303
2.00	-94.73	-12.12	0.00	-1701.4	0.00	1701.46	4612.68	2306.34	12088.3	6053.16	0.01	-0.025	0.000	0.302
4.00	-93.79	-12.08	0.00	-1677.2	0.00	1677.22	4596.18	2298.09	11955.5	5986.64	0.02	-0.049	0.000	0.301
6.00	-92.86	-12.05	0.00	-1653.0	0.00	1653.05	4579.43	2289.71	11822.6	5920.10	0.05	-0.074	0.000	0.300
8.00	-91.93	-12.01	0.00	-1628.9	0.00	1628.95	4562.40	2281.20	11689.7	5853.55	0.08	-0.100	0.000	0.298
10.00	-90.99	-11.98	0.00	-1604.9	0.00	1604.93	4545.12	2272.56	11556.8	5787.00	0.13	-0.125	0.000	0.297
12.00	-90.06	-11.94	0.00	-1580.9	0.00	1580.98	4527.57	2263.79	11423.9	5720.46	0.19	-0.150	0.000	0.296
14.00	-89.14	-11.90	0.00	-1557.1	0.00	1557.10	4509.77	2254.88	11291.0	5653.92	0.26	-0.176	0.000	0.295
16.00	-88.21	-11.87	0.00	-1533.2	0.00	1533.29	4491.69	2245.85	11158.2	5587.41	0.34	-0.202	0.000	0.294
18.00	-87.29	-11.83	0.00	-1509.5	0.00	1509.56	4473.36	2236.68	11025.4	5520.93	0.43	-0.228	0.000	0.293
20.00	-86.37	-11.79	0.00	-1485.9	0.00	1485.91	4454.76	2227.38	10892.7	5454.49	0.53	-0.255	0.000	0.292
22.00	-85.46	-11.74	0.00	-1462.3	0.00	1462.34	4435.90	2217.95	10760.1	5388.08	0.64	-0.281	0.000	0.291
24.00	-84.55	-11.70	0.00	-1438.8	0.00	1438.86	4416.78	2208.39	10627.6	5321.73	0.77	-0.308	0.000	0.290
26.00	-83.65	-11.65	0.00	-1415.4	0.00	1415.46	4397.40	2198.70	10495.2	5255.44	0.90	-0.335	0.000	0.288
28.00	-82.75	-11.61	0.00	-1392.1	0.00	1392.15	4377.75	2188.87	10363.0	5189.22	1.05	-0.362	0.000	0.287
30.00	-81.86	-11.56	0.00	-1368.9	0.00	1368.94	4357.84	2178.92	10230.9	5123.07	1.21	-0.390	0.000	0.286
32.00	-80.97	-11.51	0.00	-1345.8	0.00	1345.82	4337.67	2168.83	10099.0	5057.01	1.37	-0.417	0.000	0.285
34.00	-80.08	-11.46	0.00	-1322.7	0.00	1322.79	4317.23	2158.62	9967.25	4991.03	1.56	-0.445	0.000	0.284
36.00	-79.20	-11.41	0.00	-1299.8	0.00	1299.87	4296.53	2148.27	9835.69	4925.16	1.75	-0.473	0.000	0.282
38.00	-78.33	-11.36	0.00	-1277.0	0.00	1277.04	4275.57	2137.79	9704.34	4859.38	1.95	-0.502	0.000	0.281
40.00	-77.46	-11.30	0.00	-1254.3	0.00	1254.32	4254.35	2127.17	9573.22	4793.73	2.17	-0.530	0.000	0.280
41.00	-77.03	-11.27	0.00	-1243.0	0.00	1243.02	4243.64	2121.82	9507.75	4760.94	2.28	-0.545	0.000	0.279
42.00	-76.33	-11.25	0.00	-1231.7	0.00	1231.75	4232.86	2116.43	9442.34	4728.19	2.40	-0.559	0.000	0.279
44.00	-74.93	-11.19	0.00	-1209.2	0.00	1209.24	4211.11	2105.56	9311.72	4662.78	2.64	-0.588	0.000	0.277
46.00	-73.55	-11.13	0.00	-1186.8	0.00	1186.85	4189.10	2094.55	9181.37	4597.51	2.89	-0.617	0.000	0.276
48.00	-72.18	-11.07	0.00	-1164.5	0.00	1164.58	4202.19	2101.09	9258.62	4636.19	3.16	-0.647	0.000	0.268
50.00	-71.33	-11.01	0.00	-1142.4	0.00	1142.44	4180.07	2090.03	9128.39	4570.98	3.43	-0.676	0.000	0.267
52.00	-70.48	-10.95	0.00	-1120.4	0.00	1120.42	4157.69	2078.84	8998.45	4505.91	3.72	-0.705	0.000	0.266
54.00	-69.64	-10.89	0.00	-1098.5	0.00	1098.51	4135.04	2067.52	8868.82	4441.00	4.02	-0.734	0.000	0.264
56.00	-68.81	-10.83	0.00	-1076.7	0.00	1076.72	4112.14	2056.07	8739.51	4376.25	4.34	-0.763	0.000	0.263
58.00	-67.98	-10.77	0.00	-1055.0	0.00	1055.05	4088.97	2044.48	8610.54	4311.67	4.66	-0.792	0.000	0.261
60.00	-67.15	-10.71	0.00	-1033.5	0.00	1033.51	4065.54	2032.77	8481.93	4247.27	5.00	-0.821	0.000	0.260
62.00	-66.34	-10.65	0.00	-1012.0	0.00	1012.08	4041.84	2020.92	8353.69	4183.06	5.35	-0.851	0.000	0.258
64.00	-65.52	-10.59	0.00	-990.78	0.00	990.78	4017.89	2008.94	8225.84	4119.03	5.72	-0.881	0.000	0.257
66.00	-64.72	-10.53	0.00	-969.60	0.00	969.60	3993.67	1996.83	8098.39	4055.21	6.09	-0.911	0.000	0.255
68.00	-63.92	-10.46	0.00	-948.55	0.00	948.55	3969.18	1984.59	7971.36	3991.60	6.48	-0.941	0.000	0.254
70.00	-63.13	-10.40	0.00	-927.62	0.00	927.62	3944.44	1972.22	7844.75	3928.21	6.88	-0.971	0.000	0.252
72.00	-62.34	-10.34	0.00	-906.82	0.00	906.82	3919.43	1959.72	7718.60	3865.04	7.29	-1.002	0.000	0.251
74.00	-61.56	-10.28	0.00	-886.14	0.00	886.14	3894.16	1947.08	7592.91	3802.10	7.72	-1.033	0.000	0.249
76.00	-60.78	-10.21	0.00	-865.59	0.00	865.59	3868.63	1934.31	7467.70	3739.40	8.16	-1.064	0.000	0.247
78.00	-60.01	-10.15	0.00	-845.17	0.00	845.17	3842.83	1921.42	7342.98	3676.95	8.61	-1.095	0.000	0.246
80.00	-59.25	-10.08	0.00	-824.88	0.00	824.88	3816.78	1908.39	7218.77	3614.75	9.08	-1.126	0.000	0.244
81.00	-58.87	-10.04	0.00	-814.80	0.00	814.80	3803.65	1901.82	7156.86	3583.75	9.31	-1.142	0.000	0.243
81.00	-58.87	-10.04	0.00	-814.80	0.00	814.80	2964.89	1482.44	5593.90	2801.11	9.31	-1.142	0.000	0.311
82.00	-58.52	-10.02	0.00	-804.76	0.00	804.76	2956.04	1478.02	5548.38	2778.31	9.56	-1.158	0.000	0.310
84.00	-57.84	-9.96	0.00	-784.71	0.00	784.71	2938.13	1469.07	5457.49	2732.80	10.05	-1.196	0.000	0.307
85.00	-57.51	-9.93	0.00	-774.75	0.00	774.75	2929.08	1464.54	5412.12	2710.08	10.30	-1.215	0.000	0.306
86.00	-56.98	-9.91	0.00	-764.82	0.00	764.82	2919.97	1459.98	5366.81	2687.40	10.56	-1.235	0.000	0.304

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 39

88.00	-55.95	-9.84	0.00	-745.01	0.00	745.01	2901.54	1450.77	5276.37	2642.11	11.08	-1.273	0.000	0.301
90.00	-54.92	-9.76	0.00	-725.33	0.00	725.33	2882.85	1441.42	5186.17	2596.94	11.63	-1.312	0.000	0.298
91.00	-54.41	-9.73	0.00	-715.56	0.00	715.56	2898.33	1449.17	5260.79	2634.30	11.90	-1.331	0.000	0.290
92.00	-54.08	-9.71	0.00	-705.83	0.00	705.83	2889.00	1444.50	5215.68	2611.72	12.18	-1.351	0.000	0.289
94.00	-53.41	-9.65	0.00	-686.41	0.00	686.41	2870.13	1435.06	5125.65	2566.64	12.76	-1.388	0.000	0.286
96.00	-52.76	-9.59	0.00	-667.12	0.00	667.12	2851.00	1425.50	5035.90	2521.69	13.35	-1.426	0.000	0.283
98.00	-52.11	-9.53	0.00	-647.94	0.00	647.94	2831.61	1415.80	4946.44	2476.90	13.95	-1.463	0.000	0.280
100.00	-51.47	-9.47	0.00	-628.89	0.00	628.89	2811.95	1405.98	4857.28	2432.25	14.57	-1.501	0.000	0.277
102.00	-50.83	-9.40	0.00	-609.96	0.00	609.96	2792.03	1396.02	4768.43	2387.76	15.21	-1.539	0.000	0.274
104.00	-50.19	-9.34	0.00	-591.15	0.00	591.15	2771.85	1385.93	4679.92	2343.44	15.86	-1.577	0.000	0.270
106.00	-49.57	-9.28	0.00	-572.47	0.00	572.47	2751.41	1375.70	4591.76	2299.29	16.53	-1.615	0.000	0.267
108.00	-48.95	-9.22	0.00	-553.91	0.00	553.91	2730.70	1365.35	4503.96	2255.33	17.22	-1.653	0.000	0.264
110.00	-48.33	-9.16	0.00	-535.48	0.00	535.48	2709.73	1354.87	4416.54	2211.55	17.92	-1.692	0.000	0.260
112.00	-47.72	-9.09	0.00	-517.16	0.00	517.16	2688.50	1344.25	4329.52	2167.98	18.64	-1.730	0.000	0.256
114.00	-47.11	-9.03	0.00	-498.98	0.00	498.98	2667.01	1333.50	4242.91	2124.61	19.37	-1.768	0.000	0.253
116.00	-46.51	-8.97	0.00	-480.91	0.00	480.91	2645.25	1322.63	4156.72	2081.45	20.12	-1.806	0.000	0.249
118.00	-45.92	-8.91	0.00	-462.97	0.00	462.97	2623.23	1311.62	4070.97	2038.51	20.88	-1.845	0.000	0.245
120.00	-45.33	-8.85	0.00	-445.16	0.00	445.16	2600.95	1300.48	3985.68	1995.80	21.66	-1.883	0.000	0.241
122.00	-44.75	-8.78	0.00	-427.47	0.00	427.47	2578.41	1289.20	3900.86	1953.33	22.46	-1.921	0.000	0.236
124.00	-44.17	-8.72	0.00	-409.90	0.00	409.90	2555.60	1277.80	3816.53	1911.10	23.27	-1.959	0.000	0.232
126.00	-43.60	-8.66	0.00	-392.46	0.00	392.46	2532.53	1266.26	3732.70	1869.12	24.10	-1.997	0.000	0.227
128.00	-43.03	-8.59	0.00	-375.15	0.00	375.15	2509.20	1254.60	3649.39	1827.41	24.95	-2.035	0.000	0.222
130.00	-42.47	-8.53	0.00	-357.96	0.00	357.96	2485.60	1242.80	3566.61	1785.96	25.81	-2.072	0.000	0.218
132.00	-41.69	-8.46	0.00	-340.90	0.00	340.90	2461.74	1230.87	3484.38	1744.78	26.68	-2.109	0.000	0.212
134.00	-40.91	-8.38	0.00	-323.98	0.00	323.98	2437.62	1218.81	3402.71	1703.88	27.57	-2.146	0.000	0.207
135.00	-40.53	-8.34	0.00	-315.60	0.00	315.60	1823.78	911.89	2575.19	1289.51	28.03	-2.164	0.000	0.267
136.00	-40.28	-8.32	0.00	-307.26	0.00	307.26	1816.04	908.02	2546.55	1275.17	28.48	-2.183	0.000	0.263
138.00	-39.79	-8.26	0.00	-290.61	0.00	290.61	1800.35	900.17	2489.45	1246.57	29.40	-2.226	0.000	0.255
140.00	-39.30	-8.20	0.00	-274.09	0.00	274.09	1784.40	892.20	2432.60	1218.11	30.35	-2.268	0.000	0.247
142.00	-38.82	-8.15	0.00	-257.68	0.00	257.68	1768.19	884.09	2376.03	1189.78	31.30	-2.309	0.000	0.239
144.00	-38.35	-8.09	0.00	-241.39	0.00	241.39	1751.71	875.86	2319.73	1161.59	32.28	-2.350	0.000	0.230
146.00	-37.88	-8.03	0.00	-225.22	0.00	225.22	1734.98	867.49	2263.74	1133.55	33.27	-2.389	0.000	0.221
148.00	-37.42	-7.97	0.00	-209.17	0.00	209.17	1717.98	858.99	2208.06	1105.67	34.28	-2.428	0.000	0.211
150.00	-36.96	-7.91	0.00	-193.24	0.00	193.24	1700.71	850.36	2152.72	1077.96	35.31	-2.465	0.000	0.201
152.00	-36.50	-7.84	0.00	-177.43	0.00	177.43	1683.19	841.59	2097.72	1050.42	36.35	-2.501	0.000	0.191
154.00	-36.05	-7.78	0.00	-161.74	0.00	161.74	1665.40	832.70	2043.08	1023.06	37.40	-2.535	0.000	0.180
155.00	-28.57	-6.21	0.00	-153.96	0.00	153.96	1656.41	828.20	2015.90	1009.45	37.94	-2.552	0.000	0.170
156.00	-28.37	-6.18	0.00	-147.76	0.00	147.76	1647.35	823.68	1988.82	995.89	38.47	-2.569	0.000	0.166
158.00	-27.97	-6.12	0.00	-135.40	0.00	135.40	1629.04	814.52	1934.94	968.91	39.55	-2.600	0.000	0.157
160.00	-27.58	-6.05	0.00	-123.17	0.00	123.17	1610.46	805.23	1881.48	942.14	40.65	-2.631	0.000	0.148
162.00	-27.19	-5.98	0.00	-111.07	0.00	111.07	1591.62	795.81	1828.44	915.58	41.76	-2.659	0.000	0.138
164.00	-26.80	-5.92	0.00	-99.10	0.00	99.10	1572.52	786.26	1775.84	889.24	42.88	-2.687	0.000	0.129
165.00	-21.03	-4.60	0.00	-93.18	0.00	93.18	1562.88	781.44	1749.71	876.15	43.44	-2.700	0.000	0.120
166.00	-20.86	-4.57	0.00	-88.59	0.00	88.59	1553.16	776.58	1723.69	863.13	44.01	-2.712	0.000	0.116
168.00	-20.52	-4.50	0.00	-79.46	0.00	79.46	1533.53	766.77	1672.01	837.25	45.15	-2.736	0.000	0.108
170.00	-20.19	-4.43	0.00	-70.46	0.00	70.46	1513.65	756.82	1620.81	811.61	46.30	-2.759	0.000	0.100
172.00	-19.86	-4.37	0.00	-61.59	0.00	61.59	1493.49	746.75	1570.12	786.22	47.46	-2.780	0.000	0.092
174.00	-19.54	-4.30	0.00	-52.85	0.00	52.85	1473.08	736.54	1519.93	761.10	48.63	-2.799	0.000	0.083
175.00	-11.03	-2.74	0.00	-48.55	0.00	48.55	1462.77	731.39	1495.04	748.63	49.22	-2.809	0.000	0.072
176.00	-10.89	-2.71	0.00	-45.81	0.00	45.81	1452.40	726.20	1470.28	736.23	49.81	-2.817	0.000	0.070
178.00	-10.60	-2.64	0.00	-40.39	0.00	40.39	1427.84	713.92	1417.58	709.84	50.99	-2.833	0.000	0.064
180.00	-10.33	-2.58	0.00	-35.11	0.00	35.11	1400.09	700.04	1362.73	682.38	52.18	-2.848	0.000	0.059
180.00	-10.33	-2.58	0.00	-35.11	0.00	35.11	1571.64	785.82	1525.71	763.99	52.18	-2.848	0.000	0.053
182.00	-10.03	-2.51	0.00	-29.95	0.00	29.95	1571.64	785.82	1525.71	763.99	53.37	-2.862	0.000	0.046
184.00	-9.74	-2.44	0.00	-24.93	0.00	24.93	1571.64	785.82	1525.71	763.99	54.58	-2.873	0.000	0.039
186.00	-9.44	-2.38	0.00	-20.04	0.00	20.04	1571.64	785.82	1525.71	763.99	55.78	-2.881	0.000	0.032
188.00	-9.15	-2.31	0.00	-15.28	0.00	15.28	1571.64	785.82	1525.71	763.99	56.99	-2.888	0.000	0.026

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

190.00	-8.86	-2.24	0.00	-10.66	0.00	10.66	1571.64	785.82	1525.71	763.99	58.20	-2.893	0.000	0.020
192.00	-8.56	-2.17	0.00	-6.18	0.00	6.18	1571.64	785.82	1525.71	763.99	59.41	-2.896	0.000	0.014
193.00	-7.80	-2.02	0.00	-4.01	0.00	4.01	1571.64	785.82	1525.71	763.99	60.02	-2.897	0.000	0.010
194.00	-7.65	-1.99	0.00	-1.99	0.00	1.99	1571.64	785.82	1525.71	763.99	60.62	-2.897	0.000	0.007
195.00	0.00	-1.60	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	61.23	-2.898	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 41	

Load Case:	1.2D + 1.0E							**Iterations**	28
Gust Response Factor	1.10				**Sds**	0.13		**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.04		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26		**SA**	0.01	**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	
2.00		517.51	0.00	0.01	0.01	4.23	
4.00		513.69	0.00	0.02	0.01	6.65	
6.00		509.88	0.00	0.03	0.02	8.26	
8.00		506.07	0.00	0.04	0.02	9.42	
10.00		502.25	0.00	0.04	0.03	10.26	
12.00		498.44	0.01	0.05	0.03	10.88	
14.00		494.62	0.01	0.05	0.03	11.34	
16.00		490.81	0.01	0.06	0.03	11.68	
18.00		487.00	0.02	0.06	0.04	11.92	
20.00		483.18	0.02	0.06	0.04	12.09	
22.00		479.37	0.02	0.07	0.04	12.21	
24.00		475.56	0.03	0.07	0.04	12.28	
26.00		471.74	0.03	0.07	0.04	12.32	
28.00		467.93	0.04	0.07	0.04	12.34	
30.00		464.11	0.04	0.07	0.04	12.35	
32.00		460.30	0.05	0.07	0.04	12.34	
34.00		456.49	0.06	0.07	0.04	12.33	
36.00		452.67	0.06	0.07	0.04	12.32	
38.00		448.86	0.07	0.07	0.04	12.31	
40.00		445.05	0.08	0.07	0.04	12.30	
41.00	Bot - Section 2	221.09	0.08	0.07	0.04	6.13	
42.00		443.32	0.09	0.07	0.04	12.35	
44.00		880.91	0.10	0.07	0.04	24.75	
46.00		873.28	0.11	0.07	0.04	24.75	
48.00	Top - Section 1	865.66	0.11	0.07	0.04	24.76	
50.00		432.05	0.12	0.07	0.03	12.48	
52.00		428.24	0.13	0.07	0.03	12.48	
54.00		424.42	0.14	0.07	0.03	12.49	
56.00		420.61	0.16	0.07	0.03	12.49	
58.00		416.80	0.17	0.07	0.03	12.48	
60.00		412.98	0.18	0.07	0.03	12.46	
62.00		409.17	0.19	0.06	0.02	12.41	
64.00		405.36	0.20	0.06	0.02	12.35	
66.00		401.54	0.22	0.06	0.02	12.25	
68.00		397.73	0.23	0.06	0.02	12.12	
70.00		393.91	0.24	0.06	0.02	11.94	
72.00		390.10	0.26	0.05	0.02	11.70	
74.00		386.29	0.27	0.05	0.01	11.39	
76.00		382.47	0.29	0.05	0.01	11.01	
78.00		378.66	0.30	0.04	0.01	10.53	
80.00		374.85	0.32	0.04	0.01	9.95	
81.00	Top - Section 2	185.99	0.33	0.04	0.01	4.80	
82.00		154.41	0.33	0.04	0.01	3.85	
84.00		306.44	0.35	0.03	0.01	7.02	
85.00	Bot - Section 4	152.03	0.36	0.03	0.01	3.31	

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

86.00		304.57	0.37	0.03	0.01	6.24
88.00		604.38	0.38	0.02	0.01	10.63
90.00		598.02	0.40	0.02	0.01	8.51
91.00	Top - Section 3	296.63	0.41	0.01	0.01	3.67
92.00		148.57	0.42	0.01	0.01	1.55
94.00		294.76	0.44	0.01	0.01	1.84
96.00		291.59	0.46	0.00	0.01	0.52
98.00		288.41	0.48	-0.01	0.01	-0.83
100.00		285.23	0.50	-0.02	0.01	-2.15
102.00		282.05	0.52	-0.02	0.01	-3.41
104.00		278.87	0.54	-0.03	0.01	-4.57
106.00		275.70	0.56	-0.04	0.01	-5.61
108.00		272.52	0.58	-0.05	0.01	-6.50
110.00		269.34	0.60	-0.05	0.01	-7.25
112.00		266.16	0.62	-0.06	0.02	-7.86
114.00		262.98	0.65	-0.07	0.02	-8.32
116.00		259.81	0.67	-0.08	0.02	-8.65
118.00		256.63	0.69	-0.08	0.03	-8.86
120.00		253.45	0.72	-0.09	0.03	-8.97
122.00		250.27	0.74	-0.10	0.04	-8.96
124.00		247.09	0.76	-0.10	0.04	-8.87
126.00		243.91	0.79	-0.11	0.05	-8.69
128.00		240.74	0.81	-0.11	0.06	-8.44
130.00	Bot - Section 5	237.56	0.84	-0.12	0.07	-8.11
132.00		424.92	0.87	-0.12	0.07	-14.00
134.00		419.20	0.89	-0.12	0.08	-13.18
135.00	Top - Section 4	207.46	0.91	-0.12	0.09	-6.35
136.00		92.41	0.92	-0.12	0.09	-2.74
138.00		182.91	0.95	-0.12	0.11	-5.04
140.00		180.37	0.97	-0.12	0.12	-4.55
142.00		177.83	1.00	-0.11	0.13	-4.01
144.00		175.29	1.03	-0.10	0.15	-3.44
146.00		172.74	1.06	-0.09	0.16	-2.84
148.00		170.20	1.09	-0.08	0.18	-2.21
150.00		167.66	1.12	-0.06	0.20	-1.54
152.00		165.12	1.15	-0.04	0.22	-0.85
154.00		162.57	1.18	-0.01	0.24	-0.13
155.00	Appurtenance(s)	3371.4	1.19	0.00	0.25	4.93
156.00		79.70	1.21	0.01	0.26	0.30
158.00		157.49	1.24	0.05	0.29	1.37
160.00		154.95	1.27	0.08	0.31	2.16
162.00		152.40	1.30	0.13	0.34	2.96
164.00		149.86	1.34	0.17	0.37	3.78
165.00	Appurtenance(s)	2480.9	1.35	0.20	0.39	70.08
166.00		73.34	1.37	0.23	0.40	2.30
168.00		144.78	1.40	0.29	0.43	5.46
170.00		142.23	1.44	0.36	0.47	6.32
172.00		139.69	1.47	0.43	0.51	7.19
174.00		137.15	1.50	0.51	0.55	8.07
175.00	Appurtenance(s)	3302.8	1.52	0.56	0.57	206.79
176.00		66.99	1.54	0.60	0.59	4.45
178.00		132.06	1.57	0.70	0.64	9.83
180.00	Top - Section 5	129.52	1.61	0.81	0.68	10.72
182.00		143.97	1.65	0.93	0.73	13.16
184.00		143.97	1.68	1.06	0.79	14.44
186.00		143.97	1.72	1.20	0.84	15.78
188.00		143.97	1.76	1.35	0.90	17.17

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 43	

190.00			143.97	1.79	1.51	0.97	18.60		
192.00			143.97	1.83	1.69	1.03	20.08		
193.00	Appurtenance(s)		421.98	1.85	1.78	1.07	61.09		
194.00			71.98	1.87	1.88	1.10	10.81		
195.00	Appurtenance(s)		3448.7	1.89	1.98	1.14	536.60		
		Totals:	**45,493.8**				**1,432.5**	**Total Wind:**	**38,570.2**

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

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 44	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E

Iterations 28

Gust Response Factor	1.10			**Sds**	0.13			**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.04			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26	**SA**	0.01			**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	-64.01	-1.61	0.00	-239.53	0.00	239.53	4628.91	2314.46	12221.1	6119.66		0.00	0.00	0.053
2.00	-63.28	-1.61	0.00	-236.31	0.00	236.31	4612.68	2306.34	12088.3	6053.16		0.00	0.00	0.053
4.00	-62.55	-1.60	0.00	-233.10	0.00	233.10	4596.18	2298.09	11955.5	5986.64		0.00	-0.01	0.053
6.00	-61.83	-1.60	0.00	-229.89	0.00	229.89	4579.43	2289.71	11822.6	5920.10		0.01	-0.01	0.052
8.00	-61.11	-1.59	0.00	-226.69	0.00	226.69	4562.40	2281.20	11689.7	5853.55		0.01	-0.01	0.052
10.00	-60.39	-1.59	0.00	-223.50	0.00	223.50	4545.12	2272.56	11556.8	5787.00		0.02	-0.02	0.052
12.00	-59.68	-1.58	0.00	-220.32	0.00	220.32	4527.57	2263.79	11423.9	5720.46		0.03	-0.02	0.052
14.00	-58.97	-1.57	0.00	-217.16	0.00	217.16	4509.77	2254.88	11291.0	5653.92		0.04	-0.02	0.051
16.00	-58.27	-1.56	0.00	-214.02	0.00	214.02	4491.69	2245.85	11158.2	5587.41		0.05	-0.03	0.051
18.00	-57.57	-1.56	0.00	-210.89	0.00	210.89	4473.36	2236.68	11025.4	5520.93		0.06	-0.03	0.051
20.00	-56.88	-1.55	0.00	-207.78	0.00	207.78	4454.76	2227.38	10892.7	5454.49		0.07	-0.04	0.051
22.00	-56.19	-1.54	0.00	-204.68	0.00	204.68	4435.90	2217.95	10760.1	5388.08		0.09	-0.04	0.051
24.00	-55.51	-1.53	0.00	-201.61	0.00	201.61	4416.78	2208.39	10627.6	5321.73		0.11	-0.04	0.050
26.00	-54.83	-1.52	0.00	-198.55	0.00	198.55	4397.40	2198.70	10495.2	5255.44		0.13	-0.05	0.050
28.00	-54.15	-1.51	0.00	-195.51	0.00	195.51	4377.75	2188.87	10363.0	5189.22		0.15	-0.05	0.050
30.00	-53.48	-1.50	0.00	-192.49	0.00	192.49	4357.84	2178.92	10230.9	5123.07		0.17	-0.05	0.050
32.00	-52.82	-1.49	0.00	-189.49	0.00	189.49	4337.67	2168.83	10099.0	5057.01		0.19	-0.06	0.050
34.00	-52.16	-1.48	0.00	-186.51	0.00	186.51	4317.23	2158.62	9967.25	4991.03		0.22	-0.06	0.049
36.00	-51.50	-1.47	0.00	-183.54	0.00	183.54	4296.53	2148.27	9835.69	4925.16		0.24	-0.07	0.049
38.00	-50.85	-1.46	0.00	-180.60	0.00	180.60	4275.57	2137.79	9704.34	4859.38		0.27	-0.07	0.049
40.00	-50.20	-1.45	0.00	-177.67	0.00	177.67	4254.35	2127.17	9573.22	4793.73		0.30	-0.07	0.049
41.00	-49.88	-1.45	0.00	-176.22	0.00	176.22	4243.64	2121.82	9507.75	4760.94		0.32	-0.08	0.049
42.00	-49.29	-1.44	0.00	-174.77	0.00	174.77	4232.86	2116.43	9442.34	4728.19		0.33	-0.08	0.049
44.00	-48.12	-1.41	0.00	-171.90	0.00	171.90	4211.11	2105.56	9311.72	4662.78		0.37	-0.08	0.048
46.00	-46.96	-1.39	0.00	-169.07	0.00	169.07	4189.10	2094.55	9181.37	4597.51		0.40	-0.09	0.048
48.00	-45.81	-1.37	0.00	-166.29	0.00	166.29	4202.19	2101.09	9258.62	4636.19		0.44	-0.09	0.047
50.00	-45.18	-1.36	0.00	-163.55	0.00	163.55	4180.07	2090.03	9128.39	4570.98		0.48	-0.10	0.047
52.00	-44.55	-1.35	0.00	-160.83	0.00	160.83	4157.69	2078.84	8998.45	4505.91		0.52	-0.10	0.046
54.00	-43.93	-1.34	0.00	-158.14	0.00	158.14	4135.04	2067.52	8868.82	4441.00		0.56	-0.10	0.046
56.00	-43.31	-1.33	0.00	-155.46	0.00	155.46	4112.14	2056.07	8739.51	4376.25		0.61	-0.11	0.046
58.00	-42.70	-1.32	0.00	-152.81	0.00	152.81	4088.97	2044.48	8610.54	4311.67		0.65	-0.11	0.046
60.00	-42.09	-1.31	0.00	-150.18	0.00	150.18	4065.54	2032.77	8481.93	4247.27		0.70	-0.12	0.046
62.00	-41.48	-1.30	0.00	-147.57	0.00	147.57	4041.84	2020.92	8353.69	4183.06		0.75	-0.12	0.046
64.00	-40.88	-1.28	0.00	-144.98	0.00	144.98	4017.89	2008.94	8225.84	4119.03		0.80	-0.12	0.045
66.00	-40.29	-1.27	0.00	-142.41	0.00	142.41	3993.67	1996.83	8098.39	4055.21		0.85	-0.13	0.045
68.00	-39.70	-1.26	0.00	-139.86	0.00	139.86	3969.18	1984.59	7971.36	3991.60		0.91	-0.13	0.045
70.00	-39.11	-1.25	0.00	-137.33	0.00	137.33	3944.44	1972.22	7844.75	3928.21		0.97	-0.14	0.045
72.00	-38.53	-1.24	0.00	-134.82	0.00	134.82	3919.43	1959.72	7718.60	3865.04		1.03	-0.14	0.045
74.00	-37.96	-1.23	0.00	-132.34	0.00	132.34	3894.16	1947.08	7592.91	3802.10		1.09	-0.15	0.045
76.00	-37.38	-1.22	0.00	-129.87	0.00	129.87	3868.63	1934.31	7467.70	3739.40		1.15	-0.15	0.044
78.00	-36.82	-1.22	0.00	-127.42	0.00	127.42	3842.83	1921.42	7342.98	3676.95		1.21	-0.16	0.044
80.00	-36.25	-1.21	0.00	-124.99	0.00	124.99	3816.78	1908.39	7218.77	3614.75		1.28	-0.16	0.044
81.00	-35.97	-1.20	0.00	-123.78	0.00	123.78	3803.65	1901.82	7156.86	3583.75		1.31	-0.16	0.044
81.00	-35.97	-1.20	0.00	-123.78	0.00	123.78	2964.89	1482.44	5593.90	2801.11		1.31	-0.16	0.056
82.00	-35.73	-1.20	0.00	-122.58	0.00	122.58	2956.04	1478.02	5548.38	2778.31		1.35	-0.17	0.056
84.00	-35.25	-1.19	0.00	-120.18	0.00	120.18	2938.13	1469.07	5457.49	2732.80		1.42	-0.17	0.056
85.00	-35.01	-1.19	0.00	-118.98	0.00	118.98	2929.08	1464.54	5412.12	2710.08		1.46	-0.17	0.056

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 45

86.00	-34.59	-1.19	0.00	-117.79	0.00	117.79	2919.97	1459.98	5366.81	2687.40	1.49	-0.18	0.056
88.00	-33.75	-1.18	0.00	-115.42	0.00	115.42	2901.54	1450.77	5276.37	2642.11	1.57	-0.18	0.055
90.00	-32.92	-1.17	0.00	-113.06	0.00	113.06	2882.85	1441.42	5186.17	2596.94	1.65	-0.19	0.055
91.00	-32.51	-1.17	0.00	-111.89	0.00	111.89	2898.33	1449.17	5260.79	2634.30	1.69	-0.19	0.054
92.00	-32.27	-1.17	0.00	-110.73	0.00	110.73	2889.00	1444.50	5215.68	2611.72	1.73	-0.20	0.054
94.00	-31.81	-1.17	0.00	-108.40	0.00	108.40	2870.13	1435.06	5125.65	2566.64	1.81	-0.20	0.053
96.00	-31.34	-1.17	0.00	-106.06	0.00	106.06	2851.00	1425.50	5035.90	2521.69	1.90	-0.21	0.053
98.00	-30.88	-1.17	0.00	-103.73	0.00	103.73	2831.61	1415.80	4946.44	2476.90	1.98	-0.21	0.053
100.00	-30.43	-1.17	0.00	-101.39	0.00	101.39	2811.95	1405.98	4857.28	2432.25	2.08	-0.22	0.053
102.00	-29.98	-1.17	0.00	-99.05	0.00	99.05	2792.03	1396.02	4768.43	2387.76	2.17	-0.23	0.052
104.00	-29.53	-1.17	0.00	-96.71	0.00	96.71	2771.85	1385.93	4679.92	2343.44	2.26	-0.23	0.052
106.00	-29.09	-1.17	0.00	-94.36	0.00	94.36	2751.41	1375.70	4591.76	2299.29	2.36	-0.24	0.052
108.00	-28.64	-1.18	0.00	-92.02	0.00	92.02	2730.70	1365.35	4503.96	2255.33	2.46	-0.24	0.051
110.00	-28.21	-1.18	0.00	-89.66	0.00	89.66	2709.73	1354.87	4416.54	2211.55	2.57	-0.25	0.051
112.00	-27.78	-1.18	0.00	-87.31	0.00	87.31	2688.50	1344.25	4329.52	2167.98	2.67	-0.26	0.051
114.00	-27.35	-1.18	0.00	-84.95	0.00	84.95	2667.01	1333.50	4242.91	2124.61	2.78	-0.26	0.050
116.00	-26.92	-1.18	0.00	-82.60	0.00	82.60	2645.25	1322.63	4156.72	2081.45	2.90	-0.27	0.050
118.00	-26.50	-1.18	0.00	-80.23	0.00	80.23	2623.23	1311.62	4070.97	2038.51	3.01	-0.28	0.049
120.00	-26.08	-1.18	0.00	-77.87	0.00	77.87	2600.95	1300.48	3985.68	1995.80	3.13	-0.28	0.049
122.00	-25.67	-1.18	0.00	-75.51	0.00	75.51	2578.41	1289.20	3900.86	1953.33	3.25	-0.29	0.049
124.00	-25.26	-1.18	0.00	-73.14	0.00	73.14	2555.60	1277.80	3816.53	1911.10	3.37	-0.30	0.048
126.00	-24.86	-1.19	0.00	-70.77	0.00	70.77	2532.53	1266.26	3732.70	1869.12	3.50	-0.30	0.048
128.00	-24.45	-1.19	0.00	-68.40	0.00	68.40	2509.20	1254.60	3649.39	1827.41	3.63	-0.31	0.047
130.00	-24.05	-1.19	0.00	-66.03	0.00	66.03	2485.60	1242.80	3566.61	1785.96	3.76	-0.32	0.047
132.00	-23.43	-1.19	0.00	-63.65	0.00	63.65	2461.74	1230.87	3484.38	1744.78	3.89	-0.32	0.046
134.00	-22.82	-1.19	0.00	-61.28	0.00	61.28	2437.62	1218.81	3402.71	1703.88	4.03	-0.33	0.045
135.00	-22.51	-1.18	0.00	-60.09	0.00	60.09	1823.78	911.89	2575.19	1289.51	4.10	-0.33	0.059
136.00	-22.34	-1.19	0.00	-58.91	0.00	58.91	1816.04	908.02	2546.55	1275.17	4.17	-0.34	0.059
138.00	-22.01	-1.19	0.00	-56.54	0.00	56.54	1800.35	900.17	2489.45	1246.57	4.31	-0.35	0.058
140.00	-21.68	-1.19	0.00	-54.16	0.00	54.16	1784.40	892.20	2432.60	1218.11	4.46	-0.35	0.057
142.00	-21.35	-1.19	0.00	-51.79	0.00	51.79	1768.19	884.09	2376.03	1189.78	4.61	-0.36	0.056
144.00	-21.03	-1.19	0.00	-49.41	0.00	49.41	1751.71	875.86	2319.73	1161.59	4.76	-0.37	0.055
146.00	-20.71	-1.19	0.00	-47.03	0.00	47.03	1734.98	867.49	2263.74	1133.55	4.92	-0.38	0.053
148.00	-20.39	-1.19	0.00	-44.65	0.00	44.65	1717.98	858.99	2208.06	1105.67	5.08	-0.39	0.052
150.00	-20.08	-1.19	0.00	-42.26	0.00	42.26	1700.71	850.36	2152.72	1077.96	5.25	-0.40	0.051
152.00	-19.77	-1.19	0.00	-39.88	0.00	39.88	1683.19	841.59	2097.72	1050.42	5.41	-0.40	0.050
154.00	-19.46	-1.19	0.00	-37.49	0.00	37.49	1665.40	832.70	2043.08	1023.06	5.59	-0.41	0.048
155.00	-15.36	-1.16	0.00	-36.30	0.00	36.30	1656.41	828.20	2015.90	1009.45	5.67	-0.42	0.045
156.00	-15.22	-1.16	0.00	-35.14	0.00	35.14	1647.35	823.68	1988.82	995.89	5.76	-0.42	0.045
158.00	-14.96	-1.16	0.00	-32.82	0.00	32.82	1629.04	814.52	1934.94	968.91	5.94	-0.43	0.043
160.00	-14.70	-1.16	0.00	-30.50	0.00	30.50	1610.46	805.23	1881.48	942.14	6.12	-0.43	0.041
162.00	-14.44	-1.15	0.00	-28.19	0.00	28.19	1591.62	795.81	1828.44	915.58	6.30	-0.44	0.040
164.00	-14.18	-1.15	0.00	-25.88	0.00	25.88	1572.52	786.26	1775.84	889.24	6.49	-0.45	0.038
165.00	-11.17	-1.06	0.00	-24.73	0.00	24.73	1562.88	781.44	1749.71	876.15	6.58	-0.45	0.035
166.00	-11.06	-1.05	0.00	-23.67	0.00	23.67	1553.16	776.58	1723.69	863.13	6.68	-0.46	0.035
168.00	-10.85	-1.05	0.00	-21.57	0.00	21.57	1533.53	766.77	1672.01	837.25	6.87	-0.46	0.033
170.00	-10.64	-1.04	0.00	-19.47	0.00	19.47	1513.65	756.82	1620.81	811.61	7.06	-0.47	0.031
172.00	-10.43	-1.03	0.00	-17.39	0.00	17.39	1493.49	746.75	1570.12	786.22	7.26	-0.47	0.029
174.00	-10.23	-1.02	0.00	-15.32	0.00	15.32	1473.08	736.54	1519.93	761.10	7.46	-0.48	0.027
175.00	-6.25	-0.78	0.00	-14.30	0.00	14.30	1462.77	731.39	1495.04	748.63	7.56	-0.48	0.023
176.00	-6.16	-0.78	0.00	-13.51	0.00	13.51	1452.40	726.20	1470.28	736.23	7.66	-0.48	0.023
178.00	-5.99	-0.77	0.00	-11.95	0.00	11.95	1427.84	713.92	1417.58	709.84	7.87	-0.49	0.021
180.00	-5.83	-0.76	0.00	-10.41	0.00	10.41	1400.09	700.04	1362.73	682.38	8.07	-0.49	0.019
180.00	-5.83	-0.76	0.00	-10.41	0.00	10.41	1571.64	785.82	1525.71	763.99	8.07	-0.49	0.017
182.00	-5.65	-0.74	0.00	-8.90	0.00	8.90	1571.64	785.82	1525.71	763.99	8.28	-0.50	0.015
184.00	-5.47	-0.73	0.00	-7.41	0.00	7.41	1571.64	785.82	1525.71	763.99	8.49	-0.50	0.013
186.00	-5.28	-0.71	0.00	-5.96	0.00	5.96	1571.64	785.82	1525.71	763.99	8.70	-0.50	0.011

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 46

188.00	-5.10	-0.69	0.00	-4.54	0.00	4.54	1571.64	785.82	1525.71	763.99	8.91	-0.51	0.009
190.00	-4.92	-0.67	0.00	-3.15	0.00	3.15	1571.64	785.82	1525.71	763.99	9.12	-0.51	0.007
192.00	-4.74	-0.65	0.00	-1.81	0.00	1.81	1571.64	785.82	1525.71	763.99	9.34	-0.51	0.005
193.00	-4.23	-0.58	0.00	-1.16	0.00	1.16	1571.64	785.82	1525.71	763.99	9.44	-0.51	0.004
194.00	-4.14	-0.57	0.00	-0.57	0.00	0.57	1571.64	785.82	1525.71	763.99	9.55	-0.51	0.003
195.00	0.00	-0.54	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	9.66	-0.51	0.000

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 47

Load Case:	0.9D + 1.0E							**Iterations**	28
Gust Response Factor	1.10				**Sds**	0.13		**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.04		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26		**SA**	0.01	**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	
2.00		517.51	0.00	0.01	0.01	4.23	
4.00		513.69	0.00	0.02	0.01	6.65	
6.00		509.88	0.00	0.03	0.02	8.26	
8.00		506.07	0.00	0.04	0.02	9.42	
10.00		502.25	0.00	0.04	0.03	10.26	
12.00		498.44	0.01	0.05	0.03	10.88	
14.00		494.62	0.01	0.05	0.03	11.34	
16.00		490.81	0.01	0.06	0.03	11.68	
18.00		487.00	0.02	0.06	0.04	11.92	
20.00		483.18	0.02	0.06	0.04	12.09	
22.00		479.37	0.02	0.07	0.04	12.21	
24.00		475.56	0.03	0.07	0.04	12.28	
26.00		471.74	0.03	0.07	0.04	12.32	
28.00		467.93	0.04	0.07	0.04	12.34	
30.00		464.11	0.04	0.07	0.04	12.35	
32.00		460.30	0.05	0.07	0.04	12.34	
34.00		456.49	0.06	0.07	0.04	12.33	
36.00		452.67	0.06	0.07	0.04	12.32	
38.00		448.86	0.07	0.07	0.04	12.31	
40.00		445.05	0.08	0.07	0.04	12.30	
41.00	Bot - Section 2	221.09	0.08	0.07	0.04	6.13	
42.00		443.32	0.09	0.07	0.04	12.35	
44.00		880.91	0.10	0.07	0.04	24.75	
46.00		873.28	0.11	0.07	0.04	24.75	
48.00	Top - Section 1	865.66	0.11	0.07	0.04	24.76	
50.00		432.05	0.12	0.07	0.03	12.48	
52.00		428.24	0.13	0.07	0.03	12.48	
54.00		424.42	0.14	0.07	0.03	12.49	
56.00		420.61	0.16	0.07	0.03	12.49	
58.00		416.80	0.17	0.07	0.03	12.48	
60.00		412.98	0.18	0.07	0.03	12.46	
62.00		409.17	0.19	0.06	0.02	12.41	
64.00		405.36	0.20	0.06	0.02	12.35	
66.00		401.54	0.22	0.06	0.02	12.25	
68.00		397.73	0.23	0.06	0.02	12.12	
70.00		393.91	0.24	0.06	0.02	11.94	
72.00		390.10	0.26	0.05	0.02	11.70	
74.00		386.29	0.27	0.05	0.01	11.39	
76.00		382.47	0.29	0.05	0.01	11.01	
78.00		378.66	0.30	0.04	0.01	10.53	
80.00		374.85	0.32	0.04	0.01	9.95	
81.00	Top - Section 2	185.99	0.33	0.04	0.01	4.80	
82.00		154.41	0.33	0.04	0.01	3.85	
84.00		306.44	0.35	0.03	0.01	7.02	
85.00	Bot - Section 4	152.03	0.36	0.03	0.01	3.31	

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 48

86.00		304.57	0.37	0.03	0.01	6.24
88.00		604.38	0.38	0.02	0.01	10.63
90.00		598.02	0.40	0.02	0.01	8.51
91.00	Top - Section 3	296.63	0.41	0.01	0.01	3.67
92.00		148.57	0.42	0.01	0.01	1.55
94.00		294.76	0.44	0.01	0.01	1.84
96.00		291.59	0.46	0.00	0.01	0.52
98.00		288.41	0.48	-0.01	0.01	-0.83
100.00		285.23	0.50	-0.02	0.01	-2.15
102.00		282.05	0.52	-0.02	0.01	-3.41
104.00		278.87	0.54	-0.03	0.01	-4.57
106.00		275.70	0.56	-0.04	0.01	-5.61
108.00		272.52	0.58	-0.05	0.01	-6.50
110.00		269.34	0.60	-0.05	0.01	-7.25
112.00		266.16	0.62	-0.06	0.02	-7.86
114.00		262.98	0.65	-0.07	0.02	-8.32
116.00		259.81	0.67	-0.08	0.02	-8.65
118.00		256.63	0.69	-0.08	0.03	-8.86
120.00		253.45	0.72	-0.09	0.03	-8.97
122.00		250.27	0.74	-0.10	0.04	-8.96
124.00		247.09	0.76	-0.10	0.04	-8.87
126.00		243.91	0.79	-0.11	0.05	-8.69
128.00		240.74	0.81	-0.11	0.06	-8.44
130.00	Bot - Section 5	237.56	0.84	-0.12	0.07	-8.11
132.00		424.92	0.87	-0.12	0.07	-14.00
134.00		419.20	0.89	-0.12	0.08	-13.18
135.00	Top - Section 4	207.46	0.91	-0.12	0.09	-6.35
136.00		92.41	0.92	-0.12	0.09	-2.74
138.00		182.91	0.95	-0.12	0.11	-5.04
140.00		180.37	0.97	-0.12	0.12	-4.55
142.00		177.83	1.00	-0.11	0.13	-4.01
144.00		175.29	1.03	-0.10	0.15	-3.44
146.00		172.74	1.06	-0.09	0.16	-2.84
148.00		170.20	1.09	-0.08	0.18	-2.21
150.00		167.66	1.12	-0.06	0.20	-1.54
152.00		165.12	1.15	-0.04	0.22	-0.85
154.00		162.57	1.18	-0.01	0.24	-0.13
155.00	Appurtenance(s)	3371.4	1.19	0.00	0.25	4.93
156.00		79.70	1.21	0.01	0.26	0.30
158.00		157.49	1.24	0.05	0.29	1.37
160.00		154.95	1.27	0.08	0.31	2.16
162.00		152.40	1.30	0.13	0.34	2.96
164.00		149.86	1.34	0.17	0.37	3.78
165.00	Appurtenance(s)	2480.9	1.35	0.20	0.39	70.08
166.00		73.34	1.37	0.23	0.40	2.30
168.00		144.78	1.40	0.29	0.43	5.46
170.00		142.23	1.44	0.36	0.47	6.32
172.00		139.69	1.47	0.43	0.51	7.19
174.00		137.15	1.50	0.51	0.55	8.07
175.00	Appurtenance(s)	3302.8	1.52	0.56	0.57	206.79
176.00		66.99	1.54	0.60	0.59	4.45
178.00		132.06	1.57	0.70	0.64	9.83
180.00	Top - Section 5	129.52	1.61	0.81	0.68	10.72
182.00		143.97	1.65	0.93	0.73	13.16
184.00		143.97	1.68	1.06	0.79	14.44
186.00		143.97	1.72	1.20	0.84	15.78
188.00		143.97	1.76	1.35	0.90	17.17

Seismic Segment Forces (Factored)

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 49	

190.00			143.97	1.79	1.51	0.97	18.60		
192.00			143.97	1.83	1.69	1.03	20.08		
193.00	Appurtenance(s)		421.98	1.85	1.78	1.07	61.09		
194.00			71.98	1.87	1.88	1.10	10.81		
195.00	Appurtenance(s)		3448.7	1.89	1.98	1.14	536.60		
		Totals:	**45,493.8**				**1,432.5**	**Total Wind:**	**38,570.2**

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

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 50	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E

Iterations 28

Gust Response Factor	1.10			**Sds**	0.13			**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.04			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26	**SA**	0.01			**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	-48.01	-1.61	0.00	-234.98	0.00	234.98	4628.91	2314.46	12221.1	6119.66		0.00	0.00	0.049
2.00	-47.46	-1.61	0.00	-231.77	0.00	231.77	4612.68	2306.34	12088.3	6053.16		0.00	0.00	0.049
4.00	-46.91	-1.60	0.00	-228.55	0.00	228.55	4596.18	2298.09	11955.5	5986.64		0.00	-0.01	0.048
6.00	-46.37	-1.60	0.00	-225.35	0.00	225.35	4579.43	2289.71	11822.6	5920.10		0.01	-0.01	0.048
8.00	-45.83	-1.59	0.00	-222.15	0.00	222.15	4562.40	2281.20	11689.7	5853.55		0.01	-0.01	0.048
10.00	-45.29	-1.58	0.00	-218.97	0.00	218.97	4545.12	2272.56	11556.8	5787.00		0.02	-0.02	0.048
12.00	-44.76	-1.57	0.00	-215.81	0.00	215.81	4527.57	2263.79	11423.9	5720.46		0.03	-0.02	0.048
14.00	-44.23	-1.57	0.00	-212.66	0.00	212.66	4509.77	2254.88	11291.0	5653.92		0.04	-0.02	0.047
16.00	-43.70	-1.56	0.00	-209.53	0.00	209.53	4491.69	2245.85	11158.2	5587.41		0.05	-0.03	0.047
18.00	-43.18	-1.55	0.00	-206.41	0.00	206.41	4473.36	2236.68	11025.4	5520.93		0.06	-0.03	0.047
20.00	-42.66	-1.54	0.00	-203.32	0.00	203.32	4454.76	2227.38	10892.7	5454.49		0.07	-0.03	0.047
22.00	-42.14	-1.53	0.00	-200.24	0.00	200.24	4435.90	2217.95	10760.1	5388.08		0.09	-0.04	0.047
24.00	-41.63	-1.52	0.00	-197.19	0.00	197.19	4416.78	2208.39	10627.6	5321.73		0.10	-0.04	0.046
26.00	-41.12	-1.51	0.00	-194.15	0.00	194.15	4397.40	2198.70	10495.2	5255.44		0.12	-0.05	0.046
28.00	-40.61	-1.50	0.00	-191.14	0.00	191.14	4377.75	2188.87	10363.0	5189.22		0.14	-0.05	0.046
30.00	-40.11	-1.49	0.00	-188.15	0.00	188.15	4357.84	2178.92	10230.9	5123.07		0.16	-0.05	0.046
32.00	-39.61	-1.48	0.00	-185.17	0.00	185.17	4337.67	2168.83	10099.0	5057.01		0.19	-0.06	0.046
34.00	-39.12	-1.47	0.00	-182.22	0.00	182.22	4317.23	2158.62	9967.25	4991.03		0.21	-0.06	0.046
36.00	-38.62	-1.46	0.00	-179.28	0.00	179.28	4296.53	2148.27	9835.69	4925.16		0.24	-0.06	0.045
38.00	-38.14	-1.45	0.00	-176.37	0.00	176.37	4275.57	2137.79	9704.34	4859.38		0.27	-0.07	0.045
40.00	-37.65	-1.44	0.00	-173.48	0.00	173.48	4254.35	2127.17	9573.22	4793.73		0.30	-0.07	0.045
41.00	-37.41	-1.43	0.00	-172.04	0.00	172.04	4243.64	2121.82	9507.75	4760.94		0.31	-0.07	0.045
42.00	-36.97	-1.42	0.00	-170.61	0.00	170.61	4232.86	2116.43	9442.34	4728.19		0.33	-0.08	0.045
44.00	-36.09	-1.40	0.00	-167.77	0.00	167.77	4211.11	2105.56	9311.72	4662.78		0.36	-0.08	0.045
46.00	-35.22	-1.37	0.00	-164.98	0.00	164.98	4189.10	2094.55	9181.37	4597.51		0.40	-0.08	0.044
48.00	-34.36	-1.35	0.00	-162.24	0.00	162.24	4202.19	2101.09	9258.62	4636.19		0.43	-0.09	0.043
50.00	-33.88	-1.34	0.00	-159.54	0.00	159.54	4180.07	2090.03	9128.39	4570.98		0.47	-0.09	0.043
52.00	-33.41	-1.33	0.00	-156.86	0.00	156.86	4157.69	2078.84	8998.45	4505.91		0.51	-0.10	0.043
54.00	-32.94	-1.32	0.00	-154.21	0.00	154.21	4135.04	2067.52	8868.82	4441.00		0.55	-0.10	0.043
56.00	-32.48	-1.31	0.00	-151.58	0.00	151.58	4112.14	2056.07	8739.51	4376.25		0.59	-0.11	0.043
58.00	-32.02	-1.29	0.00	-148.97	0.00	148.97	4088.97	2044.48	8610.54	4311.67		0.64	-0.11	0.042
60.00	-31.57	-1.28	0.00	-146.38	0.00	146.38	4065.54	2032.77	8481.93	4247.27		0.69	-0.11	0.042
62.00	-31.11	-1.27	0.00	-143.82	0.00	143.82	4041.84	2020.92	8353.69	4183.06		0.73	-0.12	0.042
64.00	-30.66	-1.26	0.00	-141.27	0.00	141.27	4017.89	2008.94	8225.84	4119.03		0.78	-0.12	0.042
66.00	-30.22	-1.25	0.00	-138.75	0.00	138.75	3993.67	1996.83	8098.39	4055.21		0.84	-0.13	0.042
68.00	-29.77	-1.24	0.00	-136.25	0.00	136.25	3969.18	1984.59	7971.36	3991.60		0.89	-0.13	0.042
70.00	-29.33	-1.23	0.00	-133.77	0.00	133.77	3944.44	1972.22	7844.75	3928.21		0.95	-0.13	0.041
72.00	-28.90	-1.22	0.00	-131.31	0.00	131.31	3919.43	1959.72	7718.60	3865.04		1.00	-0.14	0.041
74.00	-28.47	-1.21	0.00	-128.88	0.00	128.88	3894.16	1947.08	7592.91	3802.10		1.06	-0.14	0.041
76.00	-28.04	-1.20	0.00	-126.46	0.00	126.46	3868.63	1934.31	7467.70	3739.40		1.12	-0.15	0.041
78.00	-27.61	-1.19	0.00	-124.07	0.00	124.07	3842.83	1921.42	7342.98	3676.95		1.19	-0.15	0.041
80.00	-27.19	-1.18	0.00	-121.69	0.00	121.69	3816.78	1908.39	7218.77	3614.75		1.25	-0.16	0.041
81.00	-26.98	-1.17	0.00	-120.51	0.00	120.51	3803.65	1901.82	7156.86	3583.75		1.28	-0.16	0.041
81.00	-26.98	-1.17	0.00	-120.51	0.00	120.51	2964.89	1482.44	5593.90	2801.11		1.28	-0.16	0.052
82.00	-26.80	-1.17	0.00	-119.34	0.00	119.34	2956.04	1478.02	5548.38	2778.31		1.32	-0.16	0.052
84.00	-26.44	-1.17	0.00	-116.99	0.00	116.99	2938.13	1469.07	5457.49	2732.80		1.39	-0.17	0.052
85.00	-26.26	-1.16	0.00	-115.83	0.00	115.83	2929.08	1464.54	5412.12	2710.08		1.42	-0.17	0.052

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 51	

86.00	-25.94	-1.16	0.00	-114.66	0.00	114.66	2919.97	1459.98	5366.81	2687.40	1.46	-0.17	0.052
88.00	-25.31	-1.15	0.00	-112.35	0.00	112.35	2901.54	1450.77	5276.37	2642.11	1.53	-0.18	0.051
90.00	-24.69	-1.14	0.00	-110.05	0.00	110.05	2882.85	1441.42	5186.17	2596.94	1.61	-0.19	0.051
91.00	-24.38	-1.14	0.00	-108.91	0.00	108.91	2898.33	1449.17	5260.79	2634.30	1.65	-0.19	0.050
92.00	-24.20	-1.14	0.00	-107.77	0.00	107.77	2889.00	1444.50	5215.68	2611.72	1.69	-0.19	0.050
94.00	-23.85	-1.14	0.00	-105.50	0.00	105.50	2870.13	1435.06	5125.65	2566.64	1.77	-0.20	0.049
96.00	-23.51	-1.14	0.00	-103.23	0.00	103.23	2851.00	1425.50	5035.90	2521.69	1.85	-0.20	0.049
98.00	-23.16	-1.14	0.00	-100.96	0.00	100.96	2831.61	1415.80	4946.44	2476.90	1.94	-0.21	0.049
100.00	-22.82	-1.14	0.00	-98.68	0.00	98.68	2811.95	1405.98	4857.28	2432.25	2.03	-0.21	0.049
102.00	-22.48	-1.14	0.00	-96.40	0.00	96.40	2792.03	1396.02	4768.43	2387.76	2.12	-0.22	0.048
104.00	-22.15	-1.14	0.00	-94.12	0.00	94.12	2771.85	1385.93	4679.92	2343.44	2.21	-0.23	0.048
106.00	-21.81	-1.14	0.00	-91.84	0.00	91.84	2751.41	1375.70	4591.76	2299.29	2.31	-0.23	0.048
108.00	-21.48	-1.14	0.00	-89.56	0.00	89.56	2730.70	1365.35	4503.96	2255.33	2.41	-0.24	0.048
110.00	-21.16	-1.14	0.00	-87.27	0.00	87.27	2709.73	1354.87	4416.54	2211.55	2.51	-0.24	0.047
112.00	-20.83	-1.14	0.00	-84.99	0.00	84.99	2688.50	1344.25	4329.52	2167.98	2.61	-0.25	0.047
114.00	-20.51	-1.15	0.00	-82.70	0.00	82.70	2667.01	1333.50	4242.91	2124.61	2.72	-0.26	0.047
116.00	-20.19	-1.15	0.00	-80.41	0.00	80.41	2645.25	1322.63	4156.72	2081.45	2.83	-0.26	0.046
118.00	-19.87	-1.15	0.00	-78.11	0.00	78.11	2623.23	1311.62	4070.97	2038.51	2.94	-0.27	0.046
120.00	-19.56	-1.15	0.00	-75.82	0.00	75.82	2600.95	1300.48	3985.68	1995.80	3.05	-0.28	0.046
122.00	-19.25	-1.15	0.00	-73.52	0.00	73.52	2578.41	1289.20	3900.86	1953.33	3.17	-0.28	0.045
124.00	-18.94	-1.15	0.00	-71.23	0.00	71.23	2555.60	1277.80	3816.53	1911.10	3.29	-0.29	0.045
126.00	-18.64	-1.15	0.00	-68.93	0.00	68.93	2532.53	1266.26	3732.70	1869.12	3.41	-0.30	0.044
128.00	-18.34	-1.15	0.00	-66.63	0.00	66.63	2509.20	1254.60	3649.39	1827.41	3.54	-0.30	0.044
130.00	-18.04	-1.15	0.00	-64.33	0.00	64.33	2485.60	1242.80	3566.61	1785.96	3.67	-0.31	0.043
132.00	-17.57	-1.15	0.00	-62.03	0.00	62.03	2461.74	1230.87	3484.38	1744.78	3.80	-0.32	0.043
134.00	-17.11	-1.15	0.00	-59.72	0.00	59.72	2437.62	1218.81	3402.71	1703.88	3.93	-0.32	0.042
135.00	-16.88	-1.15	0.00	-58.58	0.00	58.58	1823.78	911.89	2575.19	1289.51	4.00	-0.33	0.055
136.00	-16.76	-1.15	0.00	-57.43	0.00	57.43	1816.04	908.02	2546.55	1275.17	4.07	-0.33	0.054
138.00	-16.51	-1.15	0.00	-55.13	0.00	55.13	1800.35	900.17	2489.45	1246.57	4.21	-0.34	0.053
140.00	-16.26	-1.15	0.00	-52.82	0.00	52.82	1784.40	892.20	2432.60	1218.11	4.35	-0.35	0.052
142.00	-16.01	-1.15	0.00	-50.52	0.00	50.52	1768.19	884.09	2376.03	1189.78	4.50	-0.35	0.052
144.00	-15.77	-1.15	0.00	-48.21	0.00	48.21	1751.71	875.86	2319.73	1161.59	4.65	-0.36	0.051
146.00	-15.53	-1.15	0.00	-45.91	0.00	45.91	1734.98	867.49	2263.74	1133.55	4.80	-0.37	0.049
148.00	-15.29	-1.15	0.00	-43.60	0.00	43.60	1717.98	858.99	2208.06	1105.67	4.96	-0.38	0.048
150.00	-15.06	-1.16	0.00	-41.29	0.00	41.29	1700.71	850.36	2152.72	1077.96	5.12	-0.39	0.047
152.00	-14.82	-1.16	0.00	-38.98	0.00	38.98	1683.19	841.59	2097.72	1050.42	5.28	-0.39	0.046
154.00	-14.59	-1.16	0.00	-36.67	0.00	36.67	1665.40	832.70	2043.08	1023.06	5.45	-0.40	0.045
155.00	-11.52	-1.13	0.00	-35.51	0.00	35.51	1656.41	828.20	2015.90	1009.45	5.54	-0.41	0.042
156.00	-11.42	-1.13	0.00	-34.38	0.00	34.38	1647.35	823.68	1988.82	995.89	5.62	-0.41	0.041
158.00	-11.22	-1.13	0.00	-32.12	0.00	32.12	1629.04	814.52	1934.94	968.91	5.79	-0.42	0.040
160.00	-11.02	-1.13	0.00	-29.86	0.00	29.86	1610.46	805.23	1881.48	942.14	5.97	-0.42	0.039
162.00	-10.83	-1.12	0.00	-27.61	0.00	27.61	1591.62	795.81	1828.44	915.58	6.15	-0.43	0.037
164.00	-10.64	-1.12	0.00	-25.36	0.00	25.36	1572.52	786.26	1775.84	889.24	6.33	-0.44	0.035
165.00	-8.38	-1.03	0.00	-24.24	0.00	24.24	1562.88	781.44	1749.71	876.15	6.42	-0.44	0.033
166.00	-8.29	-1.03	0.00	-23.21	0.00	23.21	1553.16	776.58	1723.69	863.13	6.52	-0.44	0.032
168.00	-8.14	-1.02	0.00	-21.15	0.00	21.15	1533.53	766.77	1672.01	837.25	6.70	-0.45	0.031
170.00	-7.98	-1.02	0.00	-19.10	0.00	19.10	1513.65	756.82	1620.81	811.61	6.89	-0.46	0.029
172.00	-7.82	-1.01	0.00	-17.07	0.00	17.07	1493.49	746.75	1570.12	786.22	7.09	-0.46	0.027
174.00	-7.67	-1.00	0.00	-15.05	0.00	15.05	1473.08	736.54	1519.93	761.10	7.28	-0.47	0.025
175.00	-4.68	-0.77	0.00	-14.04	0.00	14.04	1462.77	731.39	1495.04	748.63	7.38	-0.47	0.022
176.00	-4.62	-0.77	0.00	-13.27	0.00	13.27	1452.40	726.20	1470.28	736.23	7.48	-0.47	0.021
178.00	-4.49	-0.76	0.00	-11.74	0.00	11.74	1427.84	713.92	1417.58	709.84	7.68	-0.48	0.020
180.00	-4.37	-0.74	0.00	-10.23	0.00	10.23	1400.09	700.04	1362.73	682.38	7.88	-0.48	0.018
180.00	-4.37	-0.74	0.00	-10.23	0.00	10.23	1571.64	785.82	1525.71	763.99	7.88	-0.48	0.016
182.00	-4.23	-0.73	0.00	-8.74	0.00	8.74	1571.64	785.82	1525.71	763.99	8.08	-0.49	0.014
184.00	-4.10	-0.71	0.00	-7.28	0.00	7.28	1571.64	785.82	1525.71	763.99	8.29	-0.49	0.012
186.00	-3.96	-0.70	0.00	-5.85	0.00	5.85	1571.64	785.82	1525.71	763.99	8.49	-0.49	0.010

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 52

188.00	-3.83	-0.68	0.00	-4.46	0.00	4.46	1571.64	785.82	1525.71	763.99	8.70	-0.49	0.008
190.00	-3.69	-0.66	0.00	-3.10	0.00	3.10	1571.64	785.82	1525.71	763.99	8.90	-0.50	0.006
192.00	-3.55	-0.64	0.00	-1.78	0.00	1.78	1571.64	785.82	1525.71	763.99	9.11	-0.50	0.005
193.00	-3.17	-0.57	0.00	-1.14	0.00	1.14	1571.64	785.82	1525.71	763.99	9.22	-0.50	0.004
194.00	-3.10	-0.56	0.00	-0.56	0.00	0.56	1571.64	785.82	1525.71	763.99	9.32	-0.50	0.003
195.00	0.00	-0.54	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	9.42	-0.50	0.000

Wind Loading - Shaft

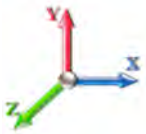
Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 53	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 30

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	0.85	7.442	8.19	301.92	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	299.71	0.650	0.000	2.00	10.876	7.07	57.9	0.0	517.5
4.00		1.00	0.85	7.442	8.19	297.51	0.650	0.000	2.00	10.796	7.02	57.4	0.0	513.7
6.00		1.00	0.85	7.442	8.19	295.31	0.650	0.000	2.00	10.717	6.97	57.0	0.0	509.9
8.00		1.00	0.85	7.442	8.19	293.10	0.650	0.000	2.00	10.637	6.91	56.6	0.0	506.1
10.00		1.00	0.85	7.442	8.19	290.90	0.650	0.000	2.00	10.557	6.86	56.2	0.0	502.3
12.00		1.00	0.85	7.442	8.19	288.69	0.650	0.000	2.00	10.478	6.81	55.8	0.0	498.4
14.00		1.00	0.85	7.442	8.19	286.49	0.650	0.000	2.00	10.398	6.76	55.3	0.0	494.6
16.00		1.00	0.86	7.534	8.29	286.04	0.650	0.000	2.00	10.318	6.71	55.6	0.0	490.8
18.00		1.00	0.88	7.723	8.50	287.36	0.650	0.000	2.00	10.239	6.66	56.5	0.0	487.0
20.00		1.00	0.90	7.896	8.69	288.29	0.650	0.000	2.00	10.159	6.60	57.4	0.0	483.2
22.00		1.00	0.92	8.056	8.86	288.91	0.650	0.000	2.00	10.079	6.55	58.1	0.0	479.4
24.00		1.00	0.94	8.205	9.03	289.25	0.650	0.000	2.00	9.999	6.50	58.7	0.0	475.6
26.00		1.00	0.95	8.345	9.18	289.37	0.650	0.000	2.00	9.920	6.45	59.2	0.0	471.7
28.00		1.00	0.97	8.476	9.32	289.28	0.650	0.000	2.00	9.840	6.40	59.6	0.0	467.9
30.00		1.00	0.98	8.600	9.46	289.02	0.650	0.000	2.00	9.760	6.34	60.0	0.0	464.1
32.00		1.00	1.00	8.717	9.59	288.60	0.650	0.000	2.00	9.681	6.29	60.3	0.0	460.3
34.00		1.00	1.01	8.829	9.71	288.05	0.650	0.000	2.00	9.601	6.24	60.6	0.0	456.5
36.00		1.00	1.02	8.936	9.83	287.37	0.650	0.000	2.00	9.521	6.19	60.8	0.0	452.7
38.00		1.00	1.03	9.039	9.94	286.58	0.650	0.000	2.00	9.442	6.14	61.0	0.0	448.9
40.00		1.00	1.04	9.137	10.05	285.69	0.650	0.000	2.00	9.362	6.09	61.2	0.0	445.0
41.00	Bot - Section 2	1.00	1.05	9.184	10.10	285.21	0.650	0.000	1.00	4.651	3.02	30.5	0.0	221.1
42.00		1.00	1.05	9.231	10.15	284.71	0.650	0.000	1.00	4.695	3.05	31.0	0.0	443.3
44.00		1.00	1.06	9.322	10.25	283.64	0.650	0.000	2.00	9.330	6.06	62.2	0.0	880.9
46.00		1.00	1.07	9.410	10.35	282.49	0.650	0.000	2.00	9.250	6.01	62.2	0.0	873.3
48.00	Top - Section 1	1.00	1.08	9.494	10.44	281.27	0.650	0.000	2.00	9.170	5.96	62.3	0.0	865.7
50.00		1.00	1.09	9.576	10.53	283.97	0.650	0.000	2.00	9.091	5.91	62.2	0.0	432.1
52.00		1.00	1.10	9.656	10.62	282.63	0.650	0.000	2.00	9.011	5.86	62.2	0.0	428.2
54.00		1.00	1.11	9.733	10.71	281.24	0.650	0.000	2.00	8.931	5.81	62.2	0.0	424.4
56.00		1.00	1.12	9.807	10.79	279.78	0.650	0.000	2.00	8.851	5.75	62.1	0.0	420.6
58.00		1.00	1.13	9.880	10.87	278.28	0.650	0.000	2.00	8.772	5.70	62.0	0.0	416.8
60.00		1.00	1.14	9.951	10.95	276.73	0.650	0.000	2.00	8.692	5.65	61.8	0.0	413.0
62.00		1.00	1.14	10.020	11.02	275.13	0.650	0.000	2.00	8.612	5.60	61.7	0.0	409.2
64.00		1.00	1.15	10.087	11.10	273.48	0.650	0.000	2.00	8.533	5.55	61.5	0.0	405.4
66.00		1.00	1.16	10.153	11.17	271.79	0.650	0.000	2.00	8.453	5.49	61.4	0.0	401.5
68.00		1.00	1.17	10.217	11.24	270.07	0.650	0.000	2.00	8.373	5.44	61.2	0.0	397.7
70.00		1.00	1.17	10.279	11.31	268.30	0.650	0.000	2.00	8.294	5.39	61.0	0.0	393.9
72.00		1.00	1.18	10.340	11.37	266.50	0.650	0.000	2.00	8.214	5.34	60.7	0.0	390.1
74.00		1.00	1.19	10.400	11.44	264.67	0.650	0.000	2.00	8.134	5.29	60.5	0.0	386.3
76.00		1.00	1.19	10.459	11.50	262.80	0.650	0.000	2.00	8.055	5.24	60.2	0.0	382.5
78.00		1.00	1.20	10.516	11.57	260.90	0.650	0.000	2.00	7.975	5.18	60.0	0.0	378.7
80.00		1.00	1.21	10.572	11.63	258.97	0.650	0.000	2.00	7.895	5.13	59.7	0.0	374.8
81.00	Top - Section 2	1.00	1.21	10.600	11.66	257.99	0.650	0.000	1.00	3.918	2.55	29.7	0.0	186.0
82.00		1.00	1.21	10.627	11.69	257.01	0.650	0.000	1.00	3.898	2.53	29.6	0.0	154.4
84.00		1.00	1.22	10.681	11.75	255.02	0.650	0.000	2.00	7.736	5.03	59.1	0.0	306.4
85.00	Bot - Section 4	1.00	1.22	10.708	11.78	254.01	0.650	0.000	1.00	3.838	2.49	29.4	0.0	152.0
86.00		1.00	1.23	10.734	11.81	253.00	0.650	0.000	1.00	3.871	2.52	29.7	0.0	304.6

Wind Loading - Shaft

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 54

88.00		1.00	1.23	10.787	11.87	250.96	0.650	0.000	2.00	7.682	4.99	59.2	0.0	604.4
90.00		1.00	1.24	10.838	11.92	248.90	0.650	0.000	2.00	7.603	4.94	58.9	0.0	598.0
91.00	Top - Section 3	1.00	1.24	10.863	11.95	247.86	0.650	0.000	1.00	3.771	2.45	29.3	0.0	296.6
92.00		1.00	1.24	10.888	11.98	250.35	0.650	0.000	1.00	3.752	2.44	29.2	0.0	148.6
94.00		1.00	1.25	10.937	12.03	248.24	0.650	0.000	2.00	7.443	4.84	58.2	0.0	294.8
96.00		1.00	1.25	10.986	12.08	246.12	0.650	0.000	2.00	7.364	4.79	57.8	0.0	291.6
98.00		1.00	1.26	11.034	12.14	243.97	0.650	0.000	2.00	7.284	4.73	57.5	0.0	288.4
100.00		1.00	1.27	11.081	12.19	241.80	0.650	0.000	2.00	7.204	4.68	57.1	0.0	285.2
102.00		1.00	1.27	11.127	12.24	239.61	0.650	0.000	2.00	7.125	4.63	56.7	0.0	282.1
104.00		1.00	1.28	11.173	12.29	237.40	0.650	0.000	2.00	7.045	4.58	56.3	0.0	278.9
106.00		1.00	1.28	11.218	12.34	235.17	0.650	0.000	2.00	6.965	4.53	55.9	0.0	275.7
108.00		1.00	1.29	11.262	12.39	232.92	0.650	0.000	2.00	6.886	4.48	55.4	0.0	272.5
110.00		1.00	1.29	11.305	12.44	230.65	0.650	0.000	2.00	6.806	4.42	55.0	0.0	269.3
112.00		1.00	1.30	11.348	12.48	228.37	0.650	0.000	2.00	6.726	4.37	54.6	0.0	266.2
114.00		1.00	1.30	11.391	12.53	226.07	0.650	0.000	2.00	6.646	4.32	54.1	0.0	263.0
116.00		1.00	1.31	11.432	12.58	223.75	0.650	0.000	2.00	6.567	4.27	53.7	0.0	259.8
118.00		1.00	1.31	11.474	12.62	221.42	0.650	0.000	2.00	6.487	4.22	53.2	0.0	256.6
120.00		1.00	1.32	11.514	12.67	219.07	0.650	0.000	2.00	6.407	4.16	52.8	0.0	253.4
122.00		1.00	1.32	11.554	12.71	216.70	0.650	0.000	2.00	6.328	4.11	52.3	0.0	250.3
124.00		1.00	1.32	11.594	12.75	214.32	0.650	0.000	2.00	6.248	4.06	51.8	0.0	247.1
126.00		1.00	1.33	11.633	12.80	211.93	0.650	0.000	2.00	6.168	4.01	51.3	0.0	243.9
128.00		1.00	1.33	11.672	12.84	209.52	0.650	0.000	2.00	6.089	3.96	50.8	0.0	240.7
130.00	Bot - Section 5	1.00	1.34	11.710	12.88	207.10	0.650	0.000	2.00	6.009	3.91	50.3	0.0	237.6
132.00		1.00	1.34	11.748	12.92	204.66	0.650	0.000	2.00	6.014	3.91	50.5	0.0	424.9
134.00		1.00	1.35	11.785	12.96	202.21	0.650	0.000	2.00	5.934	3.86	50.0	0.0	419.2
135.00	Top - Section 4	1.00	1.35	11.803	12.98	200.99	0.650	0.000	1.00	2.937	1.91	24.8	0.0	207.5
136.00		1.00	1.35	11.822	13.00	202.70	0.650	0.000	1.00	2.917	1.90	24.7	0.0	92.4
138.00		1.00	1.35	11.858	13.04	200.23	0.650	0.000	2.00	5.775	3.75	49.0	0.0	182.9
140.00		1.00	1.36	11.894	13.08	197.75	0.650	0.000	2.00	5.695	3.70	48.4	0.0	180.4
142.00		1.00	1.36	11.930	13.12	195.25	0.650	0.000	2.00	5.616	3.65	47.9	0.0	177.8
144.00		1.00	1.37	11.965	13.16	192.75	0.650	0.000	2.00	5.536	3.60	47.4	0.0	175.3
146.00		1.00	1.37	12.000	13.20	190.23	0.650	0.000	2.00	5.456	3.55	46.8	0.0	172.7
148.00		1.00	1.37	12.034	13.24	187.70	0.650	0.000	2.00	5.376	3.49	46.3	0.0	170.2
150.00		1.00	1.38	12.068	13.27	185.16	0.650	0.000	2.00	5.297	3.44	45.7	0.0	167.7
152.00		1.00	1.38	12.102	13.31	182.61	0.650	0.000	2.00	5.217	3.39	45.1	0.0	165.1
154.00		1.00	1.39	12.135	13.35	180.04	0.650	0.000	2.00	5.137	3.34	44.6	0.0	162.6
155.00	Appurtenance(s)	1.00	1.39	12.152	13.37	178.76	0.650	0.000	1.00	2.539	1.65	22.1	0.0	80.3
156.00		1.00	1.39	12.168	13.39	177.47	0.650	0.000	1.00	2.519	1.64	21.9	0.0	79.7
158.00		1.00	1.39	12.201	13.42	174.89	0.650	0.000	2.00	4.978	3.24	43.4	0.0	157.5
160.00		1.00	1.40	12.233	13.46	172.29	0.650	0.000	2.00	4.898	3.18	42.8	0.0	154.9
162.00		1.00	1.40	12.265	13.49	169.69	0.650	0.000	2.00	4.819	3.13	42.3	0.0	152.4
164.00		1.00	1.40	12.297	13.53	167.07	0.650	0.000	2.00	4.739	3.08	41.7	0.0	149.9
165.00	Appurtenance(s)	1.00	1.41	12.313	13.54	165.76	0.650	0.000	1.00	2.340	1.52	20.6	0.0	74.0
166.00		1.00	1.41	12.328	13.56	164.45	0.650	0.000	1.00	2.320	1.51	20.4	0.0	73.3
168.00		1.00	1.41	12.360	13.60	161.82	0.650	0.000	2.00	4.580	2.98	40.5	0.0	144.8
170.00		1.00	1.42	12.390	13.63	159.18	0.650	0.000	2.00	4.500	2.92	39.9	0.0	142.2
172.00		1.00	1.42	12.421	13.66	156.52	0.650	0.000	2.00	4.420	2.87	39.3	0.0	139.7
174.00		1.00	1.42	12.451	13.70	153.86	0.650	0.000	2.00	4.341	2.82	38.6	0.0	137.1
175.00	Appurtenance(s)	1.00	1.42	12.466	13.71	152.53	0.650	0.000	1.00	2.140	1.39	19.1	0.0	67.6
176.00		1.00	1.43	12.481	13.73	151.20	0.650	0.000	1.00	2.120	1.38	18.9	0.0	67.0
178.00		1.00	1.43	12.511	13.76	148.52	0.650	0.000	2.00	4.181	2.72	37.4	0.0	132.1
180.00	Top - Section 5	1.00	1.43	12.540	13.79	145.83	0.650	0.000	2.00	4.102	2.67	36.8	0.0	129.5
182.00		1.00	1.44	12.570	13.83	146.00	0.650	0.000	2.00	4.062	2.64	36.5	0.0	144.0
184.00		1.00	1.44	12.599	13.86	146.17	0.650	0.000	2.00	4.062	2.64	36.6	0.0	144.0
186.00		1.00	1.44	12.627	13.89	146.34	0.650	0.000	2.00	4.062	2.64	36.7	0.0	144.0
188.00		1.00	1.45	12.656	13.92	146.50	0.650	0.000	2.00	4.062	2.64	36.8	0.0	144.0
190.00		1.00	1.45	12.684	13.95	146.66	0.650	0.000	2.00	4.062	2.64	36.8	0.0	144.0

Wind Loading - Shaft

Structure: CT01501-S-SBA | **Code:** EIA/TIA-222-G | 9/7/2021

Site Name: Morris | **Exposure:** C

Height: 195.00 (ft) | **Crest Height:** 0.00

Base Elev: 0.000 (ft) | **Site Class:** B - Competent Rock

Gh: 1.1 | **Topography:** 1 | **Struct Class:** II | Page: 55

192.00		1.00	1.45	12.712	13.98	146.83	0.650	0.000	2.00	4.062	2.64	36.9	0.0	144.0
193.00	Appurtenance(s)	1.00	1.45	12.726	14.00	146.91	0.650	0.000	1.00	2.031	1.32	18.5	0.0	72.0
194.00		1.00	1.46	12.740	14.01	146.99	0.650	0.000	1.00	2.031	1.32	18.5	0.0	72.0
195.00	Appurtenance(s)	1.00	1.46	12.753	14.03	147.07	0.650	0.000	1.00	2.031	1.32	18.5	0.0	72.0
								Totals:	**195.00**			**5,155.1**		**32,833.6**

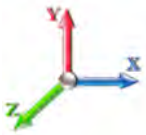
Discrete Appurtenance Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 56	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 30

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	195.00	Modified Platform + HR &	1	12.753	14.029	1.00	1.00	51.70	2246.00	0.000	0.000	725.29	0.00	0.00
2	195.00	TD-RRH8x20-25	3	12.753	14.029	0.38	0.75	4.56	210.00	0.000	0.000	63.92	0.00	0.00
3	195.00	Commscope DT465B-2XR	3	12.753	14.029	0.62	0.75	16.99	174.00	0.000	0.000	238.41	0.00	0.00
4	195.00	800 Mhz Filter	3	12.753	14.029	0.52	0.75	0.77	30.00	0.000	0.000	10.83	0.00	0.00
5	195.00	1900MHz RRH	3	12.753	14.029	0.50	0.75	5.73	132.00	0.000	0.000	80.36	0.00	0.00
6	195.00	ACU-A20-N	4	12.753	14.029	0.50	0.75	0.28	4.00	0.000	0.000	3.95	0.00	0.00
7	195.00	800 Mhz	6	12.753	14.029	0.50	0.75	10.43	409.80	0.000	0.000	146.35	0.00	0.00
8	195.00	APXVSPP18-C-A20	3	12.753	14.029	0.62	0.75	14.98	171.00	0.000	0.000	210.11	0.00	0.00
9	193.00	Collar Mount	1	12.726	13.998	1.00	1.00	5.00	350.00	0.000	0.000	69.99	0.00	0.00
10	175.00	Commscope	3	12.466	13.713	0.53	0.75	3.13	158.70	0.000	0.000	42.88	0.00	0.00
11	175.00	RFS DB-C1-12C-24AB-0Z	1	12.466	13.713	0.75	0.75	3.04	32.00	0.000	0.000	41.76	0.00	0.00
12	175.00	HRK14	1	12.466	13.713	1.00	1.00	8.13	504.00	0.000	0.000	111.49	0.00	0.00
13	175.00	Samsung B2/B66A	3	12.466	13.713	0.50	0.75	2.82	253.20	0.000	0.000	38.66	0.00	0.00
14	175.00	Samsung B5/B13	3	12.466	13.713	0.50	0.75	2.82	210.90	0.000	0.000	38.66	0.00	0.00
15	175.00	Samsung MT6407-77A	3	12.466	13.713	0.52	0.75	7.39	238.20	0.000	0.000	101.29	0.00	0.00
16	175.00	Commscope	6	12.466	13.713	0.64	0.75	31.25	262.20	0.000	0.000	428.53	0.00	0.00
17	175.00	Commscope	3	12.466	13.713	1.00	1.00	0.00	76.05	0.000	0.000	0.00	0.00	0.00
18	175.00	Low Profile Platform	1	12.466	13.713	1.00	1.00	22.00	1500.00	0.000	0.000	301.68	0.00	0.00
19	165.00	Low Profile Platform	1	12.313	13.544	1.00	1.00	22.00	1500.00	0.000	0.000	297.97	0.00	0.00
20	165.00	DC6-48-60-18-8F	1	12.313	13.544	1.00	1.00	0.92	31.80	0.000	0.000	12.46	0.00	0.00
21	165.00	ABT-DF-DMADBH	1	12.313	13.544	1.00	1.00	0.05	1.10	0.000	0.000	0.68	0.00	0.00
22	165.00	AM-X-CD-16-65-00T-RET	1	12.313	13.544	0.72	0.80	5.77	48.50	0.000	0.000	78.21	0.00	0.00
23	165.00	RRUS-11	6	12.313	13.544	0.57	0.80	8.59	306.00	0.000	0.000	116.32	0.00	0.00
24	165.00	LGP2140X TMA	12	12.313	13.544	0.54	0.80	8.36	228.00	0.000	0.000	113.25	0.00	0.00
25	165.00	7770.00	6	12.313	13.544	0.58	0.80	19.27	210.00	0.000	0.000	261.02	0.00	0.00
26	165.00	800 10764	2	12.313	13.544	0.72	0.80	8.47	81.60	0.000	0.000	114.68	0.00	0.00
27	155.00	KRY 112 144/1	3	12.152	13.367	0.52	0.75	0.65	33.00	0.000	0.000	8.63	0.00	0.00
28	155.00	Low Profile Platform	1	12.152	13.367	1.00	1.00	22.00	1500.00	0.000	0.000	294.07	0.00	0.00
29	155.00	Ericsson AIR6449 B41	3	12.152	13.367	0.53	0.75	9.03	309.00	0.000	0.000	120.65	0.00	0.00
30	155.00	S20057A1	3	12.152	13.367	0.55	0.75	1.35	33.00	0.000	0.000	18.00	0.00	0.00
31	155.00	782 11056	3	12.152	13.367	0.65	0.75	0.55	15.90	0.000	0.000	7.33	0.00	0.00
32	155.00	Ericsson 4424 B25	3	12.152	13.367	0.50	0.75	3.09	264.00	0.000	0.000	41.31	0.00	0.00
33	155.00	RFS	3	12.152	13.367	0.50	0.75	9.96	122.10	0.000	0.000	133.20	0.00	0.00
34	155.00	RFS	3	12.152	13.367	0.52	0.75	31.88	384.00	0.000	0.000	426.11	0.00	0.00
35	155.00	Ericsson 4449 B71 + B85	3	12.152	13.367	0.50	0.75	2.97	219.60	0.000	0.000	39.70	0.00	0.00
36	155.00	Ericsson 4415 B66A	3	12.152	13.367	0.50	0.75	2.80	148.80	0.000	0.000	37.48	0.00	0.00
37	155.00	HRK12 (Handrail Kit)	1	12.152	13.367	1.00	1.00	7.75	261.72	0.000	0.000	103.59	0.00	0.00
							Totals:		**12,660.17**			**4,878.80**		

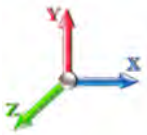
Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 57

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 30

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
2.00		57.87	611.68	0.00	0.00
4.00		57.45	607.87	0.00	0.00
6.00		57.02	604.05	0.00	0.00
8.00		56.60	600.24	0.00	0.00
10.00		56.17	596.42	0.00	0.00
12.00		55.75	592.61	0.00	0.00
14.00		55.33	588.80	0.00	0.00
16.00		55.58	584.98	0.00	0.00
18.00		56.54	581.17	0.00	0.00
20.00		57.35	577.36	0.00	0.00
22.00		58.06	573.54	0.00	0.00
24.00		58.66	569.73	0.00	0.00
26.00		59.19	565.91	0.00	0.00
28.00		59.63	562.10	0.00	0.00
30.00		60.02	558.29	0.00	0.00
32.00		60.34	554.47	0.00	0.00
34.00		60.61	550.66	0.00	0.00
36.00		60.84	546.85	0.00	0.00
38.00		61.02	543.03	0.00	0.00
40.00		61.16	539.22	0.00	0.00
41.00		30.54	268.18	0.00	0.00
42.00		30.99	490.40	0.00	0.00
44.00		62.18	975.08	0.00	0.00
46.00		62.23	967.46	0.00	0.00
48.00		62.25	959.83	0.00	0.00
50.00		62.24	526.22	0.00	0.00
52.00		62.21	522.41	0.00	0.00
54.00		62.15	518.60	0.00	0.00
56.00		62.07	514.78	0.00	0.00
58.00		61.97	510.97	0.00	0.00
60.00		61.84	507.15	0.00	0.00
62.00		61.70	503.34	0.00	0.00
64.00		61.54	499.53	0.00	0.00
66.00		61.36	495.71	0.00	0.00
68.00		61.17	491.90	0.00	0.00
70.00		60.96	488.09	0.00	0.00
72.00		60.73	484.27	0.00	0.00
74.00		60.49	480.46	0.00	0.00
76.00		60.23	476.64	0.00	0.00
78.00		59.96	472.83	0.00	0.00
80.00		59.68	469.02	0.00	0.00
81.00		29.69	233.08	0.00	0.00
82.00		29.62	201.50	0.00	0.00
84.00		59.08	400.61	0.00	0.00
85.00		29.39	199.11	0.00	0.00
86.00		29.71	351.66	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 58

88.00		59.25	698.55	0.00	0.00
90.00		58.91	692.20	0.00	0.00
91.00		29.29	343.71	0.00	0.00
92.00		29.21	195.66	0.00	0.00
94.00		58.21	388.94	0.00	0.00
96.00		57.84	385.76	0.00	0.00
98.00		57.46	382.58	0.00	0.00
100.00		57.08	379.40	0.00	0.00
102.00		56.68	376.22	0.00	0.00
104.00		56.28	373.05	0.00	0.00
106.00		55.86	369.87	0.00	0.00
108.00		55.44	366.69	0.00	0.00
110.00		55.01	363.51	0.00	0.00
112.00		54.58	360.33	0.00	0.00
114.00		54.13	357.16	0.00	0.00
116.00		53.68	353.98	0.00	0.00
118.00		53.22	350.80	0.00	0.00
120.00		52.75	347.62	0.00	0.00
122.00		52.28	344.44	0.00	0.00
124.00		51.79	341.26	0.00	0.00
126.00		51.31	338.09	0.00	0.00
128.00		50.81	334.91	0.00	0.00
130.00		50.31	331.73	0.00	0.00
132.00		50.51	519.09	0.00	0.00
134.00		50.00	513.37	0.00	0.00
135.00		24.79	254.54	0.00	0.00
136.00		24.66	139.50	0.00	0.00
138.00		48.96	277.09	0.00	0.00
140.00		48.43	274.54	0.00	0.00
142.00		47.90	272.00	0.00	0.00
144.00		47.36	269.46	0.00	0.00
146.00		46.81	266.92	0.00	0.00
148.00		46.26	264.37	0.00	0.00
150.00		45.70	261.83	0.00	0.00
152.00		45.14	259.29	0.00	0.00
154.00		44.58	256.75	0.00	0.00
155.00	(29) attachments	1252.13	3418.54	0.00	0.00
156.00		21.92	111.02	0.00	0.00
158.00		43.43	220.14	0.00	0.00
160.00		42.84	217.60	0.00	0.00
162.00		42.26	215.06	0.00	0.00
164.00		41.67	212.51	0.00	0.00
165.00	(30) attachments	1015.18	2512.30	0.00	0.00
166.00		20.45	89.70	0.00	0.00
168.00		40.47	177.49	0.00	0.00
170.00		39.87	174.95	0.00	0.00
172.00		39.26	172.40	0.00	0.00
174.00		38.64	169.86	0.00	0.00
175.00	(24) attachments	1124.01	3319.23	0.00	0.00
176.00		18.92	70.80	0.00	0.00
178.00		37.40	139.70	0.00	0.00
180.00		36.78	137.15	0.00	0.00
182.00		36.50	151.60	0.00	0.00
184.00		36.59	151.60	0.00	0.00
186.00		36.67	151.60	0.00	0.00
188.00		36.75	151.60	0.00	0.00
190.00		36.84	151.60	0.00	0.00

Total Applied Force Summary

Structure:	CT01501-S-SBA		**Code:**	EIA/TIA-222-G	9/7/2021
Site Name:	Morris		**Exposure:**	C	
Height:	195.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 59

192.00		36.92	151.60	0.00	0.00
193.00	(1) attachments	88.47	425.80	0.00	0.00
194.00		18.50	75.80	0.00	0.00
195.00	(26) attachments	1497.74	3452.60	0.00	0.00
	Totals:	**10,033.87**	**53,345.24**	**0.00**	**0.00**

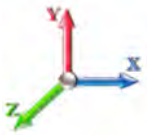
Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 60	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 30

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	-53.34	-10.04	0.00	-1392.5	0.00	1392.54	4628.91	2314.46	12221.1	6119.66	0.00	0.000	0.000	0.239
2.00	-52.73	-10.00	0.00	-1372.4	0.00	1372.46	4612.68	2306.34	12088.3	6053.16	0.00	-0.020	0.000	0.238
4.00	-52.12	-9.96	0.00	-1352.4	0.00	1352.46	4596.18	2298.09	11955.5	5986.64	0.02	-0.040	0.000	0.237
6.00	-51.51	-9.92	0.00	-1332.5	0.00	1332.54	4579.43	2289.71	11822.6	5920.10	0.04	-0.060	0.000	0.236
8.00	-50.91	-9.88	0.00	-1312.6	0.00	1312.69	4562.40	2281.20	11689.7	5853.55	0.07	-0.080	0.000	0.235
10.00	-50.31	-9.84	0.00	-1292.9	0.00	1292.93	4545.12	2272.56	11556.8	5787.00	0.11	-0.101	0.000	0.235
12.00	-49.71	-9.80	0.00	-1273.2	0.00	1273.24	4527.57	2263.79	11423.9	5720.46	0.15	-0.121	0.000	0.234
14.00	-49.12	-9.77	0.00	-1253.6	0.00	1253.63	4509.77	2254.88	11291.0	5653.92	0.21	-0.142	0.000	0.233
16.00	-48.53	-9.73	0.00	-1234.1	0.00	1234.10	4491.69	2245.85	11158.2	5587.41	0.27	-0.163	0.000	0.232
18.00	-47.94	-9.69	0.00	-1214.6	0.00	1214.65	4473.36	2236.68	11025.4	5520.93	0.35	-0.184	0.000	0.231
20.00	-47.36	-9.64	0.00	-1195.2	0.00	1195.28	4454.76	2227.38	10892.7	5454.49	0.43	-0.205	0.000	0.230
22.00	-46.79	-9.60	0.00	-1175.9	0.00	1175.99	4435.90	2217.95	10760.1	5388.08	0.52	-0.227	0.000	0.229
24.00	-46.21	-9.56	0.00	-1156.7	0.00	1156.78	4416.78	2208.39	10627.6	5321.73	0.62	-0.248	0.000	0.228
26.00	-45.64	-9.51	0.00	-1137.6	0.00	1137.67	4397.40	2198.70	10495.2	5255.44	0.73	-0.270	0.000	0.227
28.00	-45.08	-9.47	0.00	-1118.6	0.00	1118.64	4377.75	2188.87	10363.0	5189.22	0.84	-0.292	0.000	0.226
30.00	-44.52	-9.42	0.00	-1099.7	0.00	1099.70	4357.84	2178.92	10230.9	5123.07	0.97	-0.314	0.000	0.225
32.00	-43.96	-9.38	0.00	-1080.8	0.00	1080.86	4337.67	2168.83	10099.0	5057.01	1.11	-0.336	0.000	0.224
34.00	-43.41	-9.33	0.00	-1062.1	0.00	1062.11	4317.23	2158.62	9967.25	4991.03	1.25	-0.358	0.000	0.223
36.00	-42.86	-9.28	0.00	-1043.4	0.00	1043.45	4296.53	2148.27	9835.69	4925.16	1.41	-0.381	0.000	0.222
38.00	-42.31	-9.23	0.00	-1024.8	0.00	1024.88	4275.57	2137.79	9704.34	4859.38	1.57	-0.404	0.000	0.221
40.00	-41.77	-9.18	0.00	-1006.4	0.00	1006.42	4254.35	2127.17	9573.22	4793.73	1.75	-0.427	0.000	0.220
41.00	-41.50	-9.16	0.00	-997.24	0.00	997.24	4243.64	2121.82	9507.75	4760.94	1.84	-0.438	0.000	0.219
42.00	-41.01	-9.14	0.00	-988.08	0.00	988.08	4232.86	2116.43	9442.34	4728.19	1.93	-0.450	0.000	0.219
44.00	-40.03	-9.08	0.00	-969.81	0.00	969.81	4211.11	2105.56	9311.72	4662.78	2.12	-0.473	0.000	0.218
46.00	-39.06	-9.03	0.00	-951.65	0.00	951.65	4189.10	2094.55	9181.37	4597.51	2.33	-0.496	0.000	0.216
48.00	-38.09	-8.97	0.00	-933.59	0.00	933.59	4202.19	2101.09	9258.62	4636.19	2.54	-0.520	0.000	0.210
50.00	-37.56	-8.92	0.00	-915.65	0.00	915.65	4180.07	2090.03	9128.39	4570.98	2.76	-0.544	0.000	0.209
52.00	-37.04	-8.87	0.00	-897.81	0.00	897.81	4157.69	2078.84	8998.45	4505.91	3.00	-0.567	0.000	0.208
54.00	-36.52	-8.82	0.00	-880.07	0.00	880.07	4135.04	2067.52	8868.82	4441.00	3.24	-0.590	0.000	0.207
56.00	-36.00	-8.76	0.00	-862.44	0.00	862.44	4112.14	2056.07	8739.51	4376.25	3.49	-0.613	0.000	0.206
58.00	-35.49	-8.71	0.00	-844.92	0.00	844.92	4088.97	2044.48	8610.54	4311.67	3.75	-0.636	0.000	0.205
60.00	-34.98	-8.66	0.00	-827.50	0.00	827.50	4065.54	2032.77	8481.93	4247.27	4.02	-0.660	0.000	0.203
62.00	-34.47	-8.60	0.00	-810.19	0.00	810.19	4041.84	2020.92	8353.69	4183.06	4.31	-0.683	0.000	0.202
64.00	-33.97	-8.55	0.00	-792.99	0.00	792.99	4017.89	2008.94	8225.84	4119.03	4.60	-0.707	0.000	0.201
66.00	-33.47	-8.50	0.00	-775.89	0.00	775.89	3993.67	1996.83	8098.39	4055.21	4.90	-0.731	0.000	0.200
68.00	-32.97	-8.44	0.00	-758.90	0.00	758.90	3969.18	1984.59	7971.36	3991.60	5.21	-0.756	0.000	0.198
70.00	-32.48	-8.39	0.00	-742.01	0.00	742.01	3944.44	1972.22	7844.75	3928.21	5.53	-0.780	0.000	0.197
72.00	-32.00	-8.34	0.00	-725.23	0.00	725.23	3919.43	1959.72	7718.60	3865.04	5.86	-0.804	0.000	0.196
74.00	-31.51	-8.28	0.00	-708.56	0.00	708.56	3894.16	1947.08	7592.91	3802.10	6.21	-0.829	0.000	0.194
76.00	-31.03	-8.23	0.00	-692.00	0.00	692.00	3868.63	1934.31	7467.70	3739.40	6.56	-0.854	0.000	0.193
78.00	-30.56	-8.17	0.00	-675.55	0.00	675.55	3842.83	1921.42	7342.98	3676.95	6.92	-0.879	0.000	0.192
80.00	-30.09	-8.12	0.00	-659.20	0.00	659.20	3816.78	1908.39	7218.77	3614.75	7.30	-0.904	0.000	0.190
81.00	-29.85	-8.09	0.00	-651.08	0.00	651.08	3803.65	1901.82	7156.86	3583.75	7.49	-0.917	0.000	0.190
81.00	-29.85	-8.09	0.00	-651.08	0.00	651.08	2964.89	1482.44	5593.90	2801.11	7.49	-0.917	0.000	0.243
82.00	-29.65	-8.07	0.00	-642.99	0.00	642.99	2956.04	1478.02	5548.38	2778.31	7.68	-0.929	0.000	0.241
84.00	-29.25	-8.01	0.00	-626.86	0.00	626.86	2938.13	1469.07	5457.49	2732.80	8.08	-0.960	0.000	0.239
85.00	-29.05	-7.99	0.00	-618.84	0.00	618.84	2929.08	1464.54	5412.12	2710.08	8.28	-0.975	0.000	0.238
86.00	-28.69	-7.97	0.00	-610.85	0.00	610.85	2919.97	1459.98	5366.81	2687.40	8.48	-0.990	0.000	0.237

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 61

88.00	-27.99	-7.91	0.00	-594.92	0.00	594.92	2901.54	1450.77	5276.37	2642.11	8.91	-1.021	0.000	0.235
90.00	-27.30	-7.85	0.00	-579.11	0.00	579.11	2882.85	1441.42	5186.17	2596.94	9.34	-1.052	0.000	0.232
91.00	-26.95	-7.82	0.00	-571.26	0.00	571.26	2898.33	1449.17	5260.79	2634.30	9.56	-1.067	0.000	0.226
92.00	-26.75	-7.80	0.00	-563.44	0.00	563.44	2889.00	1444.50	5215.68	2611.72	9.79	-1.083	0.000	0.225
94.00	-26.36	-7.75	0.00	-547.84	0.00	547.84	2870.13	1435.06	5125.65	2566.64	10.25	-1.113	0.000	0.223
96.00	-25.97	-7.69	0.00	-532.35	0.00	532.35	2851.00	1425.50	5035.90	2521.69	10.72	-1.143	0.000	0.220
98.00	-25.59	-7.64	0.00	-516.96	0.00	516.96	2831.61	1415.80	4946.44	2476.90	11.21	-1.173	0.000	0.218
100.00	-25.20	-7.59	0.00	-501.68	0.00	501.68	2811.95	1405.98	4857.28	2432.25	11.70	-1.203	0.000	0.215
102.00	-24.83	-7.54	0.00	-486.50	0.00	486.50	2792.03	1396.02	4768.43	2387.76	12.21	-1.233	0.000	0.213
104.00	-24.45	-7.49	0.00	-471.42	0.00	471.42	2771.85	1385.93	4679.92	2343.44	12.74	-1.264	0.000	0.210
106.00	-24.08	-7.44	0.00	-456.44	0.00	456.44	2751.41	1375.70	4591.76	2299.29	13.27	-1.294	0.000	0.207
108.00	-23.71	-7.39	0.00	-441.57	0.00	441.57	2730.70	1365.35	4503.96	2255.33	13.82	-1.324	0.000	0.205
110.00	-23.34	-7.33	0.00	-426.80	0.00	426.80	2709.73	1354.87	4416.54	2211.55	14.38	-1.355	0.000	0.202
112.00	-22.98	-7.28	0.00	-412.13	0.00	412.13	2688.50	1344.25	4329.52	2167.98	14.96	-1.385	0.000	0.199
114.00	-22.62	-7.23	0.00	-397.57	0.00	397.57	2667.01	1333.50	4242.91	2124.61	15.54	-1.416	0.000	0.196
116.00	-22.26	-7.18	0.00	-383.10	0.00	383.10	2645.25	1322.63	4156.72	2081.45	16.14	-1.446	0.000	0.193
118.00	-21.91	-7.13	0.00	-368.74	0.00	368.74	2623.23	1311.62	4070.97	2038.51	16.76	-1.477	0.000	0.189
120.00	-21.56	-7.08	0.00	-354.48	0.00	354.48	2600.95	1300.48	3985.68	1995.80	17.38	-1.507	0.000	0.186
122.00	-21.21	-7.03	0.00	-340.31	0.00	340.31	2578.41	1289.20	3900.86	1953.33	18.02	-1.538	0.000	0.182
124.00	-20.87	-6.98	0.00	-326.25	0.00	326.25	2555.60	1277.80	3816.53	1911.10	18.67	-1.568	0.000	0.179
126.00	-20.53	-6.93	0.00	-312.29	0.00	312.29	2532.53	1266.26	3732.70	1869.12	19.33	-1.598	0.000	0.175
128.00	-20.19	-6.88	0.00	-298.43	0.00	298.43	2509.20	1254.60	3649.39	1827.41	20.01	-1.628	0.000	0.171
130.00	-19.86	-6.83	0.00	-284.66	0.00	284.66	2485.60	1242.80	3566.61	1785.96	20.70	-1.658	0.000	0.167
132.00	-19.34	-6.78	0.00	-271.00	0.00	271.00	2461.74	1230.87	3484.38	1744.78	21.40	-1.687	0.000	0.163
134.00	-18.82	-6.72	0.00	-257.45	0.00	257.45	2437.62	1218.81	3402.71	1703.88	22.11	-1.717	0.000	0.159
135.00	-18.57	-6.69	0.00	-250.73	0.00	250.73	1823.78	911.89	2575.19	1289.51	22.47	-1.731	0.000	0.205
136.00	-18.43	-6.67	0.00	-244.04	0.00	244.04	1816.04	908.02	2546.55	1275.17	22.84	-1.746	0.000	0.202
138.00	-18.15	-6.62	0.00	-230.70	0.00	230.70	1800.35	900.17	2489.45	1246.57	23.58	-1.780	0.000	0.195
140.00	-17.87	-6.58	0.00	-217.45	0.00	217.45	1784.40	892.20	2432.60	1218.11	24.33	-1.813	0.000	0.189
142.00	-17.60	-6.53	0.00	-204.30	0.00	204.30	1768.19	884.09	2376.03	1189.78	25.10	-1.846	0.000	0.182
144.00	-17.33	-6.48	0.00	-191.24	0.00	191.24	1751.71	875.86	2319.73	1161.59	25.88	-1.878	0.000	0.175
146.00	-17.06	-6.44	0.00	-178.28	0.00	178.28	1734.98	867.49	2263.74	1133.55	26.67	-1.910	0.000	0.167
148.00	-16.79	-6.39	0.00	-165.40	0.00	165.40	1717.98	858.99	2208.06	1105.67	27.48	-1.940	0.000	0.159
150.00	-16.53	-6.34	0.00	-152.62	0.00	152.62	1700.71	850.36	2152.72	1077.96	28.30	-1.969	0.000	0.151
152.00	-16.27	-6.30	0.00	-139.93	0.00	139.93	1683.19	841.59	2097.72	1050.42	29.13	-1.998	0.000	0.143
154.00	-16.01	-6.25	0.00	-127.34	0.00	127.34	1665.40	832.70	2043.08	1023.06	29.97	-2.025	0.000	0.134
155.00	-12.64	-4.88	0.00	-121.09	0.00	121.09	1656.41	828.20	2015.90	1009.45	30.40	-2.038	0.000	0.128
156.00	-12.53	-4.86	0.00	-116.21	0.00	116.21	1647.35	823.68	1988.82	995.89	30.82	-2.051	0.000	0.124
158.00	-12.31	-4.81	0.00	-106.49	0.00	106.49	1629.04	814.52	1934.94	968.91	31.69	-2.076	0.000	0.117
160.00	-12.09	-4.77	0.00	-96.86	0.00	96.86	1610.46	805.23	1881.48	942.14	32.56	-2.100	0.000	0.110
162.00	-11.87	-4.72	0.00	-87.33	0.00	87.33	1591.62	795.81	1828.44	915.58	33.45	-2.123	0.000	0.103
164.00	-11.66	-4.68	0.00	-77.88	0.00	77.88	1572.52	786.26	1775.84	889.24	34.34	-2.144	0.000	0.095
165.00	-9.19	-3.57	0.00	-73.21	0.00	73.21	1562.88	781.44	1749.71	876.15	34.79	-2.154	0.000	0.089
166.00	-9.10	-3.55	0.00	-69.64	0.00	69.64	1553.16	776.58	1723.69	863.13	35.24	-2.164	0.000	0.087
168.00	-8.92	-3.50	0.00	-62.55	0.00	62.55	1533.53	766.77	1672.01	837.25	36.16	-2.183	0.000	0.081
170.00	-8.75	-3.46	0.00	-55.54	0.00	55.54	1513.65	756.82	1620.81	811.61	37.07	-2.201	0.000	0.074
172.00	-8.57	-3.42	0.00	-48.62	0.00	48.62	1493.49	746.75	1570.12	786.22	38.00	-2.218	0.000	0.068
174.00	-8.41	-3.37	0.00	-41.79	0.00	41.79	1473.08	736.54	1519.93	761.10	38.93	-2.233	0.000	0.061
175.00	-5.13	-2.12	0.00	-38.42	0.00	38.42	1462.77	731.39	1495.04	748.63	39.40	-2.240	0.000	0.055
176.00	-5.06	-2.10	0.00	-36.30	0.00	36.30	1452.40	726.20	1470.28	736.23	39.87	-2.247	0.000	0.053
178.00	-4.92	-2.06	0.00	-32.10	0.00	32.10	1427.84	713.92	1417.58	709.84	40.81	-2.260	0.000	0.049
180.00	-4.79	-2.02	0.00	-27.99	0.00	27.99	1400.09	700.04	1362.73	682.38	41.76	-2.272	0.000	0.044
180.00	-4.79	-2.02	0.00	-27.99	0.00	27.99	1571.64	785.82	1525.71	763.99	41.76	-2.272	0.000	0.040
182.00	-4.64	-1.97	0.00	-23.96	0.00	23.96	1571.64	785.82	1525.71	763.99	42.72	-2.283	0.000	0.034
184.00	-4.49	-1.93	0.00	-20.01	0.00	20.01	1571.64	785.82	1525.71	763.99	43.67	-2.291	0.000	0.029
186.00	-4.34	-1.89	0.00	-16.14	0.00	16.14	1571.64	785.82	1525.71	763.99	44.64	-2.298	0.000	0.024
188.00	-4.19	-1.85	0.00	-12.36	0.00	12.36	1571.64	785.82	1525.71	763.99	45.60	-2.303	0.000	0.019

Calculated Forces

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 62	

190.00	-4.04	-1.81	0.00	-8.67	0.00	8.67	1571.64	785.82	1525.71	763.99	46.56	-2.307	0.000	0.014
192.00	-3.89	-1.76	0.00	-5.06	0.00	5.06	1571.64	785.82	1525.71	763.99	47.53	-2.310	0.000	0.009
193.00	-3.46	-1.66	0.00	-3.29	0.00	3.29	1571.64	785.82	1525.71	763.99	48.02	-2.311	0.000	0.007
194.00	-3.39	-1.64	0.00	-1.64	0.00	1.64	1571.64	785.82	1525.71	763.99	48.50	-2.311	0.000	0.004
195.00	0.00	-1.50	0.00	0.00	0.00	0.00	1571.64	785.82	1525.71	763.99	48.98	-2.311	0.000	0.000

Final Analysis Summary

Structure:	CT01501-S-SBA	**Code:**	EIA/TIA-222-G	9/7/2021	
Site Name:	Morris	**Exposure:**	C		
Height:	195.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 63	

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 + 1.6 93 mph Wind	38.6	0.00	63.99	0.00	0.00	5401.37
0.9D + 1.6W 93 mph Wind	38.6	0.00	47.98	0.00	0.00	5307.59
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.2	0.00	95.65	0.00	0.00	1725.77
1.2D + 1.0E	1.6	0.00	64.01	0.00	0.00	239.53
0.9D + 1.0E	1.6	0.00	48.01	0.00	0.00	234.98
1.0D + 1.0W 60 mph Wind	10.0	0.00	53.34	0.00	0.00	1392.54

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 + 1.6 93 mph Wind	-34.07	-31.45	0.00	-2532.9	0.00	-2532.9	3803.65	1901.8	7156.86	3583.75	81.00	0.916
0.9D + 1.6W 93 mph Wind	-25.14	-30.85	0.00	-2467.8	0.00	-2467.8	3803.65	1901.8	7156.86	3583.75	81.00	0.890
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-58.87	-10.04	0.00	-814.80	0.00	-814.80	3803.65	1901.8	7156.86	3583.75	81.00	0.311
1.2D + 1.0E	-22.51	-1.18	0.00	-60.09	0.00	-60.09	1823.78	911.89	2575.19	1289.51	135.00	0.059
0.9D + 1.0E	-16.88	-1.15	0.00	-58.58	0.00	-58.58	1823.78	911.89	2575.19	1289.51	135.00	0.055
1.0D + 1.0W 60 mph Wind	-29.85	-8.09	0.00	-651.08	0.00	-651.08	3803.65	1901.8	7156.86	3583.75	81.00	0.243

EXHIBIT 8

Tower Modification Drawings

PER THE INTERNATIONAL BUILDING CODE THIS STRUCTURE IS CLASSIFIED AS:

1. CONSTRUCTION TYPE II-B (TABLE 601)
2. GROUP U OCCUPANCY (SECTION 312.1 UNOCCUPIED TOWER SITE)

MODIFICATION AND DESIGN DRAWINGS FOR AN EXISTING 195' NUDD CORPORATION MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE

SITE: CT01501-S-SBA / MORRIS

COORDINATES (LATITUDE: 41.667219°, LONGITUDE: -73.170516°)

CONSTRUCTION CLASS

THE RIGGING PLAN FOR THIS SITE WOULD BE A MINIMUM OF A CLASS IV AND THE CONTRACTOR SHALL MAKE FINAL DETERMINATION

PLEASE NOTE THIS SET OF DRAWINGS IS FOR INSTALLATION AND ASSEMBLY ONLY. FABRICATION DETAIL DRAWINGS ARE NOT PROVIDED AND MUST BE COMPLETED BY THE STEEL FABRICATOR SELECTED. TES CAN PROVIDE THE FABRICATION DETAIL DRAWINGS FOR AN ADDITIONAL FEE.

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE TES PROJECT NO. 110746, DATED 07/06/21.

SHEET	SHEET TITLE	REV
T-1	TITLE SHEET	0
BOM	BILL OF MATERIALS	0
GN-1	GENERAL NOTES	0
A-1	TOWER PROFILE	0
A-2	REINFORCEMENT ASSEMBLY	0
FND-1	FOUNDATION MODIFICATION DETAILS	0
FND-2	DOWELS AND L-SHAPE REBAR LAYOUT	0
RBL-1	REBAR CHART	0

TES
Tower Engineering Solutions
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PHONE: (972) 483-0607

SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
111743

CUSTOMER SITE NO:
CT01501-S-SBA

CUSTOMER SITE NAME:
MORRIS

310 WATERTOWN ROAD
BETHLEHEM, CT 06763

STATE OF CONNECTICUT
JARRYD TIBBETTS
No. 34170
LICENSED
PROFESSIONAL ENGINEER
9/7/21

DRAWN BY: JRL | CHECKED BY: CZ/AD

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: T-1

REV #: 0

BILL OF MATERIALS

QUANTITY COUNTED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTIONS	LENGTH	SHEET LIST (INSTALLATION)	SHEET LIST (FABRICATE)	PIECE WEIGHT (LBS)	WEIGHT (LB)	NOTES
			MATERIAL & HARDWARE						
			Following Items are Non-standard Parts						
9	9	H-1	L 5" X 5" X 1/2" X 1'-0" A36	---	A-2	F-1	16.4	147.6	Galvanized
18	20	---	BOLT 1" X 2 3/4" A490	---	A-2	---	1.36	27.2	(1) HHN & LKW-EA
1	1	SCBRK-1	L 3 1/2" X 3" X 3/8" X 3" A36	---	A-2	F-1	2.1	2.1	Galvanized
1	2	HB16-1	LINDAPTER 5/8" TYPE HB HOLLO-BOLT (HCF)	---	A-2	---	---	---	Galvanized
3	3	---	GROUND ROD 5/8" X 10'-0" & #2 A.W.G. SOLID BARE TINNED COPPER CONDUCTOR-WIRE LENGTH X 20 FT EA	---	FND-1	---	---	---	
		---	SEE SHEETS FND-1, FND-2 AND RBL-1 FOR ALL REBAR REQUIREMENTS	---	ND-1,FND-2, RBL-	---	---	---	PROVIDED BY CONTRACTOR
17	17	---	LANCO /HENRY 287 WHITE ACRYLIC ELASTOMERIC COATING AND SEALER OR EQUIV (GALLON)	---	A-1	---	---	---	PROVIDED BY CONTRACTOR
			ALL APLXXXX, LPXXXX AND RLPXXXX ARE PATENTED PRODUCTS AND CANNOT BE FABRICATED BY THIRD PARTIES. THESE PARTS ARE AVAILABLE FROM: **METROSITE, LLC.** **180 IND PARK BLVD COMMERCE, GA 30529** **OFFICE: (706) 335-7045** **FAX: (706) 335-7056**						
			NOTE: ALL MATERIALS, WHICH WEREN'T LISTED IN THIS SHEET, ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.						
						TOTAL WEIGHT (LBS) =		**176.9**	

Tower Engineering Solutions
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
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SBA
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BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
111743

CUSTOMER SITE NO:
CT01501-S-SBA
CUSTOMER SITE NAME:
MORRIS
310 WATERTOWN ROAD
BETHLEHEM, CT 06763

DRAWN BY: JRL | CHECKED BY: CZ/AD

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV #: 0

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-G, ANSI/ASSP A10.48, 2018 CONNECTICUT STATE BUILDING CODE AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
2. ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER ANSI/ASSP A10.48, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
4. CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
5. THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
6. GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.

FABRICATION

1. ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
2. ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E70XX UNLESS NOTED OTHERWISE).
2. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
3. ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
4. WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
5. AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

1. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
2. FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING TABLE SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
3. SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
4. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
5. HB HOLLO-BOLT SHALL BE INSTALLED PER ICC ESR-3330 INSTRUCTIONS.

VERIFICATION AND INSPECTION

1. IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2015 SECTION 1705 - FOR STEEL CONSTRUCTION & TABLE 1705.3 FOR CONCRETE CONSTRUCTION.

POST INSTALLED EPOXY INJECTED ANCHOR BOLTS:

1. CONCRETE MUST BE A MINIMUM OF 28 DAYS OLD.
2. FOLLOW MANUFACTURER'S REQUIREMENTS FOR CURE TIME VS. AMBIENT TEMPERATURE.
3. DRILL HOLE TO REQUIRED DIAMETER AND DEPTH. ALL WATER, DIRT, OIL, DEBRIS, GREASE OR DUST MUST BE REMOVED FROM EACH CORE HOLE. FOLLOW MANUFACTURER'S RECOMMENDATION FOR CORRECT TYPE OF CORE BIT. AVOID DAMAGING EXISTING REINFORCING STEEL OR OTHER EMBEDDED ITEMS. NOTIFY TES ENGINEERING IF VOIDS IN THE CONCRETE, REINFORCING STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED. STOP CORING IMMEDIATELY IF THIS OCCURS.
4. A HOLE ROUGHENING DEVICE FROM EITHER HILTI OR ALLFASTENERS SHALL BE USED WITH ALL HOLES. FOLLOW ALL MANUFACTURER'S RECOMMENDED CORING AND INSTALLATION INSTRUCTIONS.
5. AFTER CORING AND ROUGHENING, FLUSH EACH HOLE WITH RUNNING WATER TO REMOVE ANY SLURRY OR DEBRIS. REMOVE ALL WATER FROM THE HOLE BY MECHANICAL PUMPING.
6. BRUSH EACH HOLE WITH AN APPROPRIATE SIZED NYLON BRUSH AND FLUSH WITH RUNNING WATER A SECOND TIME. REMOVE ALL WATER FROM THE HOLE.
7. AFTER THE SECOND WATER FLUSH BRUSH THE HOLE AGAIN WITH THE APPROPRIATE SIZED NYLON BRUSH.
8. BLOW EACH HOLE WITH COMPRESSED AIR TWO TIMES MINIMUM.
9. CONFIRM THAT EACH HOLE IS PROPERLY ROUGHED AND DRY.
10. NO EPOXY INJECTION SHALL TAKE PLACE IN RAINY CONDITIONS.
11. EPOXY SHOULD BE VISIBLE AT THE TOP OF THE CORE HOLE AFTER INSTALLATION.
12. CONTRACTOR TO SUPPLY ONE PHOTO OF EACH ROUGHED AND CLEANED HOLE IN CLOSEOUT PHOTO PACKAGE.

TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING [a,b]

BOLT LENGTH [c]	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 [d]	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS [d]
NOT MORE THAN $4d_b$	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN $4d_b$ BUT NOT MORE THAN $8d_b$	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN $8d_b$ BUT NOT MORE THAN $12d_b$	2/3 TURN	5/6 TURN	1 TURN

[a] NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

[b] APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

[c] WHEN THE BOLT LENGTH EXCEEDS $12d_b$, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

[d] BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004
RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

1. HB12 HOLLO BOLT: 59 FT-LBS
2. HB16 HOLLO BOLT: 140 FT-LBS
3. HB20 HOLLO BOLT: 221 FT-LBS
4. M20 AJAX BOLT: 280 FT-LBS.

FIELD HOT WORK PLAN NOTES:

FOLLOWING GUIDELINES SHALL BE COMPLIED WITH:

1. CONTRACTOR'S RESPONSIBILITY TO COMPLETE A HOT WORK PLAN IF AWARDED PER CUSTOMER SPECIFICATIONS GUIDELINES FOR WELDING, CUTTING & SPARK PRODUCING WORK.
2. HAVE A FIRE PLAN APPROVED BY THE CUSTOMER AND THEIR SAFETY MANAGEMENT DEPT.
3. CONTRACTOR MUST OBTAIN THE CONTACT INFO OF THE LOCAL FIRE DEPARTMENT AND THE 911 ADDRESS OF THE TOWER SITE BEFORE CONSTRUCTION.
4. CONTRACTOR SHALL MAKE SURE THAT CELL PHONE COVERAGE IS AVAILABLE IN THE TOWER SITE. IF CELL COVERAGE IS NOT AVAILABLE, AN IMMEDIATE AVAILABLE MEANS OF DIRECT COMMUNICATION WITH THE FIRE DEPARTMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION START.
5. ALL CONSTRUCTION SHALL BE PERFORMED UNDER WIND SPEED LESS THAN 10 MPH ON THE GROUND LEVEL. IF WIND SPEED INCREASE, CONTRACTOR MUST DETERMINE IF CONSTRUCTION SHALL BE DISCONTINUED.
6. FIRE SUPPRESSION EQUIPMENT MUST BE MADE AVAILABLE ON SITE AND READY TO USE.
7. CONTRACTOR SHALL ASSIGN A FIRE WATCHER TO PERFORM FIRE-FIGHTING DUTIES.
8. ALL WELDERS SHALL BE AWS OR STATE CERTIFIED. THEY MUST ALSO BE EXPERIENCED IN WELDING ON GALVANIZED MATERIALS.
9. IF IT IS POSSIBLE, ALL EXISTING COAX NEAR WELDING AREA SHALL BE TEMPORARILY MOVED AWAY FROM THE WELDING AREA BEFORE WELDING THE PLATES.
10. PLEASE REPORT ANY FIELD ISSUE TO TES @ 972-483-0607.

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SBA

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BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
111743

CUSTOMER SITE NO:
CT01501-S-SBA
CUSTOMER SITE NAME:
MORRIS
310 WATERTOWN ROAD
BETHLEHEM, CT 06763

DRAWN BY: JRL | CHECKED BY: CZ/AD

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: GN-1
REV #: 0

NOTES:

1. TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE MONOPOLE AND ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.

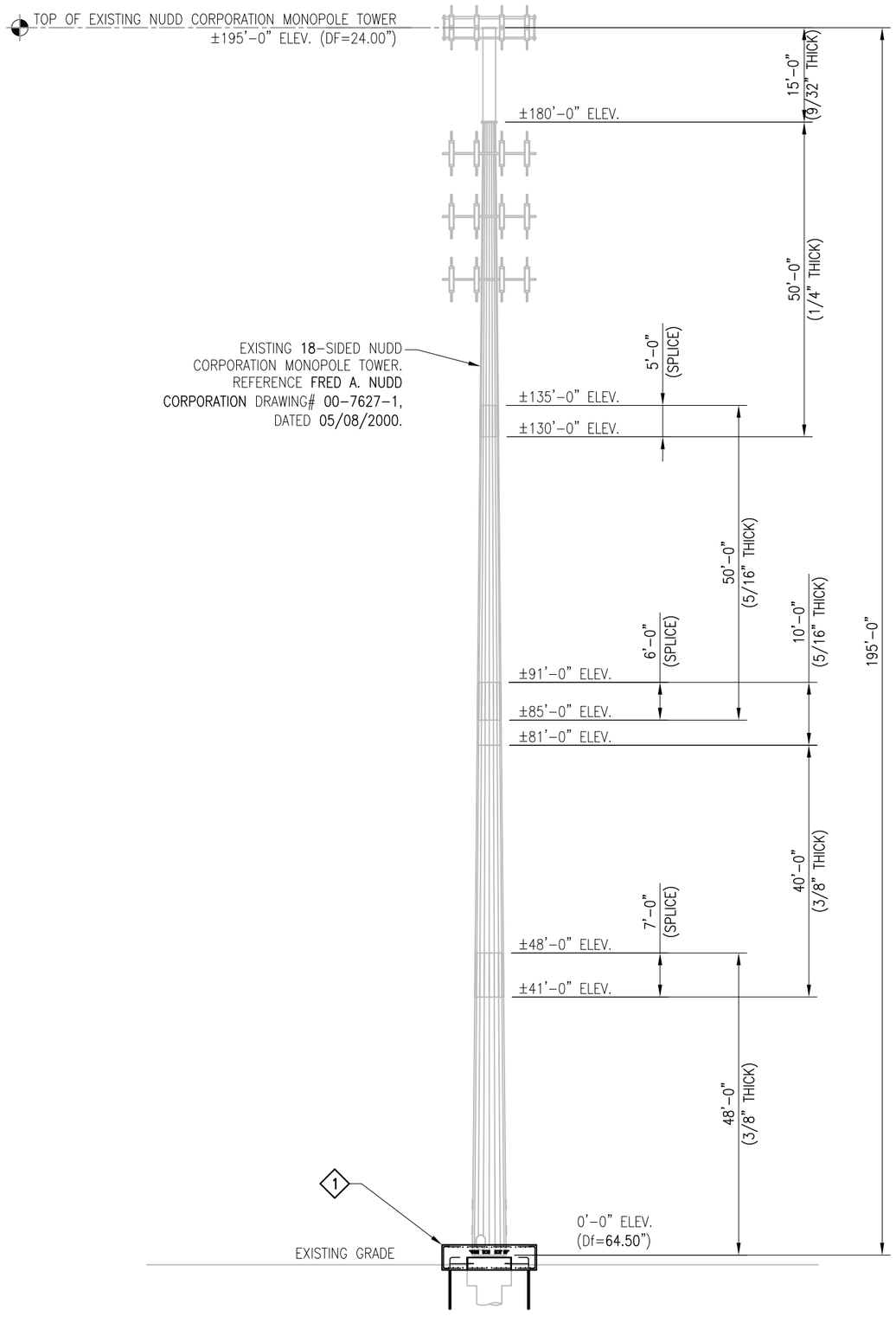
2. TEMPORARY RELOCATION OF EXISTING EQUIPMENT AROUND THE FOUNDATION MAY BE REQUIRED DURING CONSTRUCTION.

SCOPE OF WORK

1. INSTALL NEW FOUNDATION REINFORCEMENT. SEE SHEETS A-2, FND-1 AND FND-2 FOR DETAILS.
   NOTES:
   1. RELOCATION OF BOTTOM SAFETY CLIMB ASSEMBLY WILL BE REQUIRED.
   2. SLEEVE ALL EXISTING UNDERGROUND CONDUITS WILL BE REQUIRED PRIOR TO POURING CONCRETE.
   3. EXISTING TEST WELL MAY BE COVERED BY NEW CONCRETE. CONTRACTOR TO FIELD VERIFY AND SUPPLY NEW PVC GROUND TEST WELL IF REQUIRED.
   4. INSTALL NEW GROUNDING AFTER INSTALLATION OF NEW CONCRETE PAD.
2. APPLY FOUNDATION COATING
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

FOUNDATION COATING NOTES:

1. THE COATING MATERIALS SHALL BE LANCO WHITE ACRYLIC ELASTOMERIC COATING AND SEALER, OR HYDRO ARMOR COATING.
2. THE COATING CAN BE PLACED AT LEAST (2) DAYS AFTER THE PLACEMENT OF THE CONCRETE FOR FOUNDATION REINFORCEMENT, AND MINIMUM (4) DAYS FOR NEW FOUNDATION CONSTRUCTION.
3. THE CONCRETE SURFACE SHALL BE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE COATING.
4. THE COATING SHALL BE APPLIED TO ALL THE SURFACES OF THE CONCRETE ABOVE THE GROUND AND 6" BELOW THE GRADE SURFACE IF APPLICABLE.
5. MINIMUM 30 MILS COATING IS REQUIRED.
6. APPLY COLD GALVANIZE AT LEAST 2'-3' ABOVE FOUNDATION.



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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:

TOWER PROFILE

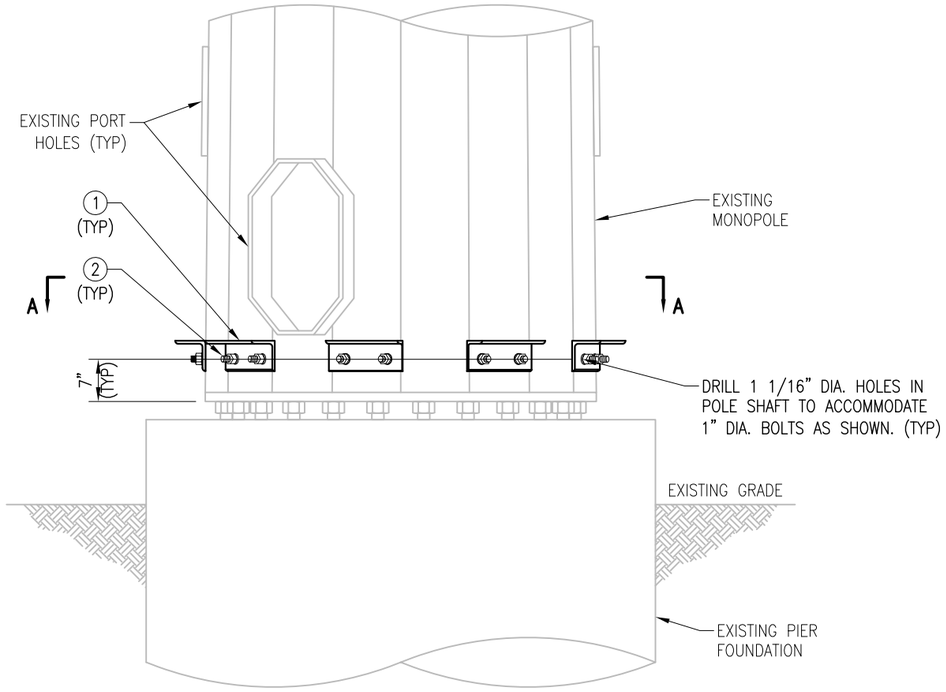
SHEET NUMBER: A-1

REV #: 0

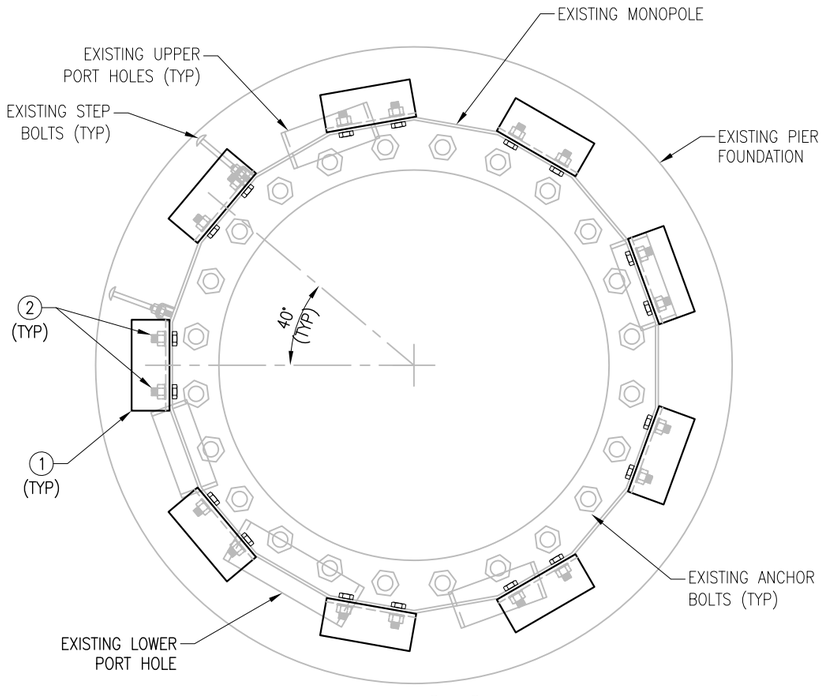
NOTES:

1. TEMPORARY RELOCATION OF ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.

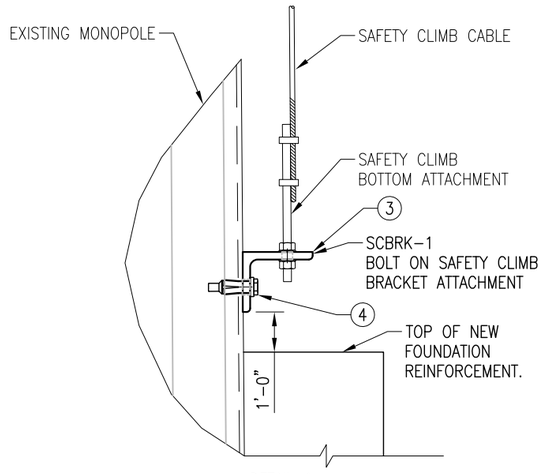
2. APPLY (2) COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS TO ALL FIELD CUT AND DRILLED AREAS.



ELEVATION VIEW



SECTION "A-A"



DETAIL 1
BOLT ON SAFETY CLIMB BRACKET INSTALLATION

PHOTO 1

ITEM NO.	QTY.	PART NO.	DESCRIPTION (BASE SECTION)
1	9	H-1	L 5" X 5" X 1/2" X 1'-0" A36
2	18	---	BOLT 1" X 2 3/4" A490
3	1	SCBRK-1	L 3 1/2" X 3" X 3/8" X 3" A36
4	1	HB16-1	LINDAPTER 5/8" TYPE HB HOLLO-BOLT (HCF)

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TES JOB NO: 111743

CUSTOMER SITE NO: CT01501-S-SBA

CUSTOMER SITE NAME: MORRIS

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0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:

REINFORCEMENT ASSEMBLY

SHEET NUMBER: A-2

REV #: 0

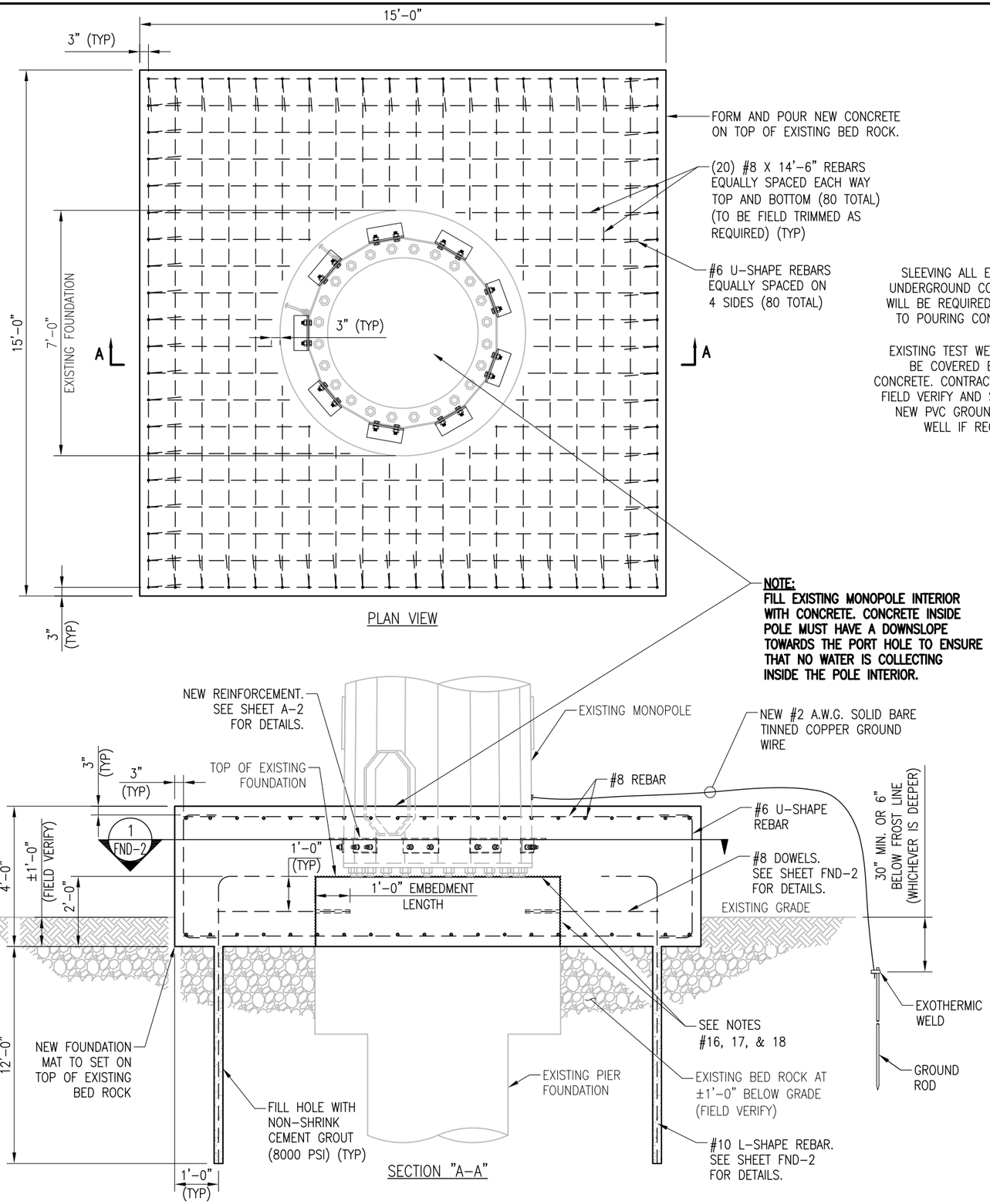

PHOTO 1

NOTES:

1. THE FOUNDATION MODIFICATION DESIGN IS BASED ON THE SOIL REPORT PROVIDED BY JAWORSKI GEOTECH, INC. (PROJECT# 99290G, DATED 11/17/1999).
2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS.
3. TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE PAIRS OF CONCRETE COMPRESSION TEST CYLINDERS SHALL BE MADE FROM EACH TRUCK LOAD OF CONCRETE. TWO CYLINDERS SHALL BE TESTED AT 7 DAYS AND TWO CYLINDERS SHALL BE TESTED AT 28 DAYS. (REMAINING PAIR OF CYLINDERS ARE FOR REDUNDANCY).
4. REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
5. ALL REBAR SHALL BE SECURELY WIRE TIED TO PREVENT DISPLACEMENT DURING POURING OF CONCRETE.
6. VERTICAL EMBEDMENTS OUT OF PLUMB: 1.0 DEGREE.
7. DEPTH OF FOUNDATION: PLUS 1" OR MINUS 0".
8. CONCRETE DIMENSIONS: PLUS OR MINUS 1/2".
9. REINFORCING STEEL PLACEMENT: PLUS OR MINUS 1/2" INCLUDING CONCRETE COVER.
10. CONCRETE VOLUME: 30.5 CUBIC YARDS TOTAL.
11. MATERIALS FOR REINFORCING SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A615-85.
12. ALL REBAR TO BE GRADE 60 (UNLESS NOTED OTHERWISE). REBAR MILL TEST REPORT IS REQUIRED AS PART OF THE PROJECT CLOSEOUT DOCUMENTATION.
13. CONCRETE SLUMP: 2"~4".
14. FOUNDATION BASE SHOULD REST ON FIRM AND LEVELED SURFACE.
15. FILL MATERIALS SHALL BE COMPACTED USING LAYERS OF NO MORE THAN 6". FINAL COMPACTION MUST BE A MINIMUM OF 95% DENSITY (THE MAXIMUM DRY UNIT OF WEIGHT). BACKFILL MATERIALS SHALL BE SANDY SILT (ML), SILT SAND (SM), CLAYED SAND (SC). NO ORGANIC MATERIALS, ROOTS, PLASTIC SILTS OR CLAYS, DELETERIOUS MATERIALS AND STONES SHALL BE USED. IF ROCK/SOIL MIXTURE IS USED AS BACKFILL, THE ROCK SIZE SHOULD BE LESS THAN 4" IN GREATEST DIMENSION AND NOT MORE THAN 15% BY WEIGHT SHALL BE LARGER THAN 2" IN GREATEST DIMENSION.
16. CLEAN AND ROUGHEN THE SURFACE. THE SURFACE MUST BE PREPARED MECHANICALLY GIVING A SURFACE PROFILE OF MINIMUM 1/8", EXPOSING THE COARSE AGGREGATE OF THE OLD CONCRETE.
17. APPLY WELD-CRETE OR CORR-BOND AGENT OVER THE SURFACE OF THE OLD CONCRETE PER THE MANUFACTURER'S SPECIFICATIONS.
18. NEW CONCRETE MUST BE PLACED OVER THE BONDING AGENT WITHIN THE MAXIMUM ALLOWABLE TIME PER THE MANUFACTURER'S SPECIFICATIONS.
19. THE FOUNDATION MODIFICATION MUST BE PERFORMED AT A WIND SPEED LESS THAN 30 MPH.
20. THE FULL EXCAVATION, FORMING AND CONCRETE PLACEMENT MUST BE COMPLETED IN A TIMEFRAME NOT TO EXCEED 72 HOURS.
21. DON'T OVER EXCAVATE SOILS BOTH VERTICALLY AND HORIZONTALLY.

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:

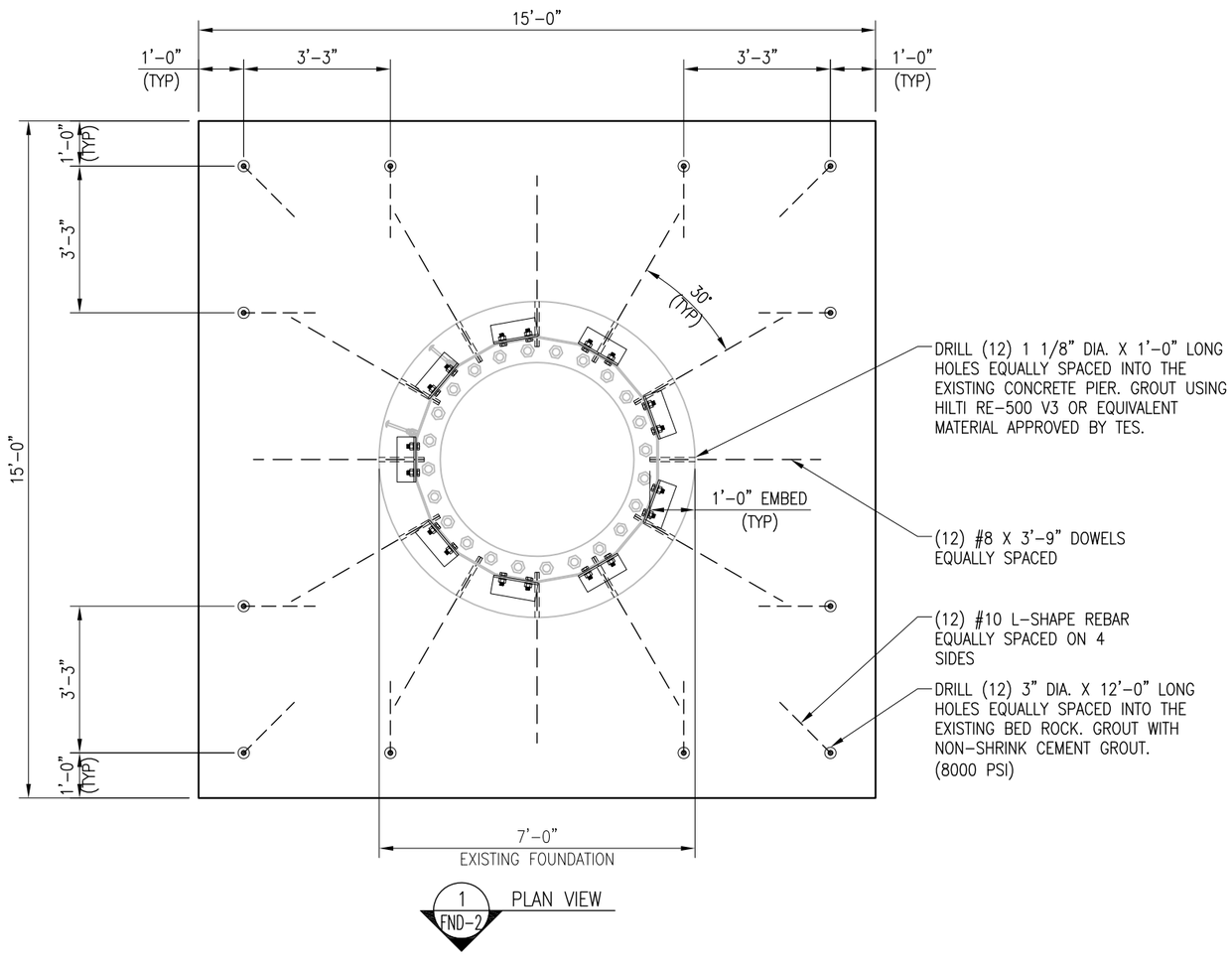
FOUNDATION MODIFICATION DETAILS

SHEET NUMBER: FND-1

REV #: 0

NOTES:

1. TEMPORARY RELOCATION OF ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.



1 FND-2 PLAN VIEW

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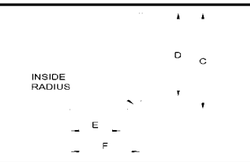
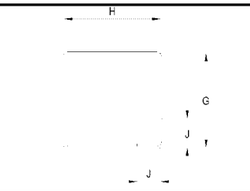
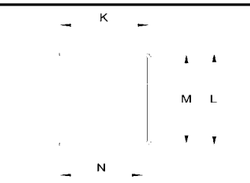
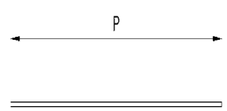
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:
DOWELS AND L-SHAPE REBAR LAYOUT

SHEET NUMBER: FND-2

REV #: 0

REBAR CHART

TYPE OF REBAR DIAGRAM	ITEMS	QTY. REQ'D	REBAR SIZE	LENGTH REQ'D (FT.)	TOTAL WEIGHT (LBS)	DETAILS OF BAR DIMENSIONS							REBAR DIAGRAM
ROUND TIE		-	-		-	A (FT.)	A	B	B (FT.)				
		-	-	-	-	C (FT.)	C	D (ft)	D	E	F	RADIUS	
90° BEND VERTICAL BAR	1	12	10	15'-6 5/16"	802.1	14.000	14'-0 "	13.683	13'-8 1/4"	1'-3 3/16"	1'-7 1/16"	3-7/8"	
		-	-	-	-	G (FT.)	G	H (ft)	H	J	RADIUS		
SQUARE OR RETANGULAR TIE													
		-	-	-	-	K (FT.)	K	L (ft)	L	M	N	RADIUS	
U-SHAPE 90° BEND	2	80	6	5'-2 7/16"	626.5	0.938	0'-11 3/16"	3.500	3'-6 "	3'-1 3/8"	0'-9 "	2-1/4"	
		-	-	-	-	P (FT.)	P	MINIMUM SPLICE LENGTHS REQUIRED					
STRAIGHT	3	80	8	14'-6 "	3097.2	14.500	14'-6 "	BAR SIZE		LENGTH REQ'D			
	4	12	8	3'-9 "	120.2	3.750	3'-9 "	#6		3'-7/8"			
								#7		4'-4 1/2"			
								#8		5'-1 1/2"			
								#9		5'-9"			
								#10		6'-6"			
								#11		7'-1 1/2"			

BILL OF MATERIALS

TYPES OF REBAR CONFIGURATIONS	QTY. REQ'D	REBAR SIZE	LENGTH REQ'D (FT.)	TOTAL WEIGHT (LBS)
90° BEND VERTICAL BAR	12	10	15'-6 5/16"	802.1
U-SHAPE 90° BEND	80	6	5'-2 7/16"	626.5
STRAIGHT	80	8	14'-6 "	3097.2
STRAIGHT	12	8	3'-9 "	120.2
TOTAL STEEL WEIGHT (LBS):	**4645.9**			

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JRL	09/07/21

SHEET TITLE:
REBAR CHART

SHEET NUMBER: RBL-1
REV #: 0

EXHIBIT 9

Post-Mod
Mount Analysis

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

Post-Mod Antenna Mount Analysis Report

Existing 195-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT01501-S-SBA / Morris

Customer Site Name: Morris

Carrier Name: T-Mobile (App#: 151085, V1)

Carrier Site ID / Name: CTNH357C / Morris

Site Location: 310 Watertown Road

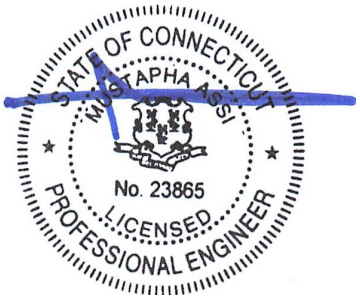
Bethlehem, Connecticut

Litchfield County

Latitude: 41.667219

Longitude: -73.170516

Exp.10/31/2021



06/21/2021

Analysis Result:

Max Structural Usage: 75.1% [Pass]

Report Prepared By : Kiran Sharma Paudel

Introduction

The purpose of this report is to summarize the analysis results on the (1) Low Profile Platform at 155.00' elevation including the proposed modifications to support the proposed antenna configuration. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount Mapping Provided by Engineered Tower Solutions, PLLC 5/25/2021
Antenna Loading	Provided by SBA Application #: 151085; Dated 5/24/2021
Existing Modification	N/A
Proposed Modification	TES Project No. 110755

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 117 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 90 mph (3-Sec. Gust)
Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent
Operational Wind Speed: 30 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-G/ 2015 IBC/ 2018 Connecticut State Building Code
Exposure Category: C
Structure Class: II
Topographic Category: 1
Crest Height (Ft): 0

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(1) Low Profile Platform at 155.00' elevation

Final Antenna Configuration

3	Ericsson AIR6449 B41
3	RFS APX16DWV-16DWVS-E-A20
3	RFS APXVAALL24_43-U-NA20
3	Remec S20057A1
3	Ericsson KRY 112 144/1
3	Ericsson 4449 B71 + B85
3	Ericsson 4415 B66A
3	Ericsson 424 B25

3 Kathrein 782 11056

* Equipment not shown in diagram, attached directly to standoff member.

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration after the proposed modification is successfully completed. The maximum structural usage is 75.1%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

1. Mount Photos Before Modification
2. Antenna Placement Diagram
3. Mount Mapping Information
4. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.

Structure: CT01501-S-SBA - Morris

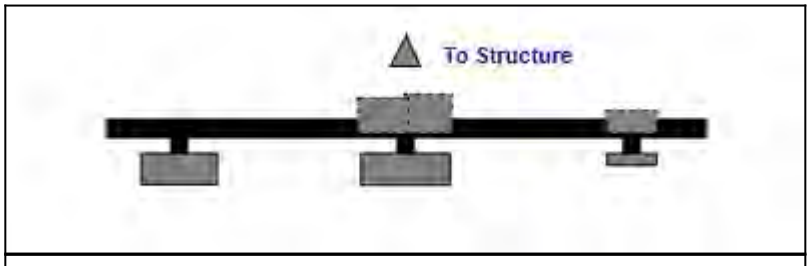
Sector: **A**

Structure Type: Monopole

Mount Elev: 155.00

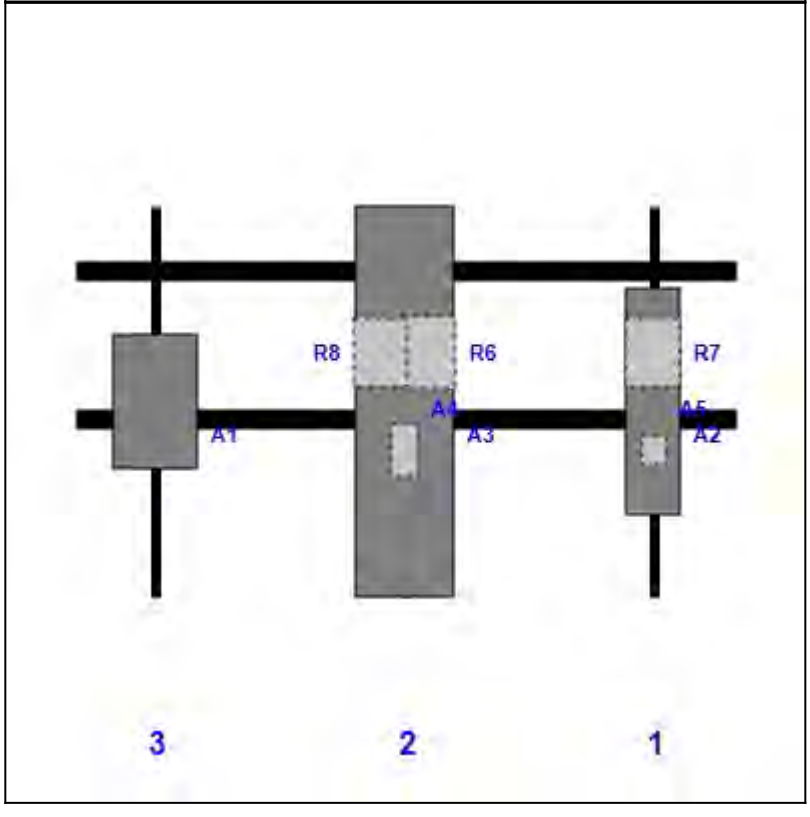
6/21/2021

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APX16DWV-16DWVS-E-A20	55.90	13.30	142.00	1	a	Front	48.00			
A5	KRY 112 144/1	6.93	6.10	142.00	1	a	Behind	60.00			
R7	4415 B66A	16.50	13.40	142.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20	95.90	24.00	81.00	2	a	Front	48.00			
A4	S20057A1	13.20	6.40	81.00	2	a	Behind	60.00			
R6	4449 B71 + B85	17.90	13.10	81.00	2	a	Behind	36.00	6.00		
R8	424 B25	16.50	13.50	81.00	2	a	Behind	36.00	-6.00		
A1	AIR6449 B41	33.10	20.50	20.00	3	a	Front	48.00			
MP5	782 11056	5.50	3.20		Member						
MP5	782 11056	5.50	3.20		Member						
MP5	782 11056	5.50	3.20		Member						

Structure: CT01501-S-SBA - Morris

Sector: B

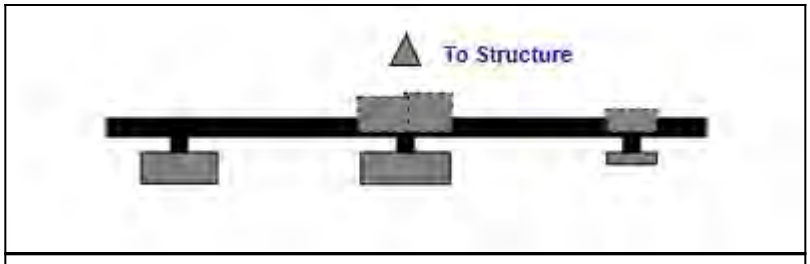
Structure Type: Monopole

Mount Elev: 155.00

6/21/2021

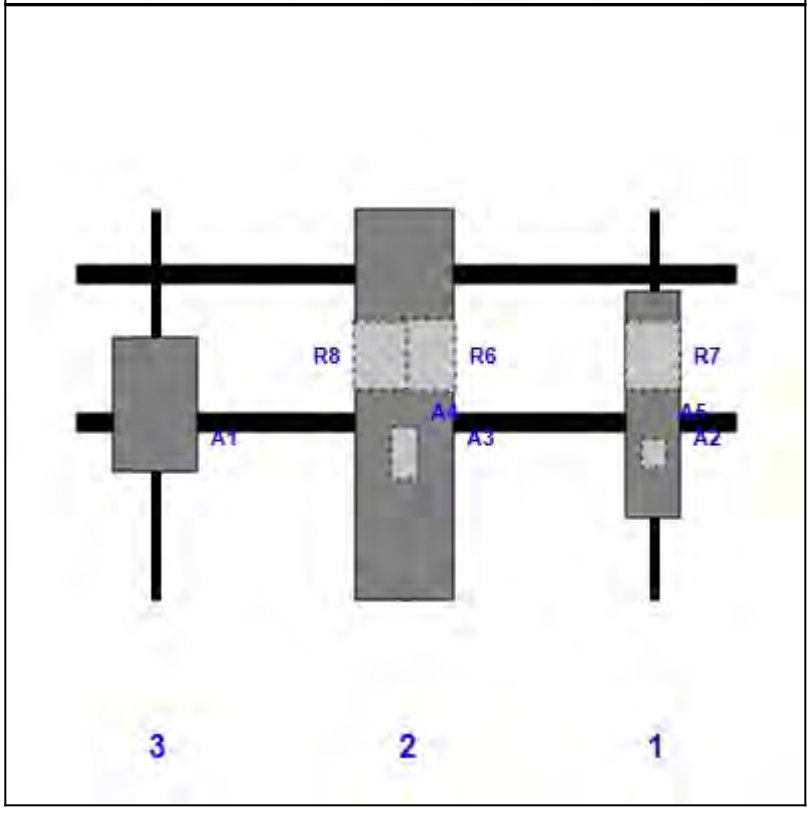
Tower Engineering Solutions

Plan View



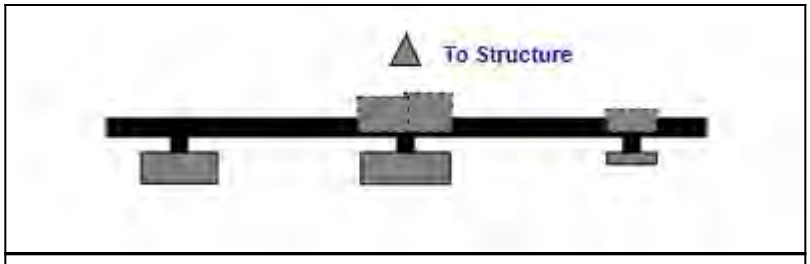
Front View

Looking Toward Structure



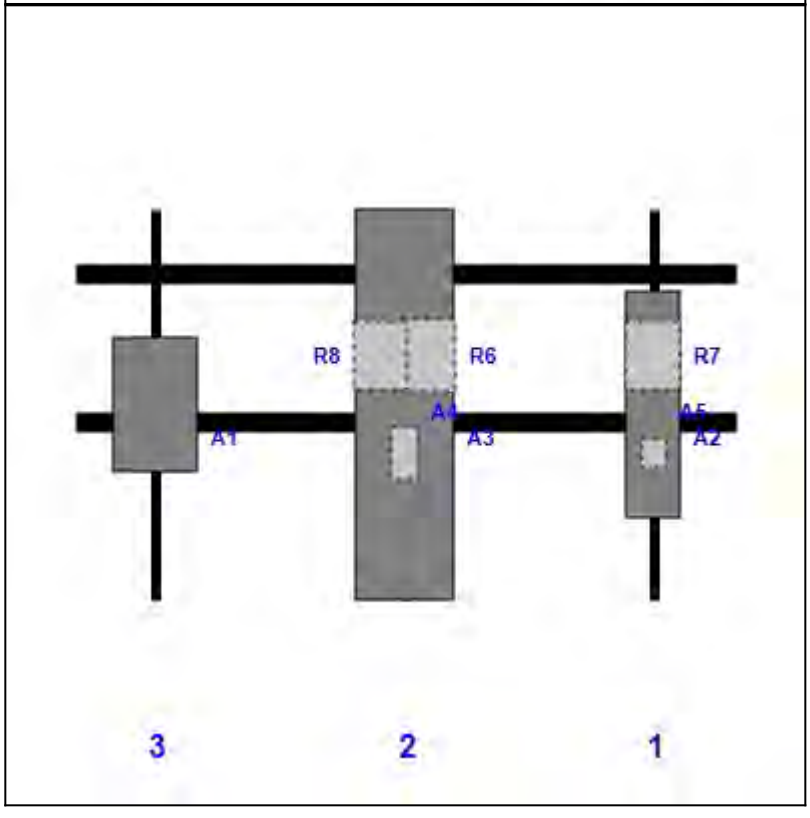
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APX16DWV-16DWVS-E-A20	55.90	13.30	142.00	1	a	Front	48.00			
A5	KRY 112 144/1	6.93	6.10	142.00	1	a	Behind	60.00			
R7	4415 B66A	16.50	13.40	142.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20	95.90	24.00	81.00	2	a	Front	48.00			
A4	S20057A1	13.20	6.40	81.00	2	a	Behind	60.00			
R6	4449 B71 + B85	17.90	13.10	81.00	2	a	Behind	36.00	6.00		
R8	424 B25	16.50	13.50	81.00	2	a	Behind	36.00	-6.00		
A1	AIR6449 B41	33.10	20.50	20.00	3	a	Front	48.00			

Plan View



Front View

Looking Toward Structure



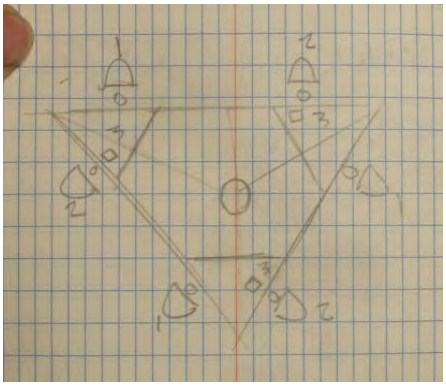
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APX16DWV-16DWVS-E-A20	55.90	13.30	142.00	1	a	Front	48.00			
A5	KRY 112 144/1	6.93	6.10	142.00	1	a	Behind	60.00			
R7	4415 B66A	16.50	13.40	142.00	1	a	Behind	36.00			
A3	APXVAALL24_43-U-NA20	95.90	24.00	81.00	2	a	Front	48.00			
A4	S20057A1	13.20	6.40	81.00	2	a	Behind	60.00			
R6	4449 B71 + B85	17.90	13.10	81.00	2	a	Behind	36.00	6.00		
R8	424 B25	16.50	13.50	81.00	2	a	Behind	36.00	-6.00		
A1	AIR6449 B41	33.10	20.50	20.00	3	a	Front	48.00			

V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1203582

Tower Owner:	SBA	**Mapping Date:**	5/25/2021
Site Name:	Morris	**Tower Type:**	Monopole
Site Number or ID:	CT01501-S	**Tower Height (Ft.):**	199
Mapping Contractor:	Engineered Tower Solutions, PLLC	**Mount Elevation (Ft.):**	154



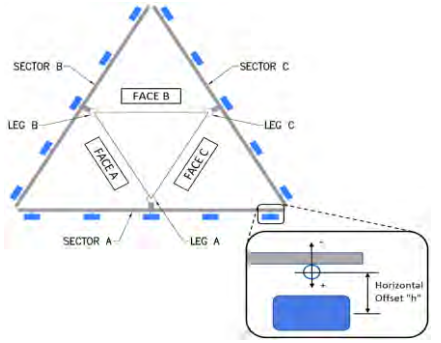
Mount Pipe Configuration and Geometries [Unit = Inches]

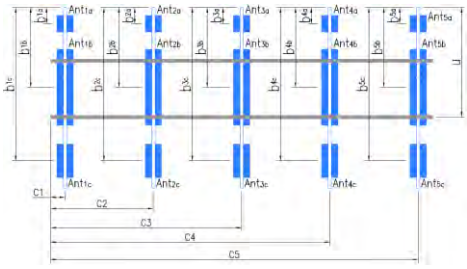
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Ø x0.153"x108"	52.00	20.00	C1	2.4"Ø x0.153"x108"	52.00	20.00
A2	2.4"Ø x0.153"x96"	52.00	142.00	C2	2.4"Ø x0.153"x96"	52.00	142.00
A3				C3			
A4				C4			
A5				C5			
A6				C6			
B1	2.4"Ø x0.153"x108"	52.00	20.00	D1			
B2	2.4"Ø x0.153"x96"	52.00	142.00	D2			
B3				D3			
B4				D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	22.69



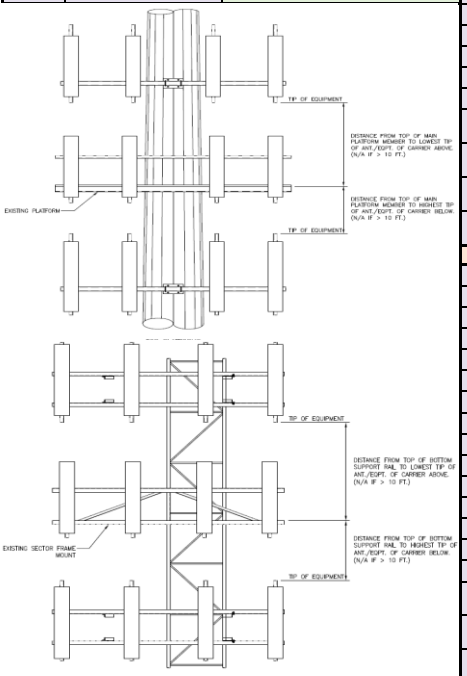


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	Commscope LNX-6515	11.90	7.10	96.40		154.333	48.00	8.00	0.00	82
Ant_{1c}										
Ant_{2a}	Unknown TMA	6.00	3.75	11.00		155.5	34.00	0.00		83
Ant_{2b}	RFS APXV18-209014	6.60	3.20	53.00		155.5	34.00	8.00	0.00	83
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:		Deg
Sector B:	120.00	Deg	Leg B:		Deg
Sector C:	240.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	210.00	Deg	Sector C
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



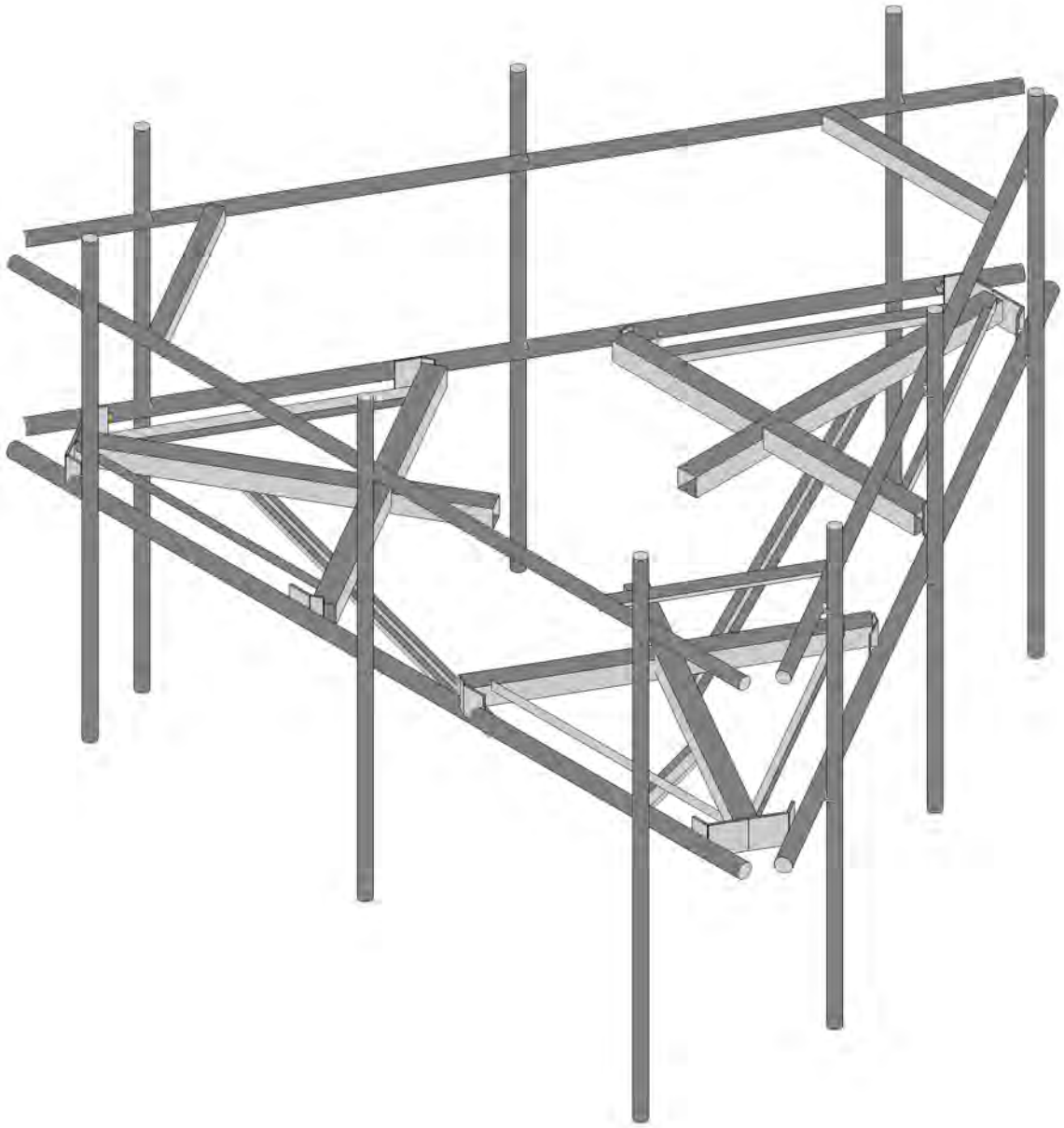
Sector B											
Ant_{1a}											
Ant_{1b}	Commscope LNX-6515	11.90	7.10	96.40		154.333	48.00	8.00	120.00	85
Ant_{1c}										
Ant_{2a}	Unknown TMA	6.00	3.75	11.00		155.5	34.00	0.00		86
Ant_{2b}	RFS APXV18-209014	6.60	3.20	53.00		155.5	34.00	8.00	120.00	86
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	Commscope LNX-6515	11.90	7.10	96.40		154.333	48.00	8.00	240.00	92
Ant_{1c}										
Ant_{2a}	Unknown TMA	6.00	3.75	11.00		155.5	34.00	0.00		97
Ant_{2b}	RFS APXV18-209014	6.60	3.20	53.00		155.5	34.00	8.00	240.00	95
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

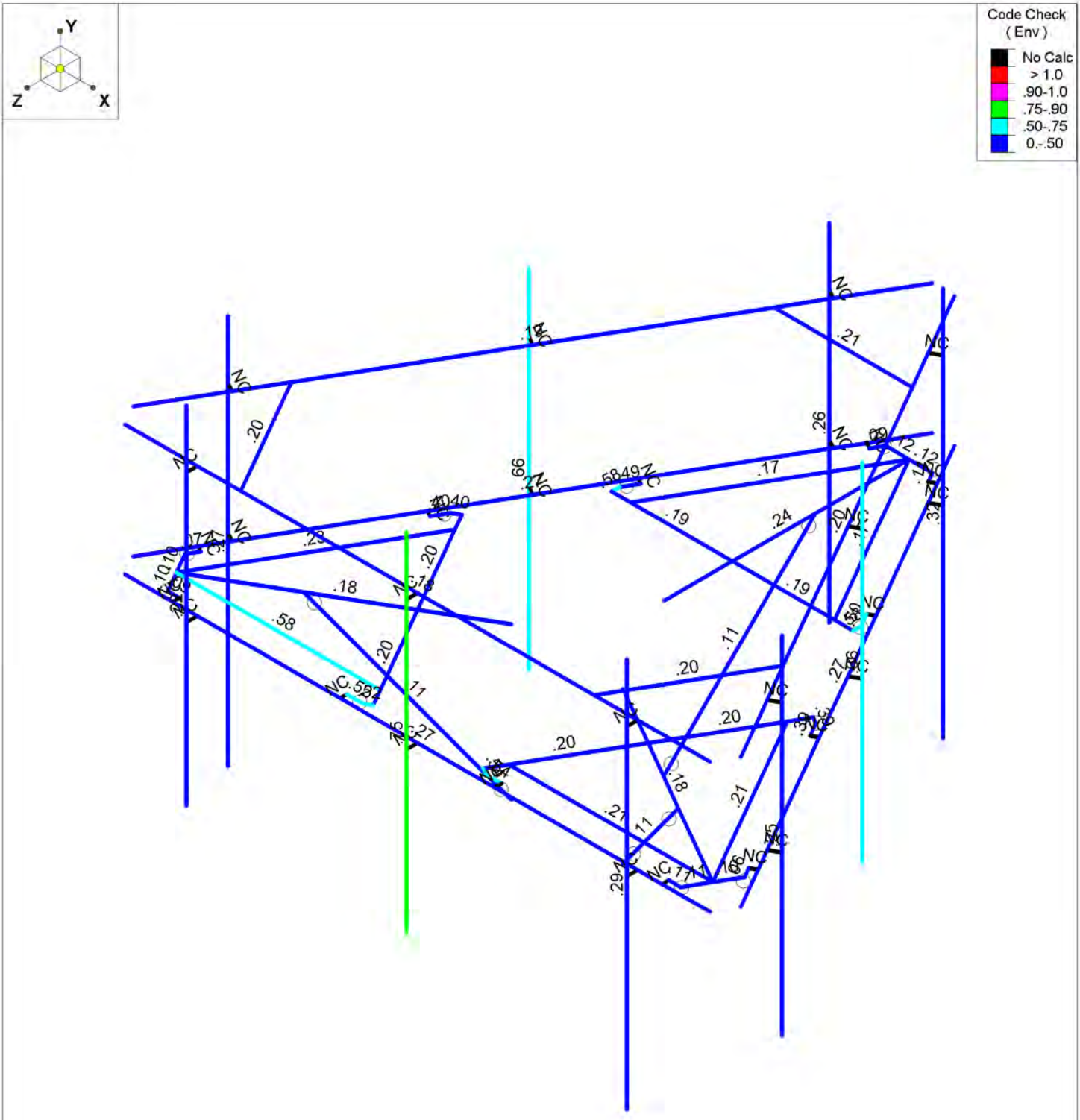
1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

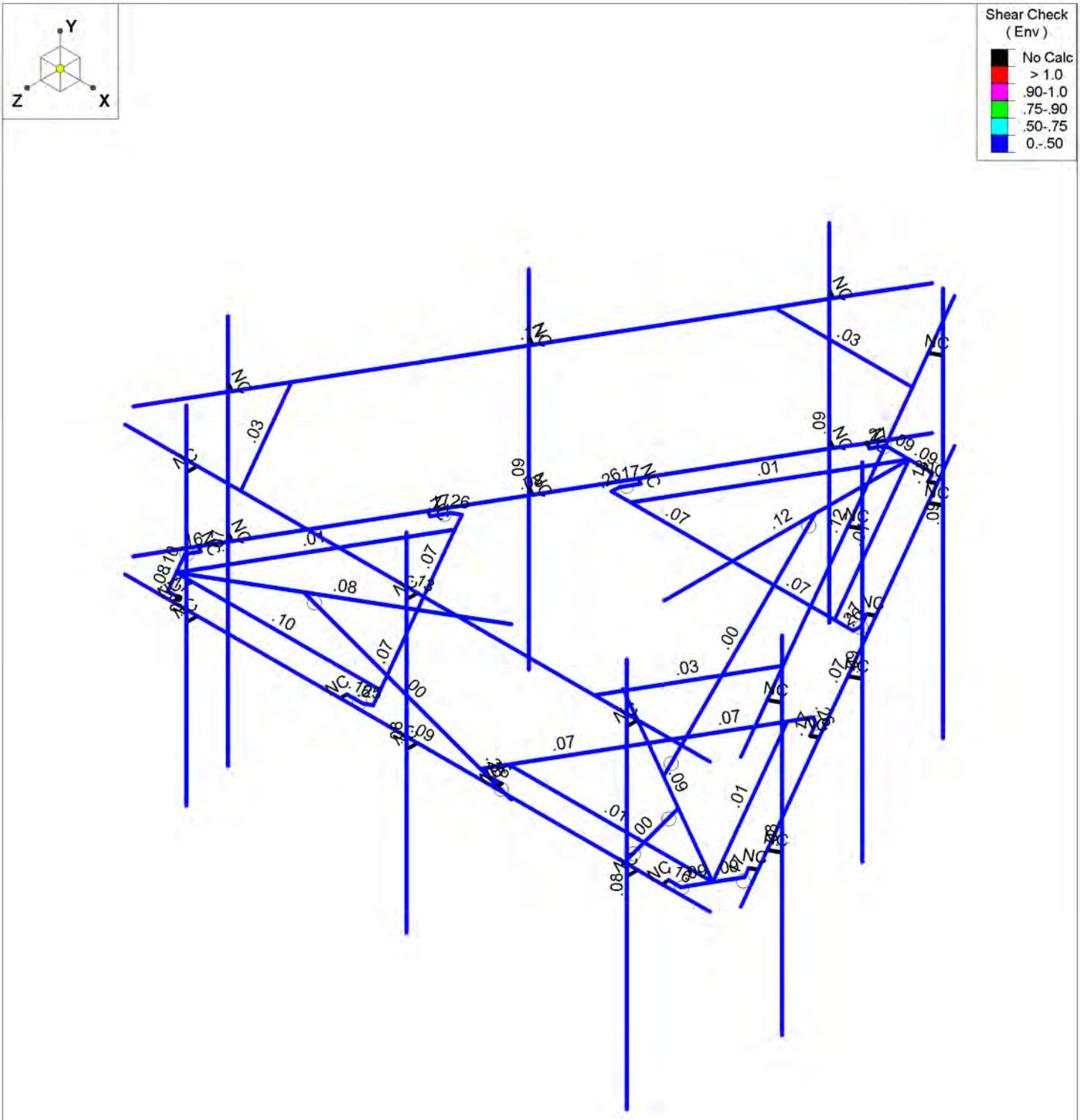


Tower Engineering Solutio...	CT01501-S-SBA_MT_LO_Loads Only_G	SK - 1
		June 21, 2021 at 11:18 AM
TES Project No. 110755		CT01501-S-SBA_110755_G_RISA_...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT01501-S-SBA_MT_LO_Loads Only_G	SK - 2
		June 21, 2021 at 11:18 AM
TES Project No. 110755		CT01501-S-SBA_110755_G_RISA_...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT01501-S-SBA_MT_LO_Loads Only_G	SK - 3
		June 21, 2021 at 11:19 AM
TES Project No. 110755		CT01501-S-SBA_110755_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(M...	Surface...
1	Antenna D	None					36			
2	Antenna Di	None					36			
3	Antenna W Front	None					36			
4	Antenna Wi Front	None					36			
5	Antenna W Side	None					36			
6	Antenna Wi Side	None					36			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					3	
10	Structure Di	None						60	3	
11	Structure W Front	None						60		
12	Structure Wi Front	None						60		
13	Structure W Side	None						60		
14	Structure Wi Side	None						60		
15	BLC 9 Transient Area Loads	None								
16	BLC 10 Transient Area Loads	None						21		

Load Combinations

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
1	1.2D+1.6W (Front)	Yes	Y		1	1.2	9	1.2	3	1.6	11	1.6														
2	1.2D+1.6W (Back)	Yes	Y		1	1.2	9	1.2	3	-1.6	11	-1.6														
3	1.2D+1.6W (Left)	Yes	Y		1	1.2	9	1.2	5	1.6	13	1.6														
4	1.2D+1.6W (Right)	Yes	Y		1	1.2	9	1.2	5	-1.6	13	-1.6														
5	1.2D+1.0Di+1.0Wi (Front)	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	12	1										
6	1.2D+1.0Di+1.0Wi (Back)	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	12	-1										
7	1.2D+1.0Di+1.0Wi (Left)	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	1	14	1										
8	1.2D+1.0Di+1.0Wi (Right)	Yes	Y		1	1.2	9	1.2	2	1	10	1	6	-1	14	-1										
9	1.2D+1.5L1+.16W (Main...	Yes	Y		1	1.2	9	1.2	7	1.5	3	.16	11	.16												
10	1.2D+1.5L2+.16W (Main...	Yes	Y		1	1.2	9	1.2	8	1.5	3	.16	11	.16												
11	1.4D	Yes	Y		1	1.4	9	1.4																		

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	NP4	-6.749998	0	4.199313	0	
2	NP1	6.750002	0	4.199313	0	
3	CG	-0.001404	0	0	0	
4	N56	0	0	-1.49346	0	
5	N53	5.652215	0	4.042353	0	
6	N51	1.782214	0	4.042353	0	
7	N50	-1.782971	0	4.042353	0	
8	N48	-5.652971	0	4.042353	0	
9	N45	-6.327969	0	2.87322	0	
10	N43	-4.392968	0	-0.478299	0	
11	N42	-2.610376	0	-3.56584	0	
12	N40	-0.675376	0	-6.917358	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N37	0.673081	0	-6.916469	0	
14	N35	2.608081	0	-3.564951	0	
15	N34	4.390673	0	-0.47741	0	
16	N32	6.325674	0	2.874109	0	
17	N30	-0.001406	0	-3.074071	0	
18	N29	2.353545	0	-3.074071	0	
19	N28	-2.355329	0	-3.074071	0	
20	N27	-0.001406	0	-7.151186	0	
21	N26	0.539622	0	-7.151186	0	
22	N25	-0.540378	0	-7.151186	0	
23	N24	2.789622	0	-3.074071	0	
24	N23	-2.790378	0	-3.074071	0	
25	N22	2.789622	0	-3.254071	0	
26	N21	-2.790378	0	-3.254071	0	
27	N20	2.661262	0	1.53626	0	
28	N19	1.484547	0	3.574391	0	
29	N18	3.838291	0	-0.502415	0	
30	N17	6.192393	0	3.574391	0	
31	N16	5.922215	0	4.042353	0	
32	N15	6.462214	0	3.107046	0	
33	N14	1.26633	0	3.952353	0	
34	N13	4.05633	0	-0.880069	0	
35	N12	1.422214	0	4.042353	0	
36	N11	4.212214	0	-0.790069	0	
37	N10	-2.661832	0	1.536583	0	
38	N9	-3.839046	0	-0.502412	0	
39	N8	-1.485123	0	3.574702	0	
40	N7	-6.192969	0	3.574702	0	
41	N6	-6.462971	0	3.107046	0	
42	N5	-5.922971	0	4.042353	0	
43	N4	-4.057086	0	-0.880069	0	
44	N3	-1.267086	0	3.952353	0	
45	N2	-4.212971	0	-0.790069	0	
46	N1	-1.422971	0	4.042353	0	
47	N75	-6.462845	0	2.795349	0	
48	N76	-4.527844	0	-0.556169	0	
49	N77	-2.745252	0	-3.64371	0	
50	N78A	-0.810252	0	-6.995228	0	
51	N83	5.650167	0	4.199313	0	
52	N84	1.780166	0	4.199313	0	
53	N85	-1.785019	0	4.199313	0	
54	N86	-5.655018	0	4.199313	0	
55	N91	0.810581	0	-6.994659	0	
56	N92	2.745581	0	-3.64314	0	
57	N93	4.528174	0	-0.555599	0	
58	N94	6.463174	0	2.795919	0	
59	N67	-1.293374	0	0.74673	0	
60	N69	1.293374	0	0.74673	0	
61	N108C	5.083336	0	4.199313	0	
62	N65	7.011711	0	3.746013	0	
63	N66	0.261711	0	-7.94533	0	
64	N67A	-0.261713	0	-7.945326	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
65	N68	-7.011713	0	3.746017	0	
66	N66A	-5.083331	0	4.199313	0	
67	N67B	0.000002	0	4.199313	0	
68	N68A	5.083336	0	4.449313	0	
69	N69A	-5.083331	0	4.449313	0	
70	N70	0.000002	0	4.449313	0	
71	N71	5.083336	4.333333	4.449313	0	
72	N72	5.083336	-4.666667	4.449313	0	
73	N73	0.000002	4.333333	4.449313	0	
74	N74	-5.083331	4.333333	4.449313	0	
75	N75A	-5.083331	-3.666667	4.449313	0	
76	N76A	0.000002	-3.666667	4.449313	0	
77	N77A	1.095044	0	-6.501954	0	
78	N78	6.178377	0	2.302637	0	
79	N79	3.636711	0	-2.099658	0	
80	N80	1.31155	0	-6.626954	0	
81	N81	6.394884	0	2.177637	0	
82	N82	3.853217	0	-2.224658	0	
83	N83A	1.31155	4.333333	-6.626954	0	
84	N84A	1.31155	-4.666667	-6.626954	0	
85	N85A	3.853217	4.333333	-2.224658	0	
86	N86A	6.394884	4.333333	2.177637	0	
87	N87	6.394884	-3.666667	2.177637	0	
88	N88	3.853217	-3.666667	-2.224658	0	
89	N89	-6.17838	0	2.302641	0	
90	N90	-1.095046	0	-6.50195	0	
91	N91A	-3.636713	0	-2.099655	0	
92	N92A	-6.394886	0	2.177641	0	
93	N93A	-1.311553	0	-6.62695	0	
94	N94A	-3.853219	0	-2.224655	0	
95	N95	-6.394886	4.333333	2.177641	0	
96	N96	-6.394886	-4.666667	2.177641	0	
97	N97	-3.853219	4.333333	-2.224655	0	
98	N98	-1.311553	4.333333	-6.62695	0	
99	N99	-1.311553	-3.666667	-6.62695	0	
100	N100	-3.853219	-3.666667	-2.224655	0	
101	N101	-6.749998	3	4.199313	0	
102	N102	6.750002	3	4.199313	0	
103	N103	5.083336	3	4.199313	0	
104	N104	-5.083331	3	4.199313	0	
105	N105	0.000002	3	4.199313	0	
106	N106	5.083336	3	4.449313	0	
107	N107	-5.083331	3	4.449313	0	
108	N108	0.000002	3	4.449313	0	
109	N109	-4.083331	3	4.199313	0	
110	N110	4.083331	3	4.199313	0	
111	N111	7.011711	3	3.746013	0	
112	N112	0.261711	3	-7.94533	0	
113	N113	1.095044	3	-6.501954	0	
114	N114	6.178377	3	2.302637	0	
115	N115	3.636711	3	-2.099658	0	
116	N116	1.31155	3	-6.626954	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
117	N117	6.394884	3	2.177637	0	
118	N118	3.853217	3	-2.224658	0	
119	N119	5.678377	3	1.436612	0	
120	N120	1.595046	3	-5.635925	0	
121	N121	-0.261713	3	-7.945326	0	
122	N122	-7.011713	3	3.746017	0	
123	N123	-6.17838	3	2.302641	0	
124	N124	-1.095046	3	-6.50195	0	
125	N125	-3.636713	3	-2.099655	0	
126	N126	-6.394886	3	2.177641	0	
127	N127	-1.311553	3	-6.62695	0	
128	N128	-3.853219	3	-2.224655	0	
129	N129	-1.595046	3	-5.635925	0	
130	N130	-5.678377	3	1.436612	0	
131	N131	0	-3.5	-1.49346	0	
132	N132	0	0	-4.99346	0	
133	N133	-1.293374	-3.5	0.74673	0	
134	N134	-4.324463	0	2.49673	0	
135	N135	1.293374	-3.5	0.74673	0	
136	N136	4.324463	0	2.49673	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Footrails	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	Grating Angles	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
3	Standoff Arm	HSS4x4x4	Beam	SquareTube	A36 Gr.36	Typical	3.37	7.8	7.8	12.8
4	Plan Bracing	HSS4x4x4	Beam	SquareTube	A36 Gr.36	Typical	3.37	7.8	7.8	12.8
5	Footrail Connection Plates	PL3/8x6	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
6	Mount Pipe1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Mount Pipe2	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	Support rail Corner Brace	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
10	Kicker	LL2x2x4x3	Beam	Double Angle...	A36 Gr.36	Typical	1.89	1.82	.692	.042
11	Corner Brace	pl1/2X6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1A	1.5CU1.25X035	Beam	CU	A570_33	Typical	.131	.022	.052	5.4e-5

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	AL1	AA CS14X1...	Beam	AA Channel	3003-H14	Typical	11.8	44.7	401	1.19

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E..	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.5	58	1.2
7	Q235	29000	11154	.3	.65	.49	34	1.5	58	1.2
8	J429-Gr5	29000	11154	.3	.65	.49	92	1.5	120	1.2

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570_33	29500	11346	.3	.65	.49	33	52
2	A607_C1_55	29500	11346	.3	.65	.49	55	70

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...	Density[...	Table B.4	kt	Ftu[ksi]	Fty[ksi]	Fcy[ksi]	Fsu[ksi]	Ct
1	3003-H14	10100	3787.5	.33	1.3	.173	Table B...	1	19	16	13	12	141
2	6061-T6	10100	3787.5	.33	1.3	.173	Table B...	1	38	35	35	24	141
3	6063-T5	10100	3787.5	.33	1.3	.173	Table B...	1	22	16	16	13	141
4	6063-T6	10100	3787.5	.33	1.3	.173	Table B...	1	30	25	25	19	141
5	5052-H34	10200	3787.5	.33	1.3	.173	Table B...	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	.33	1.3	.173	Table B...	1	24	15	15	15	141

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N7	N5			Corner Brace	Beam	RECT	A36 Gr.36	Typical
2	M2	N7	N6			Corner Brace	Beam	RECT	A36 Gr.36	Typical
3	M3	N3	N1			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
4	M4	N1	N50			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
5	M5	N4	N2			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
6	M6	N2	N43			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
7	M7	N7	N9			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
8	M8	N7	N8		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N5	N48			Corner Brace	Beam	RECT	A36 Gr.36	Typical
10	M10	N6	N45			Corner Brace	Beam	RECT	A36 Gr.36	Typical
11	M12	N3	N10			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
12	M13	N10	N4			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
13	M14	N17	N15			Corner Brace	Beam	RECT	A36 Gr.36	Typical
14	M15	N17	N16			Corner Brace	Beam	RECT	A36 Gr.36	Typical
15	M16	N13	N11			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
16	M17	N11	N34			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
17	M18	N14	N12			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
18	M19	N12	N51			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
19	M20	N17	N19			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
20	M21	N17	N18		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
21	M22	N15	N32			Corner Brace	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
22	M23	N16	N53			Corner Brace	Beam	RECT	A36 Gr.36	Typical
23	M25	N13	N20			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
24	M26	N20	N14			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
25	M27	N27	N25			Corner Brace	Beam	RECT	A36 Gr.36	Typical
26	M28	N27	N26			Corner Brace	Beam	RECT	A36 Gr.36	Typical
27	M29	N23	N21			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
28	M30	N21	N42			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
29	M31	N24	N22			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
30	M32	N22	N35			Footrail Connection Plates	Beam	RECT	A36 Gr.36	Typical
31	M33	N27	N29			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
32	M34	N27	N28		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
33	M35	N25	N40			Corner Brace	Beam	RECT	A36 Gr.36	Typical
34	M36	N26	N37			Corner Brace	Beam	RECT	A36 Gr.36	Typical
35	MP5B	N27	N56			Standoff Arm	Beam	SquareTube	A36 Gr.36	Typical
36	M38	N23	N30			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
37	M39	N30	N24			Plan Bracing	Beam	SquareTube	A36 Gr.36	Typical
38	MP8A	NP4	NP1			Footrails	Beam	Pipe	A53 Gr.B	Typical
39	M53	N45	N75			RIGID	None	None	RIGID	Typical
40	M54	N43	N76			RIGID	None	None	RIGID	Typical
41	M55	N42	N77			RIGID	None	None	RIGID	Typical
42	M56	N40	N78A			RIGID	None	None	RIGID	Typical
43	M57	N53	N83			RIGID	None	None	RIGID	Typical
44	M58	N51	N84			RIGID	None	None	RIGID	Typical
45	M59	N50	N85			RIGID	None	None	RIGID	Typical
46	M60	N48	N86			RIGID	None	None	RIGID	Typical
47	M61	N37	N91			RIGID	None	None	RIGID	Typical
48	M62	N35	N92			RIGID	None	None	RIGID	Typical
49	M63	N34	N93			RIGID	None	None	RIGID	Typical
50	M64	N32	N94			RIGID	None	None	RIGID	Typical
51	MP5A	N7	N67			HSS4x4x4	Beam	SquareTube	A36 Gr.36	DR1
52	MP5C	N17	N69			Standoff Arm	Beam	SquareTube	A36 Gr.36	Typical
53	M55A	N65	N66			Footrails	Beam	Pipe	A53 Gr.B	Typical
54	M56B	N67A	N68			Footrails	Beam	Pipe	A53 Gr.B	Typical
55	M55B	N108C	N68A			RIGID	None	None	RIGID	Typical
56	M56C	N67B	N70			RIGID	None	None	RIGID	Typical
57	M57A	N66A	N69A			RIGID	None	None	RIGID	Typical
58	MP1A	N71	N72			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
59	MP2A	N73	N76A			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
60	MP3A	N74	N75A			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
61	M61A	N77A	N80			RIGID	None	None	RIGID	Typical
62	M62A	N79	N82			RIGID	None	None	RIGID	Typical
63	M63A	N78	N81			RIGID	None	None	RIGID	Typical
64	MP1C	N83A	N84A			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
65	MP2C	N85A	N88			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
66	MP3C	N86A	N87			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
67	M67	N89	N92A			RIGID	None	None	RIGID	Typical
68	M68	N91A	N94A			RIGID	None	None	RIGID	Typical
69	M69	N90	N93A			RIGID	None	None	RIGID	Typical
70	MP1B	N95	N96			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
71	MP2B	N97	N100			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
72	MP3B	N98	N99			Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
73	M73	N103	N106			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
74	M74	N105	N108			RIGID	None	None	RIGID	Typical
75	M75	N104	N107			RIGID	None	None	RIGID	Typical
76	M76	N101	N102			Support Rail	Beam	Pipe	A53 Gr.B	Typical
77	M77	N113	N116			RIGID	None	None	RIGID	Typical
78	M78	N115	N118			RIGID	None	None	RIGID	Typical
79	M79	N114	N117			RIGID	None	None	RIGID	Typical
80	M80	N111	N112			Support Rail	Beam	Pipe	A53 Gr.B	Typical
81	M81	N123	N126			RIGID	None	None	RIGID	Typical
82	M82	N125	N128			RIGID	None	None	RIGID	Typical
83	M83	N124	N127			RIGID	None	None	RIGID	Typical
84	M84	N121	N122			Support Rail	Beam	Pipe	A53 Gr.B	Typical
85	M85	N109	N130		180	Support rail Corner Brace	Beam	Single Angle	A36 Gr.36	Typical
86	M86	N119	N110		180	Support rail Corner Brace	Beam	Single Angle	A36 Gr.36	Typical
87	M87	N129	N120		180	Support rail Corner Brace	Beam	Single Angle	A36 Gr.36	Typical
88	M88	N132	N131			Kicker	Beam	Double Angl...	A36 Gr.36	Typical
89	M89	N134	N133			Kicker	Beam	Double Angl...	A36 Gr.36	Typical
90	M90	N136	N135			Kicker	Beam	Double Angl...	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
1	M1						Yes			None
2	M2						Yes			None
3	M3						Yes			None
4	M4		BenPIN				Yes			None
5	M5						Yes			None
6	M6		BenPIN				Yes			None
7	M7						Yes			None
8	M8						Yes			None
9	M9		BenPIN				Yes			None
10	M10		BenPIN				Yes			None
11	M12						Yes			None
12	M13						Yes			None
13	M14						Yes			None
14	M15						Yes			None
15	M16						Yes			None
16	M17		BenPIN				Yes			None
17	M18						Yes			None
18	M19		BenPIN				Yes			None
19	M20						Yes			None
20	M21						Yes			None
21	M22		BenPIN				Yes			None
22	M23		BenPIN				Yes			None
23	M25						Yes			None
24	M26						Yes			None
25	M27						Yes			None
26	M28						Yes			None
27	M29						Yes			None
28	M30		BenPIN				Yes			None
29	M31						Yes			None
30	M32		BenPIN				Yes			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
31	M33						Yes			None
32	M34						Yes			None
33	M35		BenPIN				Yes			None
34	M36		BenPIN				Yes			None
35	MP5B						Yes			None
36	M38						Yes			None
37	M39						Yes			None
38	MP8A						Yes			None
39	M53						Yes			None
40	M54						Yes			None
41	M55						Yes			None
42	M56						Yes			None
43	M57						Yes			None
44	M58						Yes			None
45	M59						Yes			None
46	M60						Yes			None
47	M61						Yes			None
48	M62						Yes			None
49	M63						Yes			None
50	M64						Yes			None
51	MP5A						Yes			None
52	MP5C						Yes			None
53	M55A						Yes			None
54	M56B						Yes			None
55	M55B						Yes			None
56	M56C						Yes			None
57	M57A						Yes			None
58	MP1A						Yes			None
59	MP2A						Yes			None
60	MP3A						Yes			None
61	M61A						Yes			None
62	M62A						Yes			None
63	M63A						Yes			None
64	MP1C						Yes			None
65	MP2C						Yes			None
66	MP3C						Yes			None
67	M67						Yes			None
68	M68						Yes			None
69	M69						Yes			None
70	MP1B						Yes			None
71	MP2B						Yes			None
72	MP3B						Yes			None
73	M73						Yes			None
74	M74						Yes			None
75	M75						Yes			None
76	M76						Yes			None
77	M77						Yes			None
78	M78						Yes			None
79	M79						Yes			None
80	M80						Yes			None
81	M81						Yes			None
82	M82						Yes			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
83	M83						Yes			None
84	M84						Yes			None
85	M85						Yes			None
86	M86						Yes			None
87	M87						Yes			None
88	M88	BenPIN	BenPIN				Yes			None
89	M89	BenPIN	BenPIN				Yes			None
90	M90	BenPIN	BenPIN				Yes			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Corner Brace	.54			Lbyy			.65	.65		Lateral
2	M2	Corner Brace	.54			Lbyy			.65	.65		Lateral
3	M3	Footrail Con...	.18			Lbyy			.65	.65		Lateral
4	M4	Footrail Con...	.36			Lbyy			.8	.8		Lateral
5	M5	Footrail Con...	.18			Lbyy			.65	.65		Lateral
6	M6	Footrail Con...	.36			Lbyy			.8	.8		Lateral
7	M7	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
8	M8	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
9	M9	Corner Brace	.27			Lbyy			.8	.8		Lateral
10	M10	Corner Brace	.27			Lbyy			.8	.8		Lateral
11	M12	Plan Bracing	2.789			Lbyy			.65	.65		Lateral
12	M13	Plan Bracing	2.791			Lbyy			.65	.65		Lateral
13	M14	Corner Brace	.54			Lbyy			.65	.65		Lateral
14	M15	Corner Brace	.54			Lbyy			.65	.65		Lateral
15	M16	Footrail Con...	.18			Lbyy			.65	.65		Lateral
16	M17	Footrail Con...	.36			Lbyy			.8	.8		Lateral
17	M18	Footrail Con...	.18			Lbyy			.65	.65		Lateral
18	M19	Footrail Con...	.36			Lbyy			.8	.8		Lateral
19	M20	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
20	M21	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
21	M22	Corner Brace	.27			Lbyy			.8	.8		Lateral
22	M23	Corner Brace	.27			Lbyy			.8	.8		Lateral
23	M25	Plan Bracing	2.79			Lbyy			.65	.65		Lateral
24	M26	Plan Bracing	2.79			Lbyy			.65	.65		Lateral
25	M27	Corner Brace	.539			Lbyy			.65	.65		Lateral
26	M28	Corner Brace	.541			Lbyy			.65	.65		Lateral
27	M29	Footrail Con...	.18			Lbyy			.65	.65		Lateral
28	M30	Footrail Con...	.36			Lbyy			.8	.8		Lateral
29	M31	Footrail Con...	.18			Lbyy			.65	.65		Lateral
30	M32	Footrail Con...	.36			Lbyy			.8	.8		Lateral
31	M33	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
32	M34	Grating Ang...	4.708			Lbyy			.65	.65		Lateral
33	M35	Corner Brace	.27			Lbyy			.8	.8		Lateral
34	M36	Corner Brace	.27			Lbyy			.8	.8		Lateral
35	MP5B	Standoff Arm	5.658			Lbyy			2.1	2.1		Lateral
36	M38	Plan Bracing	2.789			Lbyy			.65	.65		Lateral
37	M39	Plan Bracing	2.791			Lbyy			.65	.65		Lateral
38	MP8A	Footrails	13.5			Lbyy			1	1		Lateral
39	MP5A	HSS4x4x4	5.657			Lbyy			2.1	2.1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
40	MP5C	Standoff Arm	5.657			Lbyy			2.1	2.1		Lateral
41	M55A	Footrails	13.5			Lbyy			1	1		Lateral
42	M56B	Footrails	13.5			Lbyy			1	1		Lateral
43	MP1A	Mount Pipe1	9			Lbyy						Lateral
44	MP2A	Mount Pipe1	8			Lbyy						Lateral
45	MP3A	Mount Pipe1	8			Lbyy						Lateral
46	MP1C	Mount Pipe1	9			Lbyy						Lateral
47	MP2C	Mount Pipe1	8			Lbyy						Lateral
48	MP3C	Mount Pipe1	8			Lbyy						Lateral
49	MP1B	Mount Pipe1	9			Lbyy						Lateral
50	MP2B	Mount Pipe1	8			Lbyy						Lateral
51	MP3B	Mount Pipe1	8			Lbyy						Lateral
52	M76	Support Rail	13.5			Lbyy						Lateral
53	M80	Support Rail	13.5			Lbyy						Lateral
54	M84	Support Rail	13.5			Lbyy						Lateral
55	M85	Support rail ...	3.19			Lbyy						Lateral
56	M86	Support rail ...	3.19			Lbyy						Lateral
57	M87	Support rail ...	3.19			Lbyy						Lateral
58	M88	Kicker	4.95			Lbyy						Lateral
59	M89	Kicker	4.95			Lbyy						Lateral
60	M90	Kicker	4.95			Lbyy						Lateral

Cold Formed Steel Design Parameters

Label	Shape	Lengt...	Lbyy[ft]	Lbzz[ft]	Lcomp t...	Lcomp ...	L-torque...	Kyy	Kzz	Cm-...	Cm-...	Cb	R	a[ft]	y sw...	z sw...
No Data to Print ...																

Aluminum Design Parameters

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
No Data to Print ...											

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
No Data to Print ...			

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-51.5	3
2	MP3A	Y	-51.5	5
3	MP3B	Y	-51.5	3
4	MP3B	Y	-51.5	5
5	MP3C	Y	-51.5	3
6	MP3C	Y	-51.5	5
7	MP1A	Y	-20.35	2
8	MP1A	Y	-20.35	6
9	MP1B	Y	-20.35	2
10	MP1B	Y	-20.35	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP1C	Y	-20.35	2
12	MP1C	Y	-20.35	6
13	MP2A	Y	-61.4	1
14	MP2A	Y	-61.4	7
15	MP2B	Y	-61.4	1
16	MP2B	Y	-61.4	7
17	MP2C	Y	-61.4	1
18	MP2C	Y	-61.4	7
19	MP2A	Y	-11	5
20	MP2B	Y	-11	5
21	MP2C	Y	-11	5
22	MP1A	Y	-11.02	5
23	MP1B	Y	-11.02	5
24	MP1C	Y	-11.02	5
25	MP2A	Y	-75	3
26	MP2B	Y	-75	3
27	MP2C	Y	-75	3
28	MP1A	Y	-46.2	3
29	MP1B	Y	-46.2	3
30	MP1C	Y	-46.2	3
31	MP2A	Y	-88	3
32	MP2B	Y	-88	3
33	MP2C	Y	-88	3
34	MP5A	Y	-1.8	1
35	MP5B	Y	-1.8	1
36	MP5C	Y	-1.8	1

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-76.744	3
2	MP3A	Y	-76.744	5
3	MP3B	Y	-76.744	3
4	MP3B	Y	-76.744	5
5	MP3C	Y	-76.744	3
6	MP3C	Y	-76.744	5
7	MP1A	Y	-69.629	2
8	MP1A	Y	-69.629	6
9	MP1B	Y	-69.629	2
10	MP1B	Y	-69.629	6
11	MP1C	Y	-69.629	2
12	MP1C	Y	-69.629	6
13	MP2A	Y	-214.642	1
14	MP2A	Y	-214.642	7
15	MP2B	Y	-214.642	1
16	MP2B	Y	-214.642	7
17	MP2C	Y	-214.642	1
18	MP2C	Y	-214.642	7
19	MP2A	Y	-26.634	5
20	MP2B	Y	-26.634	5
21	MP2C	Y	-26.634	5
22	MP1A	Y	-16.621	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP1B	Y	-16.621	5
24	MP1C	Y	-16.621	5
25	MP2A	Y	-81.828	3
26	MP2B	Y	-81.828	3
27	MP2C	Y	-81.828	3
28	MP1A	Y	-61.869	3
29	MP1B	Y	-61.869	3
30	MP1C	Y	-61.869	3
31	MP2A	Y	-75.093	3
32	MP2B	Y	-75.093	3
33	MP2C	Y	-75.093	3
34	MP5A	Y	-9.339	1
35	MP5B	Y	-9.339	1
36	MP5C	Y	-9.339	1

Member Point Loads (BLC 3 : Antenna W Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-84.964	3
2	MP3A	Z	-84.964	5
3	MP3B	Z	-48.485	3
4	MP3B	Z	-48.485	5
5	MP3C	Z	-48.485	3
6	MP3C	Z	-48.485	5
7	MP1A	Z	-99.4	2
8	MP1A	Z	-99.4	6
9	MP1B	Z	-49.098	2
10	MP1B	Z	-49.098	6
11	MP1C	Z	-49.098	2
12	MP1C	Z	-49.098	6
13	MP2A	Z	-304.365	1
14	MP2A	Z	-304.365	7
15	MP2B	Z	-174.586	1
16	MP2B	Z	-174.586	7
17	MP2C	Z	-174.586	1
18	MP2C	Z	-174.586	7
19	MP2A	Z	-12.331	5
20	MP2B	Z	-7.067	5
21	MP2C	Z	-7.067	5
22	MP1A	Z	-6.165	5
23	MP1B	Z	-3.365	5
24	MP1C	Z	-3.365	5
25	MP2A	Z	-29.624	3
26	MP2B	Z	-25.239	3
27	MP2C	Z	-25.239	3
28	MP1A	Z	-27.97	3
29	MP1B	Z	-16.665	3
30	MP1C	Z	-16.665	3
31	MP2A	Z	-30.827	3
32	MP2B	Z	-22.594	3
33	MP2C	Z	-22.594	3
34	MP5A	Z	-3.91	1

Member Point Loads (BLC 3 : Antenna W Front) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP5B	Z	-3.91	1
36	MP5C	Z	-3.91	1

Member Point Loads (BLC 4 : Antenna Wi Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-30.756	3
2	MP3A	Z	-30.756	5
3	MP3B	Z	-18.547	3
4	MP3B	Z	-18.547	5
5	MP3C	Z	-18.547	3
6	MP3C	Z	-18.547	5
7	MP1A	Z	-35.791	2
8	MP1A	Z	-35.791	6
9	MP1B	Z	-19.644	2
10	MP1B	Z	-19.644	6
11	MP1C	Z	-19.644	2
12	MP1C	Z	-19.644	6
13	MP2A	Z	-102.789	1
14	MP2A	Z	-102.789	7
15	MP2B	Z	-61.694	1
16	MP2B	Z	-61.694	7
17	MP2C	Z	-61.694	1
18	MP2C	Z	-61.694	7
19	MP2A	Z	-5.093	5
20	MP2B	Z	-3.595	5
21	MP2C	Z	-3.595	5
22	MP1A	Z	-2.941	5
23	MP1B	Z	-2.082	5
24	MP1C	Z	-2.082	5
25	MP2A	Z	-11.795	3
26	MP2B	Z	-10.349	3
27	MP2C	Z	-10.349	3
28	MP1A	Z	-11.191	3
29	MP1B	Z	-7.318	3
30	MP1C	Z	-7.318	3
31	MP2A	Z	-11.262	3
32	MP2B	Z	-9.165	3
33	MP2C	Z	-9.165	3
34	MP5A	Z	-3.29	1
35	MP5B	Z	-3.29	1
36	MP5C	Z	-3.29	1

Member Point Loads (BLC 5 : Antenna W Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	36.325	3
2	MP3A	X	36.325	5
3	MP3B	X	72.804	3
4	MP3B	X	72.804	5
5	MP3C	X	72.804	3
6	MP3C	X	72.804	5
7	MP1A	X	32.33	2

Member Point Loads (BLC 5 : Antenna W Side) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP1A	X	32.33	6
9	MP1B	X	82.632	2
10	MP1B	X	82.632	6
11	MP1C	X	82.632	2
12	MP1C	X	82.632	6
13	MP2A	X	131.327	1
14	MP2A	X	131.327	7
15	MP2B	X	261.105	1
16	MP2B	X	261.105	7
17	MP2C	X	261.105	1
18	MP2C	X	261.105	7
19	MP2A	X	10.623	5
20	MP2B	X	21.152	5
21	MP2C	X	21.152	5
22	MP1A	X	4.863	5
23	MP1B	X	10.464	5
24	MP1C	X	10.464	5
25	MP2A	X	47.555	3
26	MP2B	X	56.325	3
27	MP2C	X	56.325	3
28	MP1A	X	25.793	3
29	MP1B	X	48.404	3
30	MP1C	X	48.404	3
31	MP2A	X	39.7	3
32	MP2B	X	56.166	3
33	MP2C	X	56.166	3
34	MP5A	X	2.532	1
35	MP5B	X	2.532	1
36	MP5C	X	2.532	1

Member Point Loads (BLC 6 : Antenna Wi Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	14.478	3
2	MP3A	X	14.478	5
3	MP3B	X	26.687	3
4	MP3B	X	26.687	5
5	MP3C	X	26.687	3
6	MP3C	X	26.687	5
7	MP1A	X	14.262	2
8	MP1A	X	14.262	6
9	MP1B	X	30.409	2
10	MP1B	X	30.409	6
11	MP1C	X	30.409	2
12	MP1C	X	30.409	6
13	MP2A	X	47.996	1
14	MP2A	X	47.996	7
15	MP2B	X	89.091	1
16	MP2B	X	89.091	7
17	MP2C	X	89.091	1
18	MP2C	X	89.091	7
19	MP2A	X	6.191	5

Member Point Loads (BLC 6 : Antenna Wi Side) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP2B	X	9.187	5
21	MP2C	X	9.187	5
22	MP1A	X	3.592	5
23	MP1B	X	5.31	5
24	MP1C	X	5.31	5
25	MP2A	X	19.734	3
26	MP2B	X	22.627	3
27	MP2C	X	22.627	3
28	MP1A	X	12.054	3
29	MP1B	X	19.799	3
30	MP1C	X	19.799	3
31	MP2A	X	16.931	3
32	MP2B	X	21.126	3
33	MP2C	X	21.126	3
34	MP5A	X	2.473	1
35	MP5B	X	2.473	1
36	MP5C	X	2.473	1

Member Point Loads (BLC 7 : Service Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M8	Y	-500	%10

Member Point Loads (BLC 8 : Service Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M8	Y	-500	%90

Member Distributed Loads (BLC 10 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-13.621	-13.621	0	%100
2	M2	Y	-13.621	-13.621	0	%100
3	M3	Y	-13.451	-13.451	0	%100
4	M4	Y	-13.451	-13.451	0	%100
5	M5	Y	-13.451	-13.451	0	%100
6	M6	Y	-13.451	-13.451	0	%100
7	M7	Y	-7.832	-7.832	0	%100
8	M8	Y	-7.832	-7.832	0	%100
9	M9	Y	-13.621	-13.621	0	%100
10	M10	Y	-13.621	-13.621	0	%100
11	M12	Y	-15.664	-15.664	0	%100
12	M13	Y	-15.664	-15.664	0	%100
13	M14	Y	-13.621	-13.621	0	%100
14	M15	Y	-13.621	-13.621	0	%100
15	M16	Y	-13.451	-13.451	0	%100
16	M17	Y	-13.451	-13.451	0	%100
17	M18	Y	-13.451	-13.451	0	%100
18	M19	Y	-13.451	-13.451	0	%100
19	M20	Y	-7.832	-7.832	0	%100
20	M21	Y	-7.832	-7.832	0	%100
21	M22	Y	-13.621	-13.621	0	%100

Member Distributed Loads (BLC 10 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
22	M23	Y	-13.621	-13.621	0	%100
23	M25	Y	-15.664	-15.664	0	%100
24	M26	Y	-15.664	-15.664	0	%100
25	M27	Y	-13.621	-13.621	0	%100
26	M28	Y	-13.621	-13.621	0	%100
27	M29	Y	-13.451	-13.451	0	%100
28	M30	Y	-13.451	-13.451	0	%100
29	M31	Y	-13.451	-13.451	0	%100
30	M32	Y	-13.451	-13.451	0	%100
31	M33	Y	-7.832	-7.832	0	%100
32	M34	Y	-7.832	-7.832	0	%100
33	M35	Y	-13.621	-13.621	0	%100
34	M36	Y	-13.621	-13.621	0	%100
35	MP5B	Y	-15.664	-15.664	0	%100
36	M38	Y	-15.664	-15.664	0	%100
37	M39	Y	-15.664	-15.664	0	%100
38	MP8A	Y	-9.896	-9.896	0	%100
39	MP5A	Y	-15.664	-15.664	0	%100
40	MP5C	Y	-15.664	-15.664	0	%100
41	M55A	Y	-9.896	-9.896	0	%100
42	M56B	Y	-9.896	-9.896	0	%100
43	MP1A	Y	-8.826	-8.826	0	%100
44	MP2A	Y	-8.826	-8.826	0	%100
45	MP3A	Y	-8.826	-8.826	0	%100
46	MP1C	Y	-8.826	-8.826	0	%100
47	MP2C	Y	-8.826	-8.826	0	%100
48	MP3C	Y	-8.826	-8.826	0	%100
49	MP1B	Y	-8.826	-8.826	0	%100
50	MP2B	Y	-8.826	-8.826	0	%100
51	MP3B	Y	-8.826	-8.826	0	%100
52	M76	Y	-11.233	-11.233	0	%100
53	M80	Y	-11.233	-11.233	0	%100
54	M84	Y	-11.233	-11.233	0	%100
55	M85	Y	-10.556	-10.556	0	%100
56	M86	Y	-10.556	-10.556	0	%100
57	M87	Y	-10.556	-10.556	0	%100
58	M88	Y	-13.195	-13.195	0	%100
59	M89	Y	-13.195	-13.195	0	%100
60	M90	Y	-13.195	-13.195	0	%100

Member Distributed Loads (BLC 11 : Structure W Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-30.076	-30.076	0	%100
2	M2	PZ	-30.076	-30.076	0	%100
3	M3	PZ	-30.076	-30.076	0	%100
4	M4	PZ	-30.076	-30.076	0	%100
5	M5	PZ	-30.076	-30.076	0	%100
6	M6	PZ	-30.076	-30.076	0	%100
7	M7	PZ	-10.025	-10.025	0	%100
8	M8	PZ	-10.025	-10.025	0	%100
9	M9	PZ	-30.076	-30.076	0	%100

Member Distributed Loads (BLC 11 : Structure W Front) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
10	M10	PZ	-30.076	-30.076	0	%100
11	M12	PZ	-20.05	-20.05	0	%100
12	M13	PZ	-20.05	-20.05	0	%100
13	M14	PZ	-30.076	-30.076	0	%100
14	M15	PZ	-30.076	-30.076	0	%100
15	M16	PZ	-30.076	-30.076	0	%100
16	M17	PZ	-30.076	-30.076	0	%100
17	M18	PZ	-30.076	-30.076	0	%100
18	M19	PZ	-30.076	-30.076	0	%100
19	M20	PZ	-10.025	-10.025	0	%100
20	M21	PZ	-10.025	-10.025	0	%100
21	M22	PZ	-30.076	-30.076	0	%100
22	M23	PZ	-30.076	-30.076	0	%100
23	M25	PZ	-20.05	-20.05	0	%100
24	M26	PZ	-20.05	-20.05	0	%100
25	M27	PZ	-30.076	-30.076	0	%100
26	M28	PZ	-30.076	-30.076	0	%100
27	M29	PZ	-30.076	-30.076	0	%100
28	M30	PZ	-30.076	-30.076	0	%100
29	M31	PZ	-30.076	-30.076	0	%100
30	M32	PZ	-30.076	-30.076	0	%100
31	M33	PZ	-10.025	-10.025	0	%100
32	M34	PZ	-10.025	-10.025	0	%100
33	M35	PZ	-30.076	-30.076	0	%100
34	M36	PZ	-30.076	-30.076	0	%100
35	MP5B	PZ	-20.05	-20.05	0	%100
36	M38	PZ	-20.05	-20.05	0	%100
37	M39	PZ	-20.05	-20.05	0	%100
38	MP8A	PZ	-8.647	-8.647	0	%100
39	MP5A	PZ	-20.05	-20.05	0	%100
40	MP5C	PZ	-20.05	-20.05	0	%100
41	M55A	PZ	-8.647	-8.647	0	%100
42	M56B	PZ	-8.647	-8.647	0	%100
43	MP1A	PZ	-7.143	-7.143	0	%100
44	MP2A	PZ	-7.143	-7.143	0	%100
45	MP3A	PZ	-7.143	-7.143	0	%100
46	MP1C	PZ	-7.143	-7.143	0	%100
47	MP2C	PZ	-7.143	-7.143	0	%100
48	MP3C	PZ	-7.143	-7.143	0	%100
49	MP1B	PZ	-7.143	-7.143	0	%100
50	MP2B	PZ	-7.143	-7.143	0	%100
51	MP3B	PZ	-7.143	-7.143	0	%100
52	M76	PZ	-10.526	-10.526	0	%100
53	M80	PZ	-10.526	-10.526	0	%100
54	M84	PZ	-10.526	-10.526	0	%100
55	M85	PZ	-15.038	-15.038	0	%100
56	M86	PZ	-15.038	-15.038	0	%100
57	M87	PZ	-15.038	-15.038	0	%100
58	M88	PZ	-10.025	-10.025	0	%100
59	M89	PZ	-10.025	-10.025	0	%100
60	M90	PZ	-10.025	-10.025	0	%100

Member Distributed Loads (BLC 12 : Structure Wi Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-12.533	-12.533	0	%100
2	M2	PZ	-12.533	-12.533	0	%100
3	M3	PZ	-12.533	-12.533	0	%100
4	M4	PZ	-12.533	-12.533	0	%100
5	M5	PZ	-12.533	-12.533	0	%100
6	M6	PZ	-12.533	-12.533	0	%100
7	M7	PZ	-6.345	-6.345	0	%100
8	M8	PZ	-6.345	-6.345	0	%100
9	M9	PZ	-12.533	-12.533	0	%100
10	M10	PZ	-12.533	-12.533	0	%100
11	M12	PZ	-9.439	-9.439	0	%100
12	M13	PZ	-9.439	-9.439	0	%100
13	M14	PZ	-12.533	-12.533	0	%100
14	M15	PZ	-12.533	-12.533	0	%100
15	M16	PZ	-12.533	-12.533	0	%100
16	M17	PZ	-12.533	-12.533	0	%100
17	M18	PZ	-12.533	-12.533	0	%100
18	M19	PZ	-12.533	-12.533	0	%100
19	M20	PZ	-6.345	-6.345	0	%100
20	M21	PZ	-6.345	-6.345	0	%100
21	M22	PZ	-12.533	-12.533	0	%100
22	M23	PZ	-12.533	-12.533	0	%100
23	M25	PZ	-9.439	-9.439	0	%100
24	M26	PZ	-9.439	-9.439	0	%100
25	M27	PZ	-12.533	-12.533	0	%100
26	M28	PZ	-12.533	-12.533	0	%100
27	M29	PZ	-12.533	-12.533	0	%100
28	M30	PZ	-12.533	-12.533	0	%100
29	M31	PZ	-12.533	-12.533	0	%100
30	M32	PZ	-12.533	-12.533	0	%100
31	M33	PZ	-6.345	-6.345	0	%100
32	M34	PZ	-6.345	-6.345	0	%100
33	M35	PZ	-12.533	-12.533	0	%100
34	M36	PZ	-12.533	-12.533	0	%100
35	MP5B	PZ	-9.439	-9.439	0	%100
36	M38	PZ	-9.439	-9.439	0	%100
37	M39	PZ	-9.439	-9.439	0	%100
38	MP8A	PZ	-5.919	-5.919	0	%100
39	MP5A	PZ	-9.439	-9.439	0	%100
40	MP5C	PZ	-9.439	-9.439	0	%100
41	M55A	PZ	-5.919	-5.919	0	%100
42	M56B	PZ	-5.919	-5.919	0	%100
43	MP1A	PZ	-5.455	-5.455	0	%100
44	MP2A	PZ	-5.455	-5.455	0	%100
45	MP3A	PZ	-5.455	-5.455	0	%100
46	MP1C	PZ	-5.455	-5.455	0	%100
47	MP2C	PZ	-5.455	-5.455	0	%100
48	MP3C	PZ	-5.455	-5.455	0	%100
49	MP1B	PZ	-5.455	-5.455	0	%100
50	MP2B	PZ	-5.455	-5.455	0	%100
51	MP3B	PZ	-5.455	-5.455	0	%100
52	M76	PZ	-6.5	-6.5	0	%100

Member Distributed Loads (BLC 12 : Structure Wi Front) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M80	PZ	-6.5	-6.5	0	%100
54	M84	PZ	-6.5	-6.5	0	%100
55	M85	PZ	-7.892	-7.892	0	%100
56	M86	PZ	-7.892	-7.892	0	%100
57	M87	PZ	-7.892	-7.892	0	%100
58	M88	PZ	-6.345	-6.345	0	%100
59	M89	PZ	-6.345	-6.345	0	%100
60	M90	PZ	-6.345	-6.345	0	%100

Member Distributed Loads (BLC 13 : Structure W Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	30.076	30.076	0	%100
2	M2	PX	30.076	30.076	0	%100
3	M3	PX	30.076	30.076	0	%100
4	M4	PX	30.076	30.076	0	%100
5	M5	PX	30.076	30.076	0	%100
6	M6	PX	30.076	30.076	0	%100
7	M7	PX	10.025	10.025	0	%100
8	M8	PX	10.025	10.025	0	%100
9	M9	PX	30.076	30.076	0	%100
10	M10	PX	30.076	30.076	0	%100
11	M12	PX	20.05	20.05	0	%100
12	M13	PX	20.05	20.05	0	%100
13	M14	PX	30.076	30.076	0	%100
14	M15	PX	30.076	30.076	0	%100
15	M16	PX	30.076	30.076	0	%100
16	M17	PX	30.076	30.076	0	%100
17	M18	PX	30.076	30.076	0	%100
18	M19	PX	30.076	30.076	0	%100
19	M20	PX	10.025	10.025	0	%100
20	M21	PX	10.025	10.025	0	%100
21	M22	PX	30.076	30.076	0	%100
22	M23	PX	30.076	30.076	0	%100
23	M25	PX	20.05	20.05	0	%100
24	M26	PX	20.05	20.05	0	%100
25	M27	PX	30.076	30.076	0	%100
26	M28	PX	30.076	30.076	0	%100
27	M29	PX	30.076	30.076	0	%100
28	M30	PX	30.076	30.076	0	%100
29	M31	PX	30.076	30.076	0	%100
30	M32	PX	30.076	30.076	0	%100
31	M33	PX	10.025	10.025	0	%100
32	M34	PX	10.025	10.025	0	%100
33	M35	PX	30.076	30.076	0	%100
34	M36	PX	30.076	30.076	0	%100
35	MP5B	PX	20.05	20.05	0	%100
36	M38	PX	20.05	20.05	0	%100
37	M39	PX	20.05	20.05	0	%100
38	MP8A	PX	8.647	8.647	0	%100
39	MP5A	PX	20.05	20.05	0	%100
40	MP5C	PX	20.05	20.05	0	%100

Member Distributed Loads (BLC 13 : Structure W Side) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
41	M55A	PX	8.647	8.647	0	%100
42	M56B	PX	8.647	8.647	0	%100
43	MP1A	PX	7.143	7.143	0	%100
44	MP2A	PX	7.143	7.143	0	%100
45	MP3A	PX	7.143	7.143	0	%100
46	MP1C	PX	7.143	7.143	0	%100
47	MP2C	PX	7.143	7.143	0	%100
48	MP3C	PX	7.143	7.143	0	%100
49	MP1B	PX	7.143	7.143	0	%100
50	MP2B	PX	7.143	7.143	0	%100
51	MP3B	PX	7.143	7.143	0	%100
52	M76	PX	10.526	10.526	0	%100
53	M80	PX	10.526	10.526	0	%100
54	M84	PX	10.526	10.526	0	%100
55	M85	PX	15.038	15.038	0	%100
56	M86	PX	15.038	15.038	0	%100
57	M87	PX	15.038	15.038	0	%100
58	M88	PX	10.025	10.025	0	%100
59	M89	PX	10.025	10.025	0	%100
60	M90	PX	10.025	10.025	0	%100

Member Distributed Loads (BLC 14 : Structure Wi Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	12.533	12.533	0	%100
2	M2	PX	12.533	12.533	0	%100
3	M3	PX	12.533	12.533	0	%100
4	M4	PX	12.533	12.533	0	%100
5	M5	PX	12.533	12.533	0	%100
6	M6	PX	12.533	12.533	0	%100
7	M7	PX	6.345	6.345	0	%100
8	M8	PX	6.345	6.345	0	%100
9	M9	PX	12.533	12.533	0	%100
10	M10	PX	12.533	12.533	0	%100
11	M12	PX	9.439	9.439	0	%100
12	M13	PX	9.439	9.439	0	%100
13	M14	PX	12.533	12.533	0	%100
14	M15	PX	12.533	12.533	0	%100
15	M16	PX	12.533	12.533	0	%100
16	M17	PX	12.533	12.533	0	%100
17	M18	PX	12.533	12.533	0	%100
18	M19	PX	12.533	12.533	0	%100
19	M20	PX	6.345	6.345	0	%100
20	M21	PX	6.345	6.345	0	%100
21	M22	PX	12.533	12.533	0	%100
22	M23	PX	12.533	12.533	0	%100
23	M25	PX	9.439	9.439	0	%100
24	M26	PX	9.439	9.439	0	%100
25	M27	PX	12.533	12.533	0	%100
26	M28	PX	12.533	12.533	0	%100
27	M29	PX	12.533	12.533	0	%100
28	M30	PX	12.533	12.533	0	%100

Member Distributed Loads (BLC 14 : Structure Wi Side) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
29	M31	PX	12.533	12.533	0	%100
30	M32	PX	12.533	12.533	0	%100
31	M33	PX	6.345	6.345	0	%100
32	M34	PX	6.345	6.345	0	%100
33	M35	PX	12.533	12.533	0	%100
34	M36	PX	12.533	12.533	0	%100
35	MP5B	PX	9.439	9.439	0	%100
36	M38	PX	9.439	9.439	0	%100
37	M39	PX	9.439	9.439	0	%100
38	MP8A	PX	5.919	5.919	0	%100
39	MP5A	PX	9.439	9.439	0	%100
40	MP5C	PX	9.439	9.439	0	%100
41	M55A	PX	5.919	5.919	0	%100
42	M56B	PX	5.919	5.919	0	%100
43	MP1A	PX	5.455	5.455	0	%100
44	MP2A	PX	5.455	5.455	0	%100
45	MP3A	PX	5.455	5.455	0	%100
46	MP1C	PX	5.455	5.455	0	%100
47	MP2C	PX	5.455	5.455	0	%100
48	MP3C	PX	5.455	5.455	0	%100
49	MP1B	PX	5.455	5.455	0	%100
50	MP2B	PX	5.455	5.455	0	%100
51	MP3B	PX	5.455	5.455	0	%100
52	M76	PX	6.5	6.5	0	%100
53	M80	PX	6.5	6.5	0	%100
54	M84	PX	6.5	6.5	0	%100
55	M85	PX	7.892	7.892	0	%100
56	M86	PX	7.892	7.892	0	%100
57	M87	PX	7.892	7.892	0	%100
58	M88	PX	6.345	6.345	0	%100
59	M89	PX	6.345	6.345	0	%100
60	M90	PX	6.345	6.345	0	%100

Member Distributed Loads (BLC 16 : BLC 10 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M7	Y	-1.786	-7.092	0	2.354
2	M7	Y	-7.092	-12.399	2.354	4.708
3	M8	Y	-1.785	-7.089	0	2.354
4	M8	Y	-7.089	-12.393	2.354	4.708
5	M12	Y	-13.443	-13.443	1.774	2.774
6	M13	Y	-13.449	-13.449	.015	1.015
7	MP5A	Y	-15.823	-15.823	1.16	3.027
8	M33	Y	-1.786	-7.093	0	2.354
9	M33	Y	-7.093	-12.4	2.354	4.708
10	M34	Y	-1.785	-7.091	0	2.354
11	M34	Y	-7.091	-12.396	2.354	4.708
12	MP5B	Y	-15.825	-15.825	1.16	3.027
13	M38	Y	-13.446	-13.446	1.774	2.774
14	M39	Y	-13.452	-13.452	.016	1.016
15	M20	Y	-1.785	-7.089	0	2.354
16	M20	Y	-7.089	-12.394	2.354	4.708

Member Distributed Loads (BLC 16 : BLC 10 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
17	M21	Y	-1.786	-7.091	0	2.354
18	M21	Y	-7.091	-12.397	2.354	4.708
19	M25	Y	-13.447	-13.447	1.775	2.775
20	M26	Y	-13.443	-13.443	.015	1.015
21	MP5C	Y	-15.822	-15.822	1.16	3.027

Member Area Loads (BLC 9 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N7	N9	N8		Y	Two Way	0
2	N27	N29	N28		Y	Two Way	0
3	N17	N18	N19		Y	Two Way	0

Member Area Loads (BLC 10 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N7	N9	N8		Y	Two Way	-.013
2	N27	N29	N28		Y	Two Way	-.013
3	N17	N18	N19		Y	Two Way	-.013

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	CG						
2	N56	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N10						
4	N67	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N69	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N131	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N132						
8	N133	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
9	N134						
10	N135	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
11	N136						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N56	max	1925.387	4	437.432	6	4272.744	1	.538	6	2.843	3	.556	3
2		min	-1926.311	3	-57.396	1	-2544.725	2	.011	1	-2.843	4	-.558	4
3	N67	max	3735.05	4	480.316	10	1617.13	1	.232	1	1.271	1	.151	9
4		min	-2243.991	3	-204.982	9	-2480.105	2	-.852	10	-1.278	2	-.508	5
5	N69	max	2161.128	4	426.415	8	1698.83	1	.251	1	1.449	2	.488	5
6		min	-3651.646	3	-16.481	3	-2564.326	2	-.424	2	-1.442	1	-.12	2
7	N131	max	38.272	4	2885.861	5	-512.634	2	0	2	0	3	0	4
8		min	-38.211	3	503.681	2	-2823.771	5	0	5	0	4	0	3
9	N133	max	-507.022	3	2862.84	8	1406.439	8	0	4	0	3	0	3
10		min	-2422.406	8	568.069	3	274.081	3	0	3	0	4	0	4
11	N135	max	2421.794	7	2862.145	7	1406.106	7	0	3	0	3	0	3
12		min	505.77	4	566.62	4	273.357	4	0	4	0	4	0	4
13	Totals:	max	7215.176	4	9376.605	5	7008.768	1						

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
14		min	-7215.162	3	3352.944	2	-7008.772	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1	M1	1	max	479.617	1	461.445	6	221.124	3	.053	8	.084	4	.414	6
2			min	-422.108	2	16.803	1	-234.902	4	-.004	3	-.085	3	-.039	1
3		2	max	476.804	1	457.952	6	216.251	3	.053	8	.052	4	.352	6
4			min	-419.295	2	15.149	1	-230.03	4	-.004	3	-.056	3	-.041	1
5		3	max	473.991	1	454.46	6	211.379	3	.053	8	.049	2	.29	6
6			min	-416.482	2	13.495	1	-225.158	4	-.004	3	-.053	1	-.043	1
7		4	max	471.178	1	450.967	6	206.507	3	.053	8	.064	2	.229	6
8			min	-413.669	2	11.842	1	-220.285	4	-.004	3	-.071	1	-.045	1
9		5	max	468.365	1	447.475	6	201.635	3	.053	8	.079	2	.168	6
10			min	-410.856	2	10.188	1	-215.413	4	-.004	3	-.089	1	-.046	1
11	M2	1	max	411.47	2	523.205	8	221.193	2	.008	1	.068	3	.445	8
12			min	-366.54	1	-14.634	3	-207.148	1	-.065	6	-.07	4	-.029	3
13		2	max	408.657	2	519.712	8	219.568	2	.008	1	.068	3	.375	8
14			min	-363.727	1	-16.287	3	-205.523	1	-.065	6	-.067	4	-.027	3
15		3	max	405.844	2	516.22	8	217.944	2	.008	1	.069	3	.305	8
16			min	-360.914	1	-17.941	3	-203.899	1	-.065	6	-.065	4	-.024	3
17		4	max	403.031	2	512.727	8	216.32	2	.008	1	.071	3	.236	8
18			min	-358.101	1	-19.595	3	-202.275	1	-.065	6	-.064	4	-.022	3
19		5	max	400.218	2	509.235	8	214.696	2	.008	1	.073	3	.167	8
20			min	-355.288	1	-21.249	3	-200.651	1	-.065	6	-.063	4	-.019	3
21	M3	1	max	1630.261	1	793.669	6	167.691	3	-.021	10	.279	1	.418	6
22			min	-1498.623	2	48.649	10	-148.715	4	-.099	5	-.252	2	.015	10
23		2	max	1629.323	1	792.65	6	167.15	3	-.021	10	.28	1	.382	6
24			min	-1497.685	2	48.235	10	-148.173	4	-.099	5	-.252	2	.013	10
25		3	max	1628.385	1	791.632	6	166.608	3	-.021	10	.282	1	.346	6
26			min	-1496.748	2	47.822	10	-147.632	4	-.099	5	-.253	2	.011	10
27		4	max	1627.448	1	790.613	6	166.067	3	-.021	10	.283	1	.311	6
28			min	-1495.81	2	47.408	10	-147.091	4	-.099	5	-.254	2	.009	10
29		5	max	1626.51	1	789.594	6	165.526	3	-.021	10	.285	1	.275	6
30			min	-1494.872	2	46.995	10	-146.549	4	-.099	5	-.254	2	.007	10
31	M4	1	max	1432.263	1	789.762	6	715.589	2	.06	6	.285	1	.283	6
32			min	-1299.936	2	46.732	10	-800.083	1	-.015	10	-.254	2	.016	10
33		2	max	1432.263	1	787.724	6	711.258	2	.06	6	.213	1	.212	6
34			min	-1299.936	2	45.905	10	-795.752	1	-.015	10	-.19	2	.012	10
35		3	max	1432.263	1	785.687	6	706.927	2	.06	6	.142	1	.141	6
36			min	-1299.936	2	45.078	10	-791.421	1	-.015	10	-.126	2	.008	10
37		4	max	1432.263	1	783.649	6	702.596	2	.06	6	.071	1	.07	6
38			min	-1299.936	2	44.251	10	-787.09	1	-.015	10	-.063	2	.004	10
39		5	max	1432.263	1	781.612	6	698.265	2	.06	6	0	1	0	1
40			min	-1299.936	2	43.424	10	-782.76	1	-.015	10	0	1	0	1
41	M5	1	max	1856.314	3	792.032	8	366.338	4	.101	6	.122	4	.417	8
42			min	-1731.992	4	260.662	3	-394.242	3	.019	1	-.143	3	.127	3
43		2	max	1855.377	3	791.014	8	366.879	4	.101	6	.139	4	.381	8
44			min	-1731.054	4	260.248	3	-394.784	3	.019	1	-.161	3	.115	3
45		3	max	1854.439	3	789.995	8	367.421	4	.101	6	.155	4	.346	8
46			min	-1730.116	4	259.835	3	-395.325	3	.019	1	-.179	3	.104	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
47		4	max	1853.501	3	788.976	8	367.962	4	.101	6	.172	4	.31	8
48			min	-1729.179	4	259.422	3	-395.866	3	.019	1	-.196	3	.092	3
49		5	max	1852.564	3	787.958	8	368.504	4	.101	6	.188	4	.275	8
50			min	-1728.241	4	259.008	3	-396.408	3	.019	1	-.214	3	.08	3
51	M6	1	max	1803.619	3	788.114	8	601.417	3	0	3	.188	4	.282	8
52			min	-1680.347	4	259.513	3	-529.995	4	-.06	8	-.214	3	.093	3
53		2	max	1801.743	3	786.076	8	598.169	3	0	3	.141	4	.211	8
54			min	-1678.472	4	258.686	3	-526.747	4	-.06	8	-.16	3	.07	3
55		3	max	1799.868	3	784.039	8	594.92	3	0	3	.094	4	.141	8
56			min	-1676.596	4	257.859	3	-523.498	4	-.06	8	-.107	3	.046	3
57		4	max	1797.993	3	782.001	8	591.672	3	0	3	.047	4	.07	8
58			min	-1674.721	4	257.032	3	-520.25	4	-.06	8	-.053	3	.023	3
59		5	max	1796.117	3	779.964	8	588.424	3	0	3	0	1	0	1
60			min	-1672.846	4	256.205	3	-517.002	4	-.06	8	0	1	0	1
61	M7	1	max	2019.983	4	54.782	6	16.064	4	0	6	-.002	3	.096	6
62			min	-2182.458	3	8.843	1	-23.181	3	0	4	-.043	8	.006	1
63		2	max	2011.809	4	38.43	6	2.564	1	0	6	.002	1	.046	6
64			min	-2174.283	3	5.373	1	-12.418	7	0	4	-.011	6	.004	1
65		3	max	2003.634	4	18.957	6	5.137	3	0	6	.008	8	.023	9
66			min	-2166.109	3	1.903	1	-12.254	4	0	4	-.005	2	.002	1
67		4	max	1995.459	4	6.731	2	19.297	3	0	6	.007	3	.015	9
68			min	-2157.934	3	-6.41	5	-26.413	4	0	4	-.006	4	-.012	4
69		5	max	1987.284	4	3.261	2	33.456	3	0	6	.027	3	.035	3
70			min	-2149.759	3	-32.13	5	-40.572	4	0	4	-.031	4	-.042	4
71	M8	1	max	1689.151	2	29.999	2	739.322	9	0	2	.003	1	-.005	2
72			min	-1859.236	1	-37.069	1	10.441	3	0	5	-.212	9	-.238	9
73		2	max	1689.151	2	11.121	2	39.631	8	0	2	.024	9	.005	9
74			min	-1859.236	1	-18.19	1	-14.148	9	0	5	-.012	5	-.049	8
75		3	max	1689.151	2	.689	1	32.247	10	0	2	.011	10	.006	10
76			min	-1859.236	1	-11.94	6	-17.618	9	0	5	-.01	1	-.015	6
77		4	max	1689.151	2	19.567	1	28.777	10	0	2	.033	10	.036	10
78			min	-1859.236	1	-26.637	2	-21.088	9	0	5	-.008	9	-.022	9
79		5	max	1689.151	2	38.446	1	1.543	4	0	2	.029	1	.037	2
80			min	-1859.236	1	-45.516	2	-724.693	10	0	5	-.197	10	-.189	10
81	M9	1	max	353.652	1	447.55	6	337.922	1	.055	1	.079	2	.12	6
82			min	-302.609	2	10.786	1	-298.7	2	-.125	6	-.089	1	.002	1
83		2	max	353.652	1	445.804	6	334.673	1	.055	1	.059	2	.09	6
84			min	-302.609	2	9.959	1	-295.452	2	-.125	6	-.067	1	.002	1
85		3	max	353.652	1	444.058	6	331.425	1	.055	1	.039	2	.06	6
86			min	-302.609	2	9.132	1	-292.203	2	-.125	6	-.044	1	.001	1
87		4	max	353.652	1	442.311	6	328.177	1	.055	1	.019	2	.03	6
88			min	-302.609	2	8.305	1	-288.955	2	-.125	6	-.022	1	0	1
89		5	max	353.652	1	440.565	6	324.929	1	.055	1	0	1	0	1
90			min	-302.609	2	7.478	1	-285.707	2	-.125	6	0	1	0	1
91	M10	1	max	385.897	2	509.252	8	238.797	4	.117	5	.073	3	.137	8
92			min	-351.569	1	-21.018	3	-275.834	3	-.036	2	-.063	4	-.006	3
93		2	max	384.491	2	507.506	8	236.361	4	.117	5	.055	3	.102	8
94			min	-350.162	1	-21.845	3	-273.398	3	-.036	2	-.047	4	-.005	3
95		3	max	383.084	2	505.76	8	233.925	4	.117	5	.036	3	.068	8
96			min	-348.756	1	-22.671	3	-270.962	3	-.036	2	-.031	4	-.003	3
97		4	max	381.678	2	504.014	8	231.489	4	.117	5	.018	3	.034	8
98			min	-347.349	1	-23.498	3	-268.526	3	-.036	2	-.016	4	-.002	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
99		5	max	380.271	2	502.267	8	229.053	4	.117	5	0	1	0	1
100			min	-345.943	1	-24.325	3	-266.09	3	-.036	2	0	1	0	1
101	M12	1	max	148.35	4	-48.392	10	1630.235	1	-.015	10	.252	2	-.021	10
102			min	-168.262	3	-794.214	6	-1498.624	2	-.418	6	-.279	1	-.099	5
103		2	max	931.885	1	-257.473	1	196.469	4	-.127	1	.402	1	.472	6
104			min	-889.382	2	-843.589	6	-218.298	3	-.429	6	-.369	2	.069	10
105		3	max	941.572	1	-267.07	1	179.69	4	-.127	1	.436	1	1.068	6
106			min	-899.069	2	-864.109	6	-201.519	3	-.429	6	-.416	2	.324	1
107		4	max	951.26	1	-276.666	1	162.911	4	-.127	1	.473	1	1.678	6
108			min	-908.757	2	-888.9	6	-184.74	3	-.429	6	-.466	2	.514	1
109		5	max	960.947	1	-286.262	1	146.131	4	-.127	1	.514	1	2.309	6
110			min	-918.444	2	-918.592	6	-167.961	3	-.429	6	-.521	2	.71	1
111	M13	1	max	743.648	3	917.657	8	101.03	1	.429	8	.741	3	2.307	8
112			min	-704.825	4	301.482	3	-80.083	2	.132	2	-.749	4	.737	3
113		2	max	733.957	3	887.956	8	106.625	1	.429	8	.693	3	1.677	8
114			min	-695.134	4	291.882	3	-85.678	2	.132	2	-.686	4	.53	3
115		3	max	724.266	3	863.154	8	112.22	1	.429	8	.656	3	1.067	8
116			min	-685.443	4	282.282	3	-91.273	2	.132	2	-.635	4	.33	3
117		4	max	714.575	3	842.626	8	117.815	1	.429	8	.63	3	.472	8
118			min	-675.752	4	272.682	3	-96.868	2	.132	2	-.596	4	.136	3
119		5	max	365.134	4	792.89	8	1732.868	4	.417	8	.122	4	-.019	1
120			min	-396.345	3	259.608	3	-1855.346	3	.127	3	-.143	3	-.101	6
121	M14	1	max	381.77	2	471.251	7	192.672	1	.058	2	.072	3	.416	7
122			min	-336.112	1	-14.857	4	-206.863	2	-.02	1	-.071	4	-.05	4
123		2	max	378.959	2	467.761	7	191.049	1	.058	2	.064	3	.353	7
124			min	-333.301	1	-16.51	4	-205.24	2	-.02	1	-.066	4	-.048	4
125		3	max	376.148	2	464.271	7	189.426	1	.058	2	.057	3	.29	7
126			min	-330.49	1	-18.162	4	-203.617	2	-.02	1	-.061	4	-.046	4
127		4	max	373.337	2	460.781	7	187.803	1	.058	2	.05	3	.227	7
128			min	-327.679	1	-19.815	4	-201.994	2	-.02	1	-.058	4	-.043	4
129		5	max	370.525	2	457.29	7	186.18	1	.058	2	.051	1	.165	7
130			min	-324.868	1	-21.468	4	-200.371	2	-.02	1	-.06	2	-.04	4
131	M15	1	max	584.034	1	517.755	6	237.121	3	0	4	.085	4	.444	6
132			min	-524.82	2	4.73	1	-223.31	4	-.062	7	-.084	3	-.013	1
133		2	max	581.219	1	514.26	6	232.246	3	0	4	.055	4	.374	6
134			min	-522.005	2	3.075	1	-218.435	4	-.062	7	-.052	3	-.014	1
135		3	max	578.405	1	510.765	6	227.37	3	0	4	.061	1	.305	6
136			min	-519.19	2	1.42	1	-213.559	4	-.062	7	-.057	2	-.014	1
137		4	max	575.59	1	507.27	6	222.495	3	0	4	.085	1	.236	6
138			min	-516.375	2	-.235	1	-208.684	4	-.062	7	-.077	2	-.014	1
139		5	max	572.775	1	503.775	6	217.619	3	0	4	.109	1	.168	6
140			min	-513.56	2	-1.89	1	-203.808	4	-.062	7	-.098	2	-.014	1
141	M16	1	max	1721.889	4	791.052	7	341.531	4	-.017	3	.147	4	.417	7
142			min	-1598.817	3	253.858	2	-315.473	3	-.102	8	-.128	1	.122	2
143		2	max	1720.951	4	790.034	7	342.073	4	-.017	3	.162	4	.381	7
144			min	-1597.879	3	253.444	2	-316.014	3	-.102	8	-.141	3	.11	2
145		3	max	1720.014	4	789.015	7	342.614	4	-.017	3	.178	4	.346	7
146			min	-1596.942	3	253.031	2	-316.555	3	-.102	8	-.155	3	.099	2
147		4	max	1719.076	4	787.996	7	343.155	4	-.017	3	.193	4	.31	7
148			min	-1596.004	3	252.617	2	-317.097	3	-.102	8	-.169	3	.088	2
149		5	max	1718.138	4	786.977	7	343.697	4	-.017	3	.209	4	.275	7
150			min	-1595.066	3	252.204	2	-317.638	3	-.102	8	-.184	3	.076	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
151	M17	1	max	1658.08	4	787.104	7	516.597	3	.062	7	.209	4	.282	7
152			min	-1536.933	3	252.251	2	-586.213	4	-.003	2	-.184	3	.09	2
153		2	max	1656.215	4	785.066	7	513.33	3	.062	7	.156	4	.211	7
154			min	-1535.068	3	251.424	2	-582.946	4	-.003	2	-.137	3	.068	2
155		3	max	1654.351	4	783.029	7	510.063	3	.062	7	.104	4	.141	7
156			min	-1533.203	3	250.597	2	-579.68	4	-.003	2	-.091	3	.045	2
157		4	max	1652.486	4	780.991	7	506.797	3	.062	7	.052	4	.07	7
158			min	-1531.339	3	249.77	2	-576.413	4	-.003	2	-.045	3	.022	2
159		5	max	1650.622	4	778.954	7	503.53	3	.062	7	0	1	0	1
160			min	-1529.474	3	248.943	2	-573.146	4	-.003	2	0	1	0	1
161	M18	1	max	1715.62	1	794.657	7	149.103	3	.098	5	.255	2	.415	6
162			min	-1583.372	2	250.451	1	-167.821	4	.03	1	-.283	1	.131	1
163		2	max	1714.683	1	793.638	7	148.561	3	.098	5	.257	2	.379	6
164			min	-1582.435	2	250.038	1	-167.279	4	.03	1	-.285	1	.119	1
165		3	max	1713.745	1	792.619	7	148.02	3	.098	5	.258	2	.344	6
166			min	-1581.497	2	249.624	1	-166.738	4	.03	1	-.288	1	.108	1
167		4	max	1712.807	1	791.601	7	147.479	3	.098	5	.26	2	.308	6
168			min	-1580.559	2	249.211	1	-166.197	4	.03	1	-.291	1	.097	1
169		5	max	1711.87	1	790.582	7	146.937	3	.098	5	.262	2	.273	6
170			min	-1579.622	2	248.798	1	-165.655	4	.03	1	-.293	1	.086	1
171	M19	1	max	1518.766	1	790.56	7	823.627	1	-.017	1	.262	2	.283	7
172			min	-1384.438	2	249.106	1	-736.462	2	-.058	6	-.293	1	.089	1
173		2	max	1518.766	1	788.523	7	819.296	1	-.017	1	.196	2	.212	7
174			min	-1384.438	2	248.28	1	-732.132	2	-.058	6	-.219	1	.067	1
175		3	max	1518.766	1	786.485	7	814.965	1	-.017	1	.13	2	.141	7
176			min	-1384.438	2	247.453	1	-727.801	2	-.058	6	-.146	1	.044	1
177		4	max	1518.766	1	784.448	7	810.634	1	-.017	1	.065	2	.071	7
178			min	-1384.438	2	246.626	1	-723.47	2	-.058	6	-.073	1	.022	1
179		5	max	1518.766	1	782.41	7	806.303	1	-.017	1	0	1	0	1
180			min	-1384.438	2	245.799	1	-719.139	2	-.058	6	0	1	0	1
181	M20	1	max	1812.766	2	54.651	7	29.782	2	0	5	.003	1	.096	5
182			min	-1983.92	1	9.641	4	-36.933	1	0	2	-.045	6	.006	2
183		2	max	1812.766	2	38.302	7	10.903	2	0	5	.002	2	.046	7
184			min	-1983.92	1	6.171	4	-18.054	1	0	2	-.011	5	.005	4
185		3	max	1812.766	2	18.831	7	.825	1	0	5	.01	6	.014	3
186			min	-1983.92	1	2.701	4	-11.034	6	0	2	-.009	1	0	4
187		4	max	1812.766	2	5.933	3	19.704	1	0	5	.004	5	.008	1
188			min	-1983.92	1	-6.267	8	-26.855	2	0	2	-.003	2	-.007	2
189		5	max	1812.766	2	2.463	3	38.583	1	0	5	.03	1	.031	1
190			min	-1983.92	1	-31.981	8	-45.734	2	0	2	-.033	2	-.037	2
191	M21	1	max	1846.501	3	17.047	3	56.14	6	0	3	-.002	4	-.009	1
192			min	-2007.344	4	-24.095	4	9.766	1	0	8	-.044	7	-.101	6
193		2	max	1838.326	3	2.889	3	39.79	6	0	3	.001	1	-.006	1
194			min	-1999.168	4	-13.738	8	6.296	1	0	8	-.012	6	-.049	6
195		3	max	1830.151	3	4.22	4	20.318	6	0	3	.008	7	-.002	1
196			min	-1990.993	4	-12.911	7	2.826	1	0	8	-.005	4	-.015	7
197		4	max	1821.976	3	18.378	4	5.697	2	0	3	.006	4	.01	3
198			min	-1982.818	4	-25.426	3	-4.369	5	0	8	-.006	3	-.01	4
199		5	max	1813.801	3	32.535	4	2.227	2	0	3	.027	4	.039	3
200			min	-1974.643	4	-39.583	3	-30.085	5	0	8	-.031	3	-.032	4
201	M22	1	max	357.143	2	457.27	7	223.382	2	.055	2	.051	1	.123	7
202			min	-322.615	1	-21.265	4	-190.191	1	-.126	1	-.06	2	-.006	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
203		2	max	355.726	2	455.523	7	222.552	2	.055	2	.038	1	.092	7
204			min	-321.198	1	-22.092	4	-189.36	1	-.126	1	-.045	2	-.005	4
205		3	max	354.309	2	453.777	7	221.721	2	.055	2	.025	1	.061	7
206			min	-319.781	1	-22.919	4	-188.529	1	-.126	1	-.03	2	-.003	4
207		4	max	352.892	2	452.031	7	220.89	2	.055	2	.013	1	.03	7
208			min	-318.364	1	-23.746	4	-187.699	1	-.126	1	-.015	2	-.002	4
209		5	max	351.475	2	450.284	7	220.06	2	.055	2	0	1	0	1
210			min	-316.947	1	-24.573	4	-186.868	1	-.126	1	0	1	0	1
211	M23	1	max	440.596	1	503.872	6	368.112	2	.116	6	.109	1	.135	6
212			min	-387.011	2	-1.419	1	-408.794	1	-.016	1	-.098	2	0	1
213		2	max	440.596	1	502.126	6	364.864	2	.116	6	.081	1	.101	6
214			min	-387.011	2	-2.246	1	-405.546	1	-.016	1	-.073	2	0	1
215		3	max	440.596	1	500.38	6	361.615	2	.116	6	.054	1	.067	6
216			min	-387.011	2	-3.073	1	-402.298	1	-.016	1	-.048	2	0	1
217		4	max	440.596	1	498.633	6	358.367	2	.116	6	.027	1	.034	6
218			min	-387.011	2	-3.9	1	-399.05	1	-.016	1	-.024	2	0	1
219		5	max	440.596	1	496.887	6	355.119	2	.116	6	0	1	0	1
220			min	-387.011	2	-4.727	1	-395.802	1	-.016	1	0	1	0	1
221	M25	1	max	314.176	3	-253.724	2	1721.081	4	-.122	2	.128	1	-.017	3
222			min	-343.663	4	-791.83	7	-1599.542	3	-.417	7	-.147	4	-.102	8
223		2	max	679.017	4	-261.187	2	89.014	2	-.12	2	.575	4	.472	7
224			min	-638.783	3	-840.231	7	-109.334	1	-.427	7	-.54	3	.132	2
225		3	max	688.707	4	-270.786	2	83.42	2	-.12	2	.612	4	1.065	7
226			min	-648.473	3	-860.755	7	-103.74	1	-.427	7	-.591	3	.317	2
227		4	max	698.396	4	-280.384	2	78.107	4	-.12	2	.66	4	1.674	7
228			min	-658.162	3	-885.554	7	-98.293	3	-.427	7	-.654	3	.51	2
229		5	max	708.086	4	-289.983	2	94.89	4	-.12	2	.721	4	2.302	7
230			min	-667.852	3	-915.251	7	-115.076	3	-.427	7	-.728	3	.709	2
231	M26	1	max	998.551	1	919.651	7	167.112	4	.429	6	.495	1	2.303	7
232			min	-957.963	2	288.03	1	-145.022	3	.131	1	-.502	2	.72	1
233		2	max	988.862	1	889.956	7	183.893	4	.429	6	.469	1	1.672	7
234			min	-948.275	2	278.432	1	-161.803	3	.131	1	-.463	2	.522	1
235		3	max	979.173	1	865.163	7	200.674	4	.429	6	.448	1	1.063	6
236			min	-938.586	2	268.834	1	-178.585	3	.131	1	-.428	2	.331	1
237		4	max	969.484	1	844.64	7	217.456	4	.429	6	.43	1	.468	6
238			min	-928.897	2	259.237	1	-195.366	3	.131	1	-.397	2	.147	1
239		5	max	148.692	3	794.701	7	1583.384	2	.415	6	.255	2	-.03	1
240			min	-168.45	4	249.618	1	-1715.586	1	.131	1	-.283	1	-.098	5
241	M27	1	max	483.642	3	458.541	5	187.204	4	.059	3	.097	1	.407	8
242			min	-431.268	4	30.106	2	-207.918	3	-.021	4	-.097	2	-.032	3
243		2	max	483.642	3	455.055	5	187.204	4	.059	3	.071	1	.347	8
244			min	-431.268	4	28.456	2	-207.918	3	-.021	4	-.073	2	-.041	3
245		3	max	483.642	3	451.569	5	187.204	4	.059	3	.045	1	.288	8
246			min	-431.268	4	26.805	2	-207.918	3	-.021	4	-.05	2	-.051	3
247		4	max	483.642	3	448.083	5	187.204	4	.059	3	.049	4	.229	8
248			min	-431.268	4	25.155	2	-207.918	3	-.021	4	-.056	3	-.06	3
249		5	max	483.642	3	444.597	5	187.204	4	.059	3	.074	4	.171	8
250			min	-431.268	4	23.504	2	-207.918	3	-.021	4	-.084	3	-.068	3
251	M28	1	max	603.177	4	508.104	5	252.865	4	0	3	.098	2	.443	7
252			min	-550.392	3	38.601	2	-231.618	3	-.064	8	-.098	1	-.02	4
253		2	max	603.177	4	504.605	5	252.865	4	0	3	.075	2	.375	7
254			min	-550.392	3	36.944	2	-231.618	3	-.064	8	-.072	1	-.027	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
255		3	max	603.177	4	501.106	5	252.865	4	0	3	.052	2	.308	7
256			min	-550.392	3	35.287	2	-231.618	3	-.064	8	-.047	1	-.033	4
257		4	max	603.177	4	497.607	5	252.865	4	0	3	.073	4	.241	7
258			min	-550.392	3	33.63	2	-231.618	3	-.064	8	-.065	3	-.039	4
259		5	max	603.177	4	494.107	5	252.865	4	0	3	.107	4	.174	7
260			min	-550.392	3	31.973	2	-231.618	3	-.064	8	-.097	3	-.045	4
261	M29	1	max	1171.67	2	793.092	8	358.197	2	-.018	1	.321	3	.419	8
262			min	-1062.691	1	227.815	10	-335.928	1	-.102	7	-.3	4	.112	3
263		2	max	1171.67	2	792.073	8	358.197	2	-.018	1	.309	3	.383	8
264			min	-1062.691	1	227.401	10	-335.928	1	-.102	7	-.287	4	.102	3
265		3	max	1171.67	2	791.055	8	358.197	2	-.018	1	.296	3	.347	8
266			min	-1062.691	1	226.988	10	-335.928	1	-.102	7	-.275	4	.091	3
267		4	max	1171.67	2	790.036	8	358.197	2	-.018	1	.284	3	.312	8
268			min	-1062.691	1	226.574	10	-335.928	1	-.102	7	-.262	4	.08	3
269		5	max	1171.67	2	789.017	8	358.197	2	-.018	1	.273	3	.276	8
270			min	-1062.691	1	226.161	10	-335.928	1	-.102	7	-.25	4	.07	3
271	M30	1	max	1194.128	2	789.152	8	699.595	4	.063	8	.273	3	.283	8
272			min	-1088.108	1	226.162	10	-763.744	3	-.007	3	-.25	4	.081	10
273		2	max	1192.252	2	787.115	8	696.347	4	.063	8	.204	3	.212	8
274			min	-1086.232	1	225.335	10	-760.496	3	-.007	3	-.187	4	.061	10
275		3	max	1190.377	2	785.077	8	693.099	4	.063	8	.136	3	.141	8
276			min	-1084.357	1	224.508	10	-757.248	3	-.007	3	-.124	4	.04	10
277		4	max	1188.502	2	783.04	8	689.851	4	.063	8	.068	3	.07	8
278			min	-1082.482	1	223.681	10	-753.999	3	-.007	3	-.062	4	.02	10
279		5	max	1186.626	2	781.002	8	686.603	4	.063	8	0	1	0	1
280			min	-1080.606	1	222.854	10	-750.751	3	-.007	3	0	1	0	1
281	M31	1	max	1210.361	2	793.307	5	361.185	1	.102	8	.299	3	.416	5
282			min	-1102.248	1	255.393	10	-383.083	2	.022	3	-.32	4	.124	4
283		2	max	1210.361	2	792.288	5	361.185	1	.102	8	.287	3	.38	5
284			min	-1102.248	1	254.98	10	-383.083	2	.022	3	-.309	4	.113	4
285		3	max	1210.361	2	791.269	5	361.185	1	.102	8	.275	3	.345	5
286			min	-1102.248	1	254.566	10	-383.083	2	.022	3	-.298	4	.101	4
287		4	max	1210.361	2	790.25	5	361.185	1	.102	8	.264	3	.309	5
288			min	-1102.248	1	254.153	10	-383.083	2	.022	3	-.287	4	.09	4
289		5	max	1210.361	2	789.232	5	361.185	1	.102	8	.252	3	.274	5
290			min	-1102.248	1	253.739	10	-383.083	2	.022	3	-.276	4	.078	4
291	M32	1	max	1238.591	2	789.28	5	773.044	4	0	4	.252	3	.283	5
292			min	-1133.926	1	253.747	10	-707.323	3	-.062	7	-.276	4	.091	10
293		2	max	1236.705	2	787.242	5	769.814	4	0	4	.189	3	.212	5
294			min	-1132.04	1	252.92	10	-704.094	3	-.062	7	-.207	4	.068	10
295		3	max	1234.819	2	785.205	5	766.585	4	0	4	.126	3	.141	5
296			min	-1130.154	1	252.093	10	-700.864	3	-.062	7	-.137	4	.045	10
297		4	max	1232.933	2	783.167	5	763.355	4	0	4	.063	3	.07	5
298			min	-1128.268	1	251.266	10	-697.635	3	-.062	7	-.069	4	.023	10
299		5	max	1231.047	2	781.13	5	760.125	4	0	4	0	1	0	1
300			min	-1126.382	1	250.439	10	-694.405	3	-.062	7	0	1	0	1
301	M33	1	max	1454.498	1	54.792	8	26.061	3	0	8	-.002	4	.099	8
302			min	-1600.747	2	7.829	3	-33.14	4	0	3	-.043	7	-.007	3
303		2	max	1446.321	1	38.439	8	11.903	3	0	8	.002	3	.046	5
304			min	-1592.569	2	4.359	3	-18.982	4	0	3	-.011	8	.004	3
305		3	max	1438.143	1	18.962	8	2.554	2	0	8	.009	7	.013	5
306			min	-1584.392	2	.889	3	-11.495	5	0	3	-.009	4	.002	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
307		4	max	1429.966	1	7.777	4	9.333	4	0	8	.006	2	.005	2
308			min	-1576.214	2	-6.522	7	-16.412	3	0	3	-.005	1	-.005	1
309		5	max	1421.789	1	4.307	4	23.491	4	0	8	.019	4	.016	2
310			min	-1568.037	2	-32.245	7	-30.569	3	0	3	-.027	7	-.022	1
311	M34	1	max	1416.118	1	25.853	4	56.389	7	0	4	-.001	3	.006	4
312			min	-1563.52	2	-32.896	3	8.465	4	0	7	-.044	8	-.105	7
313		2	max	1407.943	1	11.694	4	40.039	7	0	4	.002	4	-.004	4
314			min	-1555.346	2	-18.737	3	4.995	4	0	7	-.012	7	-.049	7
315		3	max	1399.768	1	1.597	2	20.567	7	0	4	.009	8	-.003	2
316			min	-1547.171	2	-12.234	5	1.525	4	0	7	-.009	3	-.014	5
317		4	max	1391.594	1	9.582	3	7.09	3	0	4	.006	2	.004	5
318			min	-1538.996	2	-16.624	4	-4.54	8	0	7	-.005	1	-.004	2
319		5	max	1383.419	1	23.741	3	3.62	3	0	4	.019	3	.019	1
320			min	-1530.821	2	-30.783	4	-30.257	8	0	7	-.026	8	-.013	2
321	M35	1	max	421.278	3	444.494	5	315.478	3	.089	3	.074	4	.119	5
322			min	-378.316	4	23.462	2	-279.47	4	-.158	4	-.084	3	.006	2
323		2	max	419.871	3	442.748	5	313.042	3	.089	3	.055	4	.089	5
324			min	-376.909	4	22.635	2	-277.034	4	-.158	4	-.063	3	.004	2
325		3	max	418.465	3	441.001	5	310.605	3	.089	3	.037	4	.059	5
326			min	-375.503	4	21.808	2	-274.597	4	-.158	4	-.042	3	.003	2
327		4	max	417.058	3	439.255	5	308.169	3	.089	3	.018	4	.03	5
328			min	-374.096	4	20.981	2	-272.161	4	-.158	4	-.021	3	.001	2
329		5	max	415.652	3	437.509	5	305.733	3	.089	3	0	1	0	1
330			min	-372.69	4	20.154	2	-269.725	4	-.158	4	0	1	0	1
331	M36	1	max	517.291	4	494.025	5	363.126	3	.129	3	.107	4	.132	5
332			min	-474.032	3	31.948	2	-400.428	4	-.058	4	-.097	3	.008	2
333		2	max	515.895	4	492.279	5	360.671	3	.129	3	.08	4	.099	5
334			min	-472.636	3	31.121	2	-397.974	4	-.058	4	-.072	3	.006	2
335		3	max	514.499	4	490.533	5	358.217	3	.129	3	.053	4	.066	5
336			min	-471.24	3	30.294	2	-395.519	4	-.058	4	-.048	3	.004	2
337		4	max	513.104	4	488.786	5	355.762	3	.129	3	.026	4	.033	5
338			min	-469.844	3	29.467	2	-393.064	4	-.058	4	-.024	3	.002	2
339		5	max	511.708	4	487.04	5	353.307	3	.129	3	0	1	0	1
340			min	-468.449	3	28.64	2	-390.61	4	-.058	4	0	1	0	1
341	MP5B	1	max	3106.034	2	-90.06	2	52.698	3	.309	4	.011	7	-.046	2
342			min	-2875.363	1	-1075.935	5	-52.55	4	-.308	3	-.006	8	-.277	5
343		2	max	3112.289	2	-111.684	2	3.365	1	.309	4	.045	3	1.28	5
344			min	-2881.618	1	-1133.085	5	-3.245	2	-.308	3	-.045	4	.096	2
345		3	max	2655.796	2	1584.654	5	81.754	4	.309	4	.009	4	1.061	5
346			min	-4339.408	1	334.554	2	-81.597	3	-.308	3	-.009	3	-.045	2
347		4	max	2544.724	2	76.962	1	1878.957	4	.558	4	.154	4	.106	1
348			min	-4272.744	1	-395.508	6	-1879.823	3	-.556	3	-.152	3	-.125	2
349		5	max	2544.724	2	57.498	1	1924.333	4	.558	4	2.843	4	.538	6
350			min	-4272.744	1	-437.127	6	-1925.199	3	-.556	3	-2.843	3	.011	1
351	M38	1	max	335.584	1	-227.855	10	1171.429	2	-.112	3	.3	4	-.018	1
352			min	-358.867	2	-793.146	8	-1062.902	1	-.419	8	-.321	3	-.102	7
353		2	max	893.044	3	-239.235	10	104.08	1	-.108	3	.425	2	.474	8
354			min	-848.999	4	-843.781	8	-126.073	2	-.431	8	-.389	1	.121	3
355		3	max	893.044	3	-248.829	10	81.712	1	-.108	3	.345	2	1.069	8
356			min	-848.999	4	-864.297	8	-103.705	2	-.431	8	-.324	1	.295	3
357		4	max	893.044	3	-258.424	10	59.344	1	-.108	3	.281	2	1.68	8
358			min	-848.999	4	-889.09	8	-81.337	2	-.431	8	-.275	1	.474	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
359		5	max	893.044	3	-268.019	10	36.976	1	-.108	3	.232	2	2.31	8
360			min	-848.999	4	-918.775	8	-58.969	2	-.431	8	-.241	1	.661	3
361	M39	1	max	902.473	4	918.576	5	51.869	2	.429	5	.267	2	2.306	5
362			min	-859.403	3	290.1	4	-29.893	1	.119	4	-.277	1	.714	4
363		2	max	902.473	4	888.868	5	74.253	2	.429	5	.311	2	1.676	5
364			min	-859.403	3	280.499	4	-52.277	1	.119	4	-.306	1	.515	4
365		3	max	902.473	4	864.062	5	96.638	2	.429	5	.371	2	1.065	5
366			min	-859.403	3	270.897	4	-74.662	1	.119	4	-.35	1	.323	4
367		4	max	902.473	4	843.531	5	119.022	2	.429	5	.446	2	.469	5
368			min	-859.403	3	261.295	4	-97.046	1	.119	4	-.41	1	.137	4
369		5	max	361.087	1	793.87	5	1102.546	1	.416	5	.299	3	-.022	3
370			min	-383.505	2	255.444	10	-1210.03	2	.124	4	-.32	4	-.102	8
371	MP8A	1	max	0	1	0	1	0	1	0	1	0	1	0	1
372			min	0	1	0	1	0	1	0	1	0	1	0	1
373		2	max	356.356	1	38.785	10	161.39	2	.122	2	.083	4	.16	4
374			min	-333.578	2	-167.019	7	-168.24	1	-.185	1	-.088	3	-.107	3
375		3	max	966.359	2	585.787	8	523.938	2	.143	2	.848	1	-.228	9
376			min	-1075.908	1	-576.315	7	-544.584	1	-.158	1	-.799	2	-.709	8
377		4	max	443.808	1	166.502	8	181.775	1	.137	1	.078	3	.137	3
378			min	-418.642	2	20.831	3	-175.678	2	-.074	2	-.084	4	-.083	4
379		5	max	0	1	0	1	0	1	0	1	0	1	0	1
380			min	0	1	0	1	0	1	0	1	0	1	0	1
381	M53	1	max	264.976	3	502.074	8	380.092	2	0	4	0	4	.117	5
382			min	-229.771	4	-24.509	3	-346.072	1	0	7	0	1	-.036	2
383		2	max	264.976	3	502.074	8	380.092	2	0	4	.015	2	.099	5
384			min	-229.771	4	-24.509	3	-346.072	1	0	7	-.013	1	-.041	2
385		3	max	264.976	3	502.074	8	380.092	2	0	4	.03	2	.091	1
386			min	-229.771	4	-24.509	3	-346.072	1	0	7	-.027	1	-.045	2
387		4	max	264.976	3	502.074	8	380.092	2	0	4	.044	2	.083	1
388			min	-229.771	4	-24.509	3	-346.072	1	0	7	-.04	1	-.05	2
389		5	max	264.976	3	502.074	8	380.092	2	0	4	.059	2	.076	1
390			min	-229.771	4	-24.509	3	-346.072	1	0	7	-.054	1	-.054	2
391	M54	1	max	568.362	3	780.101	8	1671.291	4	0	4	0	3	.06	8
392			min	-532.999	4	254.608	3	-1797.94	3	0	3	0	4	0	3
393		2	max	568.362	3	780.101	8	1671.291	4	0	4	.065	4	.03	8
394			min	-532.999	4	254.608	3	-1797.94	3	0	3	-.07	3	-.01	2
395		3	max	568.362	3	780.101	8	1671.291	4	0	4	.13	4	.015	1
396			min	-532.999	4	254.608	3	-1797.94	3	0	3	-.14	3	-.021	2
397		4	max	568.362	3	780.101	8	1671.291	4	0	4	.195	4	.004	1
398			min	-532.999	4	254.608	3	-1797.94	3	0	3	-.21	3	-.045	7
399		5	max	568.362	3	780.101	8	1671.291	4	0	4	.26	4	-.007	1
400			min	-532.999	4	254.608	3	-1797.94	3	0	3	-.28	3	-.075	6
401	M55	1	max	733.831	3	780.59	8	1186.946	2	0	11	0	4	.063	8
402			min	-700.325	4	222.882	10	-1080.379	1	0	6	0	1	-.007	3
403		2	max	733.831	3	780.59	8	1186.946	2	0	11	.046	2	.033	4
404			min	-700.325	4	222.882	10	-1080.379	1	0	6	-.042	1	-.016	3
405		3	max	733.831	3	780.59	8	1186.946	2	0	11	.092	2	.02	4
406			min	-700.325	4	222.882	10	-1080.379	1	0	6	-.084	1	-.025	3
407		4	max	733.831	3	780.59	8	1186.946	2	0	11	.139	2	.008	4
408			min	-700.325	4	222.882	10	-1080.379	1	0	6	-.126	1	-.047	7
409		5	max	733.831	3	780.59	8	1186.946	2	0	11	.185	2	-.005	4
410			min	-700.325	4	222.882	10	-1080.379	1	0	6	-.168	1	-.077	7

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
411	M56	1	max	305.529	3	437.705	5	372.682	4	0	4	0	3	.158	4
412			min	-269.799	4	20.189	2	-415.606	3	0	11	0	2	-.089	3
413		2	max	305.529	3	437.705	5	372.682	4	0	4	.015	4	.149	4
414			min	-269.799	4	20.189	2	-415.606	3	0	11	-.016	3	-.091	3
415		3	max	305.529	3	437.705	5	372.682	4	0	4	.029	4	.139	4
416			min	-269.799	4	20.189	2	-415.606	3	0	11	-.032	3	-.093	3
417		4	max	305.529	3	437.705	5	372.682	4	0	4	.044	4	.129	4
418			min	-269.799	4	20.189	2	-415.606	3	0	11	-.049	3	-.096	3
419		5	max	305.529	3	437.705	5	372.682	4	0	4	.058	4	.12	4
420			min	-269.799	4	20.189	2	-415.606	3	0	11	-.065	3	-.098	3
421	M57	1	max	399.699	1	496.612	6	434.732	1	.002	6	0	1	.116	6
422			min	-361.589	2	-4.838	1	-382.862	2	0	1	0	2	-.015	1
423		2	max	399.699	1	496.612	6	434.732	1	.002	6	.017	1	.097	6
424			min	-361.589	2	-4.838	1	-382.862	2	0	1	-.015	2	-.015	1
425		3	max	399.699	1	496.612	6	434.732	1	.002	6	.034	1	.077	6
426			min	-361.589	2	-4.838	1	-382.862	2	0	1	-.03	2	-.015	1
427		4	max	399.699	1	496.612	6	434.732	1	.002	6	.051	1	.058	6
428			min	-361.589	2	-4.838	1	-382.862	2	0	1	-.045	2	-.015	1
429		5	max	399.699	1	496.612	6	434.732	1	.002	6	.068	1	.038	6
430			min	-361.589	2	-4.838	1	-382.862	2	0	1	-.06	2	-.015	1
431	M58	1	max	755.882	1	782.487	7	1392.259	2	0	6	0	1	.058	6
432			min	-725.927	2	245.032	1	-1530.766	1	0	1	0	5	.017	1
433		2	max	755.882	1	782.487	7	1392.259	2	0	6	.055	2	.028	6
434			min	-725.927	2	245.032	1	-1530.766	1	0	1	-.06	1	.007	10
435		3	max	755.882	1	782.487	7	1392.259	2	0	6	.109	2	0	9
436			min	-725.927	2	245.032	1	-1530.766	1	0	1	-.12	1	-.013	5
437		4	max	755.882	1	782.487	7	1392.259	2	0	6	.164	2	-.01	9
438			min	-725.927	2	245.032	1	-1530.766	1	0	1	-.18	1	-.043	5
439		5	max	755.882	1	782.487	7	1392.259	2	0	6	.219	2	-.021	9
440			min	-725.927	2	245.032	1	-1530.766	1	0	1	-.24	1	-.073	5
441	M59	1	max	773.662	1	781.389	6	1424.446	1	0	6	0	1	.06	6
442			min	-737.722	2	43.581	10	-1288.54	2	0	10	0	4	-.015	10
443		2	max	773.662	1	781.389	6	1424.446	1	0	6	.056	1	.03	6
444			min	-737.722	2	43.581	10	-1288.54	2	0	10	-.051	2	-.017	10
445		3	max	773.662	1	781.389	6	1424.446	1	0	6	.112	1	.003	2
446			min	-737.722	2	43.581	10	-1288.54	2	0	10	-.101	2	-.018	10
447		4	max	773.662	1	781.389	6	1424.446	1	0	6	.168	1	-.009	2
448			min	-737.722	2	43.581	10	-1288.54	2	0	10	-.152	2	-.045	5
449		5	max	773.662	1	781.389	6	1424.446	1	0	6	.224	1	-.021	3
450			min	-737.722	2	43.581	10	-1288.54	2	0	10	-.202	2	-.075	5
451	M60	1	max	318.998	1	440.338	6	306.776	2	.002	6	0	1	.125	6
452			min	-282.74	2	6.898	1	-357.262	1	0	1	0	2	-.055	1
453		2	max	318.998	1	440.338	6	306.776	2	.002	6	.012	2	.113	2
454			min	-282.74	2	6.898	1	-357.262	1	0	1	-.014	1	-.055	1
455		3	max	318.998	1	440.338	6	306.776	2	.002	6	.024	2	.101	2
456			min	-282.74	2	6.898	1	-357.262	1	0	1	-.028	1	-.056	1
457		4	max	318.998	1	440.338	6	306.776	2	.002	6	.036	2	.089	2
458			min	-282.74	2	6.898	1	-357.262	1	0	1	-.042	1	-.056	1
459		5	max	318.998	1	440.338	6	306.776	2	.002	6	.048	2	.078	2
460			min	-282.74	2	6.898	1	-357.262	1	0	1	-.056	1	-.056	1
461	M61	1	max	389.8	4	487.252	5	511.64	4	0	3	0	2	.129	3
462			min	-353.909	3	28.664	2	-468.542	3	0	4	0	1	-.058	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
463		2	max	389.8	4	487.252	5	511.64	4	0	3	.02	4	.118	3
464			min	-353.909	3	28.664	2	-468.542	3	0	4	-.019	3	-.06	4
465		3	max	389.8	4	487.252	5	511.64	4	0	3	.04	4	.108	3
466			min	-353.909	3	28.664	2	-468.542	3	0	4	-.037	3	-.061	4
467		4	max	389.8	4	487.252	5	511.64	4	0	3	.061	4	.097	3
468			min	-353.909	3	28.664	2	-468.542	3	0	4	-.056	3	-.063	4
469		5	max	389.8	4	487.252	5	511.64	4	0	3	.081	4	.087	3
470			min	-353.909	3	28.664	2	-468.542	3	0	4	-.074	3	-.064	4
471	M62	1	max	732.067	4	781.401	5	1128.802	1	0	7	0	2	.062	7
472			min	-700.412	3	250.056	4	-1234.441	2	0	4	0	6	0	4
473		2	max	732.067	4	781.401	5	1128.802	1	0	7	.045	1	.031	7
474			min	-700.412	3	250.056	4	-1234.441	2	0	4	-.049	2	-.011	4
475		3	max	732.067	4	781.401	5	1128.802	1	0	7	.089	1	.016	3
476			min	-700.412	3	250.056	4	-1234.441	2	0	4	-.098	2	-.021	4
477		4	max	732.067	4	781.401	5	1128.802	1	0	7	.134	1	.004	3
478			min	-700.412	3	250.056	4	-1234.441	2	0	4	-.146	2	-.047	8
479		5	max	732.067	4	781.401	5	1128.802	1	0	7	.179	1	-.008	3
480			min	-700.412	3	250.056	4	-1234.441	2	0	4	-.195	2	-.077	8
481	M63	1	max	557.35	4	778.995	7	1651.471	4	0	7	0	3	.062	7
482			min	-520.492	3	248.495	2	-1527.11	3	0	2	0	4	-.003	2
483		2	max	557.35	4	778.995	7	1651.471	4	0	7	.065	4	.031	7
484			min	-520.492	3	248.495	2	-1527.11	3	0	2	-.06	3	-.013	2
485		3	max	557.35	4	778.995	7	1651.471	4	0	7	.131	4	.018	3
486			min	-520.492	3	248.495	2	-1527.11	3	0	2	-.121	3	-.023	4
487		4	max	557.35	4	778.995	7	1651.471	4	0	7	.196	4	.007	3
488			min	-520.492	3	248.495	2	-1527.11	3	0	2	-.181	3	-.047	8
489		5	max	557.35	4	778.995	7	1651.471	4	0	7	.261	4	-.005	3
490			min	-520.492	3	248.495	2	-1527.11	3	0	2	-.242	3	-.077	8
491	M64	1	max	215.212	2	450.298	7	319.479	1	.002	1	0	7	.126	1
492			min	-182.788	1	-24.873	4	-354.233	2	0	2	0	4	-.055	2
493		2	max	215.212	2	450.298	7	319.479	1	.002	1	.013	1	.119	1
494			min	-182.788	1	-24.873	4	-354.233	2	0	2	-.014	2	-.06	2
495		3	max	215.212	2	450.298	7	319.479	1	.002	1	.025	1	.112	1
496			min	-182.788	1	-24.873	4	-354.233	2	0	2	-.028	2	-.065	2
497		4	max	215.212	2	450.298	7	319.479	1	.002	1	.038	1	.105	1
498			min	-182.788	1	-24.873	4	-354.233	2	0	2	-.042	2	-.07	2
499		5	max	215.212	2	450.298	7	319.479	1	.002	1	.051	1	.098	1
500			min	-182.788	1	-24.873	4	-354.233	2	0	2	-.056	2	-.076	2
501	MP5A	1	max	2811.56	3	-123.133	3	83.724	4	.253	2	.01	5	-.032	3
502			min	-2573.642	4	-1064.858	8	-84.594	3	-.251	1	-.007	9	-.356	9
503		2	max	2834.712	3	-144.755	3	70.361	4	.253	2	.108	4	1.262	8
504			min	-2596.795	4	-1122	8	-71.23	3	-.251	1	-.107	3	.157	3
505		3	max	2332.581	3	1572.947	8	43.558	4	.253	2	.189	4	1.083	9
506			min	-4008.917	4	366.156	3	-43.34	3	-.251	1	-.188	3	.019	3
507		4	max	2261.491	3	224.387	9	1296.316	2	.683	10	1.15	4	.162	9
508			min	-3982.093	4	-460.649	10	-1291.846	1	-.398	1	-1.149	3	-.144	10
509		5	max	2281.135	3	204.925	9	1330.349	2	.683	10	1.278	2	.528	7
510			min	-4001.736	4	-480.111	10	-1325.879	1	-.398	1	-1.271	1	-.142	9
511	MP5C	1	max	2722.477	4	-127.153	4	81.586	4	.236	1	.01	6	-.029	1
512			min	-2484.368	3	-1063.198	7	-80.696	3	-.232	2	-.004	5	-.279	6
513		2	max	2745.628	4	-148.773	4	68.224	4	.236	1	.108	4	1.264	7
514			min	-2507.518	3	-1120.332	7	-67.334	3	-.232	2	-.109	3	.147	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
515		3	max	2244.942	4	1573.975	7	40.364	4	.235	1	.185	4	1.041	7
516			min	-3921.476	3	360.644	4	-40.512	3	-.232	2	-.185	3	.016	4
517		4	max	2191.529	4	36.082	3	1357.878	1	.431	1	1.123	4	.085	3
518			min	-3912.11	3	-384.476	8	-1363.877	2	-.427	2	-1.123	3	-.104	4
519		5	max	2211.17	4	16.622	3	1391.907	1	.431	1	1.442	1	.528	8
520			min	-3931.751	3	-426.086	8	-1397.907	2	-.427	2	-1.449	2	.048	3
521	M55A	1	max	0	1	.006	1	.009	4	0	1	0	1	0	1
522			min	0	1	0	7	-.002	2	0	1	0	1	0	1
523		2	max	383.111	4	1.68	2	144.97	3	.058	1	.038	3	.166	2
524			min	-364.985	3	-169.485	5	-152.219	4	-.12	2	-.04	4	-.112	1
525		3	max	1146.777	3	580.361	6	534.341	3	.106	4	.807	4	-.238	1
526			min	-1249.977	4	-571.227	5	-557.502	4	-.092	3	-.762	3	-.702	6
527		4	max	243.412	2	168.656	7	144.261	4	.146	4	.091	3	.125	1
528			min	-233.525	1	24.425	4	-136.383	3	-.083	3	-.094	4	-.07	2
529		5	max	0	1	0	8	0	4	0	1	0	1	0	1
530			min	0	1	-.004	2	-.002	2	0	1	0	1	0	1
531	M56B	1	max	0	1	.005	2	0	2	0	1	0	1	0	1
532			min	0	1	0	7	0	3	0	1	0	1	0	1
533		2	max	205.68	2	-6.271	3	130.466	4	.112	4	.091	4	.153	1
534			min	-195.422	1	-167.666	8	-138.739	3	-.174	3	-.095	3	-.098	2
535		3	max	1158.432	4	581.628	5	558.812	3	.117	4	.808	3	-.237	9
536			min	-1261.382	3	-570.111	6	-534.888	4	-.131	3	-.763	4	-.697	5
537		4	max	514.51	3	168.408	5	169.987	3	.107	2	.032	4	.136	2
538			min	-494.189	4	22.535	2	-163.208	4	-.045	1	-.032	3	-.082	1
539		5	max	0	1	0	8	.002	2	0	1	0	1	0	1
540			min	0	1	-.004	1	-.009	3	0	1	0	1	0	1
541	M55B	1	max	529.755	1	606.55	6	394.195	3	.214	3	.078	1	.11	2
542			min	-485.046	2	5.224	1	-365.93	4	-.176	4	-.081	2	-.152	1
543		2	max	529.755	1	606.55	6	394.195	3	.214	3	.078	1	.087	2
544			min	-485.046	2	5.224	1	-365.93	4	-.176	4	-.079	2	-.152	1
545		3	max	529.755	1	606.55	6	394.195	3	.214	3	.077	1	.064	2
546			min	-485.046	2	5.224	1	-365.93	4	-.176	4	-.078	2	-.153	1
547		4	max	529.755	1	606.55	6	394.195	3	.214	3	.077	1	.041	2
548			min	-485.046	2	5.224	1	-365.93	4	-.176	4	-.076	2	-.181	7
549		5	max	529.755	1	606.55	6	394.195	3	.214	3	.077	1	.018	2
550			min	-485.046	2	5.224	1	-365.93	4	-.176	4	-.074	2	-.216	7
551	M56C	1	max	1086.365	1	1124.264	6	761.922	3	.105	10	.237	4	.274	1
552			min	-1035.767	2	357.414	10	-761.552	4	-.094	4	-.237	3	-.244	2
553		2	max	1086.365	1	1124.264	6	761.922	3	.105	10	.189	4	.25	1
554			min	-1035.767	2	357.414	10	-761.552	4	-.094	4	-.19	3	-.27	2
555		3	max	1086.365	1	1124.264	6	761.922	3	.105	10	.142	4	.227	1
556			min	-1035.767	2	357.414	10	-761.552	4	-.094	4	-.142	3	-.297	2
557		4	max	1086.365	1	1124.264	6	761.922	3	.105	10	.094	4	.203	1
558			min	-1035.767	2	357.414	10	-761.552	4	-.094	4	-.094	3	-.323	2
559		5	max	1086.365	1	1124.264	6	761.922	3	.105	10	.047	4	.179	1
560			min	-1035.767	2	357.414	10	-761.552	4	-.094	4	-.047	3	-.349	2
561	M57A	1	max	445.801	1	543.782	6	333.966	3	.233	3	.085	2	.199	2
562			min	-400.925	2	18.178	1	-362.207	4	-.271	4	-.082	1	-.241	1
563		2	max	445.801	1	543.782	6	333.966	3	.233	3	.083	2	.177	2
564			min	-400.925	2	18.178	1	-362.207	4	-.271	4	-.081	1	-.242	1
565		3	max	445.801	1	543.782	6	333.966	3	.233	3	.081	2	.155	2
566			min	-400.925	2	18.178	1	-362.207	4	-.271	4	-.081	1	-.243	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
567		4	max	445.801	1	543.782	6	333.966	3	.233	3	.079	2	.132	2
568			min	-400.925	2	18.178	1	-362.207	4	-.271	4	-.081	1	-.244	1
569		5	max	445.801	1	543.782	6	333.966	3	.233	3	.077	2	.11	2
570			min	-400.925	2	18.178	1	-362.207	4	-.271	4	-.081	1	-.246	1
571	MP1A	1	max	0	1	.011	8	.021	5	0	1	0	1	0	1
572			min	0	1	-.007	3	-.014	2	0	1	0	1	0	1
573		2	max	277.947	6	188.233	4	238.43	1	.077	1	.081	6	.08	4
574			min	-115.151	1	-216.711	3	-195.75	2	-.074	2	-.032	1	-.101	3
575		3	max	-56.386	1	110.911	3	220.323	2	0	1	.359	1	.197	3
576			min	-182.354	5	-110.916	4	-220.281	1	0	1	-.359	2	-.197	4
577		4	max	-9.371	1	25.687	3	25.704	2	0	1	.029	1	.029	3
578			min	-29.23	5	-25.691	4	-25.662	1	0	1	-.029	2	-.029	4
579		5	max	0	1	.029	8	.231	5	0	1	0	1	0	1
580			min	0	1	-.077	7	-.011	2	0	1	0	1	0	1
581	MP2A	1	max	0	1	.095	8	.588	5	0	1	0	1	0	1
582			min	0	1	-.098	7	-.487	2	0	1	0	1	0	1
583		2	max	366.39	6	326.971	4	415.869	1	.047	4	.076	5	.239	4
584			min	49.704	10	-327.326	3	-365.649	2	-.047	3	-.024	2	-.239	3
585		3	max	744.893	6	489.435	4	535.45	1	.047	4	1.027	1	.578	3
586			min	253.634	10	-489.79	3	-485.229	2	-.047	3	-.875	2	-.578	4
587		4	max	-82.01	3	232.634	3	509.196	2	0	1	.508	1	.232	3
588			min	-314.304	6	-232.634	4	-509.067	1	0	1	-.509	2	-.232	4
589		5	max	0	1	.346	4	1.141	5	0	1	0	1	0	1
590			min	0	1	-.346	3	-.645	2	0	1	0	1	0	1
591	MP3A	1	max	0	1	.007	4	.022	5	0	1	0	1	0	1
592			min	0	1	-.012	7	-.013	2	0	1	0	1	0	1
593		2	max	210.461	2	177.786	4	104.816	1	.077	2	.082	3	.136	4
594			min	-129.263	1	-149.401	3	-61.795	2	-.081	1	-.046	4	-.108	3
595		3	max	353.489	6	258.764	4	263.615	1	.077	2	.325	1	.272	3
596			min	-59.133	1	-230.379	3	-220.594	2	-.081	1	-.204	2	-.3	4
597		4	max	-8.33	2	22.887	3	22.976	2	0	1	.023	1	.023	3
598			min	-25.982	5	-22.88	4	-22.919	1	0	1	-.023	2	-.023	4
599		5	max	0	1	.042	10	.243	6	0	1	0	1	0	1
600			min	0	1	-.026	9	-.061	1	0	1	0	1	0	1
601	M61A	1	max	496.024	4	595.289	7	397.19	1	.212	1	.107	2	.17	3
602			min	-452.403	3	41.363	4	-369.71	2	-.174	2	-.109	1	-.211	4
603		2	max	496.024	4	595.289	7	397.19	1	.212	1	.084	2	.149	3
604			min	-452.403	3	41.363	4	-369.71	2	-.174	2	-.084	1	-.213	4
605		3	max	496.024	4	595.289	7	397.19	1	.212	1	.061	2	.129	3
606			min	-452.403	3	41.363	4	-369.71	2	-.174	2	-.06	1	-.216	4
607		4	max	496.024	4	595.289	7	397.19	1	.212	1	.067	4	.108	3
608			min	-452.403	3	41.363	4	-369.71	2	-.174	2	-.065	3	-.218	4
609		5	max	496.024	4	595.289	7	397.19	1	.212	1	.086	4	.088	3
610			min	-452.403	3	41.363	4	-369.71	2	-.174	2	-.082	3	-.227	8
611	M62A	1	max	916.723	4	1123.032	7	723.069	1	.07	3	.227	2	.152	4
612			min	-865.112	3	383.898	4	-723.241	2	-.07	4	-.227	1	-.124	3
613		2	max	916.723	4	1123.032	7	723.069	1	.07	3	.181	2	.128	4
614			min	-865.112	3	383.898	4	-723.241	2	-.07	4	-.182	1	-.15	3
615		3	max	916.723	4	1123.032	7	723.069	1	.07	3	.136	2	.104	4
616			min	-865.112	3	383.898	4	-723.241	2	-.07	4	-.136	1	-.176	3
617		4	max	916.723	4	1123.032	7	723.069	1	.07	3	.091	2	.08	4
618			min	-865.112	3	383.898	4	-723.241	2	-.07	4	-.091	1	-.201	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
619		5	max	916.723	4	1123.032	7	723.069	1	.07	3	.046	2	.056	4
620			min	-865.112	3	383.898	4	-723.241	2	-.07	4	-.046	1	-.258	7
621	M63A	1	max	313.433	4	542.933	7	323.452	1	.206	1	.127	3	.156	1
622			min	-268.863	3	19.496	4	-352.095	2	-.244	2	-.124	4	-.195	2
623		2	max	313.433	4	542.933	7	323.452	1	.206	1	.109	3	.139	1
624			min	-268.863	3	19.496	4	-352.095	2	-.244	2	-.108	4	-.202	2
625		3	max	313.433	4	542.933	7	323.452	1	.206	1	.091	3	.122	1
626			min	-268.863	3	19.496	4	-352.095	2	-.244	2	-.091	4	-.209	2
627		4	max	313.433	4	542.933	7	323.452	1	.206	1	.073	3	.105	1
628			min	-268.863	3	19.496	4	-352.095	2	-.244	2	-.075	4	-.215	2
629		5	max	313.433	4	542.933	7	323.452	1	.206	1	.071	1	.088	1
630			min	-268.863	3	19.496	4	-352.095	2	-.244	2	-.076	2	-.222	6
631	MP1C	1	max	0	1	.019	8	.008	1	0	1	0	1	0	1
632			min	0	1	-.016	3	-.015	6	0	1	0	1	0	1
633		2	max	266.705	7	272.642	4	208.134	1	.086	4	.063	2	.1	4
634			min	-78.331	4	-222.24	3	-205.02	2	-.082	3	-.105	1	-.129	3
635		3	max	-56.386	3	200.421	3	135.331	2	0	1	.236	1	.323	3
636			min	-182.354	5	-200.382	4	-135.348	1	0	1	-.236	2	-.322	4
637		4	max	-9.371	3	25.752	3	25.676	2	0	1	.029	1	.029	3
638			min	-29.23	5	-25.713	4	-25.693	1	0	1	-.029	2	-.029	4
639		5	max	0	1	.189	5	.024	4	0	1	0	1	0	1
640			min	0	1	.002	4	-.131	6	0	1	0	1	0	1
641	MP2C	1	max	0	1	.473	8	.178	1	0	1	0	1	0	1
642			min	0	1	-.384	3	-.233	6	0	1	0	1	0	1
643		2	max	364.972	7	387.91	4	357.48	1	.046	2	.185	2	.078	1
644			min	76.442	4	-343.825	3	-383.382	2	-.046	1	-.211	1	-.122	2
645		3	max	743.475	7	590.753	4	456.87	1	.046	2	.604	1	.797	3
646			min	280.372	4	-546.669	3	-482.773	2	-.046	1	-.681	2	-.93	4
647		4	max	-82.01	9	440.111	3	301.754	2	0	1	.301	1	.44	3
648			min	-314.304	5	-440	4	-301.818	1	0	1	-.301	2	-.439	4
649		5	max	0	1	.969	8	.377	1	0	1	0	1	0	1
650			min	0	1	-.515	3	-.674	6	0	1	0	1	0	1
651	MP3C	1	max	0	1	.02	8	.011	1	0	1	0	1	0	1
652			min	0	1	-.01	3	-.011	6	0	1	0	1	0	1
653		2	max	209.796	3	100.526	4	157.284	1	.071	1	.157	2	.055	4
654			min	-128.55	4	-77.175	3	-202.892	2	-.076	2	-.15	1	-.099	3
655		3	max	352.504	7	239.869	4	257.717	1	.071	1	.265	1	.195	3
656			min	-58.42	4	-216.519	3	-303.325	2	-.076	2	-.349	2	-.286	4
657		4	max	-8.33	9	22.947	3	22.922	2	0	1	.023	1	.023	3
658			min	-25.982	5	-22.9	4	-22.957	1	0	1	-.023	2	-.023	4
659		5	max	0	1	.207	5	.065	2	0	1	0	1	0	1
660			min	0	1	-.06	2	-.148	5	0	1	0	1	0	1
661	M67	1	max	401.105	3	606.194	8	370.891	2	.176	4	.135	3	.121	1
662			min	-357.003	4	3.874	3	-342.421	1	-.138	3	-.138	4	-.161	2
663		2	max	401.105	3	606.194	8	370.891	2	.176	4	.116	3	.105	1
664			min	-357.003	4	3.874	3	-342.421	1	-.138	3	-.117	4	-.168	2
665		3	max	401.105	3	606.194	8	370.891	2	.176	4	.097	3	.089	1
666			min	-357.003	4	3.874	3	-342.421	1	-.138	3	-.096	4	-.175	2
667		4	max	401.105	3	606.194	8	370.891	2	.176	4	.077	3	.073	1
668			min	-357.003	4	3.874	3	-342.421	1	-.138	3	-.075	4	-.19	6
669		5	max	401.105	3	606.194	8	370.891	2	.176	4	.068	2	.056	1
670			min	-357.003	4	3.874	3	-342.421	1	-.138	3	-.063	1	-.223	6

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
671	M68	1	max	921.584	3	1122.526	8	717.325	2	.067	3	.223	1	.145	3
672			min	-870.091	4	385.362	3	-716.802	1	-.066	4	-.223	2	-.116	4
673		2	max	921.584	3	1122.526	8	717.325	2	.067	3	.178	1	.121	3
674			min	-870.091	4	385.362	3	-716.802	1	-.066	4	-.178	2	-.142	4
675		3	max	921.584	3	1122.526	8	717.325	2	.067	3	.133	1	.097	3
676			min	-870.091	4	385.362	3	-716.802	1	-.066	4	-.133	2	-.168	4
677		4	max	921.584	3	1122.526	8	717.325	2	.067	3	.088	1	.073	3
678			min	-870.091	4	385.362	3	-716.802	1	-.066	4	-.088	2	-.193	4
679		5	max	921.584	3	1122.526	8	717.325	2	.067	3	.044	1	.049	3
680			min	-870.091	4	385.362	3	-716.802	1	-.066	4	-.044	2	-.256	8
681	M69	1	max	409.407	3	534.939	8	344.099	2	.242	2	.1	1	.232	4
682			min	-365.391	4	44.493	3	-371.723	1	-.28	1	-.097	2	-.272	3
683		2	max	409.407	3	534.939	8	344.099	2	.242	2	.076	1	.211	4
684			min	-365.391	4	44.493	3	-371.723	1	-.28	1	-.076	2	-.275	3
685		3	max	409.407	3	534.939	8	344.099	2	.242	2	.064	4	.191	4
686			min	-365.391	4	44.493	3	-371.723	1	-.28	1	-.064	3	-.278	3
687		4	max	409.407	3	534.939	8	344.099	2	.242	2	.078	4	.17	4
688			min	-365.391	4	44.493	3	-371.723	1	-.28	1	-.08	3	-.28	3
689		5	max	409.407	3	534.939	8	344.099	2	.242	2	.092	4	.149	4
690			min	-365.391	4	44.493	3	-371.723	1	-.28	1	-.096	3	-.283	3
691	MP1B	1	max	0	1	.01	4	.011	1	0	1	0	1	0	1
692			min	0	1	-.019	7	-.011	6	0	1	0	1	0	1
693		2	max	277.471	8	173.966	4	216.604	1	.068	2	.111	2	.103	4
694			min	-116.866	3	-196.783	3	-261.947	2	-.063	1	-.115	1	-.053	3
695		3	max	-56.386	1	200.336	3	135.358	2	0	1	.236	1	.322	3
696			min	-182.354	5	-200.369	4	-135.383	1	0	1	-.236	2	-.322	4
697		4	max	-9.371	1	25.666	3	25.703	2	0	1	.029	1	.029	3
698			min	-29.23	5	-25.7	4	-25.728	1	0	1	-.029	2	-.029	4
699		5	max	0	1	.038	2	.004	9	0	1	0	1	0	1
700			min	0	1	-.21	5	-.145	6	0	1	0	1	0	1
701	MP2B	1	max	0	1	.39	4	.174	1	0	1	0	1	0	1
702			min	0	1	-.479	7	-.234	6	0	1	0	1	0	1
703		2	max	364.483	8	350.185	4	349.657	1	.044	1	.178	2	.123	2
704			min	78.105	3	-394.05	3	-375.819	2	-.044	2	-.203	1	-.079	1
705		3	max	742.987	8	553.029	4	449.048	1	.044	1	.595	1	.936	3
706			min	282.035	3	-596.894	3	-475.209	2	-.044	2	-.673	2	-.804	4
707		4	max	-82.01	1	440.01	3	301.748	2	0	1	.301	1	.439	3
708			min	-314.304	8	-440.121	4	-301.812	1	0	1	-.301	2	-.44	4
709		5	max	0	1	.505	4	.384	1	0	1	0	1	0	1
710			min	0	1	-.969	7	-.655	6	0	1	0	1	0	1
711	MP3B	1	max	0	1	.015	4	.007	1	0	1	0	1	0	1
712			min	0	1	-.02	7	-.016	6	0	1	0	1	0	1
713		2	max	183.965	4	129.645	4	142.008	1	.092	4	.089	2	.143	4
714			min	-102.522	3	-180.271	3	-138.999	2	-.096	3	-.131	1	-.126	3
715		3	max	344.597	8	268.988	4	242.441	1	.092	4	.253	1	.374	3
716			min	-32.392	3	-319.614	3	-239.432	2	-.096	3	-.289	2	-.256	4
717		4	max	-8.33	4	22.97	3	22.881	2	0	1	.023	1	.023	3
718			min	-25.982	5	-23.022	4	-22.904	1	0	1	-.023	2	-.023	4
719		5	max	0	1	.112	3	.038	3	0	1	0	1	0	1
720			min	0	1	-.249	8	-.113	8	0	1	0	1	0	1
721	M73	1	max	38.049	4	149.242	1	110.595	4	.271	3	.082	2	.103	2
722			min	-80.387	3	-213.902	2	-138.708	3	-.223	4	-.078	1	-.113	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
723		2	max	38.049	4	149.242	1	110.595	4	.271	3	.08	2	.116	2
724			min	-80.387	3	-213.902	2	-138.708	3	-.223	4	-.077	1	-.122	1
725		3	max	38.049	4	149.242	1	110.595	4	.271	3	.078	2	.13	2
726			min	-80.387	3	-213.902	2	-138.708	3	-.223	4	-.077	1	-.131	1
727		4	max	38.049	4	149.242	1	110.595	4	.271	3	.076	2	.143	2
728			min	-80.387	3	-213.902	2	-138.708	3	-.223	4	-.077	1	-.141	1
729		5	max	38.049	4	149.242	1	110.595	4	.271	3	.074	2	.157	2
730			min	-80.387	3	-213.902	2	-138.708	3	-.223	4	-.077	1	-.15	1
731	M74	1	max	95.459	1	32.335	10	93.385	4	.535	3	.07	3	.382	2
732			min	-145.752	2	-52.313	6	-93.836	3	-.535	4	-.07	4	-.369	1
733		2	max	95.459	1	32.335	10	93.385	4	.535	3	.064	3	.384	2
734			min	-145.752	2	-52.313	6	-93.836	3	-.535	4	-.064	4	-.37	1
735		3	max	95.459	1	32.335	10	93.385	4	.535	3	.058	3	.386	2
736			min	-145.752	2	-52.313	6	-93.836	3	-.535	4	-.058	4	-.371	1
737		4	max	95.459	1	32.335	10	93.385	4	.535	3	.053	3	.388	2
738			min	-145.752	2	-52.313	6	-93.836	3	-.535	4	-.052	4	-.371	1
739		5	max	95.459	1	32.335	10	93.385	4	.535	3	.047	3	.39	2
740			min	-145.752	2	-52.313	6	-93.836	3	-.535	4	-.046	4	-.372	1
741	M75	1	max	39.547	3	138.027	1	154.375	4	.215	3	.082	1	.099	3
742			min	-82.153	1	-201.935	2	-126.366	3	-.263	4	-.085	2	-.108	4
743		2	max	39.547	3	138.027	1	154.375	4	.215	3	.081	1	.101	3
744			min	-82.153	1	-201.935	2	-126.366	3	-.263	4	-.083	2	-.106	4
745		3	max	39.547	3	138.027	1	154.375	4	.215	3	.081	1	.104	3
746			min	-82.153	1	-201.935	2	-126.366	3	-.263	4	-.081	2	-.105	4
747		4	max	39.547	3	138.027	1	154.375	4	.215	3	.081	1	.115	2
748			min	-82.153	1	-201.935	2	-126.366	3	-.263	4	-.079	2	-.113	1
749		5	max	39.547	3	138.027	1	154.375	4	.215	3	.081	1	.128	2
750			min	-82.153	1	-201.935	2	-126.366	3	-.263	4	-.077	2	-.121	1
751	M76	1	max	0	1	0	1	0	1	0	1	0	1	0	1
752			min	0	1	0	1	0	1	0	1	0	1	0	1
753		2	max	70.712	10	117.945	4	106.481	1	.185	1	.229	4	.099	4
754			min	-58.651	4	-99.963	3	-131.652	2	-.192	2	-.195	3	-.104	3
755		3	max	70.712	10	103.888	4	81.978	3	.185	1	.27	1	.037	2
756			min	-58.651	4	-105.072	3	-86.197	4	-.192	2	-.32	2	-.278	3
757		4	max	34.612	4	101.006	4	128.077	2	.19	2	.214	3	.1	3
758			min	-47.824	3	-119.128	3	-102.664	1	-.184	1	-.18	4	-.105	4
759		5	max	0	1	0	1	0	1	0	1	0	1	0	1
760			min	0	1	0	1	0	1	0	1	0	1	0	1
761	M77	1	max	52.747	3	112.713	4	116.806	2	.282	1	.073	3	.172	3
762			min	-96.706	4	-176.933	3	-144.165	1	-.234	2	-.07	4	-.18	4
763		2	max	52.747	3	112.713	4	116.806	2	.282	1	.075	3	.183	3
764			min	-96.706	4	-176.933	3	-144.165	1	-.234	2	-.074	4	-.187	4
765		3	max	52.747	3	112.713	4	116.806	2	.282	1	.077	3	.194	3
766			min	-96.706	4	-176.933	3	-144.165	1	-.234	2	-.078	4	-.194	4
767		4	max	52.747	3	112.713	4	116.806	2	.282	1	.079	3	.205	3
768			min	-96.706	4	-176.933	3	-144.165	1	-.234	2	-.082	4	-.201	4
769		5	max	52.747	3	112.713	4	116.806	2	.282	1	.082	3	.216	3
770			min	-96.706	4	-176.933	3	-144.165	1	-.234	2	-.086	4	-.208	4
771	M78	1	max	71.18	4	4.841	4	83.956	2	.54	1	.067	1	.315	3
772			min	-122.837	3	-50.854	7	-84.176	1	-.54	2	-.067	2	-.303	4
773		2	max	71.18	4	4.841	4	83.956	2	.54	1	.062	1	.317	3
774			min	-122.837	3	-50.854	7	-84.176	1	-.54	2	-.062	2	-.303	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
775		3	max	71.18	4	4.841	4	83.956	2	.54	1	.057	1	.318	3
776			min	-122.837	3	-50.854	7	-84.176	1	-.54	2	-.056	2	-.304	4
777		4	max	71.18	4	4.841	4	83.956	2	.54	1	.051	1	.32	3
778			min	-122.837	3	-50.854	7	-84.176	1	-.54	2	-.051	2	-.304	4
779		5	max	71.18	4	4.841	4	83.956	2	.54	1	.046	1	.322	3
780			min	-122.837	3	-50.854	7	-84.176	1	-.54	2	-.046	2	-.304	4
781	M79	1	max	76.963	1	136.997	4	138.269	2	.196	1	.083	4	.157	1
782			min	-119.632	2	-201.531	3	-109.716	1	-.244	2	-.086	3	-.166	2
783		2	max	76.963	1	136.997	4	138.269	2	.196	1	.077	4	.164	1
784			min	-119.632	2	-201.531	3	-109.716	1	-.244	2	-.078	3	-.169	2
785		3	max	76.963	1	136.997	4	138.269	2	.196	1	.071	4	.171	1
786			min	-119.632	2	-201.531	3	-109.716	1	-.244	2	-.07	3	-.172	2
787		4	max	76.963	1	136.997	4	138.269	2	.196	1	.067	2	.179	1
788			min	-119.632	2	-201.531	3	-109.716	1	-.244	2	-.064	1	-.175	2
789		5	max	76.963	1	136.997	4	138.269	2	.196	1	.076	2	.186	1
790			min	-119.632	2	-201.531	3	-109.716	1	-.244	2	-.071	1	-.178	2
791	M80	1	max	0	1	.015	1	.026	4	0	1	0	1	0	1
792			min	0	1	0	11	-.018	2	0	1	0	1	0	1
793		2	max	34.023	1	119.048	2	104.894	4	.16	4	.189	2	.087	2
794			min	-46.477	2	-101.025	1	-130.97	3	-.166	3	-.155	1	-.092	1
795		3	max	58.637	1	112.431	2	69.997	1	.16	4	.24	4	.273	1
796			min	-71.09	2	-102.388	1	-88.338	3	-.166	3	-.292	3	-.291	2
797		4	max	-.252	4	98.374	2	84.208	1	.149	3	.124	1	.102	1
798			min	-14.845	8	-116.444	1	-57.55	2	-.143	4	-.088	2	-.107	2
799		5	max	0	1	0	11	.017	4	0	1	0	1	0	1
800			min	0	1	-.016	2	-.005	2	0	1	0	1	0	1
801	M81	1	max	68.268	1	150.665	3	89.617	1	.249	2	.081	4	.157	1
802			min	-110.613	2	-215.679	4	-117.935	2	-.202	1	-.077	3	-.166	2
803		2	max	68.268	1	150.665	3	89.617	1	.249	2	.074	4	.164	1
804			min	-110.613	2	-215.679	4	-117.935	2	-.202	1	-.073	3	-.168	2
805		3	max	68.268	1	150.665	3	89.617	1	.249	2	.068	4	.171	1
806			min	-110.613	2	-215.679	4	-117.935	2	-.202	1	-.068	3	-.171	2
807		4	max	68.268	1	150.665	3	89.617	1	.249	2	.061	4	.177	1
808			min	-110.613	2	-215.679	4	-117.935	2	-.202	1	-.063	3	-.173	2
809		5	max	68.268	1	150.665	3	89.617	1	.249	2	.063	1	.184	1
810			min	-110.613	2	-215.679	4	-117.935	2	-.202	1	-.068	2	-.176	2
811	M82	1	max	66.002	3	3.223	3	78.006	1	.53	2	.063	2	.323	4
812			min	-117.615	4	-50.369	8	-77.982	2	-.53	1	-.063	1	-.311	3
813		2	max	66.002	3	3.223	3	78.006	1	.53	2	.058	2	.324	4
814			min	-117.615	4	-50.369	8	-77.982	2	-.53	1	-.058	1	-.311	3
815		3	max	66.002	3	3.223	3	78.006	1	.53	2	.053	2	.326	4
816			min	-117.615	4	-50.369	8	-77.982	2	-.53	1	-.053	1	-.311	3
817		4	max	66.002	3	3.223	3	78.006	1	.53	2	.048	2	.327	4
818			min	-117.615	4	-50.369	8	-77.982	2	-.53	1	-.049	1	-.312	3
819		5	max	66.002	3	3.223	3	78.006	1	.53	2	.044	2	.329	4
820			min	-117.615	4	-50.369	8	-77.982	2	-.53	1	-.044	1	-.312	3
821	M83	1	max	84.66	4	111.618	3	158.257	1	.221	2	.073	3	.157	4
822			min	-129.086	3	-175.19	4	-130.768	2	-.268	1	-.076	4	-.166	3
823		2	max	84.66	4	111.618	3	158.257	1	.221	2	.079	3	.168	4
824			min	-129.086	3	-175.19	4	-130.768	2	-.268	1	-.08	4	-.173	3
825		3	max	84.66	4	111.618	3	158.257	1	.221	2	.085	3	.179	4
826			min	-129.086	3	-175.19	4	-130.768	2	-.268	1	-.084	4	-.18	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
827		4	max	84.66	4	111.618	3	158.257	1	.221	2	.091	3	.19	4
828			min	-129.086	3	-175.19	4	-130.768	2	-.268	1	-.088	4	-.187	3
829		5	max	84.66	4	111.618	3	158.257	1	.221	2	.096	3	.201	4
830			min	-129.086	3	-175.19	4	-130.768	2	-.268	1	-.092	4	-.194	3
831	M84	1	max	0	1	.016	2	.003	2	0	1	0	1	0	1
832			min	0	1	0	9	-.019	3	0	1	0	1	0	1
833		2	max	11.958	3	112.159	1	59.403	2	.147	3	.132	1	.097	1
834			min	-29.893	9	-94.199	2	-85.96	1	-.153	4	-.096	2	-.102	2
835		3	max	57.558	1	98.102	1	83.405	4	.17	4	.238	3	.272	1
836			min	-70.325	2	-104.401	2	-71.749	1	-.164	3	-.29	4	-.29	2
837		4	max	32.945	1	100.415	1	126.037	4	.17	4	.181	2	.086	2
838			min	-45.711	2	-118.458	2	-100.018	3	-.164	3	-.147	1	-.091	1
839		5	max	0	1	0	11	.017	2	0	1	0	1	0	1
840			min	0	1	-.015	1	-.027	3	0	1	0	1	0	1
841	M85	1	max	172.266	3	172.411	1	99.823	3	.003	1	.231	2	.245	4
842			min	-252.438	4	-191.085	2	-99.555	4	-.003	2	-.231	1	-.236	3
843		2	max	163.957	3	177.1	1	85.432	3	.003	1	.144	2	.133	4
844			min	-244.129	4	-186.395	2	-85.164	4	-.003	2	-.151	1	-.117	3
845		3	max	155.648	3	181.79	1	71.04	3	.003	1	.084	4	.047	2
846			min	-235.82	4	-181.706	2	-70.772	4	-.003	2	-.092	3	-.03	1
847		4	max	147.339	3	186.479	1	56.648	3	.003	1	.113	4	.173	2
848			min	-227.511	4	-177.017	2	-56.381	4	-.003	2	-.118	3	-.158	1
849		5	max	139.03	3	191.168	1	51.31	2	.003	1	.152	4	.299	2
850			min	-219.202	4	-172.327	2	-50.342	1	-.003	2	-.15	3	-.291	1
851	M86	1	max	129.785	1	182.948	2	62.992	1	.003	2	.166	3	.305	2
852			min	-209.996	2	-201.44	1	-63.385	2	-.003	1	-.165	4	-.298	1
853		2	max	128.683	4	187.637	2	58.195	1	.003	2	.122	3	.166	2
854			min	-209.105	3	-196.75	1	-58.588	2	-.003	1	-.128	4	-.151	1
855		3	max	136.992	4	192.327	2	53.398	1	.003	2	.088	3	.04	3
856			min	-217.414	3	-192.061	1	-53.791	2	-.003	1	-.096	4	-.02	4
857		4	max	145.301	4	197.016	2	65.321	3	.003	2	.141	2	.128	3
858			min	-225.723	3	-187.371	1	-65.023	4	-.003	1	-.147	1	-.111	4
859		5	max	153.61	4	201.706	2	79.712	3	.003	2	.227	2	.256	1
860			min	-234.032	3	-182.682	1	-79.415	4	-.003	1	-.225	1	-.25	2
861	M87	1	max	102.735	2	218.404	3	43.468	2	.004	3	.226	4	.283	3
862			min	-183.473	1	-236.962	4	-43.405	1	-.004	4	-.225	3	-.277	4
863		2	max	102.735	2	223.094	3	32.389	4	.004	3	.112	4	.14	3
864			min	-183.473	1	-232.273	4	-32.24	3	-.004	4	-.119	3	-.126	4
865		3	max	102.735	2	227.783	3	32.389	4	.004	3	.077	1	.035	6
866			min	-183.473	1	-227.583	4	-32.24	3	-.004	4	-.084	2	-.005	3
867		4	max	102.735	2	232.473	3	32.389	4	.004	3	.102	3	.167	4
868			min	-183.473	1	-222.894	4	-32.24	3	-.004	4	-.108	4	-.153	3
869		5	max	102.735	2	237.162	3	33.35	1	.004	3	.216	3	.31	4
870			min	-183.473	1	-218.204	4	-33.287	2	-.004	4	-.214	4	-.304	3
871	M88	1	max	3979.827	5	44.449	5	39.698	3	0	3	0	1	0	1
872			min	651.935	2	-6.343	2	-39.698	4	0	4	0	1	0	1
873		2	max	3994.2	5	22.225	5	19.849	3	0	3	.037	3	.006	2
874			min	668.612	2	-3.172	2	-19.849	4	0	4	-.037	4	-.041	5
875		3	max	4008.574	5	0	1	0	1	0	3	.049	3	.008	2
876			min	685.289	2	0	1	0	1	0	4	-.049	4	-.055	5
877		4	max	4022.947	5	3.172	2	19.849	4	0	3	.037	3	.006	2
878			min	701.966	2	-22.225	5	-19.849	3	0	4	-.037	4	-.041	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
879		5	max	4037.32	5	6.343	2	39.698	4	0	3	0	1	0	1
880			min	718.644	2	-44.449	5	-39.698	3	0	4	0	1	0	1
881	M89	1	max	3947.008	8	44.2	8	32.159	1	0	3	0	1	0	1
882			min	743.625	3	-5.713	3	-32.159	2	0	4	0	1	0	1
883		2	max	3961.506	8	22.1	8	16.079	1	0	3	.03	1	.005	3
884			min	759.988	3	-2.856	3	-16.079	2	0	4	-.03	2	-.041	8
885		3	max	3976.004	8	0	1	0	1	0	3	.04	1	.007	3
886			min	776.35	3	0	1	0	1	0	4	-.04	2	-.055	8
887		4	max	3990.501	8	2.856	3	16.079	2	0	3	.03	1	.005	3
888			min	792.712	3	-22.1	8	-16.079	1	0	4	-.03	2	-.041	8
889		5	max	4004.999	8	5.713	3	32.159	2	0	3	0	1	0	1
890			min	809.074	3	-44.2	8	-32.159	1	0	4	0	1	0	1
891	M90	1	max	3946.024	7	44.2	7	32.159	2	0	3	0	1	0	1
892			min	741.578	4	-5.713	4	-32.159	1	0	4	0	1	0	1
893		2	max	3960.522	7	22.1	7	16.079	2	0	3	.03	2	.005	4
894			min	757.94	4	-2.856	4	-16.079	1	0	4	-.03	1	-.041	7
895		3	max	3975.02	7	0	1	0	1	0	3	.04	2	.007	4
896			min	774.303	4	0	1	0	1	0	4	-.04	1	-.055	7
897		4	max	3989.518	7	2.856	4	16.079	1	0	3	.03	2	.005	4
898			min	790.665	4	-22.1	7	-16.079	2	0	4	-.03	1	-.041	7
899		5	max	4004.016	7	5.713	4	32.159	1	0	3	0	1	0	1
900			min	807.027	4	-44.2	7	-32.159	2	0	4	0	1	0	1

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....		L..	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....		Eqn
1	MP2A	PIPE_2.0	.751	4.333	2	.079	4.333		3	14916...	32130	1.872	1.872	1..	H1-1b
2	MP2C	PIPE_2.0	.658	4.333	3	.089	4.333		4	14916...	32130	1.872	1.872	1..	H1-1b
3	MP2B	PIPE_2.0	.658	4.333	4	.087	4.333		3	14916...	32130	1.872	1.872	1..	H1-1b
4	M8	L2x2x3	.585	0	9	.102	0	z	9	14633...	23392.8	.558	1.239	4...	H2-1
5	M31	PL3/8x6	.583	0	4	.260	0	y	8	72102...	72900	.57	9.113	1..	H1-1b
6	M29	PL3/8x6	.583	0	3	.260	0	y	7	72102...	72900	.57	9.113	1..	H1-1b
7	M18	PL3/8x6	.536	.18	1	.249	0	y	5	72102...	72900	.57	9.113	1..	H1-1b
8	M19	PL3/8x6	.536	0	1	.160	0	y	6	68950...	72900	.57	9.113	1..	H1-1b
9	M3	PL3/8x6	.521	.18	1	.253	0	y	5	72102...	72900	.57	9.113	1..	H1-1b
10	M4	PL3/8x6	.520	0	1	.165	0	y	6	68950...	72900	.57	9.113	1..	H1-1b
11	M32	PL3/8x6	.501	0	4	.167	0	y	7	68950...	72900	.57	9.113	1..	H1-1b
12	M30	PL3/8x6	.494	0	3	.171	0	y	8	68950...	72900	.57	9.113	1..	H1-1b
13	M6	PL3/8x6	.399	0	3	.165	0	y	8	68950...	72900	.57	9.113	1..	H1-1b
14	M5	PL3/8x6	.398	.18	3	.257	0	y	6	72102...	72900	.57	9.113	1..	H1-1b
15	M17	PL3/8x6	.389	0	4	.169	0	y	7	68950...	72900	.57	9.113	1..	H1-1b
16	M16	PL3/8x6	.388	.18	4	.260	0	y	8	72102...	72900	.57	9.113	1..	H1-1b
17	MP1C	PIPE_2.0	.315	4.312	4	.090	4.312		4	12143...	32130	1.872	1.872	2..	H1-1b
18	MP1A	PIPE_2.0	.291	4.312	1	.078	4.312		1	12143...	32130	1.872	1.872	2..	H1-1b
19	M55A	PIPE_2.5	.271	6.75	3	.074	8.437		4	12481...	50715	3.596	3.596	1..	H1-1b
20	M56B	PIPE_2.5	.271	6.75	4	.082	5.062		3	12481...	50715	3.596	3.596	1..	H1-1b
21	MP8A	PIPE_2.5	.271	6.75	2	.089	5.062		1	12481...	50715	3.596	3.596	1..	H1-1b
22	MP1B	PIPE_2.0	.267	4.312	2	.074	4.312		2	12143...	32130	1.872	1.872	4..	H1-1b
23	MP3B	PIPE_2.0	.258	4.333	3	.091	4.333		3	14916...	32130	1.872	1.872	1..	H1-1b
24	MP3C	PIPE_2.0	.245	4.333	2	.077	4.333		2	14916...	32130	1.872	1.872	1..	H1-1b
25	MP5B	HSS4x4x4	.244	5.658	4	.116	5.658	z	4	68766...	109188	12.663	12.663	1..	H1-1b

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....	L..	phi*Pn...	phi*Pn...	phi*Mn..	phi*Mn.....	Eqn
26	M7	L2x2x3	.226	4.708	4	.010	0	y 6	14633...	23392.8	.558	1.203	2... H2-1
27	MP3A	PIPE_2.0	.225	4.333	4	.076	4.333	1	14916...	32130	1.872	1.872	1... H1-1b
28	M20	L2x2x3	.214	4.708	2	.010	0	y 5	14633...	23392.8	.558	1.225	2... H2-1
29	M21	L2x2x3	.211	4.708	3	.010	0	z 6	14633...	23392.8	.558	1.199	2... H2-1
30	M87	L3x3x4	.210	3.19	3	.032	3.19	y 3	37239...	46656	1.688	3.756	2... H2-1
31	M86	L3x3x4	.205	3.19	2	.026	0	y 1	37239...	46656	1.688	3.756	2... H2-1
32	M13	HSS4x4x4	.201	0	8	.074	2.354	z 3	10801...	109188	12.663	12.663	1... H1-1b
33	M25	HSS4x4x4	.200	2.79	7	.071	2.79	y 7	10801...	109188	12.663	12.663	1... H1-1b
34	M12	HSS4x4x4	.196	2.789	6	.071	2.789	y 6	10801...	109188	12.663	12.663	1... H1-1b
35	M80	PIPE_2.0	.195	6.75	3	.123	11....	4	5397.31	32130	1.872	1.872	1... H1-1b
36	M26	HSS4x4x4	.195	0	6	.071	0	y 7	10801...	109188	12.663	12.663	1... H1-1b
37	M85	L3x3x4	.195	0	1	.025	0	y 2	37239...	46656	1.688	3.756	2... H2-1
38	M84	PIPE_2.0	.194	6.75	4	.118	10....	4	5397.31	32130	1.872	1.872	1... H1-1b
39	M39	HSS4x4x4	.190	0	5	.071	0	y 5	10801...	109188	12.663	12.663	1... H1-1b
40	M38	HSS4x4x4	.189	2.789	5	.071	2.789	y 8	10801...	109188	12.663	12.663	1... H1-1b
41	M76	PIPE_2.0	.184	2.672	4	.130	2.672	2	5397.31	32130	1.872	1.872	1... H1-1b
42	MP5A	HSS4x4x4	.182	2.18	8	.082	5.657	z 2	68773...	109188	12.663	12.663	1... H1-1b
43	MP5C	HSS4x4x4	.182	2.18	7	.087	5.657	z 1	68780...	109188	12.663	12.663	1... H1-1b
44	M34	L2x2x3	.173	0	7	.011	0	z 7	14633...	23392.8	.558	1.239	2... H2-1
45	M33	L2x2x3	.167	0	8	.010	0	y 8	14631...	23392.8	.558	1.239	2... H2-1
46	M27	pl1/2X6	.118	0	1	.086	0	y 7	92954...	97200	1.012	12.15	1... H1-1b
47	M28	pl1/2X6	.117	0	1	.095	0	y 8	92922...	97200	1.012	12.15	1... H1-1b
48	M15	pl1/2X6	.112	.54	1	.094	0	y 7	92933...	97200	1.012	11.986	1... H1-1b
49	M23	pl1/2X6	.110	0	1	.164	0	y 6	95563...	97200	1.012	12.15	1... H1-1b
50	M88	LL2x2x4x3	.109	4.95	5	.002	0	y 5	36872...	61236	3.594	2.114	1 H1-1b*
51	M36	pl1/2X6	.109	0	4	.177	0	y 7	95563...	97200	1.012	12.15	1... H1-1b
52	M89	LL2x2x4x3	.109	4.95	8	.004	4.95	y 4	36872...	61236	3.594	2.114	1... H1-1b*
53	M90	LL2x2x4x3	.109	4.95	7	.004	4.95	y 3	36872...	61236	3.594	2.114	1... H1-1b*
54	M14	pl1/2X6	.099	0	3	.086	0	y 6	92944...	97200	1.012	12.15	1... H1-1b
55	M1	pl1/2X6	.097	0	4	.080	0	y 8	92938...	97200	1.012	12.15	1... H1-1b
56	M2	pl1/2X6	.095	0	4	.097	0	y 6	92938...	97200	1.012	12.15	1... H1-1b
57	M9	pl1/2X6	.090	0	1	.175	0	y 6	95563...	97200	1.012	12.15	1... H1-1b
58	M35	pl1/2X6	.086	0	3	.213	0	y 4	95563...	97200	1.012	12.15	1... H1-1b
59	M10	pl1/2X6	.074	0	3	.164	0	y 5	95563...	97200	1.012	12.15	1... H1-1b
60	M22	pl1/2X6	.064	0	2	.169	0	y 7	95563...	97200	1.012	12.15	1... H1-1b

Envelope AISI S100-10: LRFD Cold Formed Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[..	Dir	LC	phi*Pn..	phi*Tn...	phi*M...	phi*M...	Cb	CmyyCmzz	Eqn
No Data to Print ...															

Envelope AA ADM1-10: ASD - Building Aluminum Code Checks

Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	Pnc/O...	Pnt/Om...	Mny/O...	Mnz/O...	Vny/O...	Vnz/O...	Cb	Eqn
No Data to Print ...																

EXHIBIT 10

Mount Mod Drawings

MODIFICATION AND DESIGN
DRAWINGS FOR EXISTING ANTENNA MOUNTS
EXISTING MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE

TOWER OWNER: SBA / TOWER OWNER SITE #: CT01501-S

CARRIER SITE #/NAME: CTNH357C / MORRIS

COORDINATES (LATITUDE: 41.667219°, LONGITUDE: -73.170516°)

PLEASE NOTE THIS SET OF DRAWINGS ARE FOR INSTALLATION AND ASSEMBLY ONLY. FABRICATION DETAIL DRAWINGS ARE NOT PROVIDED AND MUST BE COMPLETED BY THE STEEL FABRICATOR SELECTED. TES CAN PROVIDE THE FABRICATION DETAIL DRAWINGS FOR AN ADDITIONAL FEE.

SHEET	SHEET TITLE	REV
T-1	TITLE SHEET	0
BOM	BILL OF MATERIALS	0
GN-1	GENERAL NOTES	0
A-1	ANTENNA MOUNT MODIFICATION DETAILS	0
A-2	ANTENNA MOUNT PHOTOS	0
D-1	STANDARD DETAILS	0
D-2	STANDARD DETAILS	0
SAF-1	SAFETY CABLE GUIDE DETAILS	0
MS-CHB350-2875	METROSITE SITE CROSSOVER CHANNEL BRACKET KIT	
MS-HR2375-2375	METROSITE SUPPORT RAIL KIT	
MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY	
MPHW-1	METROSITE HEAVY COLLAR MOUNT PLATE WELDMENT	
MS-HK122-8	METROSITE HEAVY KICKER SUPPORT KIT	

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE **TES** PROJECT NO. 109277, DATED 06/16/2021.

TES
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(800)-487-SITE

TES JOB NO:
110755

CUSTOMER SITE NO:
CT01501-S-SBA
CUSTOMER SITE NAME:
MORRIS
310 WATERTOWN ROAD
BETHLEHEM, CT 06763

Exp.10/31/2021

07/06/2021

DRAWN BY: GA | CHECKED BY: KSP/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:
TITLE SHEET

SHEET NUMBER: T-1
REV #: 0

BILL OF MATERIALS

QUANTITY COUNTED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTIONS	SHEET LIST	PIECE WEIGHT (LBS)	WEIGHT (LB)	NOTES
			MATERIAL & HARDWARE				
1	1	MS-HR2375-2375	METROSITE SUPPORT RAIL KIT	A-1, MS-HR2375-2375	251.0	251.0	Galvanized
1	1	MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY	A-1, MS-H1436	136.7	136.7	Galvanized
1	1	MS-HKI22-8	METROSITE HEAVY KICKER SUPPORT KIT	A-1, MS-HKI22-8	211.0	211.0	Galvanized
			FOLLOWING ITEMS ARE "CUSTOM" PARTS				
3	3	MS-CHB350_2875	METROSITE CROSSOVER CHANNEL BRACKET KIT	A-1	14.00	42.0	GALVANIZED
3	3	PST2375-8	2" PST (2.375" O.D. X 0.154" THK) X 8'-0" A53 GR-B 35KSI	A-1	30.14	90.4	GALVANIZED
3	3	L3325-5	L 3" X 3" X 1/4" X 5'-0" A36	D-1	25.01	75.0	GALVANIZED (FINAL CUT LENGTH TO BE DETERMINED IN FIELD)
6	6	PL375-42510-A	PL 3/8" X 4 1/4" X 10" A36	D-1	4.60	27.6	GALVANIZED
12	13	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	D-1	1.17	15.2	(2) HHN & LKW-EA GALVANIZED
12	13	---	BOLT 5/8" X 2" A325	D-1	0.38	4.9	(1) HHN & LKW-EA GALVANIZED
2	2	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)	SAF-1	0.00	0.0	GALVANIZED
			ALL METROSITE PARTS ARE AVAILABLE FROM METROSITE, LLC. **180 IND PARK BLVD COMMERCE, GA 30529** **OFFICE: (706) 335-7045** **FAX: (706) 335-7056**				
			NOTE: ALL MATERIALS, WHICH WEREN'T LISTED IN THIS SHEET, ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.				
				TOTAL WEIGHT (LBS) =		**853.9**	

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TES JOB NO:
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CUSTOMER SITE NO:
CT01501-S-SBA
CUSTOMER SITE NAME:
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310 WATERTOWN ROAD
BETHLEHEM, CT 06763

DRAWN BY: GA | CHECKED BY: KSP/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV #: 0

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-G, ANSI/ASSP A10.48, AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
2. ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER ANSI/ASSP A10.48, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
4. CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
5. THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
6. GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.
7. IT IS THE RESPONSIBILITY OF THE GC TO VERIFY THAT THERE IS NO INTERFERENCES (WITH SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.
8. PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESORDERS@TESTOWER.US

FABRICATION

1. ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
2. ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E70XX UNLESS NOTED OTHERWISE).
2. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
3. ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
4. WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
5. AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

1. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
2. FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING TABLE SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
3. SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
4. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
5. HB HOLLO-BOLT SHALL BE INSTALLED PER ICC ESR-3330 INSTRUCTIONS.

VERIFICATION AND INSPECTION

1. IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2015 SECTION 1705 FOR STEEL CONSTRUCTION AND TABLE 1705.3 FOR CONCRETE CONSTRUCTION.

TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING [a,b]

BOLT LENGTH [c]	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 [d]	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS [d]
NOT MORE THAN $4d_b$	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN $4d_b$ BUT NOT MORE THAN $8d_b$	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN $8d_b$ BUT NOT MORE THAN $12d_b$	2/3 TURN	5/6 TURN	1 TURN

[a] NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

[b] APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

[c] WHEN THE BOLT LENGTH EXCEEDS $12d_b$, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

[d] BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004
RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

1. HB12 HOLLO BOLT: 59 FT-LBS
2. HB16 HOLLO BOLT: 140 FT-LBS
3. HB20 HOLLO BOLT: 221 FT-LBS
4. M20 AJAX BOLT: 280 FT-LBS.

FIELD HOT WORK PLAN NOTES:

FOLLOWING GUIDELINES SHALL BE COMPLIED WITH:

1. CONTRACTOR'S RESPONSIBILITY TO COMPLETE A HOT WORK PLAN IF AWARDED PER CUSTOMER SPECIFICATIONS GUIDELINES FOR WELDING, CUTTING & SPARK PRODUCING WORK.
2. HAVE A FIRE PLAN APPROVED BY THE CUSTOMER AND THEIR SAFETY MANAGEMENT DEPT.
3. CONTRACTOR MUST OBTAIN THE CONTACT INFO OF THE LOCAL FIRE DEPARTMENT AND THE 911 ADDRESS OF THE TOWER SITE BEFORE CONSTRUCTION.
4. CONTRACTOR SHALL MAKE SURE THAT CELL PHONE COVERAGE IS AVAILABLE IN THE TOWER SITE. IF CELL COVERAGE IS NOT AVAILABLE, AN IMMEDIATE AVAILABLE MEANS OF DIRECT COMMUNICATION WITH THE FIRE DEPARTMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION START.
5. ALL CONSTRUCTION SHALL BE PERFORMED UNDER WIND SPEED LESS THAN 10 MPH ON THE GROUND LEVEL. IF WIND SPEED INCREASE, CONTRACTOR MUST DETERMINE IF CONSTRUCTION SHALL BE DISCONTINUED.
6. FIRE SUPPRESSION EQUIPMENT MUST BE MADE AVAILABLE ON SITE AND READY TO USE.
7. CONTRACTOR SHALL ASSIGN A FIRE WATCHER TO PERFORM FIRE-FIGHTING DUTIES.
8. ALL WELDERS SHALL BE AWS OR STATE CERTIFIED. THEY MUST ALSO BE EXPERIENCED IN WELDING ON GALVANIZED MATERIALS.
9. IF IT IS POSSIBLE, ALL EXISTING COAX NEAR WELDING AREA SHALL BE TEMPORARILY MOVED AWAY FROM THE WELDING AREA BEFORE WELDING THE PLATES.
10. PLEASE REPORT ANY FIELD ISSUE TO TES @ 972-483-0607.

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BETHLEHEM, CT 06763

DRAWN BY: GA | CHECKED BY: KSP/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: GN-1
REV #: 0

SCOPE OF WORK

1. INSTALL NEW CROSSOVER CHANNEL BRACKET KIT ON EXISTING BOTTOM SUPPORT RAIL PIPE TO ACCOMMODATE THE INSTALLATION OF NEW ANTENNA MOUNT PIPE, (1) PER SECTOR. SEE SHEET MS-CHB350-2875 FOR DETAILS.
2. INSTALL NEW 2" PST (8'-0" LONG) ANTENNA MOUNT PIPE, (1) PER SECTOR.
3. A. INSTALL NEW SUPPORT RAIL KIT, (1) PER SECTOR. SEE SHEET MS-HR2375-2375 FOR DETAILS.
   B. INSTALL NEW SUPPORT RAIL END CONNECTION ON NEW TOP SUPPORT RAIL KIT. SEE SHEET D-1 FOR DETAILS.
4. INSTALL NEW HEAVY COLLAR MOUNT (NOT SHOWN FOR CLARITY). SEE SHEETS MS-H1436 AND D-2 FOR DETAILS.
5. INSTALL NEW HEAVY KICKER SUPPORT KIT. SEE SHEETS MS-HKI22-8 AND D-2 FOR DETAILS.
6. REROUTE EXISTING TRAPPED SAFETY CABLE OUT OF EXISTING COLLAR MOUNT AND INSTALL NEW SAFETY CLIMB GUIDES TO PREVENT EXISTING SAFETY CLIMB FROM RUBBING AGAINST NEW AND EXISTING COLLAR MOUNTS. SEE SHEET SAF-1 FOR DETAILS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

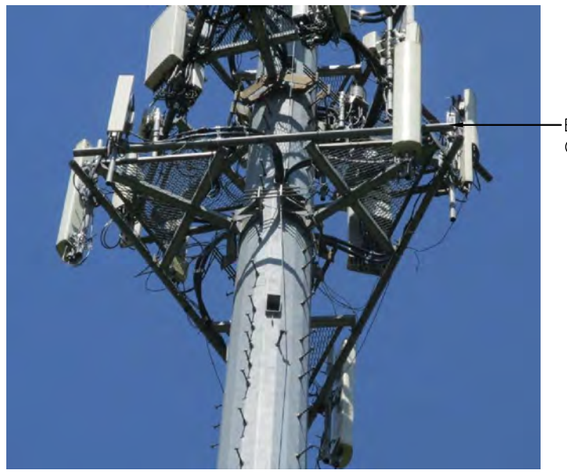
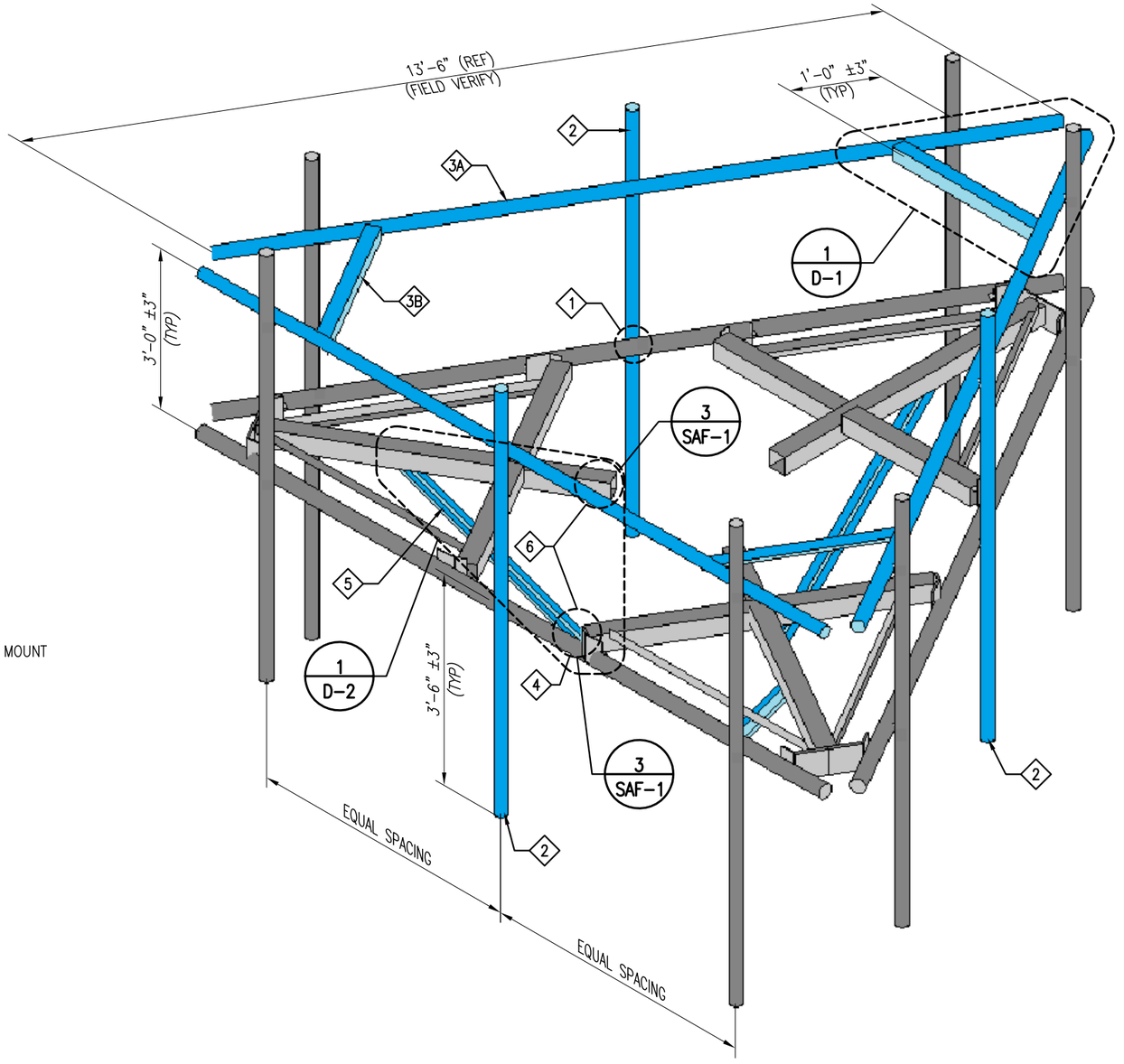


PHOTO 1

CONTRACTOR NOTE:
1. **IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THERE IS NO INTERFERENCES WITH (PORT HOLES, SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.**
2. **PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-TESORDERS@TESTOWER.US**

NOTES:
1. TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.
2. WHEN FIELD CUTTING AND DRILLING ANGLES, USE SAME GAGE LINES AND EDGE DISTANCES AS INDICATED ON SHOP CUT AND DRILLED ENDS.
3. APPLY (2) COATS OF ZINGA COLD GALVANIZING COMPOUND AS PER THE MANUFACTURER'S SPECIFICATIONS TO ALL FIELD CUT AND DRILLED AREAS.
4. **MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS.**



ISOMETRIC VIEW
EXISTING ANTENNA MOUNT @ 155' ELEV.

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	3	MS-CHB350_2875	METROSITE CROSSOVER CHANNEL BRACKET KIT
2	3	PST2375-8	2" PST (2.375" O.D. X 0.154" THK) X 8'-0" A53 GR-B 35KSI
3	1	MS-HR2375-2375	METROSITE SUPPORT RAIL KIT
4	1	MS-H1436	METROSITE HEAVY COLLAR MOUNT PLATE ASSEMBLY
5	1	MS-HKI22-8	METROSITE HEAVY KICKER SUPPORT KIT

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DRAWN BY: GA | CHECKED BY: KSP/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:
ANTENNA MOUNT MODIFICATION DETAILS

SHEET NUMBER: A-1
REV #: 0

EXISTING EQUIPMENT MUST BE RELOCATED UP OR DOWN ALONG THE MEMBER TO ACCOMMODATE INSTALLATION OF NEW SUPPORT RAIL PIPE.

PHOTO 1

PHOTO 2

PHOTO 3

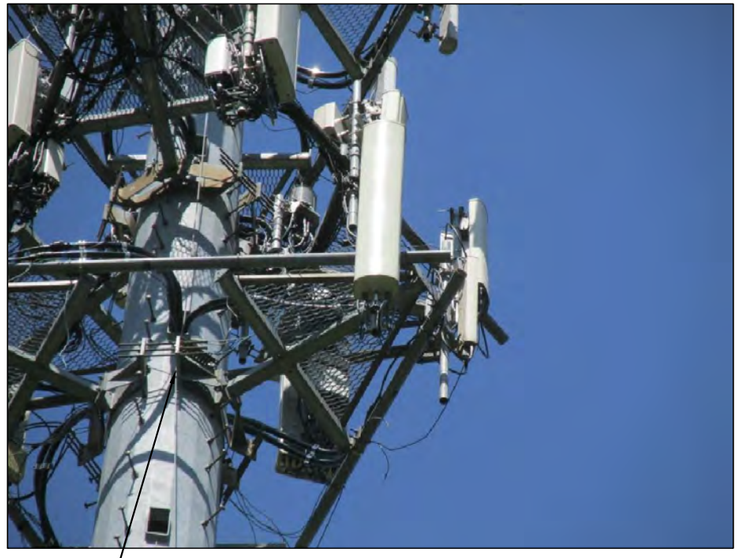

PHOTO 4

REROUTE EXISTING TRAPPED SAFETY CABLE OUT OF EXISTING COLLAR MOUNT AND INSTALL NEW SAFETY CLIMB GUIDES TO PREVENT EXISTING SAFETY CLIMB FROM RUBBING AGAINST NEW AND EXISTING COLLAR MOUNTS. SEE SHEET SAF-1 FOR DETAILS.

NOTE:
EXISTING RRUS/EQUIPMENT MAY BE RELOCATED ALONG THE MEMBER TO ACCOMMODATE THE INSTALLATION OF NEW MOUNT MODIFICATION

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TES JOB NO:
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CUSTOMER SITE NO:
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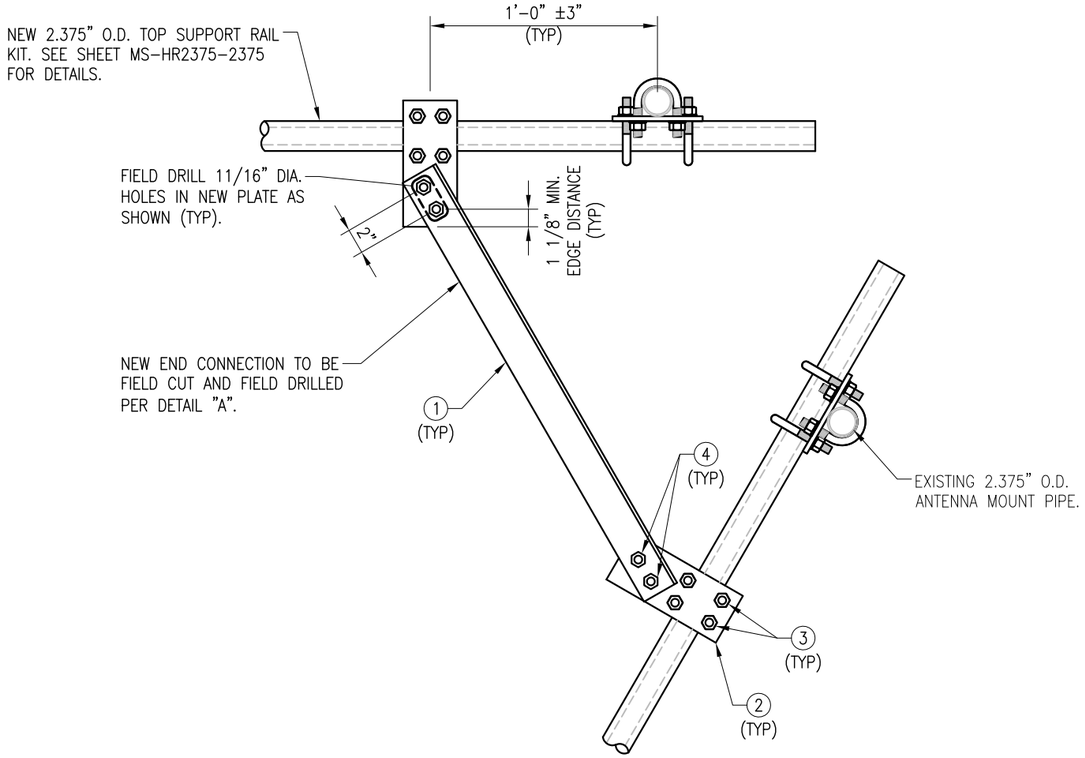
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:

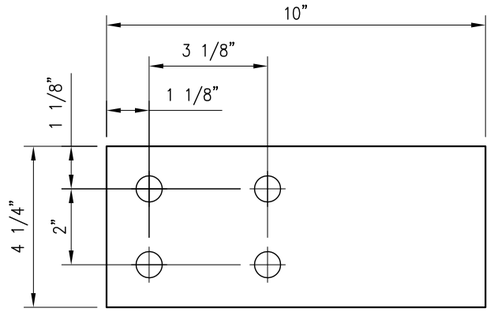
ANTENNA MOUNT PHOTOS

SHEET NUMBER: A-2

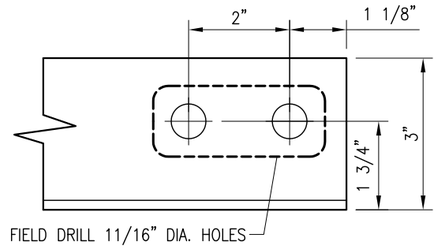
REV #: 0



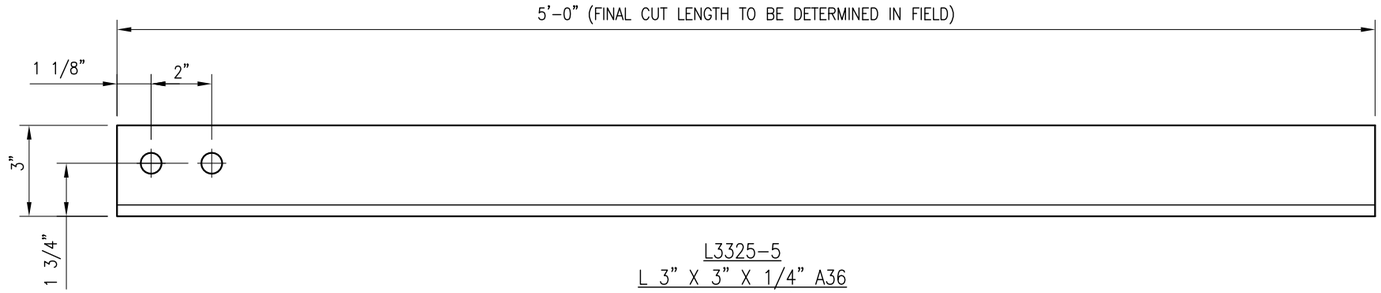
1 / D-1 DETAIL



PL375-42510-A
PL 3/8" X 4 1/4" X 10" A36
(4.6 LBS)



DETAIL "A"



L3325-5
L 3" X 3" X 1/4" A36
(25.01 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. ALL HOLES ARE 11/16" DIA. U.N.O

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	3	L3325-5	L 3" X 3" X 1/4" X 5'-0" A36
2	6	PL375-42510-A	PL 3/8" X 4 1/4" X 10" A36
3	12	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)
4	12	---	BOLT 5/8" X 2" A325

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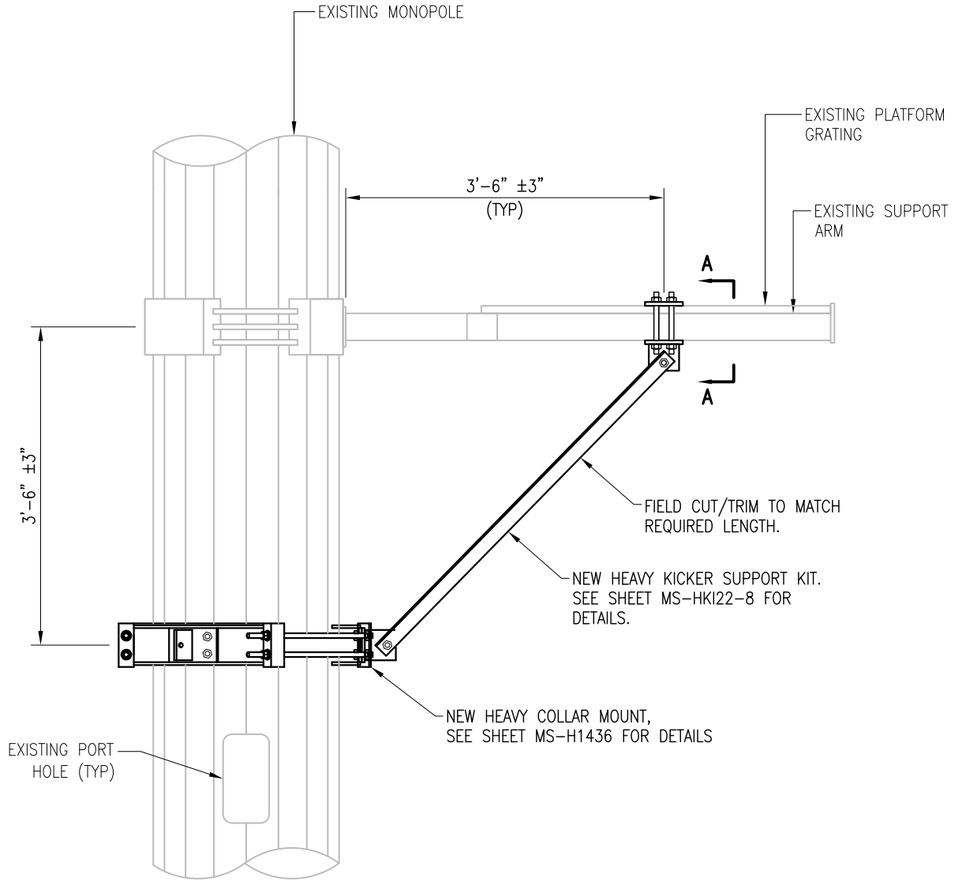
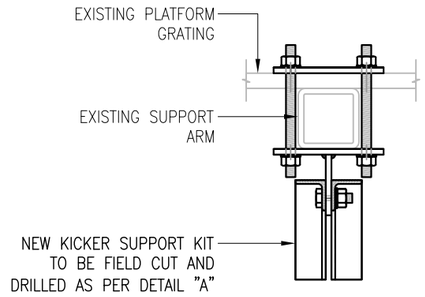
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE:
STANDARD DETAILS

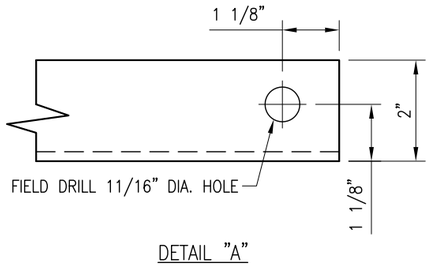
SHEET NUMBER: D-1
REV #: 0



1 / D-2 DETAIL



SECTION "A-A"



DETAIL "A"

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. ALL HOLES ARE 11/16" DIA. U.N.O

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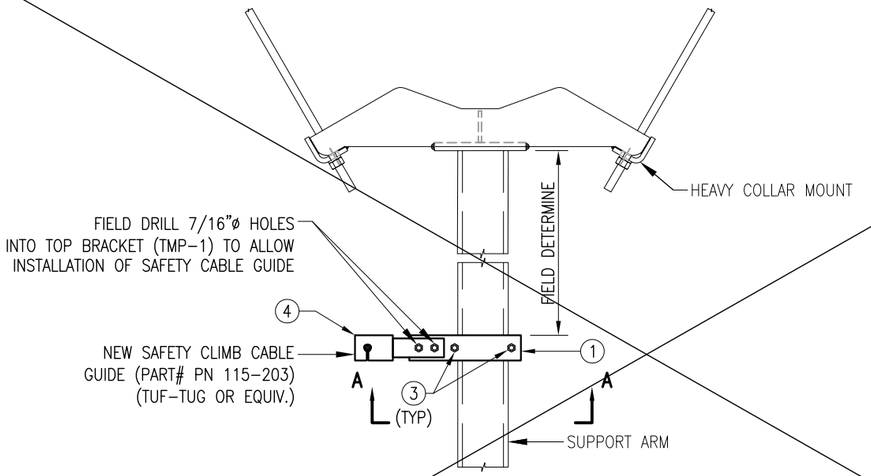
DRAWN BY: GA | CHECKED BY: KSP/CHLE

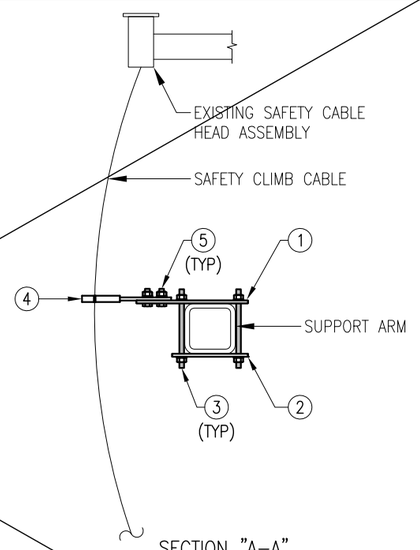
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

SHEET TITLE: STANDARD DETAILS

SHEET NUMBER: D-2
REV #: 0



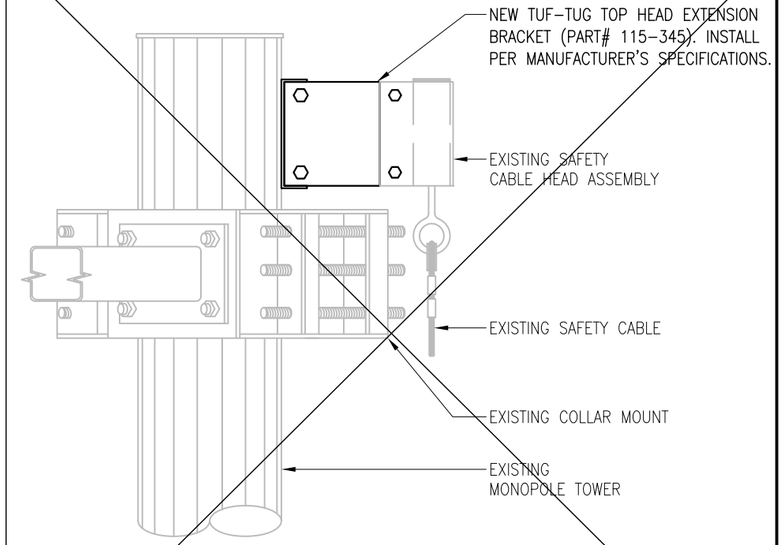
1 SAF-1 TYPE – 1



SECTION "A-A"

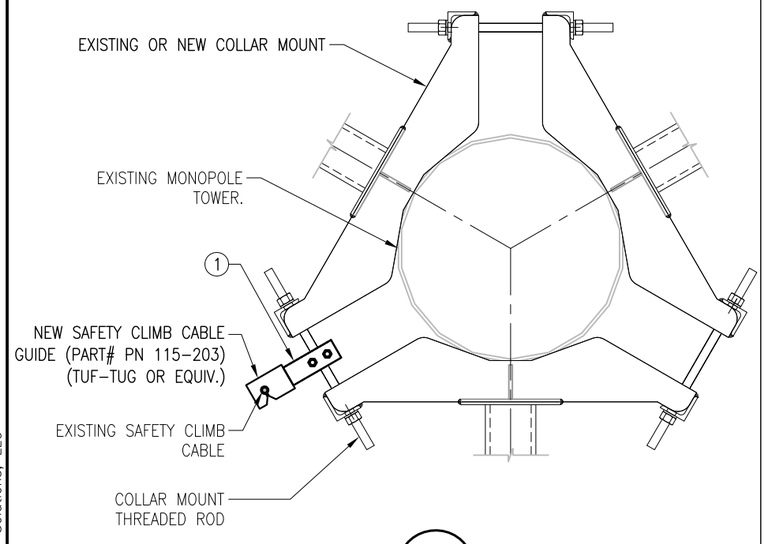
ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	TMP-1	PL 1/4" X 2" X 9 1/2" A36
2	1	BMP-1	PL 1/4" X 2" X 6 1/2" A36
3	2	---	THREADED ROD 3/8" X 8" A36
4	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
5	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5

NOTE:
SAFETY CLIMB GUIDE MAY BE INSTALLED ON EITHER LEFT OR RIGHT SIDE OF THE SUPPORT ARM, DEPENDING ON WHERE THE EXISTING SAFETY CLIMB IS LOCATED.



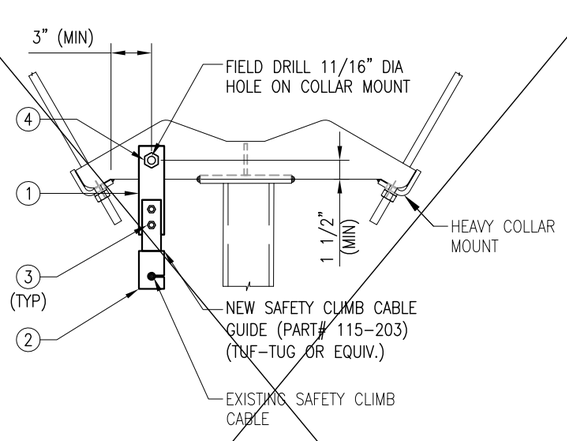
2 SAF-1 TYPE – 2

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	115-345	TUF-TUG MONOPOLE HEAD EXTENSION ASSEMBLY



3 SAF-1 TYPE – 3

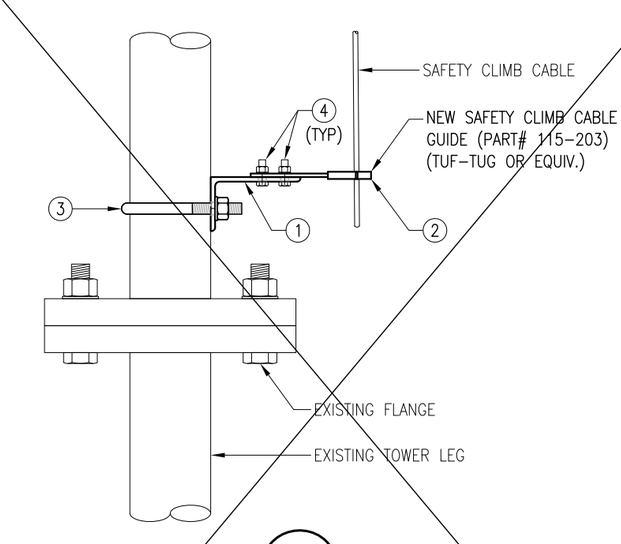
ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)



4 SAF-1 TYPE – 4

NOTE:
SAFETY CLIMB GUIDE MAY BE INSTALLED ON EITHER LEFT OR RIGHT SIDE OF THE COLLAR MOUNT, DEPENDING ON WHERE THE EXISTING SAFETY CLIMB IS LOCATED.

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	TMP-2	PL 1/4" X 2" X 7" A36
2	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
3	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5
4	1	---	BOLT 5/8" X 2" A325



5 SAF-1 TYPE – 5

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	1	SCGB-4	L 5" X 3" X 1/4" X 7 1/2" A36
2	1	PN 115-203	SAFETY CABLE GUIDE (TUF-TUG OR EQUIV.)
3	1	MS02-625-4625-700	RU-BOLT 5/8" X 4 5/8" I.W. X 7" I.L. A36 (OR EQUIV.)
4	2	---	BOLT 3/8" X 1 1/2" FULL THREAD SAE GR 5

TES
Tower Engineering Solutions
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607

SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
110755

CUSTOMER SITE NO:
CT01501-S-SBA
CUSTOMER SITE NAME:
MORRIS
310 WATERTOWN ROAD
BETHLEHEM, CT 06763

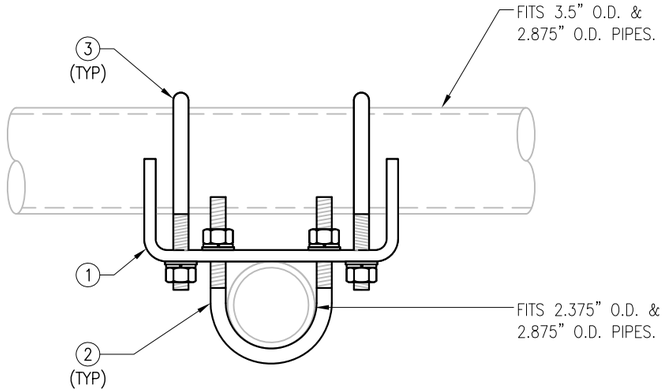
DRAWN BY: GA | CHECKED BY: KSP/CHLE

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	GA	07/06/21

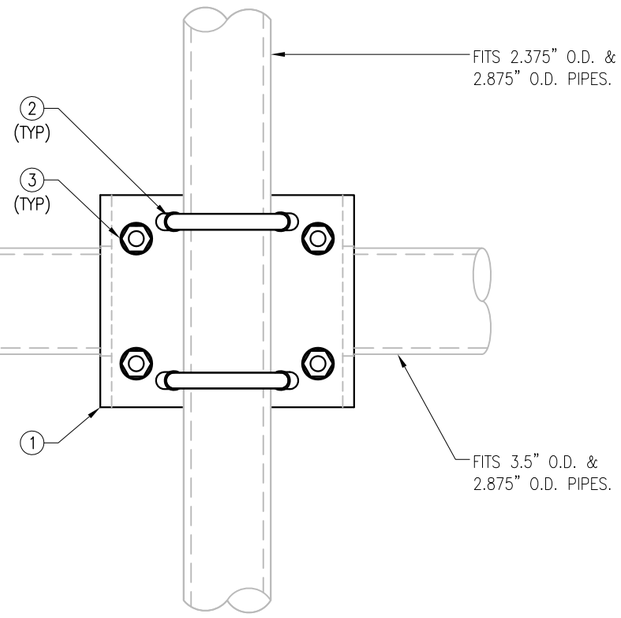
SHEET TITLE:
SAFETY CABLE GUIDE DETAILS

SHEET NUMBER: SAF-1
REV #: 0

THE FOLLOWING DRAWINGS ARE INCLUDED FOR REFERENCE ONLY
PLEASE REFER TO THE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION DETAILS



PLAN VIEW

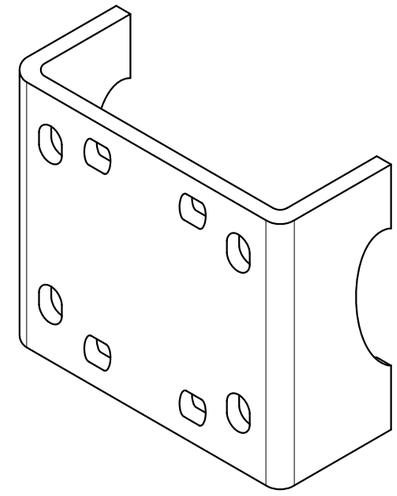


FRONT VIEW

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. FITS UP TO 3.5" O.D HORIZONTAL PIPE AND 2.875" O.D. VERTICAL PIPE

MS-CHB350-2875

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	1	CHB-714	PL 3/8" X 7" X 1'-2"	A36	CHB-1	10.6
2	2	MS02-500-300-500	RU-BOLT 1/2" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	A36	RBC-1	1.7
3	2	MS02-500-3625-600	RU-BOLT 1/2" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	1.9
					GALVANIZED WT	14



ISOMETRIC VIEW

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

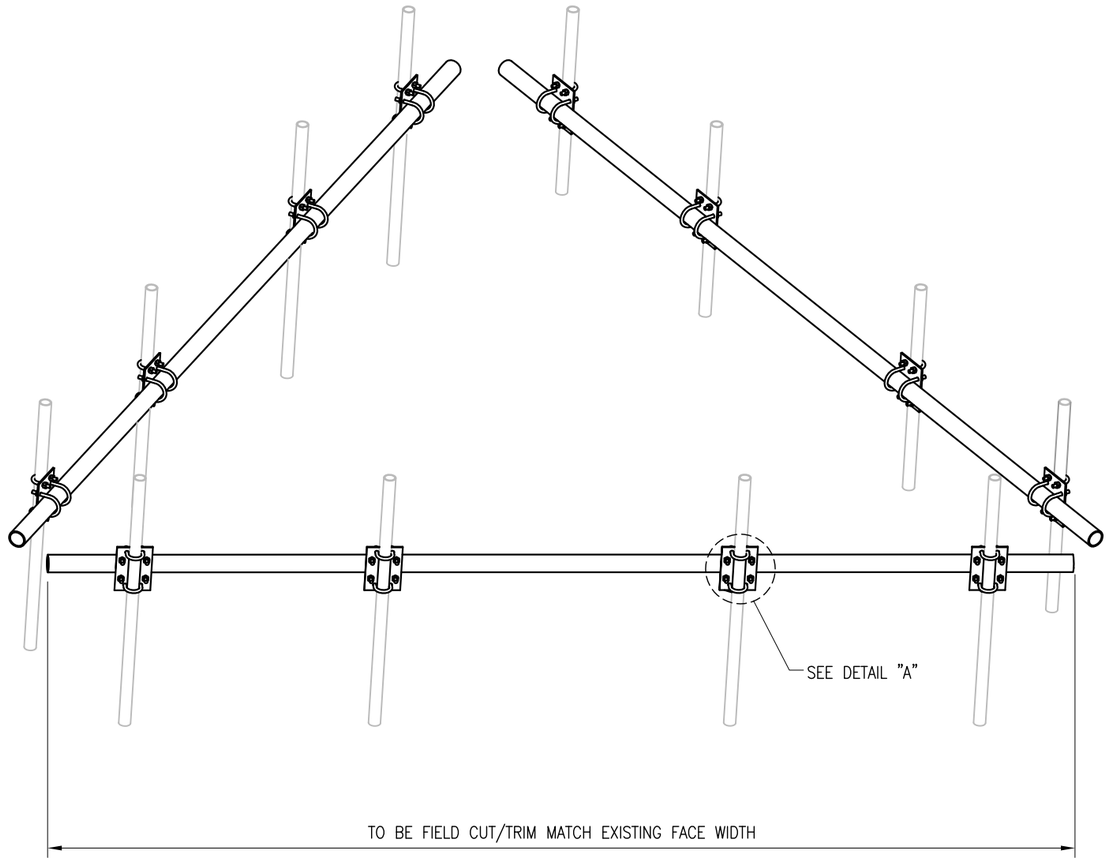
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH
STANDARD SHEET TOLERANCES
DECIMALS: .X ± 0.1, .XX ± 0.02, .XXX ± 0.005
ANGLES: ± 1°
FRACTIONS: ± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/15/20
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
MS-CHB350-2875
CROSSOVER CHANNEL BRACKET KIT

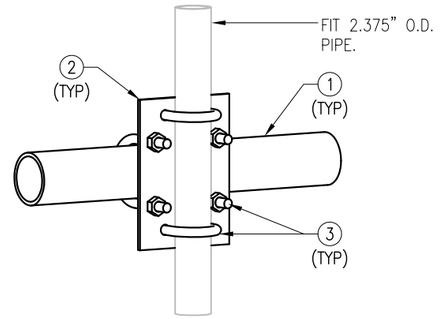
SIZE	DWG NO	REV
B	MS-CHB350-2875	0

SCALE: -
SHEET 1 OF 1



ELEVATION VIEW

MS-HR2375-2375						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	PST2375-14	2" PST (2.375" O.D. X 0.154" THK) X 14'-0"	A53 GR-B	TAF-3	158.3
2	12	PL2375-2375	PL 3/8" X 7 1/8" X 10"	A36	TAF-3	92.4
3	48	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
				GALVANIZED WT		251



DETAIL "A"

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
MS-HR2375-2375
SUPPORT RAIL KIT

SIZE	DWG NO	REV
B	MS-HR2375-2375	0

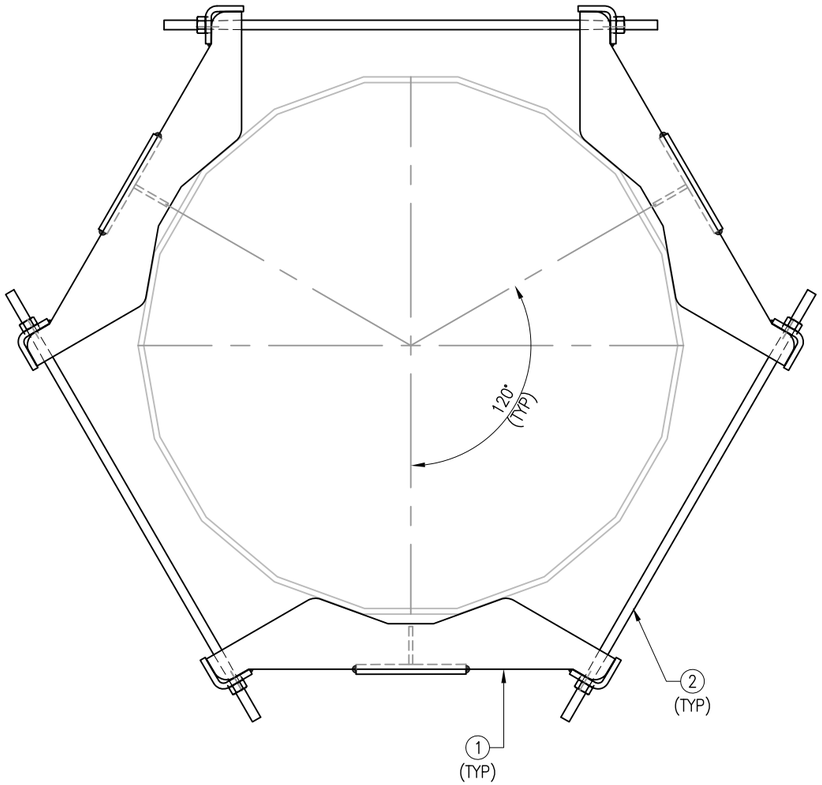
SCALE -

SHEET 1 OF 1

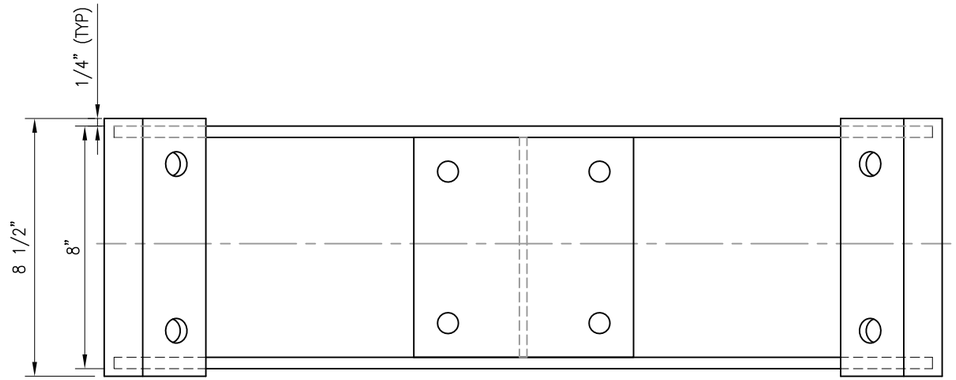
NOTE:
1) FITS 12" DIA TO 32" DIA.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	3	MPHW-1	MOUNT PLATE WELDMENT A36
2	6	---	THREADED ROD 3/4" X 2'-4 3/4" W/ 2 HHN & LW EA A36

GALVANIZED WEIGHT: 136.7 LBS



TOP VIEW



FRONT VIEW

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
HEAVY COLLAR MOUNT PLATE
ASSEMBLY DETAIL MS-H1436

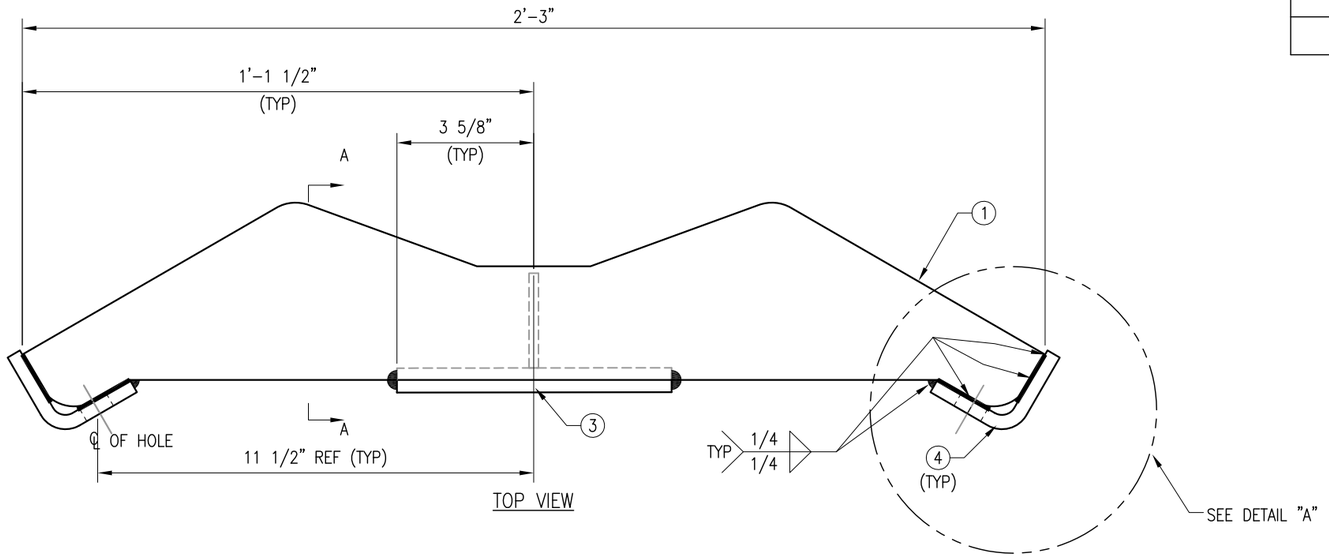
SIZE	DWG NO	REV
B	MS-H1436	1

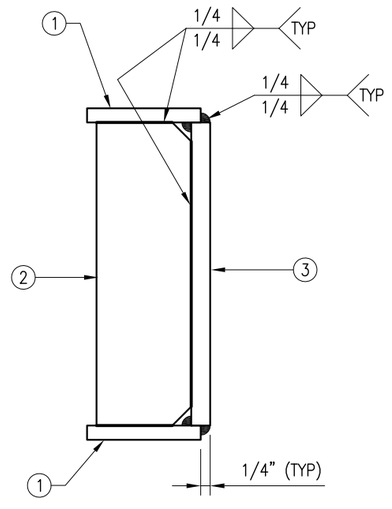
SCALE -

SHEET 1 OF 1

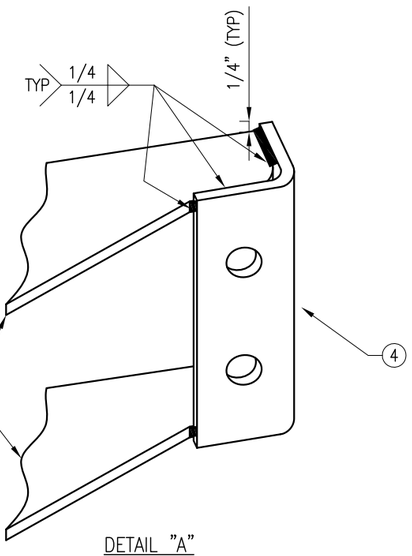
NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. WELD TYPE: E70XX.

MPHW-1 WELDMENT						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	2	PL-4	PL 3/8" X 5 3/8" X 2'-3"	A36	F-2	18.8
2	1	PL-5	PL 3/8" X 2 1/2" X 0'-7 1/4"	A36	F-2	1.9
3	1	PL-6	PL 1/2" X 7 1/4" X 0'-7 1/4"	A36	F-2	7.5
4	2	PL-7	PL 3/8" x 4 3/8" x 8 1/2"	A36	F-2	7.8
					BLACK WT	36
					GALVANIZED WT	38

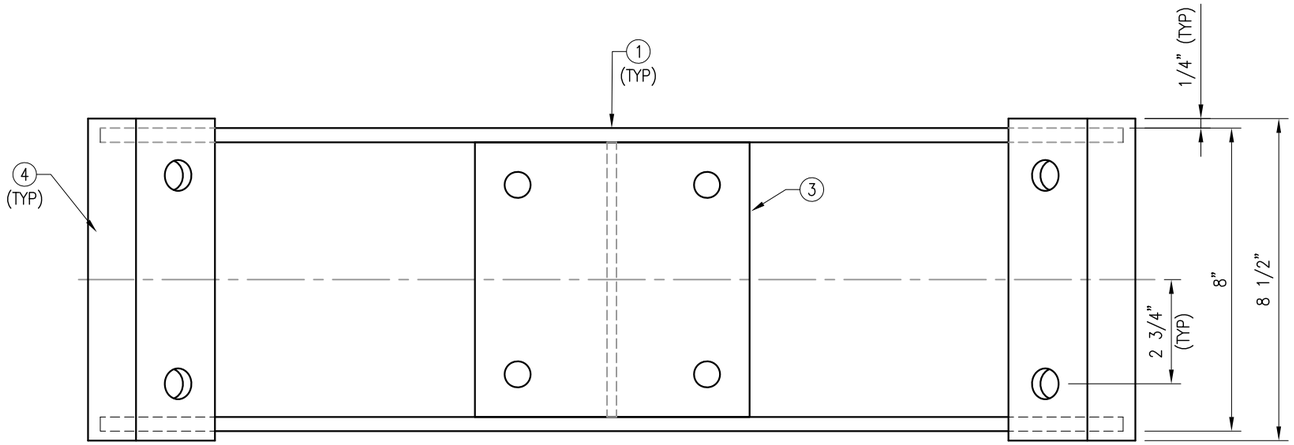




SECTION "A-A"



DETAIL "A"



FRONT VIEW

MPW-1 WELDMENT

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH

STANDARD SHEET TOLERANCES

DECIMALS	ANGLES
.X ± 0.1	± 1°
.XX ± 0.02	FRACTIONS
.XXX ± 0.005	± 1/32

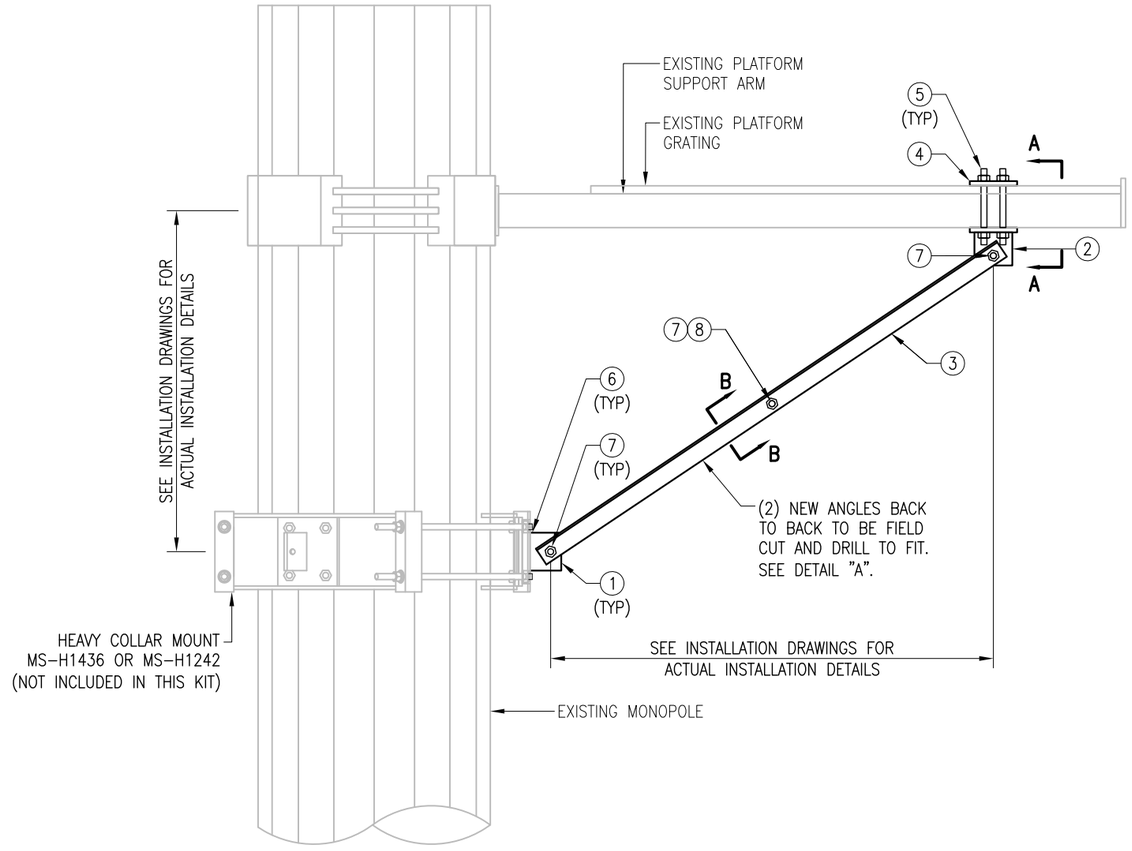
APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
HEAVY COLLAR MOUNT PLATE WELDMENT DETAIL

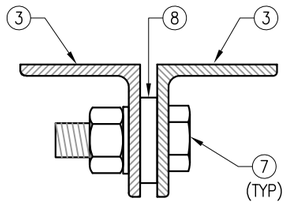
SIZE	DWG NO	REV
B	MPHW-1	0

SCALE - SHEET 1 OF 1

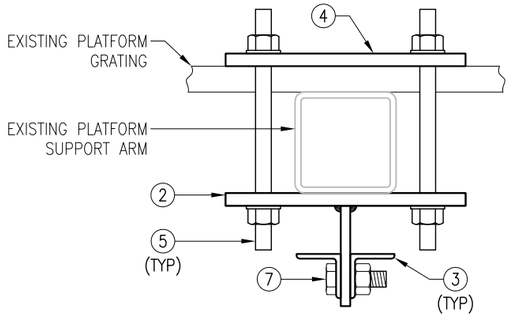
NOTE:
THE LOCATION OF KICKER AND EXISTING ANTENNA MOUNT SHOWN ON THE DRAWING IS FOR REPRESENTATION PURPOSE ONLY. SEE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION OF DETAILS.



ELEVATION



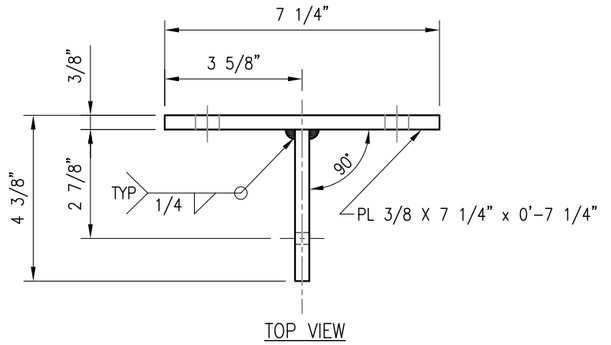
SECTION "B-B"



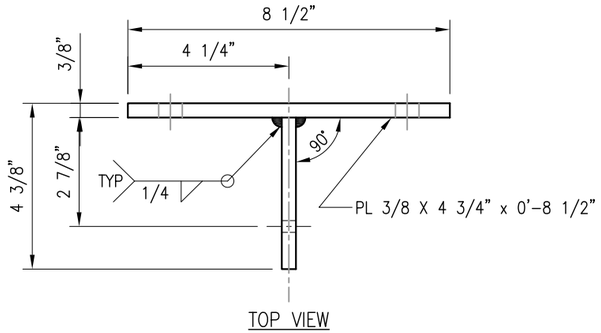
SECTION "A-A"

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. FIT UP TO 5" X 5" SQ. TUBING OR 4 1/2" O.D. PIPE

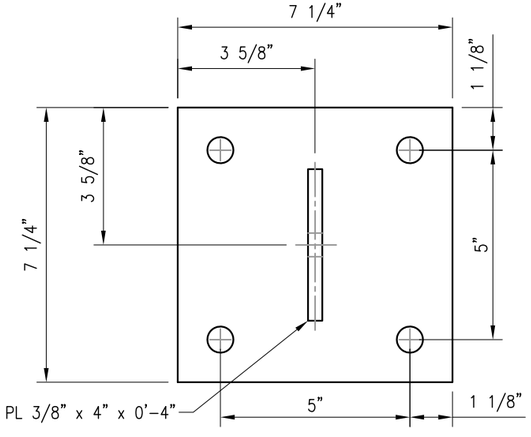
MS-HKI22-8						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	BRKW-HK	BRACKET WELDMENT	---	BRKW-HK	23.4
2	3	BRKW-5S	BRACKET WELDMENT	---	BRKW-5S	18.9
3	6	L2225-8	L 2" X 2" X 1/4" X 8'-0"	A36	HKF-8	156.0
4	3	PL5S-375	PL 3/8" X 4 3/4" X 8 1/2"	A36	HKF-8	12.9
5	12	---	ALL THREADED ROD 5/8" DIA. X 1'-0" HDG W/ (2) HHN & LKW EA.	A36	---	--
6	12	---	BOLT 5/8" X 2" W/ HHN & LKW	A325	--	--
7	9	---	BOLT 5/8" X 2 1/4" W/ HHN & LKW	A325	--	--
8	3	---	SPACER/SHIM FOR 5/8" BOLT (3/8" THICK)	A36	--	--
				GALVANIZED WT		211



TOP VIEW

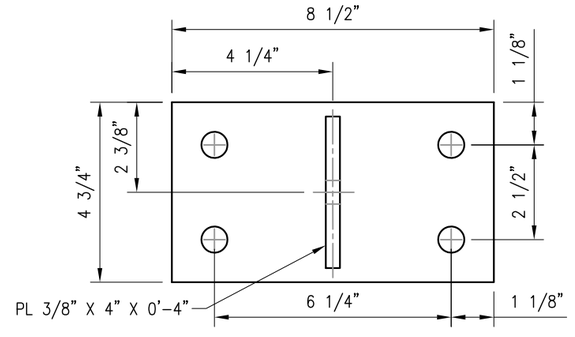


TOP VIEW



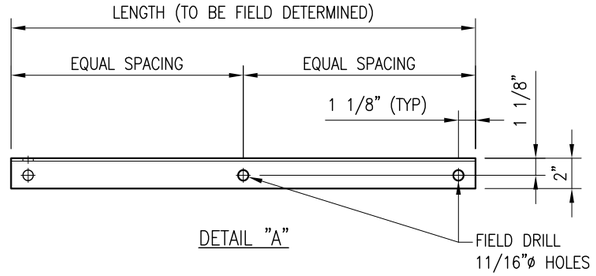
FRONT VIEW

BRKW-HK WELDMENT



FRONT VIEW

BRKW-5S WELDMENT



DETAIL "A"

THIRD ANGLE PROJECTION

METROSITE FABRICATORS LLC
180 INDUSTRIAL PARK BLVD.
COMMERCE GA 30529

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH
STANDARD SHEET TOLERANCES
DECIMALS .X ± 0.1, .XX ± 0.02, .XXX ± 0.005
ANGLES ± 1°
FRACTIONS ± 1/32

APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	06/21/18
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
HEAVY KICKER SUPPORT KIT

SIZE	DWG NO	REV
B	MS-HKI22-8	0

SCALE -
SHEET 1 OF 1

EXHIBIT 11

EME Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CTNH357C

NH357/SBA_Bethlehem
310 Watertown Road
Morris, Connecticut 06763

October 20, 2021

EBI Project Number: 6221006345

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**14.43%**

October 20, 2021

T-Mobile
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH357C - NH357/SBA_Bethlehem

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **310 Watertown Road** in **Morris, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (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.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 310 Watertown Road in Morris, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

7) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.

8) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.

9) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.

10) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.

11) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

12) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

13) The antennas used in this modeling are the RFS APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated

transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

14) The antenna mounting height centerline of the proposed antennas is 155 feet above ground level (AGL).

15) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

16) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20
Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	155 feet	Height (AGL):	155 feet	Height (AGL):	155 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna A1 MPE %:	**0.76%**	Antenna B1 MPE %:	**0.76%**	Antenna C1 MPE %:	**0.76%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd
Height (AGL):	155 feet	Height (AGL):	155 feet	Height (AGL):	155 feet
Channel Count:	11	Channel Count:	11	Channel Count:	11
Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts
ERP (W):	12,569.87	ERP (W):	12,569.87	ERP (W):	12,569.87
Antenna A2 MPE %:	**2.96%**	Antenna B2 MPE %:	**2.96%**	Antenna C2 MPE %:	**2.96%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	155 feet	Height (AGL):	155 feet	Height (AGL):	155 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	36,356.09	ERP (W):	36,356.09	ERP (W):	36,356.09
Antenna A3 MPE %:	**5.89%**	Antenna B3 MPE %:	**5.89%**	Antenna C3 MPE %:	**5.89%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	9.61%
Sprint	1.37%
AT&T	2.47%
Verizon	0.98%
Site Total MPE % :	14.43%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	9.61%
T-Mobile Sector B Total:	9.61%
T-Mobile Sector C Total:	9.61%
Site Total MPE % :	14.43%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 2100 MHz LTE	2	2334.27	155.0	7.56	2100 MHz LTE	1000	0.76%
T-Mobile 600 MHz LTE	2	591.73	155.0	1.92	600 MHz LTE	400	0.48%
T-Mobile 600 MHz NR	1	1577.94	155.0	2.56	600 MHz NR	400	0.64%
T-Mobile 700 MHz LTE	2	695.22	155.0	2.25	700 MHz LTE	467	0.48%
T-Mobile 1900 MHz GSM	4	1052.26	155.0	6.82	1900 MHz GSM	1000	0.68%
T-Mobile 1900 MHz LTE	2	2104.51	155.0	6.82	1900 MHz LTE	1000	0.68%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	155.0	17.89	2500 MHz LTE 1C & 2C Traffic	1000	1.79%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	155.0	1.74	2500 MHz LTE 1C & 2C Broadcast	1000	0.17%
T-Mobile 2500 MHz NR Traffic	1	22089.26	155.0	35.77	2500 MHz NR Traffic	1000	3.58%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	155.0	3.48	2500 MHz NR Broadcast	1000	0.35%
						Total:	**9.61%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	9.61%
Sector B:	9.61%
Sector C:	9.61%
T-Mobile Maximum MPE % (Sector A):	9.61%
Site Total:	14.43%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **14.43%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.