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

April 13, 2021

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

RE: Notice of Exempt Modification
106 Willenbrock Rd., Oxford, CT 06478
Latitude: 41.465106
Longitude: -73.146555
Sprint, now a part of T-Mobile USA #: CTNH241A_Sprint Keep

Dear Ms. Bachman:

Sprint, now a part of T-Mobile USA, hereinafter referred to as "Sprint/T-Mobile" currently maintains six (6) antennas at the 147-foot level of the existing 150-foot Monopole Tower at 106 Willenbrock Rd., Oxford, CT. The 150-foot tower is owned by SBA Towers, LLC. The property is owned by Tower Business Park, LLC. Sprint/T-Mobile now intends to remove six (6) L700/L600 MHz antennas and replace with six (6) new L700/L600/1900/2100 MHz antennas and install three (3) new 2500 MHz antennas for a total of nine (9) antennas.

The new antennas support 5G services and would be installed at the 147-foot level of the tower.

Please note: Per the Connecticut Siting Council Website: CSC COVID 19 Guidelines.
In order to prevent the spread of Coronavirus and protect the health and safety of our members and staff, as of March 18, 2020, the Connecticut Siting Council shall convert to full remote operations until March 30, 2020. Please be advised that during this time period, all hard copy filing requirements will be waived in lieu of an electronic filing. Please also be advised that the March 26, 2020 regular meeting shall be held via teleconference. The Council's website is not equipped with an on-line filing fee receipt service. Therefore, filing fees and/or direct cost charges associated with matters received electronically during the above-mentioned time period will be directly invoiced at a later date.

Planned Modifications:

TOWER

Remove:

- N/A

Remove and Replace:

- (3) RFS APXVSPP18-C-A20 (remove) – (3) AIR32 KRD901146-1_B66_B2A 1900/2100 MHz (replace)
- (3) RFS APXVTM14-C-I20 (remove) – (3) APXVAALL24_43-U-NA20 600/700/1900 MHz (replace)
- (3) ALU 1900MHz RRH (remove) – (3) Ericsson 4415 B25 RRU (replace)
- (3) ALU TD-RRH8x20-25 RRU (remove) – (3) Ericsson 4449 B71 + B85 RRU (replace)

Install New:

- (3) Ericsson AIR6449 B41 2500MHz
- (3) 2" hybrid
- Platform Mods: (1) MS-HRECP-35 (Support Rail pipe w/End Connection kit)

Existing Equipment to Remain:

- (1) Low Profile Platform
- (4) RFS ACU-A20-N RET
- (3) ALU 800 MHz RRH
- (3) ALU 800 MHz Filter

Entitlements:

- (4) 1-1/4" hybrid
- (3) 1-5/8" hybrid

GROUND

Remove:

- (3) Existing Sprint cabinets
- Fiber distribution box
- Existing steel dunnage

Install New:

- (1) AAV cabinet
- (1) B160 Battery cabinet
- (1) 6160 Cabinet
- (5) 2" conduit
- (2) 1" conduit

Remain:

- Overhead canopy
- 200A PPC
- Fibertech Cienna 3931 Cabinet
- Ice Bridge
- 20' x 8' concrete pad

This facility was approved by the Town of Oxford's Planning & Zoning Commission October 5, 2000 under P&Z# Z-00-124 SBA (as amended with new co-applicant Sprint PCS on Lot 5 Willenbrock Rd). Applicant and their assigns must comply with all representations made at P&Z Commission meetings and public hearings regarding this application. They must also comply with all contracted planner comments. An amount for a completion bond and dismantling bond will be set by P&Z engineer in a form acceptable to Town Council. The Town of Oxford issued a Building Permit No. B-00-280 on November 2, 2000 to SBA Towers and Sprint for the purpose of a Communications Tower. A Certificate of Occupancy No. 2523 was issued by the Town of Oxford Building Department on April 9/2001. As of the date of this letter, there were no other zoning documents for this telecommunications facility with the Town of Oxford. There were no further post construction stipulations set. Please see attached.

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 Ashford's First Selectman, Cathryn E. Silver-Smith, and Building Official James Rupert, as well as to the property owner. (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.

For the foregoing reasons, Sprint/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 x3807 + T
508.366.2610 + F
508.868.6000 + C
gshepherd@sbasite.com

Attachments

cc: George R. Temple, First Selectman / with attachments
Town of Oxford, 486 Oxford Rd., Oxford, CT 06478-1298
Steven S. Macary, Zoning Enforcement Officer / with attachments
Town of Oxford, 486 Oxford Rd., Oxford, CT 06478-1298
Tower Business Park, LLC / with attachments
15 Bates Place, Danbury, CT 06810 (SBA & Town mailing address per property card)

EXHIBIT LIST

Exhibit 1	Check Copy	To be invoiced at a later date per Covid guidelines
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	Town of Oxford BP No. B-00-280 (11/2/00), Town of Oxford P&Z #Z-00-124 (10/5/00)
Exhibit 6	Construction Drawings	Centerline 2/24/21
Exhibit 7	Structural Analysis	TES 4/7/21
Exhibit 8	Mod Mount Drawings	TES 12/23/20
Exhibit 9	Post-Mod Mount Analysis	TES 4/13/21
Exhibit 10	EME Report	EBI Consulting 2/22/21

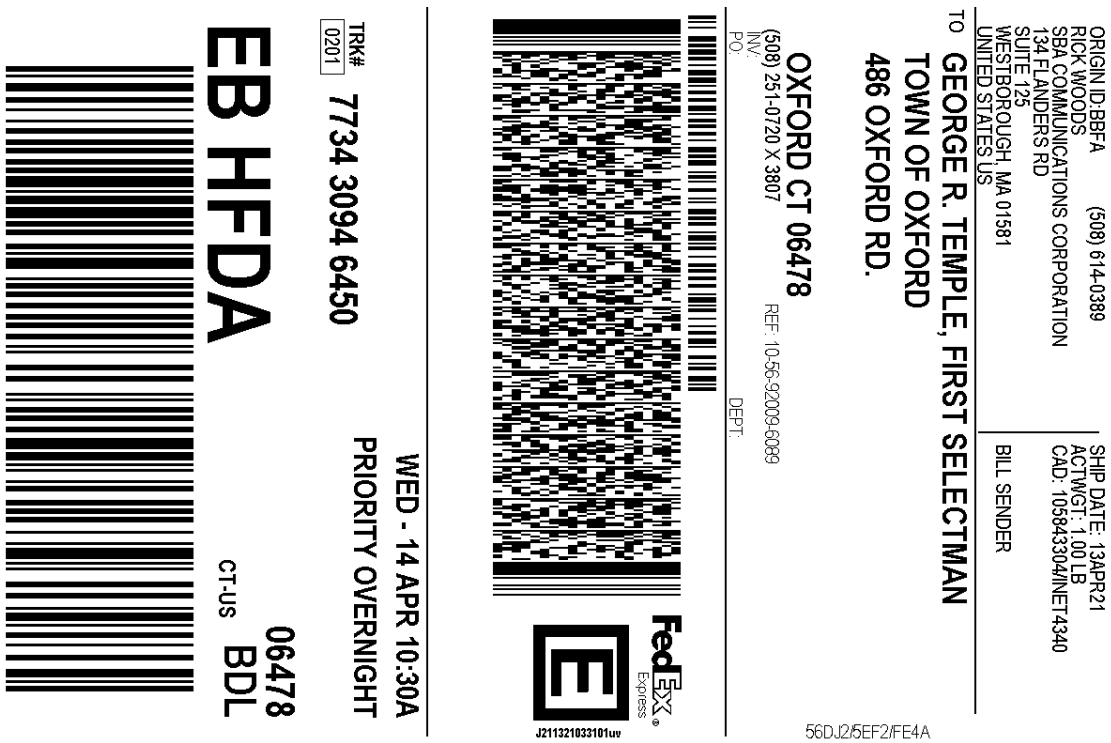
EXHIBIT 1

Normally, Exhibit 1 would contain a copy of the check for the filing fee.

EXHIBIT 2

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.



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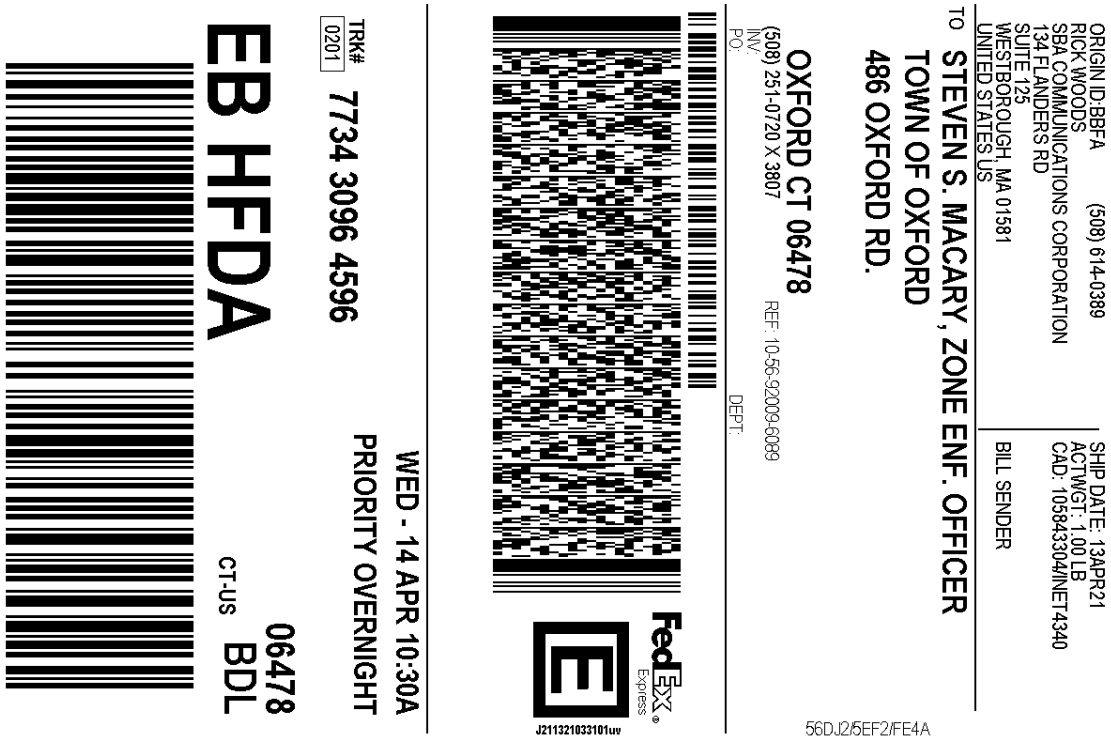

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EXHIBIT 3

Town of Oxford
Property Listing Report

Parcel ID 18/29/21-5

Account I0176800

Property Information

Owner	TOWER BUSINESS PARK LLC
Address	106 WILLENBROCK RD
Mailing Address	15 BATES PLACE DANBURY , CT 06810
Land Use	- Industrial
Land Class	I

Census Tract	R 4
Neighborhood	C06
Zoning	IND
Acreage	9.8
Utilities	
Lot Setting/ Desc	/

Photo

PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	652800	457000
Outbuildings	20200	14100
Improvements	674800	472400
Extras	1800	1300
Land	440400	308300
Total	1115200	780700
Previous		

Construction Details

Year Built	
Stories	1.00
Building Style	Pre-Eng Warehs
Building Use	Ind/Comm
Building Condition	Average +20
Total Rooms	
Bedrooms	
Full Bathrooms	0
Half Bathrooms	
Bath Style	n/a
Kitchen Style	n/a
Roof Style	Gable
Roof Cover	Enam Mtl Shing

EXTERIOR WALLS:	
Primary	Pre-finsh Metl
Secondary	
INTERIOR WALLS:	
Primary	Minim/Masonry
Secondary	
FLOORS:	
Primary	Concr-Finished
Secondary	
HEATING/AC:	
Heating Type	Hot Air-no Duc
Heating Fuel	Gas
AC Type	Partial

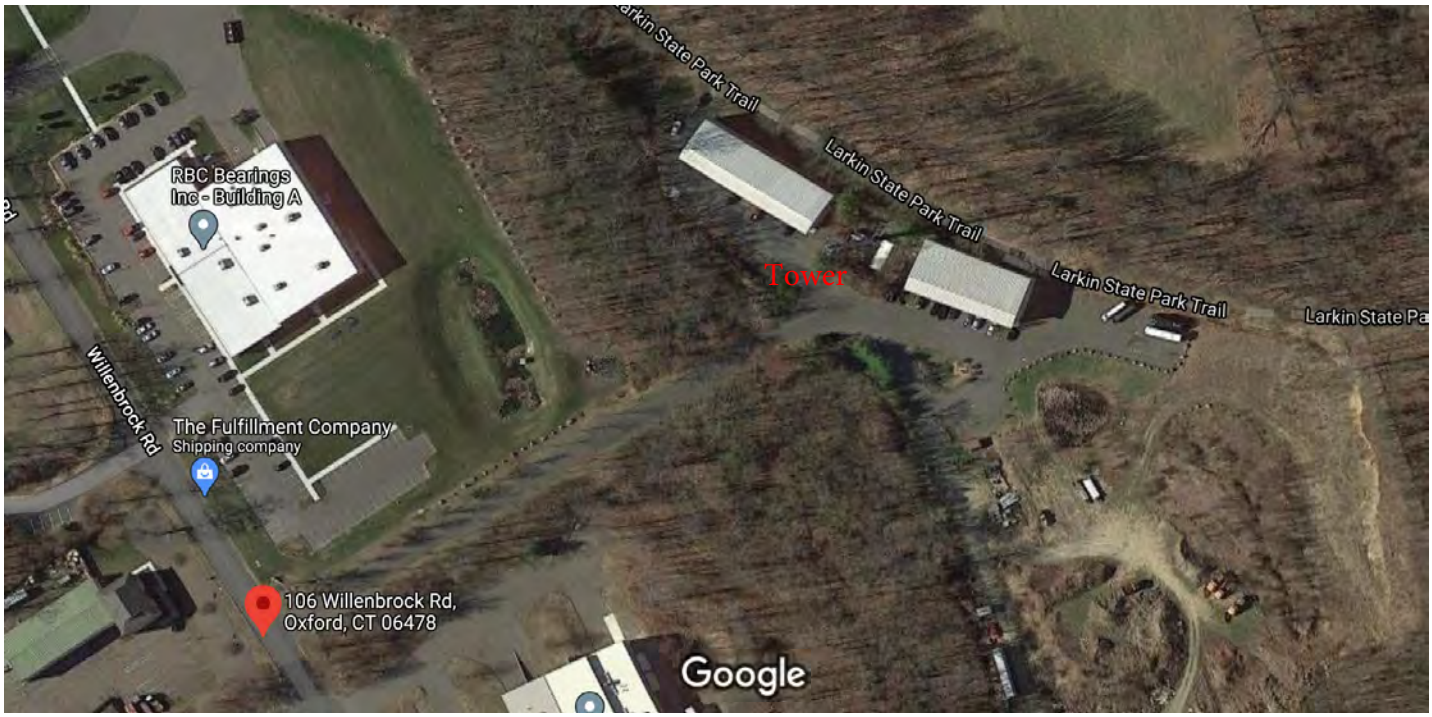
BUILDING AREA:	
Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:	
Sale Date	10/24/2006
Sale Price	0
Book/ Page	319/1244

Report Created On 3/18/2021

EXHIBIT 4

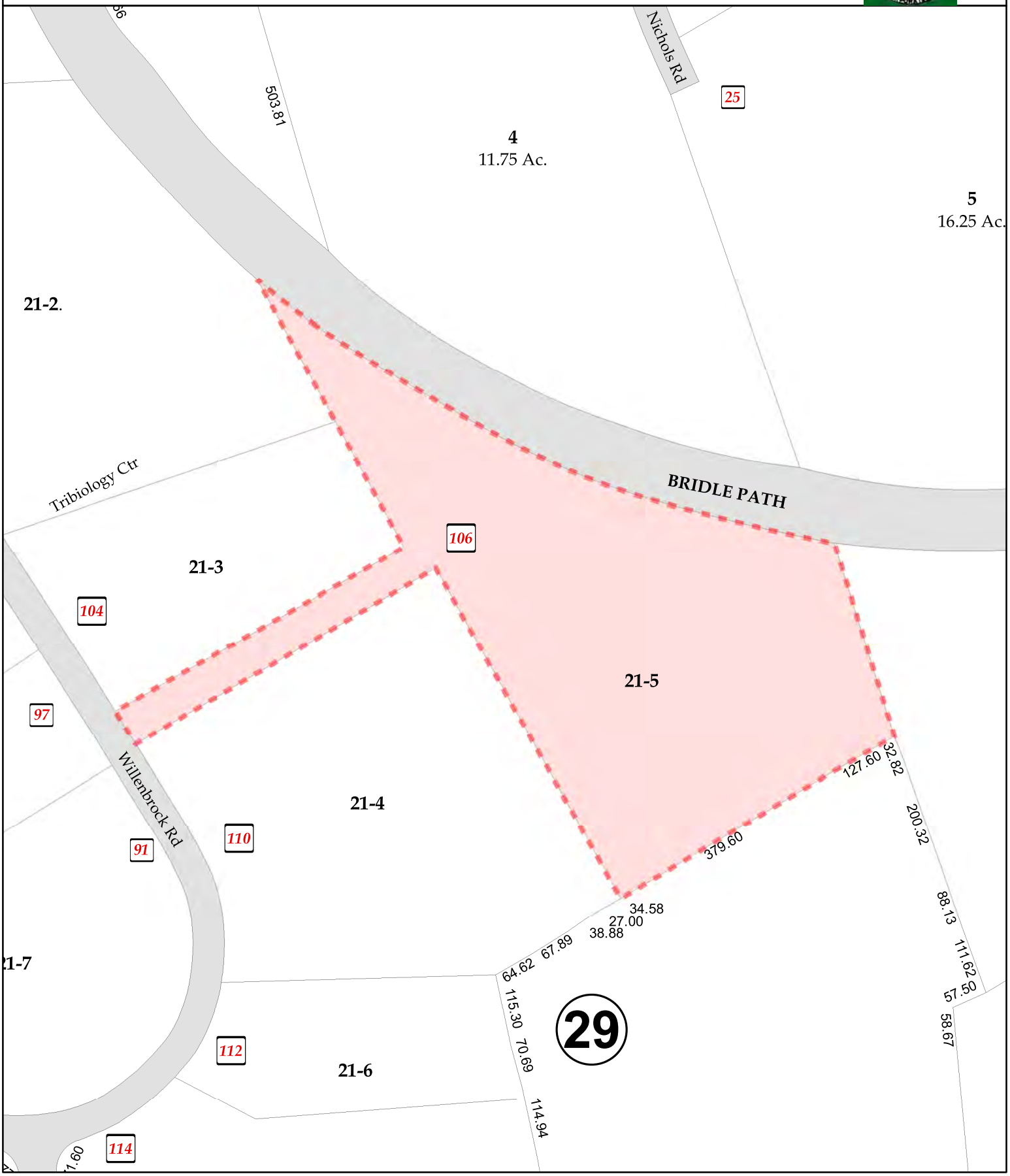
Google Maps 106 Willenbrock Rd



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

Town of Oxford, Connecticut - Assessment Parcel Map

Parcel: 18-29-21-5 **Location:** 106 WILLENBROCK RD



Approximate Scale: 1 inch = 200 feet

0 100 200 300 400 Feet

Map Produced: February 2021

EXHIBIT 5

TOWN OF OXFORD

CT 3109-5

S.B. CHURCH MEMORIAL TOWN HALL
486 OXFORD ROAD, OXFORD, CONNECTICUT 06478

PLANNING & ZONING COMMISSION

October 10, 2000

Mr. Thomas Flynn, III
SBA, Inc.
80 Eastern Boulevard
Glastonbury, CT 06033

Re: Z-00-124 SBA, Inc./Sprint PCS (S/E - Wireless Telecommunication Facility)

Dear Mr. Flynn:

At the Planning & Zoning Commission meeting of 10/5/00, approval of the above-referenced application came with the following motion:

MOTION was made by Vincent Vizzo and seconded by John Barnes to approve Application Z-00-124 SBA, Inc. (as amended with new co-applicant Sprint PCS on Lot 5 Willenbrock Road). Applicant and their assigns must comply with all representations made at P&Z Commission meetings and public hearings regarding this application. They must also comply with all contracted planner comments. An amount for a completion bond and dismantling bond will be sent by P&Z Engineer in a form acceptable to Town Counsel. Mr. Flynn will provide the P&Z Engineer with bond amounts they have pre-calculated, as a courtesy. No material will be substituted without approval from the P&Z Commission and P&Z Engineer. Per Article 3, Section 19.9 of the Zoning Regulations, the applicant shall be responsible for rendering payment for any outside experts the Commission assigns to review this application. Reason for approval is that is meets the Oxford Zoning Regulations in effect as of this date. All were in favor.

Your copies of the approved permit are enclosed. If you have any questions, please contact me.

Sincerely,

Dave Robinson

Dave Robinson, Chairman
Planning & Zoning Commission

DR/ikc

Enclosure

Certified/Return Receipt

CT 31094-3

BUILDING PERMIT

TOWN OF OXFORD

No. B-00-280

NAME: SBA Towers & Sprint PCS

ADDRESS: 106 Willenbrock Rd

PURPOSE: Communication Tower

- INSPECTIONS -

FOOTINGS	DATE		
FOOTING DRAINS	DATE		
WATERPROOFING	DATE		
FRAME	DATE		
PLUMBING	DATE		
HEATING	DATE		
ELECTRICAL	DATE		
INSULATION	DATE		
OCCUPANCY	DATE		

This Permit Must Be Attached to or in Front of Building

To Be Removed Only By Building Official

Date 11/2/00 Building Official

~~* CONSTRUCTION MUST START WITHIN ONE YEAR & BE COMPLETED WITHIN TWO YEARS~~

>

No. 2523

Willenbrock Road Street

CERTIFICATE OF OCCUPANCY

OFFICE OF

THE BUILDING DEPARTMENT

TOWN OF OXFORD, CONNECTICUT

Oxford, Conn., April 9, 2001 XX

THIS IS TO CERTIFY, that I have inspected the Building at

No. 106 Willenbrock Road (18-29-21-5) Street, and find

the same to conform with Permit No. B-00-280 issued from this office

to Willenbrock 4/5 LLC Date of Permit 11/21/00

By [signature]
Building Official

Building to be used for Communication tower

Number of Families _____ Number of Stores _____ Number of Garages _____

TOWN OF OXFORD

S.B. CHURCH MEMORIAL TOWN HALL

486 OXFORD ROAD, OXFORD, CONNECTICUT 06478

PLANNING & ZONING COMMISSION

PLANNING & ZONING COMMISSION
October 5, 2000

PUBLIC HEARING - 7:15 PM
Z-00-216 Blueberry Farm Estates
(8-Lot Resubdivision on Pope Road)

REGULAR MEETING

The following is the agenda for the Planning & zoning Commission's **regular meeting** to be held in the Public Meeting Room of the S. B. Church Memorial Town Hall on Thursday, October 5, 2000, at 7:30 PM.

CALL TO ORDER
ROLL CALL
CORRESPONDENCE
AUDIENCE OF CITIZENS
AMENDMENTS TO AGENDA
ACCEPTANCE OF MINUTES

1) **09/21/00 Public Hearing Minutes** (Z-00-185 Krystalle Estates)
2) **09/21/00 Public Hearing Minutes** (Z-00-196 Stonebridge Preserve)
3) **09/21/00 Regular Meeting Minutes**

OLD BUSINESS

1) **Z-99-148 Schaub/Ianantuoni, 50 Bala Ridge Road** (6-Month Extension Request)
2) **Z-98-230 Fawn Meadow Estates, Apple Drive** (Request for Security Reduction)
3) **Z-99-217 Blueberry Farm Estates, 4-Lots on Pope Road** (Second 90-Day Extension Request)
4) **Z-00-120 Newgate Ridge Estates, Section III, 4-Lot Resubdivision off Newgate Road** (Ed, Vinny & Nil) **(Exp. 10/7/00)**
5) **Z-00-124 SBA, Inc., Lot 5 Willenbrock Road** (S/E - Wireless Communication Facility) **(Exp. 10/21/00)**
6) **Z-00-185 Krystalle Estates, 11-Lot Subdivision at 359 Chestnut Tree Hill Road** (Ray, Ray & John) (P&Z Engineer, P&Z Planner and Subcommittee Reports) **(Exp. 11/25/00)**
7) **Z-00-196 Stonebridge Preserve, 26-Lot Subdivision on Stonebridge Road** (Ed, Dave & Vinny) (P&Z Engineer, P&Z Planner and Subcommittee Reports) **(Exp. 11/25/00)**
8) **Z-00-215 Oxford Estates, LLC, 4-Lot Resubdivision of Silano Road & Belinsky Circle** (Deny - No PDDH Approval to Date)

NEW BUSINESS

1) **Z-00-225 Nguyen/Tommy K's Plaza, 144 Oxford Road, Unit 2D** (Change of Use - Nail Salon)
2) **Z-00-227 Country Farm Estates, Section III, Larkey Road (West Side)** (Accept as Complete & Schedule P.H. 10/26/00 at 7:00 PM)
3) **Larkey Road Improvements** (Referral per C.G.S. 8-24)

ZONING ENFORCEMENT

1) **ZEO Report** (September, 2000)
2) **Arcuri Violation, 360 Oxford Road**

OTHER MATTERS OF P&Z CONCERN

1) **Progress Reports for September, 2000** (Update from Staff)
2) **Proposed Zoning Regulation Amendment** (Article 13, Section 2)
3) **Newly Proposed Zoning & Subdivision Regulations** (Brian Miller Memo of 9/22/00 - Set P.H. Date10/26/00 at 7:10 PM)
4) **Discussion of Commission Member Violation**

OTHER BUSINESS

1) **Comments from Chairman**
2) **Comments from Commission Members**
3) **Comments from ZEO**
4) **Comments from P&Z Secretary**

ADJOURNMENT

PLANNING & ZONING COMMISSION
TOWN OF OXFORD
486 Oxford Road
Oxford, CT 06478
(203) 888-2543

Z#: _____
Date Rec'd: _____
Date on Agenda: _____
65-Day Expiration: _____

ZONING PERMIT APPLICATION

(This permit is hereby applied for in accordance with the requirements of the Oxford Zoning Regulations)

Property Identification

Street Address: Lot 5 Willenbrock Road
Subdivision Name: Willenbrock Ind. Par Date Approved: _____
Map: 18 Block: 21-5 Lot: 29 Zoning district: Industrial I

Owner/Applicant

Owner Name: Willenbrock 4/5 LLC
Owner Address: 339 Christian Street Oxford, CT. 06478
Owner Telephone: 203-578-7044

Applicant Name: SBA INC. & Sprint PCS
Applicant Address: 80 Eastern Blvd. Glastonbury CT. 06033
Applicant Telephone: 203-659-9101

Miscellaneous Information

Special Exception: Article 10 Section 8 Yes X No
Site Plan Approval: Article 10 Section 8.5 Yes X No
Estimated Cost of Construction: $210,000
Variance Granted: _____ Date Granted: _____

Signatures/Authorization

Application for Zoning Permit approval as described herein is hereby made. The Oxford Planning & Zoning Commission and its technical staff are authorized to enter the property for the purpose of evaluating this application.

Permit Void If: a) Work or activity not commenced within 1 year of the date of issuance or b) Authorized construction not completed within 2 years of the date of issuance.

This permit, if issued, is based upon the plot plan submitted. Falsification, by misrepresentation or omission, or failure to comply with the conditions of approval of this permit constitute a violation of the Oxford Zoning Regulations.

_____ JUNE 5, 2000
Property Owner or Agent — Date

THOMAS F. FLYNN III SBA INC.

Purpose
___ New Home
___ Addition
___ Garage
___ Cottage Business
___ Swimming Pool IG AG
___ Sign
___ Shed
___ Barn
___ Change of Use
___ Excavating/Filling
___ Trailer
X Other Wireless Telecomm Facility

Use
___ Single-Family Residence
___ Multi-Family Residence
X Commercial
___ Industrial
___ Residential/POD
___ Other _____

Required Approvals and Dates
X Inland Wetlands _____
___ P.D.D.H. _____
___ Fire Marshal _____
___ Z.B.A. _____
X W.P.C.A. _____
___ Floodplain _____
___ Copy of Deed _____
___ Driveway _____
___ Erosion Control Plan
___ Plot Plan *
___ Other _____

_____ Town Fee
_____ State Fee
_____ Total Fee

*Draw plot plan of proposed construction and attach. Plan must show property boundaries and dimensions; location of proposed buildings on property with respect to boundaries; location of existing buildings on property; outside dimensions of all buildings proposed or now existing; location of water supply; location of sewage system. All copies must have a complete sketch. Construction and use must be exactly as described in this application. If later changes from this plan are desired prior approval of an amended application is necessary.

Denied Approved By: _____ Date: _____
Title: _____
Reason for Denial _____

ZPA-1
(Adopted 5/15/97)

White - P&Z Files / Yellow - Building Department / Pink - Applicant

EXHIBIT 6

PROJECT INFORMATION

TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
SBA TOWER ID:	CT03109-A
SBA SITE NAME:	OXFORD 3, CT
T-MOBILE SITE NAME:	CTNH241A
T-MOBILE SITE NUMBER:	CTNH241A
SBA SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
LATITUDE:	41.465110
LONGITUDE:	-73.146600
TOWER HEIGHT:	150'-0"± AGL
RAD CENTER:	147'-0"± AGL
ZONING JURISDICTION:	TOWN OF OXFORD
COUNTY:	NEW HAVEN

DESCRIPTION OF WORK:

TELECOMMUNICATIONS FACILITY UPGRADE (SPRINT RETAIN):

MONOPOLE

COMPLIANCE CODES:

1.	BUILDING CODE: IBC 2015 & CONNECTICUT STATE BUILDING CODE 2018
2.	ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
3.	CONCRETE CODE: AMERICAN CONCRETE INSTITUTE (ACI) 318
4.	STEEL CODE: AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), 14TH EDITION
5.	TELECOMMUNICATIONS CODE: EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL

BASED ON INFORMATION PROVIDED BY T-MOBILE, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).

PROJECT DIRECTORY

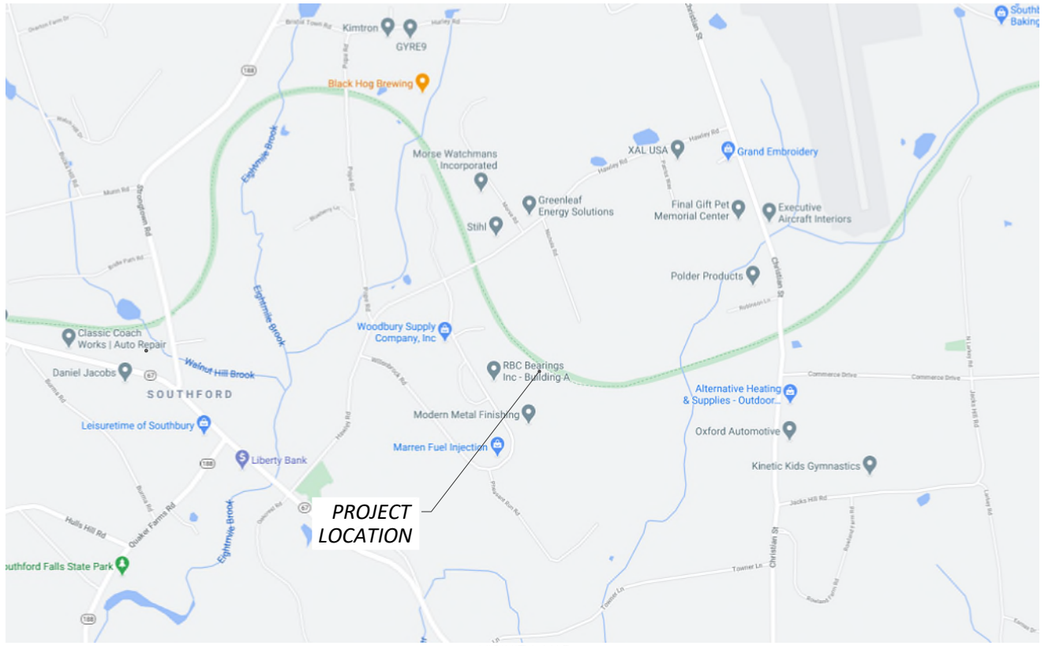
A&E / PROJECT MANAGER:
CENTERLINE COMMUNICATIONS
750 WEST CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE 781.713.4725

APPLICANT:
T-MOBILE NORTHEAST, LLC.
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
PHONE: (508) 286-2700
FAX: (508) 286-2893

APPROVED
By Stephen Roth at 9:53:42 AM, 2/26/2021

SITE NAME: CTNH241A
106 WILLENBROCK ROAD
OXFORD, CT 06478

SITE NUMBER: CTNH241A
SBA SITE #: CT03109-A
PROJECT: SPRINT RETAIN
CONFIGURATION: 67D5A997DB 6160 (GSM ONLY)



VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSE OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

DRAWING INDEX

NO.	DESCRIPTION	REV.	DATE
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GN-1	GENERAL NOTES	1	02/24/21
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SN-1	STRUCTURAL NOTES	1	02/24/21
RF-1	RF PLUMBING DIAGRAM	1	02/24/21
G-1	GROUNDING DETAILS	1	02/24/21

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CENTERLINE COMMUNICATIONS
750 W CENTER ST, SUITE 301
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REVISIONS		
1	02/24/21	ISSUED FOR CONSTRUCTION
0	12/07/20	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION
DESIGNED BY: KT		APPROVED BY: DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28557
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

CBYD.COM 811
Call Before You Dig, Inc.

SITE NAME:	CTNH241A
SITE NUMBER:	CTNH241A
SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE:	SPRINT RETAIN
SHEET TITLE:	TITLE SHEET
DRAWING #: T-1	REVISION: 1

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR – CENTERLINE COMMUNICATIONS
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – T–MOBILE

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

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

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

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

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 SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, 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.

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 OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR–ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T–MOBILE SITES."

17. 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.

18. THE EXISTING CELL SITE IS 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.

19. SINCE THE 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 ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
BUILDING CODE: IBC 2015 & CONNECTICUT STATE BUILDING CODE 2018
ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
LIGHTNING CODE: NFPA 70–2017

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222–G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		

RF NOTES

1. ACTUAL LENGTHS SHALL BE DETERMINED PER SITE CONDITION BY SUBCONTRACTOR

2. THE DESIGN IS BASED ON RF DATA SHEETS, SIGNED AND APPROVED.

3. RADIO SIGNAL CABLE AND RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8.

4. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G. OUT DOORS–OCCUPIED, INDOORS–UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC.

5. RADIO SIGNAL CABLE SHALL BE SUPPORTED AT MINIMUM OF EVERY THREE (3) FEET EXCEPT INSIDE MONOPOLES OR MONOPOLES WHERE CABLE AND CONNECTOR MANUFACTURERS SUPPORT RECOMMENDATIONS SHALL BE FOLLOWED. MANUFACTURER RECOMMENDATION CABLES SUPPORT ACCESSORIES SHALL BE USED.

6. THE OUTDOOR CABLE SUPPORT SYSTEM SHALL BE PROVIDED WITH AN ICE SHIELD TO SUPPORT AND PROTECT ANTENNA CABLE RUNS.

7. DRIP LOOPS SHALL BE REQUIRED ON ALL OUTSIDE CABLES. CABLES SHALL BE SLOPED AWAY FROM BUILDING OR OUTDOOR BTS CABINETS TO PREVENT WATER FROM ENTERING THROUGH THE COAXIAL CABLE PORT.

8. ALL FEEDER LINE AND JUMPER CONNECTORS SHALL BE 7/16 DIN CABLE CONNECTORS THAT MEET IP68 STANDARDS.

9. 7/16 DIN CONNECTORS REQUIRE NO ADDITIONAL WEATHER PROOFING IN INDOOR APPLICATIONS IF INSTALLED AND TORQUED PROPERLY. IN OUTDOOR APPLICATIONS WEATHER PROOFING IS REQUIRED AND THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED.

10. USING WEATHERPROOFING KIT APPROVED BY CABLE MANUFACTURER AND CONTRACTOR START TAPE APPROXIMATELY 5 INCHES FROM THE CONNECTOR, AND WRAP 2 INCHES TOWARD THE CONNECTOR, THEN REVERSE THE TAPE SO THAT THE STICKY SIDE IS UP. TAPE OVER THE CONNECTOR OR SURGE ARRESTOR UNTIL THREE (3) TO FOUR (4) INCHES BEYOND THE CONNECTOR AND REVERSE AGAIN WITH THE STICKY SIDE DOWN FOR ANOTHER INCH OR TWO. PASS THE BUTYL RUBBER AND FINISH WITH A FINAL LAYER OF TAPE.

11. ANTENNAS SHALL BE PAINTED,WHEN REQUIRED, BY THE LANDLORD OR AUTHORITY OF HAVING JURISDICTION IN ACCORDANCE WITH ANTENNA MANUFACTURERS' SURFACES PREPARATION AND PAINTING REQUIREMENTS.

12. CABLE SHIELDS AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF THE TOWERS THAT ARE BETWEEN 60 FEET AND 200 FEET HIGH, AND AT INTERVALS OF 60 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 200 FEET.

ANTENNA CABLE AND SCHEDULING NOTES

1. SUBCONTRACTOR SHALL VERIFY THE ACTUAL LENGTH IN THE FIELD BEFORE INSTALLATION.

2. TAG AND COLOR CODE ALL MAIN CABLES AT LOCATIONS PER T–MOBILE ANTENNA CABLE MARKING STANDARD:

- TOP OF TOWER END OF MAIN COAX
- BOTTOM OF TOWER END OF MAIN COAX
- DIRECTLY BEFORE AND AFTER RF EQUIPMENT
- END OF JUMPERS AT BTS EQUIPMENT

3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWN TILT MOUNTING BRACKETS SUPPLIED BY ANTENNA MANUFACTURER.

4. PRIOR APPROVAL IS REQUIRED BEFORE PERFORMING ANY WORK ON EXISTING CELL SITE EQUIPMENT.

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NO.	DATE	DESCRIPTION
DESIGNED BY: KT		APPROVED BY: DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME: CTNH241A

SITE NUMBER: CTNH241A

SITE ADDRESS: 106 WILLENBROCK ROAD
OXFORD, CT 06478

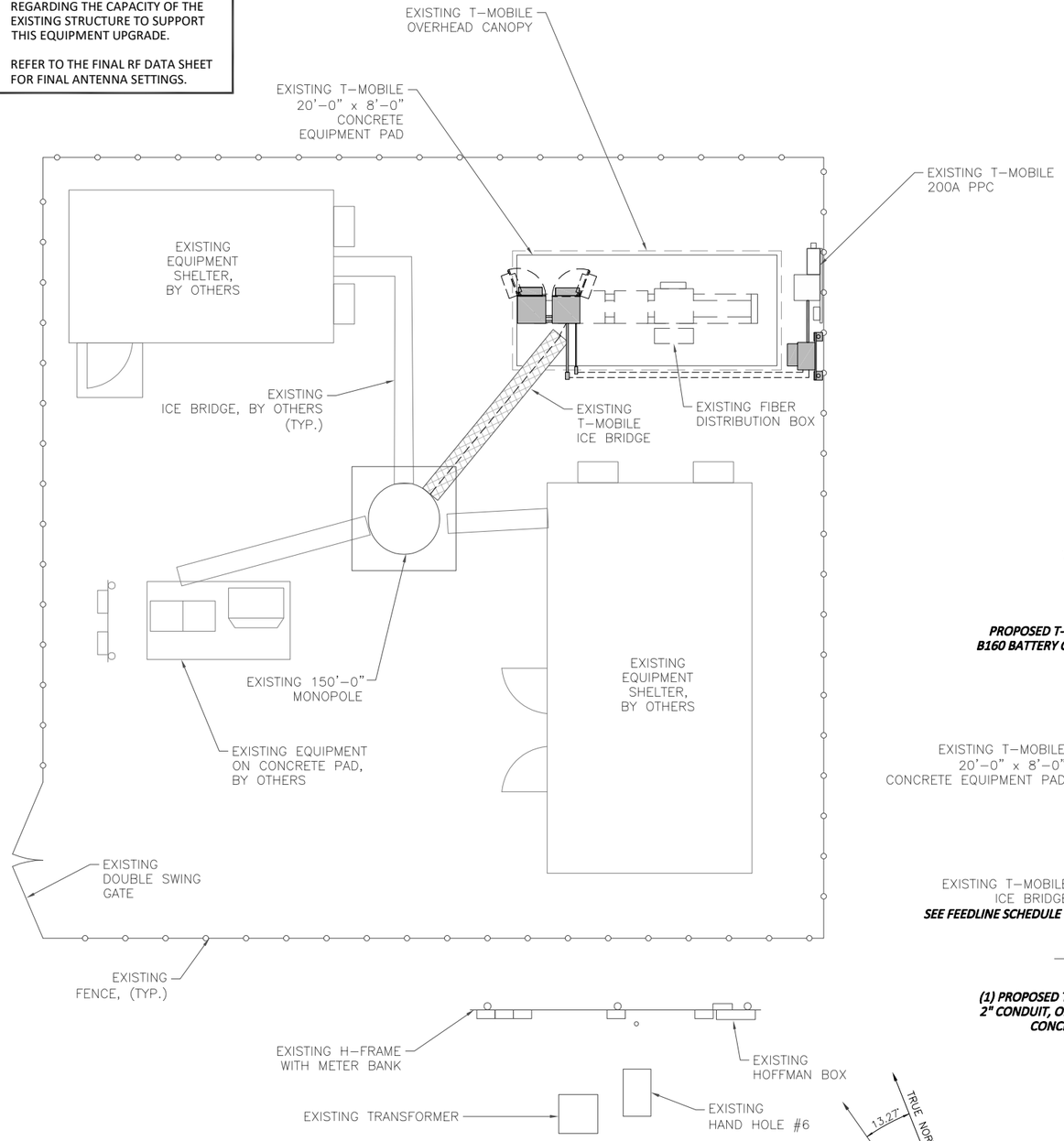
PROJECT TYPE: SPRINT RETAIN

SHEET TITLE: GENERAL NOTES

DRAWING #: GN–1 | REVISION: 1

NOTES:

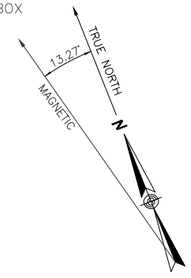
1. REFERENCE STRUCTURAL ANALYSIS BY OTHERS FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.
2. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



COMPOUND PLAN

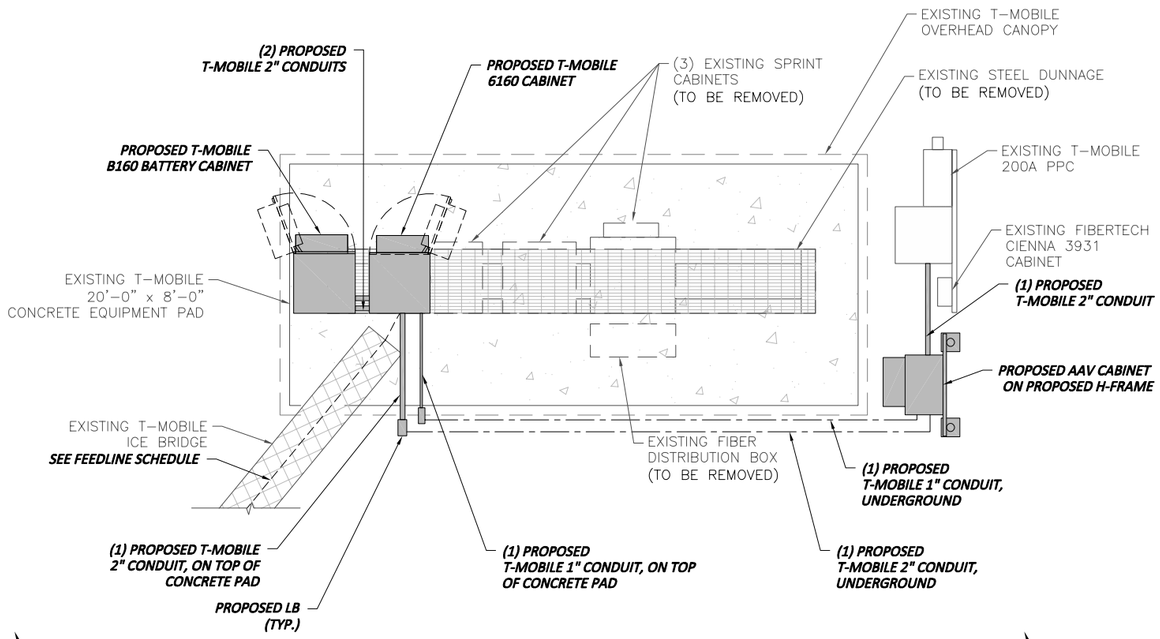
SCALE: 3/16" = 1'–0" (22"X34")
3/32" = 1'–0" (11"X17")

2'–8" 0 2'–8" 5'–4" 10'–8" 21'–4"



FEEDLINE SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO BE REMOVED: (3) 1 -5/8" HYBRID CABLES	UP INSIDE MONOPOLE TO RAD
B	PROPOSED: (3) 6x12 (1-5/8") HYBRID FIBER	UP INSIDE MONOPOLE TO RAD

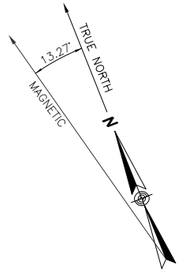
NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON COLLOCATION APPLICATION AND SBA RECORD, NOT FIELD OBSERVATIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.
SEE STRUCTURAL ANALYSIS FOR FEEDLINE INSTALLATION.



EQUIPMENT PLAN

SCALE: 3/8" = 1'–0" (22"X34")
3/16" = 1'–0" (11"X17")

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)



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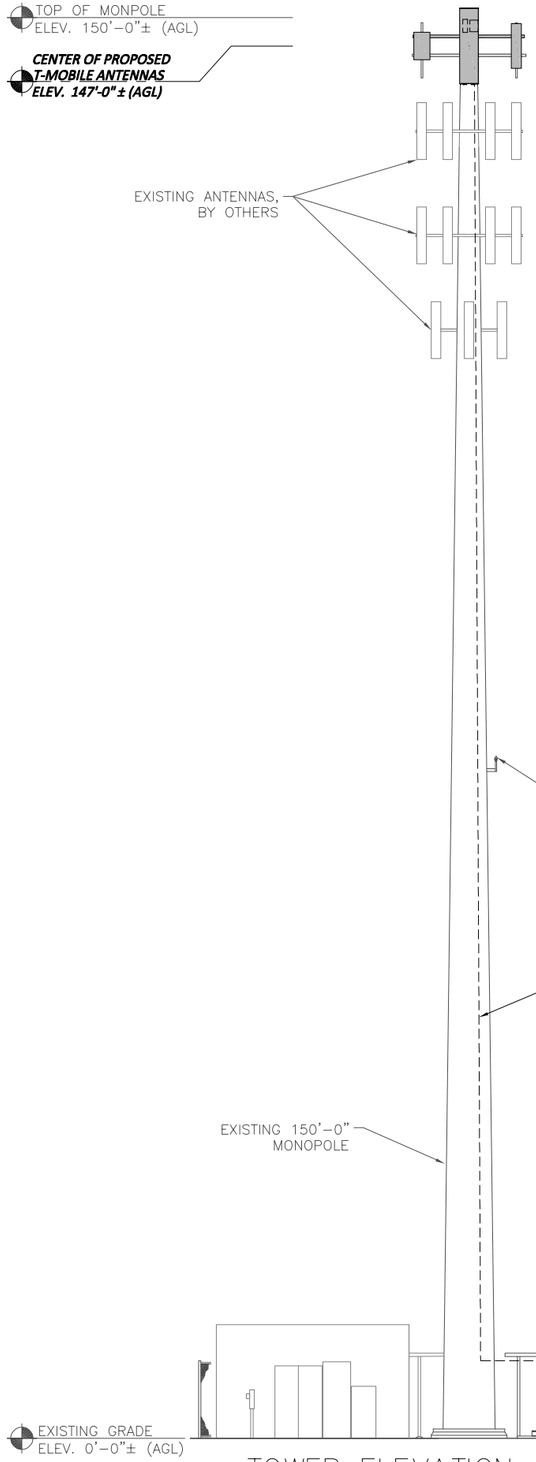
STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME: CTNH241A
SITE NUMBER: CTNH241A
SITE ADDRESS: 106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE: SPRINT RETAIN
SHEET TITLE: COMPOUND & EQUIPMENT PLANS
DRAWING #: A–1
REVISION: 1



TOWER ELEVATION

SCALE: 1/8" = 1'-0" (22"X34")
1/16" = 1'-0" (11"X17")

GRAPHIC SCALE

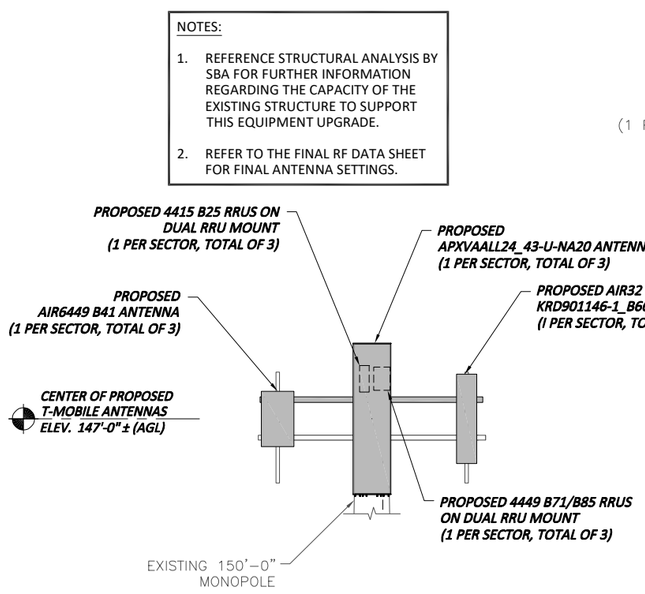
5'-4" 0 5'-4" 10'-8" 21'-4" 42'-8"
(IN FEET)

NOTES:

1. REFERENCE STRUCTURAL ANALYSIS BY SBA FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.
2. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

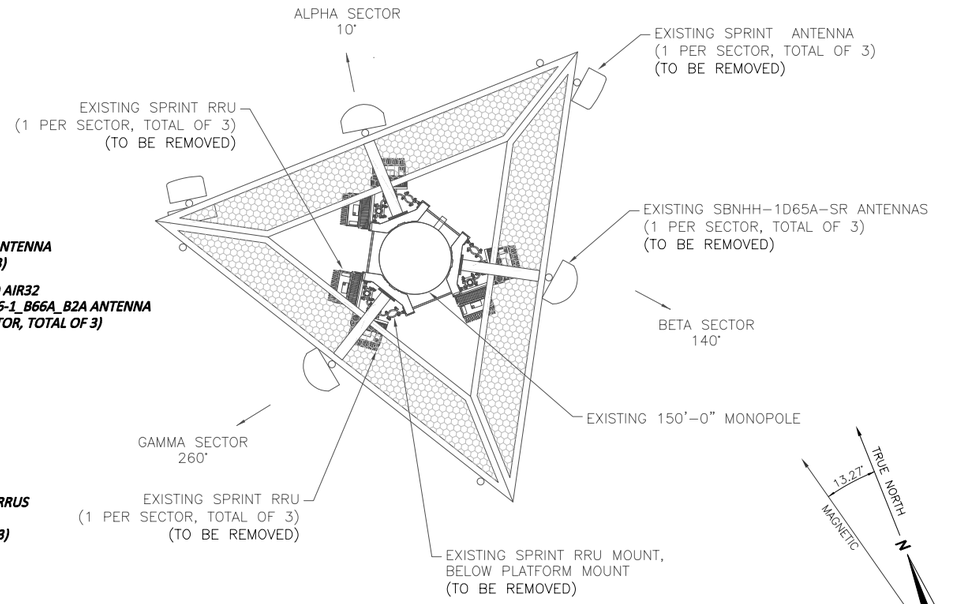
SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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

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 OR RELOCATION.



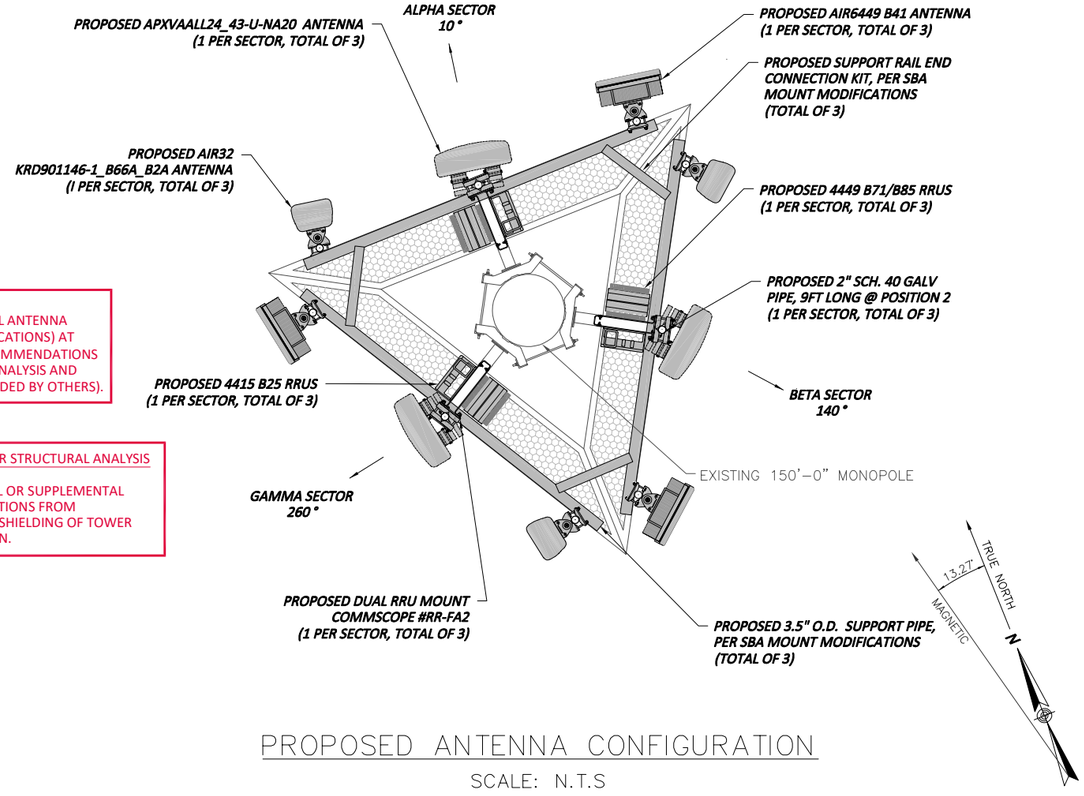
ENLARGED ANTENNA ELEVATION

SCALE: N.T.S



EXISTING ANTENNA CONFIGURATION

SCALE: N.T.S



PROPOSED ANTENNA CONFIGURATION

SCALE: N.T.S

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KT	DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED
PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME:	CTNH241A
SITE NUMBER:	CTNH241A
SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE:	SPRINT RETAIN
SHEET TITLE:	ANTENNA LAYOUT & ELEVATIONS
DRAWING #: A-2	REVISION: 1

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER
A1	PROPOSED	L2100, G1900, L1900	AIR32 KRD901146-1 B66A_B2	56.6x12.9x8.7	±147'	10°	–	(P) (1) 4449 B71 B85 RRUS (P) (1) 4415 B25 RRUS	15x13.2x10.4 16.5x13.4x5.9	(P) (3) 6x12 FIBER
A2	PROPOSED	L700, L600, N600, L1900	APXVAALL24_43-U-NA20	95.9x24x8.5	±147'	10°	–	–	–	
A3	PROPOSED	L2500, N2500	AIR6449 B41	33.1x20.6x8.6	±147'	10°	–	–	–	
B1	PROPOSED	L2100, G1900, L1900	AIR32 KRD901146-1 B66A_B2	56.6x12.9x8.7	±147'	140°	–	(P) (1) 4449 B71 B85 RRUS (P) (1) 4415 B25 RRUS	15x13.2x10.4 16.5x13.4x5.9	
B2	PROPOSED	L700, L600, N600, L1900	APXVAALL24_43-U-NA20	95.9x24x8.5	±147'	140°	–	–	–	
B3	PROPOSED	L2500, N2500	AIR6449 B41	33.1x20.6x8.6	±147'	140°	–	–	–	
G1	PROPOSED	L2100, G1900, L1900	AIR32 KRD901146-1 B66A_B2	56.6x12.9x8.7	±147'	260°	–	(P) (1) 4449 B71 B85 RRUS (P) (1) 4415 B25 RRUS	15x13.2x10.4 16.5x13.4x5.9	
G2	PROPOSED	L700, L600, N600, L1900	APXVAALL24_43-U-NA20	95.9x24x8.5	±147'	260°	–	–	–	
G3	PROPOSED	L2500, N2500	AIR6449 B41	33.1x20.6x8.6	±147'	260°	–	–	–	

NOTES:

1. REFERENCE STRUCTURAL ANALYSIS BY OTHERS FOR FURTHER INFORMATION REGARDING THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THIS EQUIPMENT UPGRADE.
2. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

RRU CHART

QUANTITY	MODEL	L	W	D
3(P)	4449 B71/B85	15.0"	13.2"	10.4"
3(P)	4415 B25	16.5"	13.4"	5.9"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

REFER TO THE FINAL RFDS AND TABLE FOR THE PROPOSED RRUS MODEL, QUANTITY, AND DIMENSIONS

RRUS DETAIL

N.T.S.

ERICSSON RBS6160 EQUIPMENT CABINET

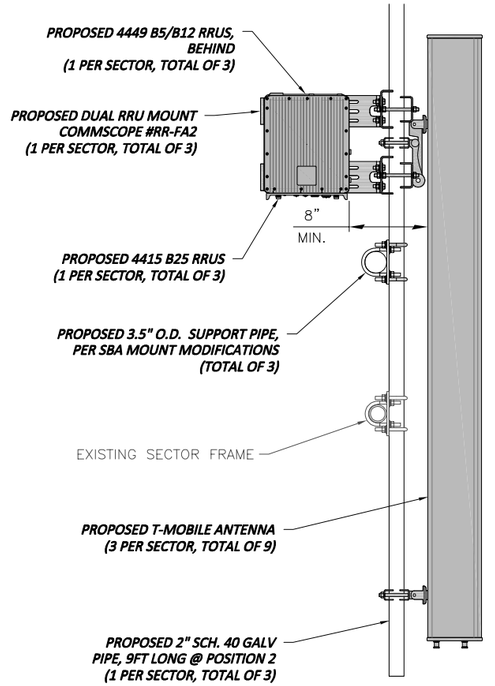
ENCLOSURE: ALUMINUM
DIMENSIONS (HxWxD): 63" X 25.6" X 33.5"
WEIGHT: 188LBS (EXCLUDES EQUIPMENT)
WEATHER TIGHTNESS: NEMA TYPE 3R

ERICSSON B160 BATTERY CABINET

ENCLOSURE: ALUMINUM
DIMENSIONS (HxWxD): 63" X 26" X 26"
WEIGHT: 188LBS (EXCLUDES EQUIPMENT)
WEATHER TIGHTNESS: NEMA TYPE 3R

EQUIPMENT CABINET DETAIL

N.T.S.



ANTENNA MOUNTING DETAIL

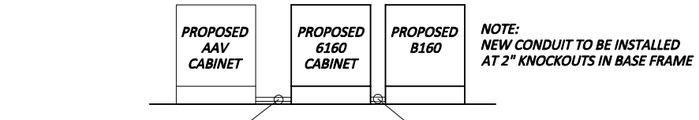
N.T.S.

EMMERSON NETXTEND COMPACT 2416 CABINET

ENCLOSURE: ALUMINUM
DIMENSIONS (HxWxD): 24" X 24" X 25.25"
WEIGHT: 64LBS (EXCLUDES EQUIPMENT)
WEATHER TIGHTNESS: NEMA TYPE 3R

AAV CABINET DETAIL

N.T.S.



CONDUIT DETAIL

N.T.S.

T-Mobile NORTHEAST LLC
T-MOBILE NORTHEAST, LLC.
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
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CENTERLINE COMMUNICATIONS
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
1	02/24/21	ISSUED FOR CONSTRUCTION
0	12/07/20	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION
DESIGNED BY: KT		APPROVED BY: DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME:	CTNH241A
SITE NUMBER:	CTNH241A
SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE:	SPRINT RETAIN
SHEET TITLE:	DETAILS
DRAWING #: A-3	REVISION: 1

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS [1]
N/A	MATERIAL SPECIFICATIONS REPORT [2]
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS [3]
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS [4]
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION [5]
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	**MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS [6]**
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	**PHOTOGRAPHS**
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

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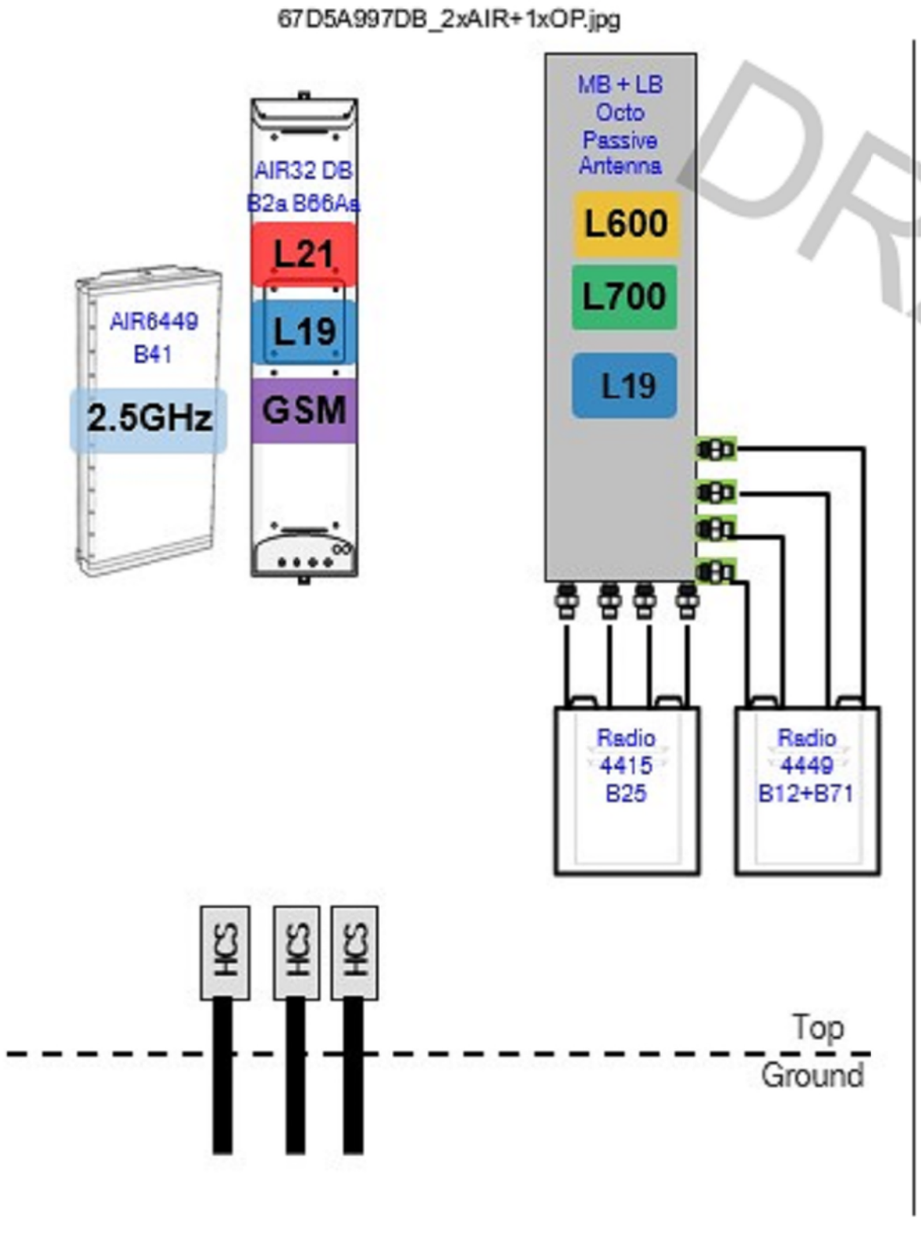
CENTERLINE COMMUNICATIONS
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
1	02/24/21	ISSUED FOR CONSTRUCTION
0	12/07/20	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION
DESIGNED BY: KT		APPROVED BY: DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME: CTNH241A
SITE NUMBER: CTNH241A
SITE ADDRESS: 106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE: SPRINT RETAIN
SHEET TITLE: STRUCTURAL NOTES
DRAWING #: SN-1
REVISION: 1



PLUMBING DIAGRAM

N.T.S.

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CENTERLINE COMMUNICATIONS
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

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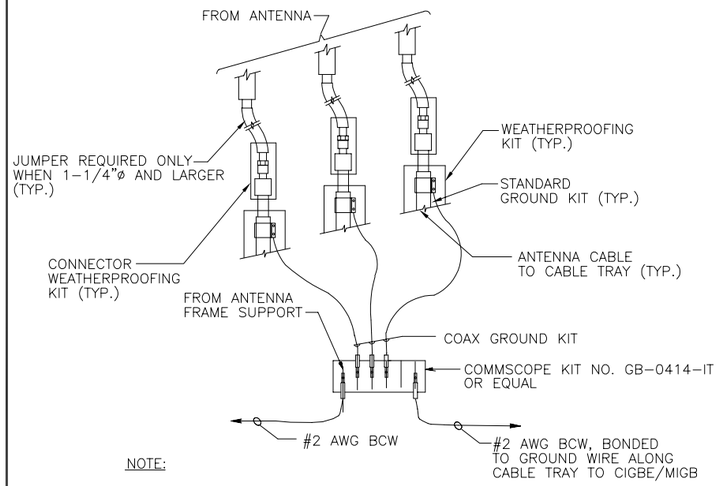
STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME:	CTNH241A
SITE NUMBER:	CTNH241A
SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE:	SPRINT RETAIN
SHEET TITLE:	RF PLUMBING DIAGRAM
DRAWING #: RF–1	REVISION: 1



NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUNDING RISER DIAGRAM

N.T.S.

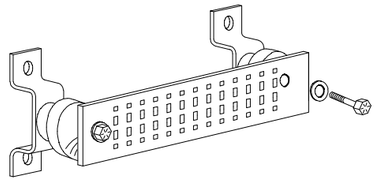
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.

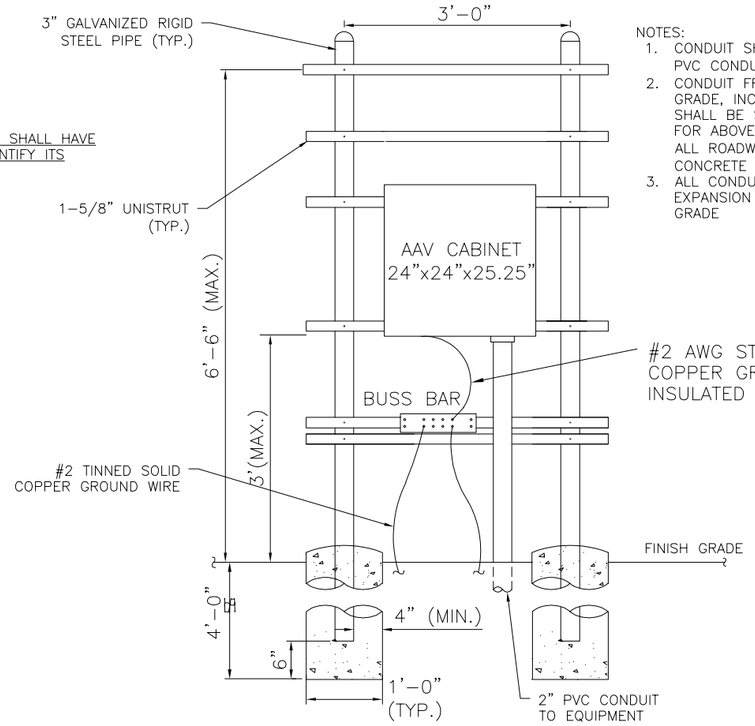
SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)



GROUND BAR DETAIL

N.T.S.

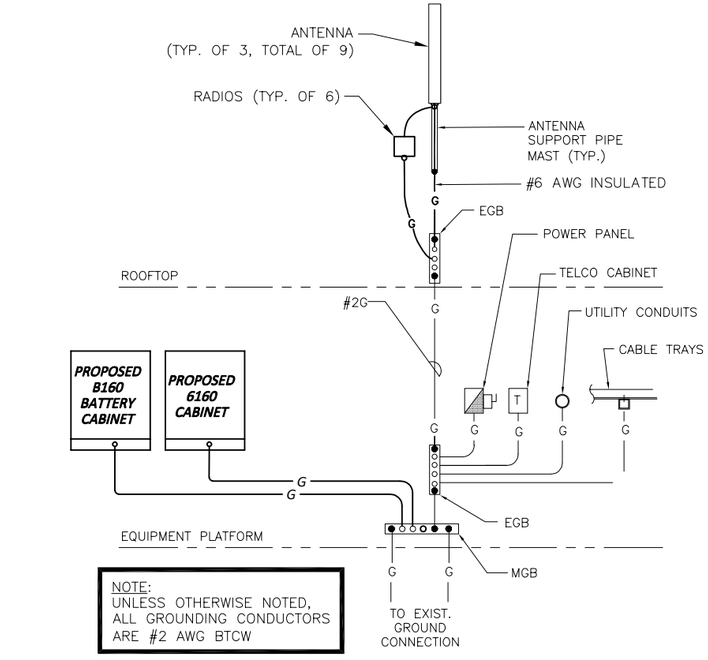


NOTES:

1. CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT 30" BELOW GRADE
2. CONDUIT FROM 30" BELOW GRADE, INCLUDING THE SWEEP, SHALL BE SCHEDULE 80 PVC FOR ABOVE GRADE AND UNDER ALL ROADWAYS (UNLESS CONCRETE ENCASED)
3. ALL CONDUITS SHALL HAVE EXPANSION FITTINGS ABOVE GRADE

H-FRAME DETAIL

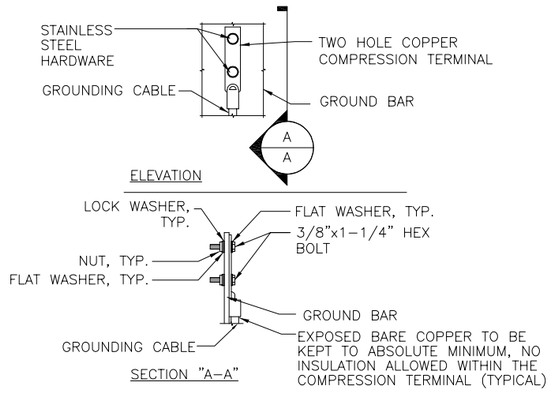
N.T.S.



NOTE:
UNLESS OTHERWISE NOTED, ALL GROUNDING CONDUCTORS ARE #2 AWG BTCW

GROUNDING RISER DIAGRAM

N.T.S.

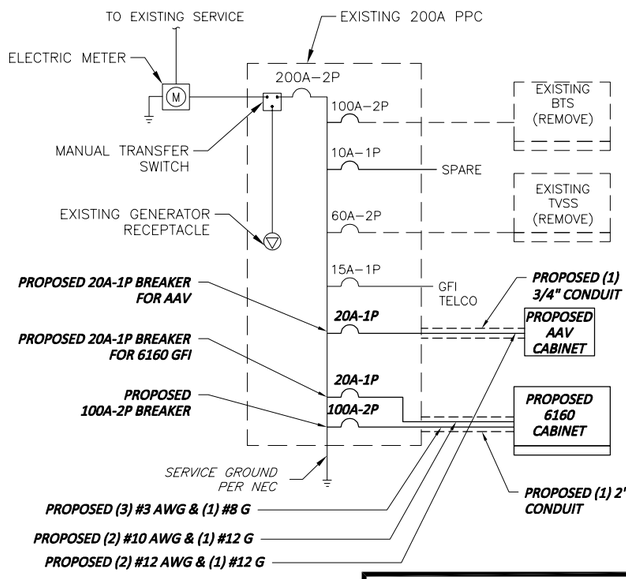


NOTE:

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

GROUND BAR CONNECTION DETAIL

N.T.S.



NOTE:
ALL WORK NEEDS TO BE PERFORMED BY LICENSED ELECTRICIAN ADHERING TO THE NEC AND LOCAL CODE REQUIREMENTS

ONE LINE POWER DIAGRAM

N.T.S.

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STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

DATE: 02/24/21

SITE NAME:	CTNH241A
SITE NUMBER:	CTNH241A
SITE ADDRESS:	106 WILLENBROCK ROAD OXFORD, CT 06478
PROJECT TYPE:	SPRINT RETAIN
SHEET TITLE:	GROUNDING DETAILS
DRAWING #: G-1	REVISION: 1

EXHIBIT 7

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

Structural Analysis Report

Existing 150 ft SUMMIT Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT03109-S

Customer Site Name: Oxford 3, CT

Carrier Name: T-Mobile Sprint (App#: 144006, V1)

Carrier Site ID / Name: CT23XC509

Site Location: 106 Willenbrock Road

Oxford, Connecticut

New Haven County

Latitude: 41.465106

Longitude: -73.146555

Analysis Result:

Max Structural Usage: 40.5% [Pass]

Max Foundation Usage: 32.0% [Pass]

Additional Usage Caused by Mount Modification: +0.8%

Report Prepared By: Younus Alkarawi

Introduction

The purpose of this report is to summarize the analysis results on the 150 ft SUMMIT Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Paul J. Ford, Job # 29200-1055, dated 7/19/2000
Foundation Drawing	Paul J. Ford, Job # 29200-1055, dated 8/7/2000
Geotechnical Report	Jaworski, Report # 00248G, dated 07/14/2000
Modification Drawings	N/A
Mount Analysis	T-Mobile Sprint MA BY TES # 100518, dated 12/18/2020

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} = 125.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 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:	S_S = 0.186, S_1 = 0.062

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
-	147.0	3	RFS - APXVSPP18-C-A20 - Panel	Low Profile Platform	(4) 1-1/4"	Sprint
-		3	RFS - APXVTM14-C-120 - Panel			
-		3	Alcatel Lucent - TD-RRH8x20-25			
-		3	Alcatel Lucent - 1900MHz RRU			
-		3	Alcatel Lucent - 800 MHz RRU			
-		3	Alcatel Lucent - 800 MHz Filter			
-		4	RFS - ACU-A20-N RET			
9	137.0	3	Antel BXA-70063/6CF- Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Hybrid	Verizon
10		3	Antel BXA-171063-8BF - Panel			
11		3	Andrew HBX-6517DS - Panel			
12		3	Andrew LNX-6514DS - Panel			
13		3	Alcatel Lucent RRH2x40-AWS			
14		6	RFS FD9R6004/2C-3L			
15		1	RFS DB-T1-6Z-8AB-0Z			
16		1	GPS			
17	117.0	3	Powerwave 7770.00 - Panel	(3) Sector Mount (SitePro1 VFA12-M3-WLL)	(9) 1 5/8" (1) 2" Conduit* (1) 2" Conduit** (2) 1/2" DC (1) 3/8" Fiber	AT&T
18		3	CCI OPA65R-BU6DA - Panel			
19		3	CCI DMP65R-BU6DA - Panel			
20		6	Powerwave LGP21401			
21		3	Ericsson 4449 B5/B12			
22		3	Ericsson 8843 B25/B66A			
23		3	Ericsson RRUS 4478 B14			
24		1	Raycap DC6-48-60-18-8F			
25		1	Raycap DC9-48-60-24-PC16-EV			
26	80.0	1	GPS	(1) Side Arm	(1) 1/2"	Sprint

** Housing (2) 3/4" DC Power*
*** Housing (1) 3/4" DC Power, (1) 3/8" Fiber*

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	147.0	3	Ericsson AIR32 KRD901146-1_B66A_B2A (Octo)- Panel	Modified Low Profile Platform W/ (1) MS-HRECP-35 (SUPPORT RAIL PIPE W/ END CONNECTION KIT)	(3) 2" Hybrid	T-Mobile Sprint
2		3	RFS APXVAALL24_43-U-NA20- Panel			
3		3	Ericsson AIR6449 B41- Panel			
4		4	RFS ACU-A20-N RET			
5		3	Ericsson 4415 B25 RRU			
6		3	ALU 800 MHz RRH			
7		3	Ericsson 4449 B71 + B85 RRU			
8		3	ALU 800 MHz Filter			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**36.9%**	**33.1%**	**40.5%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3523.1	34.2	58.8

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 0.5164 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

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 ANSI/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 36.86% at 0.0ft

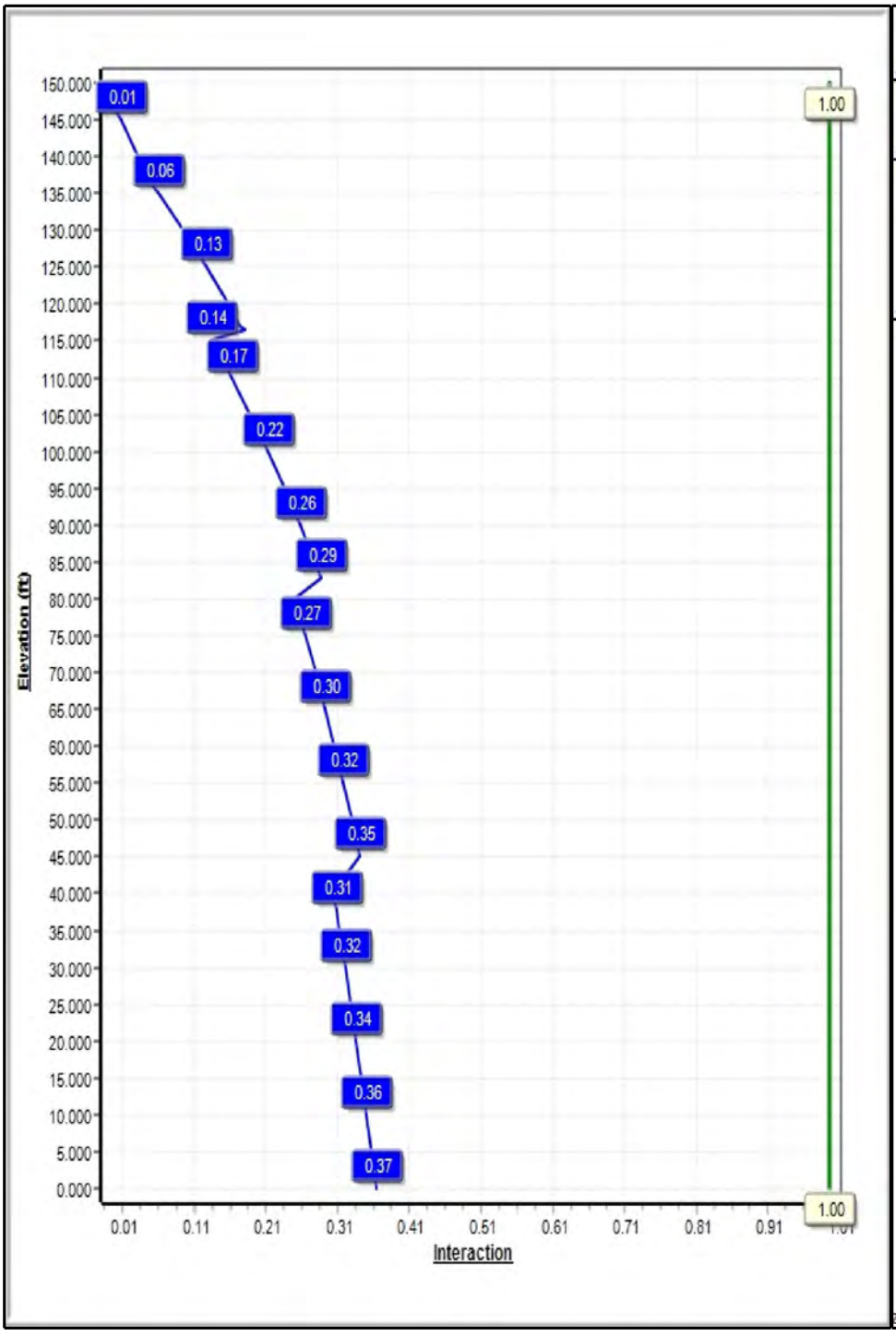
Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT	**Exposure:**	C	
Height:	150.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

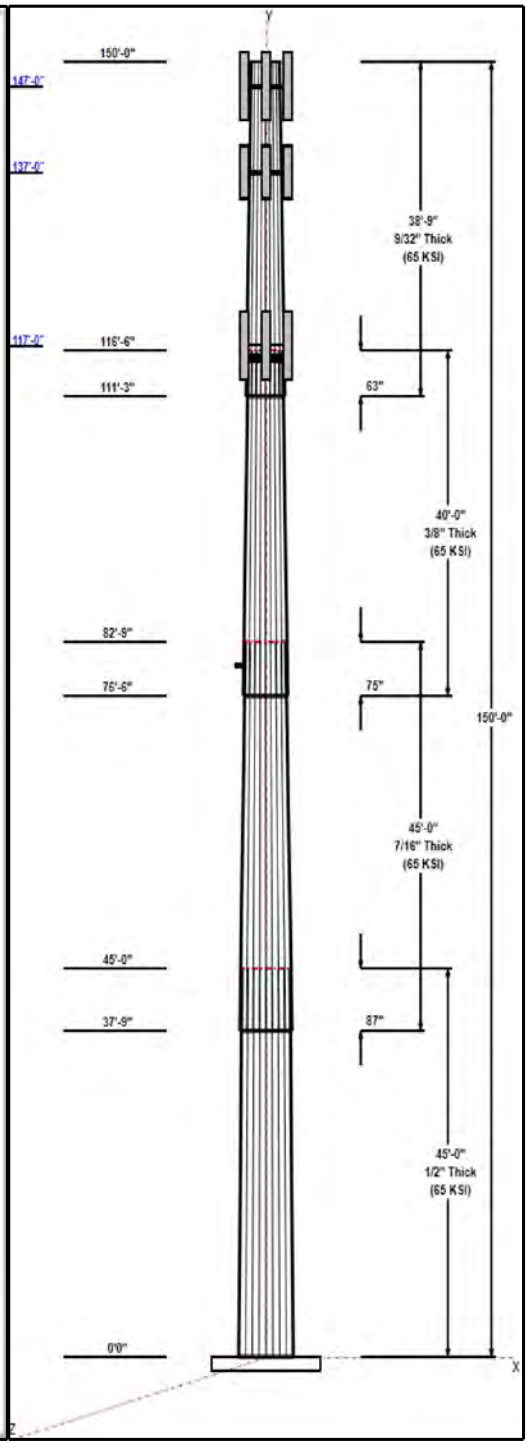
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 97 mph Wind

Iterations: 20





Structure: CT03109-S-SBA

Type: Tapered
Site Name: Oxford 3, CT
Height: 150.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.25372

4/7/2021

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	45.00	55.55	66.97	0.500		0.25372	65
2	45.00	46.85	58.27	0.438	Slip	0.25372	65
3	40.00	39.04	49.19	0.375	Slip	0.25372	65
4	38.75	31.10	40.93	0.281	Slip	0.25372	65

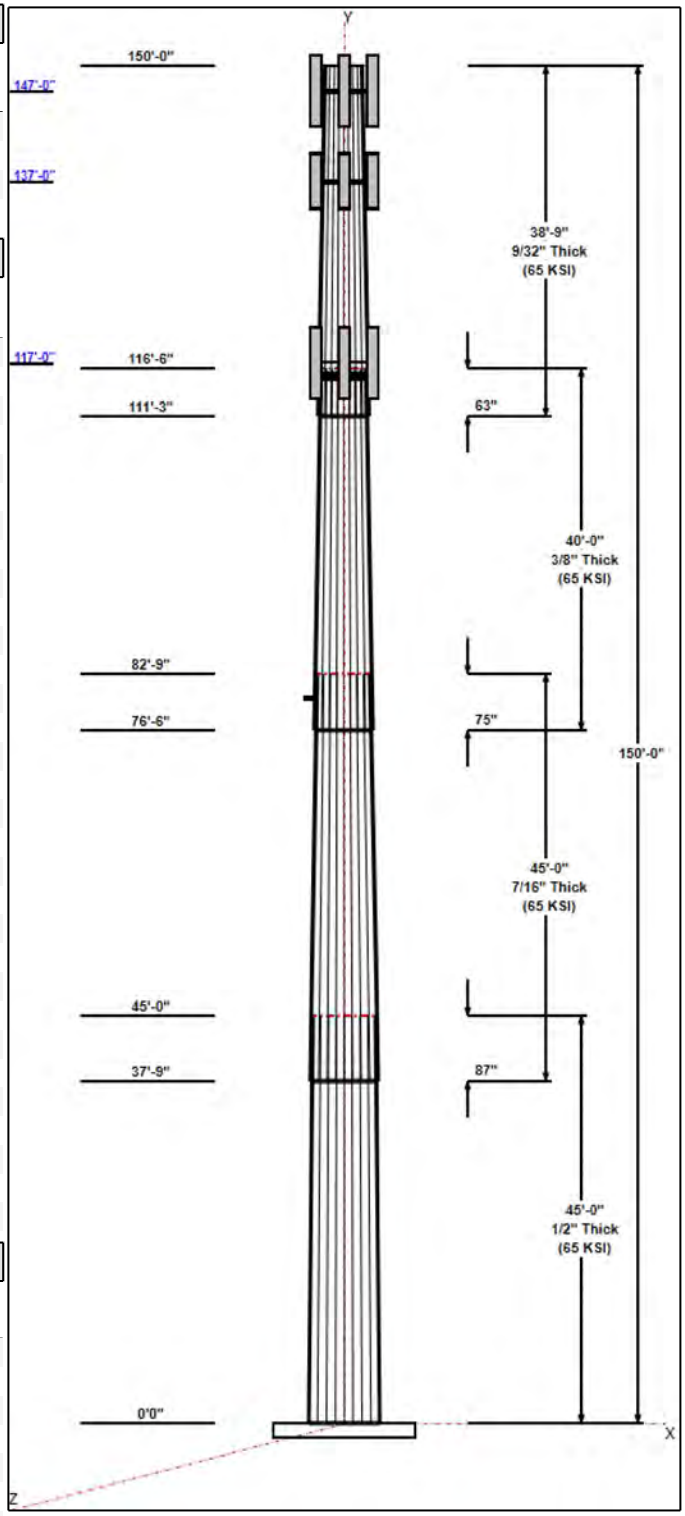
Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
147.00	147.00	3	AIR32 KRD901146	T-Mobile Sprint
147.00	147.00	3	APXVAALL24_43-U-NA20	T-Mobile Sprint
147.00	147.00	3	AIR6449 B41	T-Mobile Sprint
147.00	147.00	1	Low Profile Platform	T-Mobile Sprint
147.00	147.00	4	ACU-A20-N	T-Mobile Sprint
147.00	147.00	3	4415 B25	T-Mobile Sprint
147.00	147.00	3	800 MHz RRH	T-Mobile Sprint
147.00	147.00	3	4449 B71 + B85	T-Mobile Sprint
147.00	147.00	3	800 MHz Filter	T-Mobile Sprint
147.00	147.00	1	MS-HRECP-35	T-Mobile Sprint
137.00	137.00	3	BXA-70063/6CF	Verizon
137.00	137.00	3	BXA-171063-8BF	Verizon
137.00	137.00	3	HBX-6517DS	Verizon
137.00	137.00	3	LNX-6514DS	Verizon
137.00	137.00	3	RRH2x40-AWS	Verizon
137.00	137.00	6	FD9R6004/2C-3L	Verizon
137.00	137.00	1	DB-T1-6Z-8AB-0Z	Verizon
137.00	137.00	1	GPS	Verizon
137.00	137.00	1	Low Profile Platform	Verizon
117.00	117.00	3	7770.00	AT&T
117.00	117.00	3	OPA65R-BU6DA	AT&T
117.00	117.00	3	DMP65R-BU6DA	AT&T
117.00	117.00	6	LGP21401	AT&T
117.00	117.00	3	4449 B5/B12	AT&T
117.00	117.00	3	8843 B25/B66A	AT&T
117.00	117.00	3	RRUS 4478 B14	AT&T
117.00	117.00	1	DC6-48-60-18-8F	AT&T
117.00	117.00	1	DC9-48-60-24-PC16-EV	AT&T
117.00	117.00	1	(3) Sector Mount	AT&T
80.00	80.00	1	GPS	Sprint
80.00	80.00	1	Side Arm	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	147.00	Inside	2" Hybrid	T-Mobile Sprint
0.00	137.00	Inside	1 5/8" Coax	Verizon
0.00	137.00	Inside	1 5/8" Hybrid	Verizon
0.00	117.00	Inside	1 5/8" Coax	AT&T
0.00	117.00	Inside	1/2" DC	AT&T
0.00	117.00	Inside	2" Conduit	AT&T
0.00	117.00	Inside	3/8" Fiber	AT&T
0.00	80.00	Inside	1/2" Coax	Sprint

Anchor Bolts



Qty	Specifications	Grade (ksi)	Arrangement
28	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	77.0	55.0	Clipped

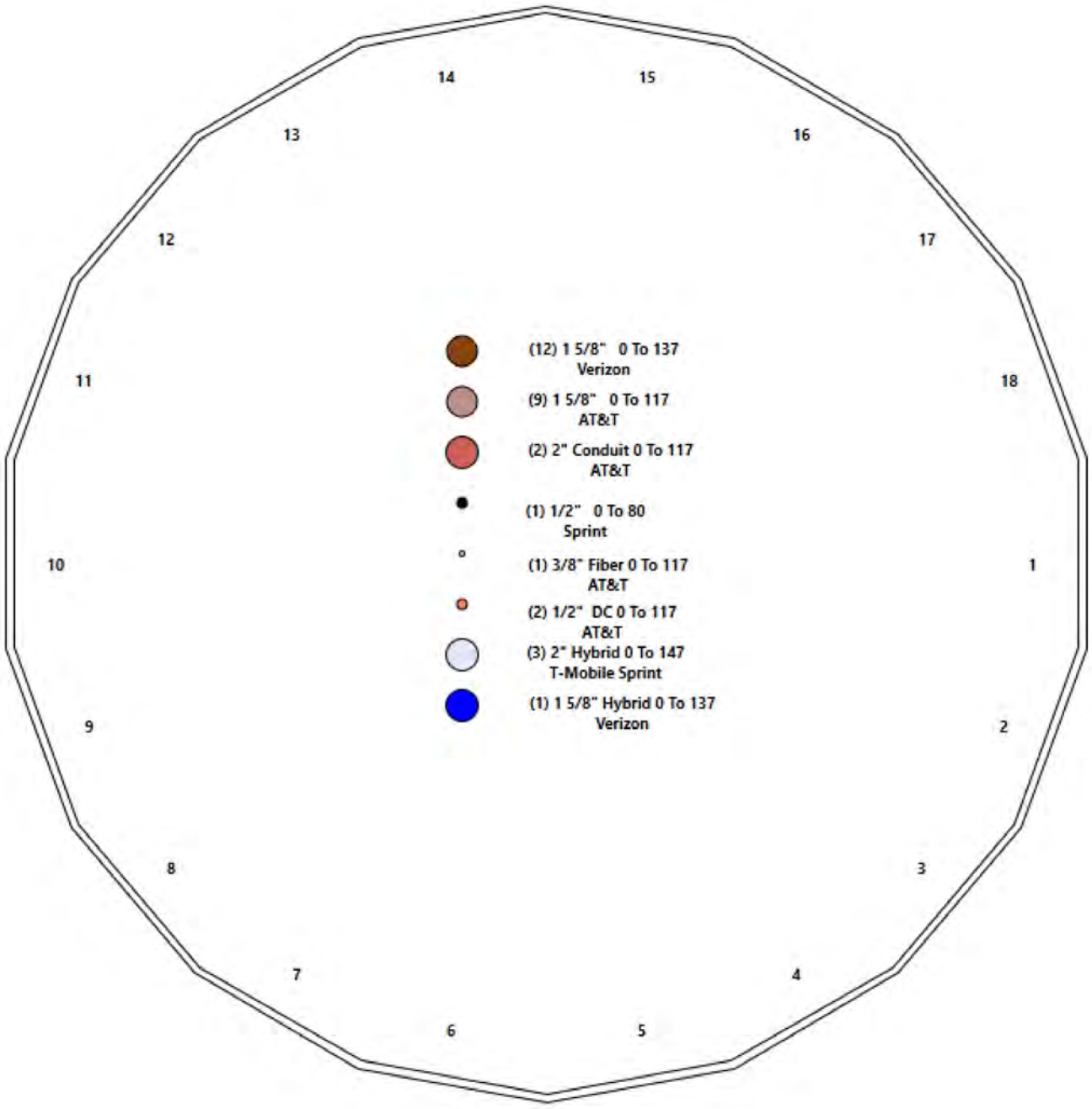
Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	3523.1	34.2	58.8
0.9D + 1.6W 97 mph Wind	3506.7	34.2	44.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1005.2	10.0	83.7
1.2D + 1.0E	229.1	2.1	58.8
0.9D + 1.0E	228.0	2.1	44.1
1.0D + 1.0W 60 mph Wind	840.0	8.2	49.0

Structure: CT03109-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Oxford 3, CT
Height: 150.00 (ft)

4/7/2021



Shaft Properties

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	45.000	0.5000	65		0.00	14,765
2	18	45.000	0.4375	65	Slip	87.00	11,082
3	18	40.000	0.3750	65	Slip	75.00	7,085
4	18	38.750	0.2813	65	Slip	63.00	4,206
					Total Shaft Weight:		**37,139**

	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	66.97	0.00	105.4	58883.20	22.21	133.94	55.55	45.00	87.37	33454.2	18.18	111.1	0.253717
2	58.27	37.75	80.30	33929.32	22.07	133.18	46.85	82.75	64.45	17539.8	17.47	107.0	0.253717
3	49.19	76.50	58.09	17487.19	21.72	131.16	39.04	116.50	46.02	8690.18	16.94	104.1	0.253717
4	40.93	111.2	36.29	7575.78	24.25	145.53	31.10	150.00	27.51	3301.28	18.09	110.5	0.253717

Load Summary

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Discrete Appurtenances

				No 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	147.00	AIR32 KRD901146	3	132.20	6.51	0.87	315.00	7.629	0.87	0.00	0.00
2	147.00	APXVAALL24_43-U-NA20	3	99.00	20.24	0.73	525.73	22.136	0.73	0.00	0.00
3	147.00	AIR6449 B41	3	103.00	5.65	0.71	239.84	6.599	0.71	0.00	0.00
4	147.00	Low Profile Platform	1	1200.00	25.00	1.00	2245.02	45.900	1.00	0.00	0.00
5	147.00	ACU-A20-N	4	1.00	0.14	0.67	5.29	0.436	0.67	0.00	0.00
6	147.00	4415 B25	3	46.30	1.86	0.72	106.91	2.423	0.72	0.00	0.00
7	147.00	800 MHz RRH	3	53.00	2.40	0.67	116.80	3.517	0.67	0.00	0.00
8	147.00	4449 B71 + B85	3	75.00	1.97	0.67	134.04	2.538	0.67	0.00	0.00
9	147.00	800 MHz Filter	3	8.80	0.78	0.50	26.41	1.426	0.50	0.00	0.00
10	147.00	MS-HRECP-35	1	514.00	12.25	1.00	1122.76	24.198	1.00	0.00	0.00
11	137.00	BXA-70063/6CF	3	17.00	7.57	0.70	157.43	10.309	0.70	0.00	0.00
12	137.00	BXA-171063-8BF	3	10.50	2.94	0.84	75.45	4.583	0.84	0.00	0.00
13	137.00	HBX-6517DS	3	18.70	5.29	0.75	113.87	7.716	0.75	0.00	0.00
14	137.00	LNX-6514DS	3	33.10	8.09	0.80	206.23	10.860	0.80	0.00	0.00
15	137.00	RRH2x40-AWS	3	44.00	2.16	0.67	104.18	3.199	0.67	0.00	0.00
16	137.00	FD9R6004/2C-3L	6	3.10	0.36	0.50	11.05	0.799	0.50	0.00	0.00
17	137.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	1.00	138.89	5.796	1.00	0.00	0.00
18	137.00	GPS	1	4.00	0.91	1.00	28.99	1.906	1.00	0.00	0.00
19	137.00	Low Profile Platform	1	1200.00	25.00	1.00	2237.68	45.754	1.00	0.00	0.00
20	117.00	7770.00	3	35.00	5.50	0.73	166.12	6.537	0.73	0.00	0.00
21	117.00	OPA65R-BU6DA	3	69.00	11.20	0.89	328.32	12.825	0.89	0.00	0.00
22	117.00	DMP65R-BU6DA	3	79.40	12.71	0.72	366.72	14.138	0.72	0.00	0.00
23	117.00	LGP21401	6	14.10	1.29	0.50	38.49	2.105	0.50	0.00	0.00
24	117.00	4449 B5/B12	3	71.00	1.97	0.67	123.07	2.504	0.67	0.00	0.00
25	117.00	8843 B25/B66A	3	72.00	1.64	0.67	117.69	2.125	0.67	0.00	0.00
26	117.00	RRUS 4478 B14	3	59.40	1.65	0.67	99.85	2.156	0.67	0.00	0.00
27	117.00	DC6-48-60-18-8F	1	31.80	0.92	1.00	92.11	1.347	1.00	0.00	0.00
28	117.00	DC9-48-60-24-PC16-EV	1	26.20	1.14	1.00	129.59	2.688	1.00	0.00	0.00
29	117.00	(3) Sector Mount	1	1696.00	47.10	1.00	3312.86	04.831	1.00	0.00	0.00
30	80.00	GPS	1	4.00	0.91	1.00	27.68	1.854	1.00	0.00	0.00
31	80.00	Side Arm	1	120.00	4.50	1.00	218.33	9.427	1.00	0.00	0.00
		Totals:	**80**	**8,001.30**			**19,843.33**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	147.00	(3) 2" Hybrid	0.00	Inside
0.00	137.00	(12) 1 5/8" Coax	0.00	Inside
0.00	137.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	117.00	(9) 1 5/8" Coax	0.00	Inside
0.00	117.00	(2) 1/2" DC	0.00	Inside
0.00	117.00	(2) 2" Conduit	0.00	Inside
0.00	117.00	(1) 3/8" Fiber	0.00	Inside
0.00	80.00	(1) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	66.970	105.484	58883.2	22.21	133.94	75.3	1731.	0.0
5.00		0.5000	65.701	103.471	55575.8	21.76	131.40	75.8	1666.	1777.6
10.00		0.5000	64.433	101.458	52394.6	21.31	128.87	76.3	1601.	1743.3
15.00		0.5000	63.164	99.445	49337.1	20.86	126.33	76.9	1538.	1709.1
20.00		0.5000	61.896	97.431	46401.0	20.42	123.79	77.4	1476.	1674.8
25.00		0.5000	60.627	95.418	43583.8	19.97	121.25	77.9	1415.	1640.6
30.00		0.5000	59.358	93.405	40882.9	19.52	118.72	78.4	1356.	1606.3
35.00		0.5000	58.090	91.392	38296.0	19.08	116.18	79.0	1298.	1572.1
37.75	Bot - Section 2	0.5000	57.392	90.285	36920.9	18.83	114.78	79.3	1267.	850.0
40.00		0.5000	56.821	89.379	35820.6	18.63	113.64	79.5	1241.	1299.5
45.00	Top - Section 1	0.4375	56.428	77.747	30793.5	21.33	128.98	0.0	0.0	2841.3
50.00		0.4375	55.159	75.985	28747.5	20.82	126.08	76.9	1026.	1307.8
55.00		0.4375	53.891	74.224	26794.2	20.31	123.18	77.5	979.3	1277.8
60.00		0.4375	52.622	72.462	24931.4	19.80	120.28	78.1	933.2	1247.8
65.00		0.4375	51.353	70.701	23157.0	19.29	117.38	78.7	888.2	1217.9
70.00		0.4375	50.085	68.939	21468.9	18.78	114.48	79.3	844.3	1187.9
75.00		0.4375	48.816	67.178	19864.9	18.26	111.58	79.9	801.5	1157.9
76.50	Bot - Section 3	0.4375	48.436	66.649	19399.8	18.11	110.71	80.1	788.9	341.5
80.00		0.4375	47.548	65.416	18342.8	17.75	108.68	80.5	759.8	1472.0
82.75	Top - Section 2	0.3750	47.600	56.207	15837.6	20.97	126.93	0.0	0.0	1137.5
85.00		0.3750	47.029	55.528	15270.2	20.70	125.41	77.1	639.5	427.7
90.00		0.3750	45.760	54.018	14058.1	20.11	122.03	77.8	605.1	931.9
95.00		0.3750	44.492	52.508	12911.9	19.51	118.65	78.5	571.6	906.2
100.00		0.3750	43.223	50.998	11829.8	18.91	115.26	79.2	539.1	880.5
105.00		0.3750	41.955	49.489	10809.9	18.32	111.88	79.9	507.5	854.8
110.00		0.3750	40.686	47.979	9850.4	17.72	108.50	80.6	476.9	829.1
111.25	Bot - Section 4	0.3750	40.369	47.601	9619.7	17.57	107.65	80.7	469.3	203.3
115.00		0.3750	39.418	46.469	8949.3	17.12	105.11	81.3	447.2	1057.8
116.50	Top - Section 3	0.2813	39.600	35.098	6855.2	23.42	140.80	0.0	0.0	416.0
117.00		0.2813	39.473	34.984	6789.1	23.34	140.35	74.0	338.8	59.6
120.00		0.2813	38.711	34.305	6401.1	22.86	137.64	74.5	325.7	353.7
125.00		0.2813	37.443	33.173	5787.9	22.06	133.13	75.4	304.5	574.0
130.00		0.2813	36.174	32.040	5215.2	21.27	128.62	76.4	284.0	554.8
135.00		0.2813	34.906	30.908	4681.5	20.47	124.11	77.3	264.2	535.5
137.00		0.2813	34.398	30.455	4478.7	20.16	122.31	77.7	256.4	208.8
140.00		0.2813	33.637	29.775	4185.6	19.68	119.60	78.3	245.1	307.4
145.00		0.2813	32.369	28.643	3726.0	18.88	115.09	79.2	226.7	497.0
147.00		0.2813	31.861	28.190	3552.0	18.56	113.28	79.6	219.6	193.4
150.00		0.2813	31.100	27.511	3301.3	18.09	110.58	80.1	209.1	284.3
										37138.7

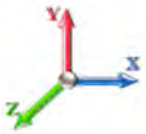
Wind Loading - Shaft

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 20

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	19.450	21.40	506.79	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	497.19	0.650	0.000	5.00	28.066	18.24	624.5	0.0	2133.1
10.00		1.00	0.85	19.450	21.40	487.59	0.650	0.000	5.00	27.530	17.89	612.6	0.0	2092.0
15.00		1.00	0.85	19.450	21.40	477.99	0.650	0.000	5.00	26.993	17.55	600.6	0.0	2050.9
20.00		1.00	0.90	20.638	22.70	482.48	0.650	0.000	5.00	26.456	17.20	624.6	0.0	2009.8
25.00		1.00	0.95	21.630	23.79	483.82	0.650	0.000	5.00	25.919	16.85	641.4	0.0	1968.7
30.00		1.00	0.98	22.477	24.72	482.87	0.650	0.000	5.00	25.383	16.50	652.7	0.0	1927.6
35.00		1.00	1.01	23.218	25.54	480.28	0.650	0.000	5.00	24.846	16.15	659.9	0.0	1886.5
37.75	Bot - Section 2	1.00	1.03	23.591	25.95	478.31	0.650	0.000	2.75	13.436	8.73	362.6	0.0	1020.0
40.00		1.00	1.04	23.880	26.27	476.45	0.650	0.000	2.25	11.039	7.18	301.6	0.0	1559.5
45.00	Top - Section 1	1.00	1.07	24.479	26.93	471.62	0.650	0.000	5.00	24.143	15.69	676.1	0.0	3409.6
50.00		1.00	1.09	25.029	27.53	473.50	0.650	0.000	5.00	23.606	15.34	675.9	0.0	1569.3
55.00		1.00	1.12	25.536	28.09	467.28	0.650	0.000	5.00	23.069	14.99	673.9	0.0	1533.4
60.00		1.00	1.14	26.008	28.61	460.47	0.650	0.000	5.00	22.532	14.65	670.4	0.0	1497.4
65.00		1.00	1.16	26.450	29.09	453.18	0.650	0.000	5.00	21.996	14.30	665.6	0.0	1461.5
70.00		1.00	1.17	26.866	29.55	445.44	0.650	0.000	5.00	21.459	13.95	659.5	0.0	1425.5
75.00		1.00	1.19	27.259	29.98	437.32	0.650	0.000	5.00	20.922	13.60	652.4	0.0	1389.5
76.50	Bot - Section 3	1.00	1.20	27.373	30.11	434.82	0.650	0.000	1.50	6.172	4.01	193.3	0.0	409.8
80.00	Appurtenance(s)	1.00	1.21	27.632	30.39	428.86	0.650	0.000	3.50	14.436	9.38	456.3	0.0	1766.4
82.75	Top - Section 2	1.00	1.22	27.829	30.61	424.08	0.650	0.000	2.75	11.158	7.25	355.2	0.0	1365.0
85.00		1.00	1.22	27.987	30.79	426.90	0.650	0.000	2.25	9.008	5.86	288.4	0.0	513.3
90.00		1.00	1.24	28.325	31.16	417.89	0.650	0.000	5.00	19.629	12.76	636.1	0.0	1118.3
95.00		1.00	1.25	28.650	31.51	408.63	0.650	0.000	5.00	19.093	12.41	625.8	0.0	1087.5
100.00		1.00	1.27	28.961	31.86	399.12	0.650	0.000	5.00	18.556	12.06	614.8	0.0	1056.6
105.00		1.00	1.28	29.260	32.19	389.41	0.650	0.000	5.00	18.019	11.71	603.2	0.0	1025.8
110.00		1.00	1.29	29.548	32.50	379.48	0.650	0.000	5.00	17.482	11.36	591.0	0.0	995.0
111.25	Bot - Section 4	1.00	1.29	29.618	32.58	376.97	0.650	0.000	1.25	4.287	2.79	145.2	0.0	243.9
115.00		1.00	1.30	29.826	32.81	369.38	0.650	0.000	3.75	12.837	8.34	438.0	0.0	1269.4
116.50	Top - Section 3	1.00	1.31	29.907	32.90	366.31	0.650	0.000	1.50	5.050	3.28	172.8	0.0	499.2
117.00	Appurtenance(s)	1.00	1.31	29.934	32.93	370.56	0.650	0.000	0.50	1.673	1.09	57.3	0.0	71.5
120.00		1.00	1.32	30.094	33.10	364.39	0.650	0.000	3.00	9.924	6.45	341.7	0.0	424.4
125.00		1.00	1.33	30.354	33.39	353.97	0.650	0.000	5.00	16.110	10.47	559.4	0.0	688.8
130.00		1.00	1.34	30.605	33.67	343.39	0.650	0.000	5.00	15.574	10.12	545.3	0.0	665.7
135.00		1.00	1.35	30.850	33.93	332.66	0.650	0.000	5.00	15.037	9.77	530.7	0.0	642.6
137.00	Appurtenance(s)	1.00	1.35	30.945	34.04	328.34	0.650	0.000	2.00	5.864	3.81	207.6	0.0	250.6
140.00		1.00	1.36	31.087	34.20	321.80	0.650	0.000	3.00	8.636	5.61	307.1	0.0	368.9
145.00		1.00	1.37	31.317	34.45	310.81	0.650	0.000	5.00	13.963	9.08	500.3	0.0	596.4
147.00	Appurtenance(s)	1.00	1.37	31.408	34.55	306.38	0.650	0.000	2.00	5.435	3.53	195.3	0.0	232.1
150.00		1.00	1.38	31.541	34.70	299.70	0.650	0.000	3.00	7.992	5.19	288.4	0.0	341.2
								Totals:	**150.00**			**18,407.3**		**44,566.4**

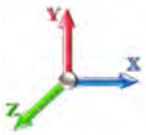
Discrete Appurtenance Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 20

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	147.00	ACU-A20-N	4	31.408	34.548	0.50	0.75	0.28	4.80	0.000	0.000	15.56	0.00	0.00
2	147.00	AIR32 KRD901146	3	31.408	34.548	0.65	0.75	12.74	475.92	0.000	0.000	704.42	0.00	0.00
3	147.00	APXVAALL24_43-U-NA20	3	31.408	34.548	0.55	0.75	33.24	356.40	0.000	0.000	1837.65	0.00	0.00
4	147.00	AIR6449 B41	3	31.408	34.548	0.53	0.75	9.03	370.80	0.000	0.000	498.93	0.00	0.00
5	147.00	Low Profile Platform	1	31.408	34.548	1.00	1.00	25.00	1440.00	0.000	0.000	1381.93	0.00	0.00
6	147.00	MS-HRECP-35	1	31.408	34.548	1.00	1.00	12.25	616.80	0.000	0.000	677.15	0.00	0.00
7	147.00	4415 B25	3	31.408	34.548	0.54	0.75	3.01	166.68	0.000	0.000	166.56	0.00	0.00
8	147.00	800 MHz RRH	3	31.408	34.548	0.50	0.75	3.62	190.80	0.000	0.000	199.99	0.00	0.00
9	147.00	4449 B71 + B85	3	31.408	34.548	0.50	0.75	2.97	270.00	0.000	0.000	164.16	0.00	0.00
10	147.00	800 MHz Filter	3	31.408	34.548	0.38	0.75	0.88	31.68	0.000	0.000	48.51	0.00	0.00
11	137.00	Low Profile Platform	1	30.945	34.040	1.00	1.00	25.00	1440.00	0.000	0.000	1361.59	0.00	0.00
12	137.00	GPS	1	30.945	34.040	1.00	1.00	0.91	4.80	0.000	0.000	49.56	0.00	0.00
13	137.00	DB-T1-6Z-8AB-0Z	1	30.945	34.040	1.00	1.00	4.80	22.68	0.000	0.000	261.43	0.00	0.00
14	137.00	FD9R6004/2C-3L	6	30.945	34.040	0.40	0.80	0.86	22.32	0.000	0.000	47.06	0.00	0.00
15	137.00	RRH2x40-AWS	3	30.945	34.040	0.54	0.80	3.47	158.40	0.000	0.000	189.17	0.00	0.00
16	137.00	LNX-6514DS	3	30.945	34.040	0.64	0.80	15.53	119.16	0.000	0.000	845.97	0.00	0.00
17	137.00	BXA-171063-8BF	3	30.945	34.040	0.67	0.80	5.93	37.80	0.000	0.000	322.81	0.00	0.00
18	137.00	BXA-70063/6CF	3	30.945	34.040	0.56	0.80	12.72	61.20	0.000	0.000	692.65	0.00	0.00
19	137.00	HBX-6517DS	3	30.945	34.040	0.60	0.80	9.52	67.32	0.000	0.000	518.60	0.00	0.00
20	117.00	4449 B5/B12	3	29.934	32.927	0.54	0.80	3.17	255.60	0.000	0.000	166.89	0.00	0.00
21	117.00	7770.00	3	29.934	32.927	0.58	0.80	9.64	126.00	0.000	0.000	507.66	0.00	0.00
22	117.00	OPA65R-BU6DA	3	29.934	32.927	0.71	0.80	23.92	248.40	0.000	0.000	1260.37	0.00	0.00
23	117.00	DMP65R-BU6DA	3	29.934	32.927	0.58	0.80	21.96	285.84	0.000	0.000	1157.09	0.00	0.00
24	117.00	LGP21401	6	29.934	32.927	0.40	0.80	3.10	101.52	0.000	0.000	163.11	0.00	0.00
25	117.00	8843 B25/B66A	3	29.934	32.927	0.54	0.80	2.64	259.20	0.000	0.000	138.93	0.00	0.00
26	117.00	RRUS 4478 B14	3	29.934	32.927	0.54	0.80	2.65	213.84	0.000	0.000	139.78	0.00	0.00
27	117.00	DC6-48-60-18-8F	1	29.934	32.927	1.00	1.00	0.92	38.16	0.000	0.000	48.47	0.00	0.00
28	117.00	DC9-48-60-24-PC16-EV	1	29.934	32.927	1.00	1.00	1.14	31.44	0.000	0.000	60.06	0.00	0.00
29	117.00	(3) Sector Mount	1	29.934	32.927	0.75	0.75	35.33	2035.20	0.000	0.000	1861.06	0.00	0.00
30	80.00	Side Arm	1	27.632	30.395	1.00	1.00	4.50	144.00	0.000	0.000	218.84	0.00	0.00
31	80.00	GPS	1	27.632	30.395	1.00	1.00	0.91	4.80	0.000	0.000	44.25	0.00	0.00
							Totals:		**9,601.56**			**15,750.19**		

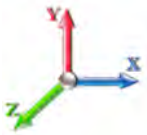
Total Applied Force Summary

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 20

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		624.51	2313.08	0.00	0.00
10.00		612.56	2271.98	0.00	0.00
15.00		600.62	2230.88	0.00	0.00
20.00		624.61	2189.78	0.00	0.00
25.00		641.37	2148.67	0.00	0.00
30.00		652.67	2107.57	0.00	0.00
35.00		659.94	2066.47	0.00	0.00
37.75		362.62	1119.04	0.00	0.00
40.00		301.58	1640.45	0.00	0.00
45.00		676.10	3589.57	0.00	0.00
50.00		675.90	1749.35	0.00	0.00
55.00		673.92	1713.38	0.00	0.00
60.00		670.41	1677.42	0.00	0.00
65.00		665.56	1641.45	0.00	0.00
70.00		659.53	1605.49	0.00	0.00
75.00		652.44	1569.52	0.00	0.00
76.50		193.27	463.84	0.00	0.00
80.00	(2) attachments	719.42	2041.23	0.00	0.00
82.75		355.22	1463.43	0.00	0.00
85.00		288.42	593.85	0.00	0.00
90.00		636.08	1297.32	0.00	0.00
95.00		625.77	1266.50	0.00	0.00
100.00		614.78	1235.67	0.00	0.00
105.00		603.16	1204.84	0.00	0.00
110.00		590.95	1174.02	0.00	0.00
111.25		145.25	288.69	0.00	0.00
115.00		438.02	1403.64	0.00	0.00
116.50		172.79	552.96	0.00	0.00
117.00	(27) attachments	5560.70	3684.65	0.00	0.00
120.00		341.65	485.17	0.00	0.00
125.00		559.42	790.11	0.00	0.00
130.00		545.27	766.99	0.00	0.00
135.00		530.68	743.87	0.00	0.00
137.00	(24) attachments	4496.43	2224.76	0.00	0.00
140.00		307.11	380.79	0.00	0.00
145.00		500.26	616.15	0.00	0.00
147.00	(27) attachments	5890.14	4163.87	0.00	0.00
150.00		288.36	341.17	0.00	0.00
	Totals:	**34,157.49**	**58,817.62**	**0.00**	**0.00**

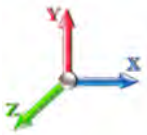
Calculated Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 20

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	-58.79	-34.20	0.00	-3523.1	0.00	3523.11	7146.92	3573.46	19526.6	9777.85	0.00	0.000	0.000	0.369
5.00	-56.43	-33.66	0.00	-3352.1	0.00	3352.11	7059.52	3529.76	18917.0	9472.57	0.05	-0.083	0.000	0.362
10.00	-54.11	-33.12	0.00	-3183.8	0.00	3183.83	6970.22	3485.11	18311.5	9169.39	0.18	-0.167	0.000	0.355
15.00	-51.83	-32.59	0.00	-3018.2	0.00	3018.24	6879.00	3439.50	17710.5	8868.44	0.40	-0.251	0.000	0.348
20.00	-49.60	-32.02	0.00	-2855.3	0.00	2855.31	6785.88	3392.94	17114.3	8569.88	0.71	-0.336	0.000	0.341
25.00	-47.41	-31.44	0.00	-2695.1	0.00	2695.19	6690.86	3345.43	16523.1	8273.87	1.10	-0.421	0.000	0.333
30.00	-45.26	-30.84	0.00	-2537.9	0.00	2537.99	6593.92	3296.96	15937.4	7980.55	1.59	-0.506	0.000	0.325
35.00	-43.17	-30.21	0.00	-2383.8	0.00	2383.81	6495.08	3247.54	15357.3	7690.07	2.17	-0.592	0.000	0.317
37.75	-42.03	-29.86	0.00	-2300.7	0.00	2300.74	6439.91	3219.95	15040.7	7531.57	2.52	-0.640	0.000	0.312
40.00	-40.36	-29.59	0.00	-2233.5	0.00	2233.55	6394.34	3197.17	14783.1	7402.58	2.83	-0.679	0.000	0.308
45.00	-36.74	-28.92	0.00	-2085.6	0.00	2085.60	5339.62	2669.81	12285.1	6151.71	3.59	-0.765	0.000	0.346
50.00	-34.95	-28.28	0.00	-1941.0	0.00	1941.00	5259.77	2629.88	11825.1	5921.35	4.44	-0.850	0.000	0.335
55.00	-33.20	-27.63	0.00	-1799.6	0.00	1799.62	5178.00	2589.00	11369.2	5693.09	5.38	-0.943	0.000	0.323
60.00	-31.50	-26.98	0.00	-1661.4	0.00	1661.47	5094.33	2547.17	10917.9	5467.09	6.42	-1.035	0.000	0.310
65.00	-29.83	-26.33	0.00	-1526.5	0.00	1526.57	5008.75	2504.38	10471.4	5243.49	7.55	-1.126	0.000	0.297
70.00	-28.19	-25.68	0.00	-1394.9	0.00	1394.92	4921.27	2460.63	10030.0	5022.46	8.78	-1.215	0.000	0.284
75.00	-26.61	-25.02	0.00	-1266.5	0.00	1266.51	4831.88	2415.94	9593.99	4804.12	10.10	-1.303	0.000	0.269
76.50	-26.14	-24.84	0.00	-1228.9	0.00	1228.98	4804.69	2402.34	9464.28	4739.17	10.51	-1.330	0.000	0.265
80.00	-24.09	-24.09	0.00	-1142.0	0.00	1142.05	4740.58	2370.29	9163.68	4588.65	11.51	-1.391	0.000	0.254
82.75	-22.62	-23.72	0.00	-1075.7	0.00	1075.79	3881.76	1940.88	7531.89	3771.54	12.33	-1.438	0.000	0.291
85.00	-22.01	-23.44	0.00	-1022.4	0.00	1022.43	3850.62	1925.31	7380.43	3695.70	13.02	-1.477	0.000	0.283
90.00	-20.69	-22.80	0.00	-905.23	0.00	905.23	3780.02	1890.01	7046.54	3528.51	14.61	-1.567	0.000	0.262
95.00	-19.41	-22.17	0.00	-791.22	0.00	791.22	3707.52	1853.76	6716.62	3363.30	16.30	-1.652	0.000	0.241
100.00	-18.16	-21.54	0.00	-680.38	0.00	680.38	3633.11	1816.56	6390.97	3200.23	18.08	-1.733	0.000	0.218
105.00	-16.95	-20.92	0.00	-572.67	0.00	572.67	3556.80	1778.40	6069.88	3039.45	19.93	-1.809	0.000	0.193
110.00	-15.78	-20.31	0.00	-468.05	0.00	468.05	3478.57	1739.29	5753.65	2881.10	21.87	-1.877	0.000	0.167
111.25	-15.49	-20.16	0.00	-442.67	0.00	442.67	3458.72	1729.36	5675.39	2841.91	22.36	-1.894	0.000	0.160
115.00	-14.09	-19.68	0.00	-367.07	0.00	367.07	3398.44	1699.22	5442.59	2725.34	23.87	-1.939	0.000	0.139
116.50	-13.54	-19.49	0.00	-337.54	0.00	337.54	2333.06	1166.53	3771.93	1888.77	24.48	-1.955	0.000	0.185
117.00	-10.04	-13.81	0.00	-327.80	0.00	327.80	2328.48	1164.24	3752.29	1878.93	24.68	-1.961	0.000	0.179
120.00	-9.56	-13.46	0.00	-286.35	0.00	286.35	2300.59	1150.29	3634.82	1820.11	25.93	-1.999	0.000	0.162
125.00	-8.78	-12.89	0.00	-219.03	0.00	219.03	2252.57	1126.29	3440.63	1722.87	28.05	-2.056	0.000	0.131
130.00	-8.02	-12.32	0.00	-154.61	0.00	154.61	2202.65	1101.33	3248.66	1626.75	30.23	-2.101	0.000	0.099
135.00	-7.29	-11.76	0.00	-93.02	0.00	93.02	2150.82	1075.41	3059.23	1531.89	32.45	-2.135	0.000	0.064
137.00	-5.24	-7.19	0.00	-69.49	0.00	69.49	2129.56	1064.78	2984.24	1494.34	33.35	-2.145	0.000	0.049
140.00	-4.87	-6.87	0.00	-47.93	0.00	47.93	2097.09	1048.54	2872.64	1438.45	34.70	-2.156	0.000	0.036
145.00	-4.27	-6.34	0.00	-13.59	0.00	13.59	2041.44	1020.72	2689.18	1346.59	36.97	-2.167	0.000	0.012
147.00	-0.33	-0.30	0.00	-0.90	0.00	0.90	2018.65	1009.33	2616.74	1310.31	37.88	-2.168	0.000	0.001
150.00	0.00	-0.29	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44	39.24	-2.168	0.000	0.000

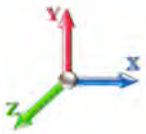
Wind Loading - Shaft

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 20

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	19.450	21.40	506.79	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	497.19	0.650	0.000	5.00	28.066	18.24	624.5	0.0	1599.8
10.00		1.00	0.85	19.450	21.40	487.59	0.650	0.000	5.00	27.530	17.89	612.6	0.0	1569.0
15.00		1.00	0.85	19.450	21.40	477.99	0.650	0.000	5.00	26.993	17.55	600.6	0.0	1538.2
20.00		1.00	0.90	20.638	22.70	482.48	0.650	0.000	5.00	26.456	17.20	624.6	0.0	1507.3
25.00		1.00	0.95	21.630	23.79	483.82	0.650	0.000	5.00	25.919	16.85	641.4	0.0	1476.5
30.00		1.00	0.98	22.477	24.72	482.87	0.650	0.000	5.00	25.383	16.50	652.7	0.0	1445.7
35.00		1.00	1.01	23.218	25.54	480.28	0.650	0.000	5.00	24.846	16.15	659.9	0.0	1414.9
37.75	Bot - Section 2	1.00	1.03	23.591	25.95	478.31	0.650	0.000	2.75	13.436	8.73	362.6	0.0	765.0
40.00		1.00	1.04	23.880	26.27	476.45	0.650	0.000	2.25	11.039	7.18	301.6	0.0	1169.6
45.00	Top - Section 1	1.00	1.07	24.479	26.93	471.62	0.650	0.000	5.00	24.143	15.69	676.1	0.0	2557.2
50.00		1.00	1.09	25.029	27.53	473.50	0.650	0.000	5.00	23.606	15.34	675.9	0.0	1177.0
55.00		1.00	1.12	25.536	28.09	467.28	0.650	0.000	5.00	23.069	14.99	673.9	0.0	1150.0
60.00		1.00	1.14	26.008	28.61	460.47	0.650	0.000	5.00	22.532	14.65	670.4	0.0	1123.1
65.00		1.00	1.16	26.450	29.09	453.18	0.650	0.000	5.00	21.996	14.30	665.6	0.0	1096.1
70.00		1.00	1.17	26.866	29.55	445.44	0.650	0.000	5.00	21.459	13.95	659.5	0.0	1069.1
75.00		1.00	1.19	27.259	29.98	437.32	0.650	0.000	5.00	20.922	13.60	652.4	0.0	1042.1
76.50	Bot - Section 3	1.00	1.20	27.373	30.11	434.82	0.650	0.000	1.50	6.172	4.01	193.3	0.0	307.4
80.00	Appurtenance(s)	1.00	1.21	27.632	30.39	428.86	0.650	0.000	3.50	14.436	9.38	456.3	0.0	1324.8
82.75	Top - Section 2	1.00	1.22	27.829	30.61	424.08	0.650	0.000	2.75	11.158	7.25	355.2	0.0	1023.7
85.00		1.00	1.22	27.987	30.79	426.90	0.650	0.000	2.25	9.008	5.86	288.4	0.0	385.0
90.00		1.00	1.24	28.325	31.16	417.89	0.650	0.000	5.00	19.629	12.76	636.1	0.0	838.7
95.00		1.00	1.25	28.650	31.51	408.63	0.650	0.000	5.00	19.093	12.41	625.8	0.0	815.6
100.00		1.00	1.27	28.961	31.86	399.12	0.650	0.000	5.00	18.556	12.06	614.8	0.0	792.5
105.00		1.00	1.28	29.260	32.19	389.41	0.650	0.000	5.00	18.019	11.71	603.2	0.0	769.4
110.00		1.00	1.29	29.548	32.50	379.48	0.650	0.000	5.00	17.482	11.36	591.0	0.0	746.2
111.25	Bot - Section 4	1.00	1.29	29.618	32.58	376.97	0.650	0.000	1.25	4.287	2.79	145.2	0.0	182.9
115.00		1.00	1.30	29.826	32.81	369.38	0.650	0.000	3.75	12.837	8.34	438.0	0.0	952.0
116.50	Top - Section 3	1.00	1.31	29.907	32.90	366.31	0.650	0.000	1.50	5.050	3.28	172.8	0.0	374.4
117.00	Appurtenance(s)	1.00	1.31	29.934	32.93	370.56	0.650	0.000	0.50	1.673	1.09	57.3	0.0	53.7
120.00		1.00	1.32	30.094	33.10	364.39	0.650	0.000	3.00	9.924	6.45	341.7	0.0	318.3
125.00		1.00	1.33	30.354	33.39	353.97	0.650	0.000	5.00	16.110	10.47	559.4	0.0	516.6
130.00		1.00	1.34	30.605	33.67	343.39	0.650	0.000	5.00	15.574	10.12	545.3	0.0	499.3
135.00		1.00	1.35	30.850	33.93	332.66	0.650	0.000	5.00	15.037	9.77	530.7	0.0	481.9
137.00	Appurtenance(s)	1.00	1.35	30.945	34.04	328.34	0.650	0.000	2.00	5.864	3.81	207.6	0.0	187.9
140.00		1.00	1.36	31.087	34.20	321.80	0.650	0.000	3.00	8.636	5.61	307.1	0.0	276.7
145.00		1.00	1.37	31.317	34.45	310.81	0.650	0.000	5.00	13.963	9.08	500.3	0.0	447.3
147.00	Appurtenance(s)	1.00	1.37	31.408	34.55	306.38	0.650	0.000	2.00	5.435	3.53	195.3	0.0	174.1
150.00		1.00	1.38	31.541	34.70	299.70	0.650	0.000	3.00	7.992	5.19	288.4	0.0	255.9
								Totals:	**150.00**			**18,407.3**		**33,424.8**

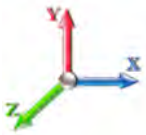
Discrete Appurtenance Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 20

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	147.00	ACU-A20-N	4	31.408	34.548	0.50	0.75	0.28	3.60	0.000	0.000	15.56	0.00	0.00
2	147.00	AIR32 KRD901146	3	31.408	34.548	0.65	0.75	12.74	356.94	0.000	0.000	704.42	0.00	0.00
3	147.00	APXVAALL24_43-U-NA20	3	31.408	34.548	0.55	0.75	33.24	267.30	0.000	0.000	1837.65	0.00	0.00
4	147.00	AIR6449 B41	3	31.408	34.548	0.53	0.75	9.03	278.10	0.000	0.000	498.93	0.00	0.00
5	147.00	Low Profile Platform	1	31.408	34.548	1.00	1.00	25.00	1080.00	0.000	0.000	1381.93	0.00	0.00
6	147.00	MS-HRECP-35	1	31.408	34.548	1.00	1.00	12.25	462.60	0.000	0.000	677.15	0.00	0.00
7	147.00	4415 B25	3	31.408	34.548	0.54	0.75	3.01	125.01	0.000	0.000	166.56	0.00	0.00
8	147.00	800 MHz RRH	3	31.408	34.548	0.50	0.75	3.62	143.10	0.000	0.000	199.99	0.00	0.00
9	147.00	4449 B71 + B85	3	31.408	34.548	0.50	0.75	2.97	202.50	0.000	0.000	164.16	0.00	0.00
10	147.00	800 MHz Filter	3	31.408	34.548	0.38	0.75	0.88	23.76	0.000	0.000	48.51	0.00	0.00
11	137.00	Low Profile Platform	1	30.945	34.040	1.00	1.00	25.00	1080.00	0.000	0.000	1361.59	0.00	0.00
12	137.00	GPS	1	30.945	34.040	1.00	1.00	0.91	3.60	0.000	0.000	49.56	0.00	0.00
13	137.00	DB-T1-6Z-8AB-0Z	1	30.945	34.040	1.00	1.00	4.80	17.01	0.000	0.000	261.43	0.00	0.00
14	137.00	FD9R6004/2C-3L	6	30.945	34.040	0.40	0.80	0.86	16.74	0.000	0.000	47.06	0.00	0.00
15	137.00	RRH2x40-AWS	3	30.945	34.040	0.54	0.80	3.47	118.80	0.000	0.000	189.17	0.00	0.00
16	137.00	LNX-6514DS	3	30.945	34.040	0.64	0.80	15.53	89.37	0.000	0.000	845.97	0.00	0.00
17	137.00	BXA-171063-8BF	3	30.945	34.040	0.67	0.80	5.93	28.35	0.000	0.000	322.81	0.00	0.00
18	137.00	BXA-70063/6CF	3	30.945	34.040	0.56	0.80	12.72	45.90	0.000	0.000	692.65	0.00	0.00
19	137.00	HBX-6517DS	3	30.945	34.040	0.60	0.80	9.52	50.49	0.000	0.000	518.60	0.00	0.00
20	117.00	4449 B5/B12	3	29.934	32.927	0.54	0.80	3.17	191.70	0.000	0.000	166.89	0.00	0.00
21	117.00	7770.00	3	29.934	32.927	0.58	0.80	9.64	94.50	0.000	0.000	507.66	0.00	0.00
22	117.00	OPA65R-BU6DA	3	29.934	32.927	0.71	0.80	23.92	186.30	0.000	0.000	1260.37	0.00	0.00
23	117.00	DMP65R-BU6DA	3	29.934	32.927	0.58	0.80	21.96	214.38	0.000	0.000	1157.09	0.00	0.00
24	117.00	LGP21401	6	29.934	32.927	0.40	0.80	3.10	76.14	0.000	0.000	163.11	0.00	0.00
25	117.00	8843 B25/B66A	3	29.934	32.927	0.54	0.80	2.64	194.40	0.000	0.000	138.93	0.00	0.00
26	117.00	RRUS 4478 B14	3	29.934	32.927	0.54	0.80	2.65	160.38	0.000	0.000	139.78	0.00	0.00
27	117.00	DC6-48-60-18-8F	1	29.934	32.927	1.00	1.00	0.92	28.62	0.000	0.000	48.47	0.00	0.00
28	117.00	DC9-48-60-24-PC16-EV	1	29.934	32.927	1.00	1.00	1.14	23.58	0.000	0.000	60.06	0.00	0.00
29	117.00	(3) Sector Mount	1	29.934	32.927	0.75	0.75	35.33	1526.40	0.000	0.000	1861.06	0.00	0.00
30	80.00	Side Arm	1	27.632	30.395	1.00	1.00	4.50	108.00	0.000	0.000	218.84	0.00	0.00
31	80.00	GPS	1	27.632	30.395	1.00	1.00	0.91	3.60	0.000	0.000	44.25	0.00	0.00
							Totals:		**7,201.17**			**15,750.19**		

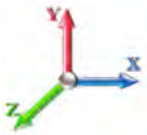
Total Applied Force Summary

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 20

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		624.51	1734.81	0.00	0.00
10.00		612.56	1703.99	0.00	0.00
15.00		600.62	1673.16	0.00	0.00
20.00		624.61	1642.33	0.00	0.00
25.00		641.37	1611.51	0.00	0.00
30.00		652.67	1580.68	0.00	0.00
35.00		659.94	1549.85	0.00	0.00
37.75		362.62	839.28	0.00	0.00
40.00		301.58	1230.34	0.00	0.00
45.00		676.10	2692.18	0.00	0.00
50.00		675.90	1312.01	0.00	0.00
55.00		673.92	1285.04	0.00	0.00
60.00		670.41	1258.06	0.00	0.00
65.00		665.56	1231.09	0.00	0.00
70.00		659.53	1204.12	0.00	0.00
75.00		652.44	1177.14	0.00	0.00
76.50		193.27	347.88	0.00	0.00
80.00	(2) attachments	719.42	1530.93	0.00	0.00
82.75		355.22	1097.57	0.00	0.00
85.00		288.42	445.39	0.00	0.00
90.00		636.08	972.99	0.00	0.00
95.00		625.77	949.87	0.00	0.00
100.00		614.78	926.75	0.00	0.00
105.00		603.16	903.63	0.00	0.00
110.00		590.95	880.51	0.00	0.00
111.25		145.25	216.52	0.00	0.00
115.00		438.02	1052.73	0.00	0.00
116.50		172.79	414.72	0.00	0.00
117.00	(27) attachments	5560.70	2763.48	0.00	0.00
120.00		341.65	363.87	0.00	0.00
125.00		559.42	592.58	0.00	0.00
130.00		545.27	575.24	0.00	0.00
135.00		530.68	557.90	0.00	0.00
137.00	(24) attachments	4496.43	1668.57	0.00	0.00
140.00		307.11	285.59	0.00	0.00
145.00		500.26	462.11	0.00	0.00
147.00	(27) attachments	5890.14	3122.90	0.00	0.00
150.00		288.36	255.87	0.00	0.00
	Totals:	**34,157.49**	**44,113.21**	**0.00**	**0.00**

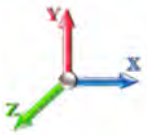
Calculated Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 20

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	-44.09	-34.19	0.00	-3506.6	0.00	3506.66	7146.92	3573.46	19526.6	9777.85	0.00	0.000	0.000	0.365
5.00	-42.30	-33.63	0.00	-3335.7	0.00	3335.72	7059.52	3529.76	18917.0	9472.57	0.04	-0.083	0.000	0.358
10.00	-40.55	-33.07	0.00	-3167.5	0.00	3167.59	6970.22	3485.11	18311.5	9169.39	0.18	-0.166	0.000	0.351
15.00	-38.84	-32.52	0.00	-3002.2	0.00	3002.25	6879.00	3439.50	17710.5	8868.44	0.40	-0.250	0.000	0.344
20.00	-37.15	-31.94	0.00	-2839.6	0.00	2839.66	6785.88	3392.94	17114.3	8569.88	0.70	-0.334	0.000	0.337
25.00	-35.50	-31.34	0.00	-2679.9	0.00	2679.96	6690.86	3345.43	16523.1	8273.87	1.10	-0.418	0.000	0.329
30.00	-33.87	-30.73	0.00	-2523.2	0.00	2523.25	6593.92	3296.96	15937.4	7980.55	1.58	-0.503	0.000	0.321
35.00	-32.30	-30.09	0.00	-2369.6	0.00	2369.63	6495.08	3247.54	15357.3	7690.07	2.16	-0.588	0.000	0.313
37.75	-31.44	-29.74	0.00	-2286.8	0.00	2286.88	6439.91	3219.95	15040.7	7531.57	2.51	-0.636	0.000	0.309
40.00	-30.18	-29.46	0.00	-2219.9	0.00	2219.97	6394.34	3197.17	14783.1	7402.58	2.82	-0.675	0.000	0.305
45.00	-27.45	-28.79	0.00	-2072.6	0.00	2072.68	5339.62	2669.81	12285.1	6151.71	3.57	-0.760	0.000	0.342
50.00	-26.11	-28.14	0.00	-1928.7	0.00	1928.74	5259.77	2629.88	11825.1	5921.35	4.42	-0.845	0.000	0.331
55.00	-24.79	-27.48	0.00	-1788.0	0.00	1788.06	5178.00	2589.00	11369.2	5693.09	5.35	-0.937	0.000	0.319
60.00	-23.50	-26.83	0.00	-1650.6	0.00	1650.66	5094.33	2547.17	10917.9	5467.09	6.38	-1.029	0.000	0.307
65.00	-22.24	-26.17	0.00	-1516.5	0.00	1516.53	5008.75	2504.38	10471.4	5243.49	7.51	-1.119	0.000	0.294
70.00	-21.01	-25.52	0.00	-1385.6	0.00	1385.67	4921.27	2460.63	10030.0	5022.46	8.73	-1.208	0.000	0.280
75.00	-19.82	-24.86	0.00	-1258.0	0.00	1258.06	4831.88	2415.94	9593.99	4804.12	10.04	-1.296	0.000	0.266
76.50	-19.46	-24.68	0.00	-1220.7	0.00	1220.77	4804.69	2402.34	9464.28	4739.17	10.46	-1.322	0.000	0.262
80.00	-17.93	-23.94	0.00	-1134.4	0.00	1134.40	4740.58	2370.29	9163.68	4588.65	11.45	-1.383	0.000	0.251
82.75	-16.82	-23.57	0.00	-1068.5	0.00	1068.57	3881.76	1940.88	7531.89	3771.54	12.26	-1.430	0.000	0.288
85.00	-16.36	-23.29	0.00	-1015.5	0.00	1015.54	3850.62	1925.31	7380.43	3695.70	12.94	-1.468	0.000	0.279
90.00	-15.37	-22.65	0.00	-899.11	0.00	899.11	3780.02	1890.01	7046.54	3528.51	14.53	-1.557	0.000	0.259
95.00	-14.40	-22.02	0.00	-785.87	0.00	785.87	3707.52	1853.76	6716.62	3363.30	16.21	-1.642	0.000	0.238
100.00	-13.46	-21.39	0.00	-675.78	0.00	675.78	3633.11	1816.56	6390.97	3200.23	17.97	-1.723	0.000	0.215
105.00	-12.55	-20.78	0.00	-568.81	0.00	568.81	3556.80	1778.40	6069.88	3039.45	19.82	-1.798	0.000	0.191
110.00	-11.68	-20.17	0.00	-464.91	0.00	464.91	3478.57	1739.29	5753.65	2881.10	21.74	-1.866	0.000	0.165
111.25	-11.46	-20.02	0.00	-439.70	0.00	439.70	3458.72	1729.36	5675.39	2841.91	22.23	-1.882	0.000	0.158
115.00	-10.41	-19.56	0.00	-364.62	0.00	364.62	3398.44	1699.22	5442.59	2725.34	23.73	-1.927	0.000	0.137
116.50	-10.00	-19.37	0.00	-335.28	0.00	335.28	2333.06	1166.53	3771.93	1888.77	24.33	-1.943	0.000	0.182
117.00	-7.42	-13.72	0.00	-325.60	0.00	325.60	2328.48	1164.24	3752.29	1878.93	24.54	-1.949	0.000	0.177
120.00	-7.05	-13.37	0.00	-284.43	0.00	284.43	2300.59	1150.29	3634.82	1820.11	25.78	-1.987	0.000	0.159
125.00	-6.47	-12.80	0.00	-217.56	0.00	217.56	2252.57	1126.29	3440.63	1722.87	27.89	-2.043	0.000	0.129
130.00	-5.91	-12.24	0.00	-153.56	0.00	153.56	2202.65	1101.33	3248.66	1626.75	30.05	-2.088	0.000	0.097
135.00	-5.36	-11.69	0.00	-92.37	0.00	92.37	2150.82	1075.41	3059.23	1531.89	32.26	-2.122	0.000	0.063
137.00	-3.86	-7.13	0.00	-68.99	0.00	68.99	2129.56	1064.78	2984.24	1494.34	33.15	-2.132	0.000	0.048
140.00	-3.59	-6.82	0.00	-47.59	0.00	47.59	2097.09	1048.54	2872.64	1438.45	34.50	-2.143	0.000	0.035
145.00	-3.14	-6.30	0.00	-13.50	0.00	13.50	2041.44	1020.72	2689.18	1346.59	36.75	-2.153	0.000	0.012
147.00	-0.24	-0.30	0.00	-0.89	0.00	0.89	2018.65	1009.33	2616.74	1310.31	37.65	-2.154	0.000	0.001
150.00	0.00	-0.29	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44	39.00	-2.154	0.000	0.000

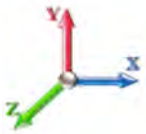
Wind Loading - Shaft

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

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
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	29.101	34.92	198.5	520.9	2654.0
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	28.639	34.37	195.4	548.4	2640.4
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	28.148	33.78	192.0	560.6	2611.5
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	27.645	33.17	200.1	566.0	2575.7
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	27.135	32.56	205.9	567.4	2536.1
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	26.621	31.94	209.9	566.3	2493.9
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	26.103	31.32	212.6	563.3	2449.8
37.75	Bot - Section 2	1.00	1.03	6.268	6.89	0.00	1.200	1.520	2.75	14.133	16.96	116.9	308.6	1328.6
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.25	11.613	13.94	97.3	255.3	1814.7
45.00	Top - Section 1	1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	25.432	30.52	218.3	561.9	3971.5
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	5.00	24.909	29.89	218.7	555.6	2124.9
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	24.385	29.26	218.4	548.5	2081.9
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	23.859	28.63	217.6	540.8	2038.2
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	23.333	28.00	216.5	532.5	1993.9
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	22.807	27.37	214.9	523.7	1949.2
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	22.279	26.74	213.0	514.5	1904.0
76.50	Bot - Section 3	1.00	1.20	7.273	8.00	0.00	1.200	1.632	1.50	6.580	7.90	63.2	153.5	563.3
80.00	Appurtenance(s)	1.00	1.21	7.342	8.08	0.00	1.200	1.639	3.50	15.392	18.47	149.2	358.8	2125.3
82.75	Top - Section 2	1.00	1.22	7.394	8.13	0.00	1.200	1.644	2.75	11.911	14.29	116.3	279.0	1643.9
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	2.25	9.627	11.55	94.5	226.2	739.5
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	21.011	25.21	208.7	492.5	1610.8
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	5.00	20.482	24.58	205.8	482.0	1569.5
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	5.00	19.952	23.94	202.7	471.3	1527.9
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	19.423	23.31	199.3	460.3	1486.1
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	5.00	18.892	22.67	195.8	449.0	1444.0
111.25	Bot - Section 4	1.00	1.29	7.870	8.66	0.00	1.200	1.694	1.25	4.640	5.57	48.2	111.6	355.5
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	3.75	13.900	16.68	145.4	332.7	1602.1
116.50	Top - Section 3	1.00	1.31	7.946	8.74	0.00	1.200	1.702	1.50	5.476	6.57	57.4	132.0	631.3
117.00	Appurtenance(s)	1.00	1.31	7.954	8.75	0.00	1.200	1.702	0.50	1.815	2.18	19.1	43.9	115.4
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	3.00	10.777	12.93	113.8	259.2	683.6
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	17.538	21.05	186.7	420.2	1109.1
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	5.00	17.007	20.41	182.6	408.3	1074.0
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	16.476	19.77	178.3	396.2	1038.7
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	1.729	2.00	6.441	7.73	69.9	156.5	407.1
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	3.00	9.502	11.40	103.6	230.3	599.2
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	15.413	18.50	169.3	371.5	967.8
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	1.742	2.00	6.016	7.22	66.3	146.6	378.7
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	3.00	8.864	10.64	98.1	215.4	556.5
								Totals:	**150.00**			**6,019.8**		**59,397.6**

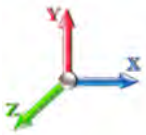
Discrete Appurtenance Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

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	147.00	ACU-A20-N	4	8.345	9.180	0.50	0.75	0.88	16.75	0.000	0.000	8.05	0.00	0.00
2	147.00	AIR32 KRD901146	3	8.345	9.180	0.65	0.75	14.93	1024.32	0.000	0.000	137.09	0.00	0.00
3	147.00	APXVAALL24_43-U-NA20	3	8.345	9.180	0.55	0.75	36.36	1636.60	0.000	0.000	333.76	0.00	0.00
4	147.00	AIR6449 B41	3	8.345	9.180	0.53	0.75	10.54	686.23	0.000	0.000	96.77	0.00	0.00
5	147.00	Low Profile Platform	1	8.345	9.180	1.00	1.00	45.90	2185.02	0.000	0.000	421.35	0.00	0.00
6	147.00	MS-HRECP-35	1	8.345	9.180	1.00	1.00	24.20	1739.56	0.000	0.000	222.13	0.00	0.00
7	147.00	4415 B25	3	8.345	9.180	0.54	0.75	3.93	348.52	0.000	0.000	36.04	0.00	0.00
8	147.00	800 MHz RRH	3	8.345	9.180	0.50	0.75	5.30	282.91	0.000	0.000	48.67	0.00	0.00
9	147.00	4449 B71 + B85	3	8.345	9.180	0.50	0.75	3.83	277.33	0.000	0.000	35.12	0.00	0.00
10	147.00	800 MHz Filter	3	8.345	9.180	0.38	0.75	1.60	69.50	0.000	0.000	14.72	0.00	0.00
11	137.00	Low Profile Platform	1	8.222	9.044	1.00	1.00	45.75	2177.68	0.000	0.000	413.82	0.00	0.00
12	137.00	GPS	1	8.222	9.044	1.00	1.00	1.91	22.59	0.000	0.000	17.24	0.00	0.00
13	137.00	DB-T1-6Z-8AB-0Z	1	8.222	9.044	1.00	1.00	5.80	115.57	0.000	0.000	52.42	0.00	0.00
14	137.00	FD9R6004/2C-3L	6	8.222	9.044	0.40	0.80	1.92	56.24	0.000	0.000	17.35	0.00	0.00
15	137.00	RRH2x40-AWS	3	8.222	9.044	0.54	0.80	5.14	286.73	0.000	0.000	46.52	0.00	0.00
16	137.00	LNX-6514DS	3	8.222	9.044	0.64	0.80	20.85	488.56	0.000	0.000	188.59	0.00	0.00
17	137.00	BXA-171063-8BF	3	8.222	9.044	0.67	0.80	9.24	176.26	0.000	0.000	83.57	0.00	0.00
18	137.00	BXA-70063/6CF	3	8.222	9.044	0.56	0.80	17.32	360.69	0.000	0.000	156.64	0.00	0.00
19	137.00	HBX-6517DS	3	8.222	9.044	0.60	0.80	13.89	270.34	0.000	0.000	125.62	0.00	0.00
20	117.00	4449 B5/B12	3	7.954	8.749	0.54	0.80	4.03	371.01	0.000	0.000	35.23	0.00	0.00
21	117.00	7770.00	3	7.954	8.749	0.58	0.80	11.45	519.36	0.000	0.000	100.21	0.00	0.00
22	117.00	OPA65R-BU6DA	3	7.954	8.749	0.71	0.80	27.39	1008.65	0.000	0.000	239.66	0.00	0.00
23	117.00	DMP65R-BU6DA	3	7.954	8.749	0.58	0.80	24.43	945.89	0.000	0.000	213.74	0.00	0.00
24	117.00	LGP21401	6	7.954	8.749	0.40	0.80	5.05	205.25	0.000	0.000	44.20	0.00	0.00
25	117.00	8843 B25/B66A	3	7.954	8.749	0.54	0.80	3.42	360.28	0.000	0.000	29.89	0.00	0.00
26	117.00	RRUS 4478 B14	3	7.954	8.749	0.54	0.80	3.47	306.99	0.000	0.000	30.33	0.00	0.00
27	117.00	DC6-48-60-18-8F	1	7.954	8.749	1.00	1.00	1.35	80.77	0.000	0.000	11.79	0.00	0.00
28	117.00	DC9-48-60-24-PC16-EV	1	7.954	8.749	1.00	1.00	2.69	117.73	0.000	0.000	23.52	0.00	0.00
29	117.00	(3) Sector Mount	1	7.954	8.749	0.75	0.75	78.62	3260.06	0.000	0.000	687.87	0.00	0.00
30	80.00	Side Arm	1	7.342	8.076	1.00	1.00	9.43	212.33	0.000	0.000	76.13	0.00	0.00
31	80.00	GPS	1	7.342	8.076	1.00	1.00	1.85	21.28	0.000	0.000	14.97	0.00	0.00
							Totals:		**19,630.99**			**3,962.98**		

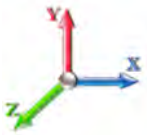
Total Applied Force Summary

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		198.52	2833.99	0.00	0.00
10.00		195.37	2820.42	0.00	0.00
15.00		192.02	2791.46	0.00	0.00
20.00		200.10	2755.74	0.00	0.00
25.00		205.86	2716.10	0.00	0.00
30.00		209.86	2673.87	0.00	0.00
35.00		212.56	2629.79	0.00	0.00
37.75		116.94	1427.62	0.00	0.00
40.00		97.26	1895.74	0.00	0.00
45.00		218.35	4151.48	0.00	0.00
50.00		218.66	2304.93	0.00	0.00
55.00		218.39	2261.88	0.00	0.00
60.00		217.64	2218.18	0.00	0.00
65.00		216.46	2173.93	0.00	0.00
70.00		214.90	2129.19	0.00	0.00
75.00		213.00	2084.02	0.00	0.00
76.50		63.17	617.34	0.00	0.00
80.00	(2) attachments	240.26	2484.88	0.00	0.00
82.75		116.26	1742.39	0.00	0.00
85.00		94.49	820.08	0.00	0.00
90.00		208.74	1789.84	0.00	0.00
95.00		205.81	1748.52	0.00	0.00
100.00		202.66	1706.94	0.00	0.00
105.00		199.32	1665.11	0.00	0.00
110.00		195.79	1623.06	0.00	0.00
111.25		48.20	400.24	0.00	0.00
115.00		145.40	1736.35	0.00	0.00
116.50		57.44	685.00	0.00	0.00
117.00	(27) attachments	1435.48	7309.33	0.00	0.00
120.00		113.75	744.37	0.00	0.00
125.00		186.71	1210.34	0.00	0.00
130.00		182.56	1175.26	0.00	0.00
135.00		178.27	1140.03	0.00	0.00
137.00	(24) attachments	1171.68	4402.24	0.00	0.00
140.00		103.60	611.12	0.00	0.00
145.00		169.29	987.63	0.00	0.00
147.00	(27) attachments	1419.95	8653.31	0.00	0.00
150.00		98.06	556.52	0.00	0.00
	Totals:	**9,982.74**	**83,678.24**	**0.00**	**0.00**

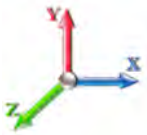
Calculated Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 19

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	-83.68	-10.00	0.00	-1005.2	0.00	1005.20	7146.92	3573.46	19526.6	9777.85	0.00	0.000	0.000	0.115
5.00	-80.84	-9.83	0.00	-955.20	0.00	955.20	7059.52	3529.76	18917.0	9472.57	0.01	-0.024	0.000	0.112
10.00	-78.01	-9.67	0.00	-906.03	0.00	906.03	6970.22	3485.11	18311.5	9169.39	0.05	-0.047	0.000	0.110
15.00	-75.22	-9.51	0.00	-857.68	0.00	857.68	6879.00	3439.50	17710.5	8868.44	0.11	-0.071	0.000	0.108
20.00	-72.46	-9.33	0.00	-810.15	0.00	810.15	6785.88	3392.94	17114.3	8569.88	0.20	-0.095	0.000	0.105
25.00	-69.74	-9.15	0.00	-763.48	0.00	763.48	6690.86	3345.43	16523.1	8273.87	0.31	-0.120	0.000	0.103
30.00	-67.06	-8.96	0.00	-717.73	0.00	717.73	6593.92	3296.96	15937.4	7980.55	0.45	-0.144	0.000	0.100
35.00	-64.43	-8.76	0.00	-672.91	0.00	672.91	6495.08	3247.54	15357.3	7690.07	0.62	-0.168	0.000	0.097
37.75	-63.00	-8.66	0.00	-648.81	0.00	648.81	6439.91	3219.95	15040.7	7531.57	0.72	-0.181	0.000	0.096
40.00	-61.10	-8.57	0.00	-629.33	0.00	629.33	6394.34	3197.17	14783.1	7402.58	0.81	-0.193	0.000	0.095
45.00	-56.95	-8.36	0.00	-586.47	0.00	586.47	5339.62	2669.81	12285.1	6151.71	1.02	-0.217	0.000	0.106
50.00	-54.64	-8.16	0.00	-544.65	0.00	544.65	5259.77	2629.88	11825.1	5921.35	1.26	-0.241	0.000	0.102
55.00	-52.38	-7.95	0.00	-503.86	0.00	503.86	5178.00	2589.00	11369.2	5693.09	1.53	-0.267	0.000	0.099
60.00	-50.16	-7.75	0.00	-464.09	0.00	464.09	5094.33	2547.17	10917.9	5467.09	1.82	-0.292	0.000	0.095
65.00	-47.98	-7.54	0.00	-425.34	0.00	425.34	5008.75	2504.38	10471.4	5243.49	2.14	-0.318	0.000	0.091
70.00	-45.85	-7.33	0.00	-387.64	0.00	387.64	4921.27	2460.63	10030.0	5022.46	2.49	-0.343	0.000	0.087
75.00	-43.76	-7.12	0.00	-350.97	0.00	350.97	4831.88	2415.94	9593.99	4804.12	2.86	-0.367	0.000	0.082
76.50	-43.15	-7.06	0.00	-340.29	0.00	340.29	4804.69	2402.34	9464.28	4739.17	2.98	-0.375	0.000	0.081
80.00	-40.66	-6.82	0.00	-315.57	0.00	315.57	4740.58	2370.29	9163.68	4588.65	3.26	-0.391	0.000	0.077
82.75	-38.92	-6.70	0.00	-296.83	0.00	296.83	3881.76	1940.88	7531.89	3771.54	3.49	-0.405	0.000	0.089
85.00	-38.10	-6.61	0.00	-281.76	0.00	281.76	3850.62	1925.31	7380.43	3695.70	3.68	-0.415	0.000	0.086
90.00	-36.31	-6.40	0.00	-248.73	0.00	248.73	3780.02	1890.01	7046.54	3528.51	4.13	-0.440	0.000	0.080
95.00	-34.56	-6.19	0.00	-216.73	0.00	216.73	3707.52	1853.76	6716.62	3363.30	4.60	-0.463	0.000	0.074
100.00	-32.85	-5.99	0.00	-185.75	0.00	185.75	3633.11	1816.56	6390.97	3200.23	5.10	-0.486	0.000	0.067
105.00	-31.18	-5.79	0.00	-155.81	0.00	155.81	3556.80	1778.40	6069.88	3039.45	5.62	-0.506	0.000	0.060
110.00	-29.56	-5.58	0.00	-126.87	0.00	126.87	3478.57	1739.29	5753.65	2881.10	6.16	-0.525	0.000	0.053
111.25	-29.16	-5.53	0.00	-119.89	0.00	119.89	3458.72	1729.36	5675.39	2841.91	6.30	-0.529	0.000	0.051
115.00	-27.43	-5.38	0.00	-99.14	0.00	99.14	3398.44	1699.22	5442.59	2725.34	6.72	-0.541	0.000	0.044
116.50	-26.74	-5.31	0.00	-91.07	0.00	91.07	2333.06	1166.53	3771.93	1888.77	6.89	-0.546	0.000	0.060
117.00	-19.44	-3.81	0.00	-88.42	0.00	88.42	2328.48	1164.24	3752.29	1878.93	6.95	-0.547	0.000	0.055
120.00	-18.70	-3.69	0.00	-76.98	0.00	76.98	2300.59	1150.29	3634.82	1820.11	7.29	-0.558	0.000	0.050
125.00	-17.49	-3.50	0.00	-58.51	0.00	58.51	2252.57	1126.29	3440.63	1722.87	7.89	-0.573	0.000	0.042
130.00	-16.32	-3.31	0.00	-41.01	0.00	41.01	2202.65	1101.33	3248.66	1626.75	8.49	-0.585	0.000	0.033
135.00	-15.18	-3.12	0.00	-24.46	0.00	24.46	2150.82	1075.41	3059.23	1531.89	9.11	-0.594	0.000	0.023
137.00	-10.79	-1.90	0.00	-18.22	0.00	18.22	2129.56	1064.78	2984.24	1494.34	9.36	-0.596	0.000	0.017
140.00	-10.18	-1.79	0.00	-12.51	0.00	12.51	2097.09	1048.54	2872.64	1438.45	9.74	-0.599	0.000	0.014
145.00	-9.19	-1.61	0.00	-3.54	0.00	3.54	2041.44	1020.72	2689.18	1346.59	10.37	-0.602	0.000	0.007
147.00	-0.56	-0.10	0.00	-0.31	0.00	0.31	2018.65	1009.33	2616.74	1310.31	10.62	-0.602	0.000	0.001
150.00	0.00	-0.10	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44	11.00	-0.602	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Load Case:	1.2D + 1.0E							**Iterations**	18
Gust Response Factor	1.10				**Sds**	0.20		**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.52		**SA**	0.05	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1777.5	0.00	0.03	0.02	26.28	
10.00		1743.3	0.01	0.05	0.03	39.00	
15.00		1709.0	0.02	0.06	0.04	45.11	
20.00		1674.8	0.03	0.07	0.04	47.89	
25.00		1640.5	0.05	0.07	0.04	49.11	
30.00		1606.3	0.08	0.07	0.04	49.69	
35.00		1572.0	0.10	0.07	0.04	50.06	
37.75	Bot - Section 2	850.03	0.12	0.07	0.03	27.47	
40.00		1299.5	0.13	0.07	0.03	42.48	
45.00	Top - Section 1	2841.3	0.17	0.07	0.03	94.67	
50.00		1307.7	0.21	0.06	0.02	43.75	
55.00		1277.8	0.25	0.05	0.02	41.77	
60.00		1247.8	0.30	0.04	0.01	38.12	
65.00		1217.8	0.35	0.03	0.01	32.39	
70.00		1187.9	0.41	0.01	0.01	24.42	
75.00		1157.9	0.47	-0.01	0.01	14.49	
76.50	Bot - Section 3	341.54	0.49	-0.01	0.01	3.34	
80.00	Appurtenance(s)	1596.0	0.54	-0.03	0.01	4.89	
82.75	Top - Section 2	1137.4	0.58	-0.04	0.01	-2.64	
85.00		427.74	0.61	-0.06	0.02	-2.83	
90.00		931.90	0.68	-0.08	0.03	-13.96	
95.00		906.21	0.76	-0.10	0.04	-18.63	
100.00		880.53	0.84	-0.12	0.07	-19.49	
105.00		854.84	0.93	-0.12	0.10	-16.22	
110.00		829.15	1.02	-0.11	0.14	-8.84	
111.25	Bot - Section 4	203.27	1.04	-0.10	0.15	-1.58	
115.00		1057.8	1.11	-0.06	0.19	3.17	
116.50	Top - Section 3	416.04	1.14	-0.04	0.21	3.39	
117.00	Appurtenance(s)	3055.6	1.15	-0.04	0.22	30.46	
120.00		353.66	1.21	0.01	0.26	7.80	
125.00		574.03	1.31	0.14	0.35	26.76	
130.00		554.76	1.42	0.32	0.45	42.54	
135.00		535.49	1.53	0.58	0.58	60.15	
137.00	Appurtenance(s)	1820.2	1.58	0.71	0.64	233.31	
140.00		307.42	1.65	0.93	0.73	47.24	
145.00		496.96	1.77	1.39	0.92	99.76	
147.00	Appurtenance(s)	3463.2	1.82	1.61	1.00	766.15	
150.00		284.30	1.89	1.98	1.14	72.13	
	Totals:	**45,140.0**				**1,983.6**	**Total Wind:** **34,157.5**

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

Calculated Forces

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

Load Case:	1.2D + 1.0E							**Iterations**	18
Gust Response Factor	1.10				**Sds**	0.20		**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.52		**SA**	0.05	**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	-58.82	-2.07	0.00	-229.15	0.00	229.15	7146.92	3573.46	19526.6	9777.85		0.00	0.00	0.032
5.00	-56.50	-2.05	0.00	-218.80	0.00	218.80	7059.52	3529.76	18917.0	9472.57		0.00	-0.01	0.031
10.00	-54.23	-2.01	0.00	-208.55	0.00	208.55	6970.22	3485.11	18311.5	9169.39		0.01	-0.01	0.031
15.00	-52.00	-1.97	0.00	-198.48	0.00	198.48	6879.00	3439.50	17710.5	8868.44		0.03	-0.02	0.030
20.00	-49.81	-1.93	0.00	-188.60	0.00	188.60	6785.88	3392.94	17114.3	8569.88		0.05	-0.02	0.029
25.00	-47.66	-1.89	0.00	-178.95	0.00	178.95	6690.86	3345.43	16523.1	8273.87		0.07	-0.03	0.029
30.00	-45.55	-1.84	0.00	-169.53	0.00	169.53	6593.92	3296.96	15937.4	7980.55		0.10	-0.03	0.028
35.00	-43.49	-1.79	0.00	-160.33	0.00	160.33	6495.08	3247.54	15357.3	7690.07		0.14	-0.04	0.028
37.75	-42.37	-1.76	0.00	-155.41	0.00	155.41	6439.91	3219.95	15040.7	7531.57		0.17	-0.04	0.027
40.00	-40.73	-1.72	0.00	-151.43	0.00	151.43	6394.34	3197.17	14783.1	7402.58		0.19	-0.04	0.027
45.00	-37.14	-1.63	0.00	-142.81	0.00	142.81	5339.62	2669.81	12285.1	6151.71		0.24	-0.05	0.030
50.00	-35.39	-1.59	0.00	-134.66	0.00	134.66	5259.77	2629.88	11825.1	5921.35		0.29	-0.06	0.029
55.00	-33.68	-1.55	0.00	-126.72	0.00	126.72	5178.00	2589.00	11369.2	5693.09		0.36	-0.06	0.029
60.00	-32.00	-1.51	0.00	-118.97	0.00	118.97	5094.33	2547.17	10917.9	5467.09		0.43	-0.07	0.028
65.00	-30.36	-1.48	0.00	-111.41	0.00	111.41	5008.75	2504.38	10471.4	5243.49		0.50	-0.08	0.027
70.00	-28.75	-1.46	0.00	-104.00	0.00	104.00	4921.27	2460.63	10030.0	5022.46		0.59	-0.08	0.027
75.00	-27.18	-1.44	0.00	-96.71	0.00	96.71	4831.88	2415.94	9593.99	4804.12		0.68	-0.09	0.026
76.50	-26.72	-1.44	0.00	-94.54	0.00	94.54	4804.69	2402.34	9464.28	4739.17		0.70	-0.09	0.026
80.00	-24.68	-1.43	0.00	-89.50	0.00	89.50	4740.58	2370.29	9163.68	4588.65		0.77	-0.10	0.025
82.75	-23.21	-1.43	0.00	-85.55	0.00	85.55	3881.76	1940.88	7531.89	3771.54		0.83	-0.10	0.029
85.00	-22.62	-1.43	0.00	-82.33	0.00	82.33	3850.62	1925.31	7380.43	3695.70		0.88	-0.10	0.028
90.00	-21.32	-1.43	0.00	-75.15	0.00	75.15	3780.02	1890.01	7046.54	3528.51		0.99	-0.11	0.027
95.00	-20.05	-1.43	0.00	-67.98	0.00	67.98	3707.52	1853.76	6716.62	3363.30		1.11	-0.12	0.026
100.00	-18.82	-1.43	0.00	-60.81	0.00	60.81	3633.11	1816.56	6390.97	3200.23		1.24	-0.12	0.024
105.00	-17.61	-1.43	0.00	-53.63	0.00	53.63	3556.80	1778.40	6069.88	3039.45		1.37	-0.13	0.023
110.00	-16.44	-1.43	0.00	-46.46	0.00	46.46	3478.57	1739.29	5753.65	2881.10		1.51	-0.14	0.021
111.25	-16.15	-1.43	0.00	-44.67	0.00	44.67	3458.72	1729.36	5675.39	2841.91		1.55	-0.14	0.020
115.00	-14.75	-1.43	0.00	-39.30	0.00	39.30	3398.44	1699.22	5442.59	2725.34		1.66	-0.14	0.019
116.50	-14.19	-1.42	0.00	-37.16	0.00	37.16	2333.06	1166.53	3771.93	1888.77		1.71	-0.15	0.026
117.00	-10.51	-1.38	0.00	-36.45	0.00	36.45	2328.48	1164.24	3752.29	1878.93		1.72	-0.15	0.024
120.00	-10.02	-1.37	0.00	-32.30	0.00	32.30	2300.59	1150.29	3634.82	1820.11		1.82	-0.15	0.022
125.00	-9.23	-1.35	0.00	-25.43	0.00	25.43	2252.57	1126.29	3440.63	1722.87		1.98	-0.16	0.019
130.00	-8.47	-1.30	0.00	-18.69	0.00	18.69	2202.65	1101.33	3248.66	1626.75		2.15	-0.16	0.015
135.00	-7.72	-1.24	0.00	-12.18	0.00	12.18	2150.82	1075.41	3059.23	1531.89		2.32	-0.17	0.012
137.00	-5.50	-1.00	0.00	-9.69	0.00	9.69	2129.56	1064.78	2984.24	1494.34		2.39	-0.17	0.009
140.00	-5.12	-0.95	0.00	-6.69	0.00	6.69	2097.09	1048.54	2872.64	1438.45		2.50	-0.17	0.007
145.00	-4.50	-0.85	0.00	-1.92	0.00	1.92	2041.44	1020.72	2689.18	1346.59		2.68	-0.17	0.004
147.00	-0.34	-0.07	0.00	-0.22	0.00	0.22	2018.65	1009.33	2616.74	1310.31		2.75	-0.17	0.000
150.00	0.00	-0.07	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44		2.86	-0.17	0.000

Seismic Segment Forces (Factored)

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Load Case:	0.9D + 1.0E							**Iterations**	18
Gust Response Factor	1.10				**Sds**	0.20		**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.52		**SA**	0.05	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1777.5	0.00	0.03	0.02	26.28	
10.00		1743.3	0.01	0.05	0.03	39.00	
15.00		1709.0	0.02	0.06	0.04	45.11	
20.00		1674.8	0.03	0.07	0.04	47.89	
25.00		1640.5	0.05	0.07	0.04	49.11	
30.00		1606.3	0.08	0.07	0.04	49.69	
35.00		1572.0	0.10	0.07	0.04	50.06	
37.75	Bot - Section 2	850.03	0.12	0.07	0.03	27.47	
40.00		1299.5	0.13	0.07	0.03	42.48	
45.00	Top - Section 1	2841.3	0.17	0.07	0.03	94.67	
50.00		1307.7	0.21	0.06	0.02	43.75	
55.00		1277.8	0.25	0.05	0.02	41.77	
60.00		1247.8	0.30	0.04	0.01	38.12	
65.00		1217.8	0.35	0.03	0.01	32.39	
70.00		1187.9	0.41	0.01	0.01	24.42	
75.00		1157.9	0.47	-0.01	0.01	14.49	
76.50	Bot - Section 3	341.54	0.49	-0.01	0.01	3.34	
80.00	Appurtenance(s)	1596.0	0.54	-0.03	0.01	4.89	
82.75	Top - Section 2	1137.4	0.58	-0.04	0.01	-2.64	
85.00		427.74	0.61	-0.06	0.02	-2.83	
90.00		931.90	0.68	-0.08	0.03	-13.96	
95.00		906.21	0.76	-0.10	0.04	-18.63	
100.00		880.53	0.84	-0.12	0.07	-19.49	
105.00		854.84	0.93	-0.12	0.10	-16.22	
110.00		829.15	1.02	-0.11	0.14	-8.84	
111.25	Bot - Section 4	203.27	1.04	-0.10	0.15	-1.58	
115.00		1057.8	1.11	-0.06	0.19	3.17	
116.50	Top - Section 3	416.04	1.14	-0.04	0.21	3.39	
117.00	Appurtenance(s)	3055.6	1.15	-0.04	0.22	30.46	
120.00		353.66	1.21	0.01	0.26	7.80	
125.00		574.03	1.31	0.14	0.35	26.76	
130.00		554.76	1.42	0.32	0.45	42.54	
135.00		535.49	1.53	0.58	0.58	60.15	
137.00	Appurtenance(s)	1820.2	1.58	0.71	0.64	233.31	
140.00		307.42	1.65	0.93	0.73	47.24	
145.00		496.96	1.77	1.39	0.92	99.76	
147.00	Appurtenance(s)	3463.2	1.82	1.61	1.00	766.15	
150.00		284.30	1.89	1.98	1.14	72.13	
	Totals:	**45,140.0**				**1,983.6**	**Total Wind:** **34,157.5**

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

Calculated Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Load Case:	0.9D + 1.0E							**Iterations**	18
Gust Response Factor	1.10			**Sds**	0.20			**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.52	**SA**	0.05	**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	-44.11	-2.07	0.00	-228.00	0.00	228.00	7146.92	3573.46	19526.6	9777.85		0.00	0.00	0.029
5.00	-42.38	-2.05	0.00	-217.65	0.00	217.65	7059.52	3529.76	18917.0	9472.57		0.00	-0.01	0.029
10.00	-40.67	-2.01	0.00	-207.42	0.00	207.42	6970.22	3485.11	18311.5	9169.39		0.01	-0.01	0.028
15.00	-39.00	-1.97	0.00	-197.36	0.00	197.36	6879.00	3439.50	17710.5	8868.44		0.03	-0.02	0.028
20.00	-37.36	-1.93	0.00	-187.51	0.00	187.51	6785.88	3392.94	17114.3	8569.88		0.05	-0.02	0.027
25.00	-35.75	-1.88	0.00	-177.88	0.00	177.88	6690.86	3345.43	16523.1	8273.87		0.07	-0.03	0.027
30.00	-34.17	-1.83	0.00	-168.49	0.00	168.49	6593.92	3296.96	15937.4	7980.55		0.10	-0.03	0.026
35.00	-32.62	-1.78	0.00	-159.33	0.00	159.33	6495.08	3247.54	15357.3	7690.07		0.14	-0.04	0.026
37.75	-31.78	-1.76	0.00	-154.43	0.00	154.43	6439.91	3219.95	15040.7	7531.57		0.16	-0.04	0.025
40.00	-30.55	-1.72	0.00	-150.47	0.00	150.47	6394.34	3197.17	14783.1	7402.58		0.19	-0.04	0.025
45.00	-27.85	-1.62	0.00	-141.89	0.00	141.89	5339.62	2669.81	12285.1	6151.71		0.24	-0.05	0.028
50.00	-26.54	-1.58	0.00	-133.79	0.00	133.79	5259.77	2629.88	11825.1	5921.35		0.29	-0.06	0.028
55.00	-25.26	-1.54	0.00	-125.89	0.00	125.89	5178.00	2589.00	11369.2	5693.09		0.35	-0.06	0.027
60.00	-24.00	-1.50	0.00	-118.19	0.00	118.19	5094.33	2547.17	10917.9	5467.09		0.42	-0.07	0.026
65.00	-22.77	-1.47	0.00	-110.68	0.00	110.68	5008.75	2504.38	10471.4	5243.49		0.50	-0.08	0.026
70.00	-21.56	-1.45	0.00	-103.33	0.00	103.33	4921.27	2460.63	10030.0	5022.46		0.58	-0.08	0.025
75.00	-20.39	-1.43	0.00	-96.09	0.00	96.09	4831.88	2415.94	9593.99	4804.12		0.67	-0.09	0.024
76.50	-20.04	-1.43	0.00	-93.94	0.00	93.94	4804.69	2402.34	9464.28	4739.17		0.70	-0.09	0.024
80.00	-18.51	-1.42	0.00	-88.94	0.00	88.94	4740.58	2370.29	9163.68	4588.65		0.77	-0.10	0.023
82.75	-17.41	-1.42	0.00	-85.02	0.00	85.02	3881.76	1940.88	7531.89	3771.54		0.82	-0.10	0.027
85.00	-16.96	-1.42	0.00	-81.82	0.00	81.82	3850.62	1925.31	7380.43	3695.70		0.87	-0.10	0.027
90.00	-15.99	-1.42	0.00	-74.70	0.00	74.70	3780.02	1890.01	7046.54	3528.51		0.98	-0.11	0.025
95.00	-15.04	-1.42	0.00	-67.58	0.00	67.58	3707.52	1853.76	6716.62	3363.30		1.10	-0.12	0.024
100.00	-14.11	-1.42	0.00	-60.46	0.00	60.46	3633.11	1816.56	6390.97	3200.23		1.23	-0.12	0.023
105.00	-13.21	-1.42	0.00	-53.34	0.00	53.34	3556.80	1778.40	6069.88	3039.45		1.36	-0.13	0.021
110.00	-12.33	-1.42	0.00	-46.22	0.00	46.22	3478.57	1739.29	5753.65	2881.10		1.50	-0.14	0.020
111.25	-12.11	-1.42	0.00	-44.44	0.00	44.44	3458.72	1729.36	5675.39	2841.91		1.54	-0.14	0.019
115.00	-11.06	-1.42	0.00	-39.11	0.00	39.11	3398.44	1699.22	5442.59	2725.34		1.65	-0.14	0.018
116.50	-10.64	-1.41	0.00	-36.98	0.00	36.98	2333.06	1166.53	3771.93	1888.77		1.70	-0.15	0.024
117.00	-7.88	-1.38	0.00	-36.28	0.00	36.28	2328.48	1164.24	3752.29	1878.93		1.71	-0.15	0.023
120.00	-7.52	-1.37	0.00	-32.15	0.00	32.15	2300.59	1150.29	3634.82	1820.11		1.80	-0.15	0.021
125.00	-6.92	-1.34	0.00	-25.31	0.00	25.31	2252.57	1126.29	3440.63	1722.87		1.97	-0.16	0.018
130.00	-6.35	-1.30	0.00	-18.61	0.00	18.61	2202.65	1101.33	3248.66	1626.75		2.13	-0.16	0.014
135.00	-5.79	-1.24	0.00	-12.12	0.00	12.12	2150.82	1075.41	3059.23	1531.89		2.31	-0.17	0.011
137.00	-4.12	-1.00	0.00	-9.65	0.00	9.65	2129.56	1064.78	2984.24	1494.34		2.38	-0.17	0.008
140.00	-3.84	-0.95	0.00	-6.66	0.00	6.66	2097.09	1048.54	2872.64	1438.45		2.48	-0.17	0.006
145.00	-3.38	-0.85	0.00	-1.92	0.00	1.92	2041.44	1020.72	2689.18	1346.59		2.66	-0.17	0.003
147.00	-0.26	-0.07	0.00	-0.22	0.00	0.22	2018.65	1009.33	2616.74	1310.31		2.73	-0.17	0.000
150.00	0.00	-0.07	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44		2.84	-0.17	0.000

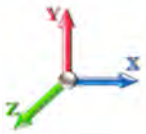
Wind Loading - Shaft

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 19

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	313.48	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	307.54	0.650	0.000	5.00	28.066	18.24	149.3	0.0	1777.6
10.00		1.00	0.85	7.442	8.19	301.60	0.650	0.000	5.00	27.530	17.89	146.5	0.0	1743.3
15.00		1.00	0.85	7.442	8.19	295.66	0.650	0.000	5.00	26.993	17.55	143.6	0.0	1709.1
20.00		1.00	0.90	7.896	8.69	298.44	0.650	0.000	5.00	26.456	17.20	149.4	0.0	1674.8
25.00		1.00	0.95	8.276	9.10	299.27	0.650	0.000	5.00	25.919	16.85	153.4	0.0	1640.6
30.00		1.00	0.98	8.600	9.46	298.68	0.650	0.000	5.00	25.383	16.50	156.1	0.0	1606.3
35.00		1.00	1.01	8.883	9.77	297.08	0.650	0.000	5.00	24.846	16.15	157.8	0.0	1572.1
37.75	Bot - Section 2	1.00	1.03	9.026	9.93	295.86	0.650	0.000	2.75	13.436	8.73	86.7	0.0	850.0
40.00		1.00	1.04	9.137	10.05	294.71	0.650	0.000	2.25	11.039	7.18	72.1	0.0	1299.5
45.00	Top - Section 1	1.00	1.07	9.366	10.30	291.72	0.650	0.000	5.00	24.143	15.69	161.7	0.0	2841.3
50.00		1.00	1.09	9.576	10.53	292.89	0.650	0.000	5.00	23.606	15.34	161.6	0.0	1307.8
55.00		1.00	1.12	9.770	10.75	289.04	0.650	0.000	5.00	23.069	14.99	161.2	0.0	1277.8
60.00		1.00	1.14	9.951	10.95	284.83	0.650	0.000	5.00	22.532	14.65	160.3	0.0	1247.8
65.00		1.00	1.16	10.120	11.13	280.31	0.650	0.000	5.00	21.996	14.30	159.2	0.0	1217.9
70.00		1.00	1.17	10.279	11.31	275.53	0.650	0.000	5.00	21.459	13.95	157.7	0.0	1187.9
75.00		1.00	1.19	10.430	11.47	270.51	0.650	0.000	5.00	20.922	13.60	156.0	0.0	1157.9
76.50	Bot - Section 3	1.00	1.20	10.473	11.52	268.96	0.650	0.000	1.50	6.172	4.01	46.2	0.0	341.5
80.00	Appurtenance(s)	1.00	1.21	10.572	11.63	265.28	0.650	0.000	3.50	14.436	9.38	109.1	0.0	1472.0
82.75	Top - Section 2	1.00	1.22	10.648	11.71	262.31	0.650	0.000	2.75	11.158	7.25	84.9	0.0	1137.5
85.00		1.00	1.22	10.708	11.78	264.06	0.650	0.000	2.25	9.008	5.86	69.0	0.0	427.7
90.00		1.00	1.24	10.838	11.92	258.49	0.650	0.000	5.00	19.629	12.76	152.1	0.0	931.9
95.00		1.00	1.25	10.962	12.06	252.76	0.650	0.000	5.00	19.093	12.41	149.6	0.0	906.2
100.00		1.00	1.27	11.081	12.19	246.88	0.650	0.000	5.00	18.556	12.06	147.0	0.0	880.5
105.00		1.00	1.28	11.195	12.31	240.87	0.650	0.000	5.00	18.019	11.71	144.2	0.0	854.8
110.00		1.00	1.29	11.305	12.44	234.73	0.650	0.000	5.00	17.482	11.36	141.3	0.0	829.1
111.25	Bot - Section 4	1.00	1.29	11.332	12.47	233.18	0.650	0.000	1.25	4.287	2.79	34.7	0.0	203.3
115.00		1.00	1.30	11.412	12.55	228.48	0.650	0.000	3.75	12.837	8.34	104.7	0.0	1057.8
116.50	Top - Section 3	1.00	1.31	11.443	12.59	226.58	0.650	0.000	1.50	5.050	3.28	41.3	0.0	416.0
117.00	Appurtenance(s)	1.00	1.31	11.453	12.60	229.22	0.650	0.000	0.50	1.673	1.09	13.7	0.0	59.6
120.00		1.00	1.32	11.514	12.67	225.40	0.650	0.000	3.00	9.924	6.45	81.7	0.0	353.7
125.00		1.00	1.33	11.614	12.78	218.95	0.650	0.000	5.00	16.110	10.47	133.8	0.0	574.0
130.00		1.00	1.34	11.710	12.88	212.40	0.650	0.000	5.00	15.574	10.12	130.4	0.0	554.8
135.00		1.00	1.35	11.803	12.98	205.77	0.650	0.000	5.00	15.037	9.77	126.9	0.0	535.5
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	203.09	0.650	0.000	2.00	5.864	3.81	49.6	0.0	208.8
140.00		1.00	1.36	11.894	13.08	199.05	0.650	0.000	3.00	8.636	5.61	73.4	0.0	307.4
145.00		1.00	1.37	11.982	13.18	192.26	0.650	0.000	5.00	13.963	9.08	119.6	0.0	497.0
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	189.52	0.650	0.000	2.00	5.435	3.53	46.7	0.0	193.4
150.00		1.00	1.38	12.068	13.27	185.38	0.650	0.000	3.00	7.992	5.19	69.0	0.0	284.3
								Totals:	**150.00**			**4,401.8**		**37,138.7**

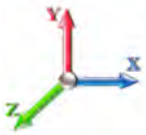
Discrete Appurtenance Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 19

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	147.00	ACU-A20-N	4	12.017	13.219	0.50	0.75	0.28	4.00	0.000	0.000	3.72	0.00	0.00
2	147.00	AIR32 KRD901146	3	12.017	13.219	0.65	0.75	12.74	396.60	0.000	0.000	168.45	0.00	0.00
3	147.00	APXVAALL24_43-U-NA20	3	12.017	13.219	0.55	0.75	33.24	297.00	0.000	0.000	439.44	0.00	0.00
4	147.00	AIR6449 B41	3	12.017	13.219	0.53	0.75	9.03	309.00	0.000	0.000	119.31	0.00	0.00
5	147.00	Low Profile Platform	1	12.017	13.219	1.00	1.00	25.00	1200.00	0.000	0.000	330.47	0.00	0.00
6	147.00	MS-HRECP-35	1	12.017	13.219	1.00	1.00	12.25	514.00	0.000	0.000	161.93	0.00	0.00
7	147.00	4415 B25	3	12.017	13.219	0.54	0.75	3.01	138.90	0.000	0.000	39.83	0.00	0.00
8	147.00	800 MHz RRH	3	12.017	13.219	0.50	0.75	3.62	159.00	0.000	0.000	47.82	0.00	0.00
9	147.00	4449 B71 + B85	3	12.017	13.219	0.50	0.75	2.97	225.00	0.000	0.000	39.26	0.00	0.00
10	147.00	800 MHz Filter	3	12.017	13.219	0.38	0.75	0.88	26.40	0.000	0.000	11.60	0.00	0.00
11	137.00	Low Profile Platform	1	11.840	13.024	1.00	1.00	25.00	1200.00	0.000	0.000	325.60	0.00	0.00
12	137.00	GPS	1	11.840	13.024	1.00	1.00	0.91	4.00	0.000	0.000	11.85	0.00	0.00
13	137.00	DB-T1-6Z-8AB-0Z	1	11.840	13.024	1.00	1.00	4.80	18.90	0.000	0.000	62.52	0.00	0.00
14	137.00	FD9R6004/2C-3L	6	11.840	13.024	0.40	0.80	0.86	18.60	0.000	0.000	11.25	0.00	0.00
15	137.00	RRH2x40-AWS	3	11.840	13.024	0.54	0.80	3.47	132.00	0.000	0.000	45.24	0.00	0.00
16	137.00	LNX-6514DS	3	11.840	13.024	0.64	0.80	15.53	99.30	0.000	0.000	202.30	0.00	0.00
17	137.00	BXA-171063-8BF	3	11.840	13.024	0.67	0.80	5.93	31.50	0.000	0.000	77.19	0.00	0.00
18	137.00	BXA-70063/6CF	3	11.840	13.024	0.56	0.80	12.72	51.00	0.000	0.000	165.63	0.00	0.00
19	137.00	HBX-6517DS	3	11.840	13.024	0.60	0.80	9.52	56.10	0.000	0.000	124.01	0.00	0.00
20	117.00	4449 B5/B12	3	11.453	12.598	0.54	0.80	3.17	213.00	0.000	0.000	39.91	0.00	0.00
21	117.00	7770.00	3	11.453	12.598	0.58	0.80	9.64	105.00	0.000	0.000	121.40	0.00	0.00
22	117.00	OPA65R-BU6DA	3	11.453	12.598	0.71	0.80	23.92	207.00	0.000	0.000	301.39	0.00	0.00
23	117.00	DMP65R-BU6DA	3	11.453	12.598	0.58	0.80	21.96	238.20	0.000	0.000	276.70	0.00	0.00
24	117.00	LGP21401	6	11.453	12.598	0.40	0.80	3.10	84.60	0.000	0.000	39.00	0.00	0.00
25	117.00	8843 B25/B66A	3	11.453	12.598	0.54	0.80	2.64	216.00	0.000	0.000	33.22	0.00	0.00
26	117.00	RRUS 4478 B14	3	11.453	12.598	0.54	0.80	2.65	178.20	0.000	0.000	33.43	0.00	0.00
27	117.00	DC6-48-60-18-8F	1	11.453	12.598	1.00	1.00	0.92	31.80	0.000	0.000	11.59	0.00	0.00
28	117.00	DC9-48-60-24-PC16-EV	1	11.453	12.598	1.00	1.00	1.14	26.20	0.000	0.000	14.36	0.00	0.00
29	117.00	(3) Sector Mount	1	11.453	12.598	0.75	0.75	35.33	1696.00	0.000	0.000	445.04	0.00	0.00
30	80.00	Side Arm	1	10.572	11.629	1.00	1.00	4.50	120.00	0.000	0.000	52.33	0.00	0.00
31	80.00	GPS	1	10.572	11.629	1.00	1.00	0.91	4.00	0.000	0.000	10.58	0.00	0.00
							Totals:		**8,001.30**			**3,766.39**		

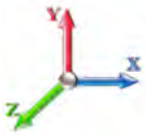
Total Applied Force Summary

Structure:	CT03109-S-SBA		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 19

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		149.34	1927.57	0.00	0.00
10.00		146.48	1893.32	0.00	0.00
15.00		143.63	1859.06	0.00	0.00
20.00		149.37	1824.81	0.00	0.00
25.00		153.37	1790.56	0.00	0.00
30.00		156.07	1756.31	0.00	0.00
35.00		157.81	1722.06	0.00	0.00
37.75		86.71	932.53	0.00	0.00
40.00		72.12	1367.04	0.00	0.00
45.00		161.68	2991.31	0.00	0.00
50.00		161.63	1457.79	0.00	0.00
55.00		161.16	1427.82	0.00	0.00
60.00		160.32	1397.85	0.00	0.00
65.00		159.16	1367.88	0.00	0.00
70.00		157.72	1337.91	0.00	0.00
75.00		156.02	1307.94	0.00	0.00
76.50		46.22	386.54	0.00	0.00
80.00	(2) attachments	172.04	1701.03	0.00	0.00
82.75		84.95	1219.52	0.00	0.00
85.00		68.97	494.88	0.00	0.00
90.00		152.11	1081.10	0.00	0.00
95.00		149.64	1055.41	0.00	0.00
100.00		147.01	1029.73	0.00	0.00
105.00		144.24	1004.04	0.00	0.00
110.00		141.32	978.35	0.00	0.00
111.25		34.73	240.57	0.00	0.00
115.00		104.74	1169.70	0.00	0.00
116.50		41.32	460.80	0.00	0.00
117.00	(27) attachments	1329.75	3070.54	0.00	0.00
120.00		81.70	404.30	0.00	0.00
125.00		133.78	658.43	0.00	0.00
130.00		130.39	639.16	0.00	0.00
135.00		126.90	619.89	0.00	0.00
137.00	(24) attachments	1075.24	1853.96	0.00	0.00
140.00		73.44	317.32	0.00	0.00
145.00		119.63	513.46	0.00	0.00
147.00	(27) attachments	1408.52	3469.89	0.00	0.00
150.00		68.96	284.30	0.00	0.00
	Totals:	**8,168.17**	**49,014.68**	**0.00**	**0.00**

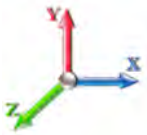
Calculated Forces

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 19

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	-49.01	-8.18	0.00	-840.00	0.00	840.00	7146.92	3573.46	19526.6	9777.85	0.00	0.000	0.000	0.093
5.00	-47.08	-8.04	0.00	-799.12	0.00	799.12	7059.52	3529.76	18917.0	9472.57	0.01	-0.020	0.000	0.091
10.00	-45.19	-7.91	0.00	-758.91	0.00	758.91	6970.22	3485.11	18311.5	9169.39	0.04	-0.040	0.000	0.089
15.00	-43.33	-7.78	0.00	-719.35	0.00	719.35	6879.00	3439.50	17710.5	8868.44	0.09	-0.060	0.000	0.087
20.00	-41.50	-7.64	0.00	-680.44	0.00	680.44	6785.88	3392.94	17114.3	8569.88	0.17	-0.080	0.000	0.086
25.00	-39.70	-7.50	0.00	-642.22	0.00	642.22	6690.86	3345.43	16523.1	8273.87	0.26	-0.100	0.000	0.084
30.00	-37.95	-7.36	0.00	-604.71	0.00	604.71	6593.92	3296.96	15937.4	7980.55	0.38	-0.121	0.000	0.082
35.00	-36.22	-7.20	0.00	-567.93	0.00	567.93	6495.08	3247.54	15357.3	7690.07	0.52	-0.141	0.000	0.079
37.75	-35.29	-7.12	0.00	-548.11	0.00	548.11	6439.91	3219.95	15040.7	7531.57	0.60	-0.152	0.000	0.078
40.00	-33.92	-7.06	0.00	-532.09	0.00	532.09	6394.34	3197.17	14783.1	7402.58	0.68	-0.162	0.000	0.077
45.00	-30.93	-6.90	0.00	-496.82	0.00	496.82	5339.62	2669.81	12285.1	6151.71	0.86	-0.182	0.000	0.087
50.00	-29.47	-6.74	0.00	-462.34	0.00	462.34	5259.77	2629.88	11825.1	5921.35	1.06	-0.203	0.000	0.084
55.00	-28.04	-6.58	0.00	-428.64	0.00	428.64	5178.00	2589.00	11369.2	5693.09	1.28	-0.225	0.000	0.081
60.00	-26.64	-6.43	0.00	-395.72	0.00	395.72	5094.33	2547.17	10917.9	5467.09	1.53	-0.247	0.000	0.078
65.00	-25.27	-6.27	0.00	-363.58	0.00	363.58	5008.75	2504.38	10471.4	5243.49	1.80	-0.268	0.000	0.074
70.00	-23.93	-6.12	0.00	-332.22	0.00	332.22	4921.27	2460.63	10030.0	5022.46	2.09	-0.290	0.000	0.071
75.00	-22.62	-5.96	0.00	-301.64	0.00	301.64	4831.88	2415.94	9593.99	4804.12	2.41	-0.311	0.000	0.067
76.50	-22.23	-5.92	0.00	-292.70	0.00	292.70	4804.69	2402.34	9464.28	4739.17	2.51	-0.317	0.000	0.066
80.00	-20.53	-5.74	0.00	-272.00	0.00	272.00	4740.58	2370.29	9163.68	4588.65	2.74	-0.331	0.000	0.064
82.75	-19.31	-5.65	0.00	-256.22	0.00	256.22	3881.76	1940.88	7531.89	3771.54	2.94	-0.343	0.000	0.073
85.00	-18.82	-5.58	0.00	-243.50	0.00	243.50	3850.62	1925.31	7380.43	3695.70	3.10	-0.352	0.000	0.071
90.00	-17.73	-5.43	0.00	-215.59	0.00	215.59	3780.02	1890.01	7046.54	3528.51	3.48	-0.373	0.000	0.066
95.00	-16.68	-5.28	0.00	-188.44	0.00	188.44	3707.52	1853.76	6716.62	3363.30	3.88	-0.394	0.000	0.061
100.00	-15.65	-5.13	0.00	-162.05	0.00	162.05	3633.11	1816.56	6390.97	3200.23	4.31	-0.413	0.000	0.055
105.00	-14.64	-4.98	0.00	-136.40	0.00	136.40	3556.80	1778.40	6069.88	3039.45	4.75	-0.431	0.000	0.049
110.00	-13.66	-4.84	0.00	-111.49	0.00	111.49	3478.57	1739.29	5753.65	2881.10	5.21	-0.447	0.000	0.043
111.25	-13.42	-4.80	0.00	-105.44	0.00	105.44	3458.72	1729.36	5675.39	2841.91	5.33	-0.451	0.000	0.041
115.00	-12.25	-4.69	0.00	-87.44	0.00	87.44	3398.44	1699.22	5442.59	2725.34	5.69	-0.462	0.000	0.036
116.50	-11.79	-4.64	0.00	-80.40	0.00	80.40	2333.06	1166.53	3771.93	1888.77	5.83	-0.466	0.000	0.048
117.00	-8.73	-3.29	0.00	-78.08	0.00	78.08	2328.48	1164.24	3752.29	1878.93	5.88	-0.467	0.000	0.045
120.00	-8.33	-3.21	0.00	-68.21	0.00	68.21	2300.59	1150.29	3634.82	1820.11	6.18	-0.476	0.000	0.041
125.00	-7.67	-3.07	0.00	-52.17	0.00	52.17	2252.57	1126.29	3440.63	1722.87	6.68	-0.490	0.000	0.034
130.00	-7.03	-2.93	0.00	-36.83	0.00	36.83	2202.65	1101.33	3248.66	1626.75	7.20	-0.501	0.000	0.026
135.00	-6.41	-2.80	0.00	-22.15	0.00	22.15	2150.82	1075.41	3059.23	1531.89	7.73	-0.509	0.000	0.017
137.00	-4.57	-1.71	0.00	-16.55	0.00	16.55	2129.56	1064.78	2984.24	1494.34	7.95	-0.511	0.000	0.013
140.00	-4.25	-1.64	0.00	-11.41	0.00	11.41	2097.09	1048.54	2872.64	1438.45	8.27	-0.514	0.000	0.010
145.00	-3.74	-1.51	0.00	-3.24	0.00	3.24	2041.44	1020.72	2689.18	1346.59	8.81	-0.516	0.000	0.004
147.00	-0.28	-0.07	0.00	-0.21	0.00	0.21	2018.65	1009.33	2616.74	1310.31	9.03	-0.516	0.000	0.000
150.00	0.00	-0.07	0.00	0.00	0.00	0.00	1983.90	991.95	2509.15	1256.44	9.35	-0.516	0.000	0.000

Final Analysis Summary

Structure:	CT03109-S-SBA	**Code:**	EIA/TIA-222-G	4/7/2021	
Site Name:	Oxford 3, CT	**Exposure:**	C		
Height:	150.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	34.2	0.00	58.79	0.00	0.00	3523.11
0.9D + 1.6W 97 mph Wind	34.2	0.00	44.09	0.00	0.00	3506.66
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.0	0.00	83.68	0.00	0.00	1005.20
1.2D + 1.0E	2.1	0.00	58.82	0.00	0.00	229.15
0.9D + 1.0E	2.1	0.00	44.11	0.00	0.00	228.00
1.0D + 1.0W 60 mph Wind	8.2	0.00	49.01	0.00	0.00	840.00

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-58.79	-34.20	0.00	-3523.1	0.00	-3523.1	7146.92	3573.4	19526.6	9777.85	0.00	0.369
0.9D + 1.6W 97 mph Wind	-44.09	-34.19	0.00	-3506.6	0.00	-3506.6	7146.92	3573.4	19526.6	9777.85	0.00	0.365
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-83.68	-10.00	0.00	-1005.2	0.00	-1005.2	7146.92	3573.4	19526.6	9777.85	0.00	0.115
1.2D + 1.0E	-58.82	-2.07	0.00	-229.15	0.00	-229.15	7146.92	3573.4	19526.6	9777.85	0.00	0.032
0.9D + 1.0E	-44.11	-2.07	0.00	-228.00	0.00	-228.00	7146.92	3573.4	19526.6	9777.85	0.00	0.029
1.0D + 1.0W 60 mph Wind	-49.01	-8.18	0.00	-840.00	0.00	-840.00	7146.92	3573.4	19526.6	9777.85	0.00	0.093

Base Plate Summary

Structure:	CT03109-S-SB		**Code:**	EIA/TIA-222-G	4/7/2021
Site Name:	Oxford 3, CT		**Exposure:**	C	
Height:	150.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Reactions	
Original Design	
Moment (kip-ft):	6800.00
Axial (kip):	55.00
Shear (kip):	53.00
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	3523.11
Axial (kip):	58.79
Shear (kip):	34.20

Base Plate	
Yield (ksi):	55.00
Width (in):	77.00
Style:	Clipped
Polygon Sides:	0.00
Clip Length (in):	16.00
Effective Len (in):	7.44
Moment (kip-in):	335.32
Allow Stress (ksi):	74.25
Applied Stress (ksi):	29.70
Stress Ratio:	0.40

Anchor Bolts	
Bolt Circle:	75.00
Number Bolts:	28.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Clustered
Cluster Dist (in):	6.00
Start Angle (deg):	45.00
Compression	
Force (kip):	83.52
Allowable (kip):	260.00
Ratio:	0.33
Tension	
Force (kip):	77.54
Allowable (kip):	260.00
Ratio:	0.31

Monopole Mat Foundation Design

				Date
				4/7/2021
	Customer Name:	T-Mobile Sprint	**EIA/TIA Standard:**	EIA-222-G
	Site Name:		**Structure Height (Ft.):**	150
	Site Number:	CT03109-S-SBA	**Engineer Name:**	T. Alajaj
	Engr. Number:	104893	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

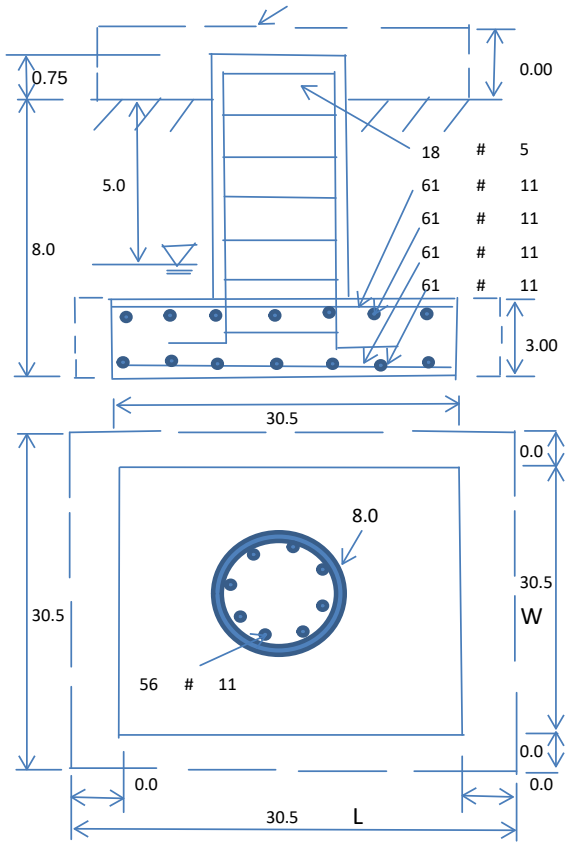
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	58.8	Shear Force (Kips):	34.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3523.1
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	8.0
Pier Height A. G. (ft.):	0.75	Thickness of Pad (ft):	3.00
Length of Pad (ft.):	30.5	Width of Pad (ft.):	30.5
Final Length of pad (ft)	30.5	Final width of pad (ft):	30.5



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	56	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	11	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	61	Qty. of Rebar in Pad (W):	61	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	61	Qty. of Rebar in Pad (W):	61	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	37.6	Pcf		
Water Table B.G.S. (ft):	5.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	16000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:			1.00	

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	4399.92	Total Dry Soil Weight (Kips):	549.99
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	549.99	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	289.03	Total Dry Concrete Weight (Kips):	43.35
Total Buoyant Concrete Volume (cu. Ft.):	2790.75	Total Buoyant Concrete Weight (Kips):	244.47
Total Effective Concrete Weight (Kips):	287.82	Total Vertical Load on Base (Kips):	896.61

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1831	<	Allowable Factored Soil Bearing (psf):	12000	0.15	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	12395.7	>	Design Factored Momont (kips-ft):	3822	0.31	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.24	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	1.56		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	15495.8	>	Design Factored Moment (Mu, Kips-F	3719.8	0.24	OK!
Calculated Shear Capacity (Kips):	1070.8	>	Design Factored Shear (Kips):	34.2	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	4717.4	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9482.1	>	Design Factored Axial Load (Pu Kips):	58.8	0.01	OK!
Moment & Axial Strength Combination:	0.24	OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.012		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	971.6	>	One-Way Factored Shear (L-D. Kips):	314.1	0.32	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	971.6	>	One-Way Factored Shear (W-D., Kips)	314.1	0.32	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	947.7	>	One-Way Factored Shear (C-C, Kips):	283.4	0.30	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0080	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0080		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	12527.0	>	Moment at Bottom (L-Dir. K-Ft):	2131.2	0.17	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	12527.0	>	Moment at Bottom (W-Dir. K-Ft):	2131.2	0.17	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	17294.1	>	Moment at Bottom (C-C Dir. K-Ft):	3014.0	0.17	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0080	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0080		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	12527.0	>	Moment at the top (L-Dir K-Ft):	526.9	0.04	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	12527.0	>	Moment at the top (W-Dir K-Ft):	526.9	0.04	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	17294.1	>	Moment at the top (C-C Dir. K-Ft):	493.3	0.03	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1409.2	k-ft.	Max. factored shear stress v_{u_CD}:		1.5	Psi
Max. factored shear stress v_{u_AB}:	8.7	Psi	Factored shear Strength ϕv_n:		164.3	Psi
Max. factored shear stress v_u:	8.7	Psi	Check Usage of Punching Shear Capacity:		0.05	OK!

EXHIBIT 8

MODIFICATION AND DESIGN
DRAWINGS FOR EXISTING ANTENNA MOUNTS
EXISTING MONOPOLE TOWER

PROPOSED CARRIER: T-MOBILE SPRINT

TOWER OWNER: SBA / TOWER OWNER SITE #: CT03109-S

CARRIER SITE #/NAME: CT23XC509 / CT23XC509

COORDINATES (LATITUDE: 41.465106°, LONGITUDE: -73.146555°)

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
MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	
MS-HRCP-35-2875	METROSITE SUPPORT RAIL CENTER PIPE KIT	
MS-HR35-60ECP	METROSITE SUPPORT RAIL END CONNECTION KIT	

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE **TES** PROJECT NO. 100518, DATED 12/18/2020.

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Tower Engineering Solutions
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IRVING, TX 75038
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SBA
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BOCA RATON, FL 33487
(800)-487-SITE

TES JOB NO:
101035

CUSTOMER SITE NO:
CT03109-S-SBA
CUSTOMER SITE NAME:
OXFORD 3, CT
106 WILLENBROCK ROAD
OXFORD, CT 06478

Exp.01/31/2021

12/23/2020

DRAWN BY: RA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	12/23/20

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				
2	2	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT	A-1, MS-HRCP-35	23.0	46.0	Galvanized
3	3	MS-HRCP-35-2875	METROSITE SUPPORT RAIL CENTER PIPE KIT	A-1, MS-HRCP-35-2875	11.0	33.0	Galvanized
1	1	MS-HR35-60ECP	METROSITE SUPPORT RAIL END CONNECTION KIT	A-1, MS-HR35-60ECP	105.0	105.0	Galvanized
			FOLLOWING ITEMS ARE "CUSTOM" PARTS				
3	3	PST350-15	3" PST (3.50" O.D. X 0.216" THK) X 15'-0" A53 GR-B 35KSI	A-1	116.31	348.9	GALVANIZED (FINAL CUT LENGTH TO BE DETERMINED IN FIELD)
			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) =		**532.9**	

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OXFORD, CT 06478

DRAWN BY: RA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	12/23/20

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.
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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CUSTOMER SITE NAME:
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106 WILLENBROCK ROAD
OXFORD, CT 06478

DRAWN BY: RA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	12/23/20

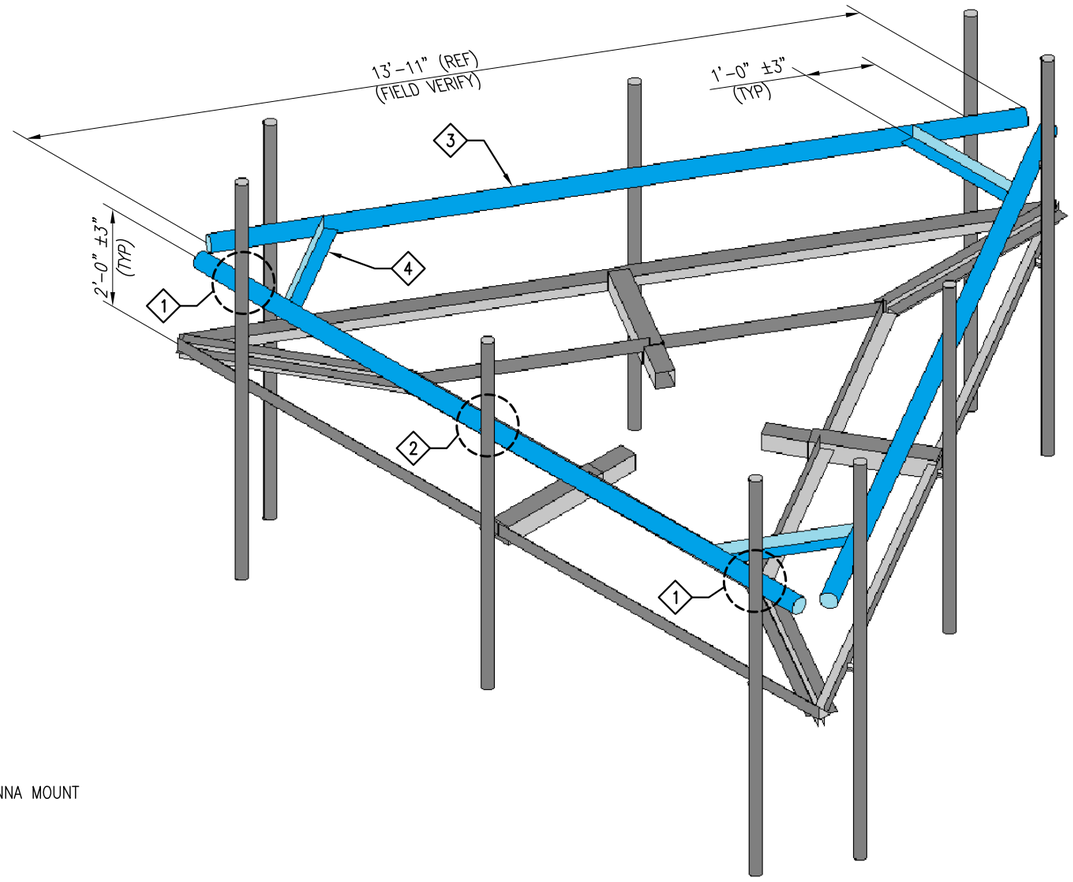
SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: GN-1
REV #: 0

SCOPE OF WORK

1. INSTALL NEW SUPPORT RAIL CENTER PIPE KIT ON OUTER ANTENNA MOUNT PIPES, (2) PER SECTOR. SEE SHEET MS-HRCP-35 FOR DETAILS.
2. INSTALL NEW SUPPORT RAIL CENTER PIPE KIT ON CENTER ANTENNA MOUNT PIPE, (1) PER SECTOR. SEE SHEET MS-HRCP-35-2875 FOR DETAILS.
3. INSTALL NEW SUPPORT RAIL PIPE, (1) PER SECTOR.
4. INSTALL NEW SUPPORT RAIL END CONNECTION KIT. SEE SHEET MS-HR35-60ECP FOR DETAILS.
5. 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



ISOMETRIC VIEW
EXISTING ANTENNA MOUNT @ 147' ELEV.

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.**

ITEM NO.	QTY.	PART NO.	DESCRIPTIONS
1	2	MS-HRCP-35	METROSITE SUPPORT RAIL CENTER PIPE KIT
2	3	MS-HRCP-35-2875	METROSITE SUPPORT RAIL CENTER PIPE KIT
3	3	PST350-15	3" PST (3.50" O.D. X 0.216" THK) X 15'-0" A53 GR-B 35
4	1	MS-HR35-60ECP	METROSITE SUPPORT RAIL END CONNECTION KIT

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TES JOB NO:
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CUSTOMER SITE NO:
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CUSTOMER SITE NAME:
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OXFORD, CT 06478

DRAWN BY: RA | CHECKED BY: SS/HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	12/23/20

SHEET TITLE:
ANTENNA MOUNT MODIFICATION DETAILS

SHEET NUMBER: A-1
REV #: 0

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

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

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	RA	12/23/20

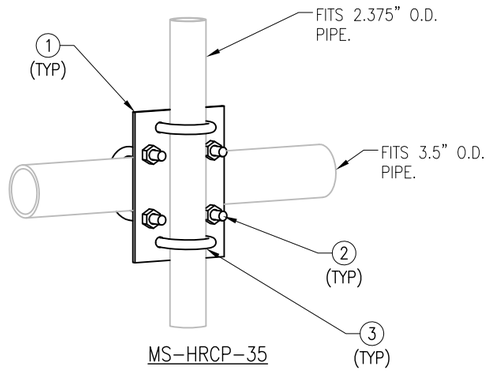
SHEET TITLE:
ANTENNA MOUNT PHOTOS

SHEET NUMBER: A-2
REV #: 0

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

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

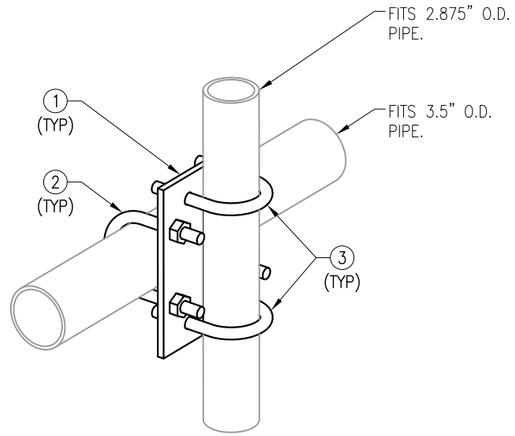
MS-HRCP-35						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	3	PL375-10	PL 3/8" X 7 1/8" X 10"	A36	TAF-1	23.1
2	6	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
3	6	MS02-625-250-400	RU-BOLT 5/8" X 2 1/2" I.W. X 4" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
					GALVANIZED WT	23



THIRD ANGLE PROJECTION		METROSITE FABRICATORS LLC 180 INDUSTRIAL PARK BLVD. COMMERCE GA 30529	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE FINISH	CONFIDENTIAL ALL INFORMATION ON THIS DOCUMENT IS PROPERTY OF METROSITE FABRICATORS LLC	TITLE MS-HRCP-35 SUPPORT RAIL CENTER PIPE KIT	
STANDARD SHEET TOLERANCES	APPROVAL / SIGNATURES	DATE	SIZE DWG NO REV
DECIMALS .X ± 0.1 .XX ± 0.02 .XXX ± 0.005 / ANGLES ± 1° / FRACTIONS ± 1/32	DRAWN BY XXX	05/12/17	B MS-HRCP-35 0
	REVIEWED XXX	-	
	APPROVED XXX	-	SCALE - SHEET 1 OF 1

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

MS-HRCP-35-2875						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	1	PL350-2875	PL 3/8" X 7 1/8" X 10"	A36	TAF-2	7.7
2	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	1.5
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	A36	RBC-1	1.4
					GALVANIZED WT	11



MS-HRCP-35-2875

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

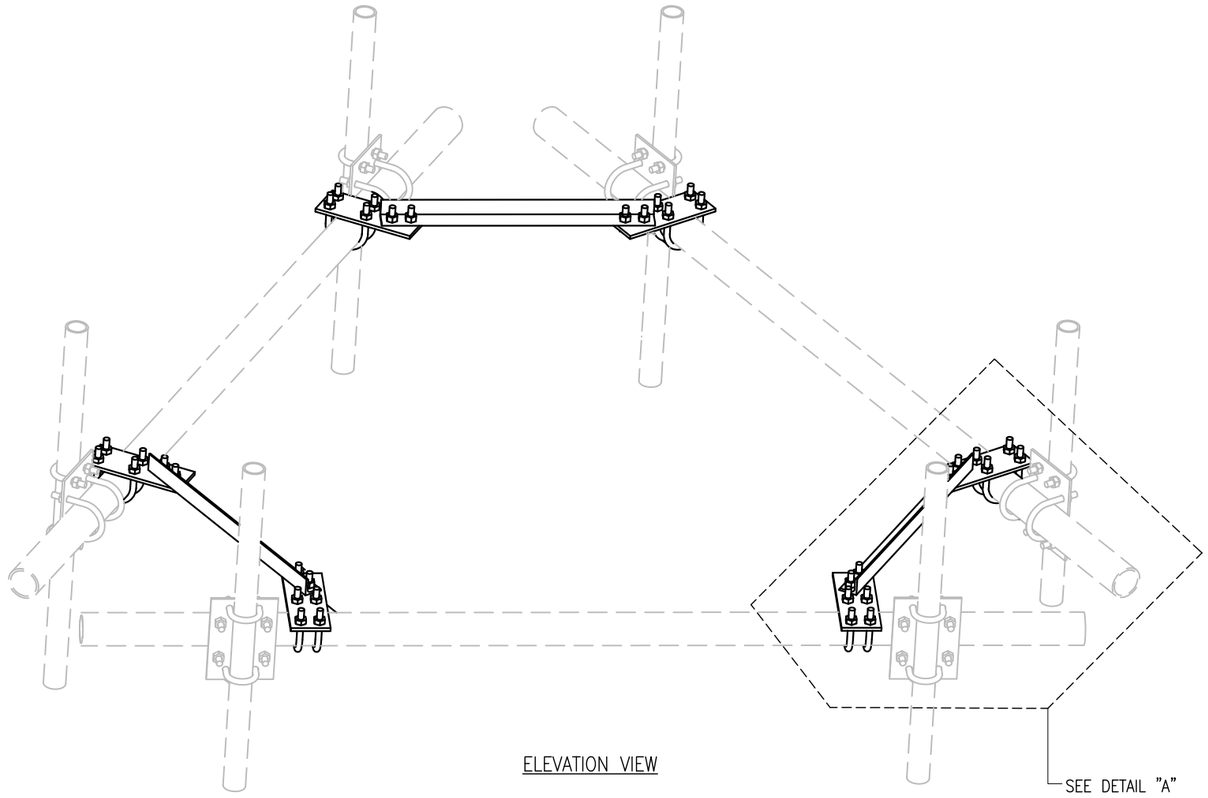
APPROVAL / SIGNATURES		DATE
DRAWN BY	XXX	05/12/17
REVIEWED	XXX	-
APPROVED	XXX	-

TITLE
MS-HRCP-35-2875
SUPPORT RAIL CENTER PIPE KIT

SIZE	DWG NO	REV
B	MS-HRCP-35-2875	0

SCALE - SHEET 1 OF 1

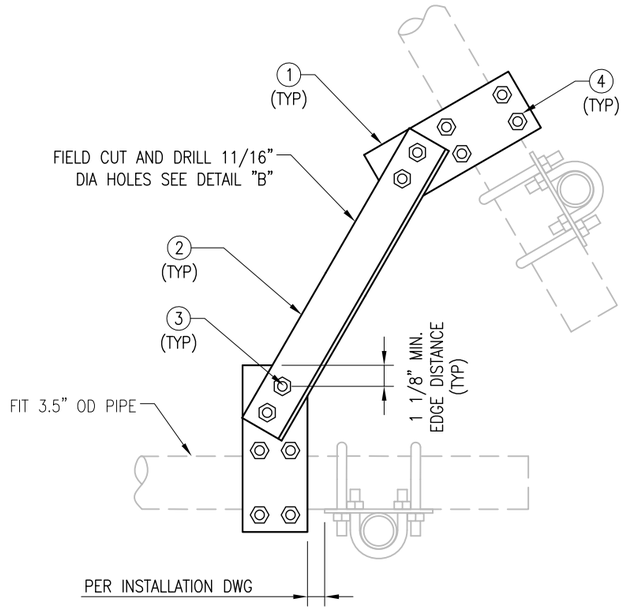
NOTE:
1) FITS 3 1/2" DIA. PIPE.
2) ALL HOLES ARE 11/16" DIA. U.N.O
3) HOT-DIPPED GALVANIZED PER ASTM A123



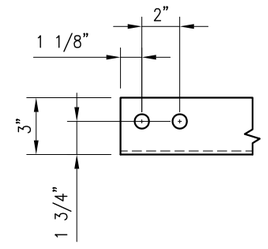
ELEVATION VIEW

MS-HR35-60ECP

ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	6	PL375-11	PL 3/8" X 4 1/4" X 0'-11"	A36	TAF-1	30.0
2	3	L3325-5	L 3" X 3" X 1/4" X 5'-0"	A36	ECP-1	75.0
3	12	--	BOLT 5/8" X 2" A325 W/ HHN & LKW	A325	--	--
4	12	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	A36	RBC-1	--
				GALVANIZED WT		105



DETAIL "A"



DETAIL "B"
11/16"ø HOLES FIELD DRILLED

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-HR35-60ECP
SUPPORT RAIL END CONNECTION KIT

SIZE	DWG NO	REV
B	MS-HR35-60ECP	0

SCALE -
SHEET 1 OF 1

EXHIBIT 9

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 150-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT03109-S-SBA / Oxford 3, CT

Customer Site Name: Oxford 3, CT

Carrier Name: T-Mobile Sprint (App#: 144006, V1)

Carrier Site ID / Name: CT23XC509

Site Location: 106 Willenbrock Road

Oxford, Connecticut

New Haven County

Latitude: 41.465106

Longitude: -73.146555

Analysis Result:

Max Structural Usage: 60.9% [Pass]

Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the low profile platform at 147.00' 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 by TEP, project no. 1224362, dated 12/16/2020.
Antenna Loading	SBA Application: # 144006, v1, dated 12/7/2020.
Existing Modification	N/A
Proposed Modification	TES Project No. 101035

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 125.0mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 97.0 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
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 w/ MS-HRECP-35 (Support Rail Pipe w/ End Connection Kit) at 147.00' elevation

Final Antenna Configuration

3	Ericsson AIR32 KRD901146-1_B66A B2A
3	RFS APXVAALL24_43-U-NA20
3	Ericsson AIR6449 B41
4	RFS ACU-A20-N RET*
3	Ericsson 4415 B25
3	ALU 800 MHz RRH*

3 Ericsson 4449 B71 + B85
3 ALU 800 MHz Filter*

* Equipment to be flush mounted directly to the Monopole. They are not mounted on the low profile platform mounts and are not included in this mount analysis.

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 60.9%, which occurs in the face horizontal. 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.

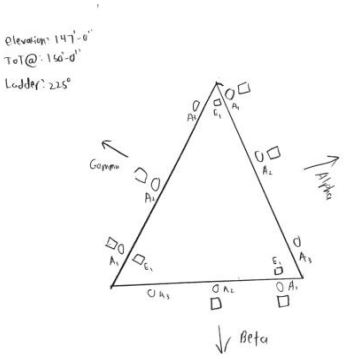
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

TES Tower Engineering Solutions

FCC #
1224362

Tower Owner:	SBA Communications	**Mapping Date:**	12/16/2020
Site Name:	Oxford 3 CT	**Tower Type:**	Monopole
Site Number or ID:	CT03109-S	**Tower Height (Ft.):**	150
Mapping Contractor:	TEP	**Mount Elevation (Ft.):**	147



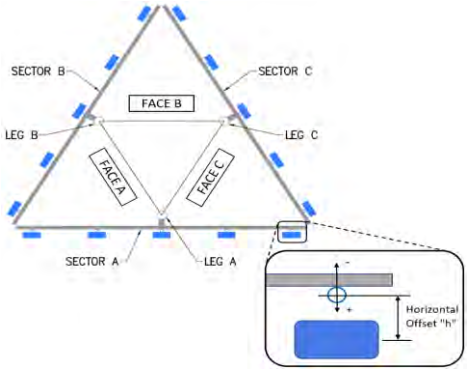
Mount Pipe Configuration and Geometries [Unit = Inches]

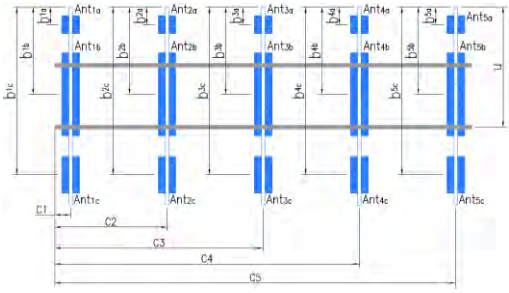
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Øx0.154"x8'-0"	50.00	18.00	C1	2.4"Øx0.154"x8'-0"	50.00	18.00
A2	2.9"Øx0.203"x7'-0"	46.00	90.00	C2	2.9"Øx0.203"x7'-0"	46.00	90.00
A3	2.4"Øx0.154"x8'-0"	50.00	150.00	C3	2.4"Øx0.154"x8'-0"	50.00	150.00
A4				C4			
A5				C5			
A6				C6			
B1	2.4"Øx0.154"x8'-0"	50.00	18.00	D1			
B2	2.9"Øx0.203"x7'-0"	46.00	90.00	D2			
B3	2.4"Øx0.154"x8'-0"	50.00	150.00	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. :	
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.) :	4.5

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.):	32.61



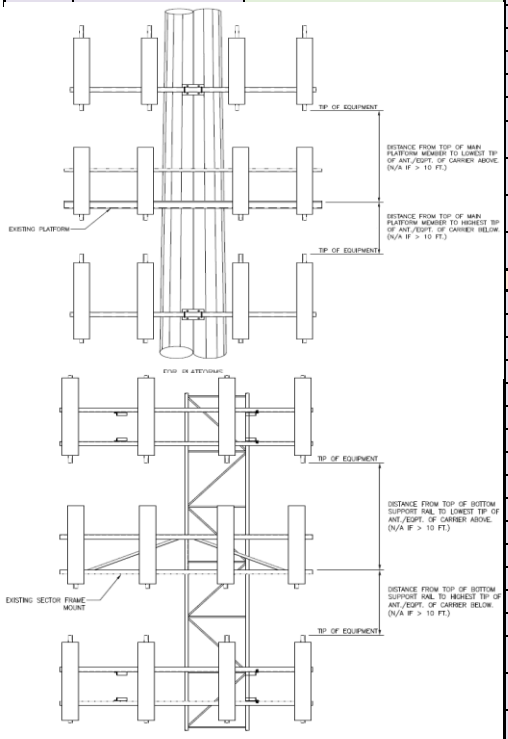


Antenna Layout (Looking Out From Tower)

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}	APXV9TM14-ALU	12.60	6.30	56.30	1) 1 1/4 F	148.5	32.00	7.00	5.00	177
Ant_{1c}	RRH 8x20-25	17.52	5.71	25.39	Jumper	150.333	10.00	6.00		179
Ant_{2a}										
Ant_{2b}	Unknown	12.00	8.00	72.00	Jumper	148	34.00	11.00	5.00	192
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	Empty					151.167				200
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRH 2x50-800	13.00	14.00	15.80	1 1/4 Hybrid					81
Ant on Tower	RRH 1900-4x45	11.10	11.40	25.00	Jumper					83

Mount Azimuth (Degree) for Each Sector					Tower Leg Azimuth (Degree) for Each Sector
Sector A:	5.00	Deg	Leg A:		Deg
Sector B:	125.00	Deg	Leg B:		Deg
Sector C:	245.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	225.00	Deg	Sector C
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was obstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	APXV9TM14-ALU	12.60	6.30	56.30	1) 1 1/4 F	148.5	32.00	7.00	125.00	212
Ant_{1c}	RRH 8x20-25	17.52	5.71	25.39	Jumper	150.333	10.00	6.00		214
Ant_{2a}										
Ant_{2b}	Unknown	12.00	8.00	72.00	Jumper	148	34.00	11.00	125.00	217
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	Empty					151.167				220
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRH 2x50-800	13.00	14.00	15.80	Jumper					74
Ant on Tower	RRH 1900-4x45	11.10	11.40	25.00	Jumper					72
Sector C										
Ant_{1a}										
Ant_{1b}	APXV9TM14-ALU	12.60	6.30	56.30	1) 1 1/4 F	148.5	32.00	7.00	270.00	228
Ant_{1c}	RRH 8x20-25	17.52	5.71	25.39	Jumper	150.333	10.00	6.00		230
Ant_{2a}										
Ant_{2b}	Unknown	12.00	8.00	72.00	Jumper	148	34.00	11.00	270.00	233
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	Empty					151.167				236
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRH 2x50-800	13.00	14.00	15.80	Jumper					76
Ant on Tower	RRH 1900-4x45	11.10	11.40	25.00	Jumper					78
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 #

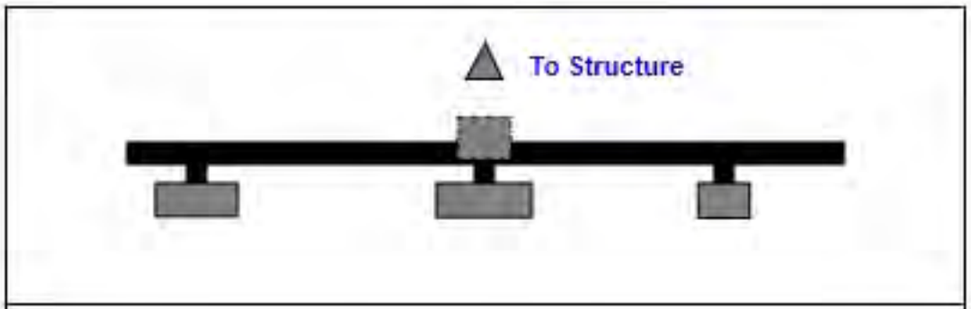
Structure: CT03109-S-SBA - Oxford 3, CT

Sector: A
Structure Type: Monopole
Mount Elev: 147.00

12/22/2020

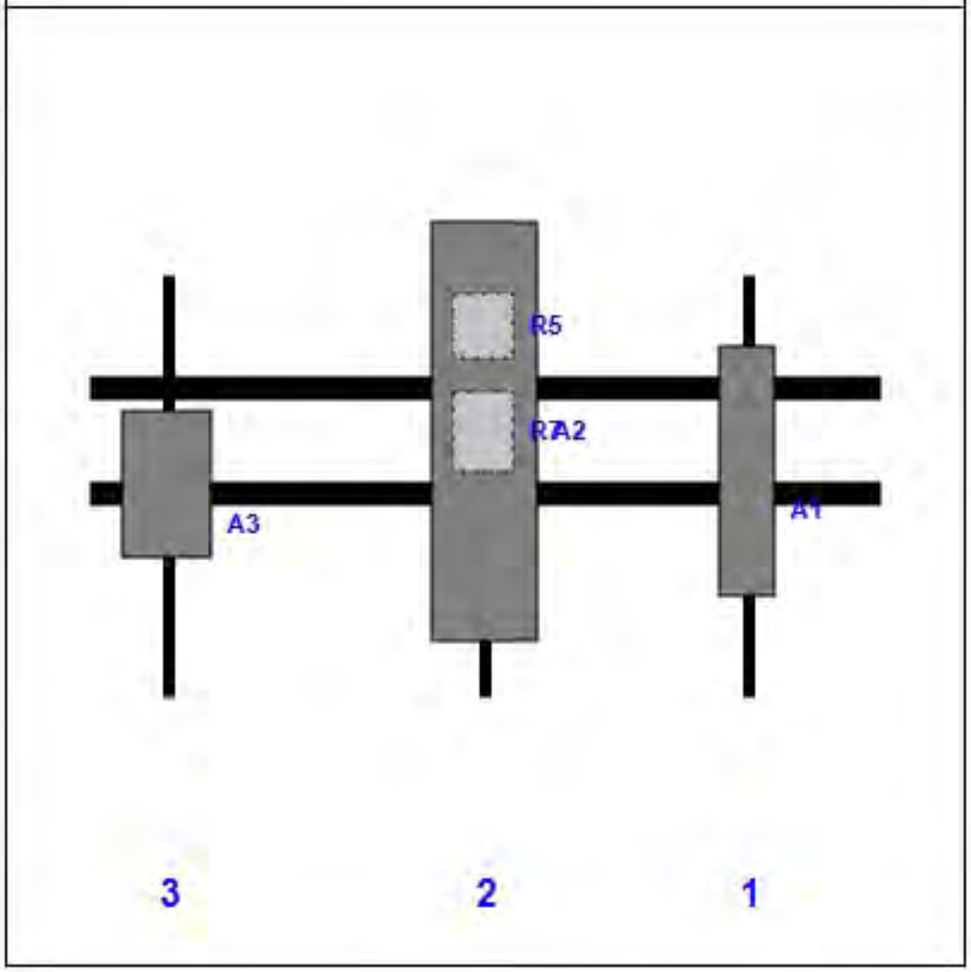
Tower Engineering Solutions

Plan View



Front View

Looking Toward Structure



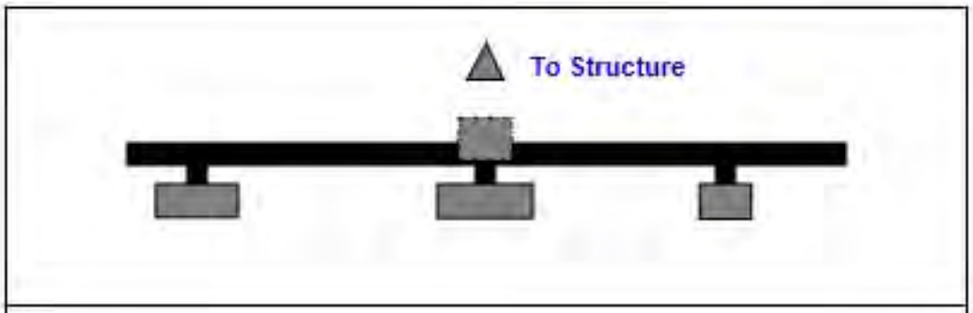
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Ericsson AIR32 KRD901146-1_B66	57.00	12.90	150.00	1	a	Front	45.00			
A2	RFS APXVAALL24_43-U-NA20	95.90	24.00	90.00	2	a	Front	36.00			
R5	RRUS 4415 B25	15.00	13.20	90.00	2	a	Behind	12.00			
R7	4449 B71 + B85	17.90	13.20	90.00	2	a	Behind	36.00			
A3	AIR6449 B41	33.10	20.50	18.00	3	a	Front	48.00			

Sector: B
Structure Type: Monopole
Mount Elev: 147.00

12/22/2020

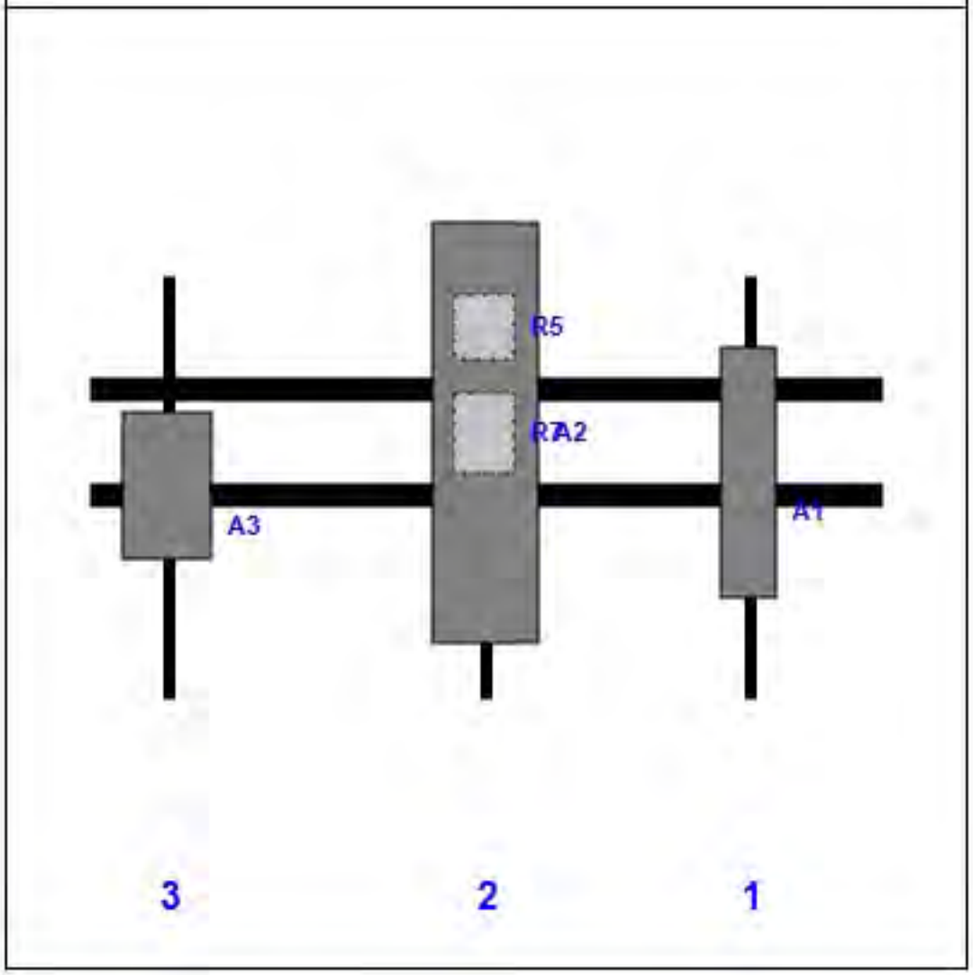
TES Tower Engineering Solutions

Plan View



Front View

Looking Toward Structure



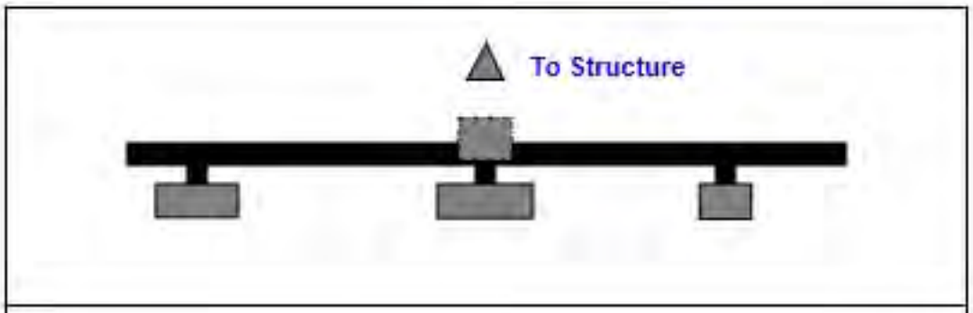
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Ericsson AIR32 KRD901146-1_B66	57.00	12.90	150.00	1	a	Front	45.00			
A2	RFS APXVAALL24_43-U-NA20	95.90	24.00	90.00	2	a	Front	36.00			
R5	RRUS 4415 B25	15.00	13.20	90.00	2	a	Behind	12.00			
R7	4449 B71 + B85	17.90	13.20	90.00	2	a	Behind	36.00			
A3	AIR6449 B41	33.10	20.50	18.00	3	a	Front	48.00			

Sector: C
Structure Type: Monopole
Mount Elev: 147.00

12/22/2020

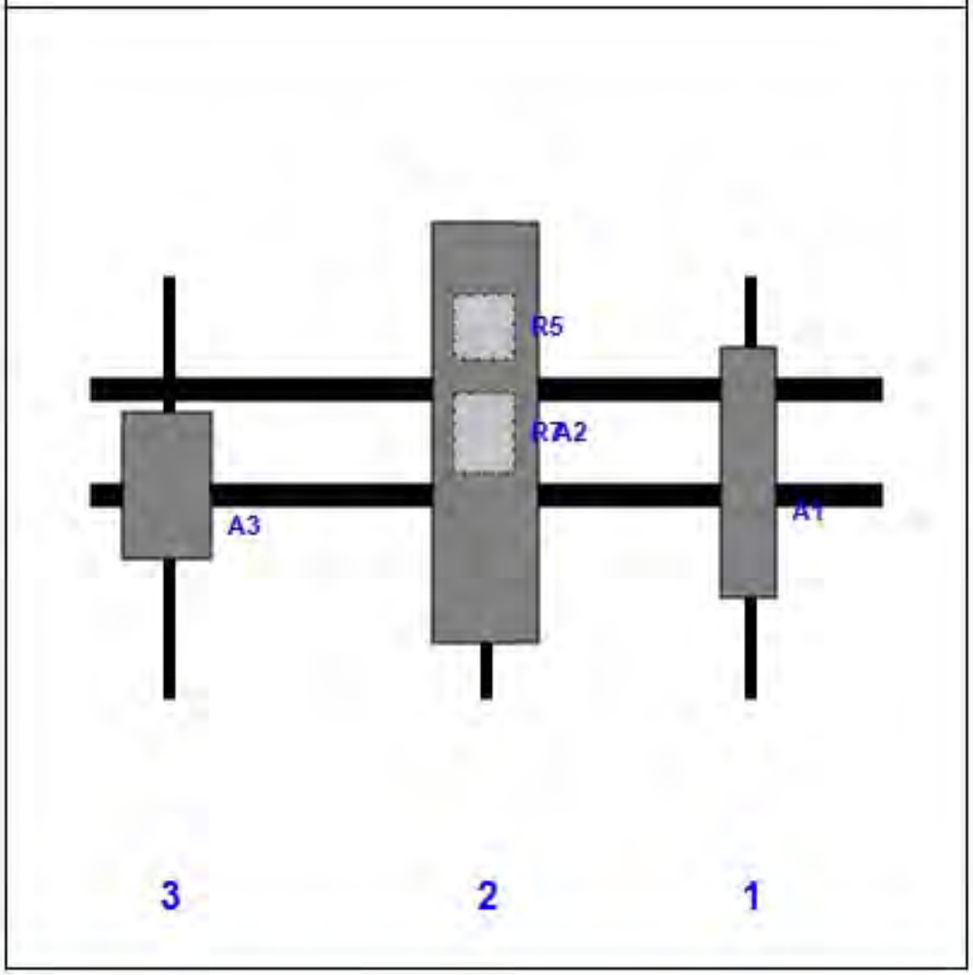
TES Tower Engineering Solutions

Plan View

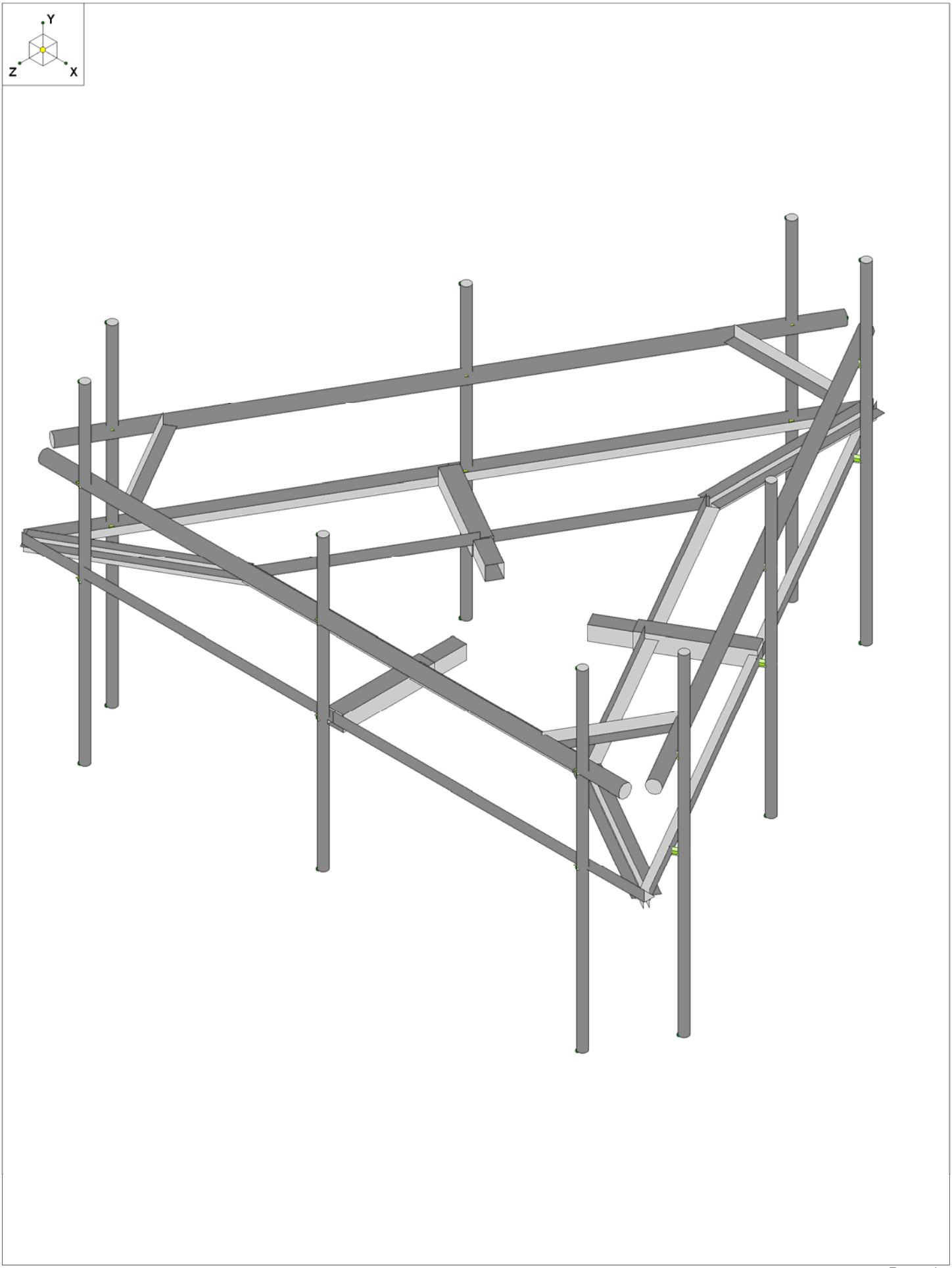


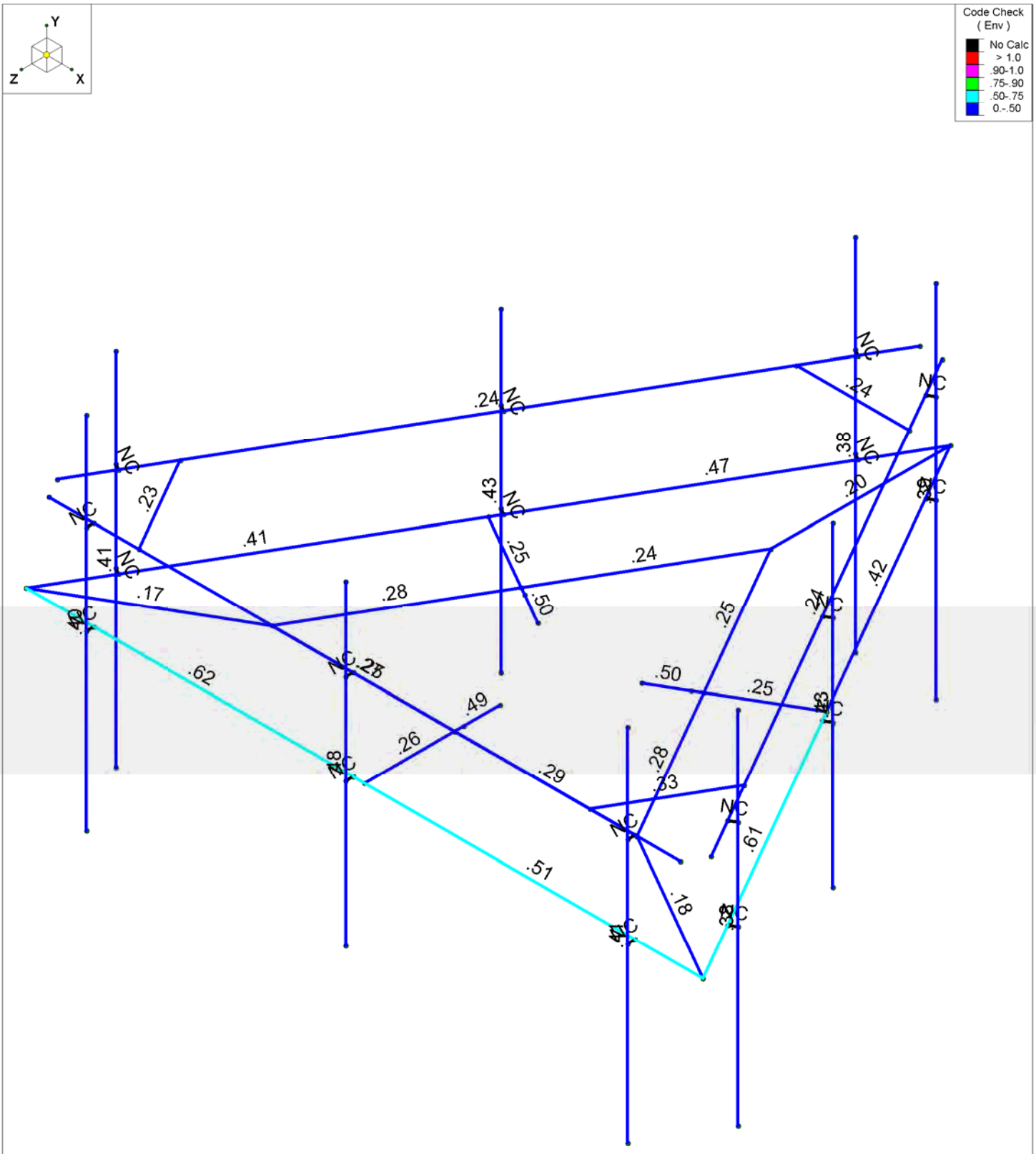
Front View

Looking Toward Structure

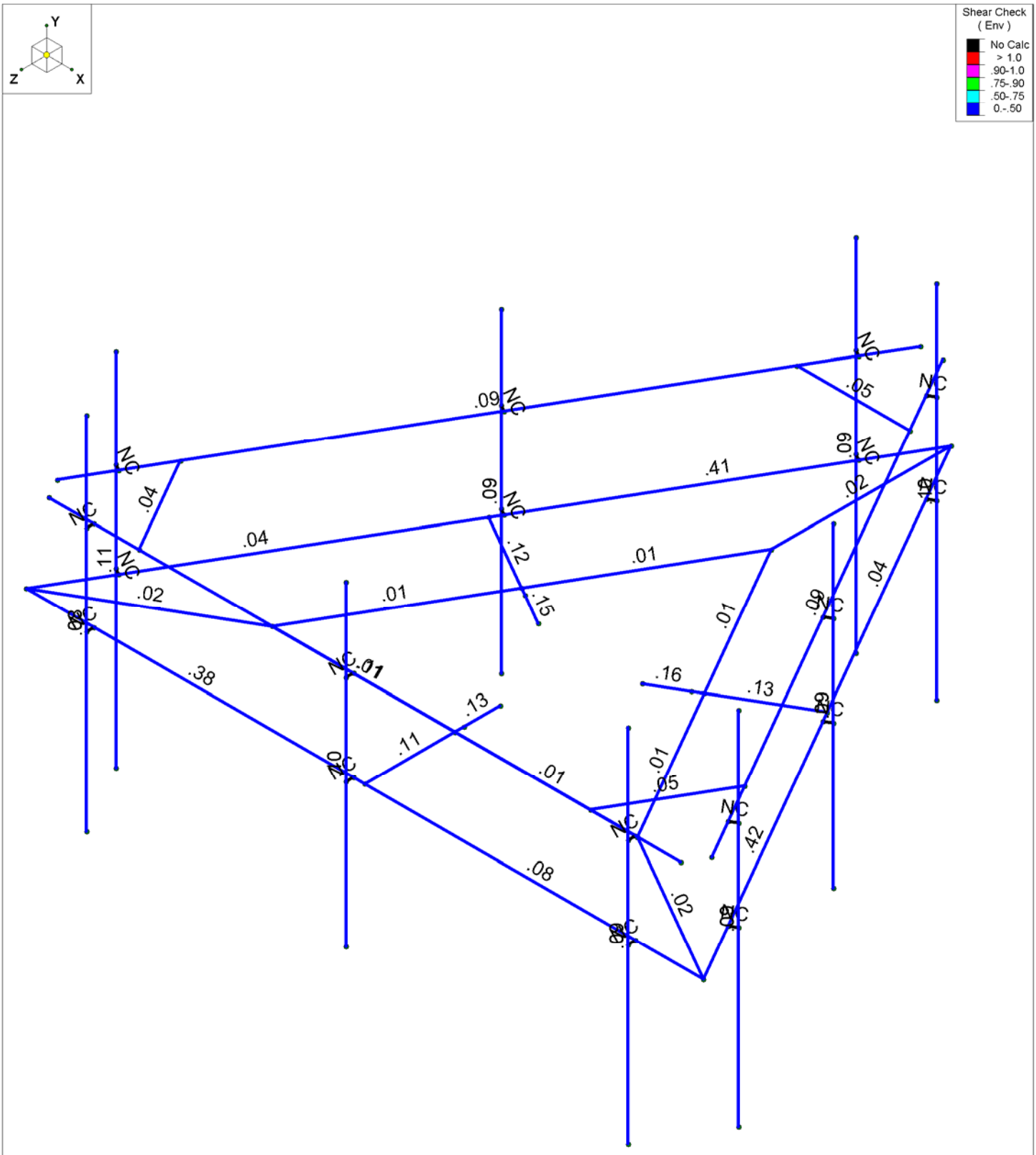


Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	Ericsson AIR32 KRD901146-1_B66	57.00	12.90	150.00	1	a	Front	45.00			
A2	RFS APXVAALL24_43-U-NA20	95.90	24.00	90.00	2	a	Front	36.00			
R5	RRUS 4415 B25	15.00	13.20	90.00	2	a	Behind	12.00			
R7	4449 B71 + B85	17.90	13.20	90.00	2	a	Behind	36.00			
A3	AIR6449 B41	33.10	20.50	18.00	3	a	Front	48.00			


Y
Z
X



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



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

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					24			
2	Antenna Di	None					24			
3	Antenna W Front	None					24			
4	Antenna Wi Front	None					24			
5	Antenna W Side	None					24			
6	Antenna Wi Side	None					24			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1						
10	Structure Di	None						30		
11	Structure W Front	None						30		
12	Structure Wi Front	None						30		
13	Structure W Side	None						30		
14	Structure Wi Side	None						30		

Load Combinations

	Description	Solve	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0W (0 Deg)	Yes	Y		1	1.2	9	1.2	3	1	5		11	1	13									
2	1.2D+1.0W (30 Deg)	Yes	Y		1	1.2	9	1.2	3	.866	5	.5	11	.866	13	.5								
3	1.2D+1.0W (60 Deg)	Yes	Y		1	1.2	9	1.2	3	.5	5	.866	11	.5	13	.866								
4	1.2D+1.0W (90 Deg)	Yes	Y		1	1.2	9	1.2	3		5	1	11		13	1								
5	1.2D+1.0W (120 Deg)	Yes	Y		1	1.2	9	1.2	3	-.5	5	.866	11	-.5	13	.866								
6	1.2D+1.0W (150 Deg)	Yes	Y		1	1.2	9	1.2	3	-.8...	5	.5	11	-.8...	13	.5								
7	1.2D+1.0W (180 Deg)	Yes	Y		1	1.2	9	1.2	3	-1	5		11	-1	13									
8	1.2D+1.0W (210 Deg)	Yes	Y		1	1.2	9	1.2	3	-.8...	5	-.5	11	-.8...	13	-.5								
9	1.2D+1.0W (240 Deg)	Yes	Y		1	1.2	9	1.2	3	-.5	5	-.8...	11	-.5	13	-.8...								
10	1.2D+1.0W (270 Deg)	Yes	Y		1	1.2	9	1.2	3		5	-1	11		13	-1								
11	1.2D+1.0W (300 Deg)	Yes	Y		1	1.2	9	1.2	3	.5	5	-.8...	11	.5	13	-.8...								
12	1.2D+1.0W (330 Deg)	Yes	Y		1	1.2	9	1.2	3	.866	5	-.5	11	.866	13	-.5								
13	1.2D+1.0Di+1.0Wi (0 Deg)	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	1	6		12	1	14					
14	1.2D+1.0Di+1.0Wi (30 D...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	.866	6	.5	12	.866	14	.5				
15	1.2D+1.0Di+1.0Wi (60 D...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	.5	6	.866	12	.5	14	.866				
16	1.2D+1.0Di+1.0Wi (90 D...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4		6	1	12		14	1				
17	1.2D+1.0Di+1.0Wi (120 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-.5	6	.866	12	-.5	14	.866				
18	1.2D+1.0Di+1.0Wi (150 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-.8...	6	.5	12	-.8...	14	.5				
19	1.2D+1.0Di+1.0Wi (180 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-1	6		12	-1	14					
20	1.2D+1.0Di+1.0Wi (210 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-.8...	6	-.5	12	-.8...	14	-.5				
21	1.2D+1.0Di+1.0Wi (240 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	-.5	6	-.8...	12	-.5	14	-.8...				
22	1.2D+1.0Di+1.0Wi (270 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4		6	-1	12		14	-1				
23	1.2D+1.0Di+1.0Wi (300 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	.5	6	-.8...	12	.5	14	-.8...				
24	1.2D+1.0Di+1.0Wi (330 ...	Yes	Y		1	1.2	9	1.2	2	1	10	1	4	.866	6	-.5	12	.866	14	-.5				
25	1.2D+1.5Lm1+1.0Wm (M...	Yes	Y		1	1.2	9	1.2	7	1.5	15	1	17	1										
26	1.2D+1.5LmL2+1.0Wm (...	Yes	Y		1	1.2	9	1.2	8	1.5	15	1	17	1										
27	1.2D+1.5Lv1 (Maintenan...	Yes	Y		1	1.2	9	1.2	19	1.5														
28	1.2D+1.5Lv2 (Maintenan...	Yes	Y		1	1.2	9	1.2	20	1.5														
29	1.4D	Yes	Y		1	1.4	9	1.4																
30	Seismic Mass		Y		1	1	9	1																
31	1.2D+1.0Ev+1.0Eh (0 Deg)		Y		1	1.2	9	1.2	SX		SY	1	SZ	-1										
32	1.2D+1.0Ev+1.0Eh (30 D...		Y		1	1.2	9	1.2	SX	.5	SY	1	SZ	-.8...										
33	1.2D+1.0Ev+1.0Eh (60 D...		Y		1	1.2	9	1.2	SX	.866	SY	1	SZ	-.5										
34	1.2D+1.0Ev+1.0Eh (90 D...		Y		1	1.2	9	1.2	SX	1	SY	1	SZ											

Load Combinations (Continued)

	Description	Solve	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
35	1.2D+1.0Ev+1.0Eh (120 ...		Y		1	1.2	9	1.2	SX	.866	SY	1	SZ	.5										
36	1.2D+1.0Ev+1.0Eh (150 ...		Y		1	1.2	9	1.2	SX	.5	SY	1	SZ	.866										
37	1.2D+1.0Ev+1.0Eh (180 ...		Y		1	1.2	9	1.2	SX		SY	1	SZ	1										
38	1.2D+1.0Ev+1.0Eh (210 ...		Y		1	1.2	9	1.2	SX	-.5	SY	1	SZ	.866										
39	1.2D+1.0Ev+1.0Eh (240 ...		Y		1	1.2	9	1.2	SX	-.8...	SY	1	SZ	.5										
40	1.2D+1.0Ev+1.0Eh (270 ...		Y		1	1.2	9	1.2	SX	-1	SY	1	SZ											
41	1.2D+1.0Ev+1.0Eh (300 ...		Y		1	1.2	9	1.2	SX	-.8...	SY	1	SZ	-.5										
42	1.2D+1.0Ev+1.0Eh (330 ...		Y		1	1.2	9	1.2	SX	-.5	SY	1	SZ	-.8...										
43	0.9D-1.0Ev+1.0Eh (0 Deg)		Y		1	.9	9	.9	SX		SY	-1	SZ	-1										
44	0.9D-1.0Ev+1.0Eh (30 D...		Y		1	.9	9	.9	SX	.5	SY	-1	SZ	-.8...										
45	0.9D-1.0Ev+1.0Eh (60 D...		Y		1	.9	9	.9	SX	.866	SY	-1	SZ	-.5										
46	0.9D-1.0Ev+1.0Eh (90 D...		Y		1	.9	9	.9	SX	1	SY	-1	SZ											
47	0.9D-1.0Ev+1.0Eh (120 ...		Y		1	.9	9	.9	SX	.866	SY	-1	SZ	.5										
48	0.9D-1.0Ev+1.0Eh (150 ...		Y		1	.9	9	.9	SX	.5	SY	-1	SZ	.866										
49	0.9D-1.0Ev+1.0Eh (180 ...		Y		1	.9	9	.9	SX		SY	-1	SZ	1										
50	0.9D-1.0Ev+1.0Eh (210 ...		Y		1	.9	9	.9	SX	-.5	SY	-1	SZ	.866										
51	0.9D-1.0Ev+1.0Eh (240 ...		Y		1	.9	9	.9	SX	-.8...	SY	-1	SZ	.5										
52	0.9D-1.0Ev+1.0Eh (270 ...		Y		1	.9	9	.9	SX	-1	SY	-1	SZ											
53	0.9D-1.0Ev+1.0Eh (300 ...		Y		1	.9	9	.9	SX	-.8...	SY	-1	SZ	-.5										
54	0.9D-1.0Ev+1.0Eh (330 ...		Y		1	.9	9	.9	SX	-.5	SY	-1	SZ	-.8...										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	1.330127	0	
2	N2	1.151924	0	-0.665064	0	
3	N3	-1.151924	0	-0.665064	0	
4	N4	-7.5	0	4.330127	0	
5	N5	7.5	0	4.330127	0	
6	N6	0	0	-8.660254	0	
7	N7	0	0	4.330127	0	
8	N8	3.75	0	-2.165064	0	
9	N9	-3.75	0	-2.165064	0	
10	NP1	5.999667	4.167	4.497127	0	
11	NP2	5.999667	-3.833	4.497127	0	
12	NP3	-0.250333	3.833	4.497127	0	
13	NP4	-0.250333	-3.167	4.497127	0	
14	N37	5.999667	0	4.330127	0	
15	N52	0	0	-4.674352	0	
16	N53	-4.048108	0	2.337176	0	
17	N54	4.048108	0	2.337176	0	
18	N49	0	0	2.337176	0	
19	N50	2.024054	0	-1.168588	0	
20	N51	-2.024054	0	-1.168588	0	
21	N25	-5.999667	4.167	4.497127	0	
22	N26	-5.999667	-3.833	4.497127	0	
23	N27	-5.999667	0	4.330127	0	
24	N25A	-0.250333	0	4.497127	0	
25	N26A	5.999667	0	4.497127	0	
26	N27A	-5.999667	0	4.497127	0	
27	N28	-.25	0	4.330127	0	
28	N29	0.894793	4.167	-7.444428	0	
29	N30	0.894793	-3.833	-7.444428	0	
30	N31	4.019793	3.833	-2.031769	0	
31	N32	4.019793	-3.167	-2.031769	0	
32	N33	0.750167	0	-7.360927	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
33	N34	6.89446	4.167	2.947301	0	
34	N35	6.89446	-3.833	2.947301	0	
35	N36	6.749833	0	3.0308	0	
36	N37A	4.019793	0	-2.031769	0	
37	N38A	0.894793	0	-7.444428	0	
38	N39	6.89446	0	2.947301	0	
39	N40	3.875	0	-1.948557	0	
40	N41	-6.89446	4.167	2.947301	0	
41	N42	-6.89446	-3.833	2.947301	0	
42	N43	-3.76946	3.833	-2.465358	0	
43	N44	-3.76946	-3.167	-2.465358	0	
44	N45	-6.749833	0	3.0308	0	
45	N46	-0.894793	4.167	-7.444428	0	
46	N47	-0.894793	-3.833	-7.444428	0	
47	N48	-0.750167	0	-7.360927	0	
48	N49A	-3.76946	0	-2.465358	0	
49	N50A	-6.89446	0	2.947301	0	
50	N51A	-0.894793	0	-7.444428	0	
51	N52A	-3.625	0	-2.38157	0	
52	N55A	-7	2	4.330127	0	
53	N56	7	2	4.330127	0	
54	N57	7.25	2	3.897114	0	
55	N58	0.25	2	-8.227241	0	
56	N59	-0.25	2	-8.227241	0	
57	N60	-7.25	2	3.897114	0	
58	N58A	5.999667	2	4.330127	0	
59	N59A	-5.999667	2	4.330127	0	
60	N60A	-0.250333	2	4.497127	0	
61	N61	5.999667	2	4.497127	0	
62	N62	-5.999667	2	4.497127	0	
63	N63	-.25	2	4.330127	0	
64	N64	0.750167	2	-7.360927	0	
65	N65	6.749833	2	3.0308	0	
66	N66	4.019793	2	-2.031769	0	
67	N67	0.894793	2	-7.444428	0	
68	N68	6.89446	2	2.947301	0	
69	N69	3.875	2	-1.948557	0	
70	N70	-6.749833	2	3.0308	0	
71	N71	-0.750167	2	-7.360927	0	
72	N72	-3.76946	2	-2.465358	0	
73	N73	-6.89446	2	2.947301	0	
74	N74	-0.894793	2	-7.444428	0	
75	N75	-3.625	2	-2.38157	0	
76	N76	-4.999667	2	4.330127	0	
77	N77	4.999667	2	4.330127	0	
78	N78	6.249833	2	2.164775	0	
79	N79	1.250167	2	-6.494902	0	
80	N80	-1.250167	2	-6.494902	0	
81	N81	-6.249833	2	2.164775	0	
82	N82	0	0	2.130127	0	
83	N83	1.844744	0	-1.065064	0	
84	N84	-1.844744	0	-1.065064	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	handrail c...	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	handrail	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF	4CU5.25X03...	Beam	CU	A570 Gr.33	Typical	4.854	13.238	12.817	.228

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	AL1A	AACS14X13.9	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	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570 Gr.33	29500	11346	.3	.65	.49	33	52
2	A607 C1 Gr.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(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N4	N7		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
2	M2	N5	N8		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
3	M3	N6	N9		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
4	M4	N1	N82			HSS4x4x4	Beam	Tube	A500 Gr.B...	DR1
5	M5	N2	N83			HSS4x4x4	Beam	Tube	A500 Gr.B...	DR1
6	M6	N3	N84			HSS4x4x4	Beam	Tube	A500 Gr.B...	DR1
7	M7	N4	N53			LL3x3x3x3	Beam	Double Angle (...	A36 Gr.36	DR1
8	M8	N5	N54			LL3x3x3x3	Beam	Double Angle (...	A36 Gr.36	DR1
9	M9	N6	N52			LL3x3x3x3	Beam	Double Angle (...	A36 Gr.36	DR1
10	MP1A	NP1	NP2			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
11	MP2A	NP3	NP4			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
12	M25	N7	N5		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
13	M26	N8	N6		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
14	M27	N9	N4		270	L3x3x4	Beam	Single Angle	A36 Gr.36	DR1
15	M31	N53	N51		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
16	M32	N52	N50		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
17	M33	N54	N49		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
18	MP3A	N25	N26			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
19	M20	N27A	N27			RIGID	Beam	None	RIGID	DR1
20	M21	N26A	N37			RIGID	Beam	None	RIGID	DR1
21	M21A	N25A	N28			RIGID	Beam	None	RIGID	DR1
22	MP1C	N29	N30			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
23	MP2C	N31	N32			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
24	MP3C	N34	N35			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
25	M25A	N39	N36			RIGID	Beam	None	RIGID	DR1
26	M26A	N38A	N33			RIGID	Beam	None	RIGID	DR1
27	M27A	N37A	N40			RIGID	Beam	None	RIGID	DR1
28	MP1B	N41	N42			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
29	MP2B	N43	N44			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
30	MP3B	N46	N47			PIPE_2.0	Beam	Pipe	A53 Gr.B	DR1
31	M31A	N51A	N48			RIGID	Beam	None	RIGID	DR1
32	M32A	N50A	N45			RIGID	Beam	None	RIGID	DR1
33	M33A	N49A	N52A			RIGID	Beam	None	RIGID	DR1
34	M34	N49	N53		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
35	M35	N51	N52		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
36	M36	N50	N54		270	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical
37	M37	N55A	N56			handrail	Beam	Pipe	A53 Gr.B	Typical
38	M38	N57	N58			handrail	Beam	Pipe	A53 Gr.B	Typical
39	M39	N59	N60			handrail	Beam	Pipe	A53 Gr.B	Typical
40	M40	N62	N59A			RIGID	Beam	None	RIGID	DR1
41	M41	N61	N58A			RIGID	Beam	None	RIGID	DR1
42	M42	N60A	N63			RIGID	Beam	None	RIGID	DR1
43	M43	N68	N65			RIGID	Beam	None	RIGID	DR1
44	M44	N67	N64			RIGID	Beam	None	RIGID	DR1
45	M45	N66	N69			RIGID	Beam	None	RIGID	DR1
46	M46	N74	N71			RIGID	Beam	None	RIGID	DR1
47	M47	N73	N70			RIGID	Beam	None	RIGID	DR1
48	M48	N72	N75			RIGID	Beam	None	RIGID	DR1
49	M49	N76	N81			handrail conne...	Beam	Single Angle	A36 Gr.36	Typical
50	M50	N80	N79			handrail conne...	Beam	Single Angle	A36 Gr.36	Typical
51	M51	N77	N78			handrail conne...	Beam	Single Angle	A36 Gr.36	Typical
52	M52	N82	N7			HSS4.5x4.5x4	Beam	Tube	A500 Gr.B...	DR1
53	M53	N83	N8			HSS4.5x4.5x4	Beam	Tube	A500 Gr.B...	DR1
54	M54	N84	N9			HSS4.5x4.5x4	Beam	Tube	A500 Gr.B...	DR1

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						Yes			None
5	M5						Yes			None
6	M6						Yes			None
7	M7						Yes			None
8	M8						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 ...
9	M9						Yes			None
10	MP1A						Yes	-z		None
11	MP2A						Yes	-z		None
12	M25						Yes			None
13	M26						Yes			None
14	M27						Yes			None
15	M31						Yes			None
16	M32						Yes			None
17	M33						Yes			None
18	MP3A						Yes	-z		None
19	M20						Yes			None
20	M21						Yes			None
21	M21A						Yes			None
22	MP1C						Yes	-z		None
23	MP2C						Yes	-z		None
24	MP3C						Yes	-z		None
25	M25A						Yes			None
26	M26A						Yes			None
27	M27A						Yes			None
28	MP1B						Yes	-z		None
29	MP2B						Yes	-z		None
30	MP3B						Yes	-z		None
31	M31A						Yes			None
32	M32A						Yes			None
33	M33A						Yes			None
34	M34						Yes			None
35	M35						Yes			None
36	M36						Yes			None
37	M37						Yes			None
38	M38						Yes			None
39	M39						Yes			None
40	M40						Yes			None
41	M41						Yes			None
42	M42						Yes			None
43	M43						Yes			None
44	M44						Yes			None
45	M45						Yes			None
46	M46						Yes			None
47	M47						Yes			None
48	M48						Yes			None
49	M49						Yes			None
50	M50						Yes			None
51	M51						Yes			None
52	M52						Yes			None
53	M53						Yes			None
54	M54						Yes			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	L3x3x4	7.5			Lbyy						Lateral
2	M2	L3x3x4	7.5			Lbyy						Lateral
3	M3	L3x3x4	7.5			Lbyy						Lateral
4	M4	HSS4x4x4	.8			Lbyy						Gravity
5	M5	HSS4x4x4	.8			Lbyy						Gravity
6	M6	HSS4x4x4	.8			Lbyy						Gravity

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
7	M7	LL3x3x3x3	3.986			Lbyy						Gravity
8	M8	LL3x3x3x3	3.986			Lbyy						Gravity
9	M9	LL3x3x3x3	3.986			Lbyy						Gravity
10	MP1A	PIPE_2.0	8			Lbyy						Lateral
11	MP2A	PIPE_2.0	7			Lbyy						Lateral
12	M25	L3x3x4	7.5			Lbyy						Lateral
13	M26	L3x3x4	7.5			Lbyy						Lateral
14	M27	L3x3x4	7.5			Lbyy						Lateral
15	M31	L3x3x4	4.048			Lbyy						Lateral
16	M32	L3x3x4	4.048			Lbyy						Lateral
17	M33	L3x3x4	4.048			Lbyy						Lateral
18	MP3A	PIPE_2.0	8			Lbyy						Lateral
19	MP1C	PIPE_2.0	8			Lbyy						Lateral
20	MP2C	PIPE_2.0	7			Lbyy						Lateral
21	MP3C	PIPE_2.0	8			Lbyy						Lateral
22	MP1B	PIPE_2.0	8			Lbyy						Lateral
23	MP2B	PIPE_2.0	7			Lbyy						Lateral
24	MP3B	PIPE_2.0	8			Lbyy						Lateral
25	M34	L3x3x4	4.048			Lbyy						Lateral
26	M35	L3x3x4	4.048			Lbyy						Lateral
27	M36	L3x3x4	4.048			Lbyy						Lateral
28	M37	handrail	14			Lbyy						Lateral
29	M38	handrail	14			Lbyy						Lateral
30	M39	handrail	14			Lbyy						Lateral
31	M49	handrail con...	2.5			Lbyy						Lateral
32	M50	handrail con...	2.5			Lbyy						Lateral
33	M51	handrail con...	2.5			Lbyy						Lateral
34	M52	HSS4.5x4.5...	2.2			Lbyy						Gravity
35	M53	HSS4.5x4.5...	2.2			Lbyy						Gravity
36	M54	HSS4.5x4.5...	2.2			Lbyy						Gravity

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-torq...	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	-66.1	2.5
2	MP3A	Y	-66.1	5
3	MP3B	Y	-66.1	2.5
4	MP3B	Y	-66.1	5
5	MP3C	Y	-66.1	2.5
6	MP3C	Y	-66.1	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	Y	-49.5	1
8	MP2A	Y	-49.5	5
9	MP2B	Y	-49.5	1
10	MP2B	Y	-49.5	5
11	MP2C	Y	-49.5	1
12	MP2C	Y	-49.5	5
13	MP1A	Y	-51.5	3
14	MP1A	Y	-51.5	5
15	MP1B	Y	-51.5	3
16	MP1B	Y	-51.5	5
17	MP1C	Y	-51.5	3
18	MP1C	Y	-51.5	5
19	MP2A	Y	-46	1
20	MP2B	Y	-46	1
21	MP2C	Y	-46	1
22	MP2A	Y	-73.2	3
23	MP2B	Y	-73.2	3
24	MP2C	Y	-73.2	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-91.967	2.5
2	MP3A	Y	-91.967	5
3	MP3B	Y	-91.967	2.5
4	MP3B	Y	-91.967	5
5	MP3C	Y	-91.967	2.5
6	MP3C	Y	-91.967	5
7	MP2A	Y	-213.366	1
8	MP2A	Y	-213.366	5
9	MP2B	Y	-213.366	1
10	MP2B	Y	-213.366	5
11	MP2C	Y	-213.366	1
12	MP2C	Y	-213.366	5
13	MP1A	Y	-76.266	3
14	MP1A	Y	-76.266	5
15	MP1B	Y	-76.266	3
16	MP1B	Y	-76.266	5
17	MP1C	Y	-76.266	3
18	MP1C	Y	-76.266	5
19	MP2A	Y	-54.125	1
20	MP2B	Y	-54.125	1
21	MP2C	Y	-54.125	1
22	MP2A	Y	-81.655	3
23	MP2B	Y	-81.655	3
24	MP2C	Y	-81.655	3

Member Point Loads (BLC 3 : Antenna W Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-186.748	2.5
2	MP3A	Z	-186.748	5
3	MP3B	Z	-148.938	2.5
4	MP3B	Z	-148.938	5
5	MP3C	Z	-148.938	2.5
6	MP3C	Z	-148.938	5
7	MP2A	Z	-580.61	1
8	MP2A	Z	-580.61	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2B	Z	-333.043	1
10	MP2B	Z	-333.043	5
11	MP2C	Z	-333.043	1
12	MP2C	Z	-333.043	5
13	MP1A	Z	-162.077	3
14	MP1A	Z	-162.077	5
15	MP1B	Z	-92.49	3
16	MP1B	Z	-92.49	5
17	MP1C	Z	-92.49	3
18	MP1C	Z	-92.49	5
19	MP2A	Z	-70.568	1
20	MP2B	Z	-39.65	1
21	MP2C	Z	-39.65	1
22	MP2A	Z	-84.768	3
23	MP2B	Z	-72.219	3
24	MP2C	Z	-72.219	3

Member Point Loads (BLC 4 : Antenna Wi Front)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-35.284	2.5
2	MP3A	Z	-35.284	5
3	MP3B	Z	-28.693	2.5
4	MP3B	Z	-28.693	5
5	MP3C	Z	-28.693	2.5
6	MP3C	Z	-28.693	5
7	MP2A	Z	-101.601	1
8	MP2A	Z	-101.601	5
9	MP2B	Z	-60.966	1
10	MP2B	Z	-60.966	5
11	MP2C	Z	-60.966	1
12	MP2C	Z	-60.966	5
13	MP1A	Z	-30.39	3
14	MP1A	Z	-30.39	5
15	MP1B	Z	-18.321	3
16	MP1B	Z	-18.321	5
17	MP1C	Z	-18.321	3
18	MP1C	Z	-18.321	5
19	MP2A	Z	-15.053	1
20	MP2B	Z	-9.337	1
21	MP2C	Z	-9.337	1
22	MP2A	Z	-17.588	3
23	MP2B	Z	-15.358	3
24	MP2C	Z	-15.358	3

Member Point Loads (BLC 5 : Antenna W Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	136.335	2.5
2	MP3A	X	136.335	5
3	MP3B	X	174.145	2.5
4	MP3B	X	174.145	5
5	MP3C	X	174.145	2.5
6	MP3C	X	174.145	5
7	MP2A	X	250.52	1
8	MP2A	X	250.52	5
9	MP2B	X	498.087	1
10	MP2B	X	498.087	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2C	X	498.087	1
12	MP2C	X	498.087	5
13	MP1A	X	69.294	3
14	MP1A	X	69.294	5
15	MP1B	X	138.882	3
16	MP1B	X	138.882	5
17	MP1C	X	138.882	3
18	MP1C	X	138.882	5
19	MP2A	X	39.125	1
20	MP2B	X	80.349	1
21	MP2C	X	80.349	1
22	MP2A	X	90.716	3
23	MP2B	X	107.447	3
24	MP2C	X	107.447	3

Member Point Loads (BLC 6 : Antenna Wi Side)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	26.496	2.5
2	MP3A	X	26.496	5
3	MP3B	X	33.087	2.5
4	MP3B	X	33.087	5
5	MP3C	X	33.087	2.5
6	MP3C	X	33.087	5
7	MP2A	X	47.421	1
8	MP2A	X	47.421	5
9	MP2B	X	88.056	1
10	MP2B	X	88.056	5
11	MP2C	X	88.056	1
12	MP2C	X	88.056	5
13	MP1A	X	14.299	3
14	MP1A	X	14.299	5
15	MP1B	X	26.367	3
16	MP1B	X	26.367	5
17	MP1C	X	26.367	3
18	MP1C	X	26.367	5
19	MP2A	X	9.909	1
20	MP2B	X	17.531	1
21	MP2C	X	17.531	1
22	MP2A	X	19.486	3
23	MP2B	X	22.459	3
24	MP2C	X	22.459	3

Member Point Loads (BLC 7 : Service Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%15

Member Point Loads (BLC 8 : Service Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M25	Y	-500	%85

Member Distributed Loads (BLC 10 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-10.487	-10.487	0	%100
2	M2	Y	-10.487	-10.487	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
3	M3	Y	-10.487	-10.487	0	%100
4	M4	Y	-15.556	-15.556	0	0
5	M5	Y	-15.556	-15.556	0	0
6	M6	Y	-15.556	-15.556	0	0
7	M7	Y	-14.879	-14.879	0	%100
8	M8	Y	-14.879	-14.879	0	%100
9	M9	Y	-14.879	-14.879	0	%100
10	MP1A	Y	-8.76	-8.76	0	%100
11	MP2A	Y	-8.76	-8.76	0	%100
12	M25	Y	-10.487	-10.487	0	%100
13	M26	Y	-10.487	-10.487	0	%100
14	M27	Y	-10.487	-10.487	0	%100
15	M31	Y	-10.487	-10.487	0	0
16	M32	Y	-10.487	-10.487	0	0
17	M33	Y	-10.487	-10.487	0	0
18	MP3A	Y	-8.76	-8.76	0	%100
19	MP1C	Y	-8.76	-8.76	0	%100
20	MP2C	Y	-8.76	-8.76	0	%100
21	MP3C	Y	-8.76	-8.76	0	%100
22	MP1B	Y	-8.76	-8.76	0	%100
23	MP2B	Y	-8.76	-8.76	0	%100
24	MP3B	Y	-8.76	-8.76	0	%100
25	M34	Y	-10.487	-10.487	0	4.048
26	M35	Y	-10.487	-10.487	0	4.048
27	M36	Y	-10.487	-10.487	0	4.048
28	M52	Y	-15.556	-15.556	0	2.2
29	M53	Y	-15.556	-15.556	0	2.2
30	M54	Y	-15.556	-15.556	0	2.2

Member Distributed Loads (BLC 11 : Structure W Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-28.686	-28.686	0	%100
2	M2	PZ	-28.686	-28.686	0	%100
3	M3	PZ	-28.686	-28.686	0	%100
4	M4	PZ	-38.248	-38.248	0	0
5	M5	PZ	-38.248	-38.248	0	0
6	M6	PZ	-38.248	-38.248	0	0
7	M7	PZ	-28.686	-28.686	0	%100
8	M8	PZ	-28.686	-28.686	0	%100
9	M9	PZ	-28.686	-28.686	0	%100
10	MP1A	PZ	-13.626	-13.626	0	%100
11	MP2A	PZ	-13.626	-13.626	0	%100
12	M25	PZ	-28.686	-28.686	0	%100
13	M26	PZ	-28.686	-28.686	0	%100
14	M27	PZ	-28.686	-28.686	0	%100
15	M31	PZ	-28.686	-28.686	0	0
16	M32	PZ	-28.686	-28.686	0	0
17	M33	PZ	-28.686	-28.686	0	0
18	MP3A	PZ	-13.626	-13.626	0	%100
19	MP1C	PZ	-13.626	-13.626	0	%100
20	MP2C	PZ	-13.626	-13.626	0	%100
21	MP3C	PZ	-13.626	-13.626	0	%100
22	MP1B	PZ	-13.626	-13.626	0	%100
23	MP2B	PZ	-13.626	-13.626	0	%100
24	MP3B	PZ	-13.626	-13.626	0	%100
25	M34	PZ	-28.686	-28.686	0	4.048

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
26	M35	PZ	-28.686	-28.686	0	4.048
27	M36	PZ	-28.686	-28.686	0	4.048
28	M52	PZ	-38.248	-38.248	0	2.2
29	M53	PZ	-38.248	-38.248	0	2.2
30	M54	PZ	-38.248	-38.248	0	2.2

Member Distributed Loads (BLC 12 : Structure Wi Front)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PZ	-7.787	-7.787	0	%100
2	M2	PZ	-7.787	-7.787	0	%100
3	M3	PZ	-7.787	-7.787	0	%100
4	M4	PZ	-9.317	-9.317	0	0
5	M5	PZ	-9.317	-9.317	0	0
6	M6	PZ	-9.317	-9.317	0	0
7	M7	PZ	-7.787	-7.787	0	%100
8	M8	PZ	-7.787	-7.787	0	%100
9	M9	PZ	-7.787	-7.787	0	%100
10	MP1A	PZ	-5.378	-5.378	0	%100
11	MP2A	PZ	-5.378	-5.378	0	%100
12	M25	PZ	-7.787	-7.787	0	%100
13	M26	PZ	-7.787	-7.787	0	%100
14	M27	PZ	-7.787	-7.787	0	%100
15	M31	PZ	-7.787	-7.787	0	0
16	M32	PZ	-7.787	-7.787	0	0
17	M33	PZ	-7.787	-7.787	0	0
18	MP3A	PZ	-5.378	-5.378	0	%100
19	MP1C	PZ	-5.378	-5.378	0	%100
20	MP2C	PZ	-5.378	-5.378	0	%100
21	MP3C	PZ	-5.378	-5.378	0	%100
22	MP1B	PZ	-5.378	-5.378	0	%100
23	MP2B	PZ	-5.378	-5.378	0	%100
24	MP3B	PZ	-5.378	-5.378	0	%100
25	M34	PZ	-7.787	-7.787	0	4.048
26	M35	PZ	-7.787	-7.787	0	4.048
27	M36	PZ	-7.787	-7.787	0	4.048
28	M52	PZ	-9.317	-9.317	0	2.2
29	M53	PZ	-9.317	-9.317	0	2.2
30	M54	PZ	-9.317	-9.317	0	2.2

Member Distributed Loads (BLC 13 : Structure W Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	28.686	28.686	0	%100
2	M2	PX	28.686	28.686	0	%100
3	M3	PX	28.686	28.686	0	%100
4	M4	PX	38.248	38.248	0	0
5	M5	PX	38.248	38.248	0	0
6	M6	PX	38.248	38.248	0	0
7	M7	PX	28.686	28.686	0	%100
8	M8	PX	28.686	28.686	0	%100
9	M9	PX	28.686	28.686	0	%100
10	MP1A	PX	13.626	13.626	0	%100
11	MP2A	PX	13.626	13.626	0	%100
12	M25	PX	28.686	28.686	0	%100
13	M26	PX	28.686	28.686	0	%100
14	M27	PX	28.686	28.686	0	%100
15	M31	PX	28.686	28.686	0	0

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
16	M32	PX	28.686	28.686	0	0
17	M33	PX	28.686	28.686	0	0
18	MP3A	PX	13.626	13.626	0	%100
19	MP1C	PX	13.626	13.626	0	%100
20	MP2C	PX	13.626	13.626	0	%100
21	MP3C	PX	13.626	13.626	0	%100
22	MP1B	PX	13.626	13.626	0	%100
23	MP2B	PX	13.626	13.626	0	%100
24	MP3B	PX	13.626	13.626	0	%100
25	M34	PX	28.686	28.686	0	4.048
26	M35	PX	28.686	28.686	0	4.048
27	M36	PX	28.686	28.686	0	4.048
28	M52	PX	38.248	38.248	0	2.2
29	M53	PX	38.248	38.248	0	2.2
30	M54	PX	38.248	38.248	0	2.2

Member Distributed Loads (BLC 14 : Structure Wi Side)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	PX	7.787	7.787	0	%100
2	M2	PX	7.787	7.787	0	%100
3	M3	PX	7.787	7.787	0	%100
4	M4	PX	9.317	9.317	0	0
5	M5	PX	9.317	9.317	0	0
6	M6	PX	9.317	9.317	0	0
7	M7	PX	7.787	7.787	0	%100
8	M8	PX	7.787	7.787	0	%100
9	M9	PX	7.787	7.787	0	%100
10	MP1A	PX	5.378	5.378	0	%100
11	MP2A	PX	5.378	5.378	0	%100
12	M25	PX	7.787	7.787	0	%100
13	M26	PX	7.787	7.787	0	%100
14	M27	PX	7.787	7.787	0	%100
15	M31	PX	7.787	7.787	0	0
16	M32	PX	7.787	7.787	0	0
17	M33	PX	7.787	7.787	0	0
18	MP3A	PX	5.378	5.378	0	%100
19	MP1C	PX	5.378	5.378	0	%100
20	MP2C	PX	5.378	5.378	0	%100
21	MP3C	PX	5.378	5.378	0	%100
22	MP1B	PX	5.378	5.378	0	%100
23	MP2B	PX	5.378	5.378	0	%100
24	MP3B	PX	5.378	5.378	0	%100
25	M34	PX	7.787	7.787	0	4.048
26	M35	PX	7.787	7.787	0	4.048
27	M36	PX	7.787	7.787	0	4.048
28	M52	PX	9.317	9.317	0	2.2
29	M53	PX	9.317	9.317	0	2.2
30	M54	PX	9.317	9.317	0	2.2

Member Area Loads

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

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	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N3	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

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	N1	max	2678.464	10	2558.848	19	1710.878	1	-1.553	1	1.479	10	.949	26
2		min	-2664.341	4	617.68	1	-1579.233	7	-6.959	19	-1.462	4	-1.06	25
3	N2	max	2481.501	11	2497.549	15	3021.741	12	3.177	14	2.981	5	5.988	16
4		min	-2409.749	5	580.135	9	-3067.816	6	.469	8	-2.979	11	1.265	10
5	N3	max	2371.06	9	2503.202	23	2969.061	2	3.419	24	2.914	3	-1.214	4
6		min	-2456.967	3	581.833	5	-3046.99	8	.571	6	-2.925	9	-5.867	22
7	Totals:	max	7208.105	10	7325.259	19	7197.824	1						
8		min	-7208.103	4	2979.368	1	-7197.81	7						

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 Mom...	LC
1	M1	1	max	1557.561	9	386.248	7	324.715	25	.011	25	.266	1	.235	7
2			min	-1758.006	3	-421.913	1	-56.598	26	-.001	2	-.37	7	-.387	1
3		2	max	1615.661	8	109.849	25	-9.887	1	.001	2	.227	7	.485	25
4			min	-1305.369	2	1.241	1	-220.148	25	-.004	8	-.093	1	.083	9
5		3	max	1615.661	8	109.849	25	-20.912	1	.001	2	.127	7	.136	2
6			min	-1305.369	2	11.305	7	-231.173	25	-.004	8	-.076	1	-.086	8
7		4	max	1615.661	8	109.849	25	-31.937	1	.001	2	.005	2	-.011	2
8			min	-1305.369	2	-42.482	7	-242.198	25	-.004	8	-.114	25	-.419	25
9		5	max	1461.595	7	1473.589	1	-431.807	1	.07	7	.266	1	.107	5
10			min	-1066.786	1	-1303.753	7	-1920.612	19	-.059	1	-.589	7	-1.089	25
11	M2	1	max	1545.574	5	373.93	3	110.013	3	.008	17	.234	9	.206	3
12			min	-1778.477	11	-417.037	9	-154.637	26	0	11	-.342	3	-.358	9
13		2	max	1553.685	4	61.946	16	1.368	25	.001	10	.218	3	.279	22
14			min	-1271.769	10	9.521	10	-131.916	26	-.003	4	-.087	9	.04	25
15		3	max	1530.395	4	64.886	21	-9.657	25	.001	10	.115	3	.124	10
16			min	-1248.479	10	.748	3	-142.941	26	-.003	4	-.06	9	-.095	4
17		4	max	1507.105	4	93.318	9	-20.682	25	.001	10	.017	10	-.007	10
18			min	-1225.189	10	-40.911	3	-167.929	15	-.003	4	-.088	26	-.363	26
19		5	max	1332.362	2	1250.27	9	-415.586	9	.059	3	.256	9	-.075	1
20			min	-980.824	8	-1117.174	3	-1879.853	15	-.08	9	-.634	3	-.989	26
21	M3	1	max	1616.14	1	372.428	11	121.32	26	.006	24	.257	5	.235	11
22			min	-1850.486	7	-396.511	5	-86.627	25	0	25	-.37	11	-.376	4
23		2	max	1659.363	12	68.069	22	-3.625	5	.002	5	.239	11	.316	18
24			min	-1383.995	6	6.381	4	-122.376	23	-.003	11	-.099	5	.067	2
25		3	max	1650.838	12	70.129	17	-14.65	5	.002	5	.13	10	.12	6
26			min	-1375.471	6	5.66	11	-153.065	23	-.003	11	-.077	4	-.08	12
27		4	max	1642.314	12	93.207	5	-25.675	5	.002	5	.01	6	-.009	6
28			min	-1366.946	6	-35.999	11	-183.753	23	-.003	11	-.075	24	-.267	24
29		5	max	1683.927	11	1264.1	5	-411.966	5	.053	11	.213	5	.012	8
30			min	-1295.212	5	-1101.76	11	-1900.823	23	-.079	5	-.468	11	-.724	15
31	M4	1	max	1710.878	1	2558.509	19	2664.367	4	.949	26	1.479	10	6.959	19
32			min	-1579.233	7	618.345	1	-2678.48	10	-1.06	25	-1.462	4	1.553	1
33		2	max	1710.878	1	2552.438	19	2656.718	4	.949	26	.944	10	6.447	19
34			min	-1579.233	7	615.385	1	-2670.83	10	-1.06	25	-.93	4	1.43	1
35		3	max	1710.878	1	2546.367	19	2649.068	4	.949	26	.411	10	5.938	19
36			min	-1579.233	7	612.425	1	-2663.181	10	-1.06	25	-.4	4	1.307	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 Mom...	LC
37		4	max	1710.878	1	2540.295	19	2641.418	4	.949	26	.131	5	5.429	19
38			min	-1579.233	7	609.465	1	-2655.531	10	-1.06	25	-.122	11	1.185	1
39		5	max	1710.878	1	2534.224	19	2633.769	4	.949	26	.657	4	4.921	19
40			min	-1579.233	7	606.505	1	-2647.881	10	-1.06	25	-.651	10	1.063	1
41	M5	1	max	1494.445	9	2497.185	15	3615.157	12	.488	12	2.981	5	6.751	15
42			min	-1404.515	3	580.666	9	-3620.671	6	-1.111	26	-2.979	11	1.43	9
43		2	max	1489.921	9	2491.113	15	3609.232	12	.488	12	2.307	5	6.252	15
44			min	-1399.991	3	577.706	9	-3614.746	6	-1.111	26	-2.305	11	1.314	9
45		3	max	1485.396	9	2485.042	15	3603.308	12	.488	12	1.634	5	5.754	15
46			min	-1395.466	3	574.746	9	-3608.821	6	-1.111	26	-1.633	11	1.199	9
47		4	max	1480.871	9	2478.971	15	3597.383	12	.488	12	.962	5	5.258	15
48			min	-1390.941	3	571.786	9	-3602.896	6	-1.111	26	-.961	11	1.084	9
49		5	max	1476.346	9	2472.9	15	3591.458	12	.488	12	.431	3	4.763	15
50			min	-1386.416	3	568.826	9	-3596.971	6	-1.111	26	-.43	9	.97	9
51	M6	1	max	1516.858	5	2502.888	23	3577.253	8	.943	25	2.914	3	6.766	23
52			min	-1398.899	11	582.374	5	-3551.264	2	-.587	2	-2.925	9	1.437	5
53		2	max	1512.333	5	2496.816	23	3571.328	8	.943	25	2.251	3	6.266	23
54			min	-1394.374	11	579.414	5	-3545.34	2	-.587	2	-2.257	9	1.321	5
55		3	max	1507.808	5	2490.745	23	3565.403	8	.943	25	1.588	3	5.768	23
56			min	-1389.849	11	576.454	5	-3539.415	2	-.587	2	-1.59	9	1.205	5
57		4	max	1503.283	5	2484.674	23	3559.478	8	.943	25	.927	3	5.27	23
58			min	-1385.324	11	573.494	5	-3533.49	2	-.587	2	-.925	9	1.09	5
59		5	max	1498.759	5	2478.603	23	3553.553	8	.943	25	.421	5	4.774	23
60			min	-1380.799	11	570.534	5	-3527.565	2	-.587	2	-.415	11	.976	5
61	M7	1	max	3236.071	3	14.597	3	161.674	6	.002	6	.697	12	-.119	4
62			min	-2879.921	9	-141.814	25	-161.952	12	-.002	12	-.697	6	-.364	22
63		2	max	3252.979	3	5.727	3	183.814	6	.002	6	.525	12	-.104	8
64			min	-2896.829	9	-150.684	25	-184.091	12	-.002	12	-.525	6	-.281	24
65		3	max	3269.888	3	-3.144	3	205.954	6	.002	6	.33	12	-.02	9
66			min	-2913.737	9	-159.554	25	-206.231	12	-.002	12	-.33	6	-.19	15
67		4	max	3286.796	3	-12.014	3	228.093	6	.002	6	.123	11	.107	25
68			min	-2930.646	9	-168.425	25	-228.371	12	-.002	12	-.123	5	-.125	3
69		5	max	3303.704	3	-20.884	3	250.233	6	.002	6	.157	7	.279	25
70			min	-2947.554	9	-177.295	25	-250.511	12	-.002	12	-.156	1	-.108	3
71	M8	1	max	3245.237	11	14.434	11	172.452	2	.002	2	.749	8	-.12	12
72			min	-2855.329	5	-144.691	26	-178.215	8	-.002	26	-.73	2	-.369	18
73		2	max	3262.146	11	5.563	11	194.592	2	.002	2	.561	8	-.106	4
74			min	-2872.237	5	-153.561	26	-200.354	8	-.002	26	-.547	2	-.283	20
75		3	max	3279.054	11	-3.307	11	216.732	2	.002	2	.35	8	-.02	5
76			min	-2889.146	5	-162.432	26	-222.494	8	-.002	26	-.342	2	-.189	23
77		4	max	3295.962	11	-12.177	11	238.872	2	.002	2	.128	9	.11	26
78			min	-2906.054	5	-171.302	26	-244.634	8	-.002	26	-.127	3	-.124	11
79		5	max	3312.871	11	-21.048	11	261.011	2	.002	2	.163	1	.286	26
80			min	-2922.962	5	-180.172	26	-266.774	8	-.002	26	-.168	7	-.108	11
81	M9	1	max	3283.962	7	17.175	7	220.978	10	.001	10	.823	4	-.111	8
82			min	-2882.983	1	-73.322	1	-224.632	4	-.001	4	-.811	10	-.36	14
83		2	max	3283.962	7	8.304	7	249.563	10	.001	10	.585	4	-.109	11
84			min	-2882.983	1	-90.142	13	-253.217	4	-.001	4	-.576	10	-.283	15
85		3	max	3283.962	7	-.566	7	278.148	10	.001	10	.319	4	-.029	1
86			min	-2882.983	1	-113.839	13	-281.802	4	-.001	4	-.313	10	-.195	19
87		4	max	3283.962	7	-9.436	7	306.733	10	.001	10	.024	4	.066	1
88			min	-2882.983	1	-137.535	13	-310.388	4	-.001	4	-.022	10	-.123	7
89		5	max	3283.962	7	-18.306	7	335.318	10	.001	10	.298	10	.17	1
90			min	-2882.983	1	-161.232	13	-338.973	4	-.001	4	-.3	4	-.11	7
91	MP1A	1	max	0	1	.01	11	.022	1	0	17	0	1	0	1
92			min	0	1	-.047	17	-.029	19	0	11	0	1	0	1
93		2	max	25.85	15	27.261	10	27.274	1	0	17	.027	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 Mom...	LC
94			min	8.33	4	-27.271	4	-27.278	7	0	11	-.027	7	-.027	10
95		3	max	114.655	8	727.238	26	176.689	1	.02	4	.192	1	-.072	4
96			min	-304.28	26	20.466	3	-95.154	7	-.032	10	-.166	7	-.548	26
97		4	max	-8.329	26	27.375	4	27.315	7	0	25	.027	1	.027	4
98			min	-25.849	23	-27.318	10	-27.319	1	0	26	-.027	7	-.027	10
99		5	max	.001	26	.201	26	.082	8	0	25	0	26	0	2
100			min	0	11	-.085	25	-.086	2	0	26	0	11	0	8
101	MP2A	1	max	0	1	.251	25	.743	1	0	4	0	1	0	1
102			min	0	1	-.24	4	-.786	7	0	25	0	1	0	1
103		2	max	404.709	22	313.737	10	675.767	1	0	4	.511	1	.239	4
104			min	121.889	7	-313.731	4	-675.81	7	0	25	-.511	7	-.239	10
105		3	max	1382.19	19	553.462	10	685.172	1	.064	8	.68	1	.489	4
106			min	314.792	1	-634.751	4	-589.144	7	-.045	2	-.382	7	-.388	10
107		4	max	-7.289	1	23.806	4	24.075	7	0	17	.021	1	.021	4
108			min	-22.619	19	-23.843	10	-23.882	1	0	26	-.021	7	-.021	10
109		5	max	0	1	.052	26	1.156	19	0	17	0	1	0	1
110			min	0	19	-.228	17	-.037	1	0	26	0	1	0	7
111	M25	1	max	1802.367	6	102.781	7	274.672	26	.002	15	.133	1	-.223	10
112			min	-1416.454	12	-171.89	1	50.952	1	0	8	-.367	7	-.971	26
113		2	max	1802.367	6	48.994	7	263.647	26	.002	15	.006	12	-.03	11
114			min	-1416.454	12	-118.104	1	39.927	1	0	8	-.133	26	-.463	26
115		3	max	1802.367	6	-4.793	7	252.622	26	.002	15	.13	8	.129	12
116			min	-1416.454	12	-113.675	26	28.902	1	0	8	-.075	2	-.099	6
117		4	max	1802.367	6	-10.53	1	241.597	26	.002	15	.249	7	.508	26
118			min	-1416.454	12	-113.675	26	17.877	1	0	8	-.093	1	.077	5
119		5	max	1597.41	6	433.773	1	68.574	2	0	25	.271	1	.24	7
120			min	-1782.162	12	-428.107	7	-298.92	26	-.011	26	-.39	7	-.375	1
121	M26	1	max	1782.759	2	73.175	3	232.889	15	.002	23	.113	9	-.095	25
122			min	-1435.061	8	-134.567	9	35.189	9	0	4	-.339	3	-.674	24
123		2	max	1791.283	2	31.516	3	202.2	15	.002	23	.012	8	-.023	8
124			min	-1443.586	8	-92.908	9	24.164	9	0	4	-.085	14	-.313	14
125		3	max	1799.808	2	-10.143	3	171.512	15	.002	23	.136	4	.1	8
126			min	-1452.11	8	-75.82	21	13.139	9	0	4	-.08	10	-.072	2
127		4	max	1808.333	2	-9.455	10	140.823	15	.002	23	.256	4	.328	19
128			min	-1460.635	8	-74.037	16	2.114	9	0	4	-.103	10	.068	25
129		5	max	1604.772	2	350.866	10	106.263	26	0	26	.237	9	.204	4
130			min	-1814.232	8	-345.519	3	-98.692	25	-.005	14	-.357	3	-.337	10
131	M27	1	max	1651.755	10	83.463	11	219.719	23	.003	20	.126	5	-.086	26
132			min	-1265.991	4	-141.97	5	35.044	26	0	1	-.341	11	-.728	25
133		2	max	1675.045	10	41.804	11	189.03	23	.003	20	.02	4	-.03	26
134			min	-1289.282	4	-100.311	5	24.019	26	0	1	-.111	25	-.404	25
135		3	max	1698.335	10	.146	11	163.279	25	.003	20	.114	12	.118	3
136			min	-1312.572	4	-74.085	17	12.994	26	0	1	-.064	6	-.101	9
137		4	max	1721.626	10	-12.835	26	152.254	25	.003	20	.232	12	.303	15
138			min	-1335.862	4	-69.592	22	1.969	26	0	1	-.094	6	.027	8
139		5	max	1639.242	10	340.783	5	183.256	25	.002	4	.203	5	.148	11
140			min	-1814.693	4	-319.194	11	-86.35	12	-.006	22	-.305	11	-.299	5
141	M31	1	max	2010.051	3	84.219	8	-5.557	4	0	3	.079	2	.031	4
142			min	-1775.631	9	-27.762	1	-90.08	25	-.002	25	-.097	8	-.18	25
143		2	max	2027.223	3	88.821	8	-11.507	4	0	3	.046	3	.025	3
144			min	-1792.803	9	-32.137	2	-104.248	22	-.002	25	-.08	9	-.289	25
145		3	max	2044.395	3	99.971	9	-17.458	4	0	3	.009	3	.039	3
146			min	-1809.975	9	-43.054	3	-120.812	22	-.002	25	-.102	25	-.403	25
147		4	max	2061.567	3	115.199	9	-23.409	4	0	3	-.016	26	.059	3
148			min	-1827.147	9	-58.281	3	-137.376	22	-.002	25	-.134	25	-.521	25
149		5	max	2078.74	3	130.538	10	-29.359	4	0	3	-.021	9	.086	3
150			min	-1844.319	9	-74.143	4	-153.941	22	-.002	25	-.17	25	-.643	25

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 Mom...	LC
151	M32	1	max	1905.197	7	127.469	11	-12.013	25	.001	26	.111	5	.099	9
152			min	-1642.007	1	-72.332	5	-85.657	13	0	2	-.127	11	-.141	3
153		2	max	1917.768	7	112.242	11	-17.964	25	.001	26	.045	5	.045	8
154			min	-1654.578	1	-57.105	5	-102.222	13	0	2	-.076	11	-.177	2
155		3	max	1930.339	7	97.014	11	-23.915	25	.001	26	.002	7	.033	7
156			min	-1667.149	1	-41.877	5	-118.786	13	0	2	-.068	13	-.302	13
157		4	max	1942.909	7	90.262	12	-29.865	25	.001	26	-.009	9	.028	7
158			min	-1682.391	12	-34.365	6	-135.35	13	0	2	-.109	16	-.449	13
159		5	max	1957.396	6	89.047	1	-35.816	25	.001	26	-.015	11	.025	7
160			min	-1699.563	12	-32.891	7	-151.914	13	0	2	-.164	17	-.609	13
161	M33	1	max	1831.439	11	87.675	2	-18.182	12	.001	11	.045	8	.094	12
162			min	-1569.78	5	-30.84	8	-93.099	26	-.002	26	-.064	2	-.188	26
163		2	max	1831.439	11	78.717	14	-24.133	12	.001	11	.012	10	.046	11
164			min	-1569.78	5	-5.698	8	-107.609	18	-.002	26	-.069	26	-.298	26
165		3	max	1831.439	11	74.885	16	-30.084	12	.001	11	0	12	.011	11
166			min	-1569.78	5	9.503	10	-124.173	18	-.002	26	-.101	26	-.412	26
167		4	max	1831.439	11	78.991	18	-36.034	12	.001	11	-.019	12	-.018	11
168			min	-1569.78	5	-6.817	12	-140.737	18	-.002	26	-.137	26	-.53	26
169		5	max	1831.439	11	89.88	6	-41.985	12	.001	11	-.059	11	-.041	11
170			min	-1569.78	5	-31.959	12	-157.301	18	-.002	26	-.177	26	-.653	26
171	MP3A	1	max	0	1	.054	21	.021	1	0	3	0	1	0	1
172			min	0	1	-.01	3	-.031	19	0	21	0	1	0	1
173		2	max	25.85	14	27.272	10	27.273	1	0	3	.027	1	.027	4
174			min	8.33	7	-27.26	4	-27.277	7	0	21	-.027	7	-.027	10
175		3	max	117.423	7	23.214	11	151.473	24	.019	26	.217	1	.474	25
176			min	-317.03	25	-673.555	25	-41.361	6	-.007	12	-.186	7	-.017	10
177		4	max	-8.329	25	27.31	4	27.265	7	0	25	.027	1	.027	4
178			min	-25.849	15	-27.378	10	-27.278	1	0	26	-.027	7	-.028	10
179		5	max	.001	25	.089	26	.054	26	0	25	0	25	0	6
180			min	0	3	-.246	25	-.073	20	0	26	0	3	0	12
181	M20	1	max	372.574	1	220.975	25	715.402	4	.587	25	.072	25	.023	25
182			min	-263.721	7	-212.908	7	-206.359	10	.193	9	-.017	10	-.045	7
183		2	max	372.574	1	220.975	25	715.402	4	.587	25	.1	25	.014	25
184			min	-263.721	7	-212.908	7	-206.359	10	.193	9	-.026	10	-.036	7
185		3	max	372.574	1	220.975	25	715.402	4	.587	25	.128	25	.007	1
186			min	-263.721	7	-212.908	7	-206.359	10	.193	9	-.035	10	-.027	7
187		4	max	372.574	1	220.975	25	715.402	4	.587	25	.156	25	.005	1
188			min	-263.721	7	-212.908	7	-206.359	10	.193	9	-.043	10	-.018	7
189		5	max	372.574	1	220.975	25	715.402	4	.587	25	.184	25	.003	2
190			min	-263.721	7	-212.908	7	-206.359	10	.193	9	-.052	10	-.013	25
191	M21	1	max	394.028	1	225.723	26	86.986	3	-.231	3	-.002	2	.026	26
192			min	-311.39	7	-192.175	8	-743.882	22	-.67	26	-.057	26	-.035	7
193		2	max	394.028	1	225.723	26	86.986	3	-.231	3	0	3	.016	26
194			min	-311.39	7	-192.175	8	-743.882	22	-.67	26	-.088	26	-.027	19
195		3	max	394.028	1	225.723	26	86.986	3	-.231	3	.003	3	.007	26
196			min	-311.39	7	-192.175	8	-743.882	22	-.67	26	-.118	26	-.02	19
197		4	max	394.028	1	225.723	26	86.986	3	-.231	3	.006	3	0	1
198			min	-311.39	7	-192.175	8	-743.882	22	-.67	26	-.148	26	-.013	19
199		5	max	394.028	1	225.723	26	86.986	3	-.231	3	.01	3	0	10
200			min	-311.39	7	-192.175	8	-743.882	22	-.67	26	-.179	26	-.012	26
201	M21A	1	max	1310.871	1	-382.195	1	930.773	4	.34	4	.119	3	-.077	8
202			min	-1207.458	7	-1699.294	19	-849.546	10	-.212	10	-.13	9	-.264	14
203		2	max	1310.871	1	-382.195	1	930.773	4	.34	4	.153	4	-.039	7
204			min	-1207.458	7	-1699.294	19	-849.546	10	-.212	10	-.161	10	-.197	13
205		3	max	1310.871	1	-382.195	1	930.773	4	.34	4	.192	4	-.002	7
206			min	-1207.458	7	-1699.294	19	-849.546	10	-.212	10	-.196	10	-.13	13
207		4	max	1310.871	1	-382.195	1	930.773	4	.34	4	.23	4	.036	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 Mom...	LC
208			min	-1207.458	7	-1699.294	19	-849.546	10	-.212	10	-.232	10	-.076	1
209		5	max	1310.871	1	-382.195	1	930.773	4	.34	4	.269	4	.074	7
210			min	-1207.458	7	-1699.294	19	-849.546	10	-.212	10	-.267	10	-.06	1
211	MP1C	1	max	0	1	.021	22	.041	14	0	4	0	1	0	1
212			min	0	1	-.018	4	-.016	8	0	22	0	1	0	1
213		2	max	25.85	23	27.272	10	27.274	1	0	4	.027	1	.027	4
214			min	8.33	10	-27.27	4	-27.266	7	0	22	-.027	7	-.027	10
215		3	max	105.292	3	160.252	11	4.352	11	.052	15	0	25	.305	4
216			min	-151.121	9	-376.564	5	-644.91	18	0	25	-.462	19	-.1	10
217		4	max	-8.329	2	27.319	4	27.303	7	0	24	.027	1	.027	4
218			min	-25.849	19	-27.361	10	-27.321	1	0	5	-.027	7	-.027	10
219		5	max	0	14	.073	5	.078	25	0	24	0	13	0	10
220			min	0	7	-.14	24	-.075	12	0	5	0	7	0	4
221	MP2C	1	max	0	1	.644	10	.394	2	0	3	0	1	0	1
222			min	0	1	-.648	3	-.409	8	0	10	0	1	0	1
223		2	max	404.709	20	602.926	10	396.887	1	0	3	.301	1	.456	4
224			min	121.889	5	-602.929	4	-396.904	7	0	10	-.301	7	-.456	10
225		3	max	1364.899	15	677.81	10	573.611	1	.047	4	.45	1	.391	4
226			min	303.359	9	-578.512	4	-554.882	7	-.03	10	-.433	7	-.568	10
227		4	max	-7.289	9	24.002	4	23.86	7	0	8	.021	1	.021	4
228			min	-22.619	15	-23.92	10	-23.847	1	0	15	-.021	7	-.021	10
229		5	max	0	6	.56	15	.142	22	0	8	0	1	0	11
230			min	0	15	-.117	8	-.086	4	0	15	0	1	0	5
231	MP3C	1	max	0	1	.024	9	.009	1	0	15	0	1	0	1
232			min	0	1	-.038	15	-.058	19	0	9	0	1	0	1
233		2	max	25.85	23	27.275	10	27.261	1	0	15	.027	1	.027	4
234			min	8.33	26	-27.281	4	-27.274	7	0	9	-.027	7	-.027	10
235		3	max	93.364	3	423.095	23	584.697	26	.021	25	.505	26	.137	4
236			min	-168.537	9	51.829	5	-93.78	7	-.032	26	-.038	7	-.317	10
237		4	max	-8.329	26	27.288	4	27.438	7	0	25	.027	1	.027	4
238			min	-25.849	23	-27.328	10	-27.324	1	0	26	-.028	7	-.027	10
239		5	max	.001	26	.152	26	.34	18	0	25	0	26	0	9
240			min	0	11	-.197	25	-.072	1	0	26	0	11	0	3
241	M25A	1	max	388.666	9	74.278	9	753.853	12	.7	26	.029	4	.012	9
242			min	-286.26	3	-188.615	3	-239.365	6	.011	25	-.049	10	-.038	3
243		2	max	388.666	9	74.278	9	753.853	12	.7	26	.035	3	.009	9
244			min	-286.26	3	-188.615	3	-239.365	6	.011	25	-.034	9	-.031	3
245		3	max	388.666	9	74.278	9	753.853	12	.7	26	.053	2	.005	9
246			min	-286.26	3	-188.615	3	-239.365	6	.011	25	-.03	8	-.023	3
247		4	max	388.666	9	74.278	9	753.853	12	.7	26	.082	26	.003	10
248			min	-286.26	3	-188.615	3	-239.365	6	.011	25	-.032	7	-.015	4
249		5	max	388.666	9	74.278	9	753.853	12	.7	26	.111	26	.001	11
250			min	-286.26	3	-188.615	3	-239.365	6	.011	25	-.04	7	-.01	16
251	M26A	1	max	321.534	10	73.655	9	231.58	11	-.007	25	.038	4	.01	9
252			min	-249.011	4	-183.148	3	-786.736	5	-.602	16	-.062	10	-.034	3
253		2	max	321.534	10	73.655	9	231.58	11	-.007	25	.009	4	.007	9
254			min	-249.011	4	-183.148	3	-786.736	5	-.602	16	-.057	22	-.026	3
255		3	max	321.534	10	73.655	9	231.58	11	-.007	25	-.006	25	.004	9
256			min	-249.011	4	-183.148	3	-786.736	5	-.602	16	-.082	20	-.019	3
257		4	max	321.534	10	73.655	9	231.58	11	-.007	25	-.007	25	.001	26
258			min	-249.011	4	-183.148	3	-786.736	5	-.602	16	-.112	18	-.012	15
259		5	max	321.534	10	73.655	9	231.58	11	-.007	25	-.007	25	0	26
260			min	-249.011	4	-183.148	3	-786.736	5	-.602	16	-.143	18	-.007	14
261	M27A	1	max	1115.183	9	-369.236	9	1069.788	12	.184	1	.064	4	-.09	3
262			min	-1035.188	3	-1682.459	15	-1001.683	6	-.193	26	-.092	10	-.303	21
263		2	max	1115.183	9	-369.236	9	1069.788	12	.184	1	.053	3	-.052	3
264			min	-1035.188	3	-1682.459	15	-1001.683	6	-.193	26	-.077	9	-.237	21

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 Mom...	LC
265		3	max	1115.183	9	-369.236	9	1069.788	12	.184	1	.067	2	-.014	3
266			min	-1035.188	3	-1682.459	15	-1001.683	6	-.193	26	-.089	8	-.171	21
267		4	max	1115.183	9	-369.236	9	1069.788	12	.184	1	.1	1	.023	3
268			min	-1035.188	3	-1682.459	15	-1001.683	6	-.193	26	-.119	7	-.106	21
269		5	max	1115.183	9	-369.236	9	1069.788	12	.184	1	.136	1	.061	3
270			min	-1035.188	3	-1682.459	15	-1001.683	6	-.193	26	-.153	7	-.081	9
271	MP1B	1	max	0	1	.039	22	.009	1	0	4	0	1	0	1
272			min	0	1	-.019	4	-.041	19	0	22	0	1	0	1
273		2	max	25.85	14	27.278	10	27.261	1	0	4	.027	1	.027	4
274			min	8.33	11	-27.271	4	-27.27	7	0	22	-.027	7	-.027	10
275		3	max	99.559	12	-70.563	9	620.416	25	.064	25	.567	25	.316	25
276			min	-166.43	6	-434.457	15	-100.89	7	.004	26	.006	7	-.084	10
277		4	max	-8.329	25	27.271	4	27.399	7	0	25	.027	1	.027	4
278			min	-25.849	15	-27.265	10	-27.323	1	0	26	-.028	7	-.027	10
279		5	max	.001	25	.126	26	.248	20	0	25	0	25	0	11
280			min	0	3	-.147	25	-.074	2	0	26	0	4	0	5
281	MP2B	1	max	0	1	.624	10	.388	12	0	4	0	1	0	1
282			min	0	1	-.636	4	-.391	6	0	10	0	1	0	1
283		2	max	404.709	18	602.906	10	396.88	1	0	4	.301	1	.456	4
284			min	121.889	26	-602.918	4	-396.884	7	0	10	-.301	7	-.456	10
285		3	max	1370.113	23	636.992	10	493.691	1	.039	12	.337	1	.556	4
286			min	301.259	5	-669.921	4	-641.554	7	-.037	6	-.497	7	-.484	10
287		4	max	-7.289	5	23.92	4	23.844	7	0	24	.021	1	.021	4
288			min	-22.619	23	-23.949	10	-23.885	1	0	6	-.021	7	-.021	10
289		5	max	0	2	.114	6	.096	4	0	24	0	1	0	9
290			min	0	23	-.276	24	-.324	22	0	6	0	1	0	3
291	MP3B	1	max	0	1	.017	10	.047	24	0	16	0	1	0	1
292			min	0	1	-.031	16	-.016	6	0	10	0	1	0	1
293		2	max	25.85	18	27.269	10	27.275	1	0	16	.027	1	.027	4
294			min	8.33	1	-27.274	4	-27.266	7	0	10	-.027	7	-.027	10
295		3	max	88.275	11	340.073	9	3.277	2	.006	26	.055	1	.127	4
296			min	-145.735	5	-159.587	3	-603.745	20	-.04	23	-.404	19	-.298	10
297		4	max	-8.329	1	27.386	4	27.298	7	0	25	.027	1	.028	4
298			min	-25.849	19	-27.311	10	-27.311	1	0	14	-.027	7	-.027	10
299		5	max	0	13	.231	14	.116	26	0	25	0	13	0	10
300			min	0	7	-.075	25	-.065	2	0	14	0	7	0	4
301	M31A	1	max	367.856	5	50.915	5	778.219	9	.508	21	.053	4	.01	5
302			min	-279.7	11	-183.711	11	-268.331	3	-.003	26	-.036	10	-.038	11
303		2	max	367.856	5	50.915	5	778.219	9	.508	21	.047	5	.007	5
304			min	-279.7	11	-183.711	11	-268.331	3	-.003	26	-.009	10	-.03	11
305		3	max	367.856	5	50.915	5	778.219	9	.508	21	.068	19	.005	5
306			min	-279.7	11	-183.711	11	-268.331	3	-.003	26	.002	26	-.022	11
307		4	max	367.856	5	50.915	5	778.219	9	.508	21	.096	20	.003	5
308			min	-279.7	11	-183.711	11	-268.331	3	-.003	26	0	1	-.015	11
309		5	max	367.856	5	50.915	5	778.219	9	.508	21	.125	20	.002	6
310			min	-279.7	11	-183.711	11	-268.331	3	-.003	26	-.007	2	-.008	24
311	M32A	1	max	319.262	5	88.954	6	190.468	8	-.011	26	.015	2	.014	5
312			min	-232.28	11	-177.539	12	-748.948	2	-.777	25	-.03	8	-.034	11
313		2	max	319.262	5	88.954	6	190.468	8	-.011	26	.003	26	.01	5
314			min	-232.28	11	-177.539	12	-748.948	2	-.777	25	-.055	25	-.027	11
315		3	max	319.262	5	88.954	6	190.468	8	-.011	26	.003	26	.007	5
316			min	-232.28	11	-177.539	12	-748.948	2	-.777	25	-.086	25	-.02	11
317		4	max	319.262	5	88.954	6	190.468	8	-.011	26	.002	26	.003	5
318			min	-232.28	11	-177.539	12	-748.948	2	-.777	25	-.116	25	-.013	11
319		5	max	319.262	5	88.954	6	190.468	8	-.011	26	.002	8	0	3
320			min	-232.28	11	-177.539	12	-748.948	2	-.777	25	-.147	25	-.008	22
321	M33A	1	max	1129.173	5	-367.162	5	1117.95	8	.396	25	.137	4	-.097	11

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 Mom...	LC
322			min	-1023.512	11	-1687.84	23	-1008.948	2	-.08	2	-.137	10	-.309	17
323		2	max	1129.173	5	-367.162	5	1117.95	8	.396	25	.129	5	-.059	11
324			min	-1023.512	11	-1687.84	23	-1008.948	2	-.08	2	-.124	11	-.243	17
325		3	max	1129.173	5	-367.162	5	1117.95	8	.396	25	.132	6	-.021	11
326			min	-1023.512	11	-1687.84	23	-1008.948	2	-.08	2	-.122	12	-.177	17
327		4	max	1129.173	5	-367.162	5	1117.95	8	.396	25	.15	6	.017	11
328			min	-1023.512	11	-1687.84	23	-1008.948	2	-.08	2	-.136	12	-.111	17
329		5	max	1129.173	5	-367.162	5	1117.95	8	.396	25	.179	7	.055	11
330			min	-1023.512	11	-1687.84	23	-1008.948	2	-.08	2	-.16	1	-.08	5
331	M34	1	max	1820.184	3	34.598	2	147.301	20	.002	25	-.052	4	-.023	3
332			min	-1578.234	9	-89.178	8	39.518	2	-.001	3	-.168	25	-.621	25
333		2	max	1820.184	3	9.456	2	130.737	20	.002	25	-.018	2	-.005	3
334			min	-1578.234	9	-74.779	20	33.567	2	-.001	3	-.13	25	-.505	25
335		3	max	1820.184	3	-8.502	4	114.173	20	.002	25	.002	3	.02	3
336			min	-1578.234	9	-70.393	22	27.616	2	-.001	3	-.096	25	-.394	25
337		4	max	1820.184	3	5.721	6	97.609	20	.002	25	.011	4	.051	3
338			min	-1578.234	9	-74.06	24	21.666	2	-.001	3	-.066	25	-.286	25
339		5	max	1820.184	3	30.863	6	86.845	25	.002	25	.039	6	.095	2
340			min	-1578.234	9	-84.456	12	15.715	2	-.001	3	-.059	12	-.183	25
341	M35	1	max	1996.636	8	31.841	7	142.535	13	0	12	-.015	4	.038	7
342			min	-1739.013	2	-84.39	1	33.087	7	-.001	25	-.151	21	-.566	13
343		2	max	1979.463	8	34.275	8	125.971	13	0	12	-.008	5	.04	7
344			min	-1721.841	2	-86.614	2	27.137	7	-.001	25	-.1	22	-.417	13
345		3	max	1962.291	8	43.265	9	109.407	13	0	12	.003	7	.042	7
346			min	-1704.669	2	-94.861	3	21.186	7	-.001	25	-.063	13	-.28	13
347		4	max	1945.119	8	58.493	9	92.843	13	0	12	.044	9	.051	6
348			min	-1687.497	2	-110.089	3	15.235	7	-.001	25	-.074	3	-.175	12
349		5	max	1927.947	8	73.72	9	76.279	13	0	12	.106	9	.105	5
350			min	-1670.324	2	-125.316	3	9.285	7	-.001	25	-.124	3	-.146	11
351	M36	1	max	2077.93	11	75.608	11	146.705	17	.002	26	-.018	5	.103	11
352			min	-1823.965	5	-129.679	5	27.497	10	0	11	-.168	26	-.631	26
353		2	max	2060.758	11	60.381	11	130.141	17	.002	26	-.015	25	.072	11
354			min	-1806.793	5	-114.451	5	21.546	10	0	11	-.132	26	-.513	26
355		3	max	2043.586	11	45.153	11	113.576	17	.002	26	.01	11	.047	11
356			min	-1789.621	5	-99.224	5	15.595	10	0	11	-.101	26	-.399	26
357		4	max	2026.414	11	35.958	12	97.012	17	.002	26	.046	11	.03	11
358			min	-1772.449	5	-89.822	6	9.644	10	0	11	-.079	5	-.289	26
359		5	max	2009.241	11	32.668	1	86.594	26	.002	26	.079	12	.035	10
360			min	-1755.277	5	-85.784	7	3.694	10	0	11	-.099	6	-.184	26
361	M37	1	max	0	1	0	1	0	1	0	1	0	1	0	1
362			min	0	1	0	1	0	1	0	1	0	1	0	1
363		2	max	-200.418	3	19.189	12	66.178	2	.502	1	.208	11	.12	26
364			min	-682.856	25	-388.02	18	-131.885	8	-.462	7	-.206	6	-.059	2
365		3	max	-225.936	11	380.828	21	112.553	6	.421	7	.257	1	1.252	20
366			min	-774.692	17	5.327	2	-77.029	12	-.435	1	-.465	7	-.052	2
367		4	max	-225.936	11	351.244	21	112.553	6	.421	7	.201	3	.063	5
368			min	-774.692	17	-24.257	2	-77.029	12	-.435	1	-.28	9	-.109	11
369		5	max	0	1	0	1	0	1	0	1	0	1	0	1
370			min	0	1	0	1	0	1	0	1	0	1	0	1
371	M38	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	4.519	25	22.891	7	78.436	11	.4	9	.194	7	.137	4
374			min	-775.501	26	-372.533	13	-112.616	5	-.393	3	-.225	1	-.057	10
375		3	max	3.143	25	382.8	16	74.501	2	.385	3	.234	9	1.225	16
376			min	-742.098	14	-23.662	10	-30.725	8	-.441	9	-.354	3	-.158	10
377		4	max	3.143	25	353.217	16	74.501	2	.385	3	.243	11	.025	1
378			min	-742.098	14	-53.246	10	-30.725	8	-.441	9	-.205	5	-.098	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 Mom...	LC
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	M39	1	max	0	1	0	1	0	1	0	1	0	1	0	1
382			min	0	1	0	1	0	1	0	1	0	1	0	1
383		2	max	15.483	26	45.62	4	34.57	6	.432	5	.244	4	.1	12
384			min	-648.18	13	-388.96	21	-79.514	12	-.384	11	-.22	10	-.069	6
385		3	max	-43.945	26	371.809	13	121.456	9	.377	11	.245	4	1.224	24
386			min	-837.448	25	-4.755	7	-62.719	3	-.438	5	-.373	10	-.058	6
387		4	max	-43.945	26	342.225	13	121.456	9	.377	11	.272	7	.054	9
388			min	-837.448	25	-34.339	7	-62.719	3	-.438	5	-.19	1	-.093	3
389		5	max	0	1	0	1	0	1	0	1	0	1	0	1
390			min	0	1	0	1	0	1	0	1	0	1	0	1
391	M40	1	max	117.05	2	22.614	7	-138.403	12	.761	25	-.021	10	.096	2
392			min	-225.166	8	-412.663	25	-672.131	25	-.032	11	-.072	25	-.24	8
393		2	max	117.05	2	22.614	7	-138.403	12	.761	25	-.026	11	.105	2
394			min	-225.166	8	-412.663	25	-672.131	25	-.032	11	-.1	25	-.239	8
395		3	max	117.05	2	22.614	7	-138.403	12	.761	25	-.032	11	.114	2
396			min	-225.166	8	-412.663	25	-672.131	25	-.032	11	-.128	25	-.239	8
397		4	max	117.05	2	22.614	7	-138.403	12	.761	25	-.038	12	.123	2
398			min	-225.166	8	-412.663	25	-672.131	25	-.032	11	-.156	25	-.239	8
399		5	max	117.05	2	22.614	7	-138.403	12	.761	25	-.044	12	.133	2
400			min	-225.166	8	-412.663	25	-672.131	25	-.032	11	-.184	25	-.239	8
401	M41	1	max	42.183	12	36.696	8	725.992	26	.011	3	.057	26	.035	12
402			min	-124.008	6	-382.413	26	127.251	3	-.785	26	0	12	-.197	26
403		2	max	42.183	12	36.696	8	725.992	26	.011	3	.088	26	.043	12
404			min	-124.008	6	-382.413	26	127.251	3	-.785	26	.009	12	-.181	26
405		3	max	42.183	12	36.696	8	725.992	26	.011	3	.118	26	.051	12
406			min	-124.008	6	-382.413	26	127.251	3	-.785	26	.019	1	-.165	26
407		4	max	42.183	12	36.696	8	725.992	26	.011	3	.148	26	.058	12
408			min	-124.008	6	-382.413	26	127.251	3	-.785	26	.026	1	-.149	26
409		5	max	42.183	12	36.696	8	725.992	26	.011	3	.179	26	.066	12
410			min	-124.008	6	-382.413	26	127.251	3	-.785	26	.033	1	-.14	6
411	M42	1	max	101.041	1	785.882	19	123.322	10	.709	4	.067	9	.987	7
412			min	-204.436	7	98.797	1	-204.541	4	-.675	10	-.056	3	-.921	1
413		2	max	101.041	1	785.882	19	123.322	10	.709	4	.071	9	.961	7
414			min	-204.436	7	98.797	1	-204.541	4	-.675	10	-.063	3	-.925	1
415		3	max	101.041	1	785.882	19	123.322	10	.709	4	.074	9	.935	7
416			min	-204.436	7	98.797	1	-204.541	4	-.675	10	-.07	3	-.929	1
417		4	max	101.041	1	785.882	19	123.322	10	.709	4	.078	9	.909	7
418			min	-204.436	7	98.797	1	-204.541	4	-.675	10	-.077	3	-.933	1
419		5	max	101.041	1	785.882	19	123.322	10	.709	4	.081	9	.882	7
420			min	-204.436	7	98.797	1	-204.541	4	-.675	10	-.084	3	-.937	1
421	M43	1	max	72.779	10	-1.693	3	-32.051	25	.707	13	.032	25	.017	11
422			min	-174.485	4	-369.317	21	-696.701	26	-.03	7	.003	9	-.249	18
423		2	max	72.779	10	-1.693	3	-32.051	25	.707	13	.031	25	.025	11
424			min	-174.485	4	-369.317	21	-696.701	26	-.03	7	-.023	26	-.235	18
425		3	max	72.779	10	-1.693	3	-32.051	25	.707	13	.03	25	.033	11
426			min	-174.485	4	-369.317	21	-696.701	26	-.03	7	-.052	26	-.221	17
427		4	max	72.779	10	-1.693	3	-32.051	25	.707	13	.028	25	.041	11
428			min	-174.485	4	-369.317	21	-696.701	26	-.03	7	-.082	26	-.207	17
429		5	max	72.779	10	-1.693	3	-32.051	25	.707	13	.027	25	.049	11
430			min	-174.485	4	-369.317	21	-696.701	26	-.03	7	-.111	26	-.196	5
431	M44	1	max	51.36	8	27.446	3	672.074	17	.084	11	.029	14	.044	7
432			min	-123.422	2	-299.544	21	14.834	25	-.789	17	0	5	-.182	13
433		2	max	51.36	8	27.446	3	672.074	17	.084	11	.056	14	.05	7
434			min	-123.422	2	-299.544	21	14.834	25	-.789	17	.005	25	-.175	2
435		3	max	51.36	8	27.446	3	672.074	17	.084	11	.083	15	.057	8

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 Mom...	LC
436			min	-123.422	2	-299.544	21	14.834	25	-.789	17	.006	25	-.175	2
437		4	max	51.36	8	27.446	3	672.074	17	.084	11	.111	15	.066	8
438			min	-123.422	2	-299.544	21	14.834	25	-.789	17	.007	25	-.175	2
439		5	max	51.36	8	27.446	3	672.074	17	.084	11	.139	16	.074	8
440			min	-123.422	2	-299.544	21	14.834	25	-.789	17	.007	25	-.175	2
441	M45	1	max	69.172	10	768.317	15	70.722	26	.853	12	.062	4	.882	3
442			min	-148.857	4	86.987	9	-126.107	2	-.783	6	-.035	10	-.827	9
443		2	max	69.172	10	768.317	15	70.722	26	.853	12	.06	4	.856	3
444			min	-148.857	4	86.987	9	-126.107	2	-.783	6	-.035	10	-.83	9
445		3	max	69.172	10	768.317	15	70.722	26	.853	12	.057	4	.83	3
446			min	-148.857	4	86.987	9	-126.107	2	-.783	6	-.035	10	-.834	9
447		4	max	69.172	10	768.317	15	70.722	26	.853	12	.055	5	.804	3
448			min	-148.857	4	86.987	9	-126.107	2	-.783	6	-.037	11	-.837	9
449		5	max	69.172	10	768.317	15	70.722	26	.853	12	.055	5	.778	3
450			min	-148.857	4	86.987	9	-126.107	2	-.783	6	-.039	11	-.841	9
451	M46	1	max	81.005	6	-6.824	11	-13.007	26	.764	21	0	7	.027	7
452			min	-168.395	12	-342.59	17	-602.518	22	-.078	3	-.021	24	-.214	13
453		2	max	81.005	6	-6.824	11	-13.007	26	.764	21	-.001	26	.034	7
454			min	-168.395	12	-342.59	17	-602.518	22	-.078	3	-.046	23	-.201	13
455		3	max	81.005	6	-6.824	11	-13.007	26	.764	21	-.002	26	.041	7
456			min	-168.395	12	-342.59	17	-602.518	22	-.078	3	-.07	23	-.188	13
457		4	max	81.005	6	-6.824	11	-13.007	26	.764	21	-.002	26	.048	7
458			min	-168.395	12	-342.59	17	-602.518	22	-.078	3	-.095	23	-.179	1
459		5	max	81.005	6	-6.824	11	-13.007	26	.764	21	-.003	26	.054	7
460			min	-168.395	12	-342.59	17	-602.518	22	-.078	3	-.12	23	-.175	1
461	M47	1	max	74.42	4	21.439	12	736.303	25	.064	7	.038	5	.104	3
462			min	-160.451	10	-327.581	17	19.853	26	-.734	13	-.022	11	-.268	9
463		2	max	74.42	4	21.439	12	736.303	25	.064	7	.055	25	.11	3
464			min	-160.451	10	-327.581	17	19.853	26	-.734	13	-.006	11	-.265	9
465		3	max	74.42	4	21.439	12	736.303	25	.064	7	.086	25	.116	3
466			min	-160.451	10	-327.581	17	19.853	26	-.734	13	-.003	26	-.261	9
467		4	max	74.42	4	21.439	12	736.303	25	.064	7	.116	25	.122	3
468			min	-160.451	10	-327.581	17	19.853	26	-.734	13	-.002	26	-.258	9
469		5	max	74.42	4	21.439	12	736.303	25	.064	7	.147	25	.128	3
470			min	-160.451	10	-327.581	17	19.853	26	-.734	13	-.001	26	-.255	9
471	M48	1	max	61.327	4	773.567	23	33.637	2	.853	8	.03	12	.866	11
472			min	-166.848	10	84.717	5	-207.294	25	-.832	2	-.031	6	-.856	5
473		2	max	61.327	4	773.567	23	33.637	2	.853	8	.03	12	.839	11
474			min	-166.848	10	84.717	5	-207.294	25	-.832	2	-.035	6	-.859	5
475		3	max	61.327	4	773.567	23	33.637	2	.853	8	.031	1	.813	11
476			min	-166.848	10	84.717	5	-207.294	25	-.832	2	-.041	7	-.863	5
477		4	max	61.327	4	773.567	23	33.637	2	.853	8	.032	1	.787	11
478			min	-166.848	10	84.717	5	-207.294	25	-.832	2	-.047	7	-.866	5
479		5	max	61.327	4	773.567	23	33.637	2	.853	8	.033	1	.761	11
480			min	-166.848	10	84.717	5	-207.294	25	-.832	2	-.053	7	-.87	5
481	M49	1	max	157.841	3	319.303	6	178.296	12	.005	12	.16	25	.342	6
482			min	-341.059	8	-285.055	12	-206.798	6	-.005	6	-.153	26	-.548	12
483		2	max	157.841	3	315.627	6	178.296	12	.005	12	.133	2	.11	6
484			min	-341.059	8	-288.731	12	-206.798	6	-.005	6	-.096	8	-.342	12
485		3	max	157.841	3	311.952	6	178.296	12	.005	12	.114	3	-.118	5
486			min	-341.059	8	-292.406	12	-206.798	6	-.005	6	-.08	9	-.291	22
487		4	max	157.841	3	308.276	6	178.296	12	.005	12	.117	4	.074	12
488			min	-341.059	8	-296.082	12	-206.798	6	-.005	6	-.088	10	-.359	18
489		5	max	157.841	3	304.601	6	178.296	12	.005	12	.139	26	.284	12
490			min	-341.059	8	-299.757	12	-206.798	6	-.005	6	-.114	10	-.576	6
491	M50	1	max	82.841	7	317.951	10	175.773	4	.005	4	.165	26	.35	10
492			min	-224.472	1	-309.614	4	-192.081	10	-.006	10	-.101	25	-.566	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 Mom...	LC
493		2	max	82.841	7	314.275	10	175.773	4	.005	4	.112	6	.125	10
494			min	-224.472	1	-313.289	4	-192.081	10	-.006	10	-.052	12	-.35	4
495		3	max	82.841	7	310.6	10	175.773	4	.005	4	.099	7	-.096	11
496			min	-224.472	1	-316.965	4	-192.081	10	-.006	10	-.047	1	-.263	17
497		4	max	82.841	7	306.924	10	175.773	4	.005	4	.122	8	.085	4
498			min	-224.472	1	-320.64	4	-192.081	10	-.006	10	-.082	2	-.319	10
499		5	max	82.841	7	303.249	10	175.773	4	.005	4	.161	9	.306	4
500			min	-224.472	1	-324.316	4	-192.081	10	-.006	10	-.134	3	-.539	10
501	M51	1	max	135.188	11	313.886	8	154.462	9	.006	8	.434	2	.262	6
502			min	-280.115	5	-268.351	2	-174.156	3	-.006	2	-.339	8	-.315	12
503		2	max	135.188	11	310.211	8	154.462	9	.006	8	.238	2	.204	6
504			min	-280.115	5	-272.027	2	-174.156	3	-.006	2	-.133	8	-.283	12
505		3	max	135.188	11	306.535	8	154.462	9	.006	8	.13	19	.17	5
506			min	-280.115	5	-275.702	2	-174.156	3	-.006	2	.038	1	-.271	11
507		4	max	135.188	11	302.86	8	154.462	9	.006	8	.274	8	.14	5
508			min	-280.115	5	-279.378	2	-174.156	3	-.006	2	-.158	2	-.262	11
509		5	max	135.188	11	299.184	8	154.462	9	.006	8	.475	8	.137	4
510			min	-280.115	5	-283.053	2	-174.156	3	-.006	2	-.359	2	-.277	10
511	M52	1	max	1710.878	1	2533.908	19	2633.765	4	.949	26	.657	4	4.921	19
512			min	-1579.233	7	607.11	1	-2647.879	10	-1.06	25	-.651	10	1.063	1
513		2	max	1647.046	1	2214.949	19	644.996	10	.567	26	.765	4	3.636	19
514			min	-1404.084	7	512.52	1	-639.461	4	-.726	25	-.778	10	.762	1
515		3	max	1647.046	1	2197.118	19	666.033	10	.567	26	.408	4	2.423	19
516			min	-1404.084	7	503.245	1	-660.497	4	-.726	25	-.418	10	.483	1
517		4	max	1647.046	1	2179.287	19	687.069	10	.567	26	.234	25	1.219	19
518			min	-1404.084	7	493.97	1	-681.534	4	-.726	25	-.256	26	.208	1
519		5	max	1647.046	1	2161.456	19	708.106	10	.567	26	.417	11	.07	7
520			min	-1404.084	7	484.695	1	-702.57	4	-.726	25	-.418	5	-.061	1
521	M53	1	max	1476.346	9	2472.57	15	3591.513	12	.488	12	.431	3	4.763	15
522			min	-1386.416	3	569.299	9	-3596.936	6	-1.111	26	-.43	9	.97	9
523		2	max	1423.514	9	2162.214	15	421.187	8	.171	12	.359	2	3.508	15
524			min	-1225.537	3	479.997	9	-417.25	2	-.743	26	-.364	8	.688	9
525		3	max	1411.071	9	2144.383	15	432.221	8	.171	12	.153	26	2.324	15
526			min	-1213.094	3	470.722	9	-428.284	2	-.743	26	-.129	8	.426	9
527		4	max	1398.628	9	2126.552	15	443.255	8	.171	12	.181	26	1.149	15
528			min	-1200.65	3	461.446	9	-439.318	2	-.743	26	-.116	3	.17	9
529		5	max	1386.184	9	2108.721	15	454.289	8	.171	12	.358	8	.058	3
530			min	-1188.207	3	452.171	9	-450.352	2	-.743	26	-.357	2	-.081	9
531	M54	1	max	1498.759	5	2478.319	23	3553.527	8	.943	25	.421	5	4.774	23
532			min	-1380.799	11	571.017	5	-3527.616	2	-.587	2	-.415	11	.976	5
533		2	max	1445.163	5	2170.159	23	254.125	1	.545	25	.426	6	3.515	23
534			min	-1219.971	11	482.194	5	-256.294	7	-.299	2	-.436	12	.693	5
535		3	max	1432.719	5	2152.328	23	269.902	1	.545	25	.294	5	2.327	23
536			min	-1207.528	11	472.918	5	-272.071	7	-.299	2	-.305	11	.43	5
537		4	max	1420.276	5	2134.497	23	285.68	1	.545	25	.203	5	1.148	23
538			min	-1195.084	11	463.643	5	-287.849	7	-.299	2	-.214	11	.172	5
539		5	max	1407.833	5	2116.666	23	301.457	1	.545	25	.213	3	.052	11
540			min	-1182.641	11	454.368	5	-303.626	7	-.299	2	-.233	25	-.08	5

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....	...	...	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn...	Cb	Eqn
1	M2	L3x3x4	.609	7.5	26	.416	7.5	y	9	13744...	46656	1.688	3.698	2.7...	H2-1
2	M3	L3x3x4	.470	7.5	11	.413	7.5	y	5	13744...	46656	1.688	3.453	1.8...	H2-1
3	M1	L3x3x4	.622	7.5	25	.381	7.5	y	7	13744...	46656	1.688	3.619	2.4...	H2-1
4	M5	HSS4x4x4	.497	0	17	.159	0	z	6	12707...	127386	14.774	14.774	1.1...	H1-1b

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

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....	...	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn...	Cb	Eqn
5	M6	HSS4x4x4	.498	0	21	.149	0	z	8 12707...	127386	14.774	14.774	1.1...	H1-1b
6	M53	HSS4.5x...	.255	0	15	.133	0	z	6 14307...	145152	19.089	19.089	1.6...	H1-1b
7	M4	HSS4x4x4	.488	0	21	.132	0	y	25 12707...	127386	14.774	14.774	1.1...	H1-1b
8	M54	HSS4.5x...	.255	0	23	.125	0	z	8 14307...	145152	19.089	19.089	1.6...	H1-1b
9	MP1B	PIPE_2.0	.414	4.167	25	.115	2.25		25 14916...	32130	1.872	1.872	2.1...	H1-1b
10	M52	HSS4.5x...	.261	0	18	.108	0	z	10 14307...	145152	19.089	19.089	1.6...	H1-1b
11	M37	PIPE_3.0	.251	6.708	18	.108	6.708		7 22812...	65205	5.749	5.749	2.0...	H1-1b
12	MP1C	PIPE_2.0	.386	2.25	16	.104	4.167		17 14916...	32130	1.872	1.872	2.0...	H1-1b
13	MP2A	PIPE_2.0	.479	3.792	1	.097	3.792		2 17855...	32130	1.872	1.872	4.0...	H1-1b
14	M38	PIPE_3.0	.244	6.708	14	.093	6.708		3 22812...	65205	5.749	5.749	2.0...	H1-1b
15	M39	PIPE_3.0	.243	6.708	22	.093	6.708		11 22812...	65205	5.749	5.749	2.0...	H1-1b
16	MP3C	PIPE_2.0	.379	2.25	13	.092	2.25		26 14916...	32130	1.872	1.872	3.0...	H1-1b
17	MP2C	PIPE_2.0	.430	3.792	11	.090	3.792		11 17855...	32130	1.872	1.872	1.7...	H1-1b
18	MP3B	PIPE_2.0	.376	2.25	21	.090	4.167		21 14916...	32130	1.872	1.872	2.0...	H1-1b
19	MP1A	PIPE_2.0	.412	2.25	26	.089	4.167		22 14916...	32130	1.872	1.872	2.2...	H1-1b
20	MP2B	PIPE_2.0	.429	3.792	9	.086	3.792		7 17855...	32130	1.872	1.872	1.68	H1-1b
21	M25	L3x3x4	.513	0	26	.078	6.016	z	26 13744...	46656	1.688	3.564	2.2...	H2-1
22	MP3A	PIPE_2.0	.401	2.25	25	.078	4.167		16 14916...	32130	1.872	1.872	2.4...	H1-1b
23	M51	L3x3x4	.327	2.5	8	.045	0	y	8 40622...	46656	1.688	3.756	2.1...	H2-1
24	M50	L3x3x4	.238	0	4	.045	0	y	10 40622...	46656	1.688	3.756	2.1...	H2-1
25	M49	L3x3x4	.230	0	1	.043	0	y	6 40622...	46656	1.688	3.756	2.1...	H2-1
26	M27	L3x3x4	.407	0	25	.042	7.5	y	11 13744...	46656	1.688	3.577	2.2...	H2-1
27	M26	L3x3x4	.422	0	3	.037	7.5	y	3 13744...	46656	1.688	3.487	1.97	H2-1
28	M9	LL3x3x3x3	.196	0	4	.020	3.986	z	4 46255...	70632	5.543	3.751	1.9...	H1-1b
29	M8	LL3x3x3x3	.183	0	7	.019	3.986	z	8 46255...	70632	5.543	3.751	1.8...	H1-1b
30	M7	LL3x3x3x3	.174	0	1	.019	3.986	z	6 46255...	70632	5.543	3.751	1.8...	H1-1b
31	M33	L3x3x4	.289	4.048	26	.015	4.048	z	26 32453...	46656	1.688	3.663	1.4...	H2-1
32	M36	L3x3x4	.276	0	26	.014	0	z	26 32453...	46656	1.688	3.662	1.4...	H2-1
33	M31	L3x3x4	.280	4.048	25	.014	4.048	z	25 32453...	46656	1.688	3.666	1.4...	H2-1
34	M34	L3x3x4	.275	0	25	.014	0	z	25 32453...	46656	1.688	3.661	1.4...	H2-1
35	M32	L3x3x4	.255	4.048	16	.012	4.048	z	20 32453...	46656	1.688	3.748	1.6...	H2-1
36	M35	L3x3x4	.236	0	22	.011	0	z	18 32453...	46656	1.688	3.748	1.6...	H2-1

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

Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mny...	phi*Mnz...	Cb	Cmyy	Cmzz	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

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: CTNH241A

106 Willenbrock Road
Oxford, Connecticut 06478

February 22, 2021

EBI Project Number: 6221000649

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**14.55%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

February 22, 2021

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

Emissions Analysis for Site: CTNH241A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **106 Willenbrock Road** in **Oxford, 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 106 Willenbrock Road in Oxford, 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 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) 4 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 channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.

8) 1 NR channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.

9) 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.

10) 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.

11) The antennas used in this modeling are the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector A, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector B, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 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.

12) The antenna mounting height centerline of the proposed antennas is 147 feet above ground level (AGL).

13) 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.

14) 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:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd
Height (AGL):	147 feet	Height (AGL):	147 feet	Height (AGL):	147 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	360 Watts	Total TX Power (W):	360 Watts	Total TX Power (W):	360 Watts
ERP (W):	12,841.53	ERP (W):	12,841.53	ERP (W):	12,841.53
Antenna A1 MPE %:	**2.14%**	Antenna B1 MPE %:	**2.14%**	Antenna C1 MPE %:	**2.14%**
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	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd
Height (AGL):	147 feet	Height (AGL):	147 feet	Height (AGL):	147 feet
Channel Count:	7	Channel Count:	7	Channel Count:	7
Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts
ERP (W):	8,360.85	ERP (W):	8,360.85	ERP (W):	8,360.85
Antenna A2 MPE %:	**2.34%**	Antenna B2 MPE %:	**2.34%**	Antenna C2 MPE %:	**2.34%**
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	Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz
Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd
Height (AGL):	147 feet	Height (AGL):	147 feet	Height (AGL):	147 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	38,477.89	ERP (W):	38,477.89	ERP (W):	38,477.89
Antenna A3 MPE %:	**6.40%**	Antenna B3 MPE %:	**6.40%**	Antenna C3 MPE %:	**6.40%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	10.88%
AT&T	0.35%
Nextel	0.39%
Sprint	0.63%
Verizon	2.3%
Site Total MPE % :	14.55%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	10.88%
T-Mobile Sector B Total:	10.88%
T-Mobile Sector C Total:	10.88%
Site Total MPE % :	14.55%

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 1900 MHz GSM	4	1028.30	147.0	6.84	1900 MHz GSM	1000	0.68%
T-Mobile 1900 MHz LTE	2	2056.61	147.0	6.84	1900 MHz LTE	1000	0.68%
T-Mobile 2100 MHz LTE	2	2307.55	147.0	7.68	2100 MHz LTE	1000	0.77%
T-Mobile 600 MHz LTE	2	591.73	147.0	1.97	600 MHz LTE	400	0.49%
T-Mobile 600 MHz NR	1	1577.94	147.0	2.63	600 MHz NR	400	0.66%
T-Mobile 700 MHz LTE	2	695.22	147.0	2.31	700 MHz LTE	467	0.50%
T-Mobile 1900 MHz LTE	2	2104.51	147.0	7.00	1900 MHz LTE	1000	0.70%
T-Mobile 2500 MHz LTE	1	19238.94	147.0	32.01	2500 MHz LTE	1000	3.20%
T-Mobile 2500 MHz NR	1	19238.94	147.0	32.01	2500 MHz NR	1000	3.20%
						Total:	**10.88%**

• 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:	10.88%
Sector B:	10.88%
Sector C:	10.88%
T-Mobile Maximum MPE % (Sector A):	10.88%
Site Total:	14.55%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **14.55%** 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.