10 Industrial Ave,
Suite 3
Mahwah NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

11/11 /2021

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
333 Grassy Hill Road, Old Lyme, CT 06371-3300
Latitude: 41.3918
Longitude: -72.2859
T-Mobile/Sprint Site#: CTNL330A-CT72XC041

Dear Ms. Bachman:

T-Mobile/Sprint currently maintains six (6) antennas at the 118-foot level of the existing 100-foot self-support tower at 333 Grassy Hill Road, Old Lyme, CT. The 100-foot self-support tower is owned and operated by American Tower Corporation. The property is owned by American Tower Corporation. T-Mobile/Sprint now intends to remove the six (6) existing antennas and add six (6) new 600/700/1900/2100/2500 MHz antennas. The new antennas will be installed at the 105-foot level of the tower and will support 5G services.

Planned Modifications:
Tower:
Remove:
(4) 1 ¼' Hybriflex Cable
(6) 1 5/8' Coax Cables

Remove:
(3) Commscope NNVV-65B-R4 Antennas
(3) RFS APXVTM14-ALU-I20 Antennas
(6) Alcatel-Lucent RRH2x50-08 RRH
(3) Alcatel-Lucent 1900 MHz 4x45 RRH
(3) Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield RRH

Install New:
(3) RFS APXVAALL24 43-U-NA20 Antennas
(3) Ericsson Air6449 B41 Antennas
(3) Ericsson Radio 4460 B25+B66 RRH
(3) Ericsson Radio 4480 B71+B85 RRH
(3) 6x24 (1.99') Hybrid Cables

Ground:
Existing To Remain:
(2) Cabinets

Install New:
(1) Enclosure 6106 Cabinet
(1) B160 Battery Cabinet
(1) RBS 6601
(3) BB 6648
(1) DUG20
(1) PSU 4813

There are no records of zoning permitting from the Town of Lyme, please accept email correspondence from the Zoning Official stating no records. T-Mobile/Sprint has been approved for subsequent modifications at their facility.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to First Selectman Steven Mattson, Elected Official, and Ross Byrne, Acting Zoning Enforcement Official, as well as the tower and property owner.

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 modifications will not require the extension of the site boundary.

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

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

6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Dave DePinto
Transcend Wireless
Cell: 973-907-3243
Email: ddepinto@transcendwireless.com

Attachments
cc: Steven Mattson – First Selectman of the Town of Lyme
Ross Byrne– Acting Zoning Official
American Tower Corporation – Tower & Property Owner

Transcend Wireless

DePinto, Dave <ddepinto@transcendwireless.com>

UPS Delivery Notification, Tracking Number 1ZV257424298416556

UPS <pkginfo@ups.com>
To: DDEPINTO@transcendwireless.com

Mon, Nov 15, 2021 at 12:18 PM

Hello, your package has been delivered.

Delivery Date: Monday, 11/15/2021
Delivery Time: 12:17 PM
Left At: FRONT DESK
Signed by: STACEY

TRANSCEND WIRELESS

Tracking Number:	1ZV257424298416556
Ship To:	AMERICAN TOWER CORP 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.8 LBS
Reference Number:	CTNL330A

Download the UPS mobile app

Review the UPS Privacy Notice

For Questions, Visit Our Help and Support Center

Transcend Wireless

DePinto, Dave <ddepinto@transcendwireless.com>

UPS Delivery Notification, Tracking Number 1ZV257424295306546

UPS <pkginfo@ups.com>
To: DDEPINTO@transcendwireless.com

Fri, Nov 12, 2021 at 12:54 PM

Hello, your package has been delivered.

Delivery Date: Friday, 11/12/2021
Delivery Time: 12:52 PM
Left At: RECEPTION
Signed by: STEVE

TRANSCEND WIRELESS

Tracking Number:	1ZV257424295306546
Ship To:	TOWN OF LYME, CT 480 HAMBURG ROAD LYME, CT 06371 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.8 LBS
Reference Number:	CTNL330A-CT72XC041

Download the UPS mobile app

For Questions, Visit Our Help and Support Center

Transcend Wireless

DePinto, Dave <ddepinto@transcendwireless.com>

UPS Delivery Notification, Tracking Number 1ZV257424294209368

UPS <pkginfo@ups.com>
To: DDEPINTO@transcendwireless.com

Fri, Nov 12, 2021 at 12:54 PM

Hello, your package has been delivered.

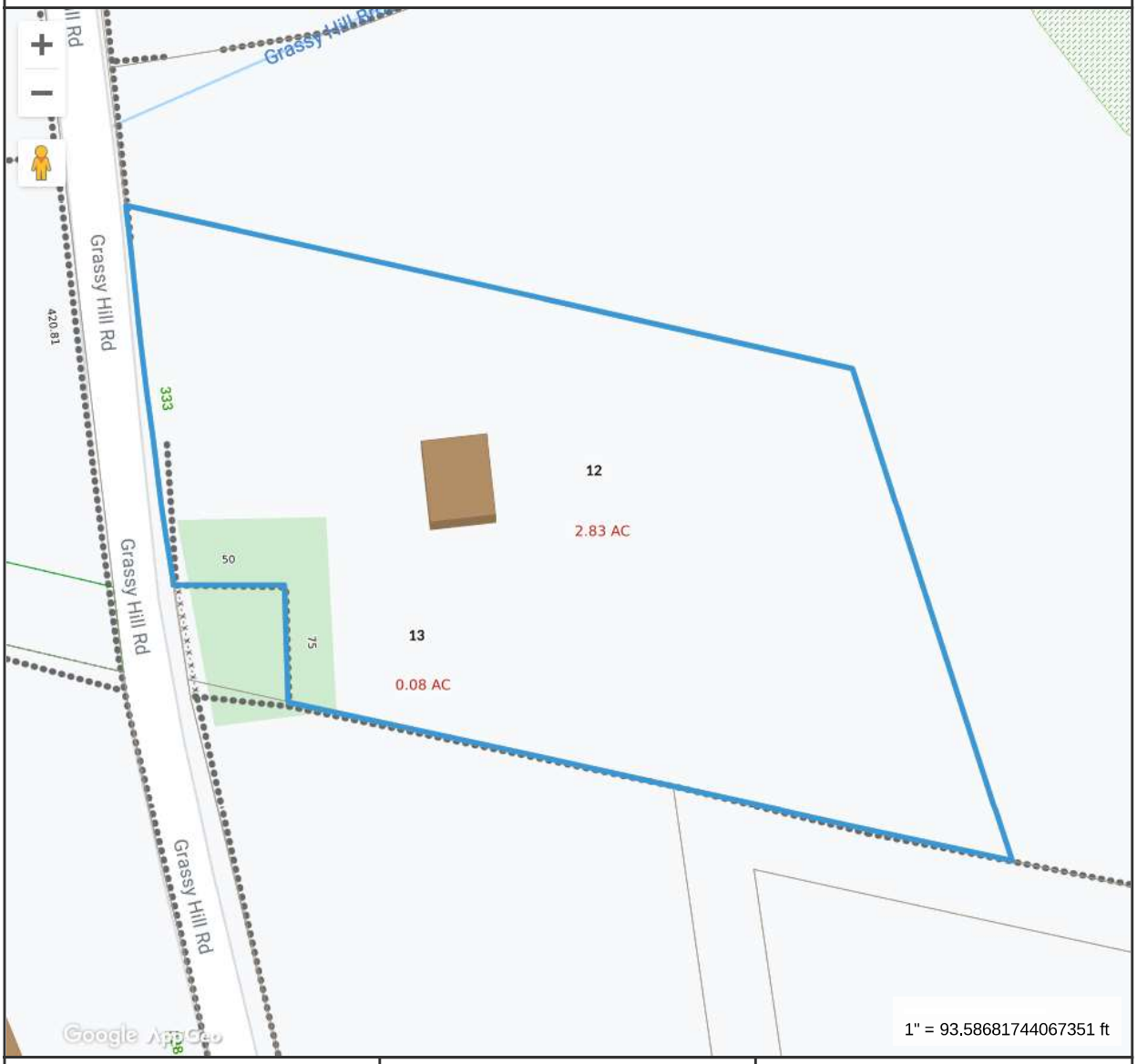
Delivery Date: Friday, 11/12/2021
Delivery Time: 12:52 PM
Left At: RECEPTION
Signed by: STEVE

TRANSCEND WIRELESS

Tracking Number:	1ZV257424294209368
Ship To:	TOWN OF LYME, CT- ZONING 480 HAMBURG ROAD LYME, CT 06371 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.8 LBS
Reference Number:	CTNL330A

Download the UPS mobile app

For Questions, Visit Our Help and Support Center



Property Information

Property ID	50-12
Location	333 GRASSY HILL RD
Owner	AMERICAN TOWERS INC

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Lyme, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 6/8/2021
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

Property Location: 333 GRASSY HILL RD | **MAP ID:** 50/ 12/ / / | **Bldg Name:** | **State Use:** 4310

Vision ID: 1559 | **Account #** 125700 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 03/04/2020 10:18

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
AMERICAN TOWERS INC C/O AMERICAN TOWER CORP P.O. BOX 723597 ATLANTA, GA 31139 Additional Owners:	4 Rolling		1 Paved	3 Rural

SUPPLEMENTAL DATA

Other ID:	31/ 33/ / /
PID2	00155900
SIDE	
GIS ID:	50/12
Dev Map #	
Dev Lot #	
Flood Plain	
Census Tract	1559
ASSOC PID#	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
UTL LAND	4-1	196,300	137,400
UTL BLDG	4-2	69,700	48,800
UTL OUTBL	4-3	110,200	77,100
	Total	376,200	263,300

6075
LYME, CT

VISION

RECORD OF OWNERSHIP

	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
AMERICAN TOWERS INC	111/ 706	02/23/2000	Q	I	146,070	
AMERICAN TEL + TEL CO	61/ 598	07/29/1966	U		0	

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2019	4-1	137,400	2018	4-1	137,400	2017	4-1	157,200
2019	4-2	48,800	2018	4-2	48,800	2017	4-2	52,000
2019	4-3	77,100	2018	4-3	77,100	2017	4-3	64,500
	Total:	263,300		Total:	263,300		Total:	273,700

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	69,700
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	110,200
Appraised Land Value (Bldg)	196,300
Special Land Value	0
Total Appraised Parcel Value	376,200
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	376,200

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0060/A				

NOTES

RELAY STATION & TOWER
ECO=USE+LOC
SELF SUPPORTING TOWER
HT=130 FT,30 FT BASE SIDE
MICROWAVE
15X16 PRE FAB
GATED LOCKED 11/2008

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
07310318	07/25/2018	RE	Remodel	20,000	03/03/2020	100	03/03/2020	ALTERATION TO ANT
07310318-1	07/25/2018	CO	CO ISSUED	0	03/03/2020	100	03/03/2020	CO ISSUED
	06/25/2008	NC	New Construct	55,000	09/30/2008	100		EQUIPMENT BLDG/AD

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
02/09/2018			ES	01	Measur+1Visit
11/03/2008			KC	54	Field Review
09/30/2008			DK	26	Building Permit
09/30/2008			DK	04	Measur/Vac/Boarded up
02/10/1999			BD	04	Measur/Vac/Boarded up

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value
1	4310	TEL REL TW MDL-96	RU80				3	SF	5,000.00	1.0000	0	1.0000	1.00	0060	1.15	USE			1.00		16,300
1	4310	TEL REL TW MDL-96	RU80				1.00	BL	180,000.00	1.0000	0	1.0000	1.00		0.00				1.00		180,000

Total Card Land Units: 0.00 AC | **Parcel Total Land Area:** 0 AC | **Total Land Value:** 196,300

Property Location: 333 GRASSY HILL RD **MAP ID:** 50/ 12/ / / **Bldg Name:** **State Use:** 4310

Vision ID: 1559 **Account #** 125700 **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 03/04/2020 10:18

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	40		Light Indust
Model	96		Commercial
Grade	03		Average
Stories	1		
Occupancy			
Exterior Wall 1	15		Concr/Cinder
Exterior Wall 2			
Roof Structure	01		Flat
Roof Cover	04		T & G/Rubber
Interior Wall 1	01		Minim/Masonry
Interior Wall 2			
Interior Floor 1	03		Concr-Finished
Interior Floor 2			
Heating Fuel	02		Oil
Heating Type	04		Forced Air-Duc
AC Type	03		Central
Bldg Use	4310		TEL REL TW MDL-96
Total Rooms			
Total Bedrms	00		
Total Baths	0		
Heat/AC	01		Heat AC Pkg
Frame Type	03		Masonry
Baths/Plumbing	00		None
Ceiling/Wall	00		None
Rooms/Prtns	02		Average
Wall Height	12		
% Comn Wall	0		

CONSTRUCTION DETAIL (CONTINUED)

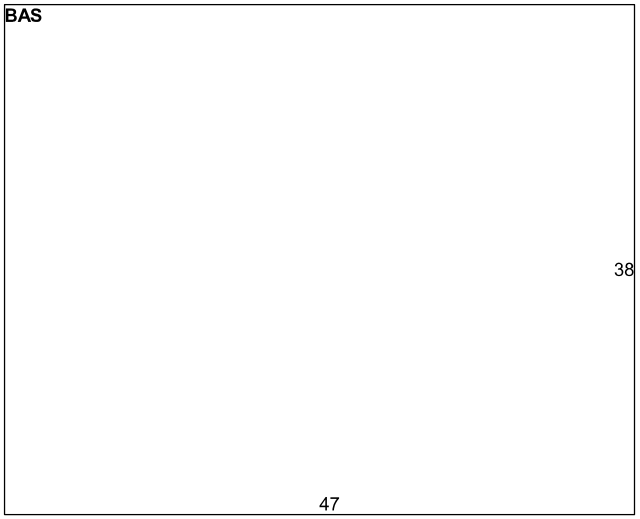
Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
4310	TEL REL TW MDL-96	100

COST/MARKET VALUATION

Adj. Base Rate:	65.00
Replace Cost	116,090
AYB	1966
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	40
Functional Obslnc	0
External Obslnc	0
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	60
Apprais Val	69,700
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



No Photo On Record

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
PAV1	PAVING-ASPH			L	3,500	0.90	1999		0		50	1,600
FN3	FENCE-6' CHA			L	144	9.00	1999		0		50	600
	TOWER			L	130	1,000.00	1966		0		0	0
	CELL TENANT			L	2	60,000.00	2018	C		E	90	108,000

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	1,786	1,786	1,786	65.00	116,090
	Ttl. Gross Liv/Lease Area:	1,786	1,786	1,786		116,090

Transcend Wireless

DePinto, Dave <ddepinto@transcendwireless.com>

Sprint Keep CT_ CTNL330A- CT72XC041_333 Grassy Hill Road_Original Zoning/Building Permit Needed

Zoning <zoning@townlyme.org> Tue, Nov 2, 2021 at 4:34 PM
To: "DePinto, Dave" <ddepinto@transcendwireless.com>
Cc: "Richers, Kyle" <krichers@transcendwireless.com>

Mr. DePinto,

Regarding the telecommunication tower on 333 Grassy Hill Road in the Town of Lyme, CT, the street file records only date back to 1998 and I know for a fact that the tower existed as long ago as 1972. It is possible that records exist in unorganized storage but that is a task that I'm not prepared to undertake. For all practical purposes, there are no records dating back to original construction.

Ross Byrne

ZEO, WEA

[Quoted text hidden]

LC

Richers, Kyle Reviewed and Redlined. attached.

CTNL330A_A and E_CDs_Preliminary_External-LC_Re...
SprintKeep > General

KR

Richers, Kyle 9/3, 11:00 AM

Farias, Ronald another set of ATC CDs when you get a chance to review.

CTNL330A_A and E_CDs_Preliminary_External-LC_Re...
Sprint Keep > General

RF

Farias, Ronald 9/3, 1:01 PM

Kyle CDs are incomplete.

KR

Richers, Kyle 9/7, 12:47 PM

Farias, Ronald can you confirm this is incomplete due to lack of diagrams for the ground equipment? Just want to make sure we are o
the same page. This will definitely need to be revised and included.

9/7, 12:48 PM

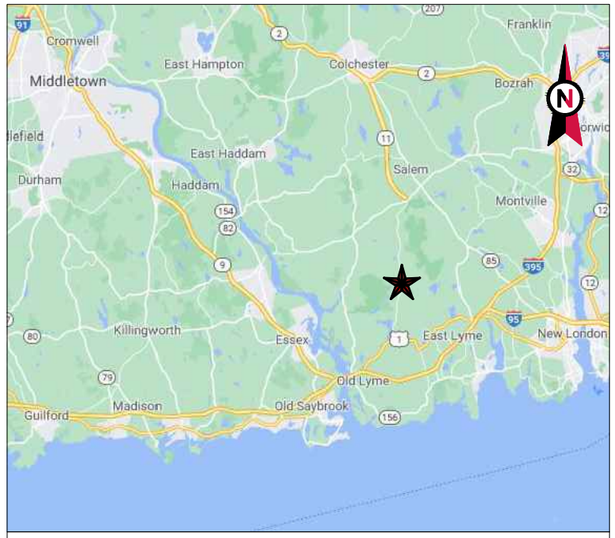
Low, Michael Hi Mike, can you take a look at these CDs and let us know if any comments or approved?

CTNL330A_A and E_CDs_Preliminary_External-LC_Re...
Sprint Keep > General

Low, Michael 9/9, 5:30 PM

Richers, Kyle CD RF approved.

Reply



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: OLD LYME
ATC SITE NUMBER: 88016
T-MOBILE SITE NAME: CTNL330A
T-MOBILE SITE NUMBER: CTNL330A
SITE ADDRESS: 333 GRASSY HILL RD OLD LYME, CT 06371

LOCATION MAP

T-MOBILE SPRINT RETAIN ANTENNA AMENDMENT PLAN
67E5A998E 6160 CONFIGURATION

COMPLIANCE CODE

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

1. 2015 INTERNATIONAL BUILDING CODE (IBC)
2. 2017 NATIONAL ELECTRIC CODE (NEC)
3. BASIC WIND SPEED: 132 MPH (3-SECOND GUST, VULT) / EXPOSURE CATEGORY: C / RISK CATEGORY : II
4. LOCAL BUILDING CODE
5. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: TBD
PHONE: N/A

TELEPHONE COMPANY: TBD
PHONE: N/A

CBYD.COM 811 Call Before You Dig, Inc.

PROJECT SUMMARY

SITE ADDRESS:

333 GRASSY HILL RD

OLD LYME, CT 06371

COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:

LATITUDE: 41.391825

LONGITUDE: -72.285928

GROUND ELEVATION: 362' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

KIMLEY-HORN
& ASSOCIATES, INC.
421 FAYETTEVILLE ST, STE 600
RALEIGH, NC 27601
COA: PEC.0000738

PROPERTY OWNER:

AMERICAN TOWER
PO BOX 723597
ATLANTA, GA 31139

APPLICANT:

T-MOBILE
WHITNEY JONES
WJONES@
TRANSCENDWIRELESS.COM

PROJECT DESCRIPTION

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

TOWER WORK:

REMOVE (3) APXVTM14-ALU-I20 ANTENNA(s), (3) NNVV-65B-R4 ANTENNA(s), (3) TD-RRH8X20-25 RRH(s), (3) 1900 MHZ 4X45 RRH(s), (6) RRH2X50-08 RRH(s), (4) 6X12 HCS (1-1/4") HYBRID CABLE(s), AND (6) 1-5/8" COAX CABLE(s)

INSTALL (3) APXVAALL24 43-U-NA20 ANTENNA(s), (3) AIR6449 B41 ANTENNA(s), (3) RADIO 4480 B71 B85A RRH(s), (3) RADIO 4460 B25 B66, AND (3) 6X24 (1.99") HYBRID CABLE(s)

GROUND WORK:

INSTALL (1) ENCLOSURE 6106 CABINET, (1) B160 BATTERY CABINET, (1) RBS 6601, (3) BB 6648(s), (1) DUG20, AND (1) PSU 4813

EXISTING SPRINT EQUIPMENT TO REMAIN

THE PROPOSED PROJECT DOES NOT INCLUDE ELECTRICAL SCOPE

PROJECT NOTES

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

PROJECT LOCATION DIRECTIONS

PROCEED FROM SALEM, CT HEAD SE ON CT-85/HARTFORD RD TOWARD MORGAN RD AT THE ROUNDABOUT, TAKE THE 1ST EXIT FOR CT-82/E HADDAM RD TURN LEFT ONTO DARLING RD KEEP STRAIGHT TO GET ONTO WHITE BIRCH RD TURN LEFT ONTO DARLING RD BEAR RIGHT ONTO GUNGY RD ROAD NAME CHANGES TO GRASSY HILL RD ARRIVE AT GRASSY HILL RD ON THE LEFT THE LAST INTERSECTION BEFORE YOUR DESTINATION IS OLD GRASSY HILL RD

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	10/11/21	FAQ
G-002	GENERAL NOTES	0	10/11/21	FAQ
C-101	DETAILED SITE PLAN	0	10/11/21	FAQ
C-102	DETAILED GROUND PLAN	0	10/11/21	FAQ
C-201	TOWER ELEVATION	0	10/11/21	FAQ
C-401	ANTENNA INFORMATION & SCHEDULE	0	10/11/21	FAQ
C-501	CONSTRUCTION DETAILS	0	10/11/21	FAQ
E-501	GROUNDING DETAILS	0	10/11/21	FAQ
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			

AMERICAN TOWER®

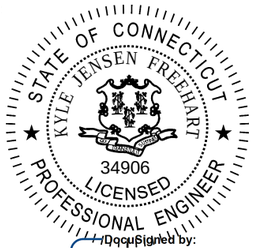
Kimley»Horn

COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KC	04/27/21
B	PRELIM	JR	08/23/21
0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

ATC SITE NUMBER:
88016
ATC SITE NAME:
OLD LYME
T-MOBILE SITE NAME:
CTNL330A
SITE ADDRESS:
333 GRASSY HILL RD
OLD LYME, CT 06371

SEAL:



DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

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

i. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

ii. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

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

AMERICAN TOWER®

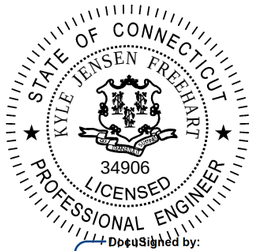
Kimley»Horn

COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KC	04/27/21
B	PRELIM	JR	08/23/21
0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

ATC SITE NUMBER:
88016
ATC SITE NAME:
OLD LYME
T-MOBILE SITE NAME:
CTNL330A
SITE ADDRESS:
333 GRASSY HILL RD
OLD LYME, CT 06371

SEAL:



T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

GENERAL NOTES

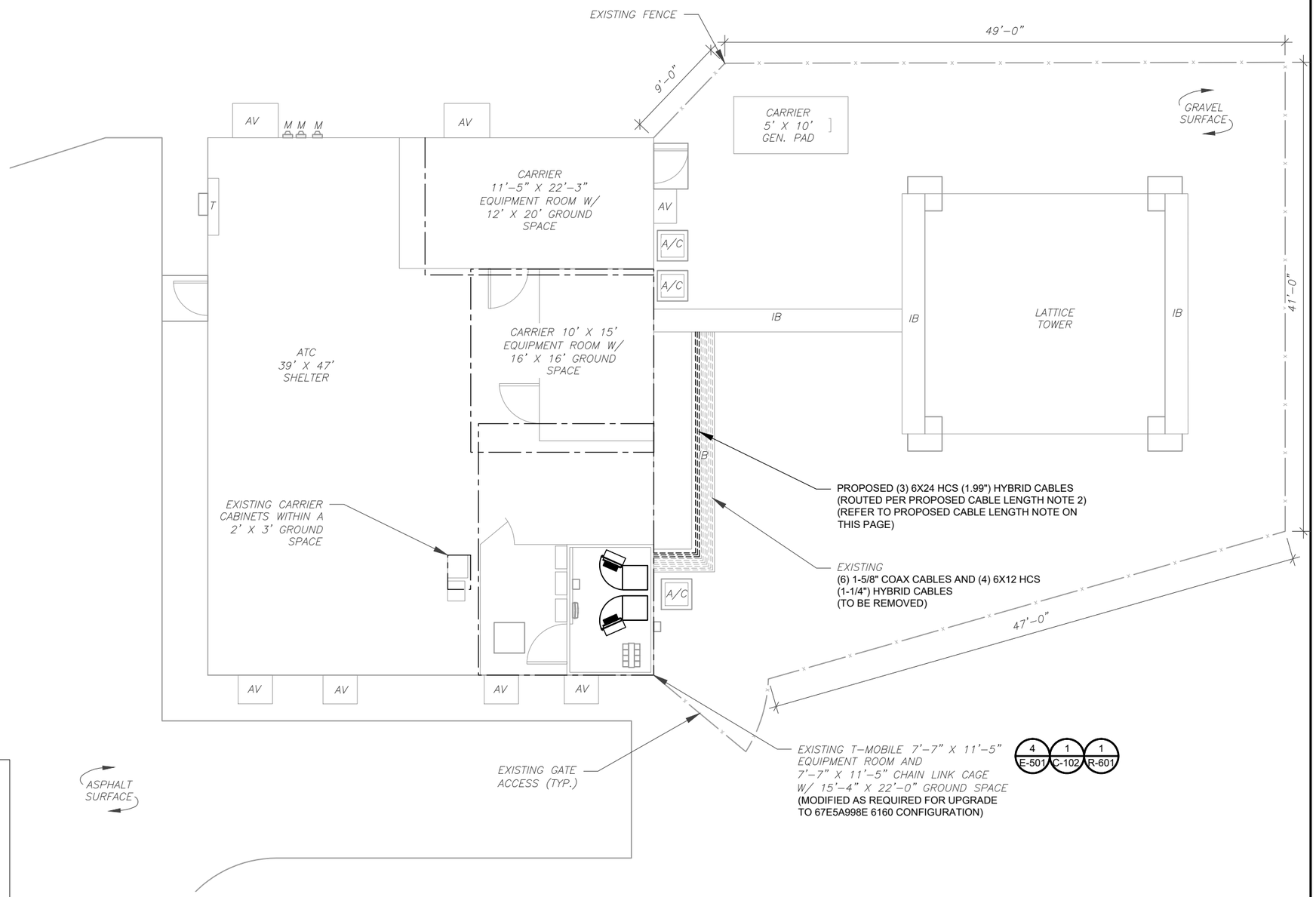
SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
x x	CHAINLINK FENCE



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **184'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

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COA: PEC.0000738
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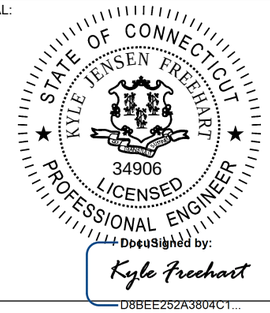
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KC	04/27/21
B	PRELIM	JR	08/23/21
0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

ATC SITE NUMBER:
88016
ATC SITE NAME:
OLD LYME
T-MOBILE SITE NAME:
CTNL330A
SITE ADDRESS:
333 GRASSY HILL RD
OLD LYME, CT 06371

SEAL:



T-Mobile

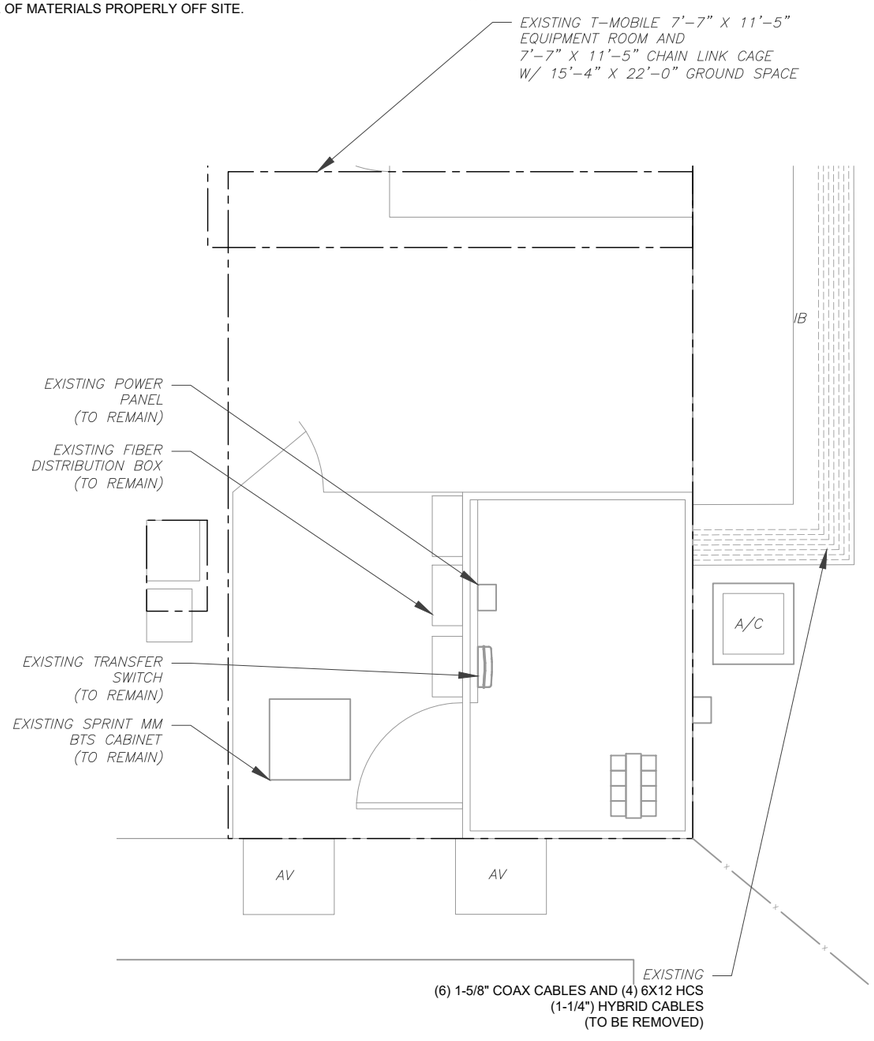
DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

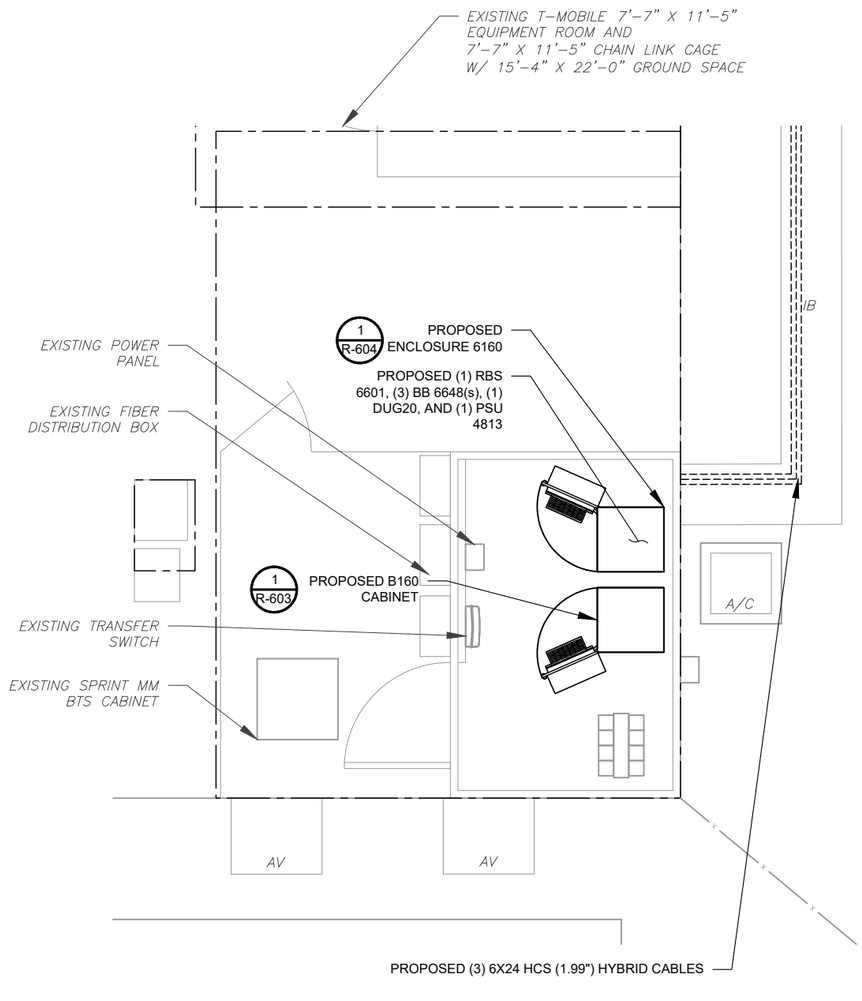


1 EXISTING GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

AMERICAN TOWER®

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COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KC	04/27/21
B	PRELIM	JR	08/23/21
0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

ATC SITE NUMBER:
88016
ATC SITE NAME:
OLD LYME
T-MOBILE SITE NAME:
CTNL330A
SITE ADDRESS:
333 GRASSY HILL RD
OLD LYME, CT 06371

SEAL:

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER

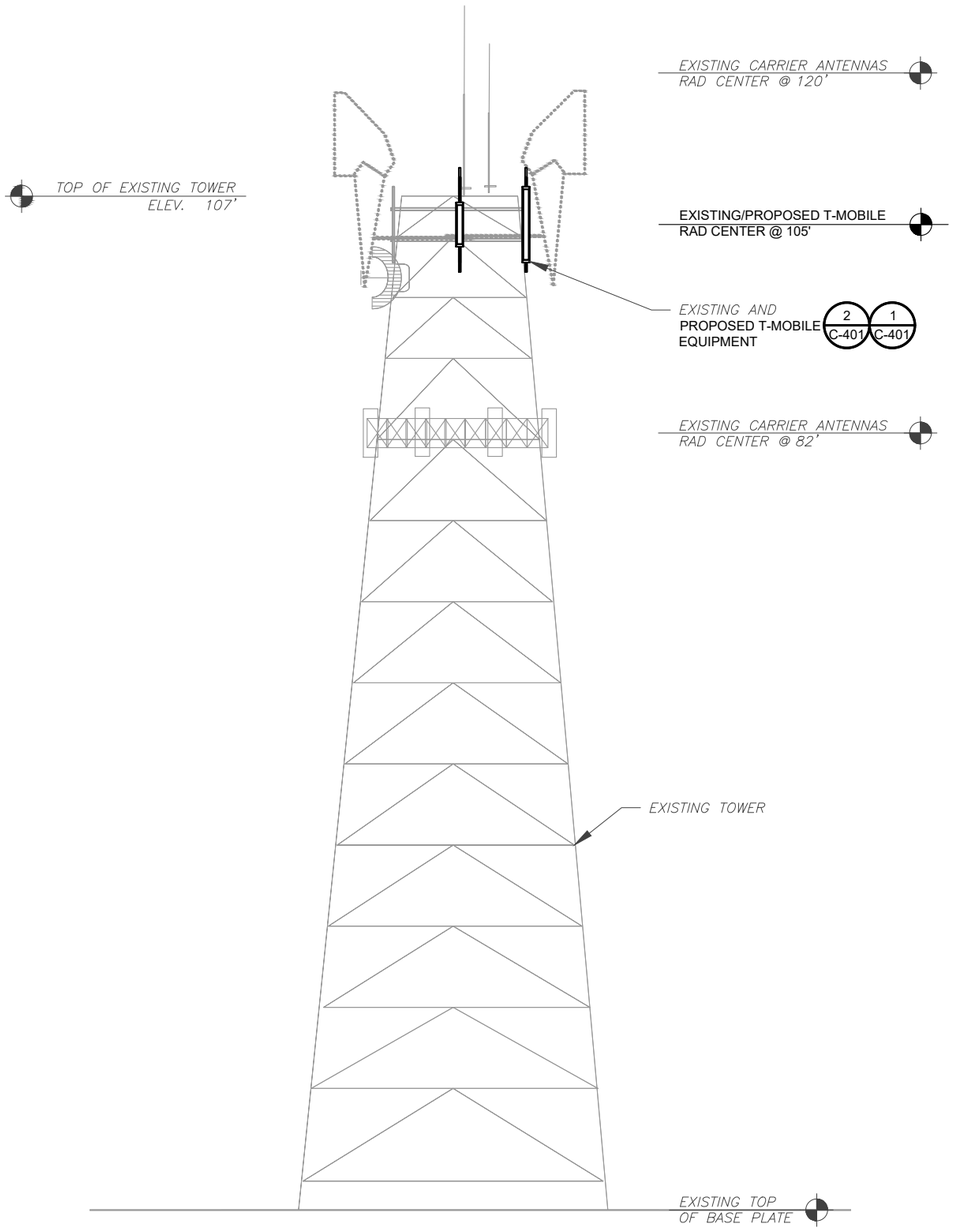
DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	0



1 TOWER ELEVATION
SCALE: N.T.S.

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

TOWER NOTE:

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

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0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

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333 GRASSY HILL RD
OLD LYME, CT 06371

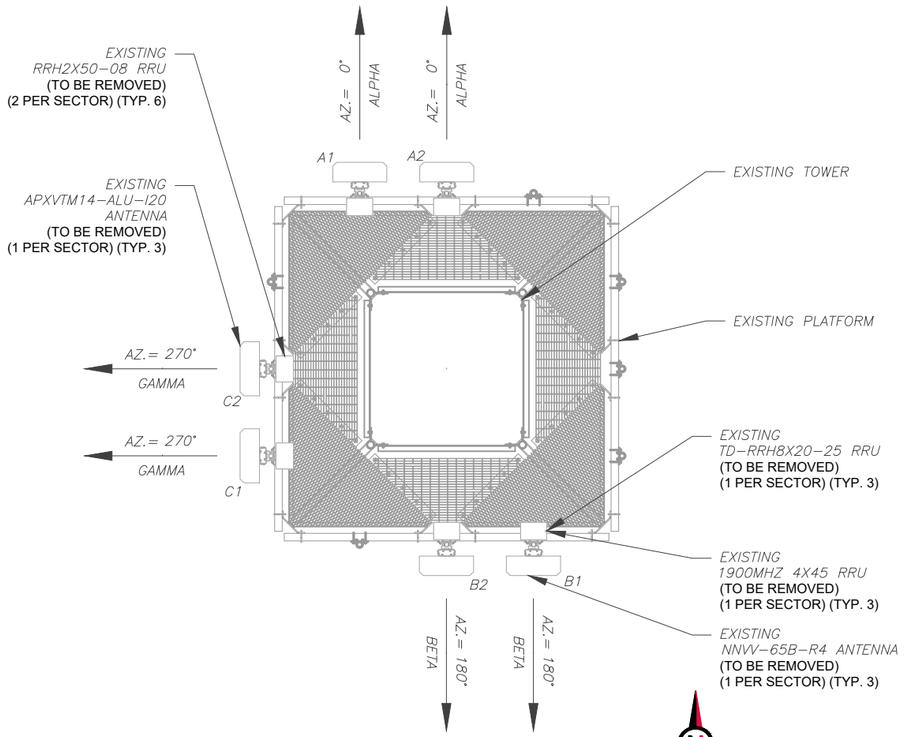
SEAL:
STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED
PROFESSIONAL ENGINEER
DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

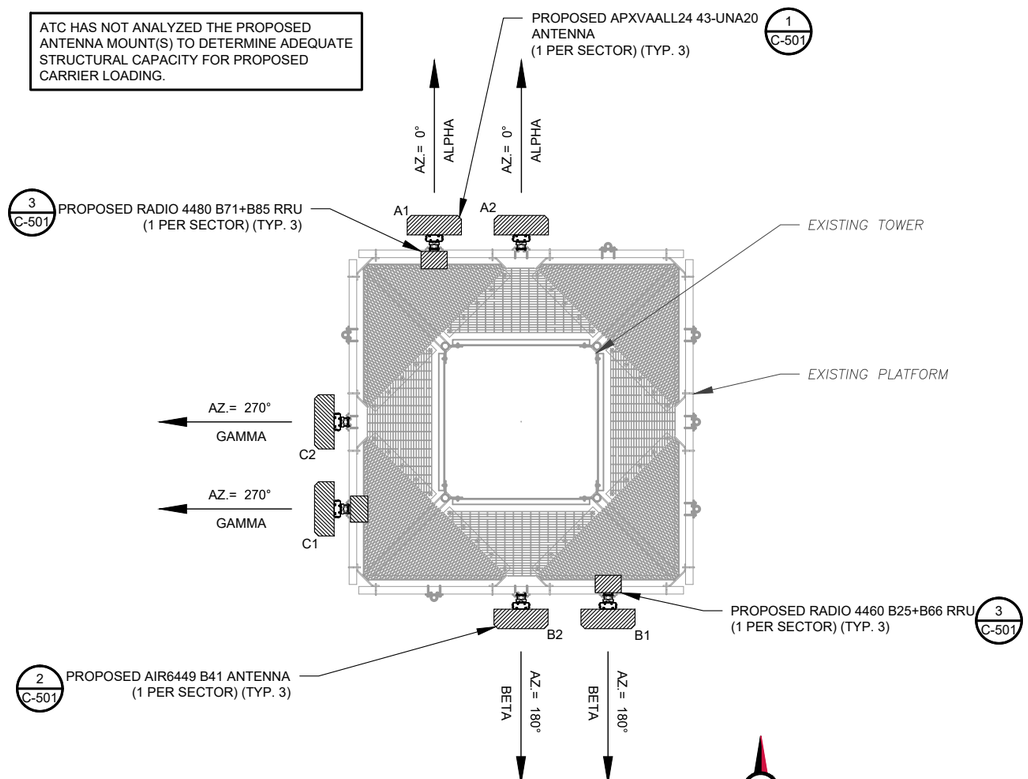
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



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

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



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

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	105'	0°	A1	NNVV–65B–R4	–	–	RMV	TD–RRH8X20–25 1900MHZ 4X45	RMV
			A2	APXVTM14–ALU–I20	–	–	RMV	(2) RRH2X50–08	RMV
BETA	105'	180°	B1	NNVV–65B–R4	–	–	RMV	TD–RRH8X20–25 1900MHZ 4X45	RMV
			B2	APXVTM14–ALU–I20	–	–	RMV	(2) RRH2X50–08	RMV
GAMMA	105'	270°	C1	NNVV–65B–R4	–	–	RMV	TD–RRH8X20–25 1900MHZ 4X45	RMV
			C2	APXVTM14–ALU–I20	–	–	RMV	(2) RRH2X50–08	RMV

NOTES

1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
3. ROUTE HYBRID JUMPERS TO AVOID DAMAGE FROM BEING STEPPED UPON.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	105'	0°	A1	APXVAALL24 43-U-NA20	L700, L600, N600, L1900, L2100, G1900	0°/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			A2	AIR6449 B41	L2500, N2500	0°/2°	ADD	-	-
BETA	105'	180°	A1	APXVAALL24 43-U-NA20	L700, L600, N600, L1900, L2100, G1900	0°/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			B2	AIR6449 B41	L2500, N2500	0°/2°	ADD	-	-
GAMMA	105'	270°	C1	APXVAALL24 43-U-NA20	L700, L600, N600, L1900, L2100, G1900	0°/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			C2	AIR6449 B41	L2500, N2500	0°/2°	ADD	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(6) 1–5/8"	(4) 6X12 (1–1/4")	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6X24 (1.99")	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®

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RALEIGH, NC 27601

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T-MOBILE SITE NAME:
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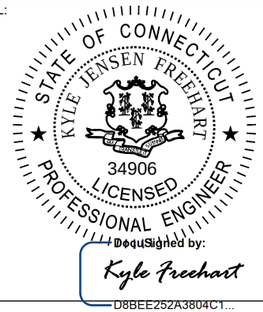
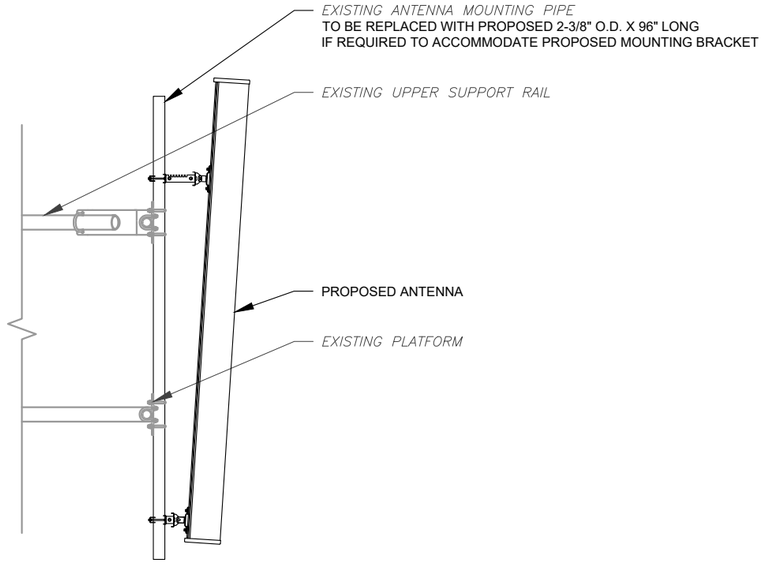


T-Mobile

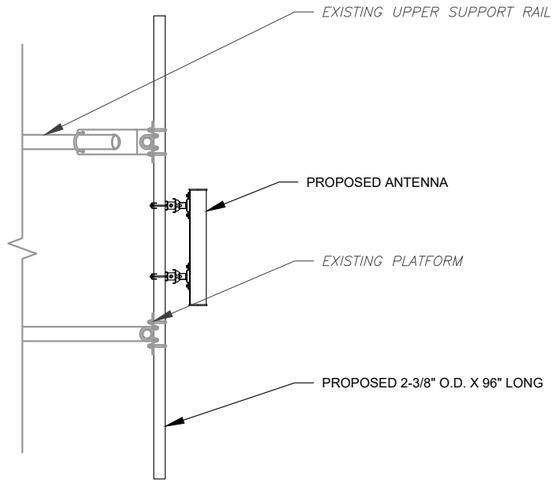
DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

ANTENNA INFORMATION & SCHEDULE

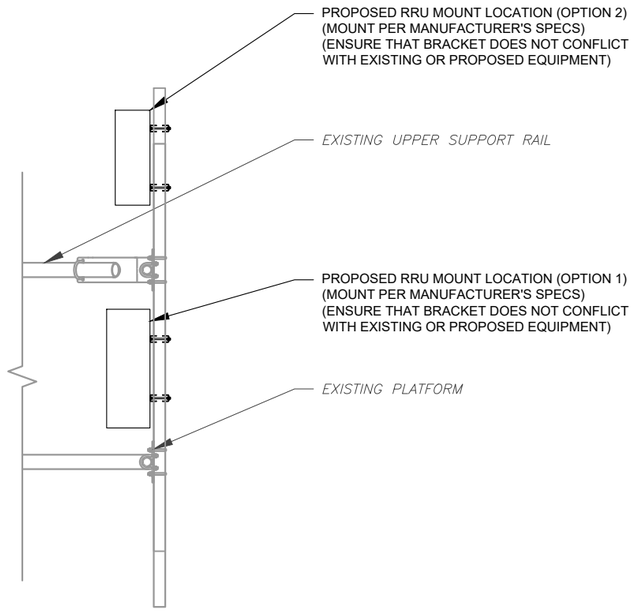
SHEET NUMBER:	REVISION:
C-401	0



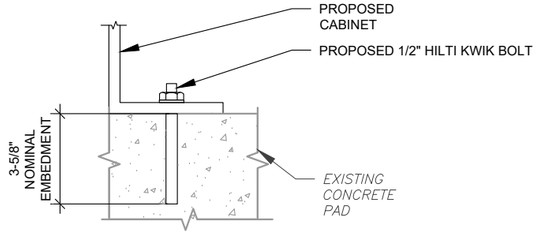
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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



NOTE:

INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

4 CABINET ATTACHMENT DETAIL
SCALE: NOT TO SCALE

AMERICAN TOWER®

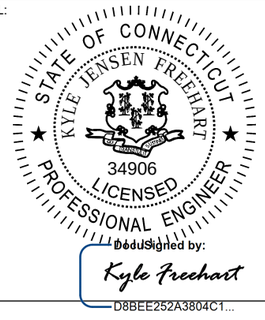
Kimley»Horn

COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KC	04/27/21
B	PRELIM	JR	08/23/21
0	ISSUED FOR CONSTRUCTION	FAQ	10/11/21

ATC SITE NUMBER:
88016
ATC SITE NAME:
OLD LYME
T-MOBILE SITE NAME:
CTNL330A
SITE ADDRESS:
333 GRASSY HILL RD
OLD LYME, CT 06371

SEAL:

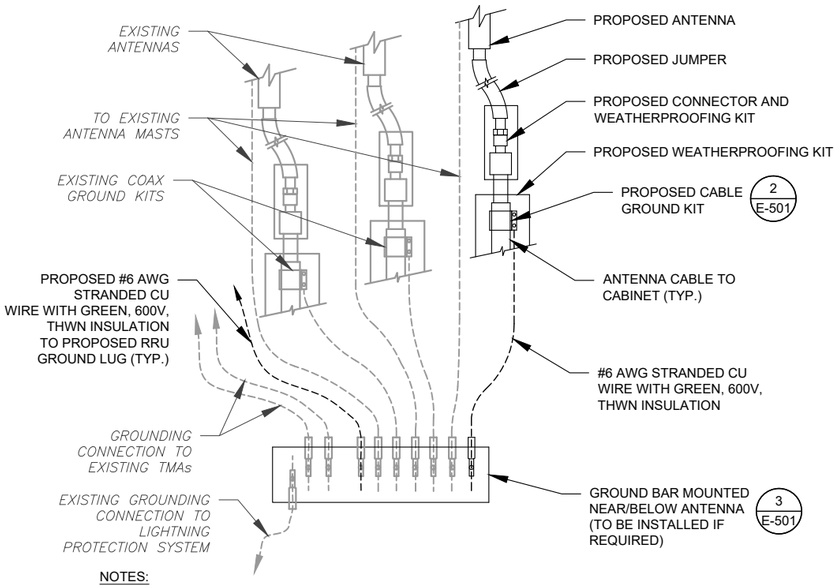


T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

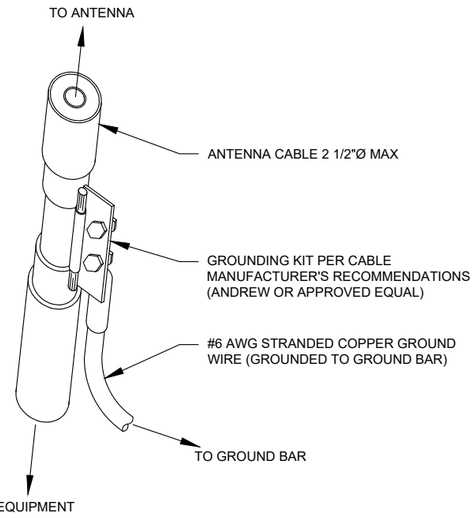


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

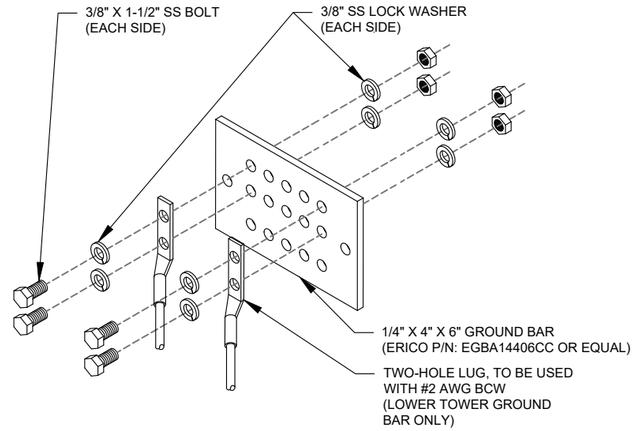


GROUND KIT NOTES:

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

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

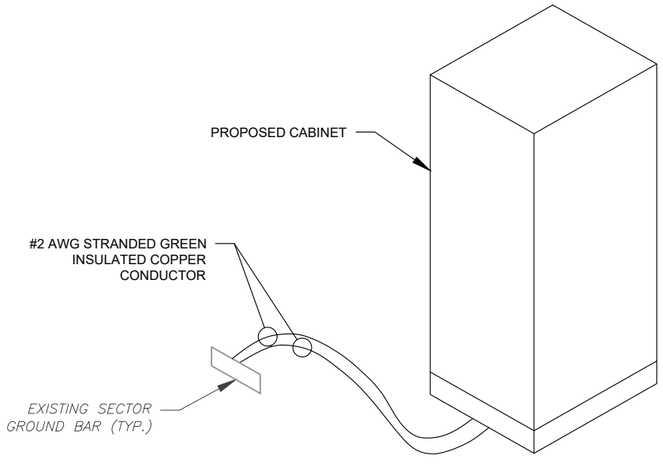


GROUND BAR NOTES:

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

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.



4 CABINET GROUNDING DETAIL

SCALE: N.T.S.

ELECTRICAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
2. ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW IN CHART.
3. FOR SPECIFIC CABINET / ANCILLARY EQUIPMENT WIRING REQUIREMENTS, THE T-MOBILE CONTRACTOR SHOULD REFERENCE DESIGN DOCUMENTS PROVIDED BY T-MOBILE FOR THIS CURRENT PROJECT CONFIGURATION, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS & NEC STANDARDS & PRACTICES.

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"

AMERICAN TOWER®

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COA: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
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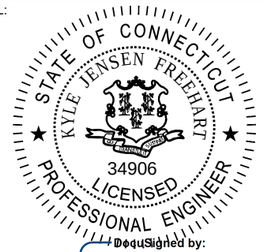


DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

T-Mobile

DATE DRAWN:	10/11/21
ATC JOB NO:	13653968
CUSTOMER ID:	CTNL330A
CUSTOMER #:	CTNL330A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Proposed RAN Equipment				
Template: 67D5A998C Indoor (GSM only)				
Enclosure	**1**	**2**	**3**	**4**
Enclosure Type	Ancillary Equipment (Ericsson)	19 Inch Rack (Ericsson)	B160	RBS 6601
Baseband		BB 6648 [N2500]; BB 6648 [L2100, L1900]; BB 6648 [L700, L600, N600]; BB 6630 [L2500]		DUG20 [G1900]
Hybrid Cable System	PSU 4813			
Transport System		CSR IXRe V2 (Gen2)		
Functionality Groups	Ericsson Hybrid Trunk 6/24 4AWG *Select Length* **(x 3)**			

RAN Scope of Work:

CT72XC041

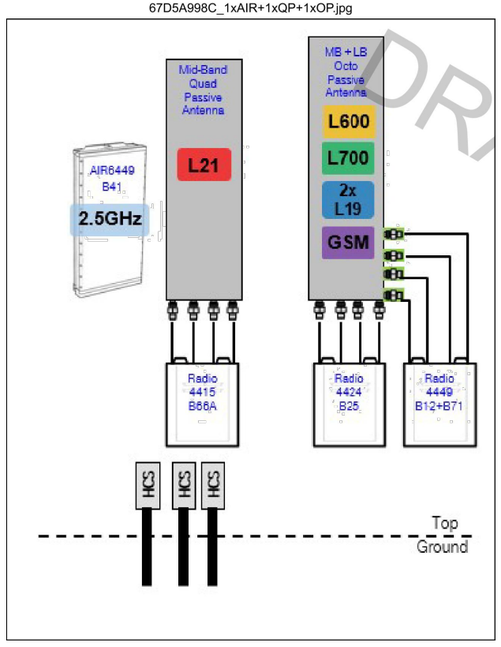
Planned azimuth: 0/180/270

Existing power 150A
Upgrade power to 200A

1 CABINET CONFIGURATION

SCALE: NOT TO SCALE

67D5A998C_1xAIR+1xQP+1xOP.jpg



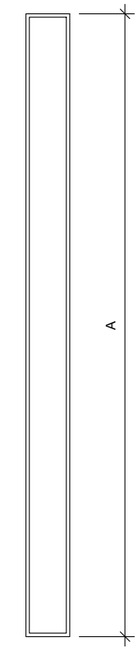
2 ANTENNA CONFIGURATION

SCALE: NOT TO SCALE

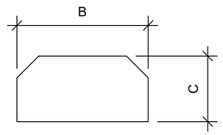
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0



FRONT VIEW

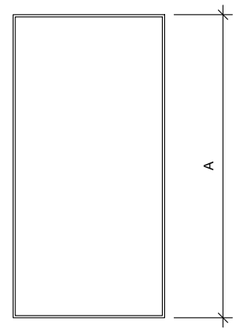


TOP VIEW

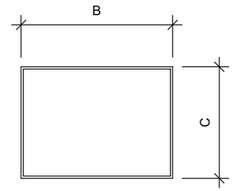
1 ANTENNA SPECIFICATIONS

FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
APXVAALL24 43-U-NA20	95.9"	24.0"	8.5"	122.8
AIR6449 B41	33.1"	20.6"	8.6"	104.0



FRONT VIEW



TOP VIEW

2 RRU SPECIFICATIONS

FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

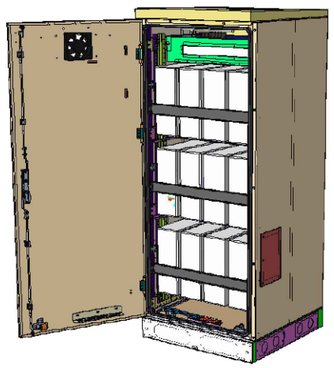
RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4480 B71+B85	21.8"	15.7"	7.5"	84
RADIO 4460 B25+B66	19.6"	15.7"	12.1"	109

SUPPLEMENTAL

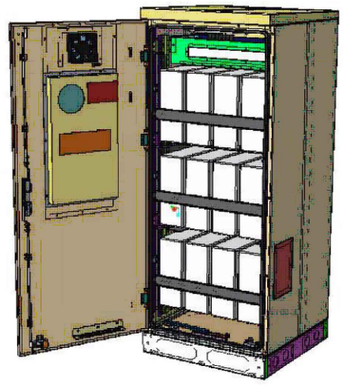
SHEET NUMBER: R-602

REVISION: 0

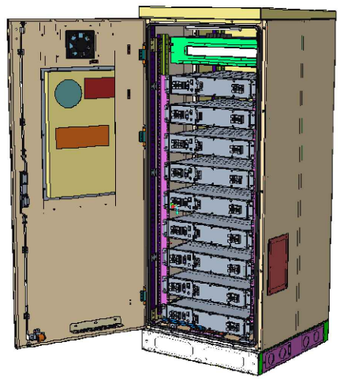
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

Enclosure B160

Capacity
- VRLA 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification
- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification
- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m^2)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification
- Ingress protection: VRLA/Sodium IP44
  Li-Ion IP55
- Relative humidity: 15-100%

Climate system
- Air Conditioner
  - Fan type: DC
  - Cooling capacity: 500W @L35/L35
- Convection cooling
  - Emergency fan

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0

ERICSSON

Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.

Preliminary technical specification for Enclosure 6160 AC

CAPACITY	
Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option
MECHANICAL SPECIFICATION	
Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder
POWER SYSTEM	
Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	0

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**100 ft Self Support Tower**
ATC Site Name	:	**OLD LYME,CT**
ATC Site Number	:	**88016**
Engineering Number	:	**13653968_C3_08**
Proposed Carrier	:	**SPRINT NEXTEL**
Carrier Site Name	:	**CTNL330A**
Carrier Site Number	:	**CTNL330A**
Site Location	:	**GRASSY HILL ROAD** **OLD LYME, CT 06371-3300** **41.3918, -72.2859**
County	:	**New London**
Date	:	**October 21, 2021**
Max Usage	:	**59%**
Result	:	**Pass**

Prepared By:

Sammie Brown
Structural Engineer I

Reviewed By:

COA : PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 100 ft Self Support tower to reflect the change in loading by SPRINT NEXTEL.

Supporting Documents

Tower Drawings	Analysis by CSEI Site Old Lyme, CT
Foundation Drawing	Geotel Engineering Report #E08-247-F, dated May 14, 2008
Geotechnical Report	Geotel Engineering Report #E08-247-G, dated May 14, 2008
Mount Analysis	TEP Job # 25607.577549, dated August 17, 2021
Mount Modification	TEP Job #25607.594249, dated September 10, 2021

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	125 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.20, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
120.0	1	Decibel DB205	Square Platform with Handrails	(2) 7/8" Coax	VALLEY SHORE EMERGENCY COMMUNICATIONS
	1	Decibel DB638			
104.0	4	Generic 12' Horn		-	OTHER
85.0	1	RAD Data AIRMUX-400 (w/o integrated antenna)	Side Arm	(2) 7/8" Coax (2) 0.38" (9.7mm) Cat 5e	VALLEY SHORE EMERGENCY COMMUNICATIONS
82.8	-	-	Access Platform	-	-
81.0	6	Commscope NHH-65B-R2B	Sector Frame	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	6	Amphenol Antel LPA-80080-4CF-EDIN-0			
	3	Samsung MT6407-77A			
	2	Raycap RVZDC-6627-PF-48			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
118.0	6	Alcatel-Lucent RRH2x50-08	-	(4) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax	SPRINT NEXTEL
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	3	Commscope NNVV-65B-R4			
	3	RFS APXVTM14-ALU-I20			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
105.0	3	Ericsson Radio 4460 B25+B66	Side Arm	(3) 1.99" (50.7mm) Hybrid	SPRINT NEXTEL
	3	Ericsson Air6449 B41			
	3	RFS APXVAALL24 43-U-NA20			
	3	Ericsson Radio 4480 B71+B85A			

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

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	41%	Pass
Diagonals	59%	Pass
Horizontals	30%	Pass
Anchor Bolts	40%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	99.1	29%
Download (kips)	129.3	2%

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

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
105.0	Ericsson Air6449 B41	SPRINT NEXTEL	0.037	0.010	0.037
	Ericsson Radio 4460 B25+B66				
	Ericsson Radio 4480 B71+B85A				
	RFS APXVAALL24 43-U-NA20				
104.0	Generic 12' Horn	Other	0.037	0.010	0.037

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H**

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

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

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

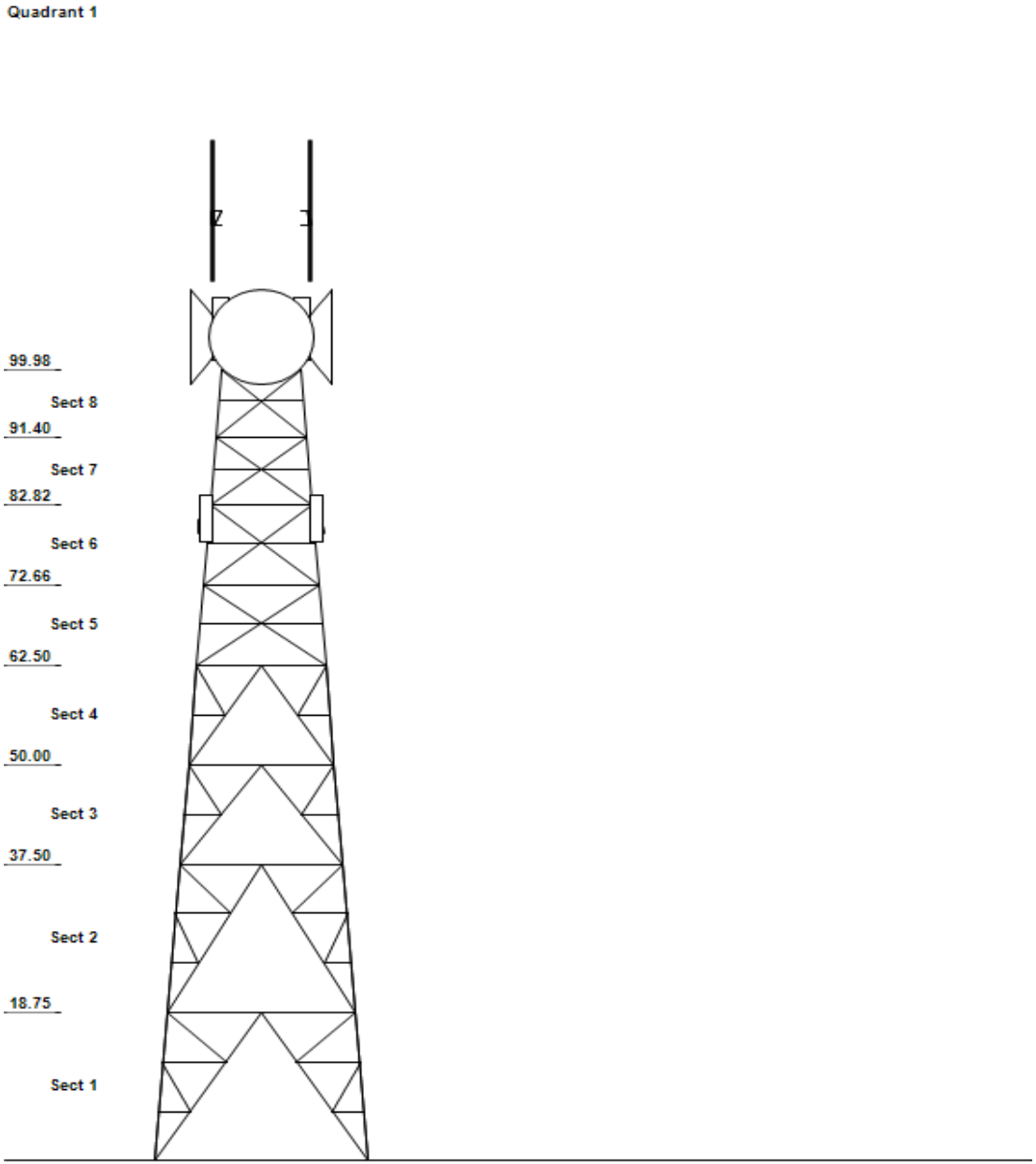
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

JOB INFORMATION

Asset:	88016, OLD LYME	Height :	100 ft
Client	SPRINT NEXTEL	Base Width :	24.25 ft
Code:	ANSI/TIA-222-H	Shape :	Square



SITE PARAMETERS

Nominal Wind : 125 mph wind with no ice — Exposure : B — Site Class : D

Ice Wind: 50 mph wind with 1" radial — Topo Method: Method 1 — Risk Cat : II

Service Wind : 60 mph Serviceability — Topo Feature : — S_s : 0.204 — S_1 : 0.054

SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SAE 36 ksi 8X8X0.625	DAS 36 ksi 3X2.5X0.25	DAE 36 ksi 2.5X2.5X0.25
2	SAE 36 ksi 6X6X0.625	DAE 36 ksi 2.5X2.5X0.25	DAE 36 ksi 2.5X2.5X0.25
3	SAE 36 ksi 6X6X0.5625	DAL 36 ksi 2.5X2X0.25	DAE 36 ksi 2.5X2.5X0.25
4	SAE 36 ksi 6X6X0.4375	DAL 36 ksi 2.5X2X0.25	DAE 36 ksi 2.5X2.5X0.25
5	SAE 36 ksi 5X5X0.4375	SAE 36 ksi 3.5x3.5x0.25	SAU 36 ksi 3X2.5X0.25
6	SAE 36 ksi 5X5X0.4375	SAE 36 ksi 3.5x3.5x0.25	DAL 36 ksi 3X2.5X0.25
7	SAE 36 ksi 5X5X0.3125	SAE 36 ksi 3X3X0.25	SAU 36 ksi 3X2.5X0.25
8	SAE 36 ksi 5X5X0.3125	SAE 36 ksi 3X3X0.25	CHN 36 ksi C8 x 11.5

REDUNDANT SECONDARY BRACING

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 2	S2X2X0.25	S2X2X0.25	S2X2X0.25	S2X2X0.25	-	-
3 - 4	S2X2X0.25	S2X2X0.25	-	-	-	-
5 - 8	-	S2X2X0.25	-	-	-	-

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
120.00	OMNI	1	Decibel DB205
120.00	OMNI	1	Decibel DB638
105.00	PANEL	3	Ericsson Air6449 B41
105.00	PANEL	3	RFS APXVAALL24 43-U-NA20
105.00	RRU/RRH	3	Ericsson Radio 4460 B25+B66
105.00	RRU/RRH	3	Ericsson Radio 4480 B71+B85A
104.00	DISH-HORN	4	Generic 12' Horn
100.00	Triangular Low Profile Platform	1	20' Platform w/ Handrails
85.00	Radio/ODU	1	RAD Data AIRMUX-400 (w/o integ
82.80	Triangular Low Profile Platform	1	Access Platform
81.00	BOB/SSB	2	Raycap RVZDC-6627-PF-48
81.00	PANEL	3	Samsung MT6407-77A
81.00	PANEL	6	Amphenol Antel LPA-80080-4CF-E
81.00	PANEL	6	Commscope NHH-65B-R2B
81.00	RRU/RRH	3	Samsung B2/B66A RRH-BR049
81.00	RRU/RRH	3	Samsung B5/B13 RRH-BR04C
78.00	Sector Frame	3	Flat Light Sector Frame

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
0.00	120.00	2	7/8" Coax
0.00	105.00	3	1.99" (50.7mm) Hybrid
10.00	100.00	1	Waveguide
10.00	100.00	1	Climbing Ladder

JOB INFORMATION

Asset:	88016, OLD LYME	Height :	100 ft
Client	SPRINT NEXTEL	Base Width :	24.25 ft
Code:	ANSI/TIA-222-H	Shape :	Square

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
10.00	92.00	1	Wave Guide
0.00	88.00	2	7/8" Coax
0.00	85.00	2	0.38" (9.7mm) Cat 5e
10.00	82.00	1	Waveguide
0.00	81.00	2	1 5/8" Hybriflex
10.00	81.00	6	1 5/8" Coax
10.00	30.00	4	Coax Cage

GLOBAL BASE FOUNDATION DESIGN LOADS

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL+WL	3843.1	68.91	50.26
DL+WL+IL	788.12	110.24	10.67

INDIVIDUAL BASE FOUNDATION DESIGN LOADS

Vertical (kip)	Uplift (kip)	Horizontal (kip)
129.27	99.10	20.65

ANALYSIS PARAMETERS

Location:	New London County, CT	Height:	100 ft
Type and Shape:	Self Support, Square	Base Elevation:	0.00 ft
Manufacturer:	AT&T TAG	Bottom Face Width:	24.25 ft
Kd	0.85	Top Face Width:	9.00 ft
Ke:	0.99	Anchor Bolt Detail Type:	c

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed Without Ice:	125 mph
Risk Category:	II	Design Wind Speed with Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Windspeed:	60 mph
Topographic Category:	Flat	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	360 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			Period Based on Rayleigh Method (sec):	0.40
T_L (sec):	6	P:	1.3	$C_{s:}$	0.072
$S_{s:}$	0.204	$S_{1:}$	0.054	$C_{s,}$ Max:	0.072
$F_{a:}$	1.600	$F_{v:}$	2.400	$C_{s,}$ Min:	0.030
$S_{ds:}$	0.218	S_{d1}:	0.086		

LOAD CASES

1.2D + 1.0W Normal	125 mph wind with no ice
1.2D + 1.0W 45°	125 mph wind with no ice
0.9D + 1.0W Normal	125 mph wind with no ice
0.9D + 1.0W 45°	125 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 45°	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
1.2D + 1.0Ev + 1.0Eh 45°	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 45°	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice
1.0D + 1.0W Service 45°	60 mph Wind with No Ice

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0W

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
120.0	Decibel DB205	1	38	3.9	18.0	3.0	3.0	1.00	1.00	0.0	0.00	34.94	115	46
120.0	Decibel DB638	1	40	4.8	16.1	3.0	3.0	1.00	1.00	0.0	0.00	34.94	143	48
105.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	33.63	118	392
105.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.67	0.0	0.00	33.63	131	302
105.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	33.63	246	374
105.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	33.63	875	442
104.0	Generic 12' Horn	4	2500	156.8	12.0	144.0	0.0	1.00	1.00	0.0	0.00	33.54	17884	12000
100.0	20' Platform w/ Handrails	1	9000	80.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	33.16	2255	10800
85.0	RAD Data AIRMUX-400 (w/o integ	1	5	0.7	0.9	7.8	3.0	1.00	1.00	0.0	0.00	31.66	20	6
82.8	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	31.42	1202	6000
81.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	31.23	60	253
81.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	31.23	60	304
81.0	Raycap RVZDC-6627-PF-48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	31.23	124	77
81.0	Samsung MT6407-77A	3	82	4.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	31.23	183	294
81.0	Amphenol Antel LPA-80080-4CF-E	6	12	5.4	3.9	5.5	13.2	0.80	0.62	0.0	0.00	31.23	426	86
81.0	Commscope NHH-65B-R2B	6	44	8.1	6.0	11.9	7.1	0.80	0.69	0.0	0.00	31.23	710	315
78.0	Flat Light Sector Frame	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	30.89	709	1440
	Totals	47	27,650	1023.3									25,260	33,180

TOWER LOADING

Discrete Appurtenance Properties 0.9D + 1.0W

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
120.0	Decibel DB205	1	38	3.9	18.0	3.0	3.0	1.00	1.00	0.0	0.00	34.94	115	34
120.0	Decibel DB638	1	40	4.8	16.1	3.0	3.0	1.00	1.00	0.0	0.00	34.94	143	36
105.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	33.63	118	294
105.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.67	0.0	0.00	33.63	131	227
105.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	33.63	246	281
105.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	33.63	875	332
104.0	Generic 12' Horn	4	2500	156.8	12.0	144.0	0.0	1.00	1.00	0.0	0.00	33.54	17884	9000
100.0	20' Platform w/ Handrails	1	9000	80.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	33.16	2255	8100
85.0	RAD Data AIRMUX-400 (w/o integ	1	5	0.7	0.9	7.8	3.0	1.00	1.00	0.0	0.00	31.66	20	5
82.8	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	31.42	1202	4500
81.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	31.23	60	190
81.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	31.23	60	228
81.0	Raycap RVZDC-6627-PF-48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	31.23	124	58
81.0	Samsung MT6407-77A	3	82	4.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	31.23	183	220
81.0	Amphenol Antel LPA-80080-4CF-E	6	12	5.4	3.9	5.5	13.2	0.80	0.62	0.0	0.00	31.23	426	65
81.0	Commscope NHH-65B-R2B	6	44	8.1	6.0	11.9	7.1	0.80	0.69	0.0	0.00	31.23	710	236
78.0	Flat Light Sector Frame	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	30.89	709	1080
	Totals	47	27,650	1023.3									25,260	24,885

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
120.0	Decibel DB205	1	104	8.0	18.0	3.0	3.0	1.00	1.00	0.0	0.00	5.59	38	112
120.0	Decibel DB638	1	117	8.5	16.1	3.0	3.0	1.00	1.00	0.0	0.00	5.59	40	125
105.0	Ericsson Radio 4460 B25+B66	3	165	3.2	1.6	15.7	12.1	0.80	0.67	0.0	0.00	5.38	24	562
105.0	Ericsson Radio 4480 B71+B85A	3	132	3.6	1.8	15.7	7.5	0.80	0.67	0.0	0.00	5.38	26	447
105.0	Ericsson Air6449 B41	3	191	6.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	5.38	46	636
105.0	RFS APXVAALL24 43-U-NA20	3	372	22.6	8.0	24.0	8.5	0.80	0.63	0.0	0.00	5.38	156	1188
104.0	Generic 12' Horn	4	3612	161.7	12.0	144.0	0.0	1.00	1.00	0.0	0.00	5.37	2951	16449
100.0	20' Platform w/ Handrails	1	1300 4	115.6	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.31	521	14804
85.0	RAD Data AIRMUX-400 (w/o integ	1	17	1.1	0.9	7.8	3.0	1.00	1.00	0.0	0.00	5.07	5	18
82.8	Access Platform	1	7179	64.6	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.03	276	8179
81.0	Samsung B5/B13 RRH-BR04C	3	106	2.4	1.3	15.0	8.1	0.80	0.50	0.0	0.00	5.00	12	360

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
81.0	Samsung B2/B66A RRH-BR049	3	124	2.4	1.3	15.0	10.0	0.80	0.50	0.0	0.00	5.00	12	424
81.0	Raycap RVZDC-6627-PF-48	2	101	4.6	2.4	15.7	10.3	0.80	0.77	0.0	0.00	5.00	24	214
81.0	Samsung MT6407-77A	3	145	5.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	5.00	35	485
81.0	Amphenol Antel LPA-80080-4CF-E	6	84	6.6	3.9	5.5	13.2	0.80	0.62	0.0	0.00	5.00	83	519
81.0	Commscope NHH-65B-R2B	6	153	9.8	6.0	11.9	7.1	0.80	0.69	0.0	0.00	5.00	138	969
78.0	Flat Light Sector Frame	3	588	27.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	4.94	173	2005
	Totals	47	41,967	1174.1									4562	47,497

TOWER LOADING

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
120.0	Decibel DB205	1	38	3.9	18.0	3.0	3.0	1.00	1.00	0.0	0.00	8.05	26	38
120.0	Decibel DB638	1	40	4.8	16.1	3.0	3.0	1.00	1.00	0.0	0.00	8.05	33	40
105.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	7.75	27	327
105.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.67	0.0	0.00	7.75	30	252
105.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	7.75	57	312
105.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	7.75	202	368
104.0	Generic 12' Horn	4	2500	156.8	12.0	144.0	0.0	1.00	1.00	0.0	0.00	7.73	4120	10000
100.0	20' Platform w/ Handrails	1	9000	80.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.64	520	9000
85.0	RAD Data AIRMUX-400 (w/o integ	1	5	0.7	0.9	7.8	3.0	1.00	1.00	0.0	0.00	7.29	5	5
82.8	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.24	277	5000
81.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	7.19	14	211
81.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	7.19	14	253
81.0	Raycap RVZDC-6627-PF-48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	7.19	28	64
81.0	Samsung MT6407-77A	3	82	4.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	7.19	42	245
81.0	Amphenol Antel LPA-80080-4CF-E	6	12	5.4	3.9	5.5	13.2	0.80	0.62	0.0	0.00	7.19	98	72
81.0	Commscope NHH-65B-R2B	6	44	8.1	6.0	11.9	7.1	0.80	0.69	0.0	0.00	7.19	164	262
78.0	Flat Light Sector Frame	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.12	163	1200
	Totals	47	27,650	1023.3									5,820	27,650

TOWER LOADING

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient Factor	K_a Override
10.0	100.0	Climbing Ladder	1	2.00	6.90	100	1	Individual	0.00	N	1.00	1.00	0.00
10.0	100.0	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
10.0	92.0	Wave Guide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
10.0	82.0	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
10.0	81.0	1 5/8" Coax	6	1.98	0.82	50	1	Block	0.00	N	1.00	1.00	0.00
10.0	30.0	Coax Cage	4	12.00	25.00	100	1,3	Individual	0.00	N	1.00	1.00	0.00
0.0	120.0	7/8" Coax	2	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	105.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	88.0	7/8" Coax	2	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	85.0	0.38" (9.7mm) Cat 5e	2	0.38	0.09	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	81.0	1 5/8" Hybriflex	2	1.98	1.30	100	None	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal
125 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	32.75	20.776	0.000	0.00	0.240	2.81	1.00	1.00	0.0	20.78	58.44	0.00	1882	0	1627	216	1843
7	87	31.88	18.247	0.000	0.00	0.187	3.04	1.00	1.00	0.0	18.25	55.42	0.00	1737	0	1502	274	1776
6	78	30.86	22.491	0.000	0.00	0.173	3.10	1.00	1.00	0.0	22.49	69.72	0.00	2747	0	1829	569	2398
5	68	29.65	23.827	0.000	0.00	0.163	3.14	1.00	1.00	0.0	23.83	74.89	0.00	2643	0	1888	589	2476
4	56	28.14	25.184	0.000	0.00	0.125	3.33	1.00	1.00	0.0	25.18	83.79	0.00	4279	0	2004	687	2691
3	44	26.19	26.044	0.000	0.00	0.115	3.37	1.00	1.00	0.0	26.04	87.85	0.00	4787	0	1956	640	2595
2	28	23.49	39.579	0.000	0.00	0.103	3.43	1.00	1.00	0.0	39.58	135.91	0.00	8496	0	2714	1939	4653
1	9	23.49	49.329	0.000	0.00	0.112	3.39	1.00	1.00	0.0	49.33	167.19	0.00	9157	0	3338	1421	4759
														35,727	0			23,190

1.2D + 1.0W 45°
125 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	32.75	20.776	0.000	0.00	0.240	2.81	1.18	1.18	0.0	24.52	68.98	0.00	1882	0	1920	216	2136
7	87	31.88	18.247	0.000	0.00	0.187	3.04	1.14	1.14	0.0	20.80	63.19	0.00	1737	0	1712	274	1987
6	78	30.86	22.491	0.000	0.00	0.173	3.10	1.13	1.13	0.0	25.41	78.76	0.00	2747	0	2066	569	2635
5	68	29.65	23.827	0.000	0.00	0.163	3.14	1.12	1.12	0.0	26.75	84.07	0.00	2643	0	2119	589	2707
4	56	28.14	25.184	0.000	0.00	0.125	3.33	1.09	1.09	0.0	27.54	91.62	0.00	4279	0	2191	687	2878
3	44	26.19	26.044	0.000	0.00	0.115	3.37	1.09	1.09	0.0	28.30	95.44	0.00	4787	0	2125	640	2764
2	28	23.49	39.579	0.000	0.00	0.103	3.43	1.08	1.08	0.0	42.64	146.43	0.00	8496	0	2924	1939	4863
1	9	23.49	49.329	0.000	0.00	0.112	3.39	1.08	1.08	0.0	53.47	181.24	0.00	9157	0	3619	1421	5040
														35,727	0			25,009

0.9D + 1.0W Normal
125 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	32.75	20.776	0.000	0.00	0.240	2.81	1.00	1.00	0.0	20.78	58.44	0.00	1411	0	1627	216	1843
7	87	31.88	18.247	0.000	0.00	0.187	3.04	1.00	1.00	0.0	18.25	55.42	0.00	1303	0	1502	274	1776
6	78	30.86	22.491	0.000	0.00	0.173	3.10	1.00	1.00	0.0	22.49	69.72	0.00	2060	0	1829	569	2398
5	68	29.65	23.827	0.000	0.00	0.163	3.14	1.00	1.00	0.0	23.83	74.89	0.00	1983	0	1888	589	2476
4	56	28.14	25.184	0.000	0.00	0.125	3.33	1.00	1.00	0.0	25.18	83.79	0.00	3209	0	2004	687	2691
3	44	26.19	26.044	0.000	0.00	0.115	3.37	1.00	1.00	0.0	26.04	87.85	0.00	3591	0	1956	640	2595
2	28	23.49	39.579	0.000	0.00	0.103	3.43	1.00	1.00	0.0	39.58	135.91	0.00	6372	0	2714	1939	4653
1	9	23.49	49.329	0.000	0.00	0.112	3.39	1.00	1.00	0.0	49.33	167.19	0.00	6867	0	3338	1421	4759
														26,796	0			23,190

0.9D + 1.0W 45°
125 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	32.75	20.776	0.000	0.00	0.240	2.81	1.18	1.18	0.0	24.52	68.98	0.00	1411	0	1920	216	2136
7	87	31.88	18.247	0.000	0.00	0.187	3.04	1.14	1.14	0.0	20.80	63.19	0.00	1303	0	1712	274	1987
6	78	30.86	22.491	0.000	0.00	0.173	3.10	1.13	1.13	0.0	25.41	78.76	0.00	2060	0	2066	569	2635
5	68	29.65	23.827	0.000	0.00	0.163	3.14	1.12	1.12	0.0	26.75	84.07	0.00	1983	0	2119	589	2707
4	56	28.14	25.184	0.000	0.00	0.125	3.33	1.09	1.09	0.0	27.54	91.62	0.00	3209	0	2191	687	2878
3	44	26.19	26.044	0.000	0.00	0.115	3.37	1.09	1.09	0.0	28.30	95.44	0.00	3591	0	2125	640	2764
2	28	23.49	39.579	0.000	0.00	0.103	3.43	1.08	1.08	0.0	42.64	146.43	0.00	6372	0	2924	1939	4863
1	9	23.49	49.329	0.000	0.00	0.112	3.39	1.08	1.08	0.0	53.47	181.24	0.00	6867	0	3619	1421	5040

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
														26,796	0			25,009

1.2D + 1.0Di + 1.0Wi Normal — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	5.24	20.776	9.664	9.66	0.346	2.44	1.00	1.00	1.1	30.44	74.21	9.66	3645	1764	331	82	412
7	87	5.10	18.247	10.183	10.18	0.286	2.64	1.00	1.00	1.1	28.43	75.00	10.18	3473	1736	325	112	437
6	78	4.94	22.491	11.648	11.65	0.259	2.74	1.00	1.00	1.1	34.14	93.60	11.65	5300	2554	393	215	608
5	68	4.74	23.827	12.202	12.20	0.244	2.80	1.00	1.00	1.1	36.03	100.84	12.20	5172	2528	407	219	625
4	56	4.50	25.184	12.296	12.30	0.183	3.05	1.00	1.00	1.1	37.48	114.40	12.30	7929	3651	438	264	702
3	44	4.19	26.044	12.505	12.51	0.169	3.12	1.00	1.00	1.0	38.55	120.17	12.51	8512	3725	428	245	673
2	28	3.76	39.579	16.323	16.32	0.145	3.23	1.00	1.00	1.0	55.90	180.60	16.32	14283	5787	577	507	1084
1	9	3.76	49.329	15.263	15.26	0.146	3.22	1.00	1.00	0.9	64.59	208.31	15.26	14428	5272	666	378	1043
														62,743	27,016			5,585

1.2D + 1.0Di + 1.0Wi 45° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	5.24	20.776	9.664	9.66	0.346	2.44	1.20	1.20	1.1	36.53	89.06	9.66	3645	1764	397	82	478
7	87	5.10	18.247	10.183	10.18	0.286	2.64	1.20	1.20	1.1	34.12	90.00	10.18	3473	1736	390	112	502
6	78	4.94	22.491	11.648	11.65	0.259	2.74	1.19	1.19	1.1	40.76	111.75	11.65	5300	2554	469	215	684
5	68	4.74	23.827	12.202	12.20	0.244	2.80	1.18	1.18	1.1	42.62	119.29	12.20	5172	2528	481	219	700
4	56	4.50	25.184	12.296	12.30	0.183	3.05	1.14	1.14	1.1	42.64	130.14	12.30	7929	3651	498	264	762
3	44	4.19	26.044	12.505	12.51	0.169	3.12	1.13	1.13	1.0	43.44	135.40	12.51	8512	3725	482	245	727
2	28	3.76	39.579	16.323	16.32	0.145	3.23	1.11	1.11	1.0	61.96	200.18	16.32	14283	5787	640	507	1147
1	9	3.76	49.329	15.263	15.26	0.146	3.22	1.11	1.11	0.9	71.65	231.08	15.26	14428	5272	738	378	1116
														62,743	27,016			6,117

1.0D + 1.0W Service Normal — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	7.55	20.776	0.000	0.00	0.240	2.81	1.00	1.00	0.0	20.78	58.44	0.00	1568	0	375	50	425
7	87	7.35	18.247	0.000	0.00	0.187	3.04	1.00	1.00	0.0	18.25	55.42	0.00	1447	0	346	63	409
6	78	7.11	22.491	0.000	0.00	0.173	3.10	1.00	1.00	0.0	22.49	69.72	0.00	2289	0	421	131	552
5	68	6.83	23.827	0.000	0.00	0.163	3.14	1.00	1.00	0.0	23.83	74.89	0.00	2203	0	435	136	571
4	56	6.48	25.184	0.000	0.00	0.125	3.33	1.00	1.00	0.0	25.18	83.79	0.00	3566	0	462	158	620
3	44	6.03	26.044	0.000	0.00	0.115	3.37	1.00	1.00	0.0	26.04	87.85	0.00	3990	0	451	147	598
2	28	5.41	39.579	0.000	0.00	0.103	3.43	1.00	1.00	0.0	39.58	135.91	0.00	7080	0	625	447	1072
1	9	5.41	49.329	0.000	0.00	0.112	3.39	1.00	1.00	0.0	49.33	167.19	0.00	7630	0	769	327	1096
														29,773	0			5,343

1.0D + 1.0W Service 45° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	96	7.55	20.776	0.000	0.00	0.240	2.81	1.18	1.18	0.0	24.52	68.98	0.00	1568	0	442	50	492
7	87	7.35	18.247	0.000	0.00	0.187	3.04	1.14	1.14	0.0	20.80	63.19	0.00	1447	0	395	63	458
6	78	7.11	22.491	0.000	0.00	0.173	3.10	1.13	1.13	0.0	25.41	78.76	0.00	2289	0	476	131	607
5	68	6.83	23.827	0.000	0.00	0.163	3.14	1.12	1.12	0.0	26.75	84.07	0.00	2203	0	488	136	624
4	56	6.48	25.184	0.000	0.00	0.125	3.33	1.09	1.09	0.0	27.54	91.62	0.00	3566	0	505	158	663
3	44	6.03	26.044	0.000	0.00	0.115	3.37	1.09	1.09	0.0	28.30	95.44	0.00	3990	0	489	147	637
2	28	5.41	39.579	0.000	0.00	0.103	3.43	1.08	1.08	0.0	42.64	146.43	0.00	7080	0	674	447	1120

SECTION FORCES

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	9	5.41	49.329	0.000	0.00	0.112	3.39	1.08	1.08	0.0	53.47	181.24	0.00	7630	0	834	327	1161
														29,773	0			5,762

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.07
Upper Limit C_S:	0.07
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	0.40
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.00
Total Unfactored Dead Load:	57.42 k
Seismic Base Shear (E):	5.37 k

SEISMIC

Load Case: 0.9D - 1.0Ev + 1.0Eh Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
8	95.69	1,568	150,060	0.039	208	1,343
7	87.11	1,447	126,091	0.032	174	1,240
6	77.74	2,289	177,929	0.046	246	1,960
5	67.58	2,203	148,864	0.038	206	1,887
4	56.25	3,566	200,568	0.052	277	3,054
3	43.75	3,990	174,542	0.045	241	3,417
2	28.12	7,080	199,124	0.051	275	6,064
1	9.38	7,630	71,535	0.018	99	6,535
Decibel DB205	100.00	38	3,800	0.001	5	33
Decibel DB638	100.00	40	4,000	0.001	6	34
Ericsson Radio 4460 B25+B66	100.00	327	32,700	0.008	45	280
Ericsson Radio 4480 B71+B85A	100.00	252	25,200	0.006	35	216
Ericsson Air6449 B41	100.00	312	31,200	0.008	43	267
RFS APXVAALL24 43-U-NA20	100.00	368	36,840	0.010	51	316
Generic 12' Horn	100.00	10,000	1,000,000	0.258	1383	8,565
20' Platform w/ Handrails	100.00	9,000	900,000	0.232	1245	7,708
RAD Data AIRMUX-400 (w/o integrated antenna)	85.00	5	442	0.000	1	4
Access Platform	82.80	5,000	414,000	0.107	573	4,282
Samsung B5/B13 RRH-BR04C	81.00	211	17,083	0.004	24	181
Samsung B2/B66A RRH-BR049	81.00	253	20,509	0.005	28	217
Raycap RVZDC-6627-PF-48	81.00	64	5,184	0.001	7	55
Samsung MT6407-77A	81.00	245	19,829	0.005	27	210
Amphenol Antel LPA-80080-4CF-EDIN-0	81.00	72	5,832	0.002	8	62
Commscope NHH-65B-R2B	81.00	262	21,238	0.006	29	225
Flat Light Sector Frame	78.00	1,200	93,600	0.024	129	1,028
Totals		57,423	3,880,171	1.000	5,366	49,181

SEISMIC

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

Section	Height Above Base (ft)	Weight (lb)	W_Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
8	95.69	1,568	150,060	0.039	208	1,950
7	87.11	1,447	126,091	0.032	174	1,800
6	77.74	2,289	177,929	0.046	246	2,846
5	67.58	2,203	148,864	0.038	206	2,739
4	56.25	3,566	200,568	0.052	277	4,434
3	43.75	3,990	174,542	0.045	241	4,961
2	28.12	7,080	199,124	0.051	275	8,804
1	9.38	7,630	71,535	0.018	99	9,489
Decibel DB205	100.00	38	3,800	0.001	5	47
Decibel DB638	100.00	40	4,000	0.001	6	50
Ericsson Radio 4460 B25+B66	100.00	327	32,700	0.008	45	407
Ericsson Radio 4480 B71+B85A	100.00	252	25,200	0.006	35	313
Ericsson Air6449 B41	100.00	312	31,200	0.008	43	388
RFS APXVAALL24 43-U-NA20	100.00	368	36,840	0.010	51	458
Generic 12' Horn	100.00	10,000	1,000,000	0.258	1383	12,435
20' Platform w/ Handrails	100.00	9,000	900,000	0.232	1245	11,192
RAD Data AIRMUX-400 (w/o integrated antenna)	85.00	5	442	0.000	1	6
Access Platform	82.80	5,000	414,000	0.107	573	6,218
Samsung B5/B13 RRH-BR04C	81.00	211	17,083	0.004	24	262
Samsung B2/B66A RRH-BR049	81.00	253	20,509	0.005	28	315
Raycap RVZDC-6627-PF-48	81.00	64	5,184	0.001	7	80
Samsung MT6407-77A	81.00	245	19,829	0.005	27	304
Amphenol Antel LPA-80080-4CF-EDIN-0	81.00	72	5,832	0.002	8	90
Commscope NHH-65B-R2B	81.00	262	21,238	0.006	29	326
Flat Light Sector Frame	78.00	1,200	93,600	0.024	129	1,492
Totals		57,423	3,880,171	1.000	5,366	71,406

FORCE/STRESS SUMMARY

Section 1 – Bolt Elevation 0.0 (ft) and Height 18.75 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 8X8X0.625	-113.30	1.2D + 1.0W 45°	18.859	33	33	33	47.27	36.0	321.66	0.00	0.00	0	0	35	Member Z
H DAE - 2.5X2.5X0.25	-6.48	0.9D + 1.0W N	10.695	100	100	25	148.84	36.0	30.75	0.00	0.00	0	0	21	Member X
D DAS - 3X2.5X0.25	-13.47	1.2D + 1.0W N	22.375	32	64	16	143.75	36.0	36.43	0.00	0.00	0	0	36	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 8X8X0.625	85.64	0.9D + 1.0W 45°	36.0	58	311.36	0.00	0.00		0	0	27	Member
H DAE - 2.5X2.5X0.25	6.79	1.2D + 1.0W N	36.0	58	77.11	0.00	0.00	0.00	0	0	8	Member
D DAS - 3X2.5X0.25	12.56	1.2D + 1.0W N	36.0	58	85.21	0.00	0.00	0.00	0	0	14	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	84.96	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	100.89	0.9D + 1.0W 45°	434.69	6	4	2" A36
Bot Compression	129.93	1.2D + 1.0W 45°	359.74	40	0	

Section 2 – Bolt Elevation 18.8 (ft) and Height 18.75 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.625	-93.92	1.2D + 1.0W 45°	18.859	33	33	33	63.29	36.0	223.72	0.00	0.00	0	0	41	Member Z
H DAE - 2.5X2.5X0.25	-6.44	1.2D + 1.0W N	9.265	100	100	25	135.12	36.0	37.31	0.00	0.00	0	0	17	Member X
D DAE - 2.5X2.5X0.25	-15.20	1.2D + 1.0W N	21.633	32	34	16	112.51	36.0	51.58	0.00	0.00	0	0	29	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.625	69.51	0.9D + 1.0W 45°	36.0	58	230.36	0.00	0.00		0	0	30	Member
H DAE - 2.5X2.5X0.25	6.64	1.2D + 1.0W N	36.0	58	77.11	0.00	0.00	0.00	0	0	8	Member
D DAE - 2.5X2.5X0.25	13.98	1.2D + 1.0W N	36.0	58	77.11	0.00	0.00	0.00	0	0	18	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	68.83	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	84.96	0.9D + 1.0W 45°	0.00	0	0	

Section 3 – Bolt Elevation 37.5 (ft) and Height 12.50 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.5625	-79.79	1.2D + 1.0W 45°	12.573	50	50	50	63.93	36.0	201.73	0.00	0.00	0	0	39	Member Z
H DAE - 2.5X2.5X0.25	-6.17	1.2D + 1.0W N	8.312	100	100	25	125.97	36.0	42.93	0.00	0.00	0	0	14	Member X
D DAL - 2.5X2X0.25	-11.56	1.2D + 1.0W N	15.589	48	96	12	172.64	36.0	20.46	0.00	0.00	0	0	56	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.5625	58.33	0.9D + 1.0W 45°	36.0	58	208.33	0.00	0.00		0	0	27	Member
H DAE - 2.5X2.5X0.25	6.36	1.2D + 1.0W N	36.0	58	77.11	0.00	0.00	0.00	0	0	8	Member
D DAL - 2.5X2X0.25	10.81	1.2D + 1.0W N	36.0	58	69.01	0.00	0.00	0.00	0	0	15	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	57.68	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	68.83	0.9D + 1.0W 45°	0.00	0	0	

FORCE/STRESS SUMMARY

Section 4 – Bolt Elevation 50.0 (ft) and Height 12.50 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.4375	-64.65	1.2D + 1.0W 45°	12.573	50	50	50	63.39	36.0	159.14	0.00	0.00	0	0	40	Member Z
H DAE - 2.5X2.5X0.25	-6.12	1.2D + 1.0W N	7.359	100	100	25	114.83	36.0	50.15	0.00	0.00	0	0	12	Member X
D DAL - 2.5X2X0.25	-12.47	1.2D + 1.0W N	15.042	48	97	13	170.59	36.0	20.95	0.00	0.00	0	0	59	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 6X6X0.4375	45.18	0.9D + 1.0W 45°	36.0	58	163.94	0.00	0.00		0	0	27	Member
H DAE - 2.5X2.5X0.25	7.26	1.2D + 1.0W N	36.0	58	77.11	0.00	0.00	0.00	0	0	9	Member
D DAL - 2.5X2X0.25	11.83	1.2D + 1.0W N	36.0	58	69.01	0.00	0.00	0.00	0	0	17	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	44.35	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	57.68	0.9D + 1.0W 45°	0.00	0	0	

Section 5 – Bolt Elevation 62.5 (ft) and Height 10.16 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.4375	-54.81	1.2D + 1.0W 45°	10.219	50	50	50	62.18	36.0	132.18	0.00	0.00	0	0	41	Member Z
H SAU - 3X2.5X0.25	-2.47	0.9D + 1.0W N	13.169	92	92	92	215.54	36.0	8.07	0.00	0.00	0	0	30	Member Z
D SAE - 3.5x3.5x0.25	-9.16	1.2D + 1.0W N	17.27	49	49	49	147.60	36.0	22.20	0.00	0.00	0	0	41	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.4375	37.59	0.9D + 1.0W 45°	36.0	58	135.43	0.00	0.00		0	0	27	Member
H SAU - 3X2.5X0.25	4.52	1.2D + 1.0W N	36.0	58	42.44	0.00	0.00	0.00	0	0	10	Member
D SAE - 3.5x3.5x0.25	7.73	0.9D + 1.0W N	36.0	58	54.76	0.00	0.00	0.00	0	0	14	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	31.84	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	44.35	0.9D + 1.0W 45°	0.00	0	0	

Section 6 – Bolt Elevation 72.7 (ft) and Height 10.16 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.4375	-41.18	1.2D + 1.0W 45°	10.219	50	50	50	62.18	36.0	132.18	0.00	0.00	0	0	31	Member Z
H DAL - 3X2.5X0.25	-1.78	0.9D + 1.0W N	11.619	93	93	47	169.04	36.0	26.34	0.00	0.00	0	0	6	Member Y
D SAE - 3.5x3.5x0.25	-9.88	1.2D + 1.0W N	16.045	48	48	48	134.33	36.0	26.81	0.00	0.00	0	0	36	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.4375	24.83	0.9D + 1.0W 45°	36.0	58	135.43	0.00	0.00		0	0	18	Member
H DAL - 3X2.5X0.25	3.36	1.2D + 1.0W N	36.0	58	85.21	0.00	0.00	0.00	0	0	3	Member
D SAE - 3.5x3.5x0.25	8.27	0.9D + 1.0W N	36.0	58	54.76	0.00	0.00	0.00	0	0	15	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	17.52	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	31.84	0.9D + 1.0W 45°	0.00	0	0	

FORCE/STRESS SUMMARY

Section 7 – Bolt Elevation 82.8 (ft) and Height 8.58 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.3125	-25.73	1.2D + 1.0W 45°	8.63	50	50	50	52.09	35.9	99.50	0.00	0.00	0	0	25	Member Z
H SAU - 3X2.5X0.25	-0.61	0.9D + 1.0W N	10.311	96	96	96	184.55	36.0	11.01	0.00	0.00	0	0	5	Member Z
D SAE - 3X3X0.25	-8.40	1.2D + 1.0W N	13.938	49	49	49	138.44	36.0	21.50	0.00	0.00	0	0	39	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.3125	13.78	0.9D + 1.0W 45°	36.0	58	98.17	0.00	0.00		0	0	14	Member
H SAU - 3X2.5X0.25	2.41	1.2D + 1.0W N	36.0	58	42.44	0.00	0.00	0.00	0	0	5	Member
D SAE - 3X3X0.25	7.17	0.9D + 1.0W N	36.0	58	46.66	0.00	0.00	0.00	0	0	15	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	7.83	0.9D + 1.0W 45°	0.00	0	0	
Bot Tension	17.52	0.9D + 1.0W 45°	0.00	0	0	

Section 8 – Bolt Elevation 91.4 (ft) and Height 8.58 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.3125	-13.20	1.2D + 1.0W 45°	8.63	50	50	50	52.09	35.9	99.50	0.00	0.00	0	0	13	Member Z
H CHN - C8 x 11.5	-2.94	0.9D + 1.0W N	9.002	100	100	100	172.85	36.0	32.38	0.00	0.00	0	0	9	Member Y
D SAE - 3X3X0.25	-9.52	1.2D + 1.0W N	12.934	50	50	50	131.09	36.0	23.98	0.00	0.00	0	0	0	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SAE - 5X5X0.3125	1.95	0.9D + 1.0W 45°	36.0	58	98.17	0.00	0.00		0	0	1	Member
H CHN - C8 x 11.5	2.54	1.2D + 1.0W 45°	36.0	58	109.51	0.00	0.00	0.00	0	0	2	Member
D SAE - 3X3X0.25	7.58	1.2D + 1.0W N	36.0	58	46.66	0.00	0.00	0.00	0	0	16	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	7.83	0.9D + 1.0W 45°	0.00	0	0	

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
1.2D + 1.0W Normal	17.15	0.00	45	1	-6.97	94.57	-13.97
	17.15	0.00	135	1a	4.02	-59.05	-11.01
	17.15	0.00	225	1b	-4.65	-59.10	-10.33
	17.15	0.00	315	1c	7.60	92.48	-13.14
1.2D + 1.0W 45°	17.15	0.00	45	1	-14.06	129.27	-15.12
	17.15	0.00	135	1a	-6.63	18.31	-3.60
	17.15	0.00	225	1b	-12.16	-94.84	-11.26
	17.15	0.00	315	1c	-2.69	16.17	-5.57
0.9D + 1.0W Normal	17.15	0.00	45	1	-6.61	90.23	-13.60
	17.15	0.00	135	1a	4.39	-63.59	-11.39
	17.15	0.00	225	1b	-5.03	-63.37	-10.68
	17.15	0.00	315	1c	7.24	88.41	-12.78
0.9D + 1.0W 45°	17.15	0.00	45	1	-13.70	124.92	-14.74
	17.15	0.00	135	1a	-6.25	13.73	-3.98
	17.15	0.00	225	1b	-12.54	-99.10	-11.61
	17.15	0.00	315	1c	-3.05	12.13	-5.21
1.2D + 1.0Di + 1.0Wi Normal	17.15	0.00	45	1	-3.41	43.14	-5.01
	17.15	0.00	135	1a	-1.28	13.59	-0.19
	17.15	0.00	225	1b	1.17	12.13	-0.19
	17.15	0.00	315	1c	3.52	41.38	-4.75
1.2D + 1.0Di + 1.0Wi 45°	17.15	0.00	45	1	-4.96	50.47	-5.25
	17.15	0.00	135	1a	-3.51	29.19	1.31
	17.15	0.00	225	1b	-0.44	4.62	-0.39
	17.15	0.00	315	1c	1.36	25.96	-3.21
1.2D + 1.0Ev + 1.0Eh Normal	17.15	0.00	45	1	-1.33	14.47	-1.67
	17.15	0.00	135	1a	-0.76	7.01	0.42
	17.15	0.00	225	1b	0.76	7.01	0.42
	17.15	0.00	315	1c	1.33	14.47	-1.67
1.2D + 1.0Ev + 1.0Eh 45°	17.15	0.00	45	1	-1.69	16.01	-1.69
	17.15	0.00	135	1a	-1.29	10.74	0.80
	17.15	0.00	225	1b	0.40	5.46	0.40
	17.15	0.00	315	1c	0.80	10.74	-1.29
0.9D - 1.0Ev + 1.0Eh Normal	17.15	0.00	45	1	-1.00	11.13	-1.35
	17.15	0.00	135	1a	-0.44	3.67	0.09
	17.15	0.00	225	1b	0.44	3.67	0.09
	17.15	0.00	315	1c	1.00	11.13	-1.35
0.9D - 1.0Ev + 1.0Eh 45°	17.15	0.00	45	1	-1.36	12.67	-1.36
	17.15	0.00	135	1a	-0.96	7.40	0.48
	17.15	0.00	225	1b	0.07	2.12	0.07
	17.15	0.00	315	1c	0.48	7.40	-0.96
1.0D + 1.0W Service Normal	17.15	0.00	45	1	-2.47	32.15	-4.14
	17.15	0.00	135	1a	0.01	-2.56	-1.62
	17.15	0.00	225	1b	-0.16	-3.22	-1.51
	17.15	0.00	315	1c	2.61	31.05	-3.89
1.0D + 1.0W Service 45°	17.15	0.00	45	1	-4.11	40.14	-4.40
	17.15	0.00	135	1a	-2.44	15.25	0.08
	17.15	0.00	225	1b	-1.88	-11.45	-1.72
	17.15	0.00	315	1c	0.24	13.48	-2.15

Max Uplift:	99.1 (kip)	Moment Ice:	788.12 (kip-ft)	Moment:	3843.10 (kip-ft)
Max Down:	129.27 (kip)	Total Down Ice:	110.24 (kip)	Total Down:	68.91 (kip)
Max Shear:	20.65 (kip)	Total Shear Ice:	10.67 (kip)	Total Shear:	50.26(kip)

1.2D + 1.0W 45°

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 125 mph wind with no ice	82.82	0.1071	-0.0211	0.1444	0.1449
1.2D + 1.0W Normal 125 mph wind with no ice	99.98	0.1536	-0.0292	0.1526	0.155
1.2D + 1.0W 45° 125 mph wind with no ice	82.82	0.1113	-0.0301	0.1493	0.1502
1.2D + 1.0W 45° 125 mph wind with no ice	99.98	0.1586	-0.0413	0.1598	0.1645
0.9D + 1.0W Normal 125 mph wind with no ice	82.82	0.1073	-0.0211	0.1448	0.1453
0.9D + 1.0W Normal 125 mph wind with no ice	99.98	0.154	-0.0292	0.1531	0.1556
0.9D + 1.0W 45° 125 mph wind with no ice	82.82	0.1112	-0.0300	0.1492	0.1501
0.9D + 1.0W 45° 125 mph wind with no ice	99.98	0.1585	-0.0413	0.1597	0.1643
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	82.82	0.0207	-0.0036	0.0247	0.0248
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	99.98	0.0282	-0.0050	0.0254	0.0259
1.2D + 1.0Di + 1.0Wi 45° 50 mph wind with 1" radial ice	82.82	0.0233	-0.0052	0.0290	0.0292
1.2D + 1.0Di + 1.0Wi 45° 50 mph wind with 1" radial ice	99.98	0.0317	-0.0071	0.0324	0.0332
1.2D + 1.0Ev + 1.0Eh Normal Seismic	82.82	0.0048	0.0002	0.0052	0.0052
1.2D + 1.0Ev + 1.0Eh Normal Seismic	99.98	0.0061	0.0000	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh 45° Seismic	82.82	0.0048	0.0003	0.0054	0.0054
1.2D + 1.0Ev + 1.0Eh 45° Seismic	99.98	0.0061	0.0000	0.0046	0.0046
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	82.82	0.0048	0.0002	0.0051	0.0051
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	99.98	0.0061	0.0000	0.0045	0.0045
0.9D - 1.0Ev + 1.0Eh 45° Seismic (Reduced DL)	82.82	0.0048	0.0003	0.0052	0.0052
0.9D - 1.0Ev + 1.0Eh 45° Seismic (Reduced DL)	99.98	0.0061	0.0000	0.0045	0.0045
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	82.82	0.0241	-0.0047	0.0320	0.032
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	99.98	0.0343	-0.0067	0.0336	0.0342
1.0D + 1.0W Service 45° 60 mph Wind with No Ice	82.82	0.0257	-0.0067	0.0344	0.0345
1.0D + 1.0W Service 45° 60 mph Wind with No Ice	99.98	0.0366	-0.0095	0.0369	0.038

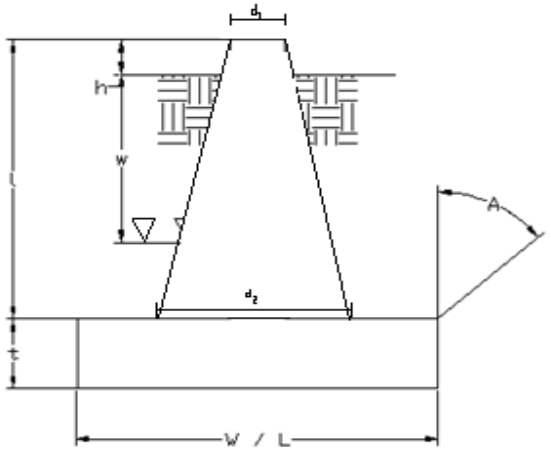
Foundation

Site No.:	88016
Engineer:	Sammie.Brown
Date:	10/21/21
Carrier:	SPRINT NEXTEL

Design Loads (Factored)

Compression/Leg:	129.27	k
Uplift/Leg:	99.10	k
Shear/Leg:	20.65	k

Face Width @ Top of Pier (d_1):	3.00	ft
Face Width @ Bottom of Pier (d_2):	5.50	ft
Total Length of Pier (l):	5.50	ft
Height of Pedestal Above Ground (h):	0.33	ft
Width of Pad (W):	15.00	ft
Length of Pad (L):	15.00	ft
Thickness of Pad (t):	3.00	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	140.0	pcf
Unit Weight of Soil (Below Water Table):	77.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	36000	psf
Ultimate Skin Friction:	1400	psf



Volume Pier (Total):	102.21	ft³
Volume Pad (Total):	675.00	ft³
Volume Soil (Total):	1575.36	ft³
Volume Pier (Buoyant):	0.00	ft³
Volume Pad (Buoyant):	0.00	ft³
Volume Soil (Buoyant):	0.00	ft³
Weight Pier:	15.33	k
Weight Pad:	101.25	k
Weight Soil:	220.55	k

Ultimate Skin Friction:	252.00	k
Difference in Soil Volume 1:	693.17	ft³
Difference in Soil Volume 2:	142.12	ft³
Diff. in Bouyant Soil Vol. 1:	0.00	ft³
Diff. in Bouyant Soil Vol. 2:	0.00	ft³
Difference in Soil Weight:	116.94	k
Diff. in Bouyant Soil Wt:	0.00	k

Uplift Check

ϕs Uplift Resistance (k)	Ratio	Result
340.55	0.29	**OK**

Axial Check

ϕs Axial Resistance (k)	Ratio	Result
6075.00	0.02	**OK**

Anchor Bolt Check

Bolt Diameter (in)	2
# of Bolts	4
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	C

Usage Ratio	Result
0.29	**OK**

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER ENGINEERING PROFESSIONALS

Antenna Mount Analysis Report

ATC Site Name	:	Old Lyme, CT
ATC Site Number	:	88016
Engineering Number	:	13653968_C9_05
Mount Elevation	:	105 ft
Carrier	:	Sprint Nextel
Carrier Site Name	:	CTNL330A
Carrier Site Number	:	CTNL330A
Site Location	:	Grassy Hill Road Old Lyme, CT 06371 41.391800, -72.285900
County	:	New London
Date	:	September 10, 2021
Max Usage	:	66%
Result	:	Contingent Pass

Prepared By:
Austin J. Wilson
TEP No. 25607.594249

Reviewed By:

09/22/2021

Table of Contents

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Sprint Nextel at 105 ft.

Supporting Documents

RFDS	RFDS dated July 20, 2021
Photos	Infinigy, Project# 1009-Z0003-H, dated July 22, 2021
Previous Mount Analysis	TEP No. 25607.577549, dated August 17, 2021

Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software.

Basic Wind Speed:	125 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00 in. radial ice
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	B
Topographic Factor Procedure:	Method 2
Kzt:	1
Spectral Response:	Ss = 0.204, S1 = 0.054
Site Class:	D – Default
Live Loads:	No Live Loads Considered

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above provided the modifications listed below are completed:

- (4) L2.5x2.5x3/8 x 15-ft Bulk Angle
- (2) L2.5x2.5x3/16 x 2-ft Bulk Angle
- (1) L2.5x2.5x3/16 x 0.5-ft Bulk Angle
- (1) 5/8" U-Bolt
- (20) 5/8” A325N Hex Bolts

Total estimated costs of the modification to include materials and required labor is $17,500.

The modifications depicted in these drawings shall be installed and, upon completion, inspected. The mount has sufficient capacity to support the final antenna configuration once the proposed modifications are completed.

If the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

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

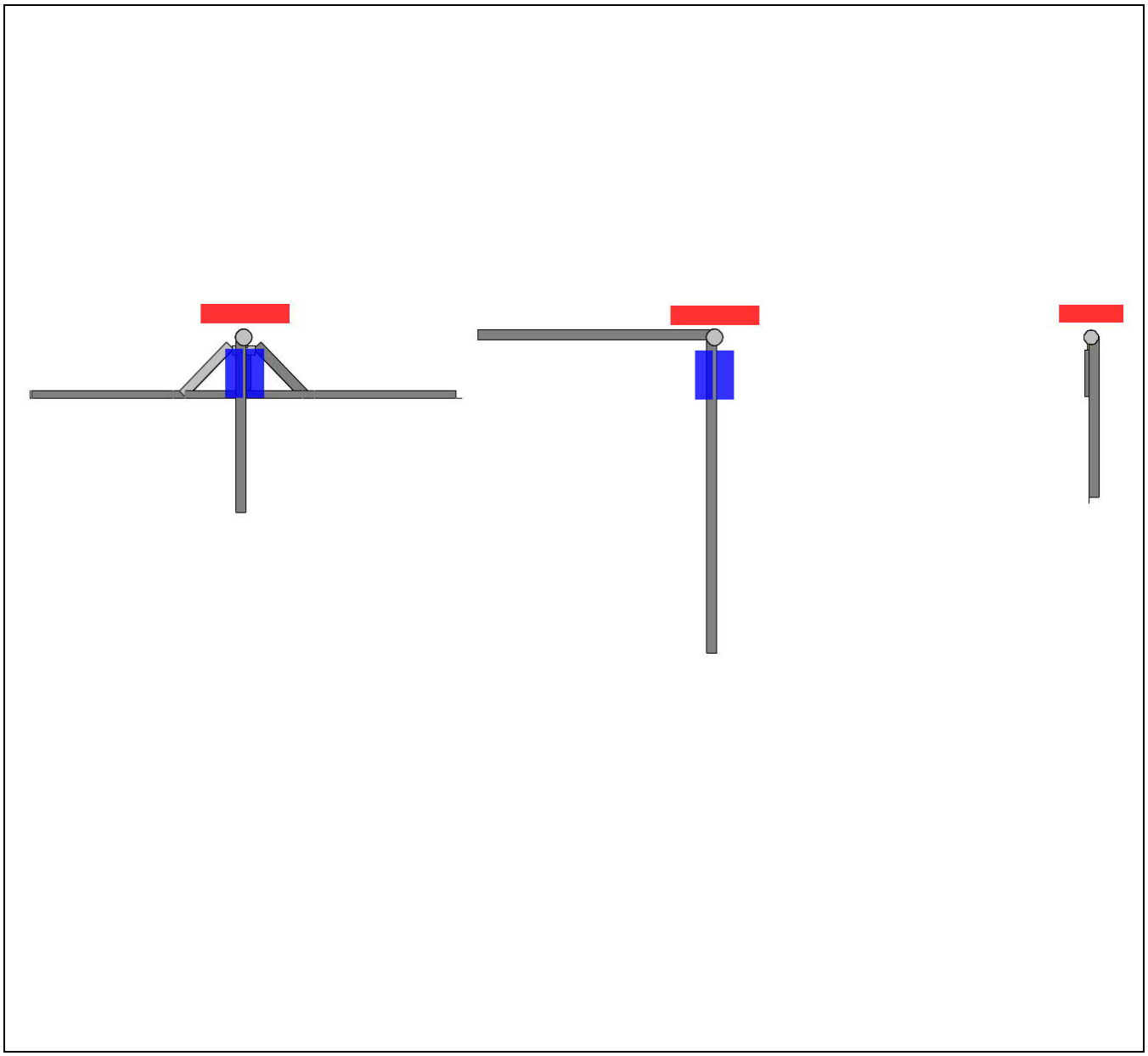
Antenna Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
105.0	105.0	3	RFS APXVAALL24 43-U-NA20
		3	Ericsson Air6449 B41
		3	Ericsson Radio 4480 B71+B85A
		3	Ericsson Radio 4460 B25+B66

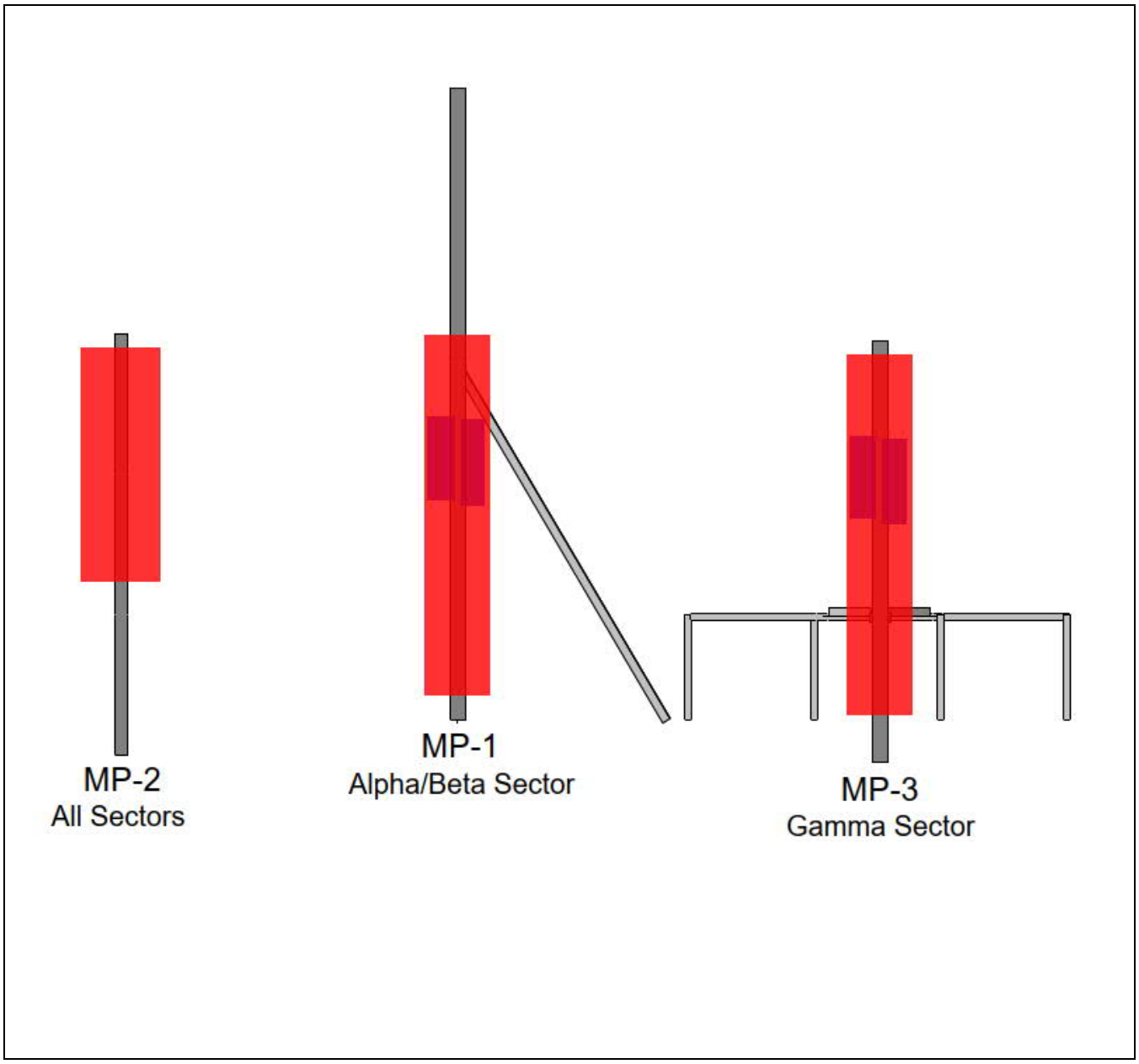
Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Mount Pipes	24%	Pass
Standoff	38%	Pass
Bracing	66%	Pass

Mount Layout



Equipment Layout



Standard Conditions

All engineering services performed by TEP are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of TEP

It is the responsibility of the client to ensure that the information provided to TEP and used in the performance of our engineering services is correct and complete.

TEP assumes that all structures were constructed in accordance with the drawings and specifications.

TEP assumes that the mount has been maintained in accordance with the manufacturer's specification.

TEP assumes that all mount components are in sufficient condition to carry their full design capacity for this analysis.

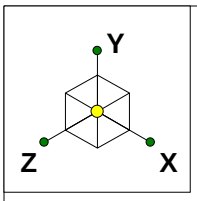
Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.

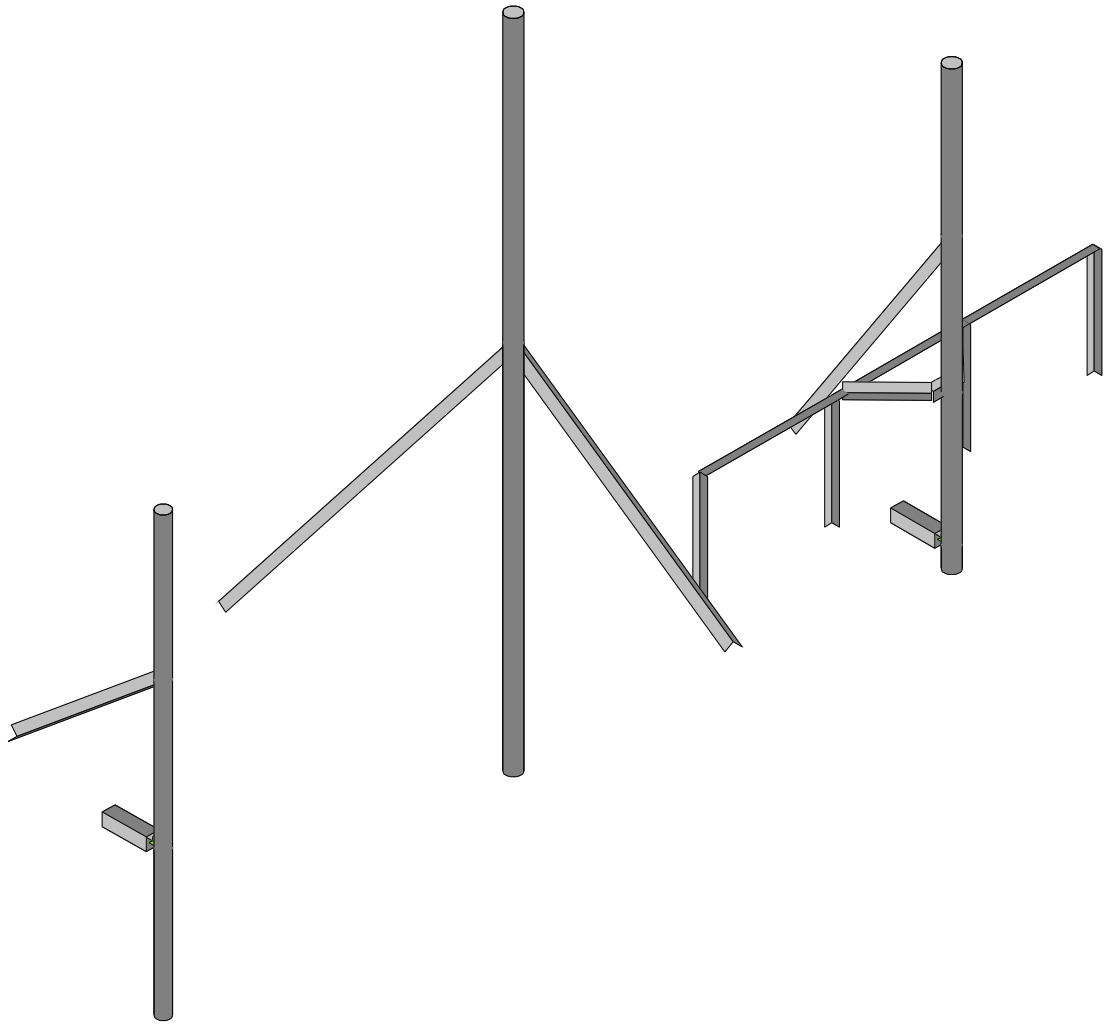
All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA 3-D output for confirmation on grades used in this analysis.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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

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





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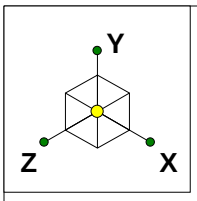

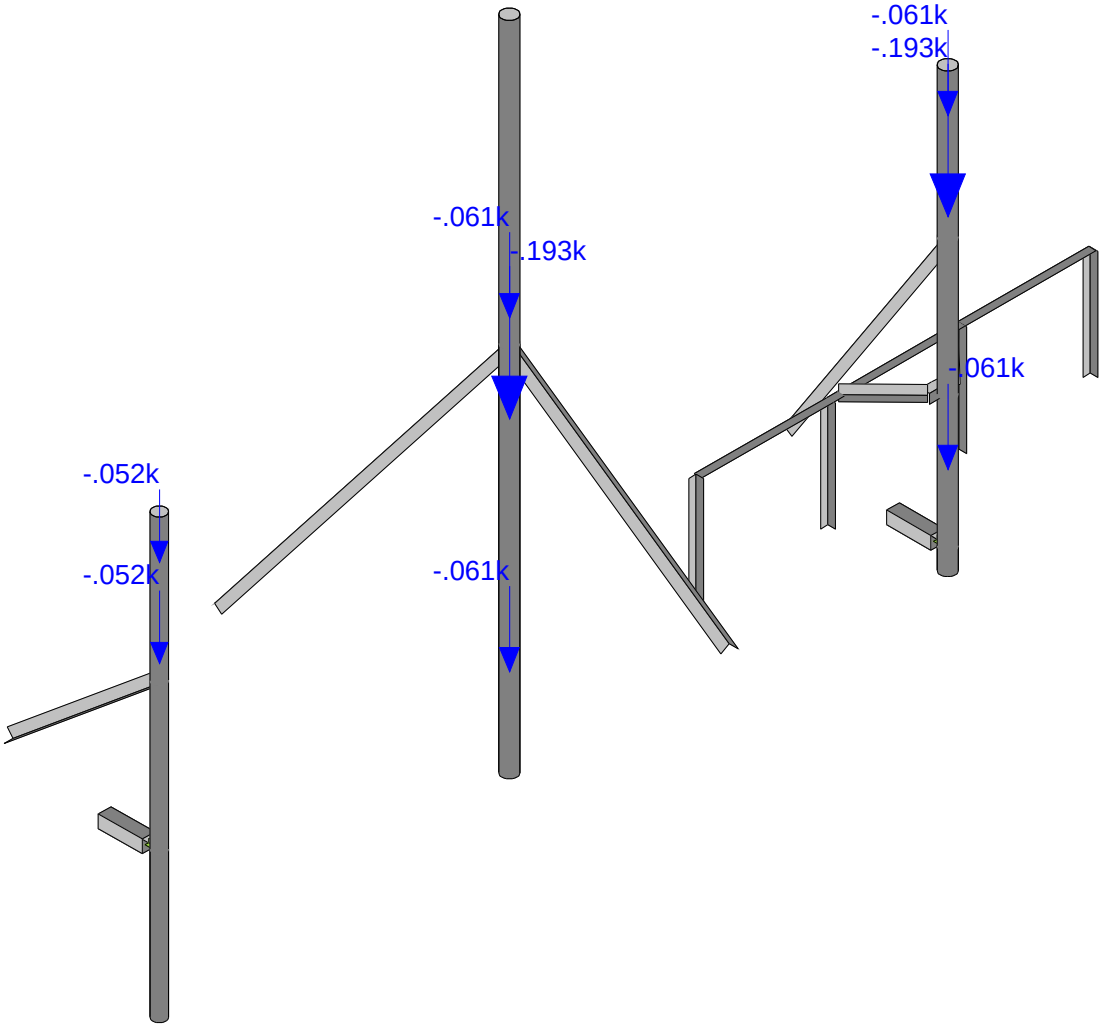

Loads: BLC 1, Dead
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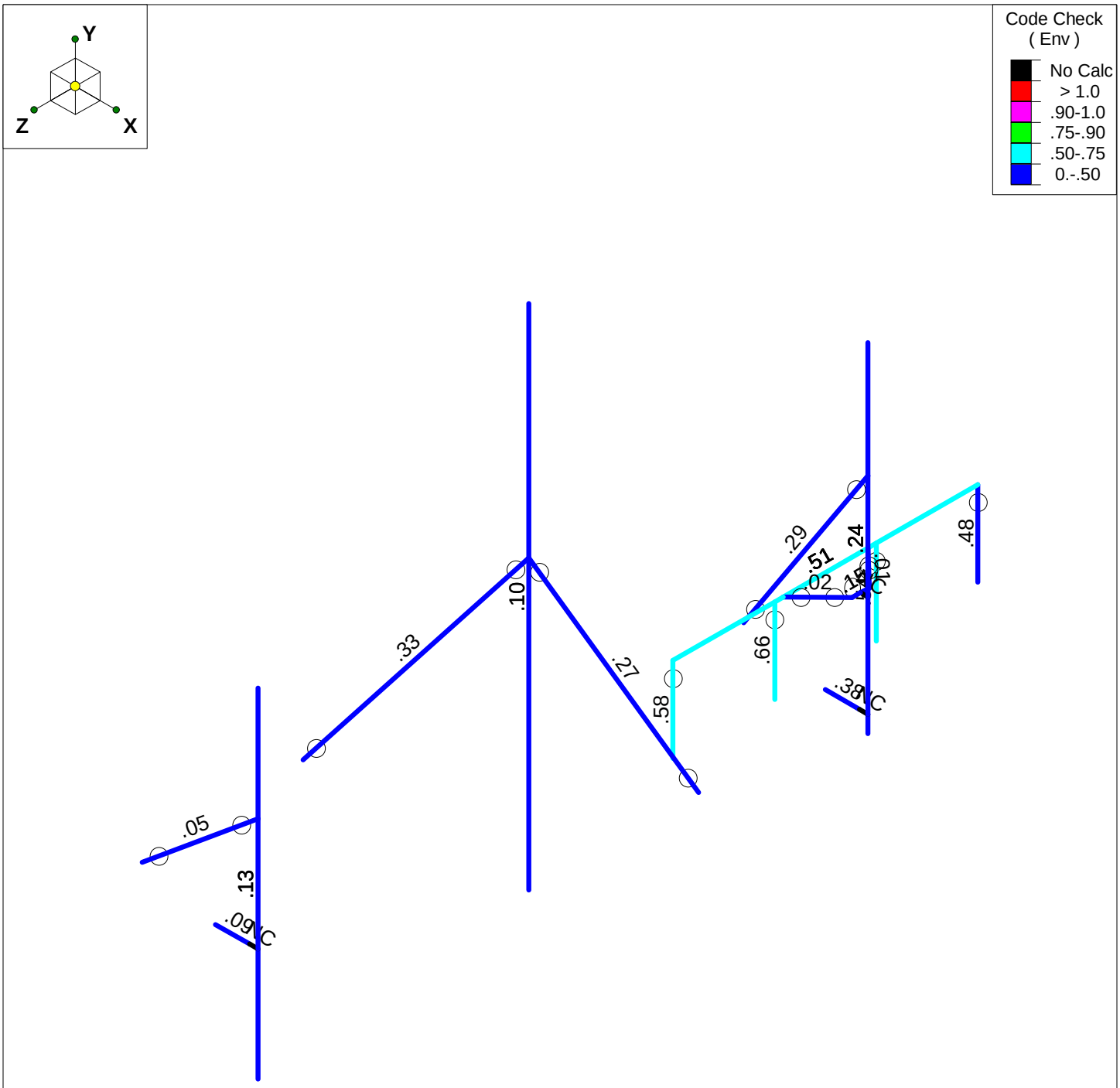

Member Code Checks Displayed (Enveloped)
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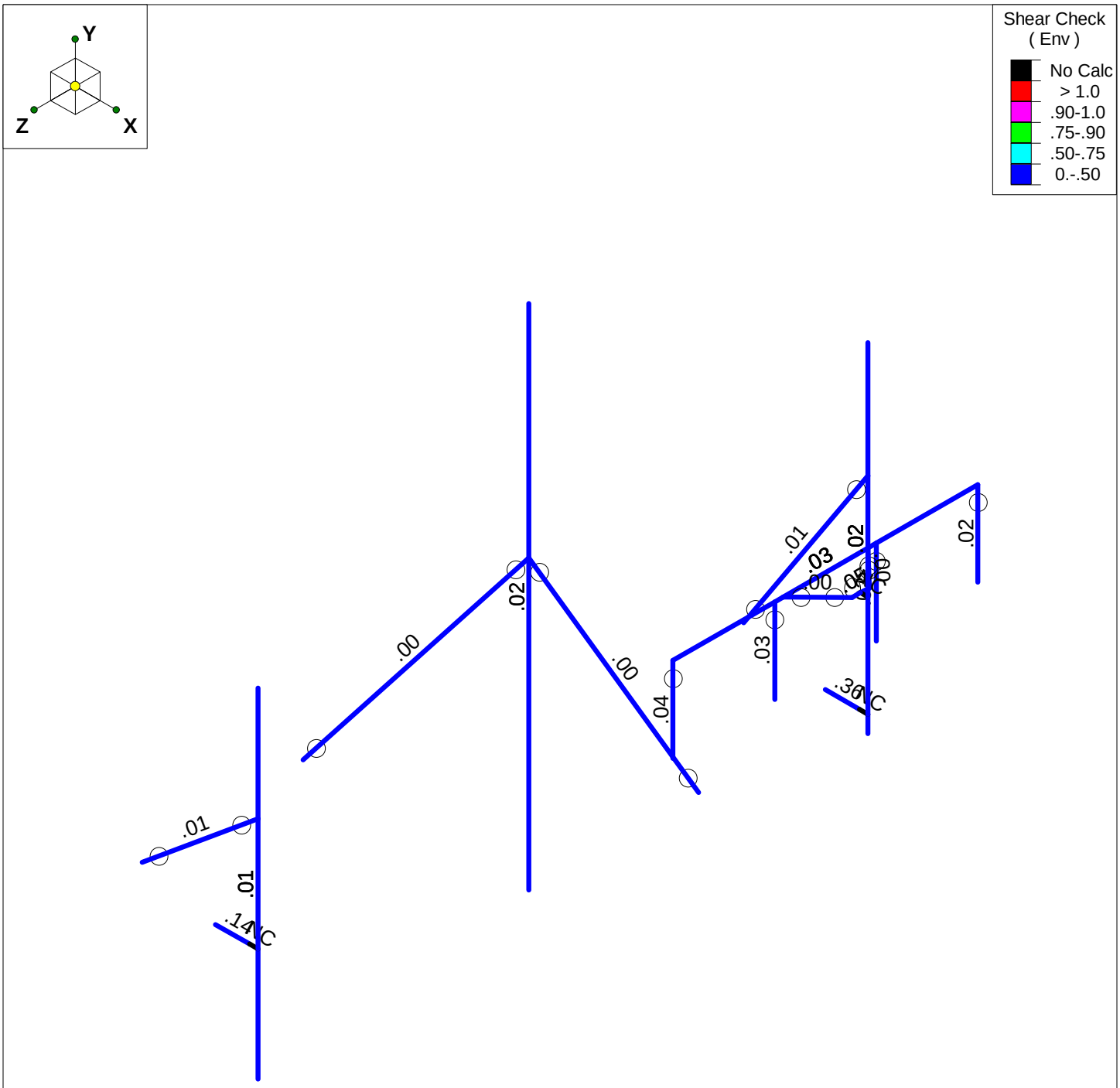

Member Shear Checks Displayed (Enveloped)
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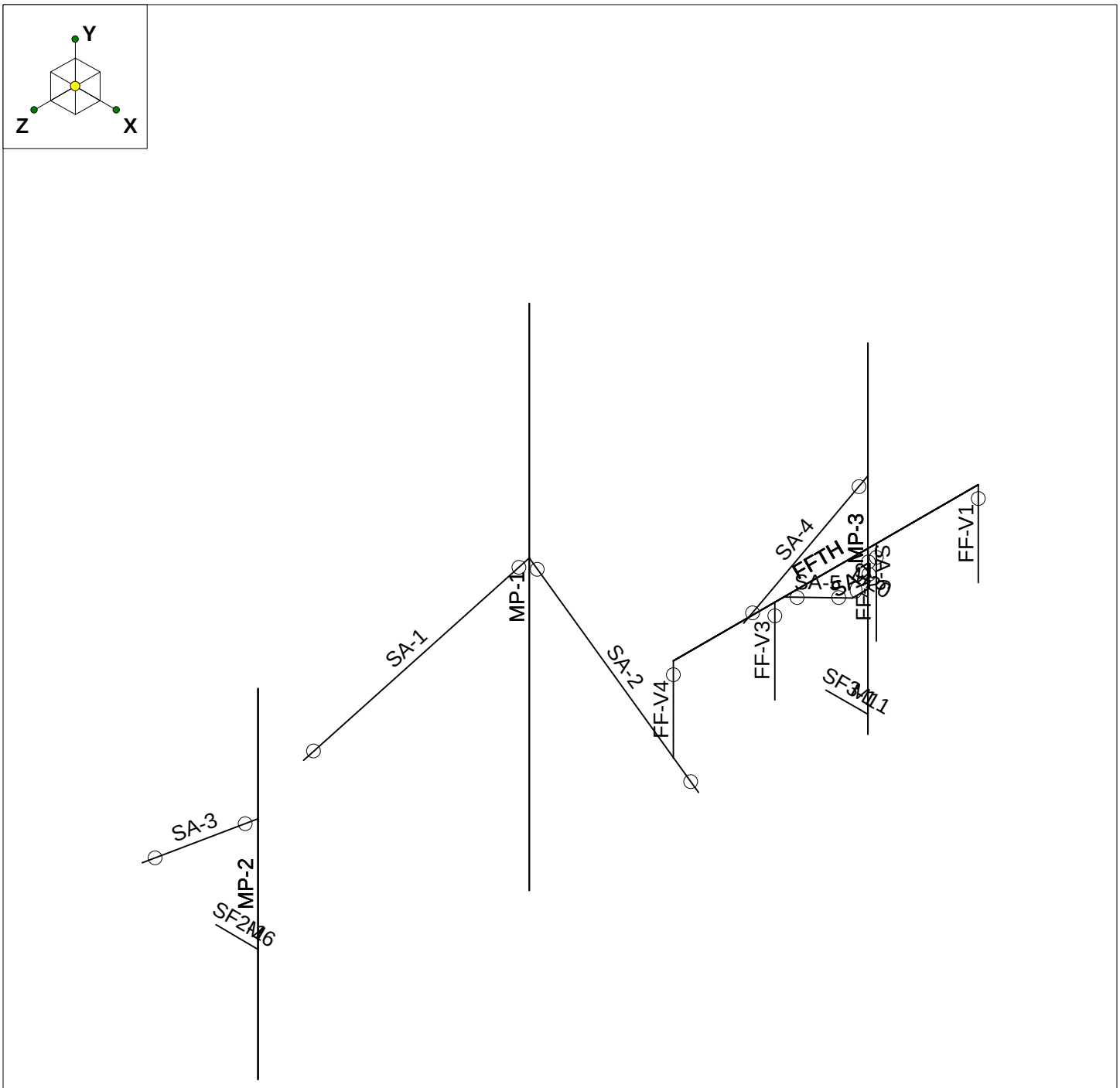

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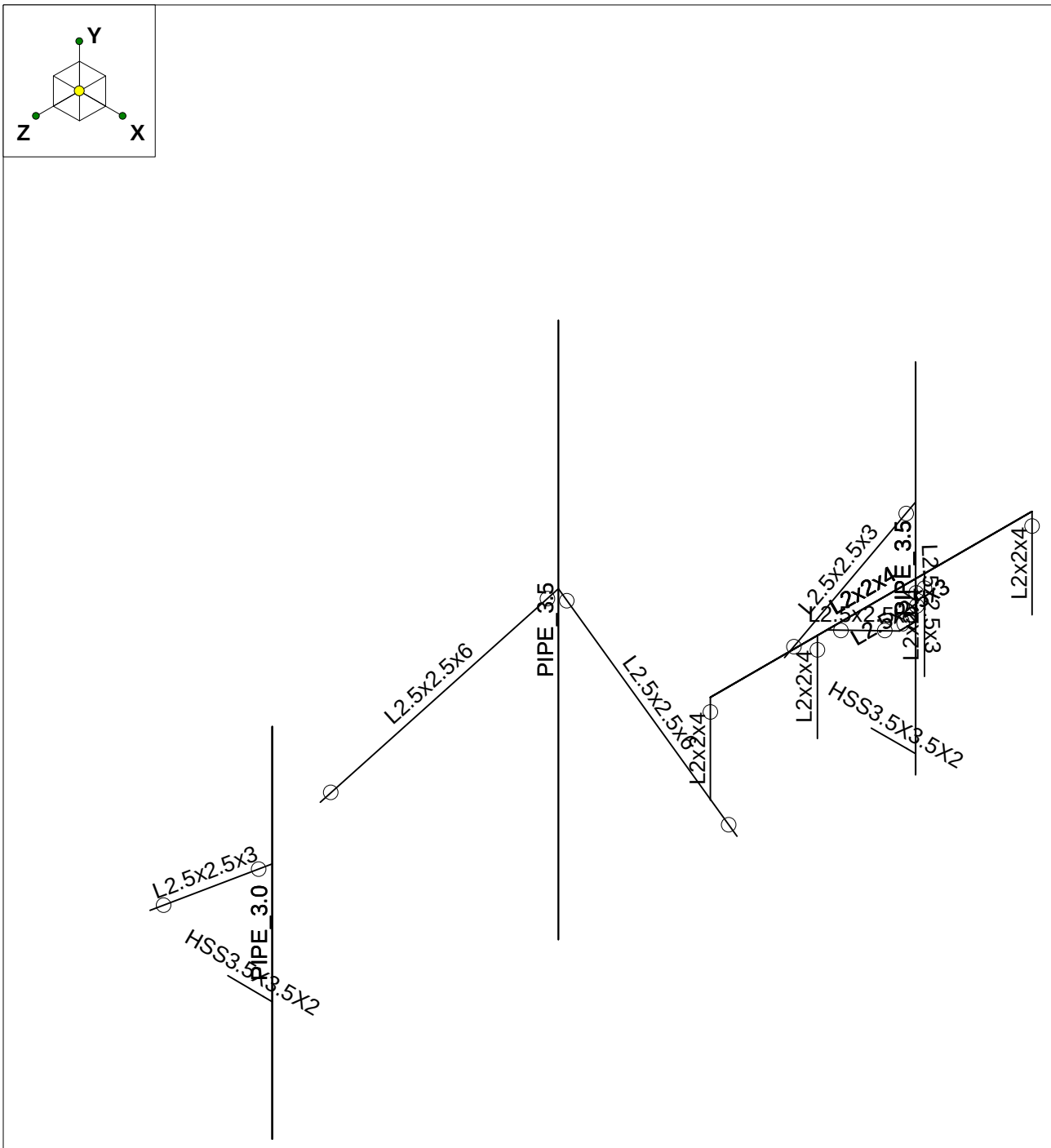

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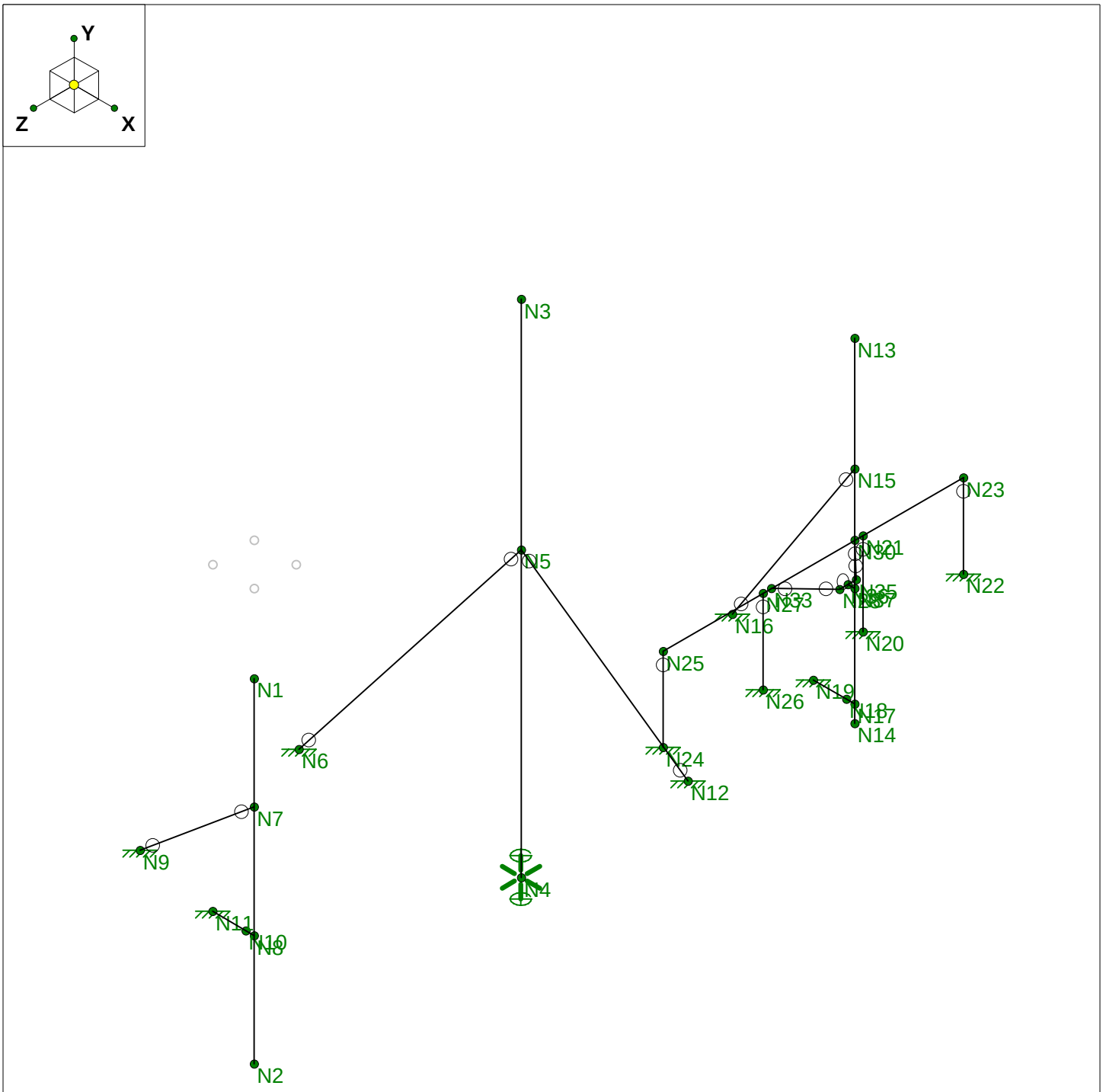

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TEP No. 25607.594249		88016_OLD LYME CT_Sprint Nextel...

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISAConnection Code	None
Cold Formed Steel Code	AISI S100-16: LRFD
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	AA ADM1-15: LRFD - Building
Stainless Steel Code	AISC 14th(360-10): LRFD
Adjust Stiffness?	No

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

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Model Name : 88016 - OLD LYME

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(Global) Model Settings, Continued

Seismic Code	ASCE 7-16
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

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.42	29000	11154	.3	.65	.49	42	1.4	58	1.3
5	A500 Gr.46	29000	11154	.3	.65	.49	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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Stabilizer Angle	L2.5x2.5x3	None	None	A36 Gr.36	Typical	.901	.535	.535	.011
2	Proposed Stab Angle	L2.5x2.5x6	None	None	A36 Gr.36	Typical	1.73	.972	.972	.083
3	Support Arm	HSS3.5X3.5X2	None	None	A500 Gr.46	Typical	1.54	2.9	2.9	4.58
4	Mount Pipe 3.5	PIPE_3.5	None	None	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
5	Mount Pipe 3.0	PIPE_3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
6	Gate Vert	L2x2x4	None	None	A36 Gr.36	Typical	.944	.346	.346	.021
7	Gate Horiz	L2x2x4	None	None	A36 Gr.36	Typical	.944	.346	.346	.021

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1	162T125-18	Beam	None	A653 SS Gr...	Typical	.078	.013	.042	9e-6

Material Takeoff

	Material	Size	Pieces	Length[ft]	Weight[K]
1	General				
2	RIGID		3	.7	0
3	Total General		3	.7	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L2.5x2.5x3	5	14.5	0
7	A36 Gr.36	L2.5x2.5x6	2	20.7	.1
8	A36 Gr.36	L2x2x4	5	19	0
9	A500 Gr.46	HSS3.5X3.5X2	2	2	0
10	A53 Gr.B	PIPE_3.0	1	10	0
11	A53 Gr.B	PIPE_3.5	2	25	.2
12	Total HR Steel		17	91.2	.5

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	N4	Reaction	Reaction	Reaction		Reaction	
2	N6	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N11	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N9	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N12	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N16	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N19	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	N20	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
9	N22	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
10	N24	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
11	N26	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	FFTH	N23	N25		180	Gate Horiz	None	None	A36 Gr.36	Typical
2	FF-V1	N22	N23		90	Gate Vert	None	None	A36 Gr.36	Typical
3	FF-V2	N20	N21		90	Gate Vert	None	None	A36 Gr.36	Typical
4	FF-V3	N26	N27		90	Gate Vert	None	None	A36 Gr.36	Typical
5	FF-V4	N24	N25		90	Gate Vert	None	None	A36 Gr.36	Typical
6	MP-2	N1	N2			Mount Pipe 3.0	None	None	A53 Gr.B	Typical
7	MP-1	N3	N4			Mount Pipe 3.5	None	None	A53 Gr.B	Typical
8	MP-3	N13	N14			Mount Pipe 3.5	None	None	A53 Gr.B	Typical
9	SA-1	N6	N5		180	Proposed Stab Angle	None	None	A36 Gr.36	Typical
10	SA-2	N12	N5		180	Proposed Stab Angle	None	None	A36 Gr.36	Typical
11	SA-5	N33	N28			Stabilizer Angle	None	None	A36 Gr.36	Typical
12	SA-6	N30	N35		270	Stabilizer Angle	None	None	A36 Gr.36	Typical
13	SA-7	N35	N28		90	Stabilizer Angle	None	None	A36 Gr.36	Typical
14	M6	N10	N8			RIGID	None	None	RIGID	Typical
15	M11	N18	N17			RIGID	None	None	RIGID	Typical
16	M20	N36	N37			RIGID	None	None	RIGID	Typical
17	SA-3	N9	N7			Stabilizer Angle	None	None	A36 Gr.36	Typical
18	SA-4	N16	N15		180	Stabilizer Angle	None	None	A36 Gr.36	Typical
19	SF2-1	N10	N11			Support Arm	None	None	A500 Gr...	Typical

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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
20	SF3-1	N19	N18			Support Arm	None	None	A500 Gr...	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	FFTH						Yes	** NA **			None
2	FF-V1		BenPIN				Yes	** NA **			None
3	FF-V2		BenPIN				Yes	** NA **			None
4	FF-V3		BenPIN				Yes	** NA **			None
5	FF-V4		BenPIN				Yes	** NA **			None
6	MP-2						Yes	** NA **			None
7	MP-1						Yes	** NA **			None
8	MP-3						Yes	** NA **			None
9	SA-1	BenPIN	BenPIN				Yes	** NA **			None
10	SA-2	BenPIN	BenPIN				Yes	** NA **			None
11	SA-5	BenPIN	BenPIN				Yes	** NA **			None
12	SA-6	BenPIN	BenPIN				Yes	** NA **			None
13	SA-7						Yes	** NA **			None
14	M6						Yes	** NA **			None
15	M11						Yes	** NA **			None
16	M20		OOOXOO				Yes	** NA **			None
17	SA-3	BenPIN	BenPIN				Yes	** NA **			None
18	SA-4	BenPIN	BenPIN				Yes	** NA **			None
19	SF2-1						Yes	** NA **			None
20	SF3-1						Yes	** NA **			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	Functi...
1	FFTH	Gate Horiz	9		3				1	1		Lateral
2	FF-V1	Gate Vert	2.5						2.1	1		Lateral
3	FF-V2	Gate Vert	2.5						2.1	1		Lateral
4	FF-V3	Gate Vert	2.5						2.1	1		Lateral
5	FF-V4	Gate Vert	2.5						2.1	1		Lateral
6	MP-2	Mount Pipe 3.0	10	Segment	Segment				2.1	2.1		Lateral
7	MP-1	Mount Pipe 3.5	15	Segment	Segment				2.1	2.1		Lateral
8	MP-3	Mount Pipe 3.5	10	Segment	Segment				2.1	2.1		Lateral
9	SA-1	Proposed Stab An...	10.803						1	1		Lateral
10	SA-2	Proposed Stab An...	9.862						1	1		Lateral
11	SA-5	Stabilizer Angle	1.443						1	1		Lateral
12	SA-6	Stabilizer Angle	1.443						1	1		Lateral
13	SA-7	Stabilizer Angle	.5	.25	.25				1	1		Lateral
14	SA-3	Stabilizer Angle	4.439						1	1		Lateral
15	SA-4	Stabilizer Angle	6.693						1	1		Lateral
16	SF2-1	Support Arm	1						1	1		Lateral
17	SF3-1	Support Arm	1						1	1		Lateral

Cold Formed Steel Design Parameters

Label	Shape	Length...	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp bo...	L-torque[ft]	Kyy	Kzz	Cb	R	a[ft]	Funct...
No Data to Print ...													

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	None		-1			10			
2	0 Wind - No Ice	None					10	17		
3	30 Wind - No Ice	None					20	34		
4	45 Wind - No Ice	None					20	34		
5	60 Wind - No Ice	None					20	34		
6	90 Wind - No Ice	None					10	17		
7	120 Wind - No Ice	None					20	34		
8	135 Wind - No Ice	None					20	34		
9	150 Wind - No Ice	None					20	34		
10	180 Wind - No Ice	None					10	17		
11	210 Wind - No Ice	None					20	34		
12	225 Wind - No Ice	None					20	34		
13	240 Wind - No Ice	None					20	34		
14	270 Wind - No Ice	None					10	17		
15	300 Wind - No Ice	None					20	34		
16	315 Wind - No Ice	None					20	34		
17	330 Wind - No Ice	None					20	34		
18	Ice Weight	None					10	17		
19	0 Wind - Ice	None					10	17		
20	30 Wind - Ice	None					20	34		
21	45 Wind - Ice	None					20	34		
22	60 Wind - Ice	None					20	34		
23	90 Wind - Ice	None					10	17		
24	120 Wind - Ice	None					20	34		
25	135 Wind - Ice	None					20	34		
26	150 Wind - Ice	None					20	34		
27	180 Wind - Ice	None					10	17		
28	210 Wind - Ice	None					20	34		
29	225 Wind - Ice	None					20	34		
30	240 Wind - Ice	None					20	34		
31	270 Wind - Ice	None					10	17		
32	300 Wind - Ice	None					20	34		
33	315 Wind - Ice	None					20	34		
34	330 Wind - Ice	None					20	34		
35	Lm	None								
36	Lv	None								
37	Seismic Load X	ELX	-1				10			
38	Seismic Load Z	ELZ			-1		10			

Load Combinations

	Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
1	1.4D	Yes	Y		1	1.4																		
2	0.9D+1.0 0-Wind	Yes	Y		1	.9	2	1																
3	0.9D+1.0 30-Wind	Yes	Y		1	.9	3	1																

Company : Tower Engineering Professionals, Inc.
Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

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Load Combinations (Continued)

	Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
4	0.9D+1.0 45-Wind	Yes	Y		1	.9	4	1																	
5	0.9D+1.0 60-Wind	Yes	Y		1	.9	5	1																	
6	0.9D+1.0 90-Wind	Yes	Y		1	.9	6	1																	
7	0.9D+1.0 120-Wind	Yes	Y		1	.9	7	1																	
8	0.9D+1.0 135-Wind	Yes	Y		1	.9	8	1																	
9	0.9D+1.0 150-Wind	Yes	Y		1	.9	9	1																	
10	0.9D+1.0 180-Wind	Yes	Y		1	.9	10	1																	
11	0.9D+1.0 210-Wind	Yes	Y		1	.9	11	1																	
12	0.9D+1.0 225-Wind	Yes	Y		1	.9	12	1																	
13	0.9D+1.0 240-Wind	Yes	Y		1	.9	13	1																	
14	0.9D+1.0 270-Wind	Yes	Y		1	.9	14	1																	
15	0.9D+1.0 300-Wind	Yes	Y		1	.9	15	1																	
16	0.9D+1.0 315-Wind	Yes	Y		1	.9	16	1																	
17	0.9D+1.0 330-Wind	Yes	Y		1	.9	17	1																	
18	1.2D+1.0 0-Wind	Yes	Y		1	1.2	2	1																	
19	1.2D+1.0 30-Wind	Yes	Y		1	1.2	3	1																	
20	1.2D+1.0 45-Wind	Yes	Y		1	1.2	4	1																	
21	1.2D+1.0 60-Wind	Yes	Y		1	1.2	5	1																	
22	1.2D+1.0 90-Wind	Yes	Y		1	1.2	6	1																	
23	1.2D+1.0 120-Wind	Yes	Y		1	1.2	7	1																	
24	1.2D+1.0 135-Wind	Yes	Y		1	1.2	8	1																	
25	1.2D+1.0 150-Wind	Yes	Y		1	1.2	9	1																	
26	1.2D+1.0 180-Wind	Yes	Y		1	1.2	10	1																	
27	1.2D+1.0 210-Wind	Yes	Y		1	1.2	11	1																	
28	1.2D+1.0 225-Wind	Yes	Y		1	1.2	12	1																	
29	1.2D+1.0 240-Wind	Yes	Y		1	1.2	13	1																	
30	1.2D+1.0 270-Wind	Yes	Y		1	1.2	14	1																	
31	1.2D+1.0 300-Wind	Yes	Y		1	1.2	15	1																	
32	1.2D+1.0 315-Wind	Yes	Y		1	1.2	16	1																	
33	1.2D+1.0 330-Wind	Yes	Y		1	1.2	17	1																	
34	1.2D+1.0Di+1.0 0-Win...	Yes	Y		1	1.2	18	1	19	1															
35	1.2D+1.0Di+1.0 30-Wi...	Yes	Y		1	1.2	18	1	20	1															
36	1.2D+1.0Di+1.0 45-Wi...	Yes	Y		1	1.2	18	1	21	1															
37	1.2D+1.0Di+1.0 60-Wi...	Yes	Y		1	1.2	18	1	22	1															
38	1.2D+1.0Di+1.0 90-Wi...	Yes	Y		1	1.2	18	1	23	1															
39	1.2D+1.0Di+1.0 120-W...	Yes	Y		1	1.2	18	1	24	1															
40	1.2D+1.0Di+1.0 135-W...	Yes	Y		1	1.2	18	1	25	1															
41	1.2D+1.0Di+1.0 150-W...	Yes	Y		1	1.2	18	1	26	1															
42	1.2D+1.0Di+1.0 180-W...	Yes	Y		1	1.2	18	1	27	1															
43	1.2D+1.0Di+1.0 210-W...	Yes	Y		1	1.2	18	1	28	1															
44	1.2D+1.0Di+1.0 225-W...	Yes	Y		1	1.2	18	1	29	1															
45	1.2D+1.0Di+1.0 240-W...	Yes	Y		1	1.2	18	1	30	1															
46	1.2D+1.0Di+1.0 270-W...	Yes	Y		1	1.2	18	1	31	1															
47	1.2D+1.0Di+1.0 300-W...	Yes	Y		1	1.2	18	1	32	1															
48	1.2D+1.0Di+1.0 315-W...	Yes	Y		1	1.2	18	1	33	1															
49	1.2D+1.0Di+1.0 330-W...	Yes	Y		1	1.2	18	1	34	1															
50	1.2D+1.5Lv	Yes	Y		36	1.5	1	1.2																	
51	1.2D+1.5Lm+1.0 0-Wind	Yes	Y		1	1.2	2	.058	35	1.5															
52	1.2D+1.5Lm+1.0 30-W...	Yes	Y		1	1.2	3	.058	35	1.5															
53	1.2D+1.5Lm+1.0 45-W...	Yes	Y		1	1.2	4	.058	35	1.5															
54	1.2D+1.5Lm+1.0 60-W...	Yes	Y		1	1.2	5	.058	35	1.5															
55	1.2D+1.5Lm+1.0 90-W...	Yes	Y		1	1.2	6	.058	35	1.5															

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
56	1.2D+1.5Lm+1.0 120-...	Yes	Y		1	1.2	7	.058	35	1.5																
57	1.2D+1.5Lm+1.0 135-...	Yes	Y		1	1.2	8	.058	35	1.5																
58	1.2D+1.5Lm+1.0 150-...	Yes	Y		1	1.2	9	.058	35	1.5																
59	1.2D+1.5Lm+1.0 180-...	Yes	Y		1	1.2	10	.058	35	1.5																
60	1.2D+1.5Lm+1.0 210-...	Yes	Y		1	1.2	11	.058	35	1.5																
61	1.2D+1.5Lm+1.0 225-...	Yes	Y		1	1.2	12	.058	35	1.5																
62	1.2D+1.5Lm+1.0 240-...	Yes	Y		1	1.2	13	.058	35	1.5																
63	1.2D+1.5Lm+1.0 270-...	Yes	Y		1	1.2	14	.058	35	1.5																
64	1.2D+1.5Lm+1.0 300-...	Yes	Y		1	1.2	15	.058	35	1.5																
65	1.2D+1.5Lm+1.0 315-...	Yes	Y		1	1.2	16	.058	35	1.5																
66	1.2D+1.5Lm+1.0 330-...	Yes	Y		1	1.2	17	.058	35	1.5																
67	(1.2+0.2Sds)D+1.0 0 S...		Y		1	1.2...	ELX	.108	0																	
68	(1.2+0.2Sds)D+1.0 30 ...		Y		1	1.2...	ELX	.094	ELZ	.054																
69	(1.2+0.2Sds)D+1.0 45 ...		Y		1	1.2...	ELX	.077	ELZ	.077																
70	(1.2+0.2Sds)D+1.0 60 ...		Y		1	1.2...	ELX	.054	ELZ	.094																
71	(1.2+0.2Sds)D+1.0 90 ...		Y		1	1.2...	0		ELZ	.108																
72	(1.2+0.2Sds)D+1.0 12...		Y		1	1.2...	ELX	-.054	ELZ	.094																
73	(1.2+0.2Sds)D+1.0 13...		Y		1	1.2...	ELX	-.077	ELZ	.077																
74	(1.2+0.2Sds)D+1.0 15...		Y		1	1.2...	ELX	-.094	ELZ	.054																
75	(1.2+0.2Sds)D+1.0 18...		Y		1	1.2...	ELX	-.108	0																	
76	(1.2+0.2Sds)D+1.0 21...		Y		1	1.2...	ELX	-.094	ELZ	-.054																
77	(1.2+0.2Sds)D+1.0 22...		Y		1	1.2...	ELX	-.077	ELZ	-.077																
78	(1.2+0.2Sds)D+1.0 24...		Y		1	1.2...	ELX	-.054	ELZ	-.094																
79	(1.2+0.2Sds)D+1.0 27...		Y		1	1.2...	0		ELZ	-.108																
80	(1.2+0.2Sds)D+1.0 30...		Y		1	1.2...	ELX	.054	ELZ	-.094																
81	(1.2+0.2Sds)D+1.0 31...		Y		1	1.2...	ELX	.077	ELZ	-.077																
82	(1.2+0.2Sds)D+1.0 33...		Y		1	1.2...	ELX	.094	ELZ	-.054																
83	(0.9-0.2Sds)*DL+1.0 0 ...		Y		1	.857	ELX	.108	0																	
84	(0.9-0.2Sds)*DL+1.0 3...		Y		1	.857	ELX	.094	ELZ	.054																
85	(0.9-0.2Sds)*DL+1.0 S...		Y		1	.857	ELX	.077	ELZ	.077																
86	(0.9-0.2Sds)*DL+1.0 6...		Y		1	.857	ELX	.054	ELZ	.094																
87	(0.9-0.2Sds)*DL+1.0 9...		Y		1	.857	0		ELZ	.108																
88	(0.9-0.2Sds)*DL+1.0 1...		Y		1	.857	ELX	-.054	ELZ	.094																
89	(0.9-0.2Sds)*DL+1.0 1...		Y		1	.857	ELX	-.077	ELZ	.077																
90	(0.9-0.2Sds)*DL+1.0 1...		Y		1	.857	ELX	-.094	ELZ	.054																
91	(0.9-0.2Sds)*DL+1.0 1...		Y		1	.857	ELX	-.108	0																	
92	(0.9-0.2Sds)*DL+1.0 2...		Y		1	.857	ELX	-.094	ELZ	-.054																
93	(0.9-0.2Sds)*DL+1.0 2...		Y		1	.857	ELX	-.077	ELZ	-.077																
94	(0.9-0.2Sds)*DL+1.0 2...		Y		1	.857	ELX	-.054	ELZ	-.094																
95	(0.9-0.2Sds)*DL+1.0 2...		Y		1	.857	0		ELZ	-.108																
96	(0.9-0.2Sds)*DL+1.0 3...		Y		1	.857	ELX	.054	ELZ	-.094																
97	(0.9-0.2Sds)*DL+1.0 3...		Y		1	.857	ELX	.077	ELZ	-.077																
98	(0.9-0.2Sds)*DL+1.0 3...		Y		1	.857	ELX	.094	ELZ	-.054																

Joint Loads and Enforced Displacements

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

Company : Tower Engineering Professionals, Inc.
Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

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Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.061	6
2	MP-1	Y	-.084	8
3	MP-1	Y	-.109	8
4	MP-2	Y	-.052	1
5	MP-3	Y	-.061	1
6	MP-3	Y	-.084	3
7	MP-3	Y	-.109	3
8	MP-1	Y	-.061	13
9	MP-2	Y	-.052	3
10	MP-3	Y	-.061	8

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.342	6
2	MP-1	X	-.047	8
3	MP-1	X	-.067	8
4	MP-2	X	-.096	1
5	MP-3	X	-.342	1
6	MP-3	X	-.047	3
7	MP-3	X	-.067	3
8	MP-1	X	-.342	13
9	MP-2	X	-.096	3
10	MP-3	X	-.342	8

Member Point Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.254	6
2	MP-1	X	-.051	8
3	MP-1	X	-.062	8
4	MP-2	X	-.072	1
5	MP-3	X	-.254	1
6	MP-3	X	-.051	3
7	MP-3	X	-.062	3
8	MP-1	X	-.254	13
9	MP-2	X	-.072	3
10	MP-3	X	-.254	8
11	MP-1	Z	-.147	6
12	MP-1	Z	-.03	8
13	MP-1	Z	-.036	8
14	MP-2	Z	-.041	1
15	MP-3	Z	-.147	1
16	MP-3	Z	-.03	3
17	MP-3	Z	-.036	3
18	MP-1	Z	-.147	13
19	MP-2	Z	-.041	3
20	MP-3	Z	-.147	8

Member Point Loads (BLC 4 : 45 Wind - No Ice)

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

Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.173	6
2	MP-1	X	-.051	8
3	MP-1	X	-.054	8
4	MP-2	X	-.049	1
5	MP-3	X	-.173	1
6	MP-3	X	-.051	3
7	MP-3	X	-.054	3
8	MP-1	X	-.173	13
9	MP-2	X	-.049	3
10	MP-3	X	-.173	8
11	MP-1	Z	-.173	6
12	MP-1	Z	-.051	8
13	MP-1	Z	-.054	8
14	MP-2	Z	-.049	1
15	MP-3	Z	-.173	1
16	MP-3	Z	-.051	3
17	MP-3	Z	-.054	3
18	MP-1	Z	-.173	13
19	MP-2	Z	-.049	3
20	MP-3	Z	-.173	8

Member Point Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.098	6
2	MP-1	X	-.042	8
3	MP-1	X	-.041	8
4	MP-2	X	-.028	1
5	MP-3	X	-.098	1
6	MP-3	X	-.042	3
7	MP-3	X	-.041	3
8	MP-1	X	-.098	13
9	MP-2	X	-.028	3
10	MP-3	X	-.098	8
11	MP-1	Z	-.17	6
12	MP-1	Z	-.073	8
13	MP-1	Z	-.071	8
14	MP-2	Z	-.048	1
15	MP-3	Z	-.17	1
16	MP-3	Z	-.073	3
17	MP-3	Z	-.071	3
18	MP-1	Z	-.17	13
19	MP-2	Z	-.048	3
20	MP-3	Z	-.17	8

Member Point Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.148	6
2	MP-1	Z	-.096	8
3	MP-1	Z	-.087	8
4	MP-2	Z	-.042	1
5	MP-3	Z	-.148	1

Company : Tower Engineering Professionals, Inc.
Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

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Member Point Loads (BLC 6 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	MP-3	Z	-.096	3
7	MP-3	Z	-.087	3
8	MP-1	Z	-.148	13
9	MP-2	Z	-.042	3
10	MP-3	Z	-.148	8

Member Point Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.098	6
2	MP-1	X	.042	8
3	MP-1	X	.041	8
4	MP-2	X	.028	1
5	MP-3	X	.098	1
6	MP-3	X	.042	3
7	MP-3	X	.041	3
8	MP-1	X	.098	13
9	MP-2	X	.028	3
10	MP-3	X	.098	8
11	MP-1	Z	-.17	6
12	MP-1	Z	-.073	8
13	MP-1	Z	-.071	8
14	MP-2	Z	-.048	1
15	MP-3	Z	-.17	1
16	MP-3	Z	-.073	3
17	MP-3	Z	-.071	3
18	MP-1	Z	-.17	13
19	MP-2	Z	-.048	3
20	MP-3	Z	-.17	8

Member Point Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.173	6
2	MP-1	X	.051	8
3	MP-1	X	.054	8
4	MP-2	X	.049	1
5	MP-3	X	.173	1
6	MP-3	X	.051	3
7	MP-3	X	.054	3
8	MP-1	X	.173	13
9	MP-2	X	.049	3
10	MP-3	X	.173	8
11	MP-1	Z	-.173	6
12	MP-1	Z	-.051	8
13	MP-1	Z	-.054	8
14	MP-2	Z	-.049	1
15	MP-3	Z	-.173	1
16	MP-3	Z	-.051	3
17	MP-3	Z	-.054	3
18	MP-1	Z	-.173	13
19	MP-2	Z	-.049	3
20	MP-3	Z	-.173	8

Member Point Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.254	6
2	MP-1	X	.051	8
3	MP-1	X	.062	8
4	MP-2	X	.072	1
5	MP-3	X	.254	1
6	MP-3	X	.051	3
7	MP-3	X	.062	3
8	MP-1	X	.254	13
9	MP-2	X	.072	3
10	MP-3	X	.254	8
11	MP-1	Z	-.147	6
12	MP-1	Z	-.03	8
13	MP-1	Z	-.036	8
14	MP-2	Z	-.041	1
15	MP-3	Z	-.147	1
16	MP-3	Z	-.03	3
17	MP-3	Z	-.036	3
18	MP-1	Z	-.147	13
19	MP-2	Z	-.041	3
20	MP-3	Z	-.147	8

Member Point Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.342	6
2	MP-1	X	.047	8
3	MP-1	X	.067	8
4	MP-2	X	.096	1
5	MP-3	X	.342	1
6	MP-3	X	.047	3
7	MP-3	X	.067	3
8	MP-1	X	.342	13
9	MP-2	X	.096	3
10	MP-3	X	.342	8

Member Point Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.254	6
2	MP-1	X	.051	8
3	MP-1	X	.062	8
4	MP-2	X	.072	1
5	MP-3	X	.254	1
6	MP-3	X	.051	3
7	MP-3	X	.062	3
8	MP-1	X	.254	13
9	MP-2	X	.072	3
10	MP-3	X	.254	8
11	MP-1	Z	.147	6
12	MP-1	Z	.03	8
13	MP-1	Z	.036	8
14	MP-2	Z	.041	1
15	MP-3	Z	.147	1

Company : Tower Engineering Professionals, Inc.
Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

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Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
16	MP-3	Z	.03	3
17	MP-3	Z	.036	3
18	MP-1	Z	.147	13
19	MP-2	Z	.041	3
20	MP-3	Z	.147	8

Member Point Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.173	6
2	MP-1	X	.051	8
3	MP-1	X	.054	8
4	MP-2	X	.049	1
5	MP-3	X	.173	1
6	MP-3	X	.051	3
7	MP-3	X	.054	3
8	MP-1	X	.173	13
9	MP-2	X	.049	3
10	MP-3	X	.173	8
11	MP-1	Z	.173	6
12	MP-1	Z	.051	8
13	MP-1	Z	.054	8
14	MP-2	Z	.049	1
15	MP-3	Z	.173	1
16	MP-3	Z	.051	3
17	MP-3	Z	.054	3
18	MP-1	Z	.173	13
19	MP-2	Z	.049	3
20	MP-3	Z	.173	8

Member Point Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.098	6
2	MP-1	X	.042	8
3	MP-1	X	.041	8
4	MP-2	X	.028	1
5	MP-3	X	.098	1
6	MP-3	X	.042	3
7	MP-3	X	.041	3
8	MP-1	X	.098	13
9	MP-2	X	.028	3
10	MP-3	X	.098	8
11	MP-1	Z	.17	6
12	MP-1	Z	.073	8
13	MP-1	Z	.071	8
14	MP-2	Z	.048	1
15	MP-3	Z	.17	1
16	MP-3	Z	.073	3
17	MP-3	Z	.071	3
18	MP-1	Z	.17	13
19	MP-2	Z	.048	3
20	MP-3	Z	.17	8

Member Point Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.148	6
2	MP-1	Z	.096	8
3	MP-1	Z	.087	8
4	MP-2	Z	.042	1
5	MP-3	Z	.148	1
6	MP-3	Z	.096	3
7	MP-3	Z	.087	3
8	MP-1	Z	.148	13
9	MP-2	Z	.042	3
10	MP-3	Z	.148	8

Member Point Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.098	6
2	MP-1	X	-.042	8
3	MP-1	X	-.041	8
4	MP-2	X	-.028	1
5	MP-3	X	-.098	1
6	MP-3	X	-.042	3
7	MP-3	X	-.041	3
8	MP-1	X	-.098	13
9	MP-2	X	-.028	3
10	MP-3	X	-.098	8
11	MP-1	Z	.17	6
12	MP-1	Z	.073	8
13	MP-1	Z	.071	8
14	MP-2	Z	.048	1
15	MP-3	Z	.17	1
16	MP-3	Z	.073	3
17	MP-3	Z	.071	3
18	MP-1	Z	.17	13
19	MP-2	Z	.048	3
20	MP-3	Z	.17	8

Member Point Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.173	6
2	MP-1	X	-.051	8
3	MP-1	X	-.054	8
4	MP-2	X	-.049	1
5	MP-3	X	-.173	1
6	MP-3	X	-.051	3
7	MP-3	X	-.054	3
8	MP-1	X	-.173	13
9	MP-2	X	-.049	3
10	MP-3	X	-.173	8
11	MP-1	Z	.173	6
12	MP-1	Z	.051	8
13	MP-1	Z	.054	8
14	MP-2	Z	.049	1
15	MP-3	Z	.173	1

Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
16	MP-3	Z	.051	3
17	MP-3	Z	.054	3
18	MP-1	Z	.173	13
19	MP-2	Z	.049	3
20	MP-3	Z	.173	8

Member Point Loads (BLC 17 : 330 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.254	6
2	MP-1	X	-.051	8
3	MP-1	X	-.062	8
4	MP-2	X	-.072	1
5	MP-3	X	-.254	1
6	MP-3	X	-.051	3
7	MP-3	X	-.062	3
8	MP-1	X	-.254	13
9	MP-2	X	-.072	3
10	MP-3	X	-.254	8
11	MP-1	Z	.147	6
12	MP-1	Z	.03	8
13	MP-1	Z	.036	8
14	MP-2	Z	.041	1
15	MP-3	Z	.147	1
16	MP-3	Z	.03	3
17	MP-3	Z	.036	3
18	MP-1	Z	.147	13
19	MP-2	Z	.041	3
20	MP-3	Z	.147	8

Member Point Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.131	6
2	MP-1	Y	-.053	8
3	MP-1	Y	-.062	8
4	MP-2	Y	-.047	1
5	MP-3	Y	-.131	1
6	MP-3	Y	-.053	3
7	MP-3	Y	-.062	3
8	MP-1	Y	-.131	13
9	MP-2	Y	-.047	3
10	MP-3	Y	-.131	8

Member Point Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.061	6
2	MP-1	X	-.019	8
3	MP-1	X	-.018	8
4	MP-2	X	-.018	1
5	MP-3	X	-.061	1
6	MP-3	X	-.019	3

Member Point Loads (BLC 19 : 0 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
7	MP-3	X	-.018	3
8	MP-1	X	-.061	13
9	MP-2	X	-.018	3
10	MP-3	X	-.061	8

Member Point Loads (BLC 20 : 30 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.046	6
2	MP-1	X	-.011	8
3	MP-1	X	-.013	8
4	MP-2	X	-.014	1
5	MP-3	X	-.046	1
6	MP-3	X	-.011	3
7	MP-3	X	-.013	3
8	MP-1	X	-.046	13
9	MP-2	X	-.014	3
10	MP-3	X	-.046	8
11	MP-1	Z	-.026	6
12	MP-1	Z	-.006	8
13	MP-1	Z	-.008	8
14	MP-2	Z	-.008	1
15	MP-3	Z	-.026	1
16	MP-3	Z	-.006	3
17	MP-3	Z	-.008	3
18	MP-1	Z	-.026	13
19	MP-2	Z	-.008	3
20	MP-3	Z	-.026	8

Member Point Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.032	6
2	MP-1	X	-.011	8
3	MP-1	X	-.011	8
4	MP-2	X	-.01	1
5	MP-3	X	-.032	1
6	MP-3	X	-.011	3
7	MP-3	X	-.011	3
8	MP-1	X	-.032	13
9	MP-2	X	-.01	3
10	MP-3	X	-.032	8
11	MP-1	Z	-.032	6
12	MP-1	Z	-.011	8
13	MP-1	Z	-.011	8
14	MP-2	Z	-.01	1
15	MP-3	Z	-.032	1
16	MP-3	Z	-.011	3
17	MP-3	Z	-.011	3
18	MP-1	Z	-.032	13
19	MP-2	Z	-.01	3
20	MP-3	Z	-.032	8

Member Point Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.019	6
2	MP-1	X	-.009	8
3	MP-1	X	-.008	8
4	MP-2	X	-.006	1
5	MP-3	X	-.019	1
6	MP-3	X	-.009	3
7	MP-3	X	-.008	3
8	MP-1	X	-.019	13
9	MP-2	X	-.006	3
10	MP-3	X	-.019	8
11	MP-1	Z	-.032	6
12	MP-1	Z	-.015	8
13	MP-1	Z	-.015	8
14	MP-2	Z	-.01	1
15	MP-3	Z	-.032	1
16	MP-3	Z	-.015	3
17	MP-3	Z	-.015	3
18	MP-1	Z	-.032	13
19	MP-2	Z	-.01	3
20	MP-3	Z	-.032	8

Member Point Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.029	6
2	MP-1	Z	-.011	8
3	MP-1	Z	-.014	8
4	MP-2	Z	-.009	1
5	MP-3	Z	-.029	1
6	MP-3	Z	-.011	3
7	MP-3	Z	-.014	3
8	MP-1	Z	-.029	13
9	MP-2	Z	-.009	3
10	MP-3	Z	-.029	8

Member Point Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.019	6
2	MP-1	X	.009	8
3	MP-1	X	.008	8
4	MP-2	X	.006	1
5	MP-3	X	.019	1
6	MP-3	X	.009	3
7	MP-3	X	.008	3
8	MP-1	X	.019	13
9	MP-2	X	.006	3
10	MP-3	X	.019	8
11	MP-1	Z	-.032	6
12	MP-1	Z	-.015	8
13	MP-1	Z	-.015	8
14	MP-2	Z	-.01	1
15	MP-3	Z	-.032	1

Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
16	MP-3	Z	-.015	3
17	MP-3	Z	-.015	3
18	MP-1	Z	-.032	13
19	MP-2	Z	-.01	3
20	MP-3	Z	-.032	8

Member Point Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.032	6
2	MP-1	X	.011	8
3	MP-1	X	.011	8
4	MP-2	X	.01	1
5	MP-3	X	.032	1
6	MP-3	X	.011	3
7	MP-3	X	.011	3
8	MP-1	X	.032	13
9	MP-2	X	.01	3
10	MP-3	X	.032	8
11	MP-1	Z	-.032	6
12	MP-1	Z	-.011	8
13	MP-1	Z	-.011	8
14	MP-2	Z	-.01	1
15	MP-3	Z	-.032	1
16	MP-3	Z	-.011	3
17	MP-3	Z	-.011	3
18	MP-1	Z	-.032	13
19	MP-2	Z	-.01	3
20	MP-3	Z	-.032	8

Member Point Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.046	6
2	MP-1	X	.011	8
3	MP-1	X	.013	8
4	MP-2	X	.014	1
5	MP-3	X	.046	1
6	MP-3	X	.011	3
7	MP-3	X	.013	3
8	MP-1	X	.046	13
9	MP-2	X	.014	3
10	MP-3	X	.046	8
11	MP-1	Z	-.026	6
12	MP-1	Z	-.006	8
13	MP-1	Z	-.008	8
14	MP-2	Z	-.008	1
15	MP-3	Z	-.026	1
16	MP-3	Z	-.006	3
17	MP-3	Z	-.008	3
18	MP-1	Z	-.026	13
19	MP-2	Z	-.008	3
20	MP-3	Z	-.026	8

Member Point Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.061	6
2	MP-1	X	.019	8
3	MP-1	X	.018	8
4	MP-2	X	.018	1
5	MP-3	X	.061	1
6	MP-3	X	.019	3
7	MP-3	X	.018	3
8	MP-1	X	.061	13
9	MP-2	X	.018	3
10	MP-3	X	.061	8

Member Point Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.046	6
2	MP-1	X	.011	8
3	MP-1	X	.013	8
4	MP-2	X	.014	1
5	MP-3	X	.046	1
6	MP-3	X	.011	3
7	MP-3	X	.013	3
8	MP-1	X	.046	13
9	MP-2	X	.014	3
10	MP-3	X	.046	8
11	MP-1	Z	.026	6
12	MP-1	Z	.006	8
13	MP-1	Z	.008	8
14	MP-2	Z	.008	1
15	MP-3	Z	.026	1
16	MP-3	Z	.006	3
17	MP-3	Z	.008	3
18	MP-1	Z	.026	13
19	MP-2	Z	.008	3
20	MP-3	Z	.026	8

Member Point Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.032	6
2	MP-1	X	.011	8
3	MP-1	X	.011	8
4	MP-2	X	.01	1
5	MP-3	X	.032	1
6	MP-3	X	.011	3
7	MP-3	X	.011	3
8	MP-1	X	.032	13
9	MP-2	X	.01	3
10	MP-3	X	.032	8
11	MP-1	Z	.032	6
12	MP-1	Z	.011	8
13	MP-1	Z	.011	8
14	MP-2	Z	.01	1
15	MP-3	Z	.032	1

Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
16	MP-3	Z	.011	3
17	MP-3	Z	.011	3
18	MP-1	Z	.032	13
19	MP-2	Z	.01	3
20	MP-3	Z	.032	8

Member Point Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.019	6
2	MP-1	X	.009	8
3	MP-1	X	.008	8
4	MP-2	X	.006	1
5	MP-3	X	.019	1
6	MP-3	X	.009	3
7	MP-3	X	.008	3
8	MP-1	X	.019	13
9	MP-2	X	.006	3
10	MP-3	X	.019	8
11	MP-1	Z	.032	6
12	MP-1	Z	.015	8
13	MP-1	Z	.015	8
14	MP-2	Z	.01	1
15	MP-3	Z	.032	1
16	MP-3	Z	.015	3
17	MP-3	Z	.015	3
18	MP-1	Z	.032	13
19	MP-2	Z	.01	3
20	MP-3	Z	.032	8

Member Point Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.029	6
2	MP-1	Z	.011	8
3	MP-1	Z	.014	8
4	MP-2	Z	.009	1
5	MP-3	Z	.029	1
6	MP-3	Z	.011	3
7	MP-3	Z	.014	3
8	MP-1	Z	.029	13
9	MP-2	Z	.009	3
10	MP-3	Z	.029	8

Member Point Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.019	6
2	MP-1	X	-.009	8
3	MP-1	X	-.008	8
4	MP-2	X	-.006	1
5	MP-3	X	-.019	1
6	MP-3	X	-.009	3

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Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

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Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
7	MP-3	X	-.008	3
8	MP-1	X	-.019	13
9	MP-2	X	-.006	3
10	MP-3	X	-.019	8
11	MP-1	Z	.032	6
12	MP-1	Z	.015	8
13	MP-1	Z	.015	8
14	MP-2	Z	.01	1
15	MP-3	Z	.032	1
16	MP-3	Z	.015	3
17	MP-3	Z	.015	3
18	MP-1	Z	.032	13
19	MP-2	Z	.01	3
20	MP-3	Z	.032	8

Member Point Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.032	6
2	MP-1	X	-.011	8
3	MP-1	X	-.011	8
4	MP-2	X	-.01	1
5	MP-3	X	-.032	1
6	MP-3	X	-.011	3
7	MP-3	X	-.011	3
8	MP-1	X	-.032	13
9	MP-2	X	-.01	3
10	MP-3	X	-.032	8
11	MP-1	Z	.032	6
12	MP-1	Z	.011	8
13	MP-1	Z	.011	8
14	MP-2	Z	.01	1
15	MP-3	Z	.032	1
16	MP-3	Z	.011	3
17	MP-3	Z	.011	3
18	MP-1	Z	.032	13
19	MP-2	Z	.01	3
20	MP-3	Z	.032	8

Member Point Loads (BLC 34 : 330 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.046	6
2	MP-1	X	-.011	8
3	MP-1	X	-.013	8
4	MP-2	X	-.014	1
5	MP-3	X	-.046	1
6	MP-3	X	-.011	3
7	MP-3	X	-.013	3
8	MP-1	X	-.046	13
9	MP-2	X	-.014	3
10	MP-3	X	-.046	8
11	MP-1	Z	.026	6

Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	MP-1	Z	.006	8
13	MP-1	Z	.008	8
14	MP-2	Z	.008	1
15	MP-3	Z	.026	1
16	MP-3	Z	.006	3
17	MP-3	Z	.008	3
18	MP-1	Z	.026	13
19	MP-2	Z	.008	3
20	MP-3	Z	.026	8

Member Point Loads (BLC 37 : Seismic Load X)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.061	6
2	MP-1	X	-.084	8
3	MP-1	X	-.109	8
4	MP-2	X	-.052	1
5	MP-3	X	-.061	1
6	MP-3	X	-.084	3
7	MP-3	X	-.109	3
8	MP-1	X	-.061	13
9	MP-2	X	-.052	3
10	MP-3	X	-.061	8

Member Point Loads (BLC 38 : Seismic Load Z)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.061	6
2	MP-1	Z	-.084	8
3	MP-1	Z	-.109	8
4	MP-2	Z	-.052	1
5	MP-3	Z	-.061	1
6	MP-3	Z	-.084	3
7	MP-3	Z	-.109	3
8	MP-1	Z	-.061	13
9	MP-2	Z	-.052	3
10	MP-3	Z	-.061	8

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.011	-.011	0	%100
2	FF-V1	X	-.009	-.009	0	%100
3	FF-V2	X	-.009	-.009	0	%100
4	FF-V3	X	-.009	-.009	0	%100
5	FF-V4	X	-.009	-.009	0	%100
6	MP-2	X	-.01	-.01	0	%100
7	MP-1	X	-.01	-.01	0	%100
8	MP-3	X	-.01	-.01	0	%100
9	SA-1	X	-.014	-.014	0	%100
10	SA-2	X	-.014	-.014	0	%100
11	SA-5	X	-.006	-.006	0	%100

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Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
12	SA-6	X	-.006	-.006	0	%100
13	SA-7	X	-.008	-.008	0	%100
14	SA-3	X	-.013	-.013	0	%100
15	SA-4	X	-.014	-.014	0	%100
16	SF2-1	X	0	0	0	%100
17	SF3-1	X	0	0	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.008	-.008	0	%100
2	FF-V1	X	-.008	-.008	0	%100
3	FF-V2	X	-.008	-.008	0	%100
4	FF-V3	X	-.008	-.008	0	%100
5	FF-V4	X	-.008	-.008	0	%100
6	MP-2	X	-.009	-.009	0	%100
7	MP-1	X	-.009	-.009	0	%100
8	MP-3	X	-.009	-.009	0	%100
9	SA-1	X	-.012	-.012	0	%100
10	SA-2	X	-.012	-.012	0	%100
11	SA-5	X	-.008	-.008	0	%100
12	SA-6	X	-.002	-.002	0	%100
13	SA-7	X	-.006	-.006	0	%100
14	SA-3	X	-.011	-.011	0	%100
15	SA-4	X	-.012	-.012	0	%100
16	SF2-1	X	-.005	-.005	0	%100
17	SF3-1	X	-.005	-.005	0	%100
18	FFTH	Z	-.005	-.005	0	%100
19	FF-V1	Z	-.005	-.005	0	%100
20	FF-V2	Z	-.005	-.005	0	%100
21	FF-V3	Z	-.005	-.005	0	%100
22	FF-V4	Z	-.005	-.005	0	%100
23	MP-2	Z	-.005	-.005	0	%100
24	MP-1	Z	-.005	-.005	0	%100
25	MP-3	Z	-.005	-.005	0	%100
26	SA-1	Z	-.007	-.007	0	%100
27	SA-2	Z	-.007	-.007	0	%100
28	SA-5	Z	-.004	-.004	0	%100
29	SA-6	Z	-.001	-.001	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.007	-.007	0	%100
32	SA-4	Z	-.007	-.007	0	%100
33	SF2-1	Z	-.003	-.003	0	%100
34	SF3-1	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.006	-.006	0	%100
2	FF-V1	X	-.007	-.007	0	%100
3	FF-V2	X	-.007	-.007	0	%100
4	FF-V3	X	-.007	-.007	0	%100
5	FF-V4	X	-.007	-.007	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	MP-2	X	-.007	-.007	0	%100
7	MP-1	X	-.007	-.007	0	%100
8	MP-3	X	-.007	-.007	0	%100
9	SA-1	X	-.01	-.01	0	%100
10	SA-2	X	-.01	-.01	0	%100
11	SA-5	X	-.006	-.006	0	%100
12	SA-6	X	-.000127	-.000127	0	%100
13	SA-7	X	-.004	-.004	0	%100
14	SA-3	X	-.009	-.009	0	%100
15	SA-4	X	-.01	-.01	0	%100
16	SF2-1	X	-.006	-.006	0	%100
17	SF3-1	X	-.006	-.006	0	%100
18	FFTH	Z	-.006	-.006	0	%100
19	FF-V1	Z	-.007	-.007	0	%100
20	FF-V2	Z	-.007	-.007	0	%100
21	FF-V3	Z	-.007	-.007	0	%100
22	FF-V4	Z	-.007	-.007	0	%100
23	MP-2	Z	-.007	-.007	0	%100
24	MP-1	Z	-.007	-.007	0	%100
25	MP-3	Z	-.007	-.007	0	%100
26	SA-1	Z	-.01	-.01	0	%100
27	SA-2	Z	-.01	-.01	0	%100
28	SA-5	Z	-.007	-.007	0	%100
29	SA-6	Z	-.000128	-.000128	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.009	-.009	0	%100
32	SA-4	Z	-.01	-.01	0	%100
33	SF2-1	Z	-.006	-.006	0	%100
34	SF3-1	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.003	-.003	0	%100
2	FF-V1	X	-.005	-.005	0	%100
3	FF-V2	X	-.005	-.005	0	%100
4	FF-V3	X	-.005	-.005	0	%100
5	FF-V4	X	-.005	-.005	0	%100
6	MP-2	X	-.005	-.005	0	%100
7	MP-1	X	-.005	-.005	0	%100
8	MP-3	X	-.005	-.005	0	%100
9	SA-1	X	-.007	-.007	0	%100
10	SA-2	X	-.007	-.007	0	%100
11	SA-5	X	-.004	-.004	0	%100
12	SA-6	X	-.001	-.001	0	%100
13	SA-7	X	-.002	-.002	0	%100
14	SA-3	X	-.007	-.007	0	%100
15	SA-4	X	-.007	-.007	0	%100
16	SF2-1	X	-.005	-.005	0	%100
17	SF3-1	X	-.005	-.005	0	%100
18	FFTH	Z	-.005	-.005	0	%100
19	FF-V1	Z	-.008	-.008	0	%100

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Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
20	FF-V2	Z	-.008	-.008	0	%100
21	FF-V3	Z	-.008	-.008	0	%100
22	FF-V4	Z	-.008	-.008	0	%100
23	MP-2	Z	-.009	-.009	0	%100
24	MP-1	Z	-.009	-.009	0	%100
25	MP-3	Z	-.009	-.009	0	%100
26	SA-1	Z	-.012	-.012	0	%100
27	SA-2	Z	-.012	-.012	0	%100
28	SA-5	Z	-.008	-.008	0	%100
29	SA-6	Z	-.002	-.002	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.011	-.011	0	%100
32	SA-4	Z	-.012	-.012	0	%100
33	SF2-1	Z	-.009	-.009	0	%100
34	SF3-1	Z	-.009	-.009	0	%100

Member Distributed Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	FF-V1	Z	-.009	-.009	0	%100
3	FF-V2	Z	-.009	-.009	0	%100
4	FF-V3	Z	-.009	-.009	0	%100
5	FF-V4	Z	-.009	-.009	0	%100
6	MP-2	Z	-.01	-.01	0	%100
7	MP-1	Z	-.01	-.01	0	%100
8	MP-3	Z	-.01	-.01	0	%100
9	SA-1	Z	-.014	-.014	0	%100
10	SA-2	Z	-.014	-.014	0	%100
11	SA-5	Z	-.007	-.007	0	%100
12	SA-6	Z	-.007	-.007	0	%100
13	SA-7	Z	0	0	0	%100
14	SA-3	Z	-.013	-.013	0	%100
15	SA-4	Z	-.014	-.014	0	%100
16	SF2-1	Z	-.012	-.012	0	%100
17	SF3-1	Z	-.012	-.012	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.003	.003	0	%100
2	FF-V1	X	.005	.005	0	%100
3	FF-V2	X	.005	.005	0	%100
4	FF-V3	X	.005	.005	0	%100
5	FF-V4	X	.005	.005	0	%100
6	MP-2	X	.005	.005	0	%100
7	MP-1	X	.005	.005	0	%100
8	MP-3	X	.005	.005	0	%100
9	SA-1	X	.007	.007	0	%100
10	SA-2	X	.007	.007	0	%100
11	SA-5	X	.001	.001	0	%100
12	SA-6	X	.004	.004	0	%100
13	SA-7	X	.002	.002	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	SA-3	X	.007	.007	0	%100
15	SA-4	X	.007	.007	0	%100
16	SF2-1	X	.005	.005	0	%100
17	SF3-1	X	.005	.005	0	%100
18	FFTH	Z	-.005	-.005	0	%100
19	FF-V1	Z	-.008	-.008	0	%100
20	FF-V2	Z	-.008	-.008	0	%100
21	FF-V3	Z	-.008	-.008	0	%100
22	FF-V4	Z	-.008	-.008	0	%100
23	MP-2	Z	-.009	-.009	0	%100
24	MP-1	Z	-.009	-.009	0	%100
25	MP-3	Z	-.009	-.009	0	%100
26	SA-1	Z	-.012	-.012	0	%100
27	SA-2	Z	-.012	-.012	0	%100
28	SA-5	Z	-.002	-.002	0	%100
29	SA-6	Z	-.008	-.008	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.011	-.011	0	%100
32	SA-4	Z	-.012	-.012	0	%100
33	SF2-1	Z	-.009	-.009	0	%100
34	SF3-1	Z	-.009	-.009	0	%100

Member Distributed Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.006	.006	0	%100
2	FF-V1	X	.007	.007	0	%100
3	FF-V2	X	.007	.007	0	%100
4	FF-V3	X	.007	.007	0	%100
5	FF-V4	X	.007	.007	0	%100
6	MP-2	X	.007	.007	0	%100
7	MP-1	X	.007	.007	0	%100
8	MP-3	X	.007	.007	0	%100
9	SA-1	X	.01	.01	0	%100
10	SA-2	X	.01	.01	0	%100
11	SA-5	X	.000127	.000127	0	%100
12	SA-6	X	.006	.006	0	%100
13	SA-7	X	.004	.004	0	%100
14	SA-3	X	.009	.009	0	%100
15	SA-4	X	.01	.01	0	%100
16	SF2-1	X	.006	.006	0	%100
17	SF3-1	X	.006	.006	0	%100
18	FFTH	Z	-.006	-.006	0	%100
19	FF-V1	Z	-.007	-.007	0	%100
20	FF-V2	Z	-.007	-.007	0	%100
21	FF-V3	Z	-.007	-.007	0	%100
22	FF-V4	Z	-.007	-.007	0	%100
23	MP-2	Z	-.007	-.007	0	%100
24	MP-1	Z	-.007	-.007	0	%100
25	MP-3	Z	-.007	-.007	0	%100
26	SA-1	Z	-.01	-.01	0	%100
27	SA-2	Z	-.01	-.01	0	%100

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Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
28	SA-5	Z	-.000128	-.000128	0	%100
29	SA-6	Z	-.007	-.007	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.009	-.009	0	%100
32	SA-4	Z	-.01	-.01	0	%100
33	SF2-1	Z	-.006	-.006	0	%100
34	SF3-1	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.008	.008	0	%100
2	FF-V1	X	.008	.008	0	%100
3	FF-V2	X	.008	.008	0	%100
4	FF-V3	X	.008	.008	0	%100
5	FF-V4	X	.008	.008	0	%100
6	MP-2	X	.009	.009	0	%100
7	MP-1	X	.009	.009	0	%100
8	MP-3	X	.009	.009	0	%100
9	SA-1	X	.012	.012	0	%100
10	SA-2	X	.012	.012	0	%100
11	SA-5	X	.002	.002	0	%100
12	SA-6	X	.008	.008	0	%100
13	SA-7	X	.006	.006	0	%100
14	SA-3	X	.011	.011	0	%100
15	SA-4	X	.012	.012	0	%100
16	SF2-1	X	.005	.005	0	%100
17	SF3-1	X	.005	.005	0	%100
18	FFTH	Z	-.005	-.005	0	%100
19	FF-V1	Z	-.005	-.005	0	%100
20	FF-V2	Z	-.005	-.005	0	%100
21	FF-V3	Z	-.005	-.005	0	%100
22	FF-V4	Z	-.005	-.005	0	%100
23	MP-2	Z	-.005	-.005	0	%100
24	MP-1	Z	-.005	-.005	0	%100
25	MP-3	Z	-.005	-.005	0	%100
26	SA-1	Z	-.007	-.007	0	%100
27	SA-2	Z	-.007	-.007	0	%100
28	SA-5	Z	-.001	-.001	0	%100
29	SA-6	Z	-.004	-.004	0	%100
30	SA-7	Z	-.004	-.004	0	%100
31	SA-3	Z	-.007	-.007	0	%100
32	SA-4	Z	-.007	-.007	0	%100
33	SF2-1	Z	-.003	-.003	0	%100
34	SF3-1	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.011	.011	0	%100
2	FF-V1	X	.009	.009	0	%100
3	FF-V2	X	.009	.009	0	%100
4	FF-V3	X	.009	.009	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	FF-V4	X	.009	.009	0	%100
6	MP-2	X	.01	.01	0	%100
7	MP-1	X	.01	.01	0	%100
8	MP-3	X	.01	.01	0	%100
9	SA-1	X	.014	.014	0	%100
10	SA-2	X	.014	.014	0	%100
11	SA-5	X	.006	.006	0	%100
12	SA-6	X	.006	.006	0	%100
13	SA-7	X	.008	.008	0	%100
14	SA-3	X	.013	.013	0	%100
15	SA-4	X	.014	.014	0	%100
16	SF2-1	X	0	0	0	%100
17	SF3-1	X	0	0	0	%100

Member Distributed Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.008	.008	0	%100
2	FF-V1	X	.008	.008	0	%100
3	FF-V2	X	.008	.008	0	%100
4	FF-V3	X	.008	.008	0	%100
5	FF-V4	X	.008	.008	0	%100
6	MP-2	X	.009	.009	0	%100
7	MP-1	X	.009	.009	0	%100
8	MP-3	X	.009	.009	0	%100
9	SA-1	X	.012	.012	0	%100
10	SA-2	X	.012	.012	0	%100
11	SA-5	X	.008	.008	0	%100
12	SA-6	X	.002	.002	0	%100
13	SA-7	X	.006	.006	0	%100
14	SA-3	X	.011	.011	0	%100
15	SA-4	X	.012	.012	0	%100
16	SF2-1	X	.005	.005	0	%100
17	SF3-1	X	.005	.005	0	%100
18	FFTH	Z	.005	.005	0	%100
19	FF-V1	Z	.005	.005	0	%100
20	FF-V2	Z	.005	.005	0	%100
21	FF-V3	Z	.005	.005	0	%100
22	FF-V4	Z	.005	.005	0	%100
23	MP-2	Z	.005	.005	0	%100
24	MP-1	Z	.005	.005	0	%100
25	MP-3	Z	.005	.005	0	%100
26	SA-1	Z	.007	.007	0	%100
27	SA-2	Z	.007	.007	0	%100
28	SA-5	Z	.004	.004	0	%100
29	SA-6	Z	.001	.001	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.007	.007	0	%100
32	SA-4	Z	.007	.007	0	%100
33	SF2-1	Z	.003	.003	0	%100
34	SF3-1	Z	.003	.003	0	%100

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Member Distributed Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.006	.006	0	%100
2	FF-V1	X	.007	.007	0	%100
3	FF-V2	X	.007	.007	0	%100
4	FF-V3	X	.007	.007	0	%100
5	FF-V4	X	.007	.007	0	%100
6	MP-2	X	.007	.007	0	%100
7	MP-1	X	.007	.007	0	%100
8	MP-3	X	.007	.007	0	%100
9	SA-1	X	.01	.01	0	%100
10	SA-2	X	.01	.01	0	%100
11	SA-5	X	.006	.006	0	%100
12	SA-6	X	.000127	.000127	0	%100
13	SA-7	X	.004	.004	0	%100
14	SA-3	X	.009	.009	0	%100
15	SA-4	X	.01	.01	0	%100
16	SF2-1	X	.006	.006	0	%100
17	SF3-1	X	.006	.006	0	%100
18	FFTH	Z	.006	.006	0	%100
19	FF-V1	Z	.007	.007	0	%100
20	FF-V2	Z	.007	.007	0	%100
21	FF-V3	Z	.007	.007	0	%100
22	FF-V4	Z	.007	.007	0	%100
23	MP-2	Z	.007	.007	0	%100
24	MP-1	Z	.007	.007	0	%100
25	MP-3	Z	.007	.007	0	%100
26	SA-1	Z	.01	.01	0	%100
27	SA-2	Z	.01	.01	0	%100
28	SA-5	Z	.007	.007	0	%100
29	SA-6	Z	.000128	.000128	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.009	.009	0	%100
32	SA-4	Z	.01	.01	0	%100
33	SF2-1	Z	.006	.006	0	%100
34	SF3-1	Z	.006	.006	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.003	.003	0	%100
2	FF-V1	X	.005	.005	0	%100
3	FF-V2	X	.005	.005	0	%100
4	FF-V3	X	.005	.005	0	%100
5	FF-V4	X	.005	.005	0	%100
6	MP-2	X	.005	.005	0	%100
7	MP-1	X	.005	.005	0	%100
8	MP-3	X	.005	.005	0	%100
9	SA-1	X	.007	.007	0	%100
10	SA-2	X	.007	.007	0	%100
11	SA-5	X	.004	.004	0	%100
12	SA-6	X	.001	.001	0	%100
13	SA-7	X	.002	.002	0	%100
14	SA-3	X	.007	.007	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	SA-4	X	.007	.007	0	%100
16	SF2-1	X	.005	.005	0	%100
17	SF3-1	X	.005	.005	0	%100
18	FFTH	Z	.005	.005	0	%100
19	FF-V1	Z	.008	.008	0	%100
20	FF-V2	Z	.008	.008	0	%100
21	FF-V3	Z	.008	.008	0	%100
22	FF-V4	Z	.008	.008	0	%100
23	MP-2	Z	.009	.009	0	%100
24	MP-1	Z	.009	.009	0	%100
25	MP-3	Z	.009	.009	0	%100
26	SA-1	Z	.012	.012	0	%100
27	SA-2	Z	.012	.012	0	%100
28	SA-5	Z	.008	.008	0	%100
29	SA-6	Z	.002	.002	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.011	.011	0	%100
32	SA-4	Z	.012	.012	0	%100
33	SF2-1	Z	.009	.009	0	%100
34	SF3-1	Z	.009	.009	0	%100

Member Distributed Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	FF-V1	Z	.009	.009	0	%100
3	FF-V2	Z	.009	.009	0	%100
4	FF-V3	Z	.009	.009	0	%100
5	FF-V4	Z	.009	.009	0	%100
6	MP-2	Z	.01	.01	0	%100
7	MP-1	Z	.01	.01	0	%100
8	MP-3	Z	.01	.01	0	%100
9	SA-1	Z	.014	.014	0	%100
10	SA-2	Z	.014	.014	0	%100
11	SA-5	Z	.007	.007	0	%100
12	SA-6	Z	.007	.007	0	%100
13	SA-7	Z	0	0	0	%100
14	SA-3	Z	.013	.013	0	%100
15	SA-4	Z	.014	.014	0	%100
16	SF2-1	Z	.012	.012	0	%100
17	SF3-1	Z	.012	.012	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.003	-.003	0	%100
2	FF-V1	X	-.005	-.005	0	%100
3	FF-V2	X	-.005	-.005	0	%100
4	FF-V3	X	-.005	-.005	0	%100
5	FF-V4	X	-.005	-.005	0	%100
6	MP-2	X	-.005	-.005	0	%100
7	MP-1	X	-.005	-.005	0	%100
8	MP-3	X	-.005	-.005	0	%100

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Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	SA-1	X	-.007	-.007	0	%100
10	SA-2	X	-.007	-.007	0	%100
11	SA-5	X	-.001	-.001	0	%100
12	SA-6	X	-.004	-.004	0	%100
13	SA-7	X	-.002	-.002	0	%100
14	SA-3	X	-.007	-.007	0	%100
15	SA-4	X	-.007	-.007	0	%100
16	SF2-1	X	-.005	-.005	0	%100
17	SF3-1	X	-.005	-.005	0	%100
18	FFTH	Z	.005	.005	0	%100
19	FF-V1	Z	.008	.008	0	%100
20	FF-V2	Z	.008	.008	0	%100
21	FF-V3	Z	.008	.008	0	%100
22	FF-V4	Z	.008	.008	0	%100
23	MP-2	Z	.009	.009	0	%100
24	MP-1	Z	.009	.009	0	%100
25	MP-3	Z	.009	.009	0	%100
26	SA-1	Z	.012	.012	0	%100
27	SA-2	Z	.012	.012	0	%100
28	SA-5	Z	.002	.002	0	%100
29	SA-6	Z	.008	.008	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.011	.011	0	%100
32	SA-4	Z	.012	.012	0	%100
33	SF2-1	Z	.009	.009	0	%100
34	SF3-1	Z	.009	.009	0	%100

Member Distributed Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.006	-.006	0	%100
2	FF-V1	X	-.007	-.007	0	%100
3	FF-V2	X	-.007	-.007	0	%100
4	FF-V3	X	-.007	-.007	0	%100
5	FF-V4	X	-.007	-.007	0	%100
6	MP-2	X	-.007	-.007	0	%100
7	MP-1	X	-.007	-.007	0	%100
8	MP-3	X	-.007	-.007	0	%100
9	SA-1	X	-.01	-.01	0	%100
10	SA-2	X	-.01	-.01	0	%100
11	SA-5	X	-.000127	-.000127	0	%100
12	SA-6	X	-.006	-.006	0	%100
13	SA-7	X	-.004	-.004	0	%100
14	SA-3	X	-.009	-.009	0	%100
15	SA-4	X	-.01	-.01	0	%100
16	SF2-1	X	-.006	-.006	0	%100
17	SF3-1	X	-.006	-.006	0	%100
18	FFTH	Z	.006	.006	0	%100
19	FF-V1	Z	.007	.007	0	%100
20	FF-V2	Z	.007	.007	0	%100
21	FF-V3	Z	.007	.007	0	%100
22	FF-V4	Z	.007	.007	0	%100

Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
23	MP-2	Z	.007	.007	0	%100
24	MP-1	Z	.007	.007	0	%100
25	MP-3	Z	.007	.007	0	%100
26	SA-1	Z	.01	.01	0	%100
27	SA-2	Z	.01	.01	0	%100
28	SA-5	Z	.000128	.000128	0	%100
29	SA-6	Z	.007	.007	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.009	.009	0	%100
32	SA-4	Z	.01	.01	0	%100
33	SF2-1	Z	.006	.006	0	%100
34	SF3-1	Z	.006	.006	0	%100

Member Distributed Loads (BLC 17 : 330 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.008	-.008	0	%100
2	FF-V1	X	-.008	-.008	0	%100
3	FF-V2	X	-.008	-.008	0	%100
4	FF-V3	X	-.008	-.008	0	%100
5	FF-V4	X	-.008	-.008	0	%100
6	MP-2	X	-.009	-.009	0	%100
7	MP-1	X	-.009	-.009	0	%100
8	MP-3	X	-.009	-.009	0	%100
9	SA-1	X	-.012	-.012	0	%100
10	SA-2	X	-.012	-.012	0	%100
11	SA-5	X	-.002	-.002	0	%100
12	SA-6	X	-.008	-.008	0	%100
13	SA-7	X	-.006	-.006	0	%100
14	SA-3	X	-.011	-.011	0	%100
15	SA-4	X	-.012	-.012	0	%100
16	SF2-1	X	-.005	-.005	0	%100
17	SF3-1	X	-.005	-.005	0	%100
18	FFTH	Z	.005	.005	0	%100
19	FF-V1	Z	.005	.005	0	%100
20	FF-V2	Z	.005	.005	0	%100
21	FF-V3	Z	.005	.005	0	%100
22	FF-V4	Z	.005	.005	0	%100
23	MP-2	Z	.005	.005	0	%100
24	MP-1	Z	.005	.005	0	%100
25	MP-3	Z	.005	.005	0	%100
26	SA-1	Z	.007	.007	0	%100
27	SA-2	Z	.007	.007	0	%100
28	SA-5	Z	.001	.001	0	%100
29	SA-6	Z	.004	.004	0	%100
30	SA-7	Z	.004	.004	0	%100
31	SA-3	Z	.007	.007	0	%100
32	SA-4	Z	.007	.007	0	%100
33	SF2-1	Z	.003	.003	0	%100
34	SF3-1	Z	.003	.003	0	%100

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Designer : AJW
Job Number : TEP No. 25607.594249
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Member Distributed Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Y	-.004	-.004	0	%100
2	FF-V1	Y	-.004	-.004	0	%100
3	FF-V2	Y	-.004	-.004	0	%100
4	FF-V3	Y	-.004	-.004	0	%100
5	FF-V4	Y	-.004	-.004	0	%100
6	MP-2	Y	-.006	-.006	0	%100
7	MP-1	Y	-.007	-.007	0	%100
8	MP-3	Y	-.007	-.007	0	%100
9	SA-1	Y	-.004	-.004	0	%100
10	SA-2	Y	-.004	-.004	0	%100
11	SA-5	Y	-.005	-.005	0	%100
12	SA-6	Y	-.005	-.005	0	%100
13	SA-7	Y	-.006	-.006	0	%100
14	SA-3	Y	-.005	-.005	0	%100
15	SA-4	Y	-.004	-.004	0	%100
16	SF2-1	Y	-.007	-.007	0	%100
17	SF3-1	Y	-.007	-.007	0	%100

Member Distributed Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.004	-.004	0	%100
2	FF-V1	X	-.003	-.003	0	%100
3	FF-V2	X	-.003	-.003	0	%100
4	FF-V3	X	-.003	-.003	0	%100
5	FF-V4	X	-.003	-.003	0	%100
6	MP-2	X	-.003	-.003	0	%100
7	MP-1	X	-.003	-.003	0	%100
8	MP-3	X	-.003	-.003	0	%100
9	SA-1	X	-.004	-.004	0	%100
10	SA-2	X	-.004	-.004	0	%100
11	SA-5	X	-.003	-.003	0	%100
12	SA-6	X	-.003	-.003	0	%100
13	SA-7	X	-.004	-.004	0	%100
14	SA-3	X	-.003	-.003	0	%100
15	SA-4	X	-.003	-.003	0	%100
16	SF2-1	X	-.004	-.004	0	%100
17	SF3-1	X	-.004	-.004	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.003	-.003	0	%100
2	FF-V1	X	-.002	-.002	0	%100
3	FF-V2	X	-.002	-.002	0	%100
4	FF-V3	X	-.002	-.002	0	%100
5	FF-V4	X	-.002	-.002	0	%100
6	MP-2	X	-.002	-.002	0	%100
7	MP-1	X	-.003	-.003	0	%100
8	MP-3	X	-.002	-.002	0	%100
9	SA-1	X	-.003	-.003	0	%100
10	SA-2	X	-.003	-.003	0	%100
11	SA-5	X	-.002	-.002	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
12	SA-6	X	-.000614	-.000614	0	%100
13	SA-7	X	-.003	-.003	0	%100
14	SA-3	X	-.003	-.003	0	%100
15	SA-4	X	-.003	-.003	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.001	-.001	0	%100
20	FF-V2	Z	-.001	-.001	0	%100
21	FF-V3	Z	-.001	-.001	0	%100
22	FF-V4	Z	-.001	-.001	0	%100
23	MP-2	Z	-.001	-.001	0	%100
24	MP-1	Z	-.002	-.002	0	%100
25	MP-3	Z	-.002	-.002	0	%100
26	SA-1	Z	-.002	-.002	0	%100
27	SA-2	Z	-.002	-.002	0	%100
28	SA-5	Z	-.001	-.001	0	%100
29	SA-6	Z	-.000356	-.000356	0	%100
30	SA-7	Z	-.001	-.001	0	%100
31	SA-3	Z	-.002	-.002	0	%100
32	SA-4	Z	-.002	-.002	0	%100
33	SF2-1	Z	-.000923	-.000923	0	%100
34	SF3-1	Z	-.000923	-.000923	0	%100

Member Distributed Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.002	-.002	0	%100
2	FF-V1	X	-.002	-.002	0	%100
3	FF-V2	X	-.002	-.002	0	%100
4	FF-V3	X	-.002	-.002	0	%100
5	FF-V4	X	-.002	-.002	0	%100
6	MP-2	X	-.002	-.002	0	%100
7	MP-1	X	-.002	-.002	0	%100
8	MP-3	X	-.002	-.002	0	%100
9	SA-1	X	-.003	-.003	0	%100
10	SA-2	X	-.003	-.003	0	%100
11	SA-5	X	-.002	-.002	0	%100
12	SA-6	X	-4.1e-5	-4.1e-5	0	%100
13	SA-7	X	-.002	-.002	0	%100
14	SA-3	X	-.002	-.002	0	%100
15	SA-4	X	-.002	-.002	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.002	-.002	0	%100
20	FF-V2	Z	-.002	-.002	0	%100
21	FF-V3	Z	-.002	-.002	0	%100
22	FF-V4	Z	-.002	-.002	0	%100
23	MP-2	Z	-.002	-.002	0	%100
24	MP-1	Z	-.002	-.002	0	%100
25	MP-3	Z	-.002	-.002	0	%100

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Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	SA-1	Z	-.003	-.003	0	%100
27	SA-2	Z	-.003	-.003	0	%100
28	SA-5	Z	-.002	-.002	0	%100
29	SA-6	Z	-4.1e-5	-4.1e-5	0	%100
30	SA-7	Z	-.002	-.002	0	%100
31	SA-3	Z	-.002	-.002	0	%100
32	SA-4	Z	-.003	-.003	0	%100
33	SF2-1	Z	-.002	-.002	0	%100
34	SF3-1	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.000977	-.000977	0	%100
2	FF-V1	X	-.001	-.001	0	%100
3	FF-V2	X	-.001	-.001	0	%100
4	FF-V3	X	-.001	-.001	0	%100
5	FF-V4	X	-.001	-.001	0	%100
6	MP-2	X	-.001	-.001	0	%100
7	MP-1	X	-.002	-.002	0	%100
8	MP-3	X	-.001	-.001	0	%100
9	SA-1	X	-.002	-.002	0	%100
10	SA-2	X	-.002	-.002	0	%100
11	SA-5	X	-.001	-.001	0	%100
12	SA-6	X	-.00041	-.00041	0	%100
13	SA-7	X	-.000882	-.000882	0	%100
14	SA-3	X	-.002	-.002	0	%100
15	SA-4	X	-.002	-.002	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.003	-.003	0	%100
20	FF-V2	Z	-.003	-.003	0	%100
21	FF-V3	Z	-.003	-.003	0	%100
22	FF-V4	Z	-.003	-.003	0	%100
23	MP-2	Z	-.003	-.003	0	%100
24	MP-1	Z	-.003	-.003	0	%100
25	MP-3	Z	-.003	-.003	0	%100
26	SA-1	Z	-.004	-.004	0	%100
27	SA-2	Z	-.004	-.004	0	%100
28	SA-5	Z	-.002	-.002	0	%100
29	SA-6	Z	-.000713	-.000713	0	%100
30	SA-7	Z	-.001	-.001	0	%100
31	SA-3	Z	-.003	-.003	0	%100
32	SA-4	Z	-.003	-.003	0	%100
33	SF2-1	Z	-.003	-.003	0	%100
34	SF3-1	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	FF-V1	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	FF-V2	Z	-.003	-.003	0	%100
4	FF-V3	Z	-.003	-.003	0	%100
5	FF-V4	Z	-.003	-.003	0	%100
6	MP-2	Z	-.003	-.003	0	%100
7	MP-1	Z	-.003	-.003	0	%100
8	MP-3	Z	-.003	-.003	0	%100
9	SA-1	Z	-.004	-.004	0	%100
10	SA-2	Z	-.004	-.004	0	%100
11	SA-5	Z	-.002	-.002	0	%100
12	SA-6	Z	-.002	-.002	0	%100
13	SA-7	Z	0	0	0	%100
14	SA-3	Z	-.003	-.003	0	%100
15	SA-4	Z	-.004	-.004	0	%100
16	SF2-1	Z	-.004	-.004	0	%100
17	SF3-1	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.000977	.000977	0	%100
2	FF-V1	X	.001	.001	0	%100
3	FF-V2	X	.001	.001	0	%100
4	FF-V3	X	.001	.001	0	%100
5	FF-V4	X	.001	.001	0	%100
6	MP-2	X	.001	.001	0	%100
7	MP-1	X	.002	.002	0	%100
8	MP-3	X	.001	.001	0	%100
9	SA-1	X	.002	.002	0	%100
10	SA-2	X	.002	.002	0	%100
11	SA-5	X	.00041	.00041	0	%100
12	SA-6	X	.001	.001	0	%100
13	SA-7	X	.000882	.000882	0	%100
14	SA-3	X	.002	.002	0	%100
15	SA-4	X	.002	.002	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.003	-.003	0	%100
20	FF-V2	Z	-.003	-.003	0	%100
21	FF-V3	Z	-.003	-.003	0	%100
22	FF-V4	Z	-.003	-.003	0	%100
23	MP-2	Z	-.003	-.003	0	%100
24	MP-1	Z	-.003	-.003	0	%100
25	MP-3	Z	-.003	-.003	0	%100
26	SA-1	Z	-.004	-.004	0	%100
27	SA-2	Z	-.004	-.004	0	%100
28	SA-5	Z	-.000713	-.000713	0	%100
29	SA-6	Z	-.002	-.002	0	%100
30	SA-7	Z	-.001	-.001	0	%100
31	SA-3	Z	-.003	-.003	0	%100
32	SA-4	Z	-.003	-.003	0	%100
33	SF2-1	Z	-.003	-.003	0	%100

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Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
34	SF3-1	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.002	.002	0	%100
2	FF-V1	X	.002	.002	0	%100
3	FF-V2	X	.002	.002	0	%100
4	FF-V3	X	.002	.002	0	%100
5	FF-V4	X	.002	.002	0	%100
6	MP-2	X	.002	.002	0	%100
7	MP-1	X	.002	.002	0	%100
8	MP-3	X	.002	.002	0	%100
9	SA-1	X	.003	.003	0	%100
10	SA-2	X	.003	.003	0	%100
11	SA-5	X	4.1e-5	4.1e-5	0	%100
12	SA-6	X	.002	.002	0	%100
13	SA-7	X	.002	.002	0	%100
14	SA-3	X	.002	.002	0	%100
15	SA-4	X	.002	.002	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.002	-.002	0	%100
20	FF-V2	Z	-.002	-.002	0	%100
21	FF-V3	Z	-.002	-.002	0	%100
22	FF-V4	Z	-.002	-.002	0	%100
23	MP-2	Z	-.002	-.002	0	%100
24	MP-1	Z	-.002	-.002	0	%100
25	MP-3	Z	-.002	-.002	0	%100
26	SA-1	Z	-.003	-.003	0	%100
27	SA-2	Z	-.003	-.003	0	%100
28	SA-5	Z	-4.1e-5	-4.1e-5	0	%100
29	SA-6	Z	-.002	-.002	0	%100
30	SA-7	Z	-.002	-.002	0	%100
31	SA-3	Z	-.002	-.002	0	%100
32	SA-4	Z	-.003	-.003	0	%100
33	SF2-1	Z	-.002	-.002	0	%100
34	SF3-1	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.003	.003	0	%100
2	FF-V1	X	.002	.002	0	%100
3	FF-V2	X	.002	.002	0	%100
4	FF-V3	X	.002	.002	0	%100
5	FF-V4	X	.002	.002	0	%100
6	MP-2	X	.002	.002	0	%100
7	MP-1	X	.003	.003	0	%100
8	MP-3	X	.002	.002	0	%100
9	SA-1	X	.003	.003	0	%100
10	SA-2	X	.003	.003	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	SA-5	X	.000614	.000614	0	%100
12	SA-6	X	.002	.002	0	%100
13	SA-7	X	.003	.003	0	%100
14	SA-3	X	.003	.003	0	%100
15	SA-4	X	.003	.003	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	-.002	-.002	0	%100
19	FF-V1	Z	-.001	-.001	0	%100
20	FF-V2	Z	-.001	-.001	0	%100
21	FF-V3	Z	-.001	-.001	0	%100
22	FF-V4	Z	-.001	-.001	0	%100
23	MP-2	Z	-.001	-.001	0	%100
24	MP-1	Z	-.002	-.002	0	%100
25	MP-3	Z	-.002	-.002	0	%100
26	SA-1	Z	-.002	-.002	0	%100
27	SA-2	Z	-.002	-.002	0	%100
28	SA-5	Z	-.000356	-.000356	0	%100
29	SA-6	Z	-.001	-.001	0	%100
30	SA-7	Z	-.001	-.001	0	%100
31	SA-3	Z	-.002	-.002	0	%100
32	SA-4	Z	-.002	-.002	0	%100
33	SF2-1	Z	-.000923	-.000923	0	%100
34	SF3-1	Z	-.000923	-.000923	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.004	.004	0	%100
2	FF-V1	X	.003	.003	0	%100
3	FF-V2	X	.003	.003	0	%100
4	FF-V3	X	.003	.003	0	%100
5	FF-V4	X	.003	.003	0	%100
6	MP-2	X	.003	.003	0	%100
7	MP-1	X	.003	.003	0	%100
8	MP-3	X	.003	.003	0	%100
9	SA-1	X	.004	.004	0	%100
10	SA-2	X	.004	.004	0	%100
11	SA-5	X	.003	.003	0	%100
12	SA-6	X	.003	.003	0	%100
13	SA-7	X	.004	.004	0	%100
14	SA-3	X	.003	.003	0	%100
15	SA-4	X	.003	.003	0	%100
16	SF2-1	X	.004	.004	0	%100
17	SF3-1	X	.004	.004	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.003	.003	0	%100
2	FF-V1	X	.002	.002	0	%100
3	FF-V2	X	.002	.002	0	%100
4	FF-V3	X	.002	.002	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	FF-V4	X	.002	.002	0	%100
6	MP-2	X	.002	.002	0	%100
7	MP-1	X	.003	.003	0	%100
8	MP-3	X	.002	.002	0	%100
9	SA-1	X	.003	.003	0	%100
10	SA-2	X	.003	.003	0	%100
11	SA-5	X	.002	.002	0	%100
12	SA-6	X	.000614	.000614	0	%100
13	SA-7	X	.003	.003	0	%100
14	SA-3	X	.003	.003	0	%100
15	SA-4	X	.003	.003	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	.002	.002	0	%100
19	FF-V1	Z	.001	.001	0	%100
20	FF-V2	Z	.001	.001	0	%100
21	FF-V3	Z	.001	.001	0	%100
22	FF-V4	Z	.001	.001	0	%100
23	MP-2	Z	.001	.001	0	%100
24	MP-1	Z	.002	.002	0	%100
25	MP-3	Z	.002	.002	0	%100
26	SA-1	Z	.002	.002	0	%100
27	SA-2	Z	.002	.002	0	%100
28	SA-5	Z	.001	.001	0	%100
29	SA-6	Z	.000356	.000356	0	%100
30	SA-7	Z	.001	.001	0	%100
31	SA-3	Z	.002	.002	0	%100
32	SA-4	Z	.002	.002	0	%100
33	SF2-1	Z	.000923	.000923	0	%100
34	SF3-1	Z	.000923	.000923	0	%100

Member Distributed Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.002	.002	0	%100
2	FF-V1	X	.002	.002	0	%100
3	FF-V2	X	.002	.002	0	%100
4	FF-V3	X	.002	.002	0	%100
5	FF-V4	X	.002	.002	0	%100
6	MP-2	X	.002	.002	0	%100
7	MP-1	X	.002	.002	0	%100
8	MP-3	X	.002	.002	0	%100
9	SA-1	X	.003	.003	0	%100
10	SA-2	X	.003	.003	0	%100
11	SA-5	X	.002	.002	0	%100
12	SA-6	X	4.1e-5	4.1e-5	0	%100
13	SA-7	X	.002	.002	0	%100
14	SA-3	X	.002	.002	0	%100
15	SA-4	X	.002	.002	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	.002	.002	0	%100

Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	FF-V1	Z	.002	.002	0	%100
20	FF-V2	Z	.002	.002	0	%100
21	FF-V3	Z	.002	.002	0	%100
22	FF-V4	Z	.002	.002	0	%100
23	MP-2	Z	.002	.002	0	%100
24	MP-1	Z	.002	.002	0	%100
25	MP-3	Z	.002	.002	0	%100
26	SA-1	Z	.003	.003	0	%100
27	SA-2	Z	.003	.003	0	%100
28	SA-5	Z	.002	.002	0	%100
29	SA-6	Z	4.1e-5	4.1e-5	0	%100
30	SA-7	Z	.002	.002	0	%100
31	SA-3	Z	.002	.002	0	%100
32	SA-4	Z	.003	.003	0	%100
33	SF2-1	Z	.002	.002	0	%100
34	SF3-1	Z	.002	.002	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.000977	.000977	0	%100
2	FF-V1	X	.001	.001	0	%100
3	FF-V2	X	.001	.001	0	%100
4	FF-V3	X	.001	.001	0	%100
5	FF-V4	X	.001	.001	0	%100
6	MP-2	X	.001	.001	0	%100
7	MP-1	X	.002	.002	0	%100
8	MP-3	X	.001	.001	0	%100
9	SA-1	X	.002	.002	0	%100
10	SA-2	X	.002	.002	0	%100
11	SA-5	X	.001	.001	0	%100
12	SA-6	X	.00041	.00041	0	%100
13	SA-7	X	.000882	.000882	0	%100
14	SA-3	X	.002	.002	0	%100
15	SA-4	X	.002	.002	0	%100
16	SF2-1	X	.002	.002	0	%100
17	SF3-1	X	.002	.002	0	%100
18	FFTH	Z	.002	.002	0	%100
19	FF-V1	Z	.003	.003	0	%100
20	FF-V2	Z	.003	.003	0	%100
21	FF-V3	Z	.003	.003	0	%100
22	FF-V4	Z	.003	.003	0	%100
23	MP-2	Z	.003	.003	0	%100
24	MP-1	Z	.003	.003	0	%100
25	MP-3	Z	.003	.003	0	%100
26	SA-1	Z	.004	.004	0	%100
27	SA-2	Z	.004	.004	0	%100
28	SA-5	Z	.002	.002	0	%100
29	SA-6	Z	.000713	.000713	0	%100
30	SA-7	Z	.001	.001	0	%100
31	SA-3	Z	.003	.003	0	%100
32	SA-4	Z	.003	.003	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
33	SF2-1	Z	.003	.003	0	%100
34	SF3-1	Z	.003	.003	0	%100

Member Distributed Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	FF-V1	Z	.003	.003	0	%100
3	FF-V2	Z	.003	.003	0	%100
4	FF-V3	Z	.003	.003	0	%100
5	FF-V4	Z	.003	.003	0	%100
6	MP-2	Z	.003	.003	0	%100
7	MP-1	Z	.003	.003	0	%100
8	MP-3	Z	.003	.003	0	%100
9	SA-1	Z	.004	.004	0	%100
10	SA-2	Z	.004	.004	0	%100
11	SA-5	Z	.002	.002	0	%100
12	SA-6	Z	.002	.002	0	%100
13	SA-7	Z	0	0	0	%100
14	SA-3	Z	.003	.003	0	%100
15	SA-4	Z	.004	.004	0	%100
16	SF2-1	Z	.004	.004	0	%100
17	SF3-1	Z	.004	.004	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.000977	-.000977	0	%100
2	FF-V1	X	-.001	-.001	0	%100
3	FF-V2	X	-.001	-.001	0	%100
4	FF-V3	X	-.001	-.001	0	%100
5	FF-V4	X	-.001	-.001	0	%100
6	MP-2	X	-.001	-.001	0	%100
7	MP-1	X	-.002	-.002	0	%100
8	MP-3	X	-.001	-.001	0	%100
9	SA-1	X	-.002	-.002	0	%100
10	SA-2	X	-.002	-.002	0	%100
11	SA-5	X	-.00041	-.00041	0	%100
12	SA-6	X	-.001	-.001	0	%100
13	SA-7	X	-.000882	-.000882	0	%100
14	SA-3	X	-.002	-.002	0	%100
15	SA-4	X	-.002	-.002	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	.002	.002	0	%100
19	FF-V1	Z	.003	.003	0	%100
20	FF-V2	Z	.003	.003	0	%100
21	FF-V3	Z	.003	.003	0	%100
22	FF-V4	Z	.003	.003	0	%100
23	MP-2	Z	.003	.003	0	%100
24	MP-1	Z	.003	.003	0	%100
25	MP-3	Z	.003	.003	0	%100
26	SA-1	Z	.004	.004	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	SA-2	Z	.004	.004	0	%100
28	SA-5	Z	.000713	.000713	0	%100
29	SA-6	Z	.002	.002	0	%100
30	SA-7	Z	.001	.001	0	%100
31	SA-3	Z	.003	.003	0	%100
32	SA-4	Z	.003	.003	0	%100
33	SF2-1	Z	.003	.003	0	%100
34	SF3-1	Z	.003	.003	0	%100

Member Distributed Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.002	-.002	0	%100
2	FF-V1	X	-.002	-.002	0	%100
3	FF-V2	X	-.002	-.002	0	%100
4	FF-V3	X	-.002	-.002	0	%100
5	FF-V4	X	-.002	-.002	0	%100
6	MP-2	X	-.002	-.002	0	%100
7	MP-1	X	-.002	-.002	0	%100
8	MP-3	X	-.002	-.002	0	%100
9	SA-1	X	-.003	-.003	0	%100
10	SA-2	X	-.003	-.003	0	%100
11	SA-5	X	-4.1e-5	-4.1e-5	0	%100
12	SA-6	X	-.002	-.002	0	%100
13	SA-7	X	-.002	-.002	0	%100
14	SA-3	X	-.002	-.002	0	%100
15	SA-4	X	-.002	-.002	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	.002	.002	0	%100
19	FF-V1	Z	.002	.002	0	%100
20	FF-V2	Z	.002	.002	0	%100
21	FF-V3	Z	.002	.002	0	%100
22	FF-V4	Z	.002	.002	0	%100
23	MP-2	Z	.002	.002	0	%100
24	MP-1	Z	.002	.002	0	%100
25	MP-3	Z	.002	.002	0	%100
26	SA-1	Z	.003	.003	0	%100
27	SA-2	Z	.003	.003	0	%100
28	SA-5	Z	4.1e-5	4.1e-5	0	%100
29	SA-6	Z	.002	.002	0	%100
30	SA-7	Z	.002	.002	0	%100
31	SA-3	Z	.002	.002	0	%100
32	SA-4	Z	.003	.003	0	%100
33	SF2-1	Z	.002	.002	0	%100
34	SF3-1	Z	.002	.002	0	%100

Member Distributed Loads (BLC 34 : 330 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.003	-.003	0	%100
2	FF-V1	X	-.002	-.002	0	%100
3	FF-V2	X	-.002	-.002	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : AJW
Job Number : TEP No. 25607.594249
Model Name : 88016 - OLD LYME

Sept 9, 2021
2:40 PM
Checked By: NPD

Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
4	FF-V3	X	-.002	-.002	0	%100
5	FF-V4	X	-.002	-.002	0	%100
6	MP-2	X	-.002	-.002	0	%100
7	MP-1	X	-.003	-.003	0	%100
8	MP-3	X	-.002	-.002	0	%100
9	SA-1	X	-.003	-.003	0	%100
10	SA-2	X	-.003	-.003	0	%100
11	SA-5	X	-.000614	-.000614	0	%100
12	SA-6	X	-.002	-.002	0	%100
13	SA-7	X	-.003	-.003	0	%100
14	SA-3	X	-.003	-.003	0	%100
15	SA-4	X	-.003	-.003	0	%100
16	SF2-1	X	-.002	-.002	0	%100
17	SF3-1	X	-.002	-.002	0	%100
18	FFTH	Z	.002	.002	0	%100
19	FF-V1	Z	.001	.001	0	%100
20	FF-V2	Z	.001	.001	0	%100
21	FF-V3	Z	.001	.001	0	%100
22	FF-V4	Z	.001	.001	0	%100
23	MP-2	Z	.001	.001	0	%100
24	MP-1	Z	.002	.002	0	%100
25	MP-3	Z	.002	.002	0	%100
26	SA-1	Z	.002	.002	0	%100
27	SA-2	Z	.002	.002	0	%100
28	SA-5	Z	.000356	.000356	0	%100
29	SA-6	Z	.001	.001	0	%100
30	SA-7	Z	.001	.001	0	%100
31	SA-3	Z	.002	.002	0	%100
32	SA-4	Z	.002	.002	0	%100
33	SF2-1	Z	.000923	.000923	0	%100
34	SF3-1	Z	.000923	.000923	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N4	max	.28	2	2.125	28	.161	5	0	66	0	24	0	66
2		min	-.28	10	-1.066	4	-.161	15	0	1	0	16	0	1
3	N6	max	.896	18	1.083	18	.076	22	0	14	0	14	0	66
4		min	-.896	26	-1.016	10	-.076	14	0	22	0	22	0	1
5	N11	max	.106	26	.581	26	.23	6	.687	21	.278	14	.453	26
6		min	-.07	2	-.16	2	-.23	14	-.687	31	-.278	6	-.053	2
7	N9	max	.425	2	.334	2	.029	22	0	21	0	21	0	66
8		min	-.46	26	-.349	26	-.029	30	0	31	0	31	0	1
9	N12	max	.069	18	1.097	22	.694	22	0	66	0	18	0	18
10		min	-.069	10	-1.036	14	-.695	30	0	1	0	10	0	10
11	N16	max	.932	2	1.361	2	.046	22	0	22	0	22	0	66

Envelope Joint Reactions (Continued)

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
12		min	-.961	26	-1.382	26	-.049	30	0	30	0	30	0	1
13	N19	max	.231	19	1.901	26	.061	4	1.584	22	.037	11	1.909	26
14		min	-.173	11	-.972	2	-.051	12	-1.608	30	-.05	3	-1.017	2
15	N20	max	.037	17	.137	30	.165	23	.385	23	.002	14	.1	24
16		min	-.049	25	-.092	6	-.159	15	-.373	15	-.002	22	-.07	16
17	N22	max	.061	4	.043	22	.121	7	.278	7	0	15	.134	28
18		min	-.062	28	-.019	14	-.124	31	-.284	31	0	23	-.131	4
19	N24	max	.09	16	.066	30	.195	22	.458	22	.003	22	.216	23
20		min	-.093	24	-.043	6	-.196	30	-.461	30	-.003	14	-.208	15
21	N26	max	.186	15	.161	22	.258	22	.619	22	0	30	.483	23
22		min	-.199	23	-.115	14	-.254	14	-.605	14	0	6	-.449	15
23	Totals:	max	2.814	2	2.843	49	1.987	22						
24		min	-2.814	26	1.131	10	-1.987	14						

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

	Member	Shape	Code Check	Loc[ft]	...	She...	Lo...	...	...	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	FF-V3	L2x2x4	.659	0	...	.028	0	y	...	8.047	30.586	.691	1.577	...	H2-1
2	FF-V4	L2x2x4	.575	0	...	.037	0	y	...	8.047	30.586	.691	1.577	...	H2-1
3	FF-V2	L2x2x4	.544	0	...	.032	0	y	...	8.047	30.586	.691	1.577	...	H2-1
4	FFTH	L2x2x4	.505	5.813	...	.028	5....	z	...	2.738	30.586	.691	1.372	...	H2-1
5	FF-V1	L2x2x4	.483	0	...	.016	0	y	...	8.047	30.586	.691	1.577	...	H2-1
6	SF3-1	HSS3.5...	.378	0	...	.357	0	y	...	63.429	63.756	6.659	6.659	...	H3-6
7	SA-1	L2.5x2...	.329	4.951	2	.005	10...	y	...	5.381	56.052	1.512	2.89	...	H2-1
8	SA-4	L2.5x2...	.295	3.277	2	.014	6....	z	...	7.331	29.192	.873	1.475	...	H2-1
9	SA-2	L2.5x2...	.272	4.623	6	.004	9....	y	...	6.457	56.052	1.512	2.963	...	H2-1
10	MP-3	PIPE_3...	.238	6.563	...	.021	3....		...	66.986	78.75	7.954	7.954	...	H1-...
11	SA-7	L2.5x2...	.147	.25	...	.049	.25	y	...	28.195	29.192	.873	1.972	...	H2-1
12	MP-2	PIPE_3...	.133	6.667	...	.012	3....		...	50.161	65.205	5.749	5.749	...	H1-...
13	MP-1	PIPE_3...	.105	12.969	...	.017	6....		...	22.256	78.75	7.954	7.954	...	H1-...
14	SF2-1	HSS3.5...	.090	1	...	.144	1	y	...	63.429	63.756	6.659	6.659	...	H1-...
15	SA-3	L2.5x2...	.053	2.219	...	.009	0	z	...	15.349	29.192	.873	1.67	...	H2-1
16	SA-5	L2.5x2...	.024	.721	...	.002	0	z	...	27.135	29.192	.873	1.972	...	H2-1
17	SA-6	L2.5x2...	.013	.721	...	.002	1....	z	...	27.135	29.192	.873	1.972	...	H2-1

Envelope AISI S100-16: LRFD Cold Formed Steel Code Checks

Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pn[k]	phi*Tn[k]	phi*Mny...	phi*Mnz...	phi*V...	phi*V...	Cb	Eqn
No Data to Print ...																

TOWER ENGINEERING PROFESSIONALS

88016 - OLD LYME

TEP No.	25607.594249	
Analysis By:	AJW	9/9/2021
Checked By:	NPD	9/9/2021

Code Revisions:	TIA-222-H	IBC 2018
Tower Type:	4 Sided Self-Support	

Wind Inputs:

Ult. Wind Velocity:	125.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.00	inches
Mount Centerline:	105.0	ft
Antenna Centerline:	105.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	362	ft

Wind Calculations:

K_{zt}:	1.000	Section 2.6.6
K_d:	0.950	
$K_{z\text{-Mount}}$:	1.002	Section 2.6.5.2
$K_{z\text{-Antenna}}$:	1.002	Section 2.6.5.2
K_{iz}:	1.123	Section 2.6.10
Ice Thickness:	1.123	inches - Section 2.6.10

Without Ice - (psf)		With Ice - (psf)	
$(q_z G_h)_{Mount}$:	37.58	$(q_z G_h)_{Mount}$:	6.01
$(q_z G_h)_{Antenna}$:	37.58	$(q_z G_h)_{Antenna}$:	6.01

Antenna Loads are Calculated in Accordance with TIA-222-H
Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

										Distance from start node of the member		
MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	0.00	1	Flat	MP-1	6.00	13.00	
ERICSSON	RADIO 4480 B71+B85A	21.80	15.70	7.50	84.00	90.00	1	Flat	MP-1	8.00		
ERICSSON	RADIO 4460 B25+B66	19.60	15.70	12.10	109.00	90.00	1	Flat	MP-1	8.00		
ERICSSON	AIR6449 B41	33.10	20.60	8.60	104.00	0.00	1	Flat	MP-2	1.00	3.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	0.00	1	Flat	MP-3	1.00	8.00	
ERICSSON	RADIO 4480 B71+B85A	21.80	15.70	7.50	84.00	90.00	1	Flat	MP-3	3.00		
ERICSSON	RADIO 4460 B25+B66	19.60	15.70	12.10	109.00	90.00	1	Flat	MP-3	3.00		

Member Forces are Calculated in Accordance with TIA-222-H

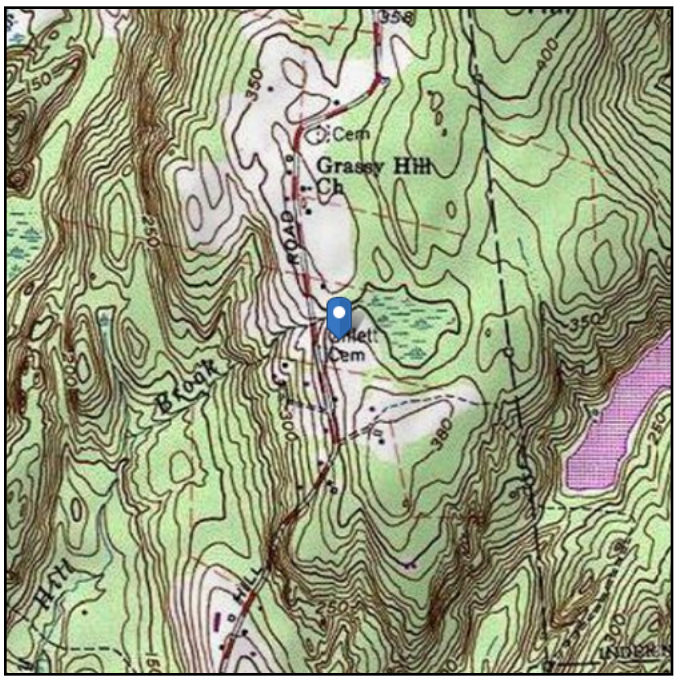
Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
FFTH	2.000	108.00	Flat	90.00	8.00
FF-V1	2.000	30.00	Flat		8.00
FF-V2	2.000	30.00	Flat		8.00
FF-V3	2.000	30.00	Flat		8.00
FF-V4	2.000	30.00	Flat		8.00
MP-2	3.500	120.00	Round		11.00
MP-1	4.000	180.00	Round		12.57
MP-3	4.000	120.00	Round		12.57
SA-1	2.500	129.63	Flat		10.00
SA-2	2.500	118.34	Flat		10.00
SA-5	2.500	17.31	Flat	43.88	10.00
SA-6	2.500	17.31	Flat	-43.88	10.00
SA-7	2.500	6.00	Flat	90.00	10.00
SA-3	2.500	53.26	Flat		10.00
SA-4	2.500	80.31	Flat		10.00
SF2-1	3.500	12.00	Flat	0.00	14.00
SF3-1	3.500	12.00	Flat	0.00	14.00

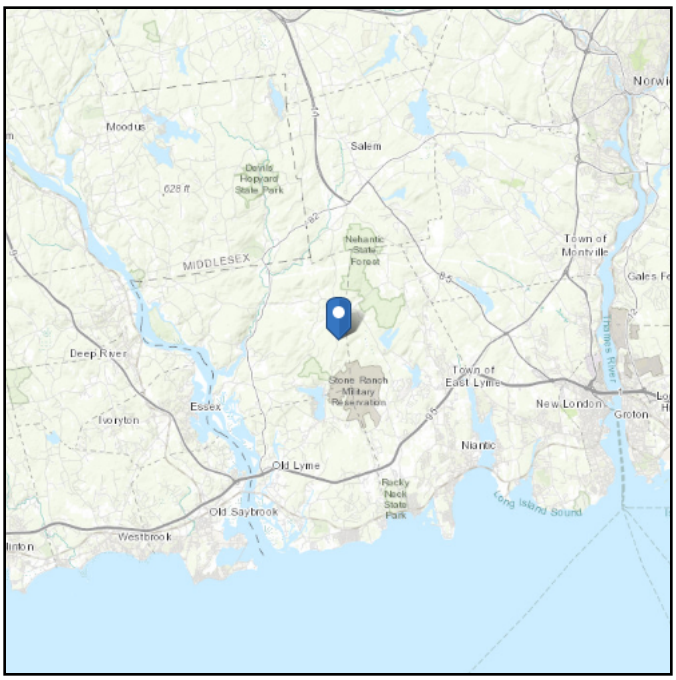
ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 362.2 ft (NAVD 88)
Latitude: 41.3918
Longitude: -72.2859





Wind

Results:

Wind Speed:	125 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	96 Vmph
100-year MRI	102 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Wed Sep 01 2021

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

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

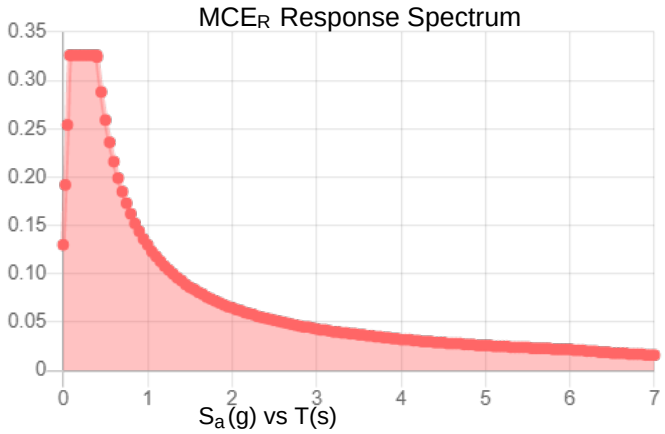
Seismic

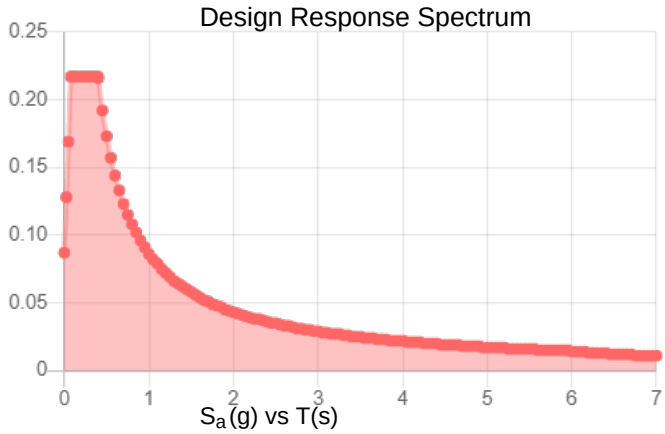
Site Soil Class: D - Default (see Section 11.4.3)

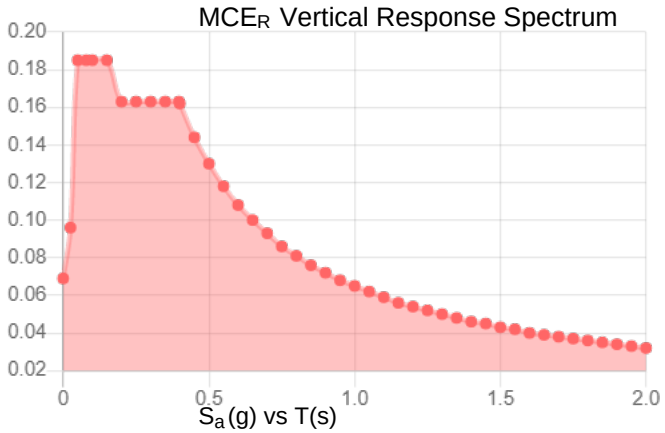
Results:

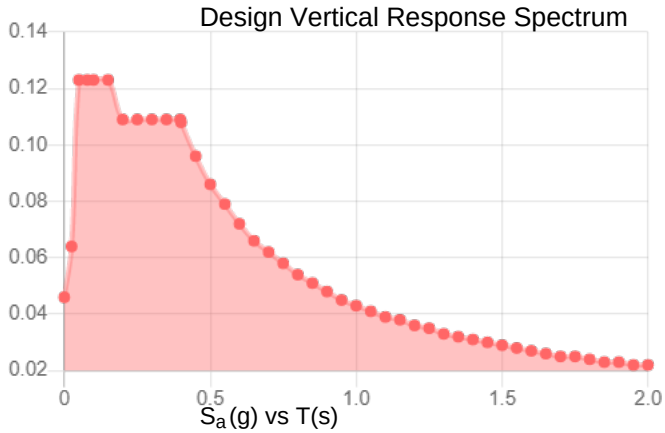
S_S :	0.204	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.114
F_v :	2.4	PGA_M :	0.179
S_{MS} :	0.326	F_{PGA} :	1.573
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.217	C_v :	0.708

Seismic Design Category B









Data Accessed: Wed Sep 01 2021

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

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Wed Sep 01 2021

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

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

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: CTNL330A

333 Grassy Hill Road
Old Lyme, Connecticut 06371

November 9, 2021

EBI Project Number: 6221006624

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**30.92%**

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

November 9, 2021

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

Emissions Analysis for Site: CTNL330A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **333 Grassy Hill Road** in **Old Lyme, 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 333 Grassy Hill Road in Old Lyme, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

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

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

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

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

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

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

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

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

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

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

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

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

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

13) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied

specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

14) The antenna mounting height centerline of the proposed antennas is 105 feet above ground level (AGL).

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

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

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna A1 MPE %:	**8.66%**	Antenna B1 MPE %:	**8.66%**	Antenna C1 MPE %:	**8.66%**
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	36,356.09	ERP (W):	36,356.09	ERP (W):	36,356.09
Antenna A2 MPE %:	**13.34%**	Antenna B2 MPE %:	**13.34%**	Antenna C2 MPE %:	**13.34%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	21.99%
Verizon	6.33%
Valley Communications	0.4%
Cingular	2.2%
Site Total MPE % :	30.92%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	21.99%
T-Mobile Sector B Total:	21.99%
T-Mobile Sector C Total:	21.99%
Site Total MPE % :	30.92%

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 600 MHz LTE	2	591.73	105.0	4.34	600 MHz LTE	400	1.09%
T-Mobile 600 MHz NR	1	1577.94	105.0	5.79	600 MHz NR	400	1.45%
T-Mobile 700 MHz LTE	2	695.22	105.0	5.10	700 MHz LTE	467	1.09%
T-Mobile 1900 MHz GSM	4	1052.26	105.0	15.44	1900 MHz GSM	1000	1.54%
T-Mobile 1900 MHz LTE	2	2104.51	105.0	15.44	1900 MHz LTE	1000	1.54%
T-Mobile 2100 MHz LTE	2	2649.42	105.0	19.44	2100 MHz LTE	1000	1.94%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	105.0	40.51	2500 MHz LTE 1C & 2C Traffic	1000	4.05%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	105.0	3.94	2500 MHz LTE 1C & 2C Broadcast	1000	0.39%
T-Mobile 2500 MHz NR Traffic	1	22089.26	105.0	81.03	2500 MHz NR Traffic	1000	8.10%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	105.0	7.88	2500 MHz NR Broadcast	1000	0.79%
						Total:	**21.99%**

• 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:	21.99%
Sector B:	21.99%
Sector C:	21.99%
T-Mobile Maximum MPE % (Sector A):	21.99%
Site Total:	30.92%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **30.92%** 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.