



10 INDUSTRIAL AVE,  
SUITE 3  
MAHWAH NJ 07430

PHONE: 201.684.0055  
FAX: 201.684.0066

11/5/2021

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

RE: Notice of Exempt Modification  
135 Honey Hill Road, East Haddam, CT 06423  
Latitude: 41.43694722  
Longitude: -72.36639167  
T-Mobile/Sprint Site#: CTHA843A-CT33XC537

Dear Ms. Bachman:

T-Mobile/Sprint currently maintains six (6) antennas at the 141-foot level of the existing 150-foot guyed tower at 135 Honey Hill Road, East Haddam, CT. The 150-foot lattice 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 same 141-foot level of the tower and will support 5G services.

**Planned Modifications:**

**Tower:**

To Remain:

(1) ½" Coax Cable

Remove:

(3) 1 ¼' Hybriflex Cable

Remove:

- (3) APXVTM14-ALU-I20 Antennas
- (3) NNVV-65B-R4 Antennas
- (3) 1900 MHZ 4X45 RRH
- (3) TD-RRH8X20-25 W/ Solar Shield RRH
- (3) RRH2X50-08 RRH
- (3) T-Arm Mounts

Install New:

- (3) RFS APXVAALL24\_43-U-NA20 Antennas
- (3) Ericsson AIR6449 B41 Antennas
- (3) Ericsson Radio 4460 B25+B66 RRU

- (3) Ericsson Radio 4480 B71+B85A RRU
- (3) 6X24 4AWG 1-5/8" Hybrid Cables
- (1) Platform Mount

**Ground:**

Existing To Remain:

- (2) Cabinets

Install New:

- (1) Enclosure 6160 Cabinet
- (1) B160 Battery Cabinet
- (4) BB6648
- (1) RBS 6601
- (1) DUG20
- (1) CSR IXRE V2 (GEN2)

Sprint was originally approved for use of this tower by the Connecticut Siting Council in Petition No. 587 on October 23, 2002. 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 § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to First Selectman Irene M. Haines, Elected Official, and James F. Ventres, 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](mailto:ddepinto@transcendwireless.com)

Attachments

cc: Irene M. Haines – First Selectman of the Town of East Haddam

James F. Ventres– Acting Zoning Official

American Tower Corporation – Tower & Property Owner

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**UPS Delivery Notification, Tracking Number 1ZV25742A898866409**

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

Tue, Nov 9, 2021 at 10:20 AM

**Hello, your package has been delivered.****Delivery Date:** Tuesday, 11/09/2021**Delivery Time:** 10:18 AM**Left At:** FRONT DESK**Signed by:** STACEY**TRANSCEND WIRELESS**

<b>Tracking Number:</b>	<b>1ZV25742A898866409</b>
<b>Ship To:</b>	AMERICAN TOWER CORP 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.8 LBS
<b>Reference Number:</b>	CTHA843A-CT33XC537

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**UPS Delivery Notification, Tracking Number 1ZV257424296056396**

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

Mon, Nov 8, 2021 at 12:09 PM

**Hello, your package has been delivered.****Delivery Date:** Monday, 11/08/2021**Delivery Time:** 12:01 PM**Left At:** OFFICE**Signed by:** DENETTE**TRANSCEND WIRELESS**

<b>Tracking Number:</b>	<b>1ZV257424296056396</b>
<b>Ship To:</b>	TOWN OF EAST HADDAM 1 PLAINS ROAD P.O. BOX 385 MOODUS, CT 06469 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.8 LBS
<b>Reference Number:</b>	CTHA843A-CT33XC537

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## UPS Delivery Notification, Tracking Number 1ZV257424294519318

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

Mon, Nov 8, 2021 at 12:09 PM



**Hello, your package has been delivered.**

**Delivery Date:** Monday, 11/08/2021

**Delivery Time:** 12:01 PM

**Left At:** OFFICE

**Signed by:** DENETTE

### TRANSCEND WIRELESS

<b>Tracking Number:</b>	<b>1ZV257424294519318</b>
<b>Ship To:</b>	TOWN OF EAST HADDAM 1 PLAINS ROAD P.O. BOX 385 MOODUS, CT 06469 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.8 LBS
<b>Reference Number:</b>	CTHA843A-CT33XC537



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# 135 Honey Hill Road

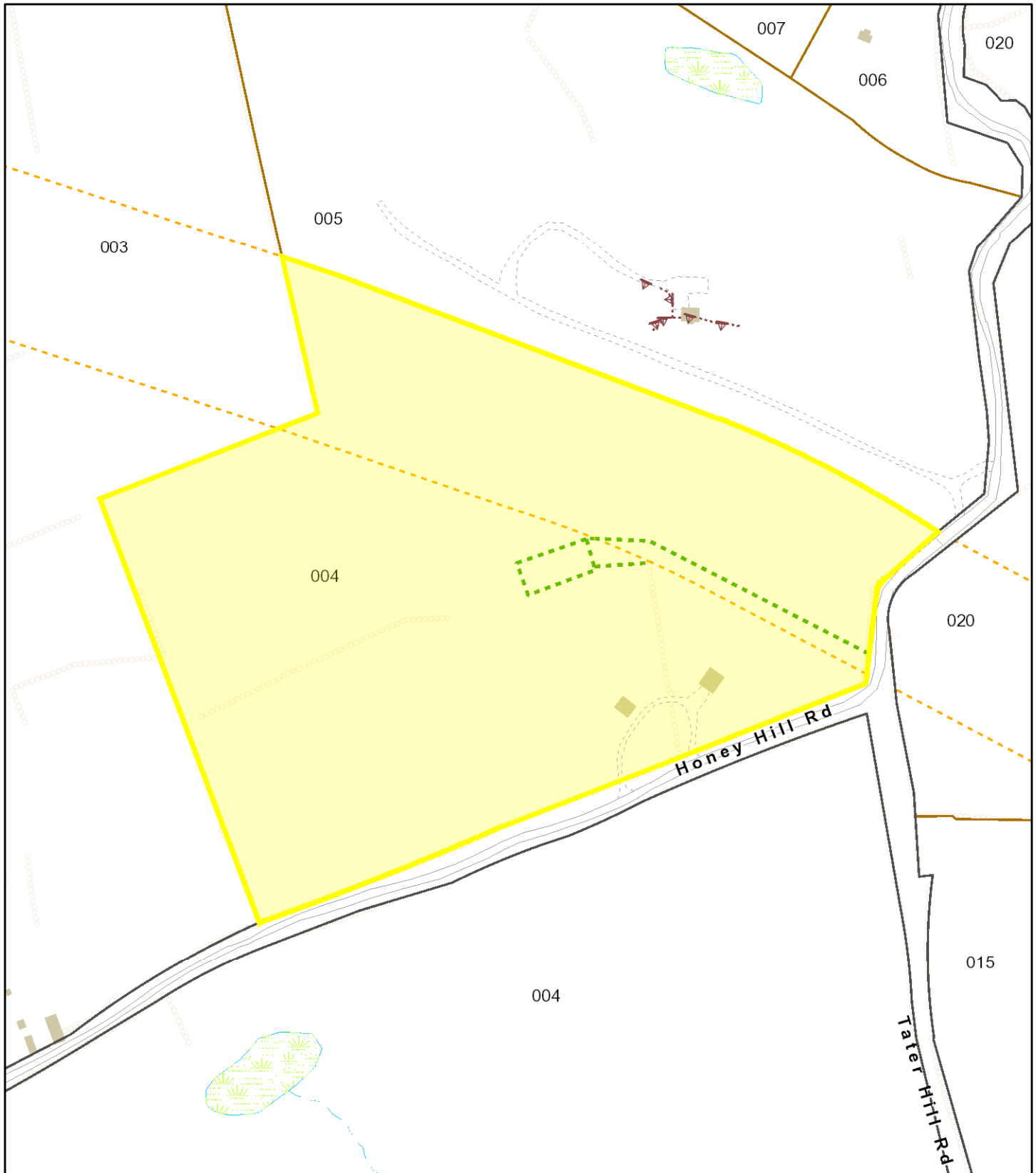
East Haddam, CT

1 inch = 282 Feet



July 6, 2021

www.cai-tech.com



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

# HONEY HILL RD-CELL#302527

**Location** HONEY HILL RD-CELL#302527

**Mblu** M13/ / L004/ /

**Acct#** 54007700

**Owner** SOBIECH SUSAN LEE

**Assessment** \$149,660

**Appraisal** \$213,800

**PID** 5949

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$51,800	\$162,000	\$213,800

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$36,260	\$113,400	\$149,660

## Owner of Record

<b>Owner</b>	SOBIECH SUSAN LEE	<b>Sale Price</b>	\$0
<b>Co-Owner</b>	C/O AMERICAN TOWERS CORP	<b>Certificate</b>	
<b>Address</b>	PO BOX 723587 ATLANTA, GA 31139	<b>Book &amp; Page</b>	1047/ 282
		<b>Sale Date</b>	06/06/2018

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
SOBIECH SUSAN LEE	\$0		1047/ 282	06/06/2018
PORTER SUSAN	\$0		1046/ 133	05/07/2018
PORTER DONALD L & SUSAN	\$0		1046/ 130	05/07/2018
SOBIECH ZIGFRED & PORTER DONALD L & SI	\$0		202/ 76	09/11/1985

## Building Information

### Building 1 : Section 1

**Year Built:**  
**Living Area:** 0  
**Replacement Cost:** \$0

Building Percent Good:

Replacement Cost

Less Depreciation: \$0


Building Attributes	
Field	Description
Style	Outbuildings
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type	
AC Type	
Bedrooms	
Full Baths	
Half Baths	
Extra Fixtures	
Total Rooms	
Bath Style	
Kitchen Style	
Fireplace(s)	
Extra Openings	
Gas Fireplace(s)	
Bsmt Garage(s)	
Foundation	
Fin Bsmt	
FBM Quality	
Int Vs Ext	

### Building Photo



(<http://images.vgsi.com/photos/EastHaddamCTPhotos/\00\00\69\29.jpg>)

### Building Layout

 Building Layout

([http://images.vgsi.com/photos/EastHaddamCTPhotos//Sketches/5949\\_59](http://images.vgsi.com/photos/EastHaddamCTPhotos//Sketches/5949_59))

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

### Extra Features

Extra Features	Legend

No Data for Extra Features

## Land

### Land Use

**Use Code** 522  
**Description** Comm Vac w/ OB  
**Zone** R2  
**Neighborhood** COMM  
**Alt Land Appr** No  
**Category**

### Land Line Valuation

**Size (Acres)** 0  
**Frontage**  
**Depth**  
**Assessed Value** \$113,400  
**Appraised Value** \$162,000

## Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
TCB	Telecomm Bldg			288 UNITS	\$51,800	1

## Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$51,800	\$162,000	\$213,800
2018	\$51,800	\$162,000	\$213,800
2017	\$51,800	\$162,000	\$213,800

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$36,260	\$113,400	\$149,660
2018	\$36,260	\$113,400	\$149,660
2017	\$36,260	\$113,400	\$149,660

**Petition No. 587**  
**Spectrasite Communications**  
**135 Honey Hill Road**  
**East Haddam, Connecticut**  
**October 23, 2002**

On October 15, 2002, Connecticut Siting Council members Colin Tait and Gerry Hefferan and Council staff member David Martin met with Julie Donaldson Kohler of Hurwitz & Sagarin who was representing SpectraSite Communications, which filed a petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is needed for the operation and maintenance of a wireless telecommunication facility located at 135 Honey Hill Road, East Haddam.

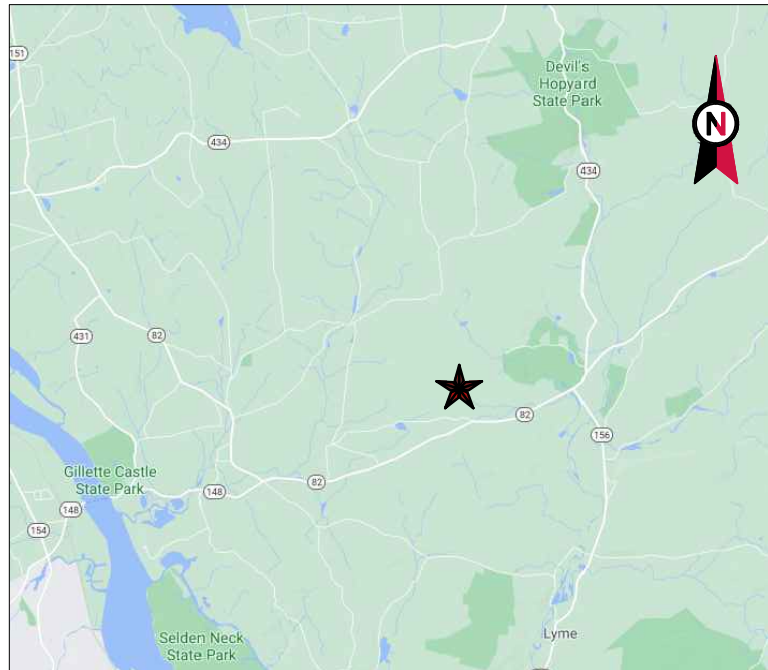
The existing facility consists of a 150-foot tall monopole with a 50-foot by 64-foot fenced in enclosure for accessory ground equipment. At the time of the visit, there were no wireless antennas on the pole. However, Nextel has received approval from the Town of East Haddam's Planning and Zoning Commission to locate at the 150-foot level of the monopole. Under this petition, Sprint is seeking Council's approval to share the use of this tower by locating its antennas at the 140-foot level. At the site meeting, Attorney Kohler informed Council representatives that Verizon is also interested in locating on this tower.

This facility was originally approved by the East Haddam Planning and Zoning Commission acting on an application for a Special Exception Permit submitted by Nextel. Following a public hearing held on May 8 and continued to June 12 and June 26, 2001, the Commission voted to approve Nextel's application on July 10, 2001. Nextel received a building permit for the monopole on November 29, 2001. Completion of the tower occurred sometime after July, 2002. Subsequently, Nextel assigned its interests in the facility to SpectraSite.

The facility is located in a rural area with a few residences in the vicinity. Although there are some small trees planted along the enclosure's fence line, woods and vegetation provide good visual screening from the nearest residences. Utilities to the site will come underground from Tater Hill Road, a dirt road approximately 650 feet away from the site. There is also a power right-of-way near the facility; the nearest lines are approximately 150 feet from the tower.

According to propagation maps submitted as part of this petition, this tower would enable Sprint to fill a sizeable service gap in the southern East Haddam area. Using radio frequency data submitted for Nextel and Sprint, Council staff calculates the power density of this facility to be 16.96% of the applicable federal and state standard.

It was the consensus of the Council members present that this facility does not represent a significant, adverse environmental impact.



VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: EAST HADDAM  
 ATC SITE NUMBER: 302527  
 T-MOBILE SITE NAME: CTHA843A  
 T-MOBILE SITE NUMBER: CTHA843A  
 SITE ADDRESS: 135 HONEY HILL ROAD  
 EAST HADDAM, CT, 06423



LOCATION MAP

**T-MOBILE SPRINT RETAINED ANTENNA AMENDMENT PLAN  
 67D5A998C 6160 CONFIGURATION**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  1. 2015 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 135 HONEY HILL ROAD EAST HADDAM, CT, 06423 COUNTY: MIDDLESEX  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.43694722 LONGITUDE: -72.36639167 GROUND ELEVATION: 488' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) APXVTM14-ALU-I20 ANTENNA(s), (3) NNVV-65B-R4 ANTENNA(s), (3) 1900 MHZ 4X45 RRH(s), (3) TD-RRH8X20-25 W/ SOLAR SHIELD RRH(s), (3) RRH2X50-08 RRH(s), AND (3) 1-1/4" HYBRID CABLE(s), (3) EXISTING T-ARM MOUNTS  INSTALL (3) APXVAALL24_43-U-NA20 ANTENNA(s), (3) AIR6449 B41 ANTENNA(s), (3) RADIO 4480 B71+B85 RRU(s), (1) RADIO 4460 B25+B66 RRU(s), (3) 6X24 (1.99") 4AWG HYBRID CABLE(s), AND (1) PLATFORM MOUNT  EXISTING (1) 1/2" COAX CABLE(s) TO REMAIN  <u>GROUND WORK:</u> INSTALL (1) ENCLOSURE 6160 CABINET, (1) B160 BATTERY CABINET, (4) BB6648, (1) RBS 6601, (1) DUG20, (1) CSR IXRE V2 (GEN2)  EXISTING CABINETS TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> KIMLEY-HORN & ASSOCIATES, INC. 421 FAYETTEVILLE ST, STE 600 RALEIGH, NC 27601 COA: PEC.0000738  <u>APPLICANT:</u> T-MOBILE WHITNEY JONES W.JONES@TRANSCENDWIRELESS.COM  <u>PROPERTY OWNER:</u> SOBIECH SUSAN LEE 135 HONEY HILL RD EAST HADDAM, CT 06423	THE PROPOSED PROJECT DOES NOT INCLUDE ELECTRICAL SCOPE  <u>PROJECT NOTES</u>  1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION REMOVAL AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001	TITLE SHEET	4	10/25/21	CH
<u>UTILITY COMPANIES</u>  POWER COMPANY: TBD PHONE: N/A  TELEPHONE COMPANY: TBD PHONE: N/A	<u>PROJECT LOCATION DIRECTIONS</u>  FROM EAST HADDAM: PROCEED FROM EAST HADDAM HEAD NORTHEAST ON CT-82 / MAIN ST TOWARD LUMBERYARD RD 220 FT KEEP RIGHT TO STAY ON CT-82 / NORWICH RD 4.5 MI TURN LEFT ONTO CLARK HILL RD 2.6 MI TURN RIGHT ONTO TATER HILL RD 0.9 MI ROAD NAME CHANGES TO HONEY HILL RD 479 FT ARRIVE AT HONEY HILL RD	G-002	GENERAL NOTES	4	10/25/21	CH	
		C-101	DETAILED SITE PLAN	4	10/25/21	CH	
			C-102	DETAILED GROUND PLAN	4	10/25/21	CH
			C-201	TOWER ELEVATION	4	10/25/21	CH
			C-401	ANTENNA INFORMATION & SCHEDULE	4	10/25/21	CH
			C-501	CONSTRUCTION DETAILS	4	10/25/21	CH
			E-501	GROUNDING DETAILS	4	10/25/21	CH
		R-601	SUPPLEMENTAL				
		R-602	SUPPLEMENTAL				
		R-603	SUPPLEMENTAL				
		R-604	SUPPLEMENTAL				
		R-605	SUPPLEMENTAL				
		R-606	SUPPLEMENTAL				

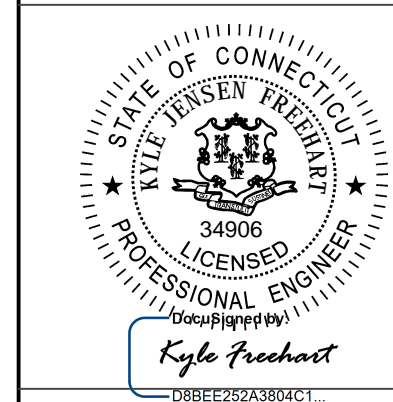


**Kimley»Horn**

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	SM	04/23/21
0	ISSUED FOR CONSTRUCTION	JW	06/30/21
1	REVISED PER CLIENT	ARC	08/24/21
2	REVISED PER CLIENT	ATR	09/15/21
3	REVISED PER CLIENT	CH	10/14/21
4	REVISED PER CLIENT	CH	10/25/21

ATC SITE NUMBER:  
**302527**  
 ATC SITE NAME:  
**EAST HADDAM**  
 T-MOBILE SITE NAME:  
**CTHA843A**  
 SITE ADDRESS:  
 135 HONEY HILL ROAD  
 EAST HADDAM, CT, 06423



DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

**TITLE SHEET**

SHEET NUMBER:  
**G-001**  
 REVISION:  
**4**



**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.

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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE 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.

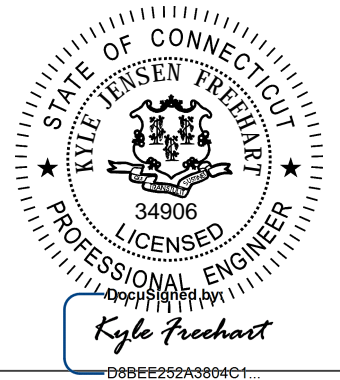


**COA: PEC.0000738**  
**421 FAYETTEVILLE ST, SUITE 600**  
**RALEIGH, NC 27601**

REV.	DESCRIPTION	BY	DATE
A	PRELIM	SM	04/23/21
0	ISSUED FOR CONSTRUCTION	JW	06/30/21
1	REVISED PER CLIENT	ARC	08/24/21
2	REVISED PER CLIENT	ATR	09/15/21
3	REVISED PER CLIENT	CH	10/14/21
4	REVISED PER CLIENT	CH	10/25/21

ATC SITE NUMBER:  
**302527**  
 ATC SITE NAME:  
**EAST HADDAM**  
 T-MOBILE SITE NAME:  
**CTHA843A**  
 SITE ADDRESS:  
 135 HONEY HILL ROAD  
 EAST HADDAM, CT, 06423

SEAL:



DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

**GENERAL NOTES**

SHEET NUMBER: <b>G-002</b>	REVISION: <b>4</b>
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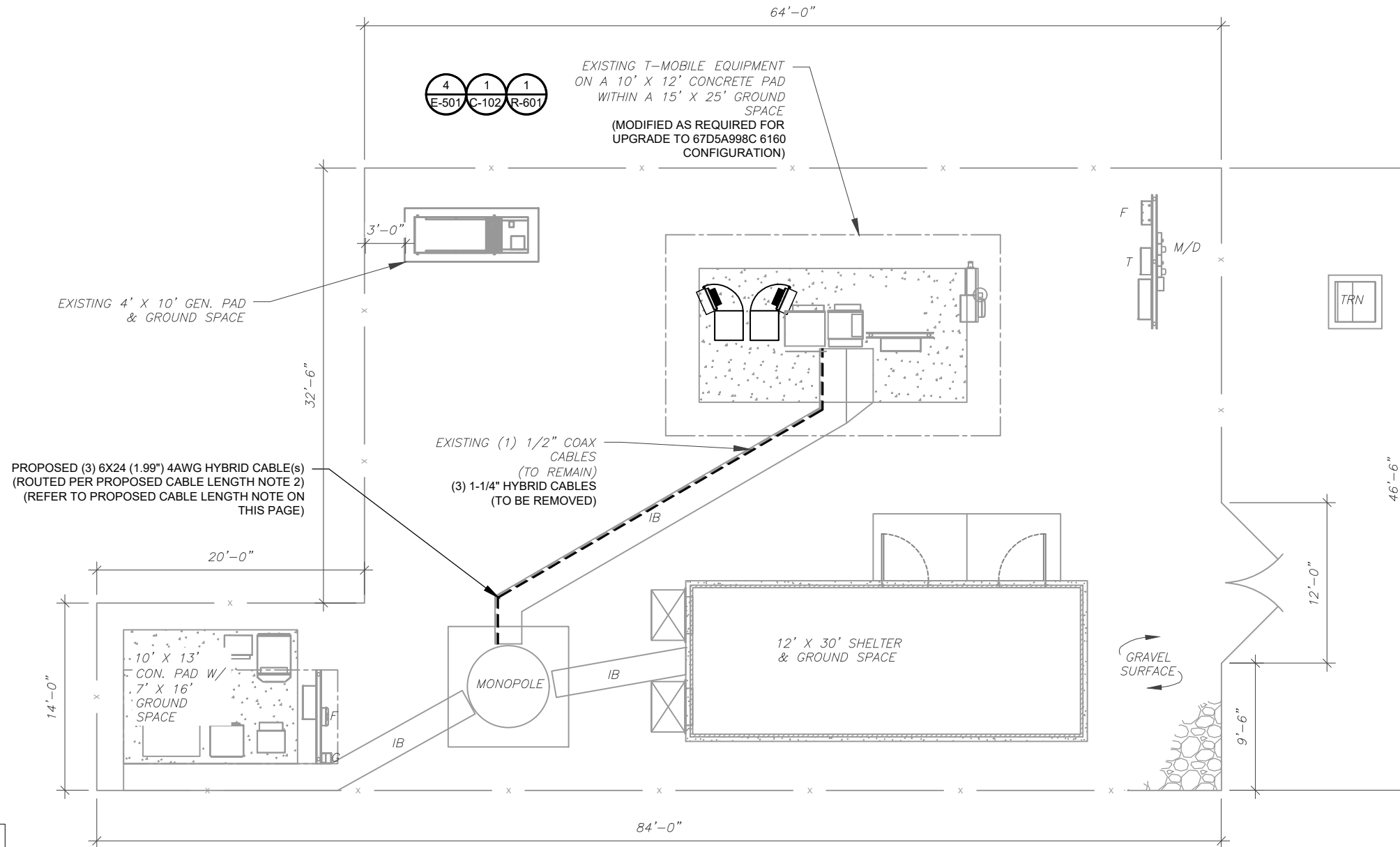


**SITE PLAN NOTES:**

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

**LEGEND**

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



PROPOSED (3) 6X24 (1.99) 4AWG HYBRID CABLE(S)  
(ROUTED PER PROPOSED CABLE LENGTH NOTE 2)  
(REFER TO PROPOSED CABLE LENGTH NOTE ON THIS PAGE)

EXISTING (1) 1/2" COAX CABLES  
(TO REMAIN)  
(3) 1-1/4" HYBRID CABLES  
(TO BE REMOVED)

EXISTING T-MOBILE EQUIPMENT  
ON A 10' X 12' CONCRETE PAD  
WITHIN A 15' X 25' GROUND SPACE  
(MODIFIED AS REQUIRED FOR  
UPGRADE TO 67D5A998C 6160  
CONFIGURATION)

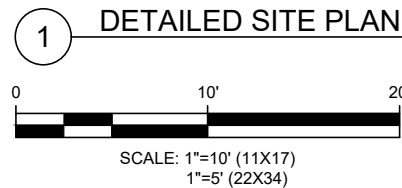
EXISTING 4' X 10' GEN. PAD  
& GROUND SPACE

10' X 13'  
CON. PAD W/  
7' X 16'  
GROUND SPACE

12' X 30' SHELTER  
& GROUND SPACE

**PROPOSED CABLE LENGTH:**

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **204'**. 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. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

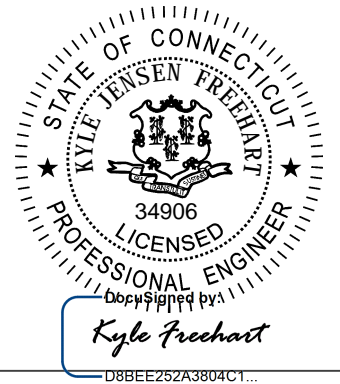


**Kimley»Horn**

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	SM	04/23/21
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4	REVISED PER CLIENT	CH	10/25/21

ATC SITE NUMBER:  
**302527**  
ATC SITE NAME:  
**EAST HADDAM**  
T-MOBILE SITE NAME:  
**CTHA843A**  
SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423



DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

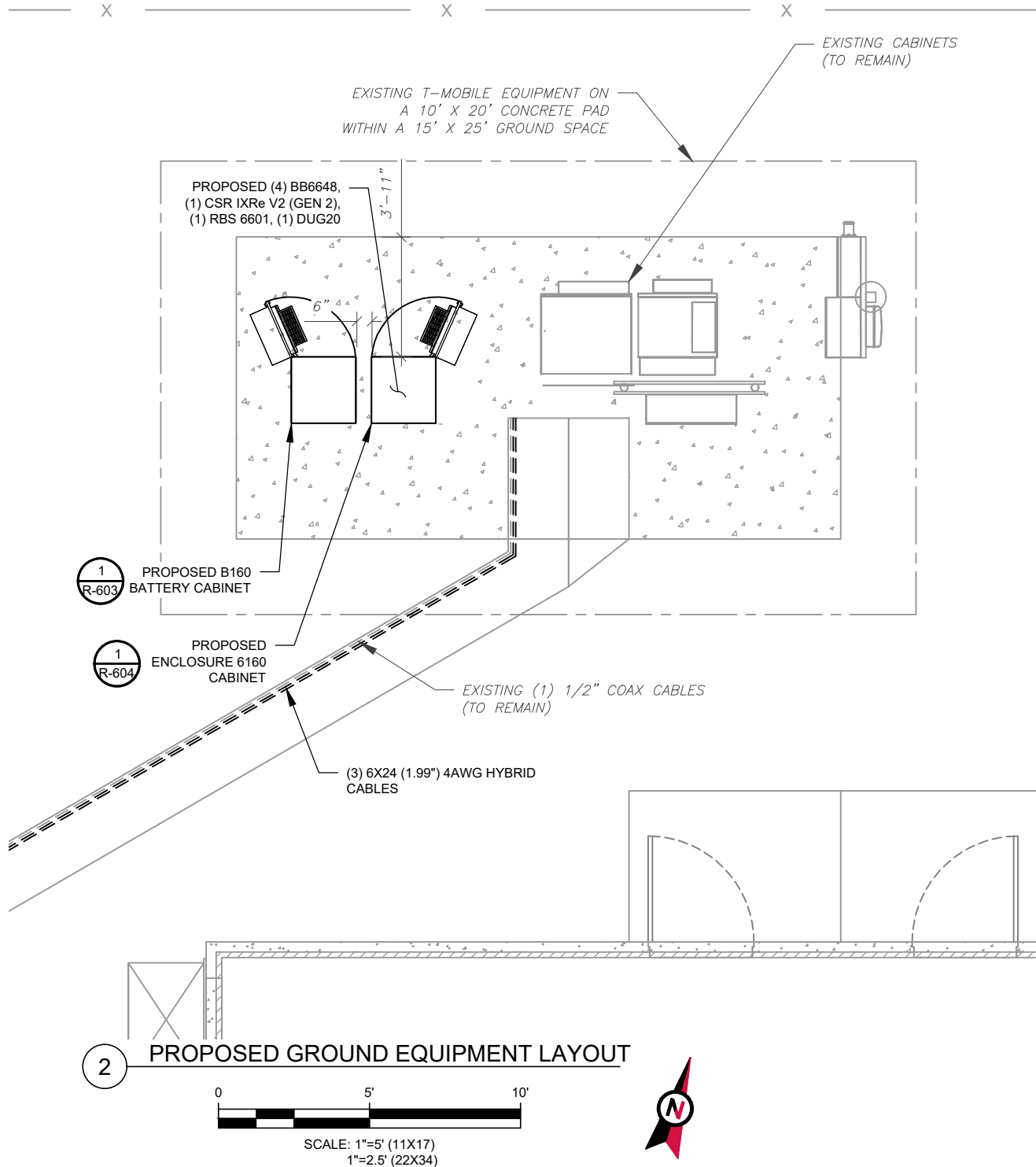
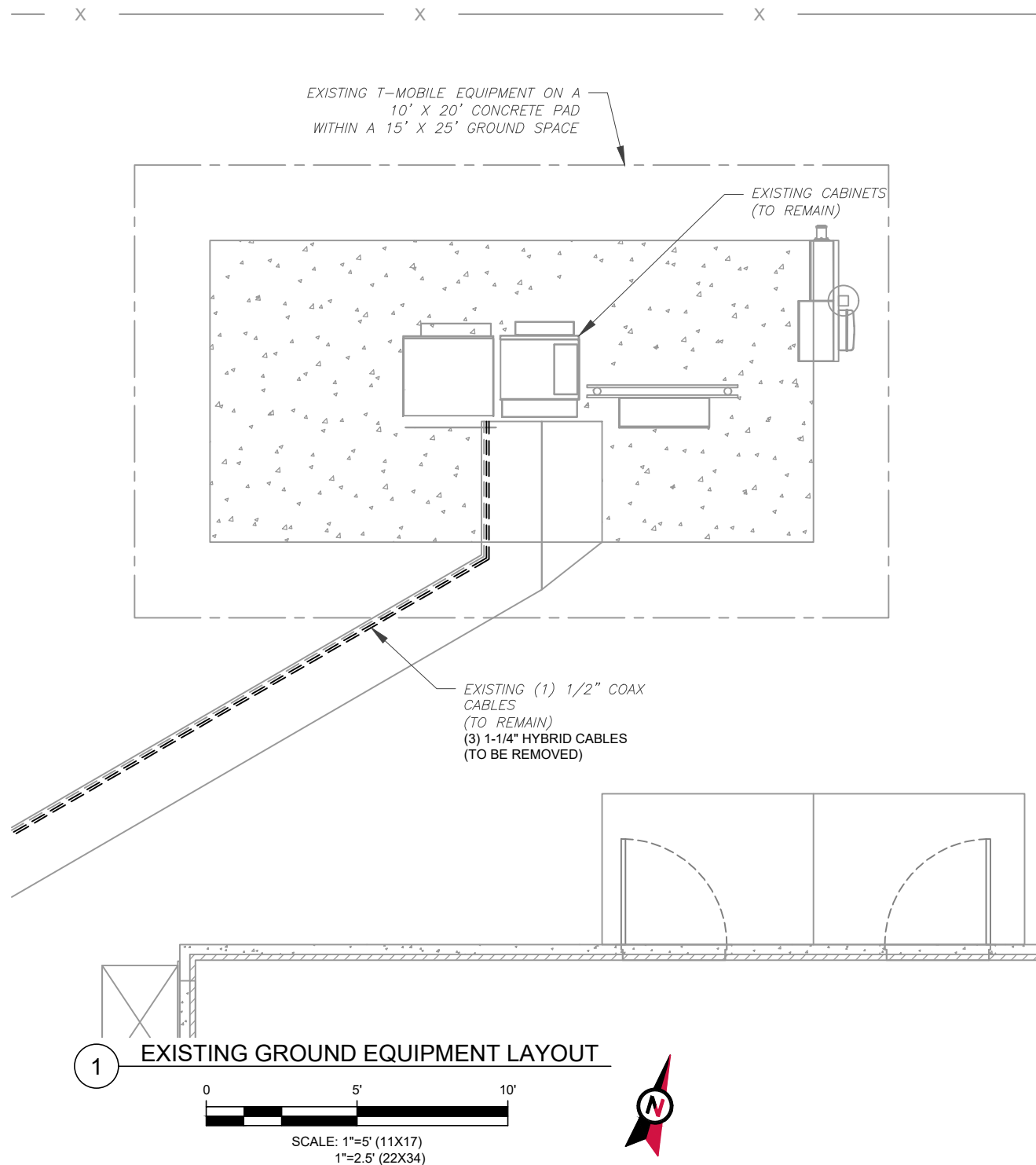
**DETAILED SITE PLAN**

SHEET NUMBER: <b>C-101</b>	REVISION: <b>4</b>
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**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.

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



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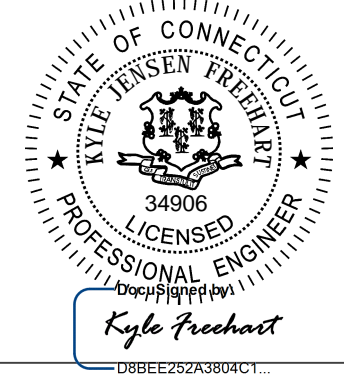
REV.	DESCRIPTION	BY	DATE
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ATC SITE NUMBER:  
**302527**

ATC SITE NAME:  
**EAST HADDAM**

T-MOBILE SITE NAME:  
**CTHA843A**

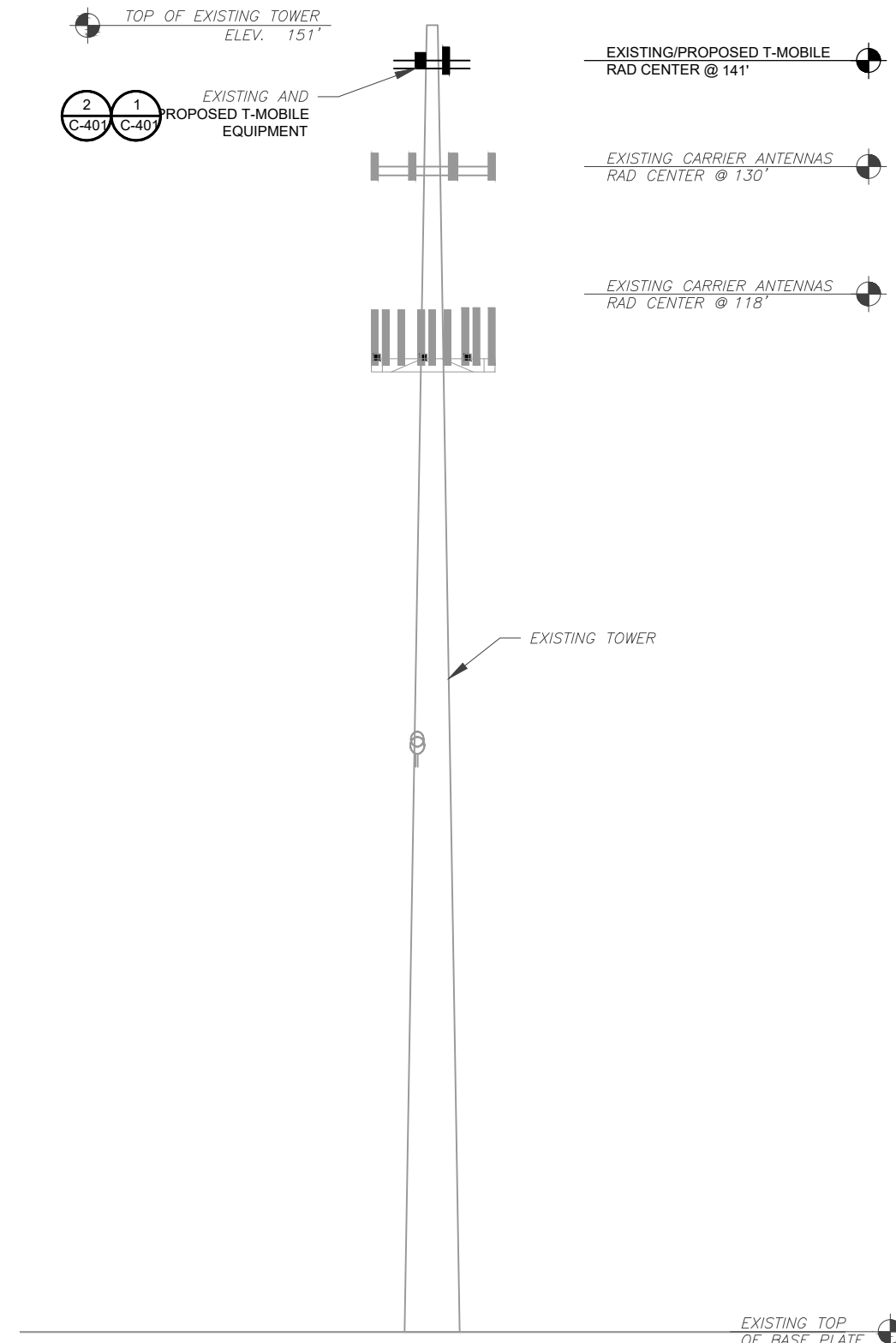
SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423



DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

<b>DETAILED GROUND PLAN</b>	
SHEET NUMBER: <b>C-102</b>	REVISION: <b>4</b>

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PER MOUNT ANALYSIS COMPLETED BY SMJ INTERNATIONAL, DATED 08/16/21, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

**TOWER NOTE:**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
- WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

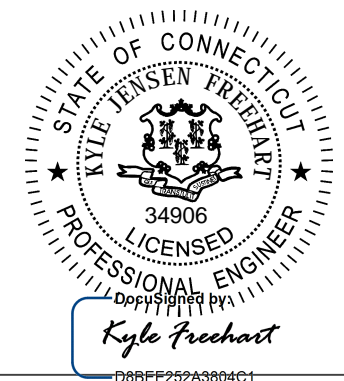
**1 TOWER ELEVATION**  
SCALE: N.T.S.



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421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

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**EAST HADDAM**  
T-MOBILE SITE NAME:  
**CTHA843A**  
SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423

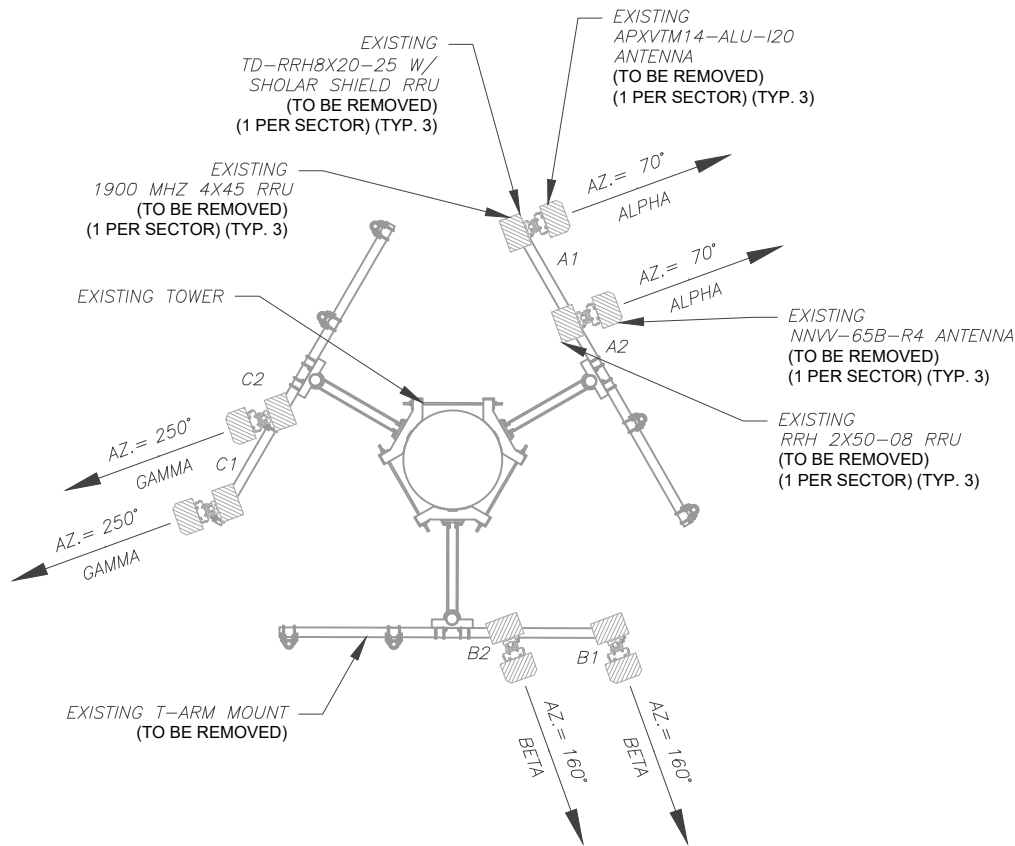


DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

**TOWER ELEVATION**

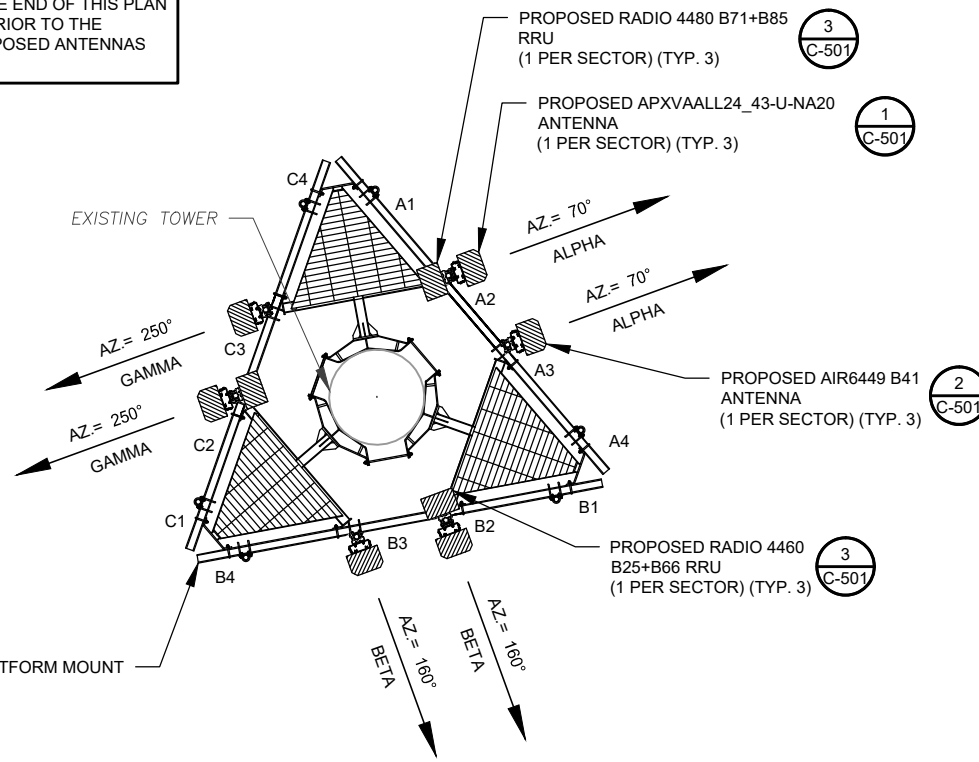
SHEET NUMBER: <b>C-201</b>	REVISION: <b>4</b>
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1 EXISTING ANTENNA PLAN  
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY SMJ INTERNATIONAL, DATED 08/16/21, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT REPLACEMENT PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



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	140'	70°	A1	APXVTM14-ALU-I20	-	-	RMV	1900 MHZ 4X45 RRU TD-RRH8X20-25 W/ SOLAR SHIELD	RMV
			A2	NNVV-65B-R4	-	-	-	RRH2X50-08	RMV
BETA	140'	160°	B1	APXVTM14-ALU-I20	-	-	RMV	1900 MHZ 4X45 RRU TD-RRH8X20-25 W/ SOLAR SHIELD	RMV
			B2	NNVV-65B-R4	-	-	-	RRH2X50-08	RMV
GAMMA	140'	250°	C1	APXVTM14-ALU-I20	-	-	RMV	1900 MHZ 4X45 RRU TD-RRH8X20-25 W/ SOLAR SHIELD	RMV
			C2	NNVV-65B-R4	-	-	-	RRH2X50-08	RMV

**NOTES**

- CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

**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	141'	70°	A1	-	-	-	-	-	-
			A2	APXVAALL24_43-U-NA20	L700, L600, N600, L1900, G1900	0/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			A3	AIR6449 B49	L2500, N2500	0/2°	ADD	-	-
			A4	-	-	-	-	-	-
BETA	141'	160°	B1	-	-	-	-	-	-
			B2	APXVAALL24_43-U-NA20	L700, L600, N600, L1900, G1900	0/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			B3	AIR6449 B49	L2500, N2500	0/2°	ADD	-	-
			B4	-	-	-	-	-	-
GAMMA	141'	250°	C1	-	-	-	-	-	-
			C2	APXVAALL24_43-U-NA20	L700, L600, N600, L1900, G1900	0/2°	ADD	RADIO 4480 B71+B85 RADIO 4460 B25+B66	ADD ADD
			C3	AIR6449 B49	L2500, N2500	0/2°	ADD	-	-
			C4	-	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(1) 1/2"	-	RMN
-	-	-	(3) 1-1/4"	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(1) 1/2"	-	RMN
-	-	-	(3) 6X24 (1.99") 4AWG	ADD



**Kimley»Horn**

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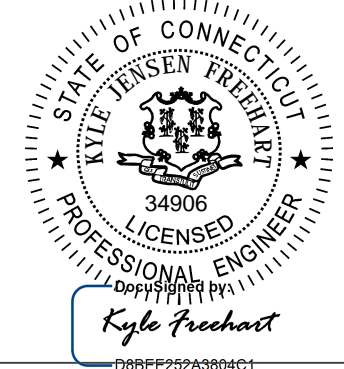
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ATC SITE NUMBER:  
**302527**

ATC SITE NAME:  
**EAST HADDAM**

T-MOBILE SITE NAME:  
**CTHA843A**

SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423

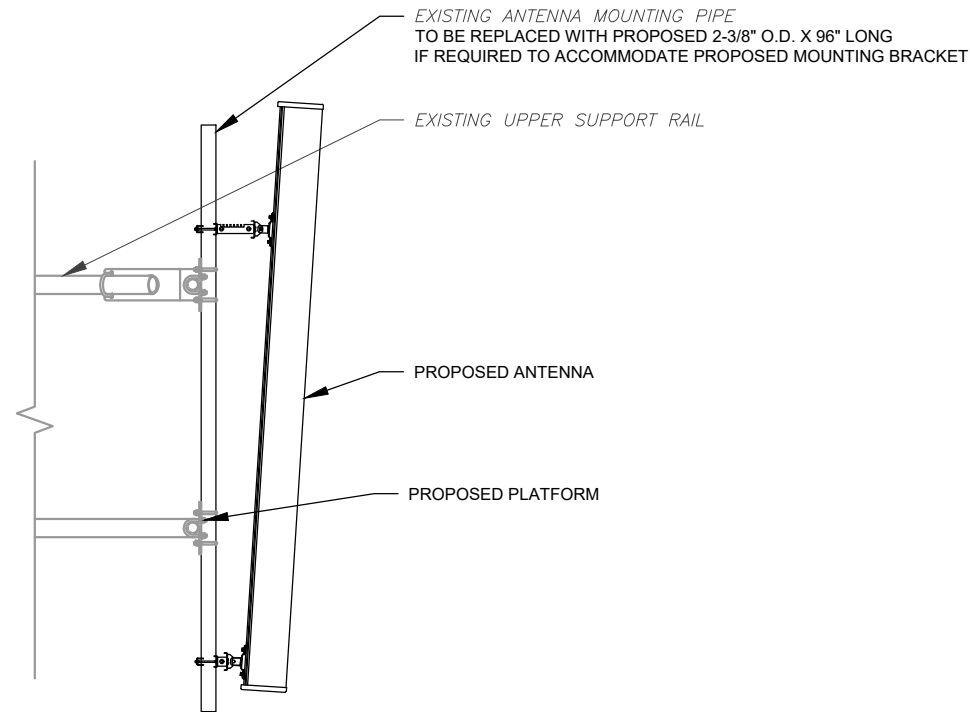


DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

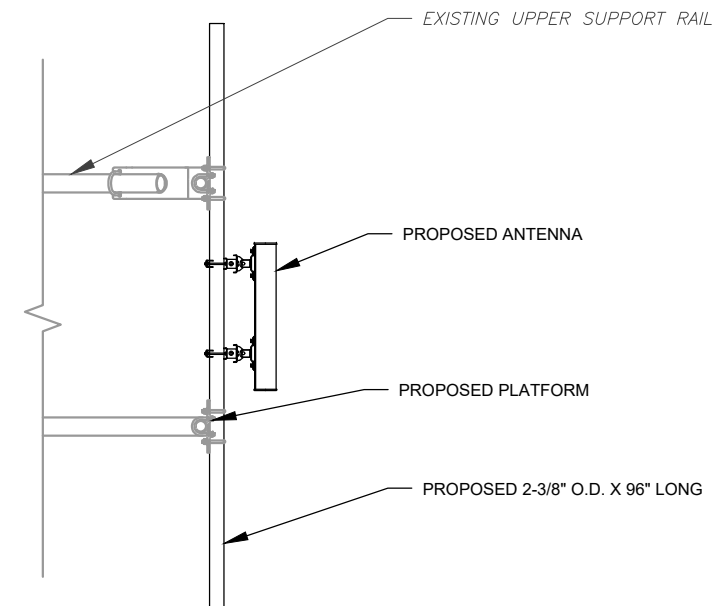
**ANTENNA INFORMATION & SCHEDULE**

SHEET NUMBER:  
**C-401**

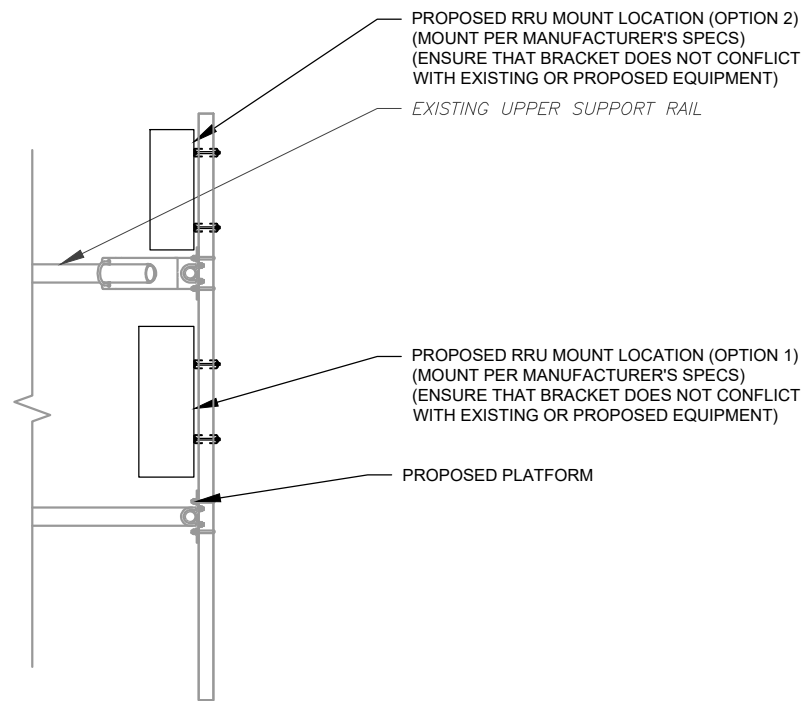
REVISION:  
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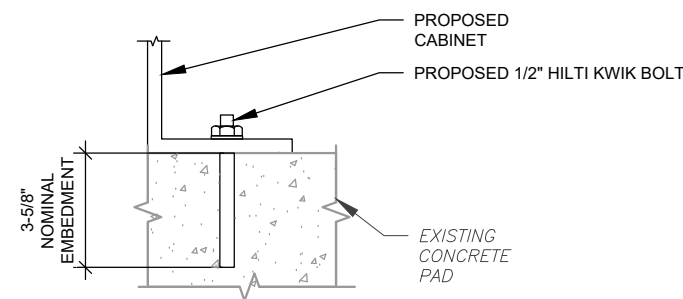
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



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



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



4 CABINET ATTACHMENT DETAIL  
SCALE: NOT TO SCALE

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.

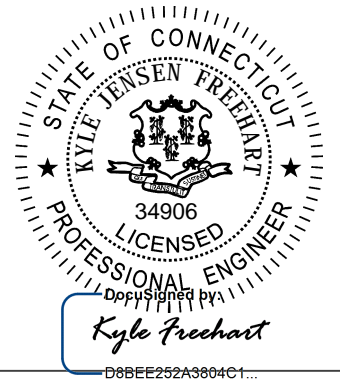


**Kimley»Horn**

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	SM	04/23/21
0	ISSUED FOR CONSTRUCTION	JW	06/30/21
1	REVISED PER CLIENT	ARC	08/24/21
2	REVISED PER CLIENT	ATR	09/15/21
3	REVISED PER CLIENT	CH	10/14/21
4	REVISED PER CLIENT	CH	10/25/21

ATC SITE NUMBER:  
**302527**  
ATC SITE NAME:  
**EAST HADDAM**  
T-MOBILE SITE NAME:  
**CTHA843A**  
SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423  
SEAL:

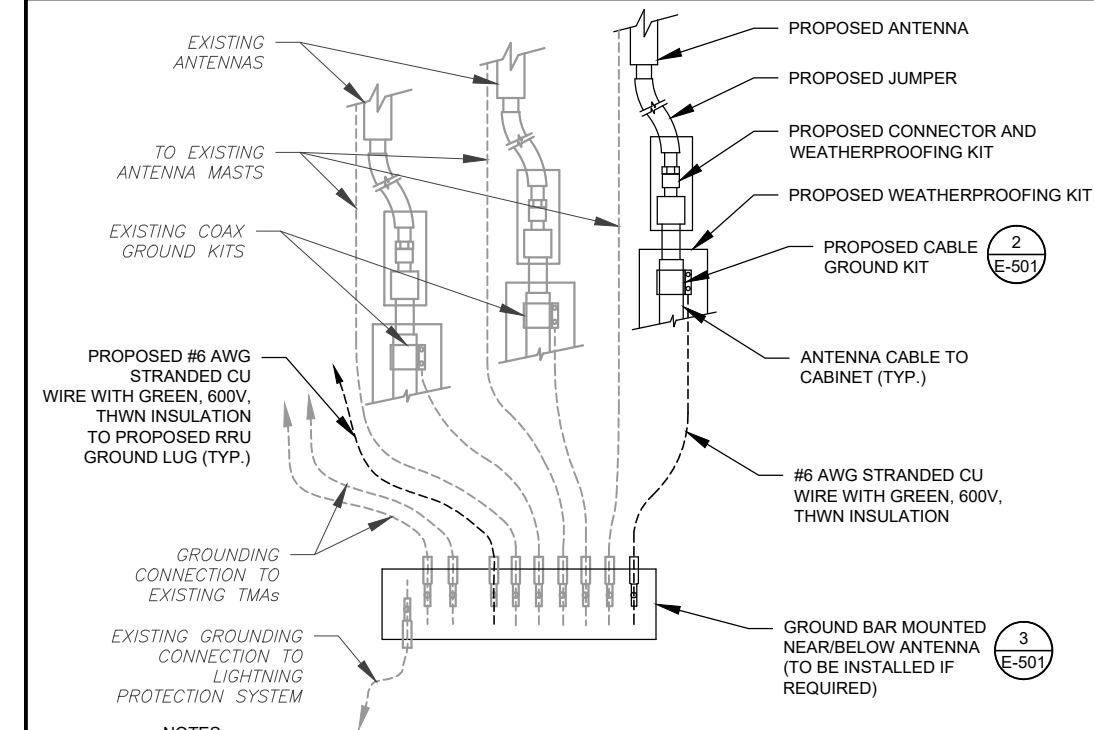


DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

**CONSTRUCTION  
DETAILS**

SHEET NUMBER:  
**C-501**  
REVISION:  
**4**

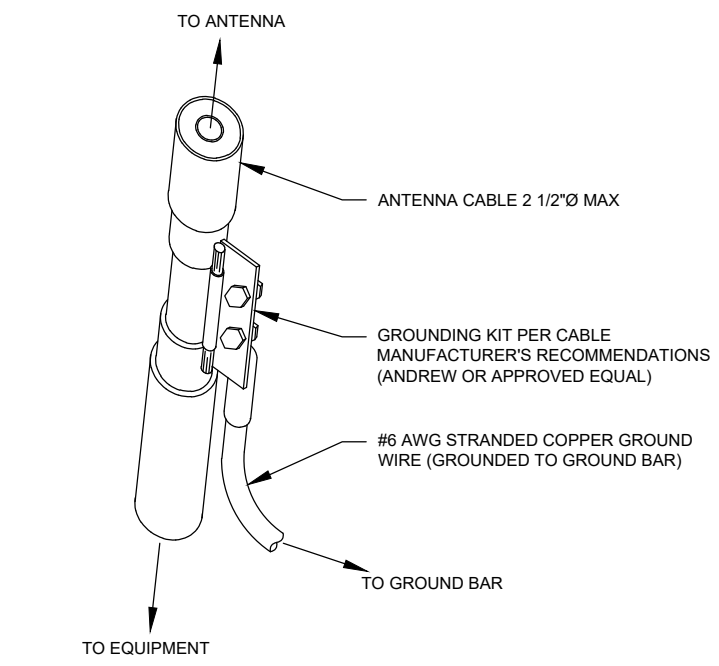




**NOTES:**

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.

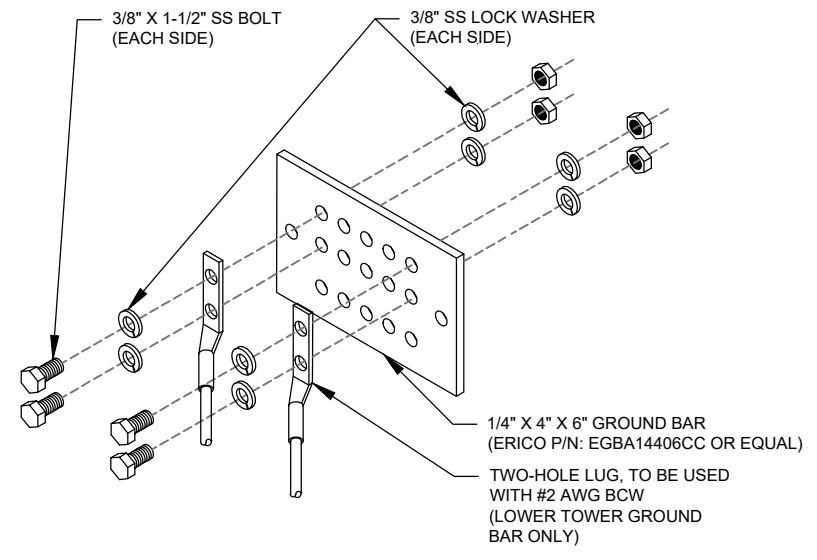
**1** TYPICAL ANTENNA GROUNDING DIAGRAM  
SCALE: N.T.S.



**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:**

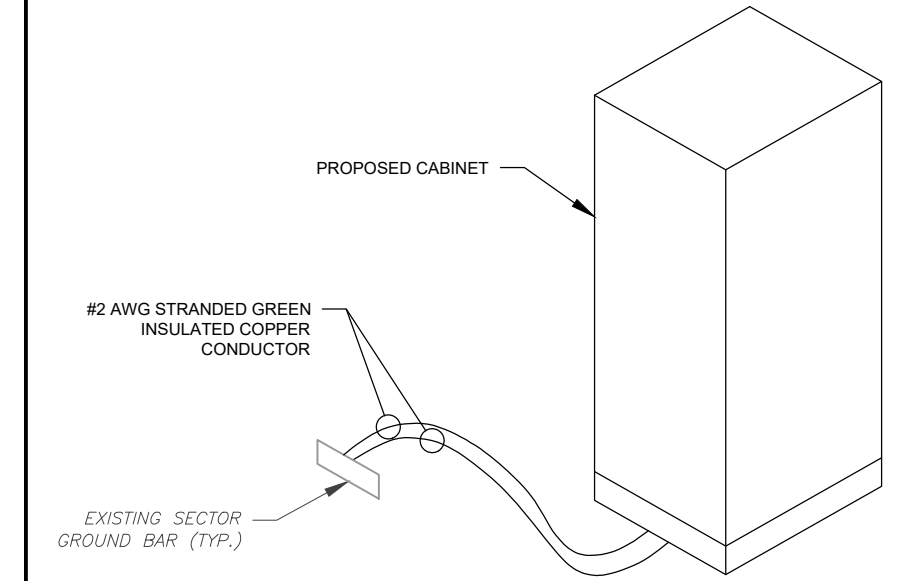
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

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

**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	#6 AWG	1-1/2"
150A/2P	2#1/0 AWG	#6 AWG	1-1/2"



**4** CABINET GROUNDING DETAIL  
SCALE: N.T.S.

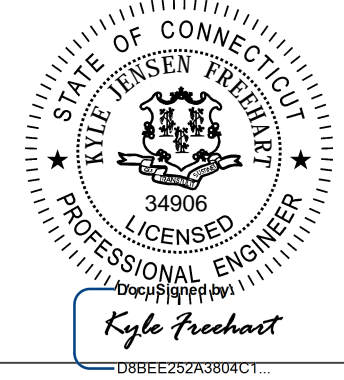


**Kimley»Horn**

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	SM	04/23/21
0	ISSUED FOR CONSTRUCTION	JW	06/30/21
1	REVISED PER CLIENT	ARC	08/24/21
2	REVISED PER CLIENT	ATR	09/15/21
3	REVISED PER CLIENT	CH	10/14/21
4	REVISED PER CLIENT	CH	10/25/21

ATC SITE NUMBER:  
**302527**  
ATC SITE NAME:  
**EAST HADDAM**  
T-MOBILE SITE NAME:  
**CTHA843A**  
SITE ADDRESS:  
135 HONEY HILL ROAD  
EAST HADDAM, CT, 06423



DATE DRAWN:	10/25/21
ATC JOB NO:	13653958
CUSTOMER ID:	CTHA843A
CUSTOMER #:	CTHA843A

**GROUNDING DETAILS**

SHEET NUMBER: <b>E-501</b>	REVISION: <b>4</b>
-------------------------------	-----------------------

7/20/2021

CTHA843A\_Sprint Retain\_1\_draft\_2021-07-20

RAN Template: 67E5A998E 6160  
 A&L Template: 67E5998E\_1xAIR+1OP

CTHA843A\_Sprint Retain\_1\_draft

Print Name: Standard (2)  
 PORs: New Build\_Sprint Keep

Section 5 - RAN Equipment

Existing RAN Equipment

----- This section is intentionally blank. -----

Proposed RAN Equipment

Template: 67E5A998E 6160

Enclosure	1	2	3	4
Enclosure Type	Ancillary Equipment (Ericsson)	Enclosure 6160	B160	RBS 6601
Baseband		BB 6648 N2500 L2500	BB 6648 L1900 L2100	BB 6648 L700 L600 N600
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:

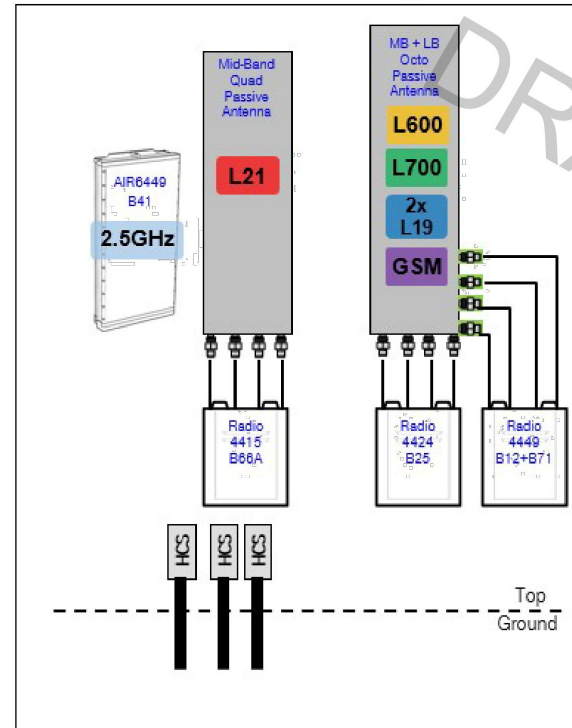
CT33XC537  
 Existing & planned azimuth: 70/160/250  
 Existing power 200A  
 Change existing T-arm to full platform.

7/20/2021

CTHA843A\_Sprint Retain\_1\_draft\_2021-07-20

Section 3 - Proposed Template Images

67D5A998C\_1xAIR+1xQP+1xOP.jpg



Notes:

<https://rfd-prod-web-core-secure.geo.cf.t-mobile.com/DataSheet/Printout/831804e2-9a78-4765-947f-e8d67ca6fc90?layoutId=40a5e3ef-a782-48cf-8d...> 4/8

1 CABINET CONFIGURATION  
 SCALE: NOT TO SCALE

<https://rfd-prod-web-core-secure.geo.cf.t-mobile.com/DataSheet/Printout/831804e2-9a78-4765-947f-e8d67ca6fc90?layoutId=40a5e3ef-a782-48cf-8d...> 2/8

2 ANTENNA CONFIGURATION  
 SCALE: NOT TO SCALE

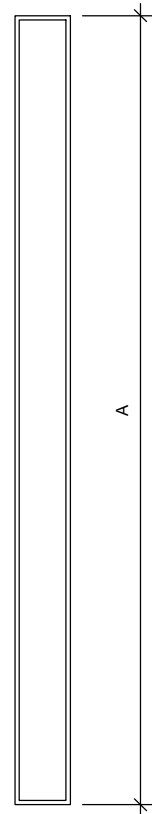
SUPPLEMENTAL

SHEET NUMBER: REVISION:

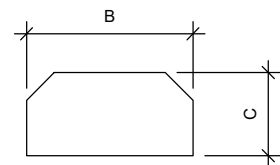
R-601

4

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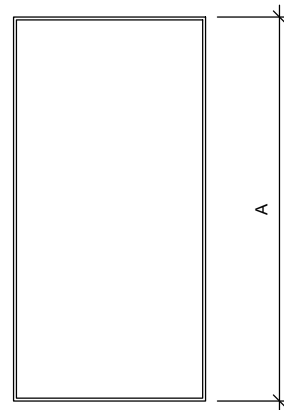
FRONT VIEW



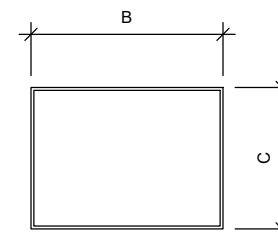
TOP VIEW

**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	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	15.0"	13.2"	10.4"	84
RADIO 4460	19.6"	15.7"	12.1"	109

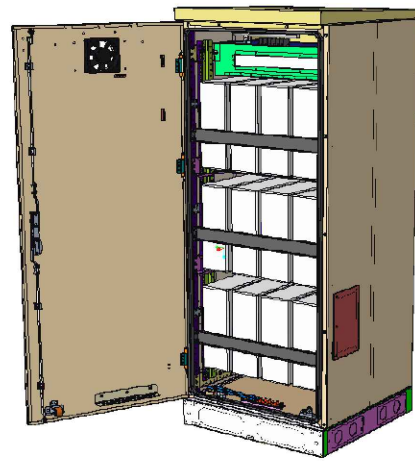
SUPPLEMENTAL

SHEET NUMBER:  
**R-602**

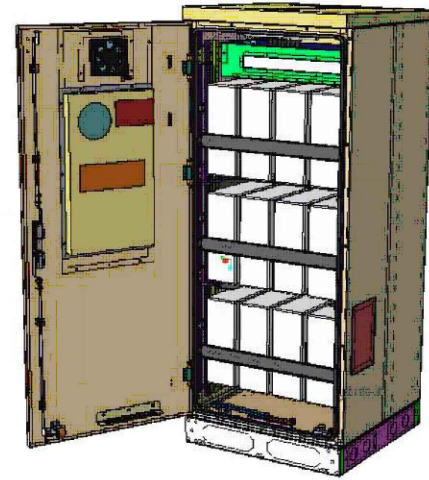
REVISION:  
**4**



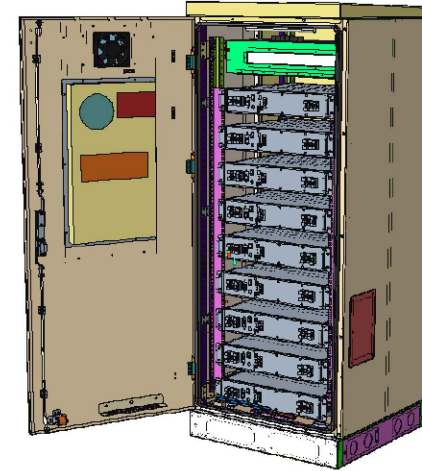
## Enclosure B160



Enclosure B160  
AirCon + VRLA



Enclosure B160  
AirCon + Li-Ion



Enclosure B160  
Convection Cooling  
+ VRLA

PA1 | 2019-02-03 | Ericsson Confidential | Page 1

## 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<sup>2</sup>)
- 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

PA1 | 2019-02-03 | Ericsson Confidential | Page 2

SUPPLEMENTAL

SHEET NUMBER:

R-603

REVISION:

4

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# 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

SUPPLEMENTAL

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

SHEET NUMBER:

R-604

REVISION:

4



This report was prepared for American Tower Corporation by

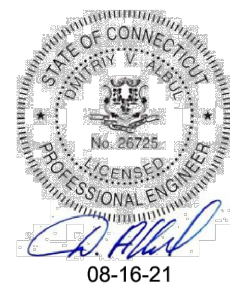


## Antenna Mount Analysis Report

**ATC Site Name** : East Haddam, CT  
**ATC Site Number** : 302527  
**Engineering Number** : 13653958\_C8\_06  
**Mount Elevation** : 141 ft  
**Carrier** : Sprint Nextel  
**Carrier Site Name** : CTHA843A  
**Carrier Site Number** : CTHA843A  
**Site Location** : 135 Honey Hill Road  
 East Haddam, CT 06423  
 41.436958, -72.366393  
**County** : Middlesex  
**Date** : August 16, 2021  
**Max Usage** : 68%  
**Result** : Pass

Prepared By:  
Dmitriy Albul  
Qualified Engineer

Reviewed By:



SMJ International, LLC - 49030 Pontiac Trail, Suite 100 - Wixom, MI 48393 - 616.745.4777 Office - info@smj-llc.com



Eng. Number 13653958\_C8\_06  
August 16, 2021  
Page 1

### Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Sprint Nextel at 141 ft.

### Supporting Documents

<b>RFDS</b>	RFDS Ver. 1, dated July 9, 2021
<b>Other</b>	Preview Exhibit by American Tower Corporation
<b>Spec. Sheet</b>	Perfect Vision PV-LPP Series

### Analysis

This antenna mount was analyzed using RISA-3D v13 analysis software

<b>Basic Wind Speed:</b>	123 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Codes:</b>	ANSI/TIA-222-H
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Procedure:</b>	Method II
<b>Topographic Feature:</b>	Flat
<b>Crest Height:</b>	0 ft
<b>Crest Length:</b>	0 ft
<b>Spectral Response:</b>	S <sub>s</sub> = 0.209, S <sub>1</sub> = 0.055
<b>Site Class:</b>	D - Stiff Soil
<b>Live Loads:</b>	L <sub>m</sub> = 500 lbs, L <sub>v</sub> = 250 lbs

### Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed. The mount can support the equipment as described in this report. Analysis is based on new Perfect Vision PV-LPPGS Mount.

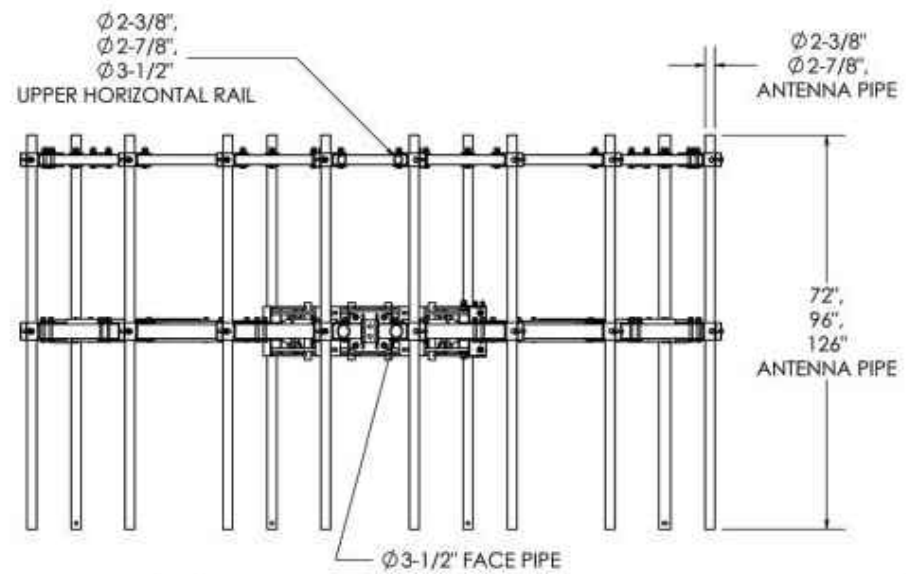
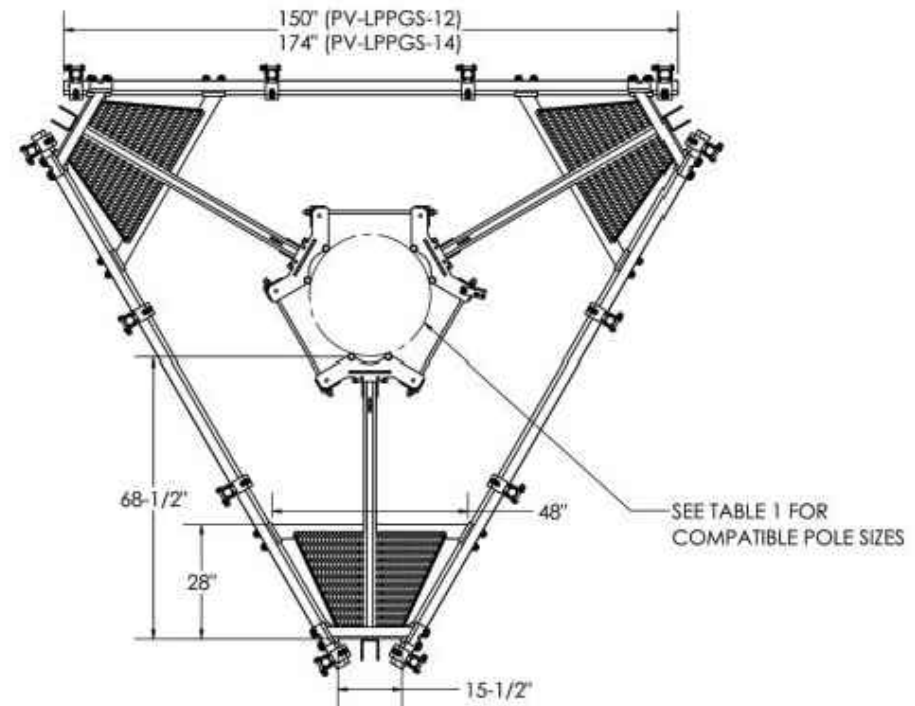
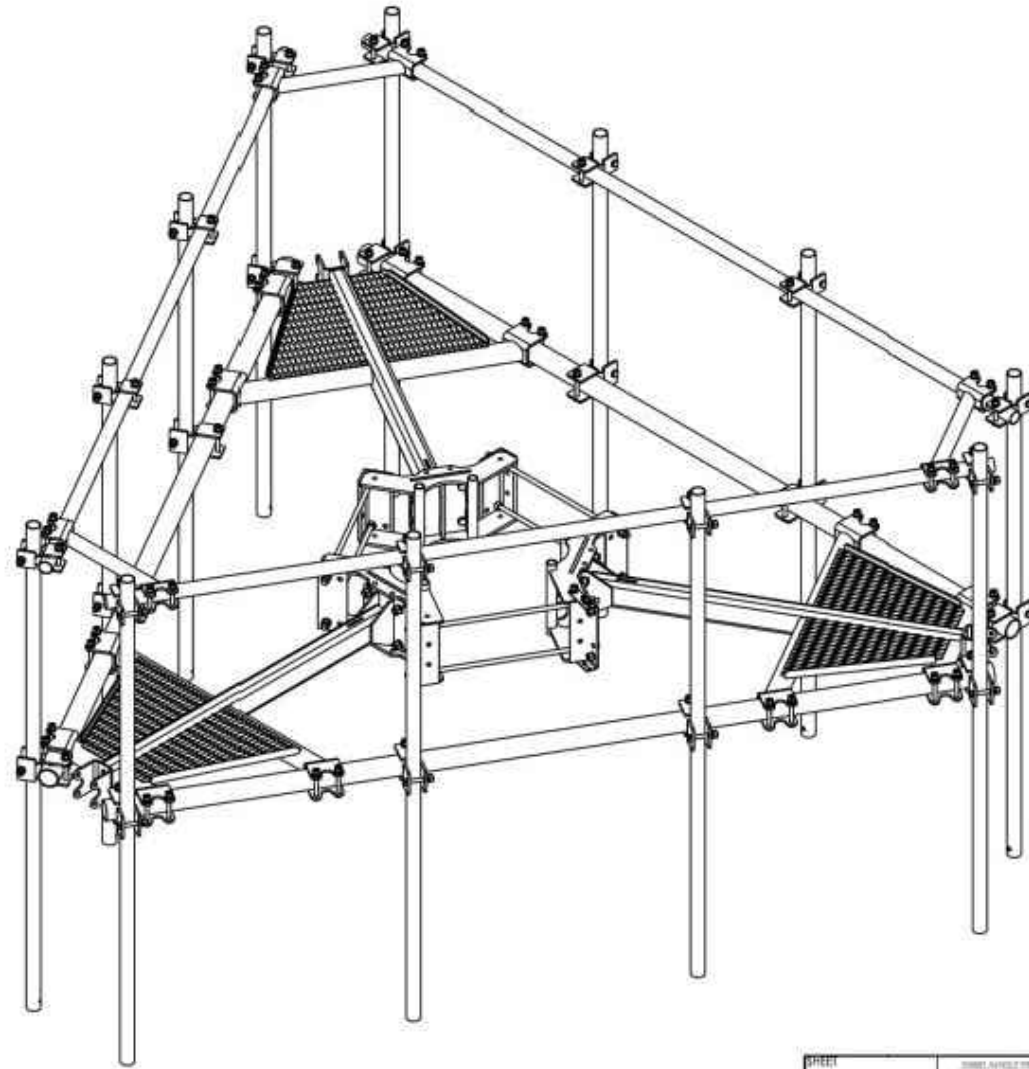
If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

SMJ International, LLC - 49030 Pontiac Trail, Suite 100 - Wixom, MI 48393 - 616.745.4777 Office - info@smj-llc.com



# PV-LPPGS MONOPOLE GUARDIAN MOUNT

SEE SHEET 2 - TABLE 1 FOR FULL CONFIGURATION DETAILS



1 OF 16	SCALE 1:36	CATEGORY 02_Monopole	9	ACC1 REPLACE ACC2 PV-CMXX-CG-BD REPLACE	3/14/21	<b>PERFECT VISION</b>	
3/19/2021		SERIES 01_Triangular	8	KKGS UPDATE	2/2/21		
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16" -1/32" ANGULAR: PROFILE ±1/4", BEND ±2" ALL OTHERS: ±1/16"		TYPE PV-LPPGS_GUARDIAN	7	REPLACED PKBK WITH PV-KKGS	11/11/20	MONOPOLE GUARDIAN MOUNT DOCUMENT NUMBER <b>LPPGS-ENG-01-R9</b>	
		BY DJN	4	ADDED ALL THREAD NOTE TO COLLARS	7/27/20		REV
		CHECKED SJS	5	ADDED HRZ-APS CONINGS	1/20/20		9
		STATUS APPROVED	REV	DESCRIPTION	DATE		

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1 MOUNT SPECIFICATIONS

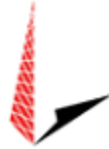
SUPPLEMENTAL

SHEET NUMBER: **R-606** REVISION: **4**



**AMERICAN TOWER®**  
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER  
ENGINEERING  
PROFESSIONALS**

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## Structural Analysis Report

**Structure** : 150 ft Monopole  
**ATC Site Name** : East Haddam,CT  
**ATC Site Number** : 302527  
**Engineering Number** : 13714288\_C3\_01  
**Proposed Carrier** : SPRINT NEXTEL  
**Carrier Site Name** : CTHA843A  
**Carrier Site Number** : CTHA843A  
**Site Location** : 135 Honey Hill Road  
East Haddam, CT 06423-1714  
41.437, -72.3664  
**County** : Middlesex  
**Date** : September 3, 2021  
**Max Usage** : 45%  
**Result** : Pass

Prepared By:

Siddharth Yadav  
TEP

Reviewed By:



09/03/2021

**COA : PEC.0001553**



## **Table of Contents**

Introduction .....	3
Supporting Documents .....	3
Analysis .....	3
Conclusion .....	3
Existing and Reserved Equipment.....	4
Equipment to be Removed .....	4
Proposed Equipment .....	4
Structure Usages.....	5
Foundations .....	5
Deflection, Twist and Sway* .....	5
Standard Conditions .....	6
Calculations .....	Attached



## **Introduction**

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft Monopole to reflect the change in loading by SPRINT NEXTEL.

## **Supporting Documents**

<b>Tower Drawings</b>	Summit, PJF Job #29201-0876, Rev 1, dated September 24, 2001
<b>Foundation Drawing</b>	Summit, PJF Job #29201-0876, dated October 30, 2001
<b>Geotechnical Report</b>	Clarence Welti, dated June 28, 2001
<b>Mount Analysis</b>	SMJ International, ATC Job #13653958_C8_03, dated May 18, 2021

## **8Analysis**

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.

<b>Basic Wind Speed:</b>	123 mph (3-second gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-second gust) w/ 1.00" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 2
<b>Crest Height (H):</b>	452 ft
<b>Crest Length (L):</b>	2970 ft
<b>Spectral Response:</b>	$S_s = 0.21$ , $S_i = 0.06$
<b>Site Class:</b>	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](mailto: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. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
152.8	1	Telewave ANT450F6	Stand-Off	(1) 7/8" Coax	VALLEY SHORE EMERGENCY COMMUNICATIONS
141.0	3	RFS APXVAALL24 43-U-NA20	Platform with Handrails	-	SPRINT NEXTEL
	3	Ericsson Air6449 B41			
130.0	3	Samsung MT6407-77A	Platform with Handrails	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	2	Commscope RC3DC-3315-PF-48			
	6	RFS APL868013-42T0			
	6	Samsung B2/B66A RRH-BR049			
	6	Commscope JAHH-65B-R3B			
	3	Commscope CBC78T-DS-43-2X			
120.0	6	Powerwave Allgon LGP21401	Platform with Handrails	(1) 0.35" (9mm) Fiber (1) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4415 B25			
	2	KMW EPBQ-654L8H8-L2			
	1	Raycap DC6-48-60-18-8F			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS 4478 B5			
	3	Ericsson RRUS-11 1900 MHz			
	3	Powerwave Allgon 7770.00			
	1	Andrew SBNHH-1D65A (33.5 lbs)			
	1	Andrew DBXNH-6565B-R2M (72.7")			
	1	KMW AM-X-CD-17-65-00T-RET (96" Height)			
	1	KMW EPBQ-654L8H6-L2			
108.8	1	Telewave ANT450F6	Stand-Off	(1) 7/8" Coax	VALLEY SHORE EMERGENCY COMMUNICATIONS
75.0	1	GPS	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
141.0	3	Ericsson RRUS 4415 B66	-	(3) 1 5/8" Hybriflex	SPRINT NEXTEL
	3	RFS APX16DWV-16DWVS-E-A20			
	3	Ericsson 4424 B25			
	3	Ericsson Radio 4449 B71 B85A			

**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
141.0	3	Ericsson Radio 4460 B25+B66	Platform with Handrails	(3) 1.99" (50.7mm) Hybrid	SPRINT NEXTEL
	3	Ericsson Radio 4480 B71+B85A			

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

Install proposed lines in the place of the existing SPRINT NEXTEL lines.





**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	37%	Pass
Shaft	32%	Pass
Base Plate	20%	Pass

**Foundations**

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	9100.0	12285.0	4037.3	33%
Shear (Kips)	69.0	93.2	41.8	45%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

**Deflection, Twist and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
141.0	Ericsson Radio 4480 B71+B85A	SPRINT NEXTEL	0.311	0.210
	Ericsson Radio 4460 B25+B66			

\*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.

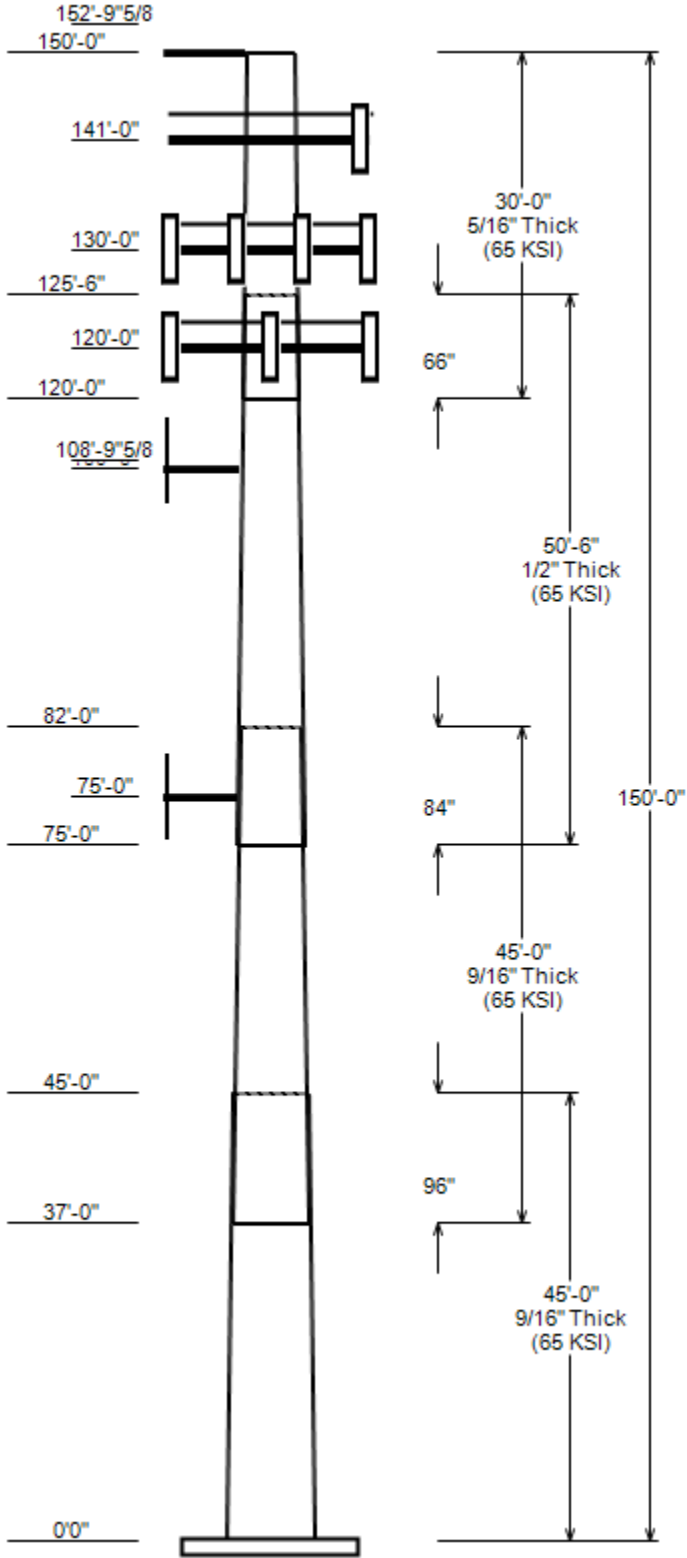
Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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 : 302527, East Haddam  
 Client : SPRINT NEXTEL  
 Code : ANSI/TIA-222-H

Height : 150 ft  
 Base Width : 72.2  
 Shape : 18 Sides



SITE PARAMETERS

Base Elev (ft): 0.00 Structure Class: II  
 Taper : 0.25400 (In/ft) Exposure : B  
 Topographic Category : 0 Topographic Feature: Hill  
 Topo Method : Method 2

SECTION PROPERTIES

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Overlap Length (in)	Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom			
1	45.000	60.79	72.20	0.562	0.000	65
2	45.000	52.53	63.94	0.562	96.000	65
3	50.500	42.50	55.30	0.500	84.000	65
4	30.000	36.91	44.52	0.312	66.000	65

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
152.8	152.8	1	Telewave ANT450F6
150.0	150.0	1	Generic Flat Stand-Off
141.0	141.0	3	Ericsson Radio 4460 B25+B66
141.0	141.0	3	Ericsson Radio 4480 B71+B85A
141.0	141.0	3	Ericsson Air6449 B41
141.0	141.0	3	RFS APXVAALL24 43-U-NA20
141.0	141.0	1	Generic Round Platform with Ha
130.0	130.0	3	Commscope CBC78T-DS-43-2X
130.0	130.0	6	Samsung B2/B66A RRH-BR049
130.0	130.0	6	RFS APL868013-42T0
130.0	130.0	2	Commscope RC3DC-3315-PF-48
130.0	130.0	3	Samsung MT6407-77A
130.0	130.0	6	Commscope JAHH-65B-R3B
130.0	130.0	1	Generic Flat Platform with Han
120.0	120.0	6	Powerwave Allgon LGP21401
120.0	120.0	1	Raycap DC6-48-60-18-8F
120.0	120.0	1	Raycap DC6-48-60-18-8F ("Squid
120.0	120.0	3	Ericsson RRUS 4478 B5
120.0	120.0	3	Ericsson RRUS 4415 B25
120.0	120.0	3	Ericsson RRUS-11 1900 MHz
120.0	120.0	3	Powerwave Allgon 7770.00
120.0	120.0	1	Andrew SBNHH-1D65A (33.5 lbs)
120.0	120.0	1	Andrew DBXNH-6565B-R2M (72.7")
120.0	120.0	1	KMW AM-X-CD-17-65-00T-RET (96")
120.0	120.0	1	KMW EPBQ-654L8H6-L2
120.0	120.0	2	KMW EPBQ-654L8H8-L2
120.0	120.0	1	Generic Round Platform with Ha
108.8	108.8	1	Telewave ANT450F6
108.0	108.0	1	Generic Flat Stand-Off
75.0	75.0	1	Generic GPS
75.0	75.0	1	Generic Flat Stand-Off

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	152.8	7/8" Coax	No
0.0	141.0	1.99" (50.7mm) Hybrid	No
10.0	130.0	1 5/8" Hybriflex	No
10.0	130.0	1 5/8" Coax	No
10.0	120.0	2" conduit	No
10.0	120.0	1 5/8" Coax	No
10.0	120.0	0.78" (19.7mm) 8 AWG 6	No
10.0	120.0	0.39" (10mm) Fiber Trunk	No

**JOB INFORMATION**

Asset : 302527, East Haddam  
 Client : SPRINT NEXTEL  
 Code : ANSI/TIA-222-H

Height : 150 ft  
 Base Width : 72.2  
 Shape : 18 Sides

**LINEAR APPURTENANCE**

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
10.0	120.0	0.35" (9mm) Fiber	No
0.0	108.8	7/8" Coax	No
10.0	75.0	1/2" Coax	No

**LOAD CASES**

1.2D + 1.0W Normal	123 mph wind with no ice
0.9D + 1.0W Normal	123 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Nor	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Nor	Seismic
0.9D - 1.0Ev + 1.0Eh Nor	Seismic (Reduced DL)
1.0D + 1.0W Service Norm	60 mph Wind with No Ice

**REACTIONS**

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W Normal	4037.30	41.77	80.32
0.9D + 1.0W Normal	4020.31	41.76	60.23
1.2D + 1.0Di + 1.0Wi Normal	1026.72	10.88	100.51
1.2D + 1.0Ev + 1.0Eh Normal	300.92	2.81	80.61
0.9D - 1.0Ev + 1.0Eh Normal	299.36	2.81	55.40
1.0D + 1.0W Service Normal	857.19	8.89	66.95

**DISH DEFLECTIONS**

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
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ASSET: 302527, East Haddam  
CUSTOMER: SPRINT NEXTEL

CODE: ANSI/TIA-222-H  
ENG NO: 13714288\_C3\_01

#### ANALYSIS PARAMETERS

Location:	Middlesex County,CT	Height:	150 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	72.20 in
Manufacturer:	Undetermined	Top Diameter:	36.91 in
K <sub>d</sub> (non-service):	0.95	Taper:	0.2540 in/ft
K <sub>e</sub> :	0.98	Rotation:	0.000°

#### ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed w/o Ice:	123 mph
Risk Category:	II	Design Wind Speed w/Ice:	50 mph
Topo Factor Procedure:	Method 2	Operational Wind Speed:	60 mph
		Design Ice Thickness:	1.00 in
		HMSL:	490.00 ft
Crest Height(H):	452 ft	Distance from Apex (x):	253 ft
Crest Length(L):	2970 ft	Upwind/Downwind:	Downwind
Feature:	Hill		

#### SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	1.40
T <sub>L</sub> (sec):	6	P:	1
S <sub>s</sub> :	0.209	S <sub>1</sub> :	0.055
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
S <sub>ds</sub> :	0.223	S <sub>d1</sub> :	0.088
		C <sub>s</sub> :	0.042
		C <sub>s</sub> Max:	0.042
		C <sub>s</sub> Min:	0.030

#### LOAD CASES

1.2D + 1.0W Normal	123 mph wind with no ice
0.9D + 1.0W Normal	123 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice

ASSET: 302527, East Haddam  
 CUSTOMER: SPRINT NEXTEL

CODE: ANSI/TIA-222-H  
 ENG NO: 13714288\_C3\_01

SHAFT SECTION PROPERTIES

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Bottom							Top							
						Weight (lb)	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	45.00	0.5625	65		0.00	18,024	72.20	0.000	127.9	0	82,925.5	20.87	128.36	60.79	45.00	107.52	49,270.0	17.29	108.07	0.2536
2-18	45.00	0.5625	65	Slip	96.00	15,766	63.94	37.000	113.1	5	57,423.4	18.28	113.67	52.53	82.00	92.77	31,652.1	14.70	93.38	0.2536
3-18	50.50	0.5000	65	Slip	84.00	13,198	55.30	75.000	86.97	33,001.0	17.74	110.61	42.50	125.50	66.64	14,849.2	13.22	84.99	0.2536	
4-18	30.00	0.3125	65	Slip	66.00	4,090	44.52	120.000	43.84	10,822.5	23.35	142.45	36.91	150.00	36.29	6,140.5	19.06	118.10	0.2536	

Shaft Weight 51,078

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice					
					Weight (lb)	EPAa (sf)	Orientation Factor	Weight (lb)	EPAa (sf)	Orientation Factor			
152.80	Telewave ANT450F6	1	1.00	0.000	21.00	1.802	1.00	57.52	3.845	1.00			
150.00	Generic Flat Stand-Off	1	1.00	0.000	187.50	6.300	1.00	286.92	8.625	1.00			
141.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	412.61	23.003	0.63			
141.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3705.17	45.388	1.00			
141.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	205.40	6.863	0.63			
141.00	Ericsson Radio 4480 B71+B85A	3	0.75	0.000	84.00	2.852	0.67	140.21	3.683	0.67			
141.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.67	174.77	3.348	0.67			
130.00	Commscope RC3DC-3315-PF-48	2	0.75	0.000	32.00	3.781	0.67	113.08	4.759	0.67			
130.00	RFS APL868013-42T0	6	0.75	0.000	6.30	3.615	0.73	71.48	4.997	0.73			
130.00	Samsung B2/B66A RRR-BR049	6	0.75	0.000	84.40	1.875	0.50	131.59	2.543	0.50			
130.00	Commscope CBC78T-DS-43-2X	3	0.75	0.000	20.70	0.552	0.50	37.04	0.928	0.50			
130.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	3814.10	57.914	1.00			
130.00	Commscope JAHH-65B-R3B	6	0.75	0.000	60.60	9.113	0.69	210.25	11.165	0.69			
130.00	Samsung MT6407-77A	3	0.75	0.000	81.60	4.709	0.61	157.00	5.833	0.61			
120.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3691.78	45.186	1.00			
120.00	Ericsson RRUS 4478 B5	3	0.75	0.000	59.90	1.842	0.50	100.58	2.502	0.50			
120.00	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.842	0.50	82.08	2.502	0.50			
120.00	Raycap DC6-48-60-18-8F ("Squid	1	0.75	0.000	31.80	1.470	1.00	77.20	1.984	1.00			
120.00	Raycap DC6-48-60-18-8F	1	0.75	0.000	20.00	1.260	1.00	58.74	1.744	1.00			
120.00	KMW EPBQ-654L8H8-L2	2	0.75	0.000	86.00	18.089	0.61	324.97	20.806	0.61			
120.00	KMW EPBQ-654L8H6-L2	1	0.75	0.000	72.80	13.237	0.61	257.74	15.340	0.61			
120.00	KMW AM-X-CD-17-65-00T-RET (96"	1	0.75	0.000	59.50	11.310	0.68	216.85	13.681	0.68			
120.00	Andrew DBXNH-6565B-R2M (72.7")	1	0.75	0.000	46.30	8.173	1.00	175.74	10.247	1.00			
120.00	Andrew SBNHH-1D65A (33.5 lbs)	1	0.75	0.000	33.50	5.883	0.69	133.10	7.448	0.69			
120.00	Powerwave Allgon LGP21401	6	0.75	0.000	14.10	1.104	0.50	32.46	1.629	0.50			
120.00	Ericsson RRUS-11 1900 MHz	3	0.75	0.000	44.00	2.522	0.67	93.51	3.287	0.67			
120.00	Powerwave Allgon 7770.00	3	0.75	0.000	35.00	5.508	0.65	128.32	6.269	0.65			
108.80	Telewave ANT450F6	1	1.00	0.000	21.00	1.802	1.00	56.82	3.806	1.00			
108.00	Generic Flat Stand-Off	1	1.00	0.000	187.50	6.300	1.00	284.90	8.578	1.00			
75.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	30.81	1.355	1.00			
75.00	Generic Flat Stand-Off	1	1.00	0.000	187.50	6.300	1.00	282.25	8.516	1.00			
Totals	Num Loadings: 31				73			11,272.80			21,274.98		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : 0.00\_

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax/ Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	152.80	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	VALLEY SHORE
0.00	141.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	SPRINT NEXTEL
10.00	130.00	12	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
10.00	130.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIREL
10.00	120.00	12	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
10.00	120.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
10.00	120.00	1	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
10.00	120.00	1	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
10.00	120.00	1	0.35" (9mm) Fiber	0.35	0.05	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	108.80	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	VALLEY SHORE
10.00	75.00	1	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	SPRINT NEXTEL

SEGMENT PROPERTIES

(Max Len: 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)
0.00		0.5625	72.200	127.895	82,925.50	20.87	128.36	76.9	2262.2	0.0	0.0
5.00		0.5625	70.932	125.631	78,599.10	20.47	126.10	77.3	2182.5	0.0	2,156.7
10.00		0.5625	69.664	123.367	74,425.90	20.07	123.85	77.8	2104.3	0.0	2,118.2
15.00		0.5625	68.396	121.103	70,403.10	19.68	121.59	78.3	2027.4	0.0	2,079.7
20.00		0.5625	67.127	118.839	66,527.90	19.28	119.34	78.7	1952.0	0.0	2,041.2
25.00		0.5625	65.859	116.575	62,797.60	18.88	117.08	79.2	1878.1	0.0	2,002.7
30.00		0.5625	64.591	114.311	59,209.40	18.48	114.83	79.7	1805.5	0.0	1,964.1
35.00		0.5625	63.323	112.047	55,760.60	18.09	112.57	80.1	1734.4	0.0	1,925.6
37.00	Bot - Section 2	0.5625	62.816	111.142	54,419.50	17.93	111.67	80.3	1706.3	0.0	759.5
40.00		0.5625	62.055	109.783	52,448.40	17.69	110.32	80.6	1664.7	0.0	2,275.8
45.00	Top - Section 1	0.5625	61.912	109.528	52,083.00	17.64	110.07	80.6	1656.9	0.0	3,731.3
50.00		0.5625	60.644	107.264	48,919.50	17.25	107.81	81.1	1588.8	0.0	1,844.2
55.00		0.5625	59.376	105.000	45,886.80	16.85	105.56	81.6	1522.2	0.0	1,805.7
60.00		0.5625	58.107	102.736	42,982.10	16.45	103.30	82.1	1456.9	0.0	1,767.2
65.00		0.5625	56.839	100.472	40,202.60	16.05	101.05	82.5	1393.1	0.0	1,728.7
70.00		0.5625	55.571	98.208	37,545.60	15.66	98.79	82.6	1330.7	0.0	1,690.2
75.00	Bot - Section 3	0.5625	54.303	95.943	35,008.40	15.26	96.54	82.6	1269.8	0.0	1,651.6
80.00		0.5625	53.035	93.679	32,588.10	14.86	94.28	82.6	1210.3	0.0	3,075.7
82.00	Top - Section 2	0.5000	53.528	84.152	29,896.50	17.11	107.06	81.3	1100.1	0.0	1,209.9
85.00		0.5000	52.767	82.944	28,628.00	16.85	105.53	81.6	1068.6	0.0	852.9
90.00		0.5000	51.499	80.932	26,594.30	16.40	103.00	82.1	1017.1	0.0	1,394.1
95.00		0.5000	50.230	78.919	24,659.40	15.95	100.46	82.6	966.9	0.0	1,359.8
100.00		0.5000	48.962	76.907	22,820.60	15.50	97.92	82.6	918.0	0.0	1,325.6
105.00		0.5000	47.694	74.895	21,075.60	15.06	95.39	82.6	870.4	0.0	1,291.4
108.00		0.5000	46.933	73.687	20,072.60	14.79	93.87	82.6	842.4	0.0	758.4
108.80		0.5000	46.730	73.365	19,810.60	14.72	93.46	82.6	835.0	0.0	200.2
110.00		0.5000	46.426	72.882	19,421.90	14.61	92.85	82.6	824.0	0.0	298.6
115.00		0.5000	45.158	70.870	17,857.10	14.16	90.32	82.6	778.9	0.0	1,222.9
120.00	Bot - Section 4	0.5000	43.890	68.857	16,378.60	13.71	87.78	82.6	735.0	0.0	1,188.6
125.00		0.5000	42.622	66.845	14,984.10	13.27	85.24	82.6	692.4	0.0	1,889.6
125.50	Top - Section 3	0.3125	43.120	42.458	9,829.90	22.57	137.98	74.9	449.0	0.0	185.9
130.00		0.3125	41.979	41.326	9,064.40	21.92	134.33	75.6	425.3	0.0	641.5
135.00		0.3125	40.710	40.068	8,261.70	21.21	130.27	76.5	399.7	0.0	692.4
140.00		0.3125	39.442	38.810	7,507.90	20.49	126.22	77.3	374.9	0.0	671.0
141.00		0.3125	39.189	38.559	7,362.80	20.35	125.40	77.5	370.1	0.0	131.6
145.00		0.3125	38.174	37.553	6,801.30	19.78	122.16	78.1	350.9	0.0	518.0
150.00		0.3125	36.906	36.295	6,140.50	19.06	118.10	79	327.7	0.0	628.2

Totals: 51,078.7

Load Case: 1.2D + 1.0W Normal	123 mph wind with no ice	18 Iterations
Gust Response Factor:	1.10	
Dead load Factor:	1.20	
Wind Load Factor:	1.00	

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-80.32	-41.77	0.00	-4,037.3	0.00	4,037.30	8,846.41	2,244.56	14,523.39	13,039.59	0	0	0.319
5.00	-77.64	-40.90	0.00	-3,828.4	0.00	3,828.45	8,742.67	2,204.83	14,013.82	12,656.78	0.04	-0.07	0.312
10.00	-75.02	-40.04	0.00	-3,624.0	0.00	3,623.96	8,637.03	2,165.09	13,513.34	12,276.73	0.14	-0.13	0.304
15.00	-72.27	-39.20	0.00	-3,423.8	0.00	3,423.75	8,529.48	2,125.36	13,021.96	11,899.57	0.32	-0.2	0.297
20.00	-69.57	-38.38	0.00	-3,227.7	0.00	3,227.73	8,420.03	2,085.63	12,539.68	11,525.46	0.57	-0.27	0.289
25.00	-66.92	-37.57	0.00	-3,035.8	0.00	3,035.84	8,308.68	2,045.89	12,066.51	11,154.55	0.89	-0.34	0.281
30.00	-64.32	-36.77	0.00	-2,848.0	0.00	2,847.99	8,195.41	2,006.16	11,602.43	10,786.99	1.28	-0.4	0.272
35.00	-61.77	-36.19	0.00	-2,664.2	0.00	2,664.17	8,080.25	1,966.43	11,147.45	10,422.93	1.74	-0.47	0.264
37.00	-60.76	-35.78	0.00	-2,591.8	0.00	2,591.79	8,033.65	1,950.53	10,968.01	10,278.32	1.94	-0.5	0.260
40.00	-57.88	-35.08	0.00	-2,484.5	0.00	2,484.47	7,963.17	1,926.69	10,701.58	10,062.51	2.27	-0.54	0.255
45.00	-53.16	-34.19	0.00	-2,309.0	0.00	2,309.05	7,949.84	1,922.21	10,651.82	10,022.07	2.86	-0.6	0.237
50.00	-50.71	-33.31	0.00	-2,138.1	0.00	2,138.08	7,830.65	1,882.48	10,216.07	9,665.90	3.53	-0.67	0.228
55.00	-48.31	-32.43	0.00	-1,971.5	0.00	1,971.51	7,709.55	1,842.74	9,789.42	9,313.69	4.26	-0.72	0.218
60.00	-45.96	-31.54	0.00	-1,809.4	0.00	1,809.38	7,586.54	1,803.01	9,371.87	8,965.60	5.05	-0.78	0.208
65.00	-43.66	-30.64	0.00	-1,651.7	0.00	1,651.71	7,461.63	1,763.28	8,963.42	8,621.78	5.9	-0.84	0.198
70.00	-41.41	-29.75	0.00	-1,498.5	0.00	1,498.50	7,296.33	1,723.54	8,564.07	8,238.92	6.81	-0.9	0.188
75.00	-38.98	-28.47	0.00	-1,349.8	0.00	1,349.75	7,128.12	1,683.81	8,173.82	7,861.55	7.78	-0.95	0.177
80.00	-35.07	-27.79	0.00	-1,207.4	0.00	1,207.43	6,959.92	1,644.07	7,792.67	7,493.03	8.8	-1	0.166
82.00	-33.53	-27.33	0.00	-1,151.8	0.00	1,151.85	6,155.27	1,476.86	7,073.91	6,705.43	9.23	-1.02	0.178
85.00	-32.38	-26.62	0.00	-1,069.9	0.00	1,069.86	6,090.51	1,455.67	6,872.40	6,538.79	9.88	-1.05	0.169
90.00	-30.49	-25.74	0.00	-936.8	0.00	936.75	5,981.05	1,420.35	6,543.00	6,264.00	11.01	-1.1	0.155
95.00	-28.65	-24.86	0.00	-808.1	0.00	808.08	5,863.32	1,385.04	6,221.70	5,986.52	12.19	-1.15	0.140
100.00	-26.85	-23.99	0.00	-683.8	0.00	683.80	5,713.80	1,349.72	5,908.48	5,683.62	13.42	-1.19	0.125
105.00	-25.10	-23.29	0.00	-563.9	0.00	563.87	5,564.29	1,314.40	5,603.36	5,388.58	14.69	-1.23	0.109
108.00	-23.84	-22.59	0.00	-494.0	0.00	494.01	5,474.58	1,293.21	5,424.16	5,215.33	15.47	-1.25	0.099
108.80	-23.55	-22.32	0.00	-475.9	0.00	475.94	5,450.66	1,287.56	5,376.87	5,169.61	15.68	-1.26	0.097
110.00	-23.15	-21.81	0.00	-449.2	0.00	449.15	5,414.77	1,279.08	5,306.32	5,101.41	16	-1.27	0.093
115.00	-21.48	-20.97	0.00	-340.1	0.00	340.11	5,265.26	1,243.76	5,017.37	4,822.10	17.34	-1.3	0.075
120.00	-15.69	-15.07	0.00	-235.2	0.00	235.24	5,115.74	1,208.44	4,736.51	4,550.65	18.71	-1.32	0.055
125.00	-13.32	-14.58	0.00	-159.9	0.00	159.88	4,966.23	1,173.12	4,463.74	4,287.07	20.11	-1.34	0.040
125.50	-13.09	-14.19	0.00	-152.6	0.00	152.59	2,860.49	745.14	2,881.01	2,520.88	20.25	-1.34	0.065
130.00	-7.84	-7.55	0.00	-88.7	0.00	88.73	2,812.39	725.27	2,729.45	2,411.94	21.51	-1.35	0.040
135.00	-6.99	-6.78	0.00	-51.0	0.00	50.97	2,757.14	703.20	2,565.85	2,292.06	22.93	-1.36	0.025
140.00	-6.16	-6.32	0.00	-17.0	0.00	17.04	2,699.99	681.12	2,407.31	2,173.54	24.36	-1.36	0.010
141.00	-1.59	-1.52	0.00	-10.7	0.00	10.72	2,688.33	676.71	2,376.20	2,150.02	24.64	-1.36	0.006
145.00	-0.99	-0.87	0.00	-4.6	0.00	4.64	2,640.93	659.05	2,253.82	2,056.55	25.78	-1.37	0.003
150.00	0.00	-0.84	0.00	-0.3	0.00	0.31	2,579.97	636.98	2,105.39	1,941.24	27.22	-1.37	0.000



Load Case: 0.9D + 1.0W Normal	123 mph wind with no ice	18 Iterations
Gust Response Factor: 1.10		
Dead load Factor: 0.90		
Wind Load Factor: 1.00		

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-60.23	-41.76	0.00	-4,020.3	0.00	4,020.31	8,846.41	2,244.56	14,523.39	13,039.59	0	0	0.315
5.00	-58.22	-40.86	0.00	-3,811.5	0.00	3,811.52	8,742.67	2,204.83	14,013.82	12,656.78	0.04	-0.07	0.308
10.00	-56.24	-39.99	0.00	-3,607.2	0.00	3,607.21	8,637.03	2,165.09	13,513.34	12,276.73	0.14	-0.13	0.301
15.00	-54.16	-39.13	0.00	-3,407.3	0.00	3,407.27	8,529.48	2,125.36	13,021.96	11,899.57	0.32	-0.2	0.293
20.00	-52.13	-38.29	0.00	-3,211.6	0.00	3,211.64	8,420.03	2,085.63	12,539.68	11,525.46	0.57	-0.27	0.285
25.00	-50.13	-37.46	0.00	-3,020.2	0.00	3,020.21	8,308.68	2,045.89	12,066.51	11,154.55	0.89	-0.33	0.277
30.00	-48.17	-36.64	0.00	-2,832.9	0.00	2,832.92	8,195.41	2,006.16	11,602.43	10,786.99	1.27	-0.4	0.269
35.00	-46.25	-36.06	0.00	-2,649.7	0.00	2,649.72	8,080.25	1,966.43	11,147.45	10,422.93	1.73	-0.47	0.260
37.00	-45.49	-35.64	0.00	-2,577.6	0.00	2,577.61	8,033.65	1,950.53	10,968.01	10,278.32	1.93	-0.49	0.257
40.00	-43.32	-34.94	0.00	-2,470.7	0.00	2,470.70	7,963.17	1,926.69	10,701.58	10,062.51	2.25	-0.53	0.251
45.00	-39.78	-34.04	0.00	-2,296.0	0.00	2,296.02	7,949.84	1,922.21	10,651.82	10,022.07	2.85	-0.6	0.234
50.00	-37.94	-33.16	0.00	-2,125.8	0.00	2,125.80	7,830.65	1,882.48	10,216.07	9,665.90	3.51	-0.66	0.225
55.00	-36.13	-32.26	0.00	-1,960.0	0.00	1,960.02	7,709.55	1,842.74	9,789.42	9,313.69	4.24	-0.72	0.215
60.00	-34.37	-31.37	0.00	-1,798.7	0.00	1,798.70	7,586.54	1,803.01	9,371.87	8,965.60	5.02	-0.78	0.205
65.00	-32.64	-30.47	0.00	-1,641.9	0.00	1,641.87	7,461.63	1,763.28	8,963.42	8,621.78	5.87	-0.84	0.195
70.00	-30.94	-29.58	0.00	-1,489.5	0.00	1,489.51	7,296.33	1,723.54	8,564.07	8,238.92	6.78	-0.89	0.185
75.00	-29.12	-28.29	0.00	-1,341.6	0.00	1,341.62	7,128.12	1,683.81	8,173.82	7,861.55	7.74	-0.95	0.175
80.00	-26.19	-27.63	0.00	-1,200.2	0.00	1,200.15	6,959.92	1,644.07	7,792.67	7,493.03	8.76	-1	0.164
82.00	-25.03	-27.17	0.00	-1,144.9	0.00	1,144.89	6,155.27	1,476.86	7,073.91	6,705.43	9.18	-1.02	0.175
85.00	-24.16	-26.47	0.00	-1,063.4	0.00	1,063.37	6,090.51	1,455.67	6,872.40	6,538.79	9.83	-1.05	0.167
90.00	-22.75	-25.58	0.00	-931.0	0.00	931.05	5,981.05	1,420.35	6,543.00	6,264.00	10.96	-1.1	0.153
95.00	-21.37	-24.70	0.00	-803.2	0.00	803.15	5,863.32	1,385.04	6,221.70	5,986.52	12.13	-1.14	0.138
100.00	-20.02	-23.84	0.00	-679.6	0.00	679.63	5,713.80	1,349.72	5,908.48	5,683.62	13.35	-1.19	0.123
105.00	-18.70	-23.15	0.00	-560.4	0.00	560.44	5,564.29	1,314.40	5,603.36	5,388.58	14.62	-1.22	0.108
108.00	-17.77	-22.45	0.00	-491.0	0.00	490.99	5,474.58	1,293.21	5,424.16	5,215.33	15.39	-1.25	0.098
108.80	-17.54	-22.18	0.00	-473.0	0.00	473.03	5,450.66	1,287.56	5,376.87	5,169.61	15.6	-1.25	0.095
110.00	-17.24	-21.68	0.00	-446.4	0.00	446.41	5,414.77	1,279.08	5,306.32	5,101.41	15.92	-1.26	0.091
115.00	-16.00	-20.85	0.00	-338.0	0.00	338.03	5,265.26	1,243.76	5,017.37	4,822.10	17.25	-1.29	0.073
120.00	-11.68	-14.98	0.00	-233.8	0.00	233.80	5,115.74	1,208.44	4,736.51	4,550.65	18.62	-1.31	0.054
125.00	-9.91	-14.50	0.00	-158.9	0.00	158.92	4,966.23	1,173.12	4,463.74	4,287.07	20	-1.33	0.039
125.50	-9.74	-14.11	0.00	-151.7	0.00	151.66	2,860.49	745.14	2,881.01	2,520.88	20.14	-1.33	0.064
130.00	-5.84	-7.51	0.00	-88.2	0.00	88.17	2,812.39	725.27	2,729.45	2,411.94	21.4	-1.34	0.039
135.00	-5.20	-6.74	0.00	-50.6	0.00	50.64	2,757.14	703.20	2,565.85	2,292.06	22.81	-1.35	0.024
140.00	-4.58	-6.28	0.00	-16.9	0.00	16.93	2,699.99	681.12	2,407.31	2,173.54	24.23	-1.36	0.010
141.00	-1.19	-1.51	0.00	-10.6	0.00	10.65	2,688.33	676.71	2,376.20	2,150.02	24.51	-1.36	0.005
145.00	-0.73	-0.86	0.00	-4.6	0.00	4.61	2,640.93	659.05	2,253.82	2,056.55	25.65	-1.36	0.003
150.00	0.00	-0.84	0.00	-0.3	0.00	0.31	2,579.97	636.98	2,105.39	1,941.24	27.07	-1.36	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice		17 Iterations
Gust Response Factor: 1.10	Ice Dead Load Factor	1.00	
Dead load Factor: 1.20			Ice Importance Factor 1.00
Wind Load Factor: 1.00			

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-100.51	-10.88	0.00	-1,026.7	0.00	1,026.72	8,846.41	2,244.56	14,523.39	13,039.59	0	0	0.090
5.00	-97.47	-10.64	0.00	-972.3	0.00	972.34	8,742.67	2,204.83	14,013.82	12,656.78	0.01	-0.02	0.088
10.00	-94.44	-10.40	0.00	-919.2	0.00	919.15	8,637.03	2,165.09	13,513.34	12,276.73	0.04	-0.03	0.086
15.00	-91.27	-10.17	0.00	-867.1	0.00	867.14	8,529.48	2,125.36	13,021.96	11,899.57	0.08	-0.05	0.084
20.00	-88.14	-9.94	0.00	-816.3	0.00	816.29	8,420.03	2,085.63	12,539.68	11,525.46	0.15	-0.07	0.081
25.00	-85.06	-9.72	0.00	-766.6	0.00	766.58	8,308.68	2,045.89	12,066.51	11,154.55	0.23	-0.09	0.079
30.00	-82.02	-9.49	0.00	-718.0	0.00	718.00	8,195.41	2,006.16	11,602.43	10,786.99	0.32	-0.1	0.077
35.00	-79.03	-9.33	0.00	-670.5	0.00	670.53	8,080.25	1,966.43	11,147.45	10,422.93	0.44	-0.12	0.074
37.00	-77.84	-9.22	0.00	-651.9	0.00	651.86	8,033.65	1,950.53	10,968.01	10,278.32	0.49	-0.13	0.073
40.00	-74.70	-9.03	0.00	-624.2	0.00	624.21	7,963.17	1,926.69	10,701.58	10,062.51	0.57	-0.14	0.071
45.00	-69.54	-8.78	0.00	-579.1	0.00	579.08	7,949.84	1,922.21	10,651.82	10,022.07	0.72	-0.15	0.067
50.00	-66.66	-8.53	0.00	-535.2	0.00	535.19	7,830.65	1,882.48	10,216.07	9,665.90	0.89	-0.17	0.064
55.00	-63.82	-8.28	0.00	-492.5	0.00	492.53	7,709.55	1,842.74	9,789.42	9,313.69	1.08	-0.18	0.061
60.00	-61.04	-8.03	0.00	-451.1	0.00	451.12	7,586.54	1,803.01	9,371.87	8,965.60	1.28	-0.2	0.058
65.00	-58.31	-7.78	0.00	-411.0	0.00	410.96	7,461.63	1,763.28	8,963.42	8,621.78	1.49	-0.21	0.055
70.00	-55.63	-7.53	0.00	-372.1	0.00	372.06	7,296.33	1,723.54	8,564.07	8,238.92	1.72	-0.23	0.053
75.00	-52.68	-7.19	0.00	-334.4	0.00	334.41	7,128.12	1,683.81	8,173.82	7,861.55	1.96	-0.24	0.050
80.00	-48.35	-7.00	0.00	-298.5	0.00	298.48	6,959.92	1,644.07	7,792.67	7,493.03	2.22	-0.25	0.047
82.00	-46.64	-6.87	0.00	-284.5	0.00	284.48	6,155.27	1,476.86	7,073.91	6,705.43	2.33	-0.26	0.050
85.00	-45.24	-6.67	0.00	-263.9	0.00	263.88	6,090.51	1,455.67	6,872.40	6,538.79	2.49	-0.26	0.048
90.00	-42.94	-6.42	0.00	-230.5	0.00	230.54	5,981.05	1,420.35	6,543.00	6,264.00	2.78	-0.28	0.044
95.00	-40.69	-6.17	0.00	-198.5	0.00	198.47	5,863.32	1,385.04	6,221.70	5,986.52	3.07	-0.29	0.040
100.00	-38.50	-5.92	0.00	-167.6	0.00	167.64	5,713.80	1,349.72	5,908.48	5,683.62	3.38	-0.3	0.036
105.00	-36.35	-5.72	0.00	-138.0	0.00	138.05	5,564.29	1,314.40	5,603.36	5,388.58	3.7	-0.31	0.032
108.00	-34.78	-5.54	0.00	-120.9	0.00	120.90	5,474.58	1,293.21	5,424.16	5,215.33	3.89	-0.31	0.030
108.80	-34.39	-5.46	0.00	-116.5	0.00	116.47	5,450.66	1,287.56	5,376.87	5,169.61	3.95	-0.31	0.029
110.00	-33.89	-5.31	0.00	-109.9	0.00	109.92	5,414.77	1,279.08	5,306.32	5,101.41	4.03	-0.32	0.028
115.00	-31.85	-5.07	0.00	-83.4	0.00	83.37	5,265.26	1,243.76	5,017.37	4,822.10	4.36	-0.32	0.023
120.00	-23.03	-3.68	0.00	-58.0	0.00	58.02	5,115.74	1,208.44	4,736.51	4,550.65	4.7	-0.33	0.017
125.00	-20.29	-3.53	0.00	-39.6	0.00	39.64	4,966.23	1,173.12	4,463.74	4,287.07	5.05	-0.33	0.013
125.50	-20.02	-3.42	0.00	-37.9	0.00	37.87	2,860.49	745.14	2,881.01	2,520.88	5.09	-0.33	0.022
130.00	-11.63	-1.91	0.00	-22.5	0.00	22.47	2,812.39	725.27	2,729.45	2,411.94	5.4	-0.34	0.013
135.00	-10.43	-1.68	0.00	-13.0	0.00	12.95	2,757.14	703.20	2,565.85	2,292.06	5.76	-0.34	0.009
140.00	-9.25	-1.55	0.00	-4.5	0.00	4.54	2,699.99	681.12	2,407.31	2,173.54	6.11	-0.34	0.006
141.00	-2.30	-0.43	0.00	-3.0	0.00	2.99	2,688.33	676.71	2,376.20	2,150.02	6.19	-0.34	0.002
145.00	-1.43	-0.24	0.00	-1.3	0.00	1.29	2,640.93	659.05	2,253.82	2,056.55	6.47	-0.34	0.001
150.00	0.00	-0.23	0.00	-0.1	0.00	0.11	2,579.97	636.98	2,105.39	1,941.24	6.83	-0.34	0.000

Load Case: 1.0D + 1.0W Service Normal	60 mph Wind with No Ice	17 Iterations
Gust Response Factor: 1.10		
Dead load Factor: 1.00		
Wind Load Factor: 1.00		

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-66.95	-8.89	0.00	-857.2	0.00	857.19	8,846.41	2,244.56	14,523.39	13,039.59	0	0	0.073
5.00	-64.76	-8.70	0.00	-812.7	0.00	812.74	8,742.67	2,204.83	14,013.82	12,656.78	0.01	-0.01	0.072
10.00	-62.61	-8.52	0.00	-769.2	0.00	769.23	8,637.03	2,165.09	13,513.34	12,276.73	0.03	-0.03	0.070
15.00	-60.35	-8.34	0.00	-726.6	0.00	726.64	8,529.48	2,125.36	13,021.96	11,899.57	0.07	-0.04	0.068
20.00	-58.14	-8.16	0.00	-685.0	0.00	684.96	8,420.03	2,085.63	12,539.68	11,525.46	0.12	-0.06	0.066
25.00	-55.96	-7.98	0.00	-644.2	0.00	644.18	8,308.68	2,045.89	12,066.51	11,154.55	0.19	-0.07	0.065
30.00	-53.82	-7.81	0.00	-604.3	0.00	604.26	8,195.41	2,006.16	11,602.43	10,786.99	0.27	-0.09	0.063
35.00	-51.72	-7.69	0.00	-565.2	0.00	565.22	8,080.25	1,966.43	11,147.45	10,422.93	0.37	-0.1	0.061
37.00	-50.89	-7.60	0.00	-549.8	0.00	549.84	8,033.65	1,950.53	10,968.01	10,278.32	0.41	-0.11	0.060
40.00	-48.50	-7.45	0.00	-527.0	0.00	527.05	7,963.17	1,926.69	10,701.58	10,062.51	0.48	-0.11	0.058
45.00	-44.60	-7.26	0.00	-489.8	0.00	489.81	7,949.84	1,922.21	10,651.82	10,022.07	0.61	-0.13	0.054
50.00	-42.58	-7.07	0.00	-453.5	0.00	453.52	7,830.65	1,882.48	10,216.07	9,665.90	0.75	-0.14	0.052
55.00	-40.60	-6.88	0.00	-418.2	0.00	418.16	7,709.55	1,842.74	9,789.42	9,313.69	0.9	-0.15	0.050
60.00	-38.65	-6.69	0.00	-383.8	0.00	383.76	7,586.54	1,803.01	9,371.87	8,965.60	1.07	-0.17	0.048
65.00	-36.75	-6.50	0.00	-350.3	0.00	350.31	7,461.63	1,763.28	8,963.42	8,621.78	1.25	-0.18	0.046
70.00	-34.88	-6.31	0.00	-317.8	0.00	317.81	7,296.33	1,723.54	8,564.07	8,238.92	1.45	-0.19	0.043
75.00	-32.86	-6.04	0.00	-286.3	0.00	286.26	7,128.12	1,683.81	8,173.82	7,861.55	1.65	-0.2	0.041
80.00	-29.61	-5.89	0.00	-256.1	0.00	256.08	6,959.92	1,644.07	7,792.67	7,493.03	1.87	-0.21	0.038
82.00	-28.33	-5.80	0.00	-244.3	0.00	244.29	6,155.27	1,476.86	7,073.91	6,705.43	1.96	-0.22	0.041
85.00	-27.37	-5.65	0.00	-226.9	0.00	226.90	6,090.51	1,455.67	6,872.40	6,538.79	2.1	-0.22	0.039
90.00	-25.80	-5.46	0.00	-198.7	0.00	198.66	5,981.05	1,420.35	6,543.00	6,264.00	2.34	-0.23	0.036
95.00	-24.27	-5.27	0.00	-171.4	0.00	171.38	5,863.32	1,385.04	6,221.70	5,986.52	2.59	-0.24	0.033
100.00	-22.77	-5.09	0.00	-145.0	0.00	145.02	5,713.80	1,349.72	5,908.48	5,683.62	2.85	-0.25	0.030
105.00	-21.31	-4.94	0.00	-119.6	0.00	119.59	5,564.29	1,314.40	5,603.36	5,388.58	3.12	-0.26	0.026
108.00	-20.26	-4.79	0.00	-104.8	0.00	104.77	5,474.58	1,293.21	5,424.16	5,215.33	3.28	-0.27	0.024
108.80	-20.01	-4.73	0.00	-100.9	0.00	100.94	5,450.66	1,287.56	5,376.87	5,169.61	3.33	-0.27	0.023
110.00	-19.67	-4.63	0.00	-95.3	0.00	95.26	5,414.77	1,279.08	5,306.32	5,101.41	3.4	-0.27	0.022
115.00	-18.27	-4.45	0.00	-72.1	0.00	72.13	5,265.26	1,243.76	5,017.37	4,822.10	3.68	-0.27	0.018
120.00	-13.34	-3.20	0.00	-49.9	0.00	49.89	5,115.74	1,208.44	4,736.51	4,550.65	3.97	-0.28	0.014
125.00	-11.36	-3.09	0.00	-33.9	0.00	33.91	4,966.23	1,173.12	4,463.74	4,287.07	4.27	-0.28	0.010
125.50	-11.17	-3.01	0.00	-32.4	0.00	32.36	2,860.49	745.14	2,881.01	2,520.88	4.3	-0.28	0.017
130.00	-6.67	-1.60	0.00	-18.8	0.00	18.82	2,812.39	725.27	2,729.45	2,411.94	4.56	-0.29	0.010
135.00	-5.95	-1.44	0.00	-10.8	0.00	10.81	2,757.14	703.20	2,565.85	2,292.06	4.87	-0.29	0.007
140.00	-5.25	-1.34	0.00	-3.6	0.00	3.61	2,699.99	681.12	2,407.31	2,173.54	5.17	-0.29	0.004
141.00	-1.36	-0.32	0.00	-2.3	0.00	2.27	2,688.33	676.71	2,376.20	2,150.02	5.23	-0.29	0.002
145.00	-0.84	-0.18	0.00	-1.0	0.00	0.98	2,640.93	659.05	2,253.82	2,056.55	5.47	-0.29	0.001
150.00	0.00	-0.18	0.00	-0.1	0.00	0.07	2,579.97	636.98	2,105.39	1,941.24	5.77	-0.29	0.000

**EQUIVALENT LATERAL FORCES METHOD ANALYSIS**  
 (Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period ( $S_S$ ):	0.209
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.055
Long-Period Transition Period ( $T_L$ – Seconds):	6
Importance Factor ( $I_a$ ):	1.000
Site Coefficient $F_a$ :	1.600
Site Coefficient $F_v$ :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.223
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.088
Seismic Response Coefficient ( $C_s$ ):	0.042
Upper Limit $C_s$ :	0.042
Lower Limit $C_s$ :	0.030
Period based on Rayleigh Method (sec):	1.400
Redundancy Factor ( $\rho$ ):	1.000
Seismic Force Distribution Exponent ( $k$ ):	1.450
Total Unfactored Dead Load:	66.950 k
Seismic Base Shear (E):	2.810 k

**1.2D + 1.0Ev + 1.0Eh Normal Seismic**

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
36	147.5	630	872	0.023	64	784
35	143	519	688	0.018	50	646
34	140.5	138	178	0.005	13	171
33	137.5	701	877	0.023	64	873
32	132.5	723	857	0.022	63	899
31	127.75	725	815	0.021	60	902
30	125.25	195	213	0.006	16	243
29	122.5	1,982	2,097	0.055	153	2,467
28	117.5	1,361	1,356	0.035	99	1,694
27	112.5	1,395	1,305	0.034	95	1,736
26	109.4	340	305	0.008	22	423
25	108.4	228	202	0.005	15	284
24	106.5	863	745	0.019	55	1,074
23	102.5	1,465	1,198	0.031	88	1,824
22	97.5	1,499	1,140	0.030	83	1,866
21	92.5	1,534	1,080	0.028	79	1,909
20	87.5	1,568	1,019	0.026	75	1,951
19	83.5	957	581	0.015	43	1,191
18	81	1,279	744	0.019	54	1,592
17	77.5	3,249	1,772	0.046	130	4,044
16	72.5	1,826	904	0.024	66	2,273
15	67.5	1,865	832	0.022	61	2,321
14	62.5	1,903	760	0.020	56	2,369
13	57.5	1,942	687	0.018	50	2,417
12	52.5	1,980	614	0.016	45	2,465
11	47.5	2,019	542	0.014	40	2,513
10	42.5	3,906	892	0.023	65	4,861
9	38.5	2,381	471	0.012	34	2,963
8	36	829	149	0.004	11	1,032
7	32.5	2,100	325	0.008	24	2,614
6	27.5	2,139	260	0.007	19	2,662
5	22.5	2,177	198	0.005	14	2,710
4	17.5	2,216	140	0.004	10	2,758
3	12.5	2,254	87	0.002	6	2,806

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
2	7.5	2,150	40	0.001	3	2,676
1	2.5	2,189	8	0.000	1	2,724
Telewave ANT450F6	150	21	30	0.001	2	26
Telewave ANT450F6	108.8	21	19	0.000	1	26
Generic Flat Stand-Off	150	188	266	0.007	19	233
Generic Flat Stand-Off	108	188	165	0.004	12	233
Generic Flat Stand-Off	75	188	97	0.002	7	233
Ericsson Radio 4460 B25+B66	141	327	424	0.011	31	407
Ericsson Radio 4480 B71+B85A	141	252	327	0.008	24	314
Ericsson Air6449 B41	141	312	405	0.010	30	388
RFS APXVAALL24 43-U-NA20	141	368	478	0.012	35	459
Generic Round Platform with Handrails	141	2,500	3,243	0.084	237	3,111
Generic Round Platform with Handrails	120	2,500	2,568	0.067	188	3,111
Commscope CBC78T-DS-43-2X	130	62	72	0.002	5	77
Samsung B2/B66A RRH-BR049	130	506	584	0.015	43	630
RFS APL868013-42T0	130	38	44	0.001	3	47
Commscope RC3DC-3315-PF-48	130	64	74	0.002	5	80
Samsung MT6407-77A	130	245	282	0.007	21	305
Commscope JAHH-65B-R3B	130	364	419	0.011	31	453
Generic Flat Platform with Handrails	130	2,500	2,883	0.075	211	3,111
Powerwave Allgon LGP21401	120	85	87	0.002	6	105
Raycap DC6-48-60-18-8F	120	20	21	0.000	2	25
Raycap DC6-48-60-18-8F ("Squid")	120	32	33	0.001	2	40
Ericsson RRUS 4415 B25	120	138	142	0.004	10	172
Ericsson RRUS 4478 B5	120	180	185	0.005	13	224
Ericsson RRUS-11 1900 MHz	120	132	136	0.004	10	164
Powerwave Allgon 7770.00	120	105	108	0.003	8	131
Andrew SBNHH-1D65A (33.5 lbs)	120	34	34	0.001	3	42
Andrew DBXNH-6565B-R2M (72.7")	120	46	48	0.001	3	58
KMW AM-X-CD-17-65-00T-RET (96" Height)	120	60	61	0.002	4	74
KMW EPBQ-654L8H6-L2	120	73	75	0.002	5	91
KMW EPBQ-654L8H8-L2	120	172	177	0.005	13	214
Generic GPS	75	10	5	0.000	0	12
		66,954	38,442	1.000	2,812	83,330

**0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
36	147.5	630	872	0.023	64	539
35	143	519	688	0.018	50	444
34	140.5	138	178	0.005	13	118
33	137.5	701	877	0.023	64	600
32	132.5	723	857	0.022	63	618
31	127.75	725	815	0.021	60	620
30	125.25	195	213	0.006	16	167
29	122.5	1,982	2,097	0.055	153	1,695
28	117.5	1,361	1,356	0.035	99	1,164
27	112.5	1,395	1,305	0.034	95	1,193
26	109.4	340	305	0.008	22	291
25	108.4	228	202	0.005	15	195
24	106.5	863	745	0.019	55	738
23	102.5	1,465	1,198	0.031	88	1,253
22	97.5	1,499	1,140	0.030	83	1,283
21	92.5	1,534	1,080	0.028	79	1,312
20	87.5	1,568	1,019	0.026	75	1,341
19	83.5	957	581	0.015	43	819
18	81	1,279	744	0.019	54	1,094
17	77.5	3,249	1,772	0.046	130	2,780
16	72.5	1,826	904	0.024	66	1,562
15	67.5	1,865	832	0.022	61	1,595
14	62.5	1,903	760	0.020	56	1,628
13	57.5	1,942	687	0.018	50	1,661

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vz</sub>	Horizontal Force (lb)	Vertical Force (lb)
12	52.5	1,980	614	0.016	45	1,694
11	47.5	2,019	542	0.014	40	1,727
10	42.5	3,906	892	0.023	65	3,341
9	38.5	2,381	471	0.012	34	2,036
8	36	829	149	0.004	11	709
7	32.5	2,100	325	0.008	24	1,797
6	27.5	2,139	260	0.007	19	1,829
5	22.5	2,177	198	0.005	14	1,862
4	17.5	2,216	140	0.004	10	1,895
3	12.5	2,254	87	0.002	6	1,928
2	7.5	2,150	40	0.001	3	1,839
1	2.5	2,189	8	0.000	1	1,872
Telewave ANT450F6	150	21	30	0.001	2	18
Telewave ANT450F6	108.8	21	19	0.000	1	18
Generic Flat Stand-Off	150	188	266	0.007	19	160
Generic Flat Stand-Off	108	188	165	0.004	12	160
Generic Flat Stand-Off	75	188	97	0.002	7	160
Ericsson Radio 4460 B25+B66	141	327	424	0.011	31	280
Ericsson Radio 4480 B71+B85A	141	252	327	0.008	24	216
Ericsson Air6449 B41	141	312	405	0.010	30	267
RFS APXVAALL24 43-U-NA20	141	368	478	0.012	35	315
Generic Round Platform with Handrails	141	2,500	3,243	0.084	237	2,139
Generic Round Platform with Handrails	120	2,500	2,568	0.067	188	2,139
Commscope CBC78T-DS-43-2X	130	62	72	0.002	5	53
Samsung B2/B66A RRH-BR049	130	506	584	0.015	43	433
RFS APL868013-42T0	130	38	44	0.001	3	32
Commscope RC3DC-3315-PF-48	130	64	74	0.002	5	55
Samsung MT6407-77A	130	245	282	0.007	21	209
Commscope JAHH-65B-R3B	130	364	419	0.011	31	311
Generic Flat Platform with Handrails	130	2,500	2,883	0.075	211	2,139
Powerwave Allgon LGP21401	120	85	87	0.002	6	72
Raycap DC6-48-60-18-8F	120	20	21	0.000	2	17
Raycap DC6-48-60-18-8F ("Squid")	120	32	33	0.001	2	27
Ericsson RRUS 4415 B25	120	138	142	0.004	10	118
Ericsson RRUS 4478 B5	120	180	185	0.005	13	154
Ericsson RRUS-11 1900 MHz	120	132	136	0.004	10	113
Powerwave Allgon 7770.00	120	105	108	0.003	8	90
Andrew SBNHH-1D65A (33.5 lbs)	120	34	34	0.001	3	29
Andrew DBXNH-6565B-R2M (72.7")	120	46	48	0.001	3	40
KMW AM-X-CD-17-65-00T-RET (96" Height)	120	60	61	0.002	4	51
KMW EPBQ-654L8H6-L2	120	73	75	0.002	5	62
KMW EPBQ-654L8H8-L2	120	172	177	0.005	13	147
Generic GPS	75	10	5	0.000	0	9
		66,954	38,442	1.000	2,812	57,273

**1.2D + 1.0Ev + 1.0Eh Normal Seismic**

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-80.61	-2.81	0.00	-300.92	0.00	300.92	8,846.41	2,244.56	14,523	13,039.59	0.00	0.00	0.03
5.00	-77.93	-2.82	0.00	-286.85	0.00	286.85	8,742.67	2,204.83	14,014	12,656.78	0.00	-0.01	0.03
10.00	-75.12	-2.82	0.00	-272.76	0.00	272.76	8,637.03	2,165.09	13,513	12,276.73	0.01	-0.01	0.03
15.00	-72.37	-2.81	0.00	-258.67	0.00	258.67	8,529.48	2,125.36	13,022	11,899.57	0.02	-0.02	0.03
20.00	-69.66	-2.80	0.00	-244.60	0.00	244.60	8,420.03	2,085.63	12,540	11,525.46	0.04	-0.02	0.03
25.00	-66.99	-2.79	0.00	-230.58	0.00	230.58	8,308.68	2,045.89	12,067	11,154.55	0.07	-0.03	0.03
30.00	-64.38	-2.77	0.00	-216.62	0.00	216.62	8,195.41	2,006.16	11,602	10,786.99	0.10	-0.03	0.03
35.00	-63.35	-2.76	0.00	-202.77	0.00	202.77	8,080.25	1,966.43	11,147	10,422.93	0.13	-0.04	0.03
37.00	-60.38	-2.73	0.00	-197.24	0.00	197.24	8,033.65	1,950.53	10,968	10,278.32	0.15	-0.04	0.03
40.00	-55.52	-2.67	0.00	-189.05	0.00	189.05	7,963.17	1,926.69	10,702	10,062.51	0.17	-0.04	0.03
45.00	-53.01	-2.63	0.00	-175.73	0.00	175.73	7,949.84	1,922.21	10,652	10,022.07	0.22	-0.05	0.02
50.00	-50.55	-2.59	0.00	-162.59	0.00	162.59	7,830.65	1,882.48	10,216	9,665.90	0.27	-0.05	0.02
55.00	-48.13	-2.54	0.00	-149.66	0.00	149.66	7,709.55	1,842.74	9,789	9,313.69	0.32	-0.05	0.02
60.00	-45.76	-2.48	0.00	-136.98	0.00	136.98	7,586.54	1,803.01	9,372	8,965.60	0.38	-0.06	0.02
65.00	-43.44	-2.42	0.00	-124.57	0.00	124.57	7,461.63	1,763.28	8,963	8,621.78	0.45	-0.06	0.02

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
70.00	-41.17	-2.36	0.00	-112.46	0.00	112.46	7,296.33	1,723.54	8,564	8,238.92	0.51	-0.07	0.02
75.00	-36.88	-2.22	0.00	-100.68	0.00	100.68	7,128.12	1,683.81	8,174	7,861.55	0.59	-0.07	0.02
80.00	-35.28	-2.16	0.00	-89.60	0.00	89.60	6,959.92	1,644.07	7,793	7,493.03	0.67	-0.08	0.02
82.00	-34.09	-2.12	0.00	-85.27	0.00	85.27	6,155.27	1,476.86	7,074	6,705.43	0.70	-0.08	0.02
85.00	-32.14	-2.04	0.00	-78.92	0.00	78.92	6,090.51	1,455.67	6,872	6,538.79	0.75	-0.08	0.02
90.00	-30.23	-1.96	0.00	-68.70	0.00	68.70	5,981.05	1,420.35	6,543	6,264.00	0.83	-0.08	0.02
95.00	-28.37	-1.88	0.00	-58.89	0.00	58.89	5,863.32	1,385.04	6,222	5,986.52	0.92	-0.09	0.02
100.00	-26.54	-1.79	0.00	-49.49	0.00	49.49	5,713.80	1,349.72	5,908	5,683.62	1.01	-0.09	0.01
105.00	-25.47	-1.73	0.00	-40.55	0.00	40.55	5,564.29	1,314.40	5,603	5,388.58	1.11	-0.09	0.01
108.00	-24.95	-1.71	0.00	-35.34	0.00	35.34	5,474.58	1,293.21	5,424	5,215.33	1.17	-0.09	0.01
108.80	-24.50	-1.68	0.00	-33.98	0.00	33.98	5,450.66	1,287.56	5,377	5,169.61	1.18	-0.09	0.01
110.00	-22.77	-1.59	0.00	-31.96	0.00	31.96	5,414.77	1,279.08	5,306	5,101.41	1.21	-0.10	0.01
115.00	-21.07	-1.48	0.00	-24.03	0.00	24.03	5,265.26	1,243.76	5,017	4,822.10	1.31	-0.10	0.01
120.00	-14.16	-1.05	0.00	-16.61	0.00	16.61	5,115.74	1,208.44	4,737	4,550.65	1.41	-0.10	0.01
125.00	-13.91	-1.03	0.00	-11.36	0.00	11.36	4,966.23	1,173.12	4,464	4,287.07	1.52	-0.10	0.01
125.50	-13.01	-0.97	0.00	-10.84	0.00	10.84	2,860.49	745.14	2,881	2,520.88	1.53	-0.10	0.01
130.00	-7.41	-0.58	0.00	-6.46	0.00	6.46	2,812.39	725.27	2,729	2,411.94	1.62	-0.10	0.01
135.00	-6.54	-0.52	0.00	-3.55	0.00	3.55	2,757.14	703.20	2,566	2,292.06	1.73	-0.10	0.00
140.00	-6.37	-0.50	0.00	-0.96	0.00	0.96	2,699.99	681.12	2,407	2,173.54	1.83	-0.10	0.00
141.00	-1.04	-0.09	0.00	-0.46	0.00	0.46	2,688.33	676.71	2,376	2,150.02	1.85	-0.10	0.00
145.00	-0.26	-0.02	0.00	-0.11	0.00	0.11	2,640.93	659.05	2,254	2,056.55	1.94	-0.10	0.00
150.00	0.00	-0.02	0.00	0.00	0.00	0.00	2,579.97	636.98	2,105	1,941.24	2.05	-0.10	0.00

**0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)**

**CALCULATED FORCES**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-55.40	-2.81	0.00	-299.36	0.00	299.36	8,846.41	2,244.56	14,523	13,039.59	0.00	0.00	0.03
5.00	-53.56	-2.81	0.00	-285.29	0.00	285.29	8,742.67	2,204.83	14,014	12,656.78	0.00	-0.01	0.03
10.00	-51.63	-2.81	0.00	-271.22	0.00	271.22	8,637.03	2,165.09	13,513	12,276.73	0.01	-0.01	0.03
15.00	-49.74	-2.81	0.00	-257.16	0.00	257.16	8,529.48	2,125.36	13,022	11,899.57	0.02	-0.02	0.03
20.00	-47.87	-2.80	0.00	-243.12	0.00	243.12	8,420.03	2,085.63	12,540	11,525.46	0.04	-0.02	0.03
25.00	-46.04	-2.78	0.00	-229.14	0.00	229.14	8,308.68	2,045.89	12,067	11,154.55	0.07	-0.03	0.03
30.00	-44.25	-2.76	0.00	-215.25	0.00	215.25	8,195.41	2,006.16	11,602	10,786.99	0.10	-0.03	0.03
35.00	-43.54	-2.75	0.00	-201.45	0.00	201.45	8,080.25	1,966.43	11,147	10,422.93	0.13	-0.04	0.03
37.00	-41.50	-2.72	0.00	-195.95	0.00	195.95	8,033.65	1,950.53	10,968	10,278.32	0.15	-0.04	0.02
40.00	-38.16	-2.65	0.00	-187.80	0.00	187.80	7,963.17	1,926.69	10,702	10,062.51	0.17	-0.04	0.02
45.00	-36.43	-2.61	0.00	-174.54	0.00	174.54	7,949.84	1,922.21	10,652	10,022.07	0.21	-0.05	0.02
50.00	-34.74	-2.57	0.00	-161.47	0.00	161.47	7,830.65	1,882.48	10,216	9,665.90	0.26	-0.05	0.02
55.00	-33.08	-2.52	0.00	-148.62	0.00	148.62	7,709.55	1,842.74	9,789	9,313.69	0.32	-0.05	0.02
60.00	-31.45	-2.47	0.00	-136.01	0.00	136.01	7,586.54	1,803.01	9,372	8,965.60	0.38	-0.06	0.02
65.00	-29.86	-2.41	0.00	-123.68	0.00	123.68	7,461.63	1,763.28	8,963	8,621.78	0.44	-0.06	0.02
70.00	-28.29	-2.34	0.00	-111.65	0.00	111.65	7,296.33	1,723.54	8,564	8,238.92	0.51	-0.07	0.02
75.00	-25.34	-2.20	0.00	-99.95	0.00	99.95	7,128.12	1,683.81	8,174	7,861.55	0.58	-0.07	0.02
80.00	-24.25	-2.15	0.00	-88.94	0.00	88.94	6,959.92	1,644.07	7,793	7,493.03	0.66	-0.08	0.02
82.00	-23.43	-2.10	0.00	-84.65	0.00	84.65	6,155.27	1,476.86	7,074	6,705.43	0.69	-0.08	0.02
85.00	-22.09	-2.03	0.00	-78.34	0.00	78.34	6,090.51	1,455.67	6,872	6,538.79	0.74	-0.08	0.02
90.00	-20.78	-1.95	0.00	-68.19	0.00	68.19	5,981.05	1,420.35	6,543	6,264.00	0.83	-0.08	0.01
95.00	-19.50	-1.86	0.00	-58.45	0.00	58.45	5,863.32	1,385.04	6,222	5,986.52	0.92	-0.09	0.01
100.00	-18.24	-1.78	0.00	-49.12	0.00	49.12	5,713.80	1,349.72	5,908	5,683.62	1.01	-0.09	0.01
105.00	-17.50	-1.72	0.00	-40.24	0.00	40.24	5,564.29	1,314.40	5,603	5,388.58	1.10	-0.09	0.01
108.00	-17.15	-1.69	0.00	-35.08	0.00	35.08	5,474.58	1,293.21	5,424	5,215.33	1.16	-0.09	0.01
108.80	-16.84	-1.67	0.00	-33.72	0.00	33.72	5,450.66	1,287.56	5,377	5,169.61	1.18	-0.09	0.01
110.00	-15.65	-1.57	0.00	-31.72	0.00	31.72	5,414.77	1,279.08	5,306	5,101.41	1.20	-0.09	0.01
115.00	-14.48	-1.47	0.00	-23.85	0.00	23.85	5,265.26	1,243.76	5,017	4,822.10	1.30	-0.10	0.01
120.00	-9.73	-1.04	0.00	-16.49	0.00	16.49	5,115.74	1,208.44	4,737	4,550.65	1.40	-0.10	0.01
125.00	-9.56	-1.03	0.00	-11.28	0.00	11.28	4,966.23	1,173.12	4,464	4,287.07	1.51	-0.10	0.01
125.50	-8.94	-0.97	0.00	-10.76	0.00	10.76	2,860.49	745.14	2,881	2,520.88	1.52	-0.10	0.01
130.00	-5.09	-0.58	0.00	-6.41	0.00	6.41	2,812.39	725.27	2,729	2,411.94	1.61	-0.10	0.00
135.00	-4.49	-0.51	0.00	-3.52	0.00	3.52	2,757.14	703.20	2,566	2,292.06	1.72	-0.10	0.00
140.00	-4.38	-0.50	0.00	-0.96	0.00	0.96	2,699.99	681.12	2,407	2,173.54	1.82	-0.10	0.00
141.00	-0.72	-0.09	0.00	-0.46	0.00	0.46	2,688.33	676.71	2,376	2,150.02	1.84	-0.10	0.00
145.00	-0.18	-0.02	0.00	-0.11	0.00	0.11	2,640.93	659.05	2,254	2,056.55	1.93	-0.10	0.00
150.00	0.00	-0.02	0.00	0.00	0.00	0.00	2,579.97	636.98	2,105	1,941.24	2.03	-0.10	0.00

ASSET: 302527, East Haddam  
 CUSTOMER: SPRINT NEXTEL

CODE: ANSI/TIA-222-H  
 ENG NO: 13714288\_C3\_01

ANALYSIS SUMMARY

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W Normal	41.77	0.00	80.32	0.00	0.00	4037.30	0.00	0.32
0.9D + 1.0W Normal	41.76	0.00	60.23	0.00	0.00	4020.31	0.00	0.32
1.2D + 1.0Di + 1.0Wi Normal	10.88	0.00	100.51	0.00	0.00	1026.72	0.00	0.09
1.2D + 1.0Ev + 1.0Eh Normal	2.82	0.00	80.61	0.00	0.00	300.92	0.00	0.03
0.9D - 1.0Ev + 1.0Eh Normal	2.81	0.00	55.40	0.00	0.00	299.36	0.00	0.03
1.0D + 1.0W Service Normal	8.89	0.00	66.95	0.00	0.00	857.19	0.00	0.07



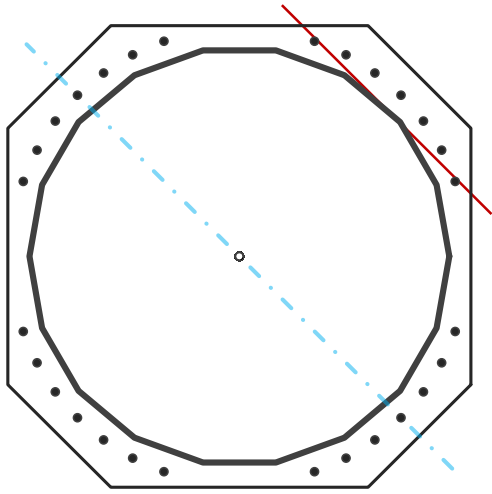
## Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	72.2	in
Thickness	9/16	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	4,037.3	k-ft
Axial, Pu	80.3	k
Shear, Vu	41.8	k
Neutral Axis	315	°

Report Capacities		
Component	Capacity	Result
Base Plate	20%	Pass
Anchor Rods	37%	Pass
Dwyidag	-	-

Base Plate		
Shape	Square	-
Width	81	in
Thickness	3 1/2	in
Grade	A572-55	
Yield Strength, Fy	55	ksi
Tensile Strength, Fu	70	ksi
Clip	18	in
Orientation Offset	0	°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	3	in
Applied Moment, Mu	1292.5	k
Bending Stress, $\phi Mn$	6552.8	k



Original Anchor Rods		
Arrangement	Cluster	-
Quantity	28	-
Diameter, $\phi$	2 1/4	in
Bolt Circle	80	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	89.4	k
Anchor Rods, $\phi Pn$	243.6	k

# Calculations for Monopole Base Plate & Anchor Rod Analysis

## Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	41.8	4037.3	1.00
Anchor Rod Forces	41.8	4037.3	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

## Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in <sup>2</sup>	in <sup>2</sup>	in <sup>4</sup>	#	in <sup>4</sup>
Pole	125.9522	6.9973	0.7409		80810.58
Bolt	3.9761	3.2477	0.8393	4.5	72771.75
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	81	in
Thickness, t	3.5	in
Yield Strength, Fy	55	ksi
Tensile Strength, Fu	70	ksi
Base Plate Chord	36.717	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	28	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	80	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	89.4	k
Applied Shear, Vu	0.4	k
Compressive Capacity, φPn	243.6	k
Tensile Capacity, φRnt	0.367	OK
Interaction Capacity	0.370	OK

External Base Plate		
Chord Length AA	42.226	in
Additional AA	1.000	in
Section Modulus, Z	132.381	in <sup>3</sup>
Applied Moment, Mu	1292.5	k-ft
Bending Capacity, φMn	6552.8	k-ft
Capacity, Mu/φMn	0.197	OK
Chord Length AB	41.111	in
Additional AB	1.000	in
Section Modulus, Z	128.964	in <sup>3</sup>
Applied Moment, Mu	1048.7	k-ft
Bending Capacity, φMn	6383.7	k-ft
Capacity, Mu/φMn	0.164	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		



**AMERICAN TOWER®**  
CORPORATION

This report was prepared for American Tower Corporation by



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## Antenna Mount Analysis Report

**ATC Site Name** : East Haddam, CT  
**ATC Site Number** : 302527  
**Engineering Number** : 13653958\_C8\_06  
**Mount Elevation** : 141 ft  
**Carrier** : Sprint Nextel  
**Carrier Site Name** : CTHA843A  
**Carrier Site Number** : CTHA843A  
**Site Location** : 135 Honey Hill Road  
East Haddam, CT 06423  
41.436958, -72.366393  
**County** : Middlesex  
**Date** : August 16, 2021  
**Max Usage** : 68%  
**Result** : Pass

Prepared By:  
Dmitriy Albul  
Qualified Engineer

Reviewed By:



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Calculations .....	Attached

## Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Sprint Nextel at 141 ft.

## Supporting Documents

<b>RFDS</b>	RFDS Ver. 1, dated July 9, 2021
<b>Other</b>	Preview Exhibit by American Tower Corporation
<b>Spec. Sheet</b>	Perfect Vision PV-LPP Series

## Analysis

This antenna mount was analyzed using RISA-3D v13 analysis software

<b>Basic Wind Speed:</b>	123 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Codes:</b>	ANSI/TIA-222-H
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Procedure:</b>	Method II
<b>Topographic Feature:</b>	Flat
<b>Crest Height:</b>	0 t
<b>Crest Length:</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.209, S_1 = 0.055$
<b>Site Class:</b>	D - Stiff Soil
<b>Live Loads:</b>	$L_m = 500 \text{ lbs}, L_v = 250 \text{ lbs}$

## Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed. The mount can support the equipment as described in this report. Analysis is based on new Perfect Vision PV-LPPGS Mount.

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

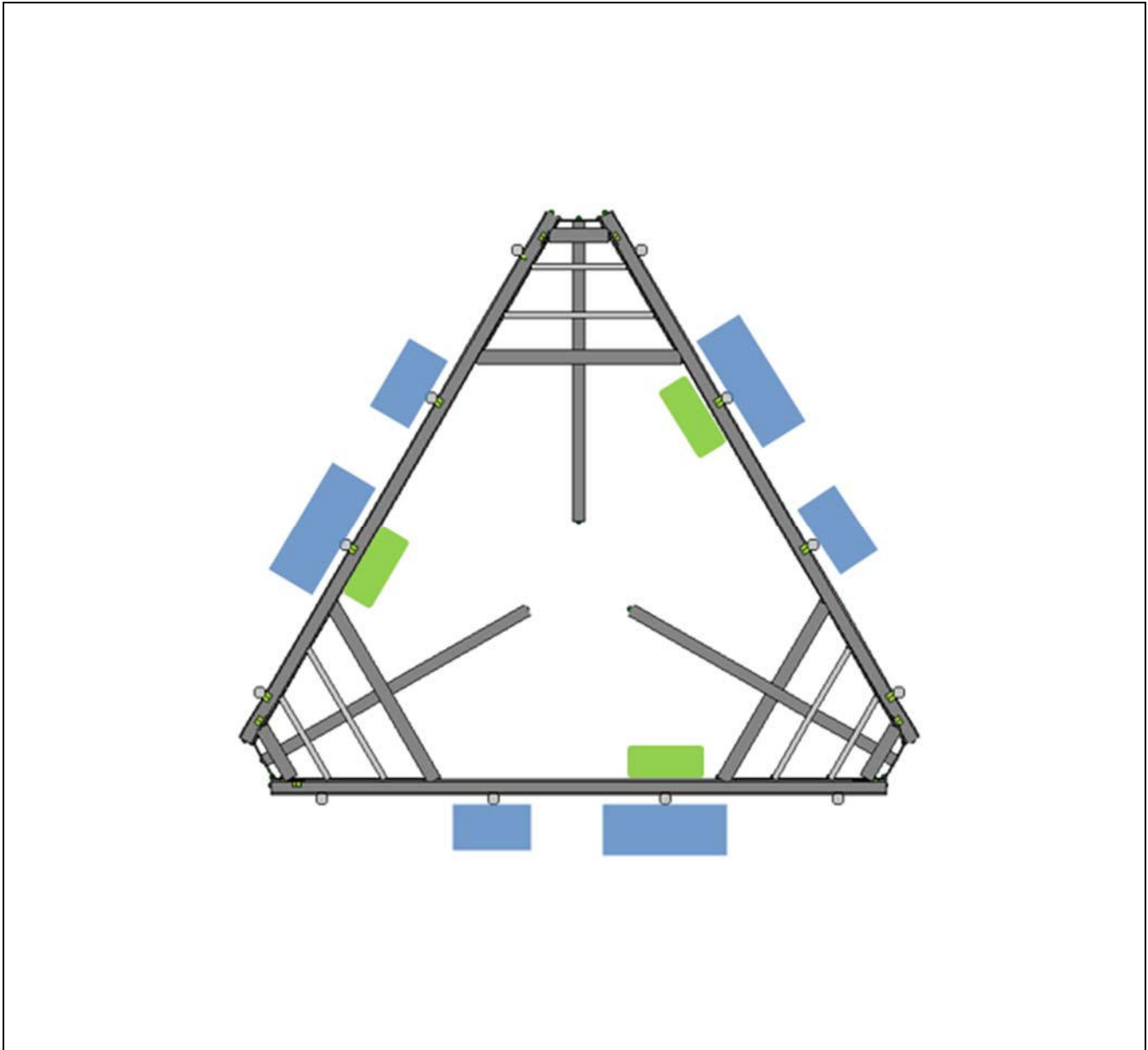
**Antenna Loading**

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
141.0	141.0	3	RFS APXVAALL24_24_43-U-NA20
		3	Ericsson AIR6449 B41
		3	Ericsson Radio 4460 B25+B66
		3	Ericsson Radio 4480 B71+B85A

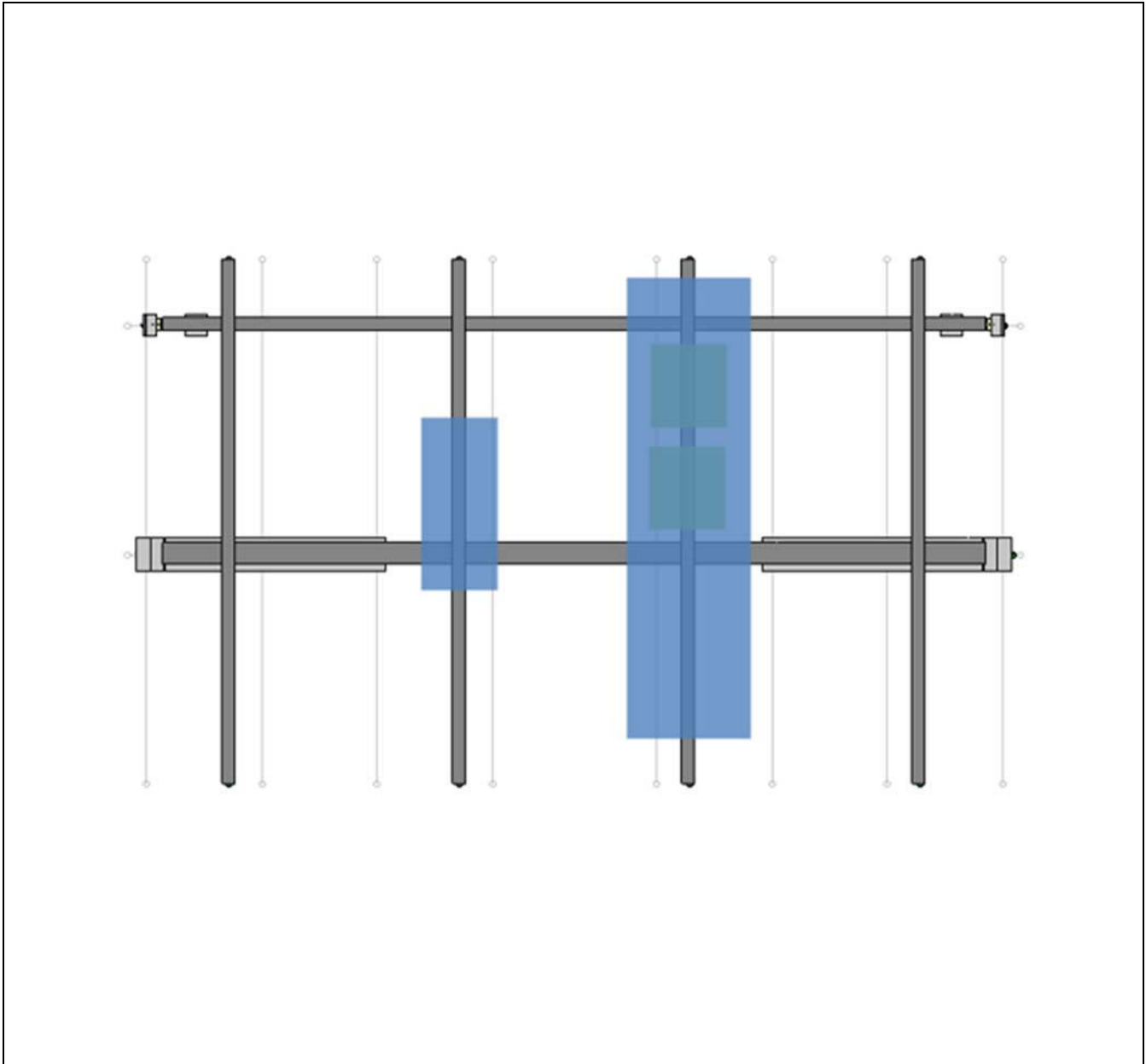
**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Frame Rails	18%	Pass
Arms	28%	Pass
Cross Arms	34%	Pass
Mount Pipes	51%	Pass
Plates	68%	Pass
Handrails	19%	Pass
Connections	26%	Pass

**Mount Layout**



**Equipment Layout**





### **Standard Conditions**

All engineering services performed by ATC Tower Services, LLC 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 ATC Tower Services, LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, LLC and used in the performance of our engineering services is correct and complete.

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

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 ATC Tower Services, LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

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



Date:	8/16/2021
Site Name:	East Haddam, CT
Project Engineer:	DVA
Project No.:	13653958_C8_06
Customer:	American Tower Corporation
Carrier:	Sprint Nextel

Building Code:	2018	
ASCE Standard:	ASCE 7-16	
TIA Standard:	H	
Mount Type:	Platform	
Mount Existing?	Existing	
Mount Centerline:	141	ft
Superstructure Height:	N/A	ft
Structure Type:	Tower	

Site Information		
Exposure Category:	B	
Risk Category:	II	
Ground Elevation:	487.3	ft
Ultimate Wind Speed:	123	mph
Design Wind Speed:	123	mph
Ice Thickness:	1.00	in
Ice Wind Speed:	50.0	mph
Escalated Ice Thickness:	0.98	in
Topographic Method:	2	
Topographic Category:	1	

Factors	
Gh:	1.000
K <sub>min</sub> :	0.700
K <sub>z</sub> :	1.090
K <sub>g</sub> :	0.950
K <sub>st</sub> :	1.000
Ke:	0.983
Ka:	0.900
Kes(Wind):	0.950
Kes(Ice):	0.850
I <sub>wind</sub> :	1.000
I <sub>ice</sub> :	1.000

q <sub>z</sub> :	39.41	psf
Surface Wind Pressure:	0.00	psf

Run Seismic?	Yes
Site Soil:	D (Default)
Short-Period Accel. (Ss):	0.2090
1-Second Accel. (S1):	0.0550
Short-Period Design (SDS):	0.2230
1-Second Design (SD1):	0.0880
Short-Period Coeff. (Fa):	1.6000
1-Second Coeff. (Fv):	2.4000
Cs	0.1115
Cs min	0.0300
Amplification Factor (ap):	1.00
Response Mod. (Rp):	2.50
Overstrength (Ωo):	1.00

Service Wind:	30.0	mph
Lm (man live load) =	500.0	lb
Lv (man live load) =	250.0	lb

Table 1. Equipment Specifications and Wind Pressure

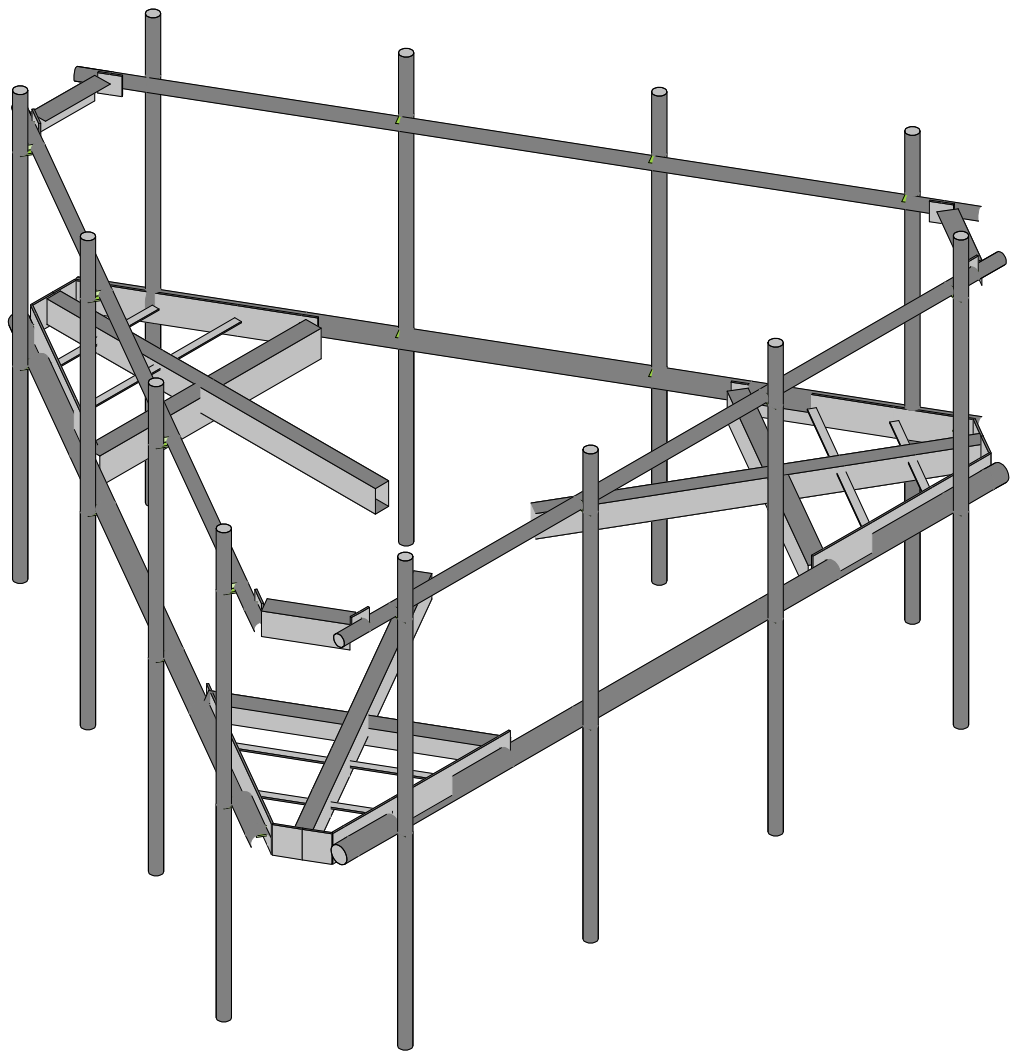
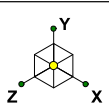
Manufacturer	Model	Elevation	Pipe Label	Weight (lb)	Height (in)	Width (in)	Depth (in)	EPA <sub>N</sub>	EPA <sub>T</sub>	EPA <sub>N w/ Ice</sub>	EPA <sub>T w/ Ice</sub>	q <sub>z</sub> :	q <sub>z ice +</sub>	q <sub>z live +</sub>
RFS/CELWAVE	APXVAALL24 24 43-U-NA20	141	62, 74, 86	122.80	95.9	24	8.5	20.24	8.73	22.17	10.52	39.41	6.51	2.34
ERICSSON	AIR6449 B41	141	59, 71, 83	104.00	33.1	20.6	8.6	5.28	2.05	6.18	2.76	39.41	6.51	2.34
ERICSSON	Radio 4460 B25+B66	141	62, 74, 86	109.00	19.6	15.7	12.1	2.45	1.91	3.02	2.44	39.41	6.51	2.34
ERICSSON	Radio 4480 B71+B85A	141	62, 74, 86	84.00	21.8	15.7	7.5	2.73	1.38	3.35	1.88	39.41	6.51	2.34

Table 2. Equipment Wind and Seismic Loads

Manufacturer	Model	Wind Load (F <sub>w</sub> ), lb	Wind Load Ice Case (F <sub>w</sub> ), lb	Wind Load Service Case	Seismic				
RFS/CELWAVE	APXVAALL24 24 43-U-NA20	682	123	123	59	259	43	18	13.7
ERICSSON	AIR6449 B41	178	34	34	15	79	11	4	11.6
ERICSSON	Radio 4460 B25+B66	82	17	17	14	42	5	4	12.2
ERICSSON	Radio 4480 B71+B85A	92	19	19	10	41	6	3	9.4

Table 3. Member Capacities

Member Name	Member Shape	Wind load (plf)	Wind Load Ice (plf)	Weight Ice (plf)	Bending Check	Shear Check	Total Capacity	Controlling Capacity
Inner Grating Plate	1.5" x 0.25" Plate	9.36	1.38	0.35	32%	5%	32%	68%
Grating Plate	6"x0.375" Plate	37.44	5.54	0.81	36%	3%	36%	
Arm	HSS5x3x6	31.20	4.61	0.71	28%	7%	28%	
Cross Arm	L6x3.5x5	37.44	5.54	0.81	34%	4%	34%	
Frame Rail	PIPE 3.0	13.10	1.94	0.56	18%	7%	18%	
Top Plate	4" x 0.375" Plate	24.96	3.69	0.61	32%	68%	68%	
Top Connection	L5x3.5x4	31.20	4.61	0.71	7%	9%	9%	
Handrail	PIPE 2.0	8.91	1.32	0.44	19%	15%	19%	
Mount Pipe	PIPE 2.0	8.91	1.32	0.44	51%	11%	51%	



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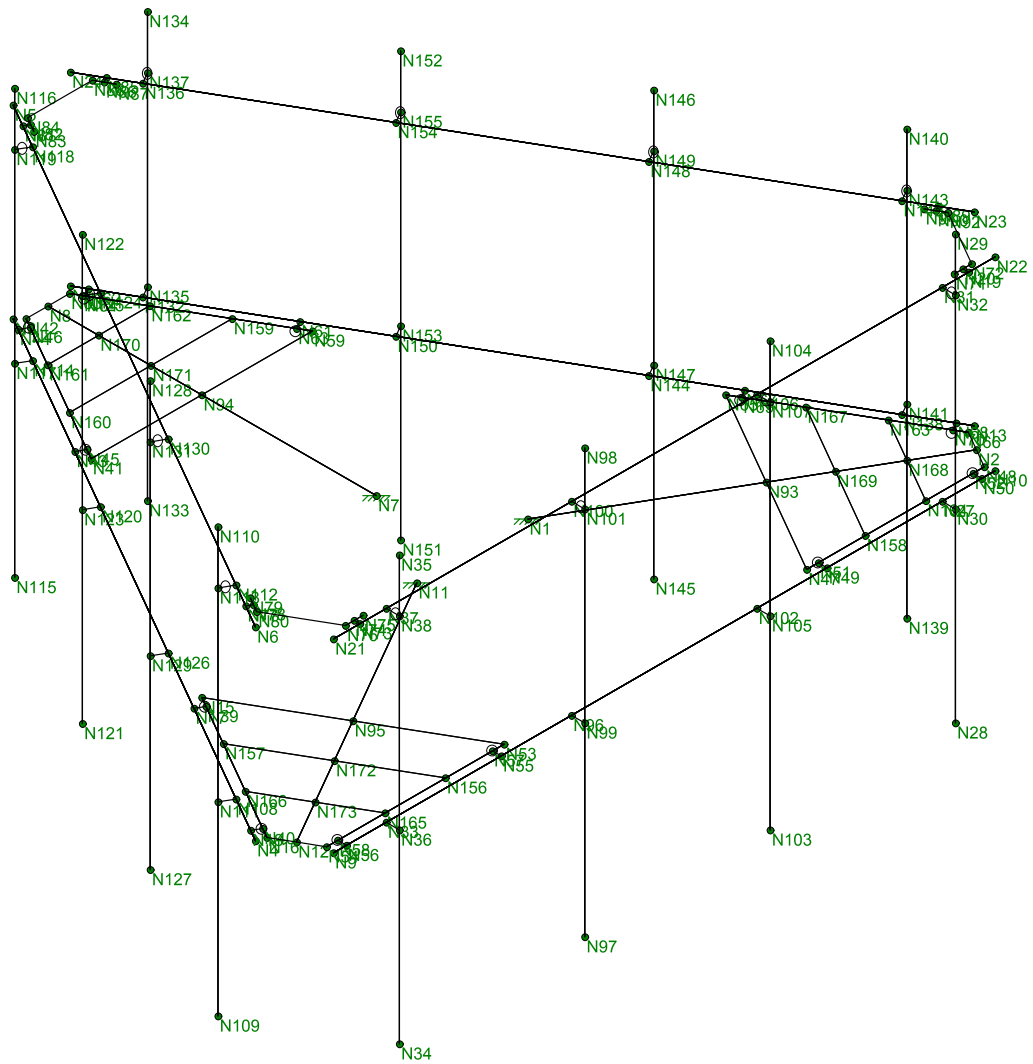
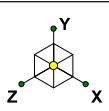
13653958\_C8\_06

East Haddam, CT  
Platform Model

SK - 1

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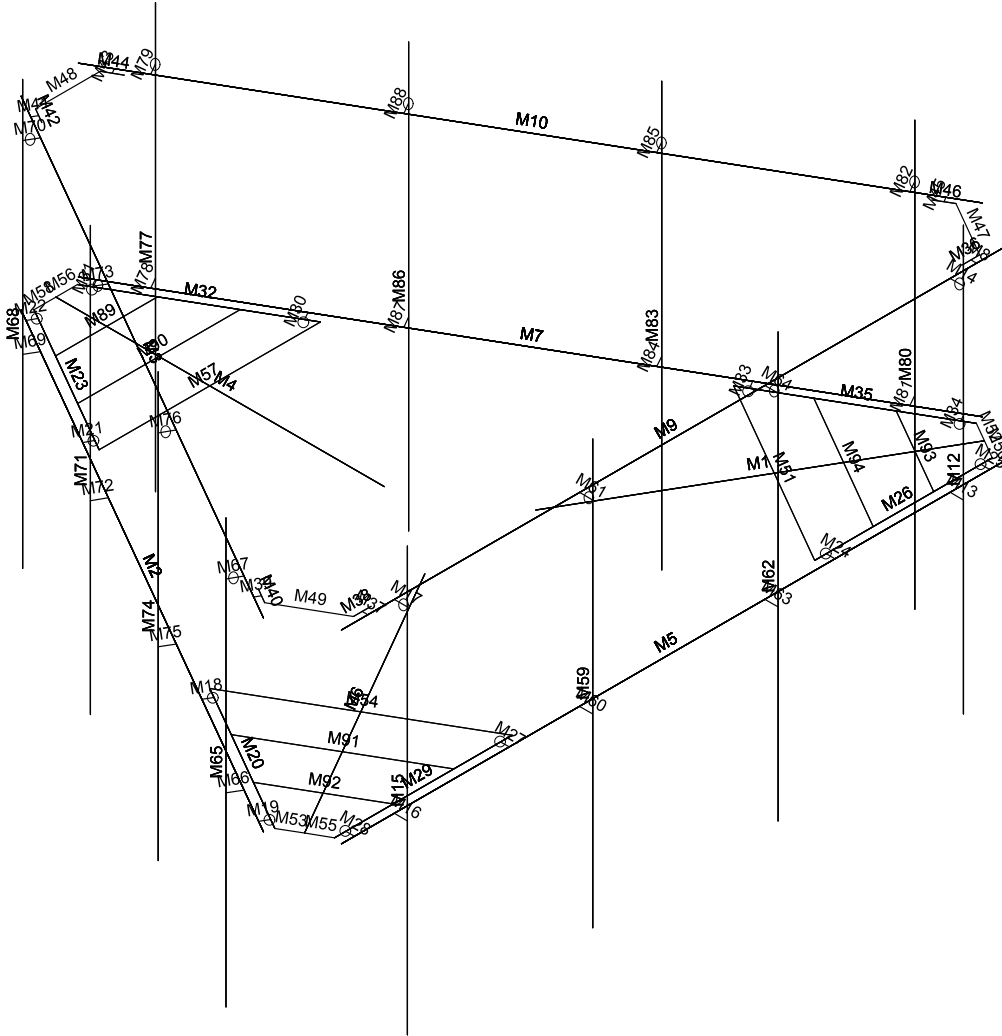
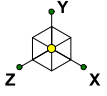
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SMJ International, LLC	East Haddam, CT	SK - 2
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Joint Labels



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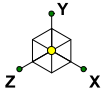
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East Haddam, CT  
Member Labels

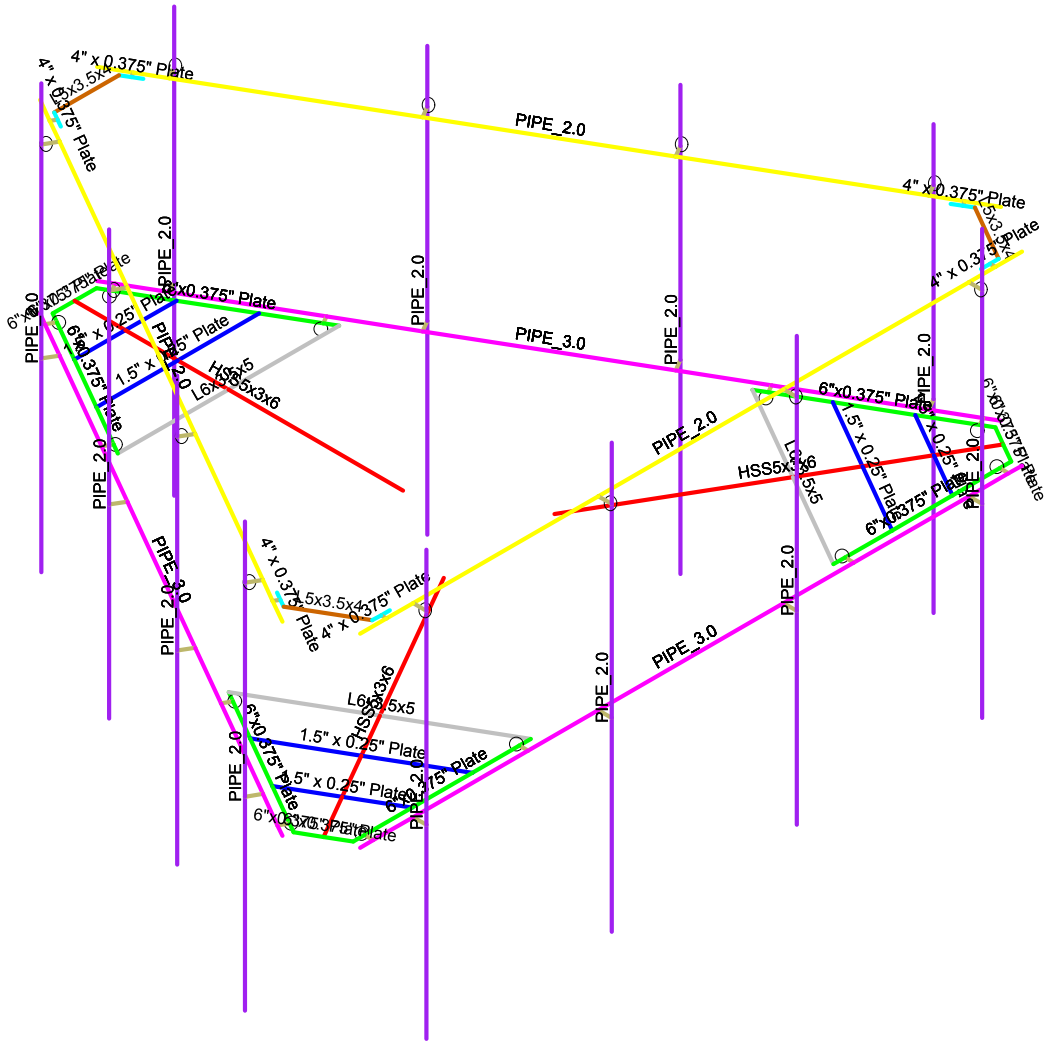
SK - 3

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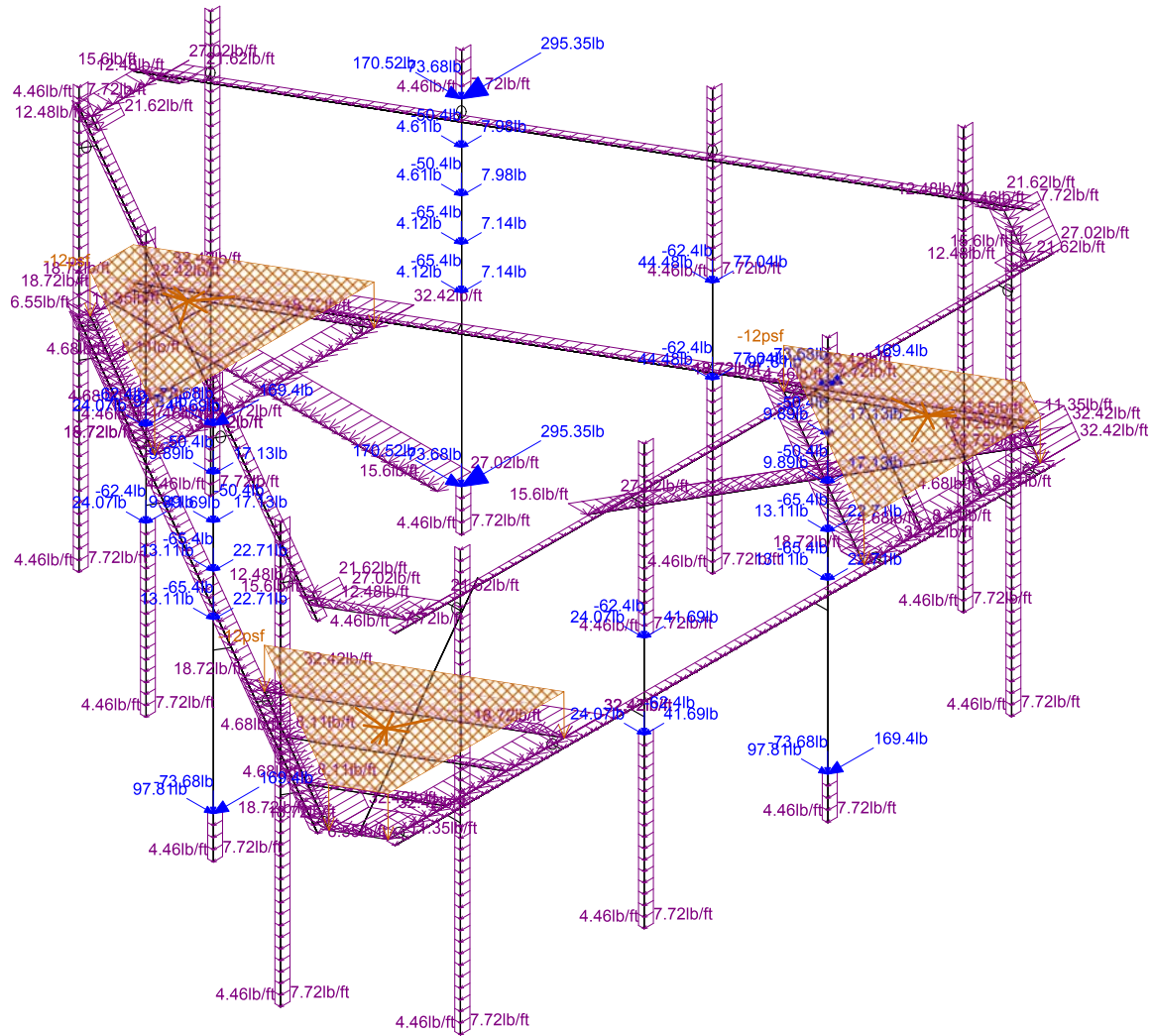
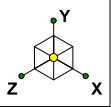
Section Sets	
Blue	Inner_Grating_Plate
Green	Grating_Plate
Red	Arm
Grey	Cross_Arm
Pink	Frame_Rail
Cyan	Top_Plate
Orange	Top_Connection
Yellow	Handrail
Purple	Mount_Pipe
Brown	RIGID



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SMJ International, LLC	East Haddam, CT Member Shapes	SK - 4
DVA		Aug 16, 2021 at 3:54 PM
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Loads: LC 10, 1.2DL + 1WL AZI 240  
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SMJ International, LLC

DVA

13653958\_C8\_06

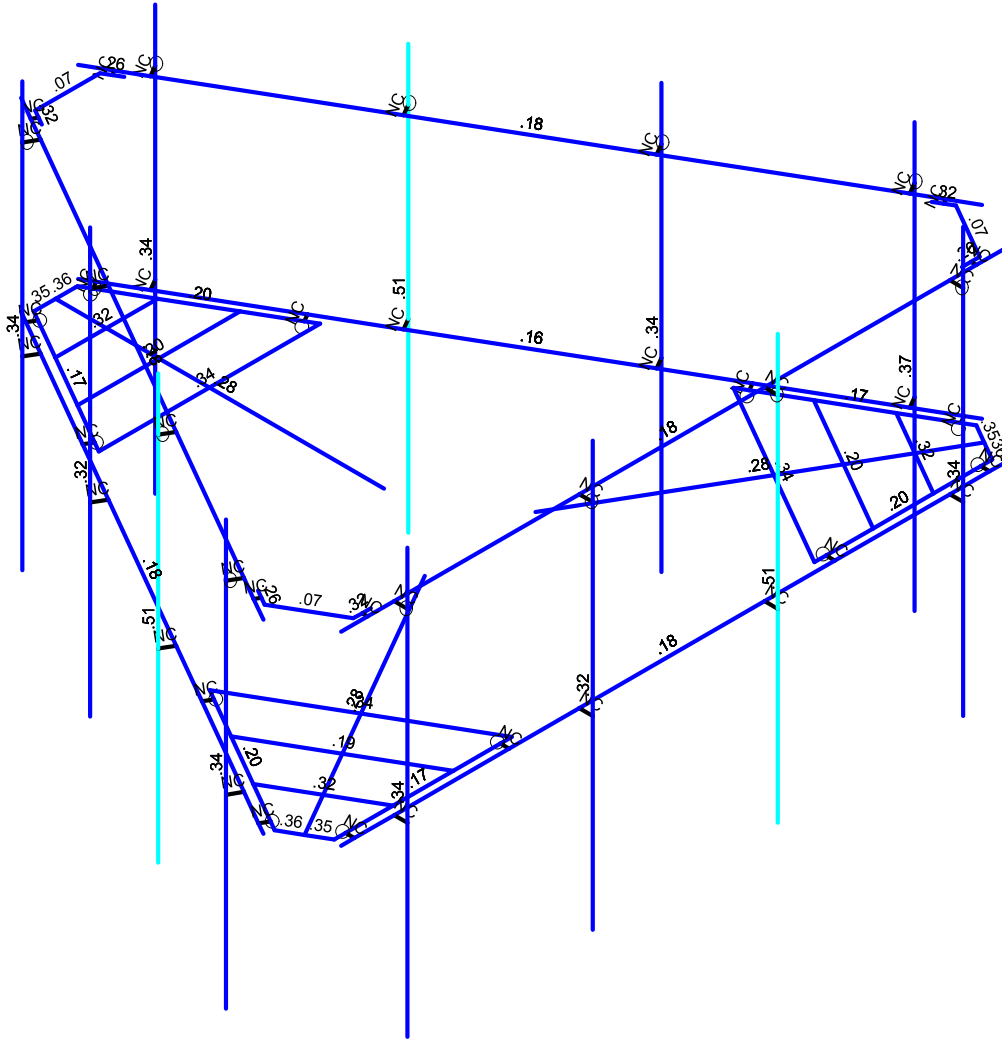
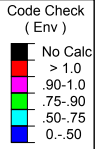
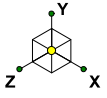
East Haddam, CT  
Controlling Load Case

SK - 6

Aug 16, 2021 at 3:54 PM

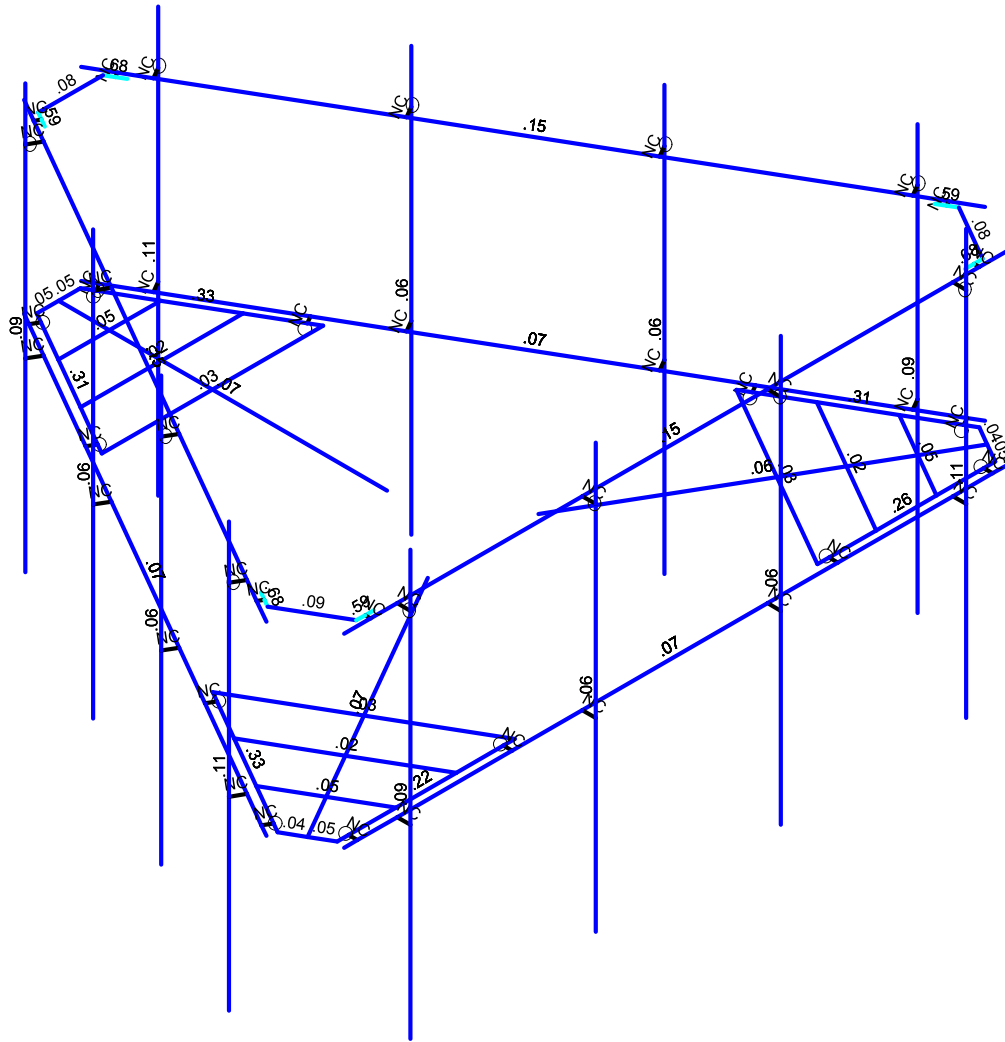
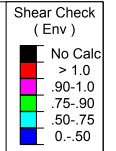
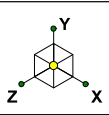
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Member Code Checks Displayed (Enveloped)  
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SMJ International, LLC	East Haddam, CT Member Bending Check	SK - 7
DVA		Aug 16, 2021 at 3:54 PM
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Member Shear Checks Displayed (Enveloped)  
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SMJ International, LLC	East Haddam, CT Member Shear Check	SK - 8
DVA		Aug 16, 2021 at 3:54 PM
13653958_C8_06		302527_13653958_C8_06_Sprint...



**Global**

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 (in/sec^2)	386.4
Wall Mesh Size (in)	12
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 14th(360-10): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): LRFD
Cold Formed Steel Code	AISI S100-12: LRFD
Wood Code	AF&PA NDS-12: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-11
Masonry Code	ACI 530-11: Strength
Aluminum Code	AA ADM1-10: LRFD - Building

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



**Global, Continued**

Seismic Code	ASCE 7-10
Seismic Base Elevation (in)	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
Om Z	1
Om X	1
Rho Z	1
Rho X	1

**Member Primary Data**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N1	N2			Arm	Beam	Tube	A500 Gr...	Typical
2	M2	N3	N4			Frame Rail	Beam	Pipe	A53 Gr.B	Typical
3	M3	N5	N6			Handrail	HBrace	Pipe	A53 Gr.B	Typical
4	M4	N7	N8			Arm	Beam	Tube	A500 Gr...	Typical
5	M5	N9	N10			Frame Rail	Beam	Pipe	A53 Gr.B	Typical
6	M6	N11	N12			Arm	Beam	Tube	A500 Gr...	Typical
7	M7	N13	N14			Frame Rail	Beam	Pipe	A53 Gr.B	Typical
8	M8	N20	N19			RIGID	None	None	RIGID	Typical
9	M9	N21	N22			Handrail	HBrace	Pipe	A53 Gr.B	Typical
10	M10	N23	N24			Handrail	HBrace	Pipe	A53 Gr.B	Typical
11	M12	N28	N29			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
12	M13	N30	N27			RIGID	None	None	RIGID	Typical
13	M14	N32	N31			RIGID	None	None	RIGID	Typical
14	M15	N34	N35			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
15	M16	N36	N33			RIGID	None	None	RIGID	Typical
16	M17	N38	N37			RIGID	None	None	RIGID	Typical
17	M18	N17	N39			RIGID	None	None	RIGID	Typical
18	M19	N18	N40			RIGID	None	None	RIGID	Typical
19	M20	N15	N16			Grating Plate	Beam	BAR	A36 Gr.36	Typical
20	M21	N43	N45			RIGID	None	None	RIGID	Typical
21	M22	N44	N46			RIGID	None	None	RIGID	Typical
22	M23	N41	N42			Grating Plate	Beam	BAR	A36 Gr.36	Typical
23	M24	N49	N51			RIGID	None	None	RIGID	Typical
24	M25	N50	N52			RIGID	None	None	RIGID	Typical
25	M26	N47	N48			Grating Plate	Beam	BAR	A36 Gr.36	Typical
26	M27	N55	N57			RIGID	None	None	RIGID	Typical
27	M28	N56	N58			RIGID	None	None	RIGID	Typical
28	M29	N53	N54			Grating Plate	Beam	BAR	A36 Gr.36	Typical
29	M30	N61	N63			RIGID	None	None	RIGID	Typical
30	M31	N62	N64			RIGID	None	None	RIGID	Typical
31	M32	N59	N60			Grating Plate	Beam	BAR	A36 Gr.36	Typical
32	M33	N67	N69			RIGID	None	None	RIGID	Typical
33	M34	N68	N70			RIGID	None	None	RIGID	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
34	M35	N65	N66			Grating Plate	Beam	BAR	A36 Gr.36	Typical
35	M36	N71	N72			Top Plate	Beam	BAR	A36 Gr.36	Typical
36	M37	N74	N73			RIGID	None	None	RIGID	Typical
37	M38	N75	N76			Top Plate	Beam	BAR	A36 Gr.36	Typical
38	M39	N78	N77			RIGID	None	None	RIGID	Typical
39	M40	N79	N80			Top Plate	Beam	BAR	A36 Gr.36	Typical
40	M41	N82	N81			RIGID	None	None	RIGID	Typical
41	M42	N83	N84			Top Plate	Beam	BAR	A36 Gr.36	Typical
42	M43	N86	N85			RIGID	None	None	RIGID	Typical
43	M44	N87	N88			Top Plate	Beam	BAR	A36 Gr.36	Typical
44	M45	N90	N89			RIGID	None	None	RIGID	Typical
45	M46	N91	N92			Top Plate	Beam	BAR	A36 Gr.36	Typical
46	M47	N72	N92		180	Top Connection	HBrace	Single Angle	A36 Gr.36	Typical
47	M48	N88	N84		180	Top Connection	HBrace	Single Angle	A36 Gr.36	Typical
48	M49	N80	N76		180	Top Connection	HBrace	Single Angle	A36 Gr.36	Typical
49	M50	N48	N2			Grating Plate	Beam	BAR	A36 Gr.36	Typical
50	M51	N65	N47		180	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
51	M52	N2	N66			Grating Plate	Beam	BAR	A36 Gr.36	Typical
52	M53	N16	N12			Grating Plate	Beam	BAR	A36 Gr.36	Typical
53	M54	N53	N15		180	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
54	M55	N12	N54			Grating Plate	Beam	BAR	A36 Gr.36	Typical
55	M56	N60	N8			Grating Plate	Beam	BAR	A36 Gr.36	Typical
56	M57	N41	N59		180	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
57	M58	N8	N42			Grating Plate	Beam	BAR	A36 Gr.36	Typical
58	M59	N97	N98			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
59	M60	N99	N96			RIGID	None	None	RIGID	Typical
60	M61	N101	N100			RIGID	None	None	RIGID	Typical
61	M62	N103	N104			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
62	M63	N105	N102			RIGID	None	None	RIGID	Typical
63	M64	N107	N106			RIGID	None	None	RIGID	Typical
64	M65	N109	N110			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	M66	N111	N108			RIGID	None	None	RIGID	Typical
66	M67	N113	N112			RIGID	None	None	RIGID	Typical
67	M68	N115	N116			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
68	M69	N117	N114			RIGID	None	None	RIGID	Typical
69	M70	N119	N118			RIGID	None	None	RIGID	Typical
70	M71	N121	N122			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
71	M72	N123	N120			RIGID	None	None	RIGID	Typical
72	M73	N125	N124			RIGID	None	None	RIGID	Typical
73	M74	N127	N128			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
74	M75	N129	N126			RIGID	None	None	RIGID	Typical
75	M76	N131	N130			RIGID	None	None	RIGID	Typical
76	M77	N133	N134			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
77	M78	N135	N132			RIGID	None	None	RIGID	Typical
78	M79	N137	N136			RIGID	None	None	RIGID	Typical
79	M80	N139	N140			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
80	M81	N141	N138			RIGID	None	None	RIGID	Typical
81	M82	N143	N142			RIGID	None	None	RIGID	Typical
82	M83	N145	N146			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
83	M84	N147	N144			RIGID	None	None	RIGID	Typical
84	M85	N149	N148			RIGID	None	None	RIGID	Typical
85	M86	N151	N152			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
86	M87	N153	N150			RIGID	None	None	RIGID	Typical
87	M88	N155	N154			RIGID	None	None	RIGID	Typical
88	M89	N161	N162		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical
89	M90	N160	N159		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical
90	M91	N157	N156		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

Aug 16, 2021

Checked By: \_\_\_\_\_

**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
91	M92	N166	N165		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical
92	M93	N164	N163		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical
93	M94	N158	N167		90	Inner Grating Plate	Beam	BAR	A36 Gr.36	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	TOM	Inactive	Seismic Design ...
1	M1						Yes			None
2	M2						Yes			None
3	M3						Yes			None
4	M4						Yes			None
5	M5						Yes			None
6	M6						Yes			None
7	M7						Yes			None
8	M8						Yes			None
9	M9						Yes			None
10	M10						Yes			None
11	M12						Yes			None
12	M13						Yes			None
13	M14		OOOXOO				Yes			None
14	M15						Yes			None
15	M16						Yes			None
16	M17		OOOXOO				Yes			None
17	M18	BenPIN					Yes			None
18	M19	BenPIN					Yes			None
19	M20						Yes			None
20	M21	BenPIN					Yes			None
21	M22	BenPIN					Yes			None
22	M23						Yes			None
23	M24	BenPIN					Yes			None
24	M25	BenPIN					Yes			None
25	M26						Yes			None
26	M27	BenPIN					Yes			None
27	M28	BenPIN					Yes			None
28	M29						Yes			None
29	M30	BenPIN					Yes			None
30	M31	BenPIN					Yes			None
31	M32						Yes			None
32	M33	BenPIN					Yes			None
33	M34	BenPIN					Yes			None
34	M35						Yes			None
35	M36						Yes			None
36	M37						Yes			None
37	M38						Yes			None
38	M39						Yes			None
39	M40						Yes			None
40	M41						Yes			None
41	M42						Yes			None
42	M43						Yes			None
43	M44						Yes			None
44	M45						Yes			None
45	M46						Yes			None
46	M47						Yes			None
47	M48						Yes			None
48	M49						Yes			None
49	M50						Yes			None



**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	TOM	Inactive	Seismic Design ...
50	M51						Yes			None
51	M52						Yes			None
52	M53						Yes			None
53	M54						Yes			None
54	M55						Yes			None
55	M56						Yes			None
56	M57						Yes			None
57	M58						Yes			None
58	M59						Yes			None
59	M60						Yes			None
60	M61		000X00				Yes			None
61	M62						Yes			None
62	M63						Yes			None
63	M64		000X00				Yes			None
64	M65						Yes			None
65	M66						Yes			None
66	M67		000X00				Yes			None
67	M68						Yes			None
68	M69						Yes			None
69	M70		000X00				Yes			None
70	M71						Yes			None
71	M72						Yes			None
72	M73		000X00				Yes			None
73	M74						Yes			None
74	M75						Yes			None
75	M76		000X00				Yes			None
76	M77						Yes			None
77	M78						Yes			None
78	M79		000X00				Yes			None
79	M80						Yes			None
80	M81						Yes			None
81	M82		000X00				Yes			None
82	M83						Yes			None
83	M84						Yes			None
84	M85		000X00				Yes			None
85	M86						Yes			None
86	M87						Yes			None
87	M88		000X00				Yes			None
88	M89						Yes			None
89	M90						Yes			None
90	M91						Yes			None
91	M92						Yes			None
92	M93						Yes			None
93	M94						Yes			None

**Material Takeoff**

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		42	103.7	0
3	Total General		42	103.7	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	1.5" x 0.25" Plate	6	180.1	19.2
7	A36 Gr.36	4" x 0.375" Plate	6	24	10.2
8	A36 Gr.36	6"x0.375" Plate	12	271.3	173.1



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

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Checked By: \_\_\_\_\_

**Material Takeoff (Continued)**

	Material	Size	Pieces	Length[in]	Weight[LB]
9	A36 Gr.36	L5x3.5x4	3	44.1	25.9
10	A36 Gr.36	L6x3.5x5	3	150.5	123.3
11	A500 Gr.B Rect	HSS5x3x6	3	223.4	325.6
12	A53 Gr.B	PIPE 2.0	15	1602	463.4
13	A53 Gr.B	PIPE 3.0	3	450	264.1
14	Total HR Steel		51	2945.3	1404.8

**Basic Load Cases**

	BLC Description	Category	X Gravity	Y Gravity	Z Gra...	Joint	Point	Distributed Area(Me...	Surface(...
1	Self Weight	DL		-1			24	3	
2	Wind Load AZI 0	WLX					48	198	
3	Wind Load AZI 30	None					48	198	
4	Wind Load AZI 60	None					48	198	
5	Wind Load AZI 90	WLZ					48	198	
6	Wind Load AZI 120	None					48	198	
7	Wind Load AZI 150	None					48	198	
8	Wind Load AZI 180	None					48	198	
9	Wind Load AZI 210	None					48	198	
10	Wind Load AZI 240	None					48	198	
11	Wind Load AZI 270	None					48	198	
12	Wind Load AZI 300	None					48	198	
13	Wind Load AZI 330	None					48	198	
14	Ice Weight	OL1					24	93	3
15	Ice Wind Load AZI 0	OL2					48	198	
16	Ice Wind Load AZI 30	None					48	198	
17	Ice Wind Load AZI 60	None					48	198	
18	Ice Wind Load AZI 90	OL3					48	198	
19	Ice Wind Load AZI 120	None					48	198	
20	Ice Wind Load AZI 150	None					48	198	
21	Ice Wind Load AZI 180	None					48	198	
22	Ice Wind Load AZI 210	None					48	198	
23	Ice Wind Load AZI 240	None					48	198	
24	Ice Wind Load AZI 270	None					48	198	
25	Ice Wind Load AZI 300	None					48	198	
26	Ice Wind Load AZI 330	None					48	198	
27	Seismic Load X	ELX			-.112		24		
28	Seismic Load Z	ELZ	-.112				24		
29	Service Live Loads	LL							
30	Maintenance Load 1	LL					1		
31	Maintenance Load 2	LL					1		
32	Maintenance Load 3	LL					1		
33	Maintenance Load 4	LL					1		
34	Maintenance Load 5	LL					1		
35	Maintenance Load 6	LL					1		
36	Maintenance Load 7	LL					1		
37	Maintenance Load 8	LL					1		
38	Maintenance Load 9	LL					1		
39	Maintenance Load 10	LL					1		
40	Maintenance Load 11	LL					1		
41	Maintenance Load 12	LL					1		
42	Maintenance Load 13	LL					1		
43	Maintenance Load 14	LL					1		
44	Maintenance Load 15	LL					1		
45	Maintenance Load 16	LL					1		
46	Maintenance Load 17	LL					1		





**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gra...	Joint	Point	Distributed Area(Me...	Surface(...
47	Maintenance Load 18	LL					1		
48	Maintenance Load 19	LL					1		
49	Maintenance Load 20	LL					1		
50	Maintenance Load 21	LL					1		
55	BLC 1 Transient Area Loads	None						111	
56	BLC 14 Transient Area Loads	None						111	

**Load Combinations**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	
1	1.4DL	Yes	Y		1	1.4																	
2	1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1															
3	1.2DL + 1WL AZI 30	Yes	Y		1	1.2	3	1															
4	1.2DL + 1WL AZI 60	Yes	Y		1	1.2	4	1															
5	1.2DL + 1WL AZI 90	Yes	Y		1	1.2	5	1															
6	1.2DL + 1WL AZI 120	Yes	Y		1	1.2	6	1															
7	1.2DL + 1WL AZI 150	Yes	Y		1	1.2	7	1															
8	1.2DL + 1WL AZI 180	Yes	Y		1	1.2	8	1															
9	1.2DL + 1WL AZI 210	Yes	Y		1	1.2	9	1															
10	1.2DL + 1WL AZI 240	Yes	Y		1	1.2	10	1															
11	1.2DL + 1WL AZI 270	Yes	Y		1	1.2	11	1															
12	1.2DL + 1WL AZI 300	Yes	Y		1	1.2	12	1															
13	1.2DL + 1WL AZI 330	Yes	Y		1	1.2	13	1															
14	0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1															
15	0.9DL + 1WL AZI 30	Yes	Y		1	.9	3	1															
16	0.9DL + 1WL AZI 60	Yes	Y		1	.9	4	1															
17	0.9DL + 1WL AZI 90	Yes	Y		1	.9	5	1															
18	0.9DL + 1WL AZI 120	Yes	Y		1	.9	6	1															
19	0.9DL + 1WL AZI 150	Yes	Y		1	.9	7	1															
20	0.9DL + 1WL AZI 180	Yes	Y		1	.9	8	1															
21	0.9DL + 1WL AZI 210	Yes	Y		1	.9	9	1															
22	0.9DL + 1WL AZI 240	Yes	Y		1	.9	10	1															
23	0.9DL + 1WL AZI 270	Yes	Y		1	.9	11	1															
24	0.9DL + 1WL AZI 300	Yes	Y		1	.9	12	1															
25	0.9DL + 1WL AZI 330	Yes	Y		1	.9	13	1															
26	1.2D + 1.0Di	Yes	Y		1	1.2	14	1															
27	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	15	1													
28	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	16	1													
29	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	17	1													
30	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	18	1													
31	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	19	1													
32	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	20	1													
33	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	21	1													
34	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	22	1													
35	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	23	1													
36	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	24	1													
37	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	25	1													
38	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		1	1.2	14	1	26	1													
39	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	1	28														
40	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	.866	28	.5													
41	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	.5	28	.866													
42	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27		28	1													
43	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	-.5	28	.866													
44	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	-.8...	28	.5													
45	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	-1	28														
46	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	-.8...	28	-.5													



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

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Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
47	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	-5	28	-8...										
48	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27		28	-1										
49	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	.5	28	-8...										
50	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.2...	27	.866	28	-.5										
51	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	1	28											
52	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	.866	28	.5										
53	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	.5	28	.866										
54	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27		28	1										
55	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	-.5	28	.866										
56	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	-.8...	28	.5										
57	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	-1	28											
58	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	-.8...	28	-.5										
59	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	-.5	28	-.8...										
60	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27		28	-1										
61	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	.5	28	-.8...										
62	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.855	27	.866	28	-.5										
63	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	2	.059	29	1.5										
64	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	3	.059	29	1.5										
65	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	4	.059	29	1.5										
66	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	5	.059	29	1.5										
67	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	6	.059	29	1.5										
68	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	7	.059	29	1.5										
69	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	8	.059	29	1.5										
70	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	9	.059	29	1.5										
71	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	10	.059	29	1.5										
72	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	11	.059	29	1.5										
73	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	12	.059	29	1.5										
74	1.0DL + 1.5LL + 1.0S...	Yes	Y		1	1	13	.059	29	1.5										
75	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	2	.059										
76	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	3	.059										
77	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	4	.059										
78	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	5	.059										
79	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	6	.059										
80	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	7	.059										
81	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	8	.059										
82	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	9	.059										
83	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	10	.059										
84	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	11	.059										
85	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	12	.059										
86	1.2DL + 1.5LM1 + 1S...	Yes	Y		1	1.2	34	1.5	13	.059										
87	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	2	.059										
88	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	3	.059										
89	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	4	.059										
90	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	5	.059										
91	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	6	.059										
92	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	7	.059										
93	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	8	.059										
94	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	9	.059										
95	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	10	.059										
96	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	11	.059										
97	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	12	.059										
98	1.2DL + 1.5LM2 + 1S...	Yes	Y		1	1.2	35	1.5	13	.059										
99	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	2	.059										
100	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	3	.059										
101	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	4	.059										
102	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	5	.059										
103	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	6	.059										



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

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Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
104	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	7	.059										
105	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	8	.059										
106	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	9	.059										
107	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	10	.059										
108	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	11	.059										
109	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	12	.059										
110	1.2DL + 1.5LM3 + 1S...	Yes	Y		1	1.2	36	1.5	13	.059										
111	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	2	.059										
112	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	3	.059										
113	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	4	.059										
114	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	5	.059										
115	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	6	.059										
116	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	7	.059										
117	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	8	.059										
118	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	9	.059										
119	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	10	.059										
120	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	11	.059										
121	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	12	.059										
122	1.2DL + 1.5LM4 + 1S...	Yes	Y		1	1.2	37	1.5	13	.059										
123	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	2	.059										
124	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	3	.059										
125	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	4	.059										
126	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	5	.059										
127	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	6	.059										
128	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	7	.059										
129	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	8	.059										
130	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	9	.059										
131	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	10	.059										
132	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	11	.059										
133	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	12	.059										
134	1.2DL + 1.5LM5 + 1S...	Yes	Y		1	1.2	38	1.5	13	.059										
135	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	2	.059										
136	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	3	.059										
137	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	4	.059										
138	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	5	.059										
139	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	6	.059										
140	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	7	.059										
141	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	8	.059										
142	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	9	.059										
143	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	10	.059										
144	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	11	.059										
145	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	12	.059										
146	1.2DL + 1.5LM6 + 1S...	Yes	Y		1	1.2	39	1.5	13	.059										
147	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	2	.059										
148	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	3	.059										
149	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	4	.059										
150	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	5	.059										
151	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	6	.059										
152	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	7	.059										
153	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	8	.059										
154	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	9	.059										
155	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	10	.059										
156	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	11	.059										
157	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	12	.059										
158	1.2DL + 1.5LM7 + 1S...	Yes	Y		1	1.2	40	1.5	13	.059										
159	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	2	.059										
160	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	3	.059										



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

Aug 16, 2021

Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
161	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	4	.059										
162	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	5	.059										
163	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	6	.059										
164	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	7	.059										
165	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	8	.059										
166	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	9	.059										
167	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	10	.059										
168	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	11	.059										
169	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	12	.059										
170	1.2DL + 1.5LM8 + 1S...	Yes	Y		1	1.2	41	1.5	13	.059										
171	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	2	.059										
172	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	3	.059										
173	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	4	.059										
174	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	5	.059										
175	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	6	.059										
176	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	7	.059										
177	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	8	.059										
178	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	9	.059										
179	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	10	.059										
180	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	11	.059										
181	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	12	.059										
182	1.2DL + 1.5LM9 + 1S...	Yes	Y		1	1.2	42	1.5	13	.059										
183	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	2	.059										
184	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	3	.059										
185	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	4	.059										
186	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	5	.059										
187	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	6	.059										
188	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	7	.059										
189	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	8	.059										
190	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	9	.059										
191	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	10	.059										
192	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	11	.059										
193	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	12	.059										
194	1.2DL + 1.5LM10 + 1S...	Yes	Y		1	1.2	43	1.5	13	.059										
195	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	2	.059										
196	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	3	.059										
197	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	4	.059										
198	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	5	.059										
199	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	6	.059										
200	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	7	.059										
201	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	8	.059										
202	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	9	.059										
203	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	10	.059										
204	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	11	.059										
205	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	12	.059										
206	1.2DL + 1.5LM11 + 1S...	Yes	Y		1	1.2	44	1.5	13	.059										
207	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	2	.059										
208	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	3	.059										
209	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	4	.059										
210	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	5	.059										
211	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	6	.059										
212	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	7	.059										
213	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	8	.059										
214	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	9	.059										
215	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	10	.059										
216	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	11	.059										
217	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	12	.059										



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

Aug 16, 2021

Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
218	1.2DL + 1.5LM12 + 1S...	Yes	Y		1	1.2	45	1.5	13	.059										
219	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	2	.059										
220	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	3	.059										
221	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	4	.059										
222	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	5	.059										
223	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	6	.059										
224	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	7	.059										
225	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	8	.059										
226	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	9	.059										
227	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	10	.059										
228	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	11	.059										
229	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	12	.059										
230	1.2DL + 1.5LM13 + 1S...	Yes	Y		1	1.2	46	1.5	13	.059										
231	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	2	.059										
232	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	3	.059										
233	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	4	.059										
234	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	5	.059										
235	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	6	.059										
236	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	7	.059										
237	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	8	.059										
238	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	9	.059										
239	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	10	.059										
240	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	11	.059										
241	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	12	.059										
242	1.2DL + 1.5LM14 + 1S...	Yes	Y		1	1.2	47	1.5	13	.059										
243	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	2	.059										
244	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	3	.059										
245	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	4	.059										
246	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	5	.059										
247	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	6	.059										
248	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	7	.059										
249	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	8	.059										
250	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	9	.059										
251	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	10	.059										
252	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	11	.059										
253	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	12	.059										
254	1.2DL + 1.5LM15 + 1S...	Yes	Y		1	1.2	48	1.5	13	.059										
255	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	2	.059										
256	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	3	.059										
257	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	4	.059										
258	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	5	.059										
259	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	6	.059										
260	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	7	.059										
261	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	8	.059										
262	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	9	.059										
263	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	10	.059										
264	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	11	.059										
265	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	12	.059										
266	1.2DL + 1.5LM16 + 1S...	Yes	Y		1	1.2	49	1.5	13	.059										
267	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	2	.059										
268	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	3	.059										
269	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	4	.059										
270	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	5	.059										
271	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	6	.059										
272	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	7	.059										
273	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	8	.059										
274	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	9	.059										





Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

Aug 16, 2021

Checked By: \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	PDe...	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
275	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	10	.059										
276	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	11	.059										
277	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	12	.059										
278	1.2DL + 1.5LM17 + 1S...	Yes	Y		1	1.2	50	1.5	13	.059										
279	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	2	.059										
280	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	3	.059										
281	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	4	.059										
282	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	5	.059										
283	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	6	.059										
284	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	7	.059										
285	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	8	.059										
286	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	9	.059										
287	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	10	.059										
288	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	11	.059										
289	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	12	.059										
290	1.2DL + 1.5LM18 + 1S...	Yes	Y		1	1.2	51	1.5	13	.059										
291	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	2	.059										
292	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	3	.059										
293	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	4	.059										
294	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	5	.059										
295	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	6	.059										
296	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	7	.059										
297	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	8	.059										
298	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	9	.059										
299	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	10	.059										
300	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	11	.059										
301	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	12	.059										
302	1.2DL + 1.5LM19 + 1S...	Yes	Y		1	1.2	52	1.5	13	.059										
303	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	2	.059										
304	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	3	.059										
305	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	4	.059										
306	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	5	.059										
307	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	6	.059										
308	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	7	.059										
309	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	8	.059										
310	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	9	.059										
311	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	10	.059										
312	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	11	.059										
313	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	12	.059										
314	1.2DL + 1.5LM20 + 1S...	Yes	Y		1	1.2	53	1.5	13	.059										
315	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	2	.059										
316	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	3	.059										
317	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	4	.059										
318	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	5	.059										
319	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	6	.059										
320	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	7	.059										
321	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	8	.059										
322	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	9	.059										
323	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	10	.059										
324	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	11	.059										
325	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	12	.059										
326	1.2DL + 1.5LM21 + 1S...	Yes	Y		1	1.2	54	1.5	13	.059										



**Envelope Joint Reactions**

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-...]	LC	MY [lb-...]	LC	MZ [lb-in]	LC		
1	N1	max	1789.392	2	2021.209	151	1878.866	18	74533.5	151	29726...	9	39562.803	151
2		min	-1559.278	20	552.469	24	-2439.995	12	8505.9...	24	-29696...	15	5012.379	24
3	N7	max	2201.391	14	2021.232	123	1225.531	17	9071.59	138	28921....	5	-9876.855	20
4		min	-2658.068	8	552.554	20	-1227.586	11	-7030....	108	-28892...	23	-84329.781	123
5	N11	max	1603.251	2	2021.187	83	2331.159	4	-8592.33	16	28988....	13	37723.057	83
6		min	-1376.692	20	552.441	16	-1934.639	22	-75593..	83	-29699..	19	4858.703	16
7	Totals:	max	5528.796	14	5404.62	29	4906.914	17						
8		min	-5528.799	8	2465.52	58	-4956.211	12						

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

Member	Shape	Code Check	Loc...	LC	Shear C...	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [l...	phi*Mn y-y	phi*Mn z-z [lb-in]	Cb	Eqn
1	M44	4" x 0.37...	.258	4	12	.678	4	y	10	48596.507	48600	4556.25	48600	1.... H1...
2	M40	4" x 0.37...	.258	4	8	.678	4	y	6	48596.507	48600	4556.25	48600	1.... H1...
3	M36	4" x 0.37...	.258	4	4	.678	4	y	2	48596.507	48600	4556.25	48600	1.... H1...
4	M46	4" x 0.37...	.321	4	8	.587	4	y	10	48596.507	48600	4556.25	48600	1.... H1...
5	M42	4" x 0.37...	.322	4	4	.587	4	y	6	48596.507	48600	4556.25	48600	1.... H1...
6	M38	4" x 0.37...	.321	4	12	.587	4	y	2	48596.507	48600	4556.25	48600	1.... H1...
7	M32	6"x0.375...	.205	0	4	.328	0	y	1...	72370.839	72900	6834.391	109350	2.... H1...
8	M20	6"x0.375...	.205	0	12	.328	0	y	95	72370.839	72900	6834.391	109350	2.... H1...
9	M35	6"x0.375...	.166	40.27	6	.309	0	y	1...	72370.839	72900	6834.391	109350	1.... H1...
10	M23	6"x0.375...	.170	40.27	13	.309	0	y	1...	72370.839	72900	6834.391	109350	1.... H1...
11	M26	6"x0.375...	.205	0	8	.262	0	y	34	72370.839	72900	6834.391	109350	2.... H1...
12	M29	6"x0.375...	.166	40.27	10	.224	0	y	32	72370.839	72900	6834.391	109350	1.... H1...
13	M10	PIPE_2.0	.185	96....	4	.150	143.75	10	32069.864	32130	22459.5	22459.5	1.... H1...	
14	M3	PIPE_2.0	.185	96....	12	.150	143.75	6	32069.864	32130	22459.5	22459.5	1.... H1...	
15	M9	PIPE_2.0	.185	96....	8	.150	143.75	2	32069.864	32130	22459.5	22459.5	1.... H1...	
16	M65	PIPE_2.0	.338	42	2	.112	42	12	32105.355	32130	22459.5	22459.5	1.... H1...	
17	M77	PIPE_2.0	.338	42	6	.112	42	4	32105.355	32130	22459.5	22459.5	1.... H1...	
18	M12	PIPE_2.0	.338	42	10	.112	42	8	32105.355	32130	22459.5	22459.5	2.... H1...	
19	M68	PIPE_2.0	.342	42	10	.090	84	12	32105.355	32130	22459.5	22459.5	1.... H1...	
20	M80	PIPE_2.0	.371	42	13	.090	84	4	32105.355	32130	22459.5	22459.5	1.... H1...	
21	M15	PIPE_2.0	.342	42	6	.090	84	8	32105.355	32130	22459.5	22459.5	1.... H1...	
22	M49	L5x3.5x4	.073	0	6	.088	0	y	25	67066.682	67068	31552.829	89584.577	1.... H2-1
23	M48	L5x3.5x4	.073	0	10	.084	14.704	y	11	67066.682	67068	31552.829	89584.577	1.... H2-1
24	M47	L5x3.5x4	.073	0	2	.084	14.704	y	3	67066.682	67068	31552.829	89584.577	1.... H2-1
25	M2	PIPE_3.0	.181	39....	124	.074	110.937	7	65150.484	65205	68985	68985	3.... H1...	
26	M5	PIPE_3.0	.181	39....	84	.074	110.937	3	65150.484	65205	68985	68985	3.... H1...	
27	M7	PIPE_3.0	.165	39....	32	.074	110.937	11	65150.484	65205	68985	68985	3.... H1...	
28	M6	HSS5x3...	.283	0	80	.069	0	y	97	197835.5...	197892	211140	303876	2.... H1...
29	M4	HSS5x3...	.283	0	113	.069	0	y	1...	197835.5...	197892	211140	303876	2.... H1...
30	M59	PIPE_2.0	.324	42	12	.064	42	9	32105.355	32130	22459.5	22459.5	2.... H1...	
31	M83	PIPE_2.0	.341	42	13	.064	42	5	32105.355	32130	22459.5	22459.5	1.... H1...	
32	M71	PIPE_2.0	.324	42	4	.063	42	13	32105.355	32130	22459.5	22459.5	1.... H1...	
33	M62	PIPE_2.0	.510	42	2	.063	84	7	32105.355	32130	22459.5	22459.5	2.... H1...	
34	M86	PIPE_2.0	.510	42	10	.063	84	3	32105.355	32130	22459.5	22459.5	1.97 H1...	
35	M74	PIPE_2.0	.510	42	6	.062	84	11	32105.355	32130	22459.5	22459.5	2.... H1...	
36	M1	HSS5x3...	.284	0	154	.059	0	y	1...	197835.5...	197892	211140	303876	2.... H1...
37	M58	6"x0.375...	.354	0	13	.055	4.941	y	1...	72892.006	72900	6834.391	109350	1.... H1...
38	M55	6"x0.375...	.347	0	10	.055	4.941	y	83	72892.006	72900	6834.391	109350	1.... H1...
39	M50	6"x0.375...	.355	4.941	6	.052	0	y	1...	72892.006	72900	6834.391	109350	1.... H1...
40	M56	6"x0.375...	.355	4.941	2	.052	0	y	1...	72892.006	72900	6834.391	109350	1.... H1...
41	M89	1.5" x 0....	.323	11....	13	.046	11.585	y	13	12084.246	12150	759.375	4556.25	1.... H1...
42	M92	1.5" x 0....	.316	11....	10	.046	11.585	y	10	12084.246	12150	759.375	4556.25	1.... H1...
43	M93	1.5" x 0....	.320	11....	13	.046	11.585	y	6	12084.246	12150	759.375	4556.25	1.... H1...



Company : SMJ International, LLC  
 Designer : DVA  
 Job Number : 13653958\_C8\_06  
 Model Name : East Haddam, CT

Aug 16, 2021

Checked By: \_\_\_\_\_

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

Member	Shape	Code Check	Loc...	LC	Shear C...	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [l...	phi*Mn y-y	phi*Mn z-z [lb-in]	Cb	Eqn
44	M52	6"x0.375...	.347	0	6	.040	4.941	y	2...	72892.006	72900	6834.391	109350	1.... H1...
45	M53	6"x0.375...	.355	4.941	10	.037	0	y	1...	72892.006	72900	6834.391	109350	1.... H1...
46	M57	L6x3.5x5	.339	25....	4	.035	25.076	y	1...	93614.927	93636	40738.786	145406.627	1.... H2-1
47	M54	L6x3.5x5	.339	25....	12	.035	25.076	y	97	93614.927	93636	40738.786	145406.627	1.... H2-1
48	M51	L6x3.5x5	.339	25....	8	.033	25.076	y	1...	93614.927	93636	40738.786	145406.627	1.... H2-1
49	M90	1.5" x 0....	.199	18....	13	.020	18.431	y	13	11984.264	12150	759.375	4556.25	1.... H1...
50	M94	1.5" x 0....	.199	18....	13	.019	18.431	y	13	11984.264	12150	759.375	4556.25	1.... H1...
51	M91	1.5" x 0....	.186	18....	11	.019	18.431	y	11	11984.264	12150	759.375	4556.25	1.... H1...





## BOLT CONNECTION CALCULATION

### BOLT PROPERTIES

<b>Date:</b>	8/16/2021
<b>Site:</b>	East Haddam, CT
<b>Engineer:</b>	DVA
<b>Project No:</b>	13653958_C8_06
<b>Connection Location:</b>	Platform to Collar Mount

Bolt Capacity Equation	TIA-222-H	
Connection Type	Steel	
U-Bolt	Yes	
Bolt Size, <b>d</b>	5/8	in
Threads per Inch, <b>n</b>	11	
Steel Grade	A325	
Bolt Ultimate Tensile Stress, <b>F<sub>u</sub></b>	120	ksi
Threads Exclusion	N	
Shear Plane	1	
Net Bolt Cross-Sectional Area, <b>A<sub>n</sub></b>	0.226	in <sup>2</sup>
Gross Bolt Cross-Sectional Area, <b>A<sub>g</sub></b>	0.307	in <sup>2</sup>
Tensile Steel Strength (per bolt), <b>φR<sub>nt</sub></b>	20340	lbs
Shear Steel Strength (per bolt), <b>φR<sub>nv</sub></b>	13806	lbs

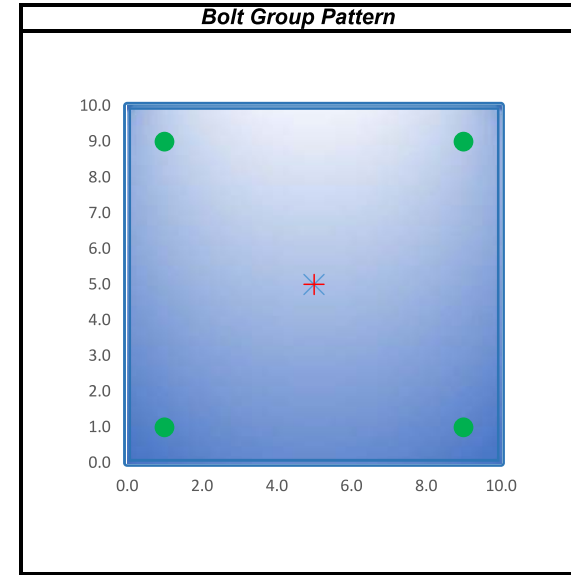
## BOLT CONNECTION CALCULATION

### BOLT GROUP CHECK

<b>Date:</b>	8/16/2021
<b>Contractor:</b>	SMJ International, LLC
<b>Site:</b>	East Haddam, CT
<b>Engineer:</b>	DVA
<b>Project No:</b>	13653958_C8_06
<b>Connection Location:</b>	Platform to Collar Mount

Loads Properties					
Controlling LC:	132				
Load Point Number:	N7				
X-Coordinate (in.)	5.00				
Y-Coordinate (in.)	5.00				
Z-Coordinate (in.)	0.00				
Shear Load, Px (lbs)	82.000	0	0	0	0
Shear Load, Py (lbs)	2003.000	0	0	0	0
Axial Load, Pz (lbs)	315.000	0	0	0	0
Moment, Mx (lb-in)	83065.000	0	0	0	0
Moment, My (lb-in)	-1834.000	0	0	0	0
Moment, Mz (lb-in)	4958.000	0	0	0	0

Member Properties		
	X	Y
Start Coordinates:	0.0	0.0
Dimensions:	10.0	10.0



Number of Bolts

No.	Bolt Type	Bolt Coordinates		Bolt Loads			Steel Bolt Usage		
		Xo (in)	Yo (in)	Axial (lbs)	Shear (lbs)	Tension	Shear	Combined	Max. Capacity
1	Main Type	1.00	1.00	-5227.44	669.33	0.0%	4.8%	4.8%	4.8%
2	Main Type	1.00	9.00	5155.69	678.75	25.3%	4.9%	25.3%	25.3%
3	Main Type	9.00	1.00	-4998.19	371.03	0.0%	2.7%	2.7%	2.7%
4	Main Type	9.00	9.00	5384.94	387.77	26.5%	2.8%	26.5%	26.5%

**Bolt Group Properties:**

Xc =	5.00	in.
Yc =	5.00	in.
Ic.y =	19.63	in.^2
Ic.x =	19.63	in.^2
Ic.xy =	39.27	in.^2

**Loads at Center of Gravity of Bolt Group:**

Pz =	315.00	lbs
Px =	82.00	lbs
Py =	2003.00	lbs
Mx =	83065.00	lb-in
My =	-1834.00	lb-in
Mz =	4958.00	lb-in

**Total Capacity of Bolt Group:**

U-bolt Connection

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

T-Mobile Existing Facility

Site ID: CTHA843A

135 Honey Hill Road  
East Haddam, Connecticut 06423

**October 5, 2021**

**EBI Project Number: 6221005847**

<b>Site Compliance Summary</b>	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>21.34%</b>

October 5, 2021

T-Mobile

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

Emissions Analysis for Site: CTHA843A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **135 Honey Hill Road** in **East Haddam, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The number of  $\mu\text{W}/\text{cm}^2$  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 ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately  $400 \mu\text{W}/\text{cm}^2$  and  $467 \mu\text{W}/\text{cm}^2$ , respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is  $1000 \mu\text{W}/\text{cm}^2$ . 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 135 Honey Hill Road in East Haddam, 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 IC 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 IC 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 141 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):	141 feet	Height (AGL):	141 feet	Height (AGL):	141 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 %:	<b>4.65%</b>	Antenna B1 MPE %:	<b>4.65%</b>	Antenna C1 MPE %:	<b>4.65%</b>
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):	141 feet	Height (AGL):	141 feet	Height (AGL):	141 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 %:	<b>7.17%</b>	Antenna B2 MPE %:	<b>7.17%</b>	Antenna C2 MPE %:	<b>7.17%</b>



Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	11.83%
Nextel	0.73%
AT&T	5.33%
Verizon	3.45%
<b>Site Total MPE % :</b>	<b>21.34%</b>

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	11.83%
T-Mobile Sector B Total:	11.83%
T-Mobile Sector C Total:	11.83%
Site Total MPE % :	21.34%

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 ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 600 MHz LTE	2	591.73	141.0	2.33	600 MHz LTE	400	0.58%
T-Mobile 600 MHz NR	1	1577.94	141.0	3.11	600 MHz NR	400	0.78%
T-Mobile 700 MHz LTE	2	695.22	141.0	2.74	700 MHz LTE	467	0.59%
T-Mobile 1900 MHz GSM	4	1052.26	141.0	8.30	1900 MHz GSM	1000	0.83%
T-Mobile 1900 MHz LTE	2	2104.51	141.0	8.30	1900 MHz LTE	1000	0.83%
T-Mobile 2100 MHz LTE	2	2649.42	141.0	10.45	2100 MHz LTE	1000	1.05%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	11044.63	141.0	21.79	2500 MHz LTE IC & 2C Traffic	1000	2.18%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	1074.06	141.0	2.12	2500 MHz LTE IC & 2C Broadcast	1000	0.21%
T-Mobile 2500 MHz NR Traffic	1	22089.26	141.0	43.57	2500 MHz NR Traffic	1000	4.36%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	141.0	4.24	2500 MHz NR Broadcast	1000	0.42%
						<b>Total:</b>	<b>11.83%</b>

• 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:	11.83%
Sector B:	11.83%
Sector C:	11.83%
T-Mobile Maximum MPE % (Sector A):	11.83%
Site Total:	21.34%
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **21.34%** 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.