Transcend Wireless

10 Industrial Avenue,
Suite 3
Mahwah, NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

June 3, 2020

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

Notice of Exempt Modification
401 Wakelee Avenue, Ansonia CT
Latitude 41.35614722
Longitude -73.09193333
T-Mobile site: CT11810A /L600

Dear Ms. Bachman:

T-Mobile currently maintains (9) antennas at the 148-foot level of the existing 196 -foot self-support lattice located at 401 Wakelee Avenue in Ansonia, CT. The self-support lattice is owned by American Tower and the property is owned by the City of Ansonia. T-Mobile now intends to replace (6) of its existing antennas with (3) 600 MHz/700 MHz antennas, and (3) 1900 MHz / 2100 MHz antennas The new antennas would be installed at the 148 foot level of the tower, along with mount modifications that are proposed per the attached mount analysis . .

Planned Modifications:

Remove:
(6) 1-5/8" coax

Remove and Replace:
Antennas:
(3) LNX-6515DS-A1M (remove) – (replace) (3) APXVAARR24_43-U-NA20, 600 MHz / 700 MHz
(3) AIR B21 2P B4A (remove) – (replace) (3) AIR32 B66A B2A, 1900 MHz / 2100 MHz
RRUs:
(3) RRUS11 B12 (remove) – (replace) (3) Ericsson Radio 4449B 71 B12 - RRUs

Existing to Remain:
(3) AIR 21 B2A B4P Antennas
(3) KRY 112 144/1 TMAs
(6) 1-5/8" coax
(1) 1-1/4" hybrid

Install New:
(3) 1-5/8" Fiber

This facility was approved by the City of Ansonia on July 13, 1999, with no record of conditions that would restrict exempt modifications. Therefore, this modification complies with the aforementioned approval. A copy of the approval is attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to The Honorable David S. Cassetti, Mayor and land 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 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,

Elizabeth Jamieson

Elizabeth Jamieson
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, New Jersey 07430
860-605-7808
EJamieson@TranscendWireless.com

cc:
The Honorable David S. Cassetti, Mayor and land owner
David Blackwell, Sr., Ansonia Zoning Enforcement Officer
American Tower, Tower Owner

Exhibit A

Original Facility Approval

Charles M-rrone RESOLUTION rd 5
Kevin Bl[illegible] rd 7
Joseph Ca[illegible]etti ward 2
George Pritchard City of Ansonia Ward 3
Kathleen Samela Ward 3
Aldermen
Alderman Jeremiah Kennedy, of the Ward 6

the following Resolution:

Resolved,

WHEREAS, the Ansonia Planning and Zoning Commission, under the provisions of Section 8-2 and Section 8-24 of the Connecticut General Statutes, has received the March 18, 1999 letter from Nextel Communications to Mayor Nancy Valentine concerning the proposed location of a 200 foot telecommunications tower to be located on City of Ansonia property known as Nolan Athletic Field, 401 Wakelee Avenue, Ansonia. The leased parcel consists of 2,500 square feet, and

WHEREAS, the Commission has reviewed the plan and finds that (a) the location of the PCS facility will provide wireless communications for emergency services, businesses and individuals in the Ansonia area and (b) construction of the proposed PCS facility will allow Nextel Communications of the Mid-Atlantic, Inc., 100 Corporate Place, Rocky Hill, CT 06067 to fulfill its obligations under its FCC license to provide PCS service throughout the State of Connecticut and (c) it is consistent with the Comprehensive Plan of Development for the City, and

BE IT RESOLVED that the proposed location of the Nextel telecommunications tower on Nolan Athletic Complex is exempt from the zoning regulations of the City of Ansonia; and

BE IT FURTHER RESOLVED that under the provisions of Section 8-2 of the Connecticut General Statutes, the proposed location of the Nextel telecommunications tower on Nolan Athletic Complex is approved; and

BE IT FURTHER RESOLVED that under the provisions of Section 8-24 of the Connecticut General Statutes, the proposed location of the Nextel telecommunications tower on Nolan Athletic Complex is approved.

Certification

Certified a true copy of a resolution adopted by the board of aldermen of the city of Ansonia at a meeting held on July 13, 1999 *' and which has not been rescinded or modified in any way.*

7/14/99
Date
Seal Madeline H. Battone
Town & City Clerk

Approved July 14, 1999
Nancy Valentine
Mayor

Adopted July 13, 1999
Madeline H. Battone
City Clerk

Exhibit B

Property card

City of Ansonia, CT

Property Listing Report

Map Block Lot	01900030000	Account	65440

Property Information

Property Location	401 WAKELEE AVE
Owner	CITY OF ANSONIA
Co-Owner	HILLSIDE HOME & NOLAN FIE
Mailing Address	401 WAKELEE AVE ANSONIA CT 06401
Land Use	901 MUNICIPAL MDL-94
Land Class	E
Zoning Code	A
Census Tract	
Sub Lot	

Neighborhood	
Acreage	16.5
Utilities	All Public
Lot Setting/Desc	Bus. District Level
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built	2001
Stories	1
Building Style	Health Club
Building Use	Comm/Ind
Building Condition	Average +20
Floors	Ceram Clay Til
Total Rooms	

Bedrooms	
Full Bathrooms	0
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Gable
Roof Cover	Asphalt Shingl

Exterior Walls	Brick/Masonry
Interior Walls	Minim/Masonry
Heating Type	Forced Air-Duc
Heating Fuel	Gas
AC Type	None
Gross Bldg Area	6004
Total Living Area	4693

Report Created On 7/17/2019

City of Ansonia, CT

Property Listing Report | Map Block Lot **01900030000** | Account **65440**

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	585700	410000
Extras	57400	40200
Outbuildings	162300	113800
Land	996500	697600
Total	1801900	1261600

Outbuilding and Extra Items

Type	Description
Shed	120.00 S.F.
Shed	120.00 S.F.
Shed	180.00 S.F.
Shed	180.00 S.F.
Fin Rsd Bsmt	2607.00 S.F.
Paving, Asph	75000.00 S.F.
Fence 3 Ft	770.00 L.F.
Fence 4 Ft	1600.00 L.F.
Fence 5 Ft	180.00 L.F.
Lights (2)	7.00 UNITS

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Porch, Open	790	0
Finished Lower Level	2607	2086
First Floor	2607	2607
Total Area	6004	4693

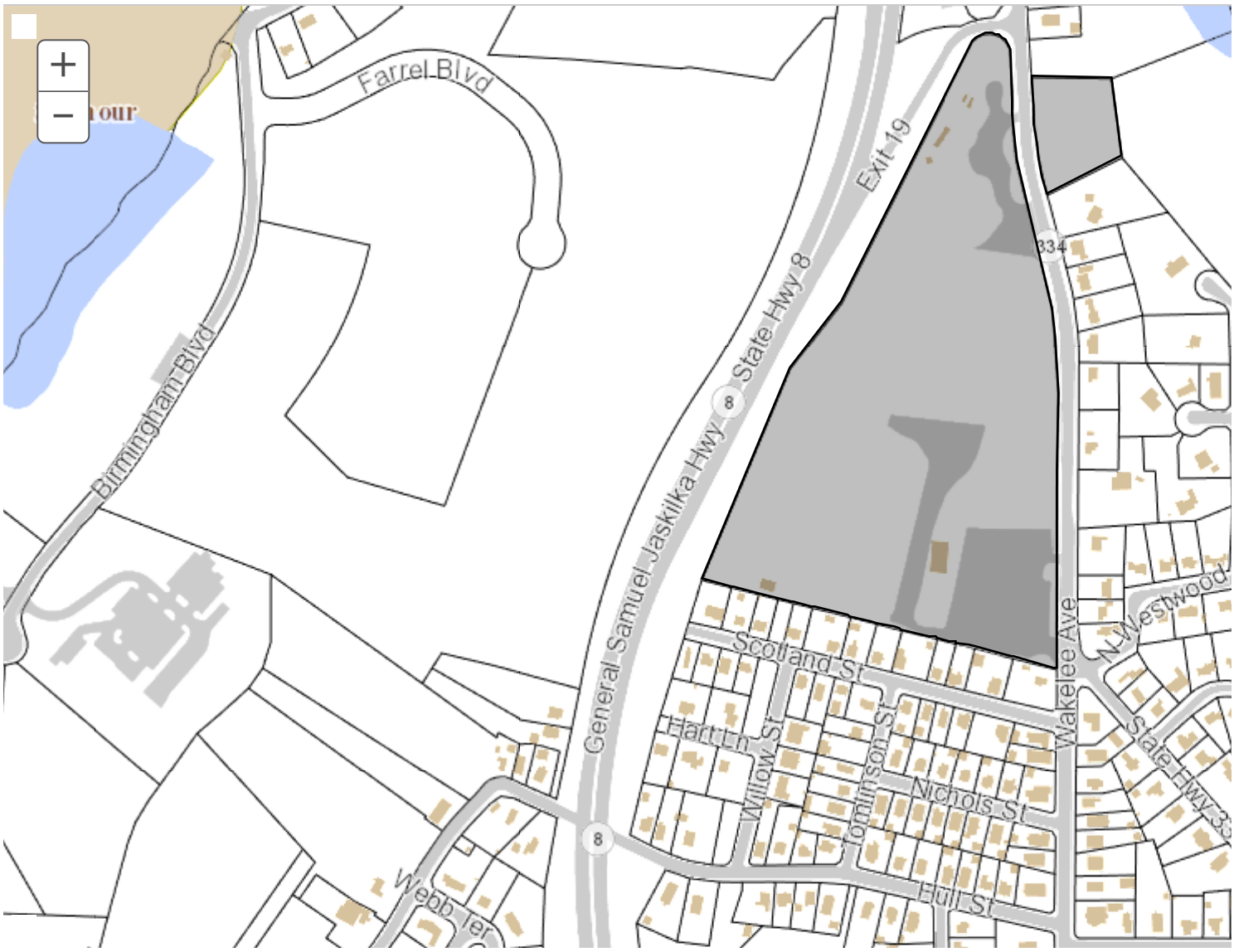
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
CITY OF ANSONIA	5/ 525	1/1/1900	0

Report Created On **7/17/2019**

City of Ansonia, Connecticut
Geographic & Property Information Application

Full Town View | Reset Map | **Search** | Print Map | H | Map Layers



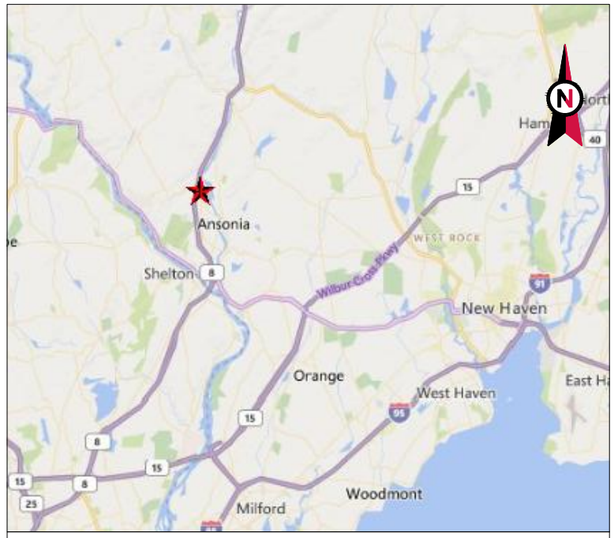
Full Extent | Zoom In | Zoom Out | Prev Extent | Next Extent | Pan | **Parcel Information** | Simple M

MapXpress v1.2

Property Info Updated Weekly - Parcels Updated Mar 2016

Exhibit C

Construction Drawings

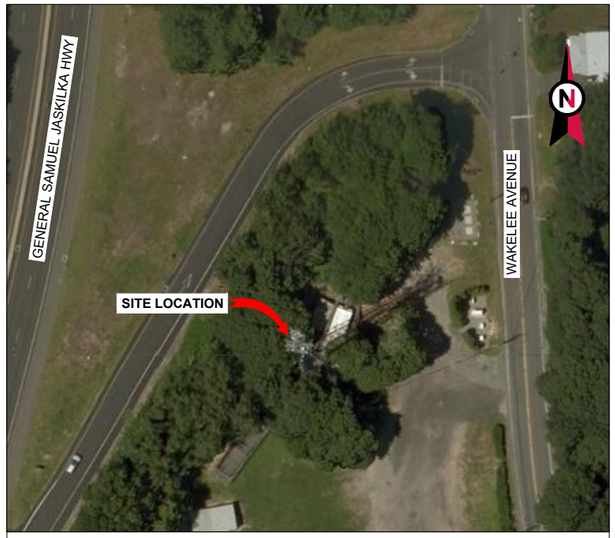


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: ANSONIA WAKELEE
ATC SITE NUMBER: 302470
T-MOBILE SITE ID: CT11810A
SITE ADDRESS: 401 WAKELEE AVE ANSONIA, CT 06401

T-MOBILE L600 ANTENNA AMENDMENT 67D92DB CONFIGURATION



LOCATION MAP

COMPLIANCE CODE

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

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: UNITED ILLUMINATING
PHONE: (877) 251-9959

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

401 WAKELEE AVE
ANSONIA, CT 06401
COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 21' 21.85" N

LONGITUDE: 73° 5' 31.2" W

GROUND ELEVATION: 314' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

T14 UNISON SITE MANAGEMENT, LLC
PO BOX 759472
BALTIMORE, MD 21275

PROJECT DESCRIPTION

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

REMOVE (6) PANELS, (3) RRUs, AND (6) 1-5/8" COAX CABLES

INSTALL MOUNT MODIFICATIONS, (6) NEW PANELS, (3) RRUs, AND (3) 1-5/8" HYBRID CABLES

EXISTING (3) PANELS, (3) TTAs, (6) 1-5/8" COAX CABLES AND (1) 1-1/4" HYBRID CABLES TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

DIRECTIONS TO SITE: FROM HARTFORD TAKE I-91 SOUTH TO MERRITT PKWY SOUTH. TAKE RT 8 N TO EXIT 19. TAKE A RIGHT OFF THE EXIT. TOWER IS IMMEDIATELY ON RIGHT.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	4	04/23/20	EB
G-002	GENERAL NOTES	0	07/24/19	LM
C-101	DETAILED SITE PLAN & TOWER ELEVATION	4	04/23/20	EB
C-501	ANTENNA INFORMATION & SCHEDULE	4	04/23/20	EB
E-501	GROUNDING DETAILS	3	10/17/19	EB
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

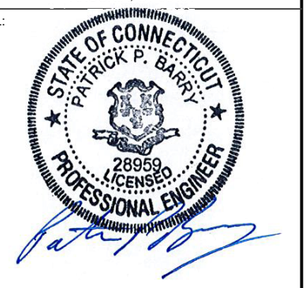
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LM	07/24/19
1	CABLE CHANGE	LM	08/02/19
2	MA CHANGE	LM	08/14/19
3	CAB. BREAKER UPGRADE	EB	10/17/19
4	REV CABLE LOADING	EB	04/23/20

ATC SITE NUMBER:
302470

ATC SITE NAME:
ANSONIA WAKELEE

SITE ADDRESS:
401 WAKELEE AVE
ANSONIA, CT 06401

SEAL:



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T-Mobile cosign

DRAWN BY:	LM
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12961554

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	4

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. 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.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH T-MOBILE WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. 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.
25. CONTRACTOR SHALL NOTIFY T-MOBILE WIRELESS 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.
26. 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.
27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. 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 WIRELESS REP. ANY WORK FOUND BY THE T-MOBILE WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. 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.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

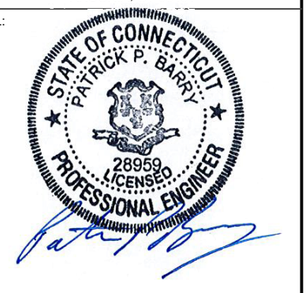
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LM	07/24/19

ATC SITE NUMBER:
302470

ATC SITE NAME:
ANSONIA WAKELEE

SITE ADDRESS:
401 WAKELEE AVE
ANSONIA, CT 06401

SEAL:



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T-Mobile cosign

DRAWN BY:	LM
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12961554

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

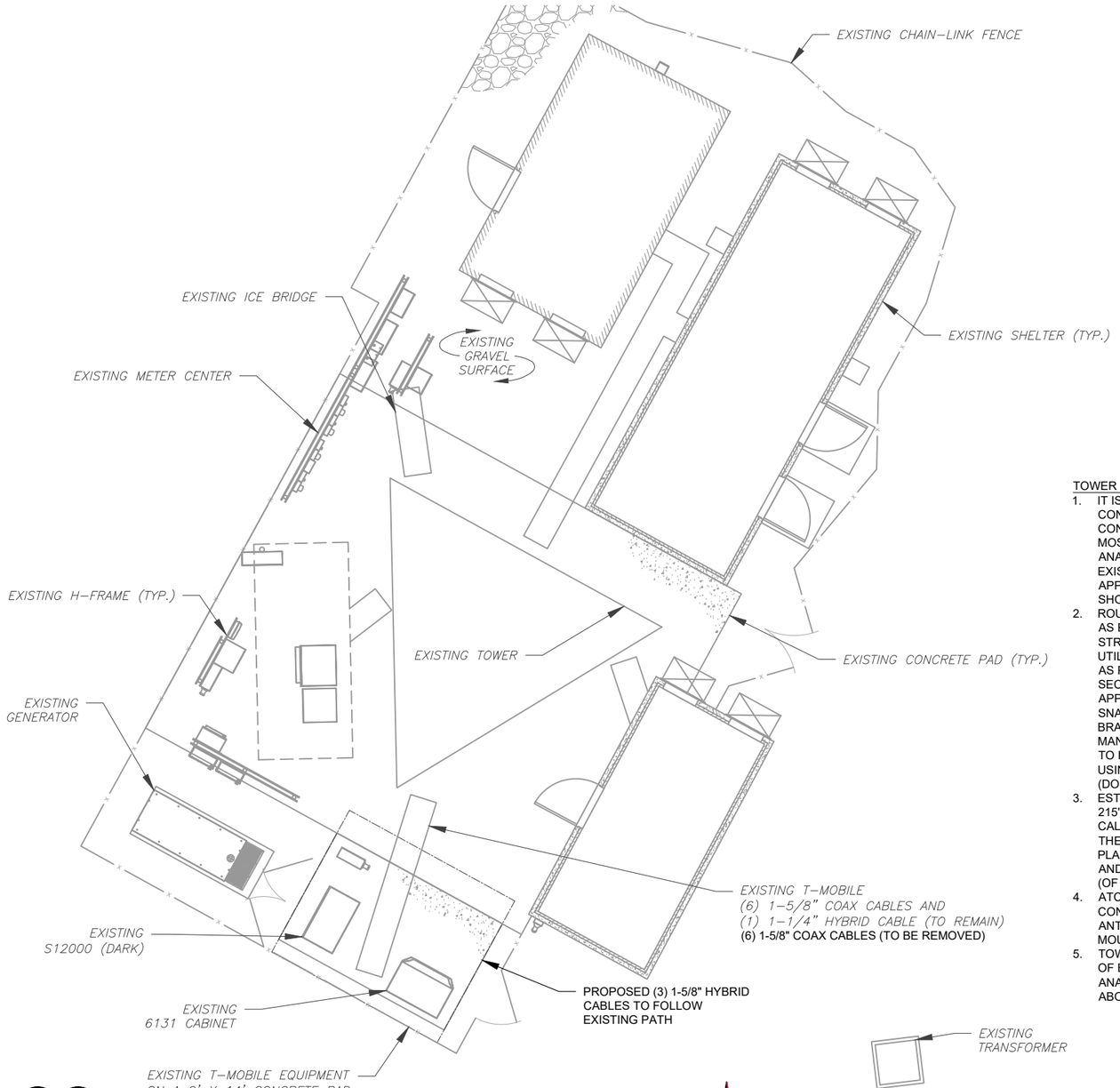
SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

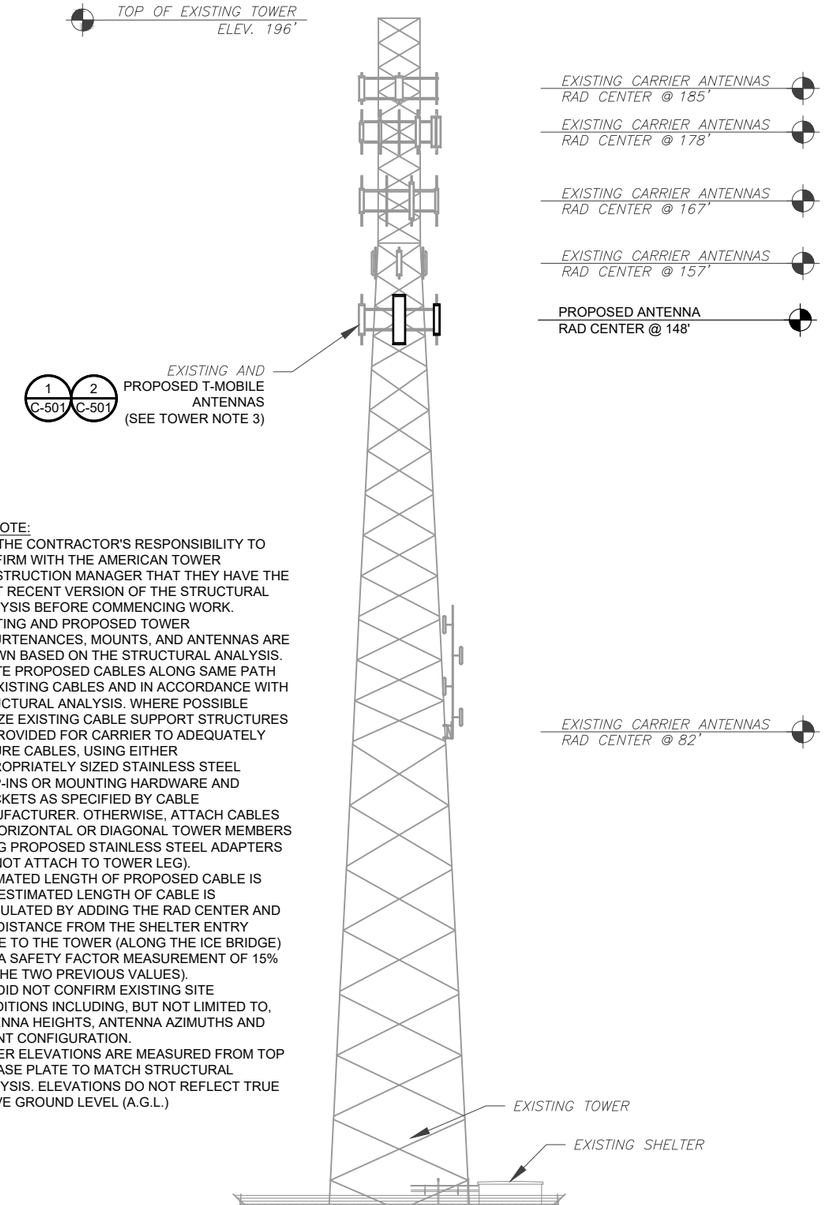
PER MOUNT ANALYSIS COMPLETED BY CLS GROUP, DATED 03/31/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



1 DETAILED SITE PLAN

0 10' 20'

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



TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
3. ESTIMATED LENGTH OF PROPOSED CABLE IS 215'. ESTIMATED LENGTH OF CABLE IS 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).
4. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATION.
5. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

2 TOWER ELEVATION

SCALE: NOT TO SCALE

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

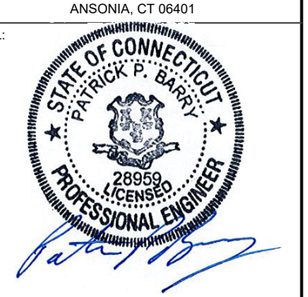
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LM	07/24/19
1	CABLE CHANGE	LM	08/02/19
3	CAB. BREAKER UPGRADE	EB	10/17/19
4	REV CABLE LOADING	EB	04/23/20

ATC SITE NUMBER:
302470

ATC SITE NAME:
ANSONIA WAKELEE

SITE ADDRESS:
401 WAKELEE AVE
ANSONIA, CT 06401

SEAL:



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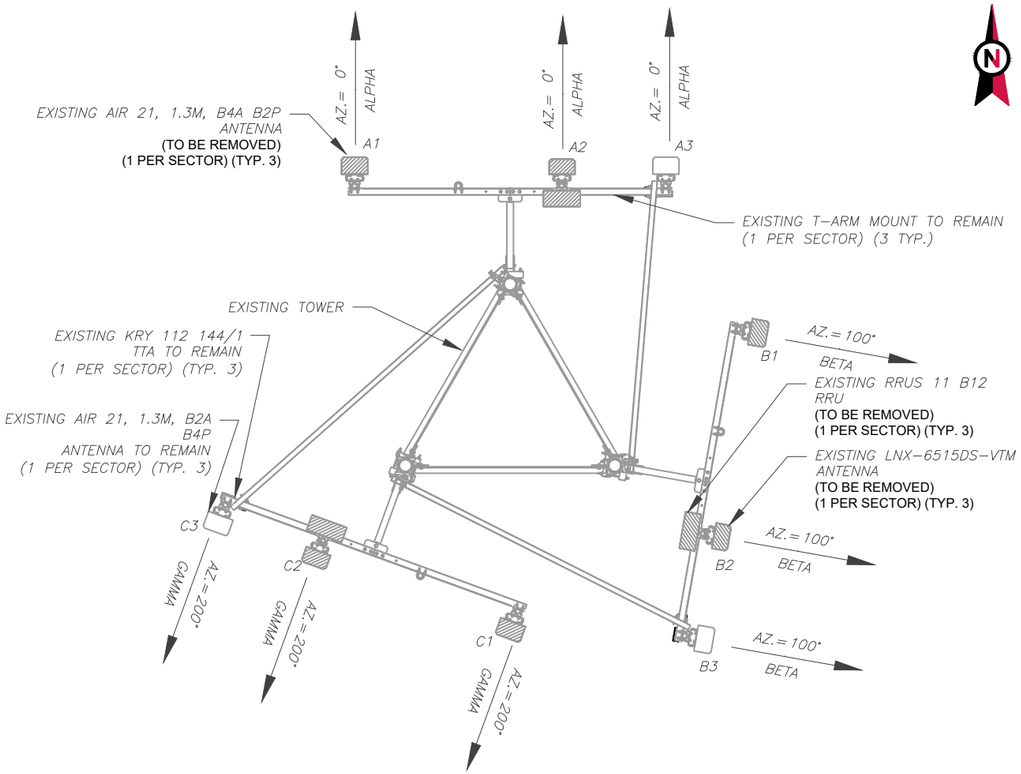
Apr 23 2020 5:49 PM

T-Mobile cosign

DRAWN BY:	LM
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12961554

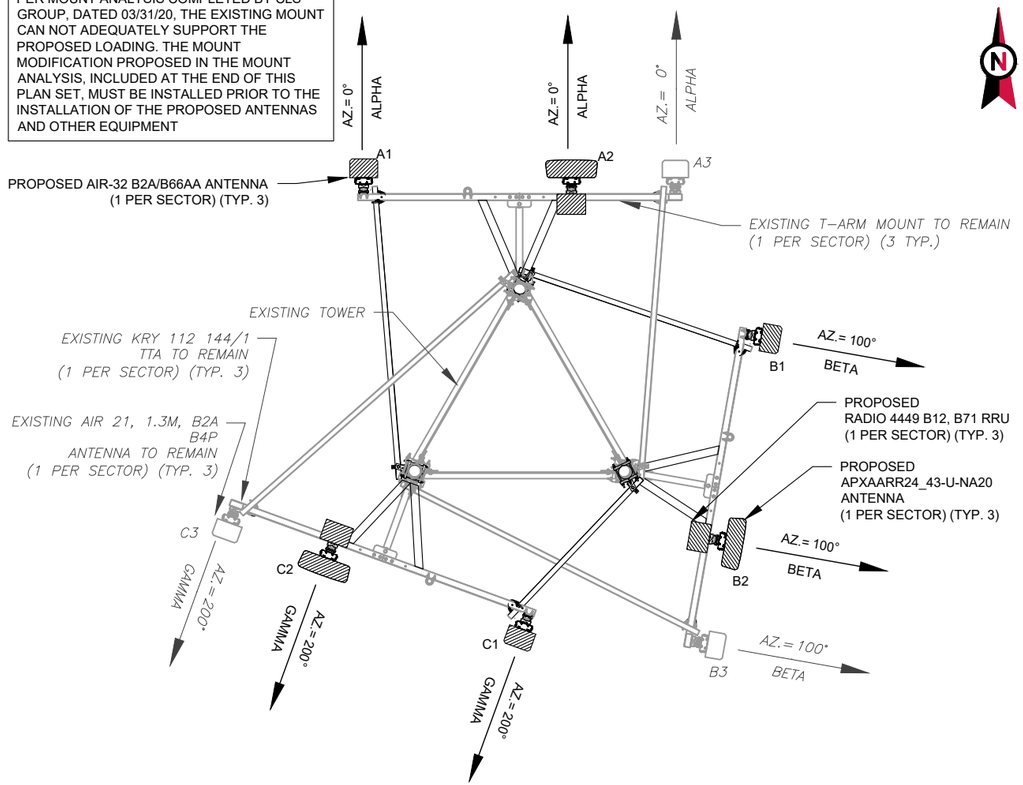
DETAILED SITE PLAN & TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-101	4



1 EXISTING ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY CLS GROUP, DATED 03/31/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION 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

EXISTING ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	AIR 21, 1.3M, B4A B2P	148'-0"	0°	0	2	-
ALPHA	A2	LNX-6515DS-VTM	148'-0"	0°	0	2	RRUS 11 B12
ALPHA	A3	AIR 21, 1.3M, B2A B4P	148'-0"	0°	0	2	KRY 112 144/1
BETA	B1	AIR 21, 1.3M, B4A B2P	148'-0"	100°	0	2	-
BETA	B2	LNX-6515DS-VTM	148'-0"	100°	0	2	RRUS 11 B12
BETA	B3	AIR 21, 1.3M, B2A B4P	148'-0"	100°	0	2	KRY 112 144/1
GAMMA	C1	AIR 21, 1.3M, B4A B2P	148'-0"	200°	0	2	-
GAMMA	C2	LNX-6515DS-VTM	148'-0"	200°	0	2	RRUS 11 B12
GAMMA	C3	AIR 21, 1.3M, B2A B4P	148'-0"	200°	0	2	KRY 112 144/1

NOTES

1. BASED ON APPROVED ATC APPLICATION 12942673, DATED 04/22/19. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA / EQUIPMENT SCHEDULE

SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	A1	AIR-32 B2A/B66AA	**148'-0"**	0°	0	2	-
ALPHA	A2	APXAARR24_43-U-NA20	**148'-0"**	0°	0	2	RADIO 4449 B12, B71
ALPHA	A3	AIR 21, 1.3M, B2A B4P	148'-0"	0°	0	2	KRY 112 144/1
BETA	B1	AIR-32 B2A/B66AA	**148'-0"**	100°	0	2	-
BETA	B2	APXAARR24_43-U-NA20	**148'-0"**	100°	0	2	RADIO 4449 B12, B71
BETA	B3	AIR 21, 1.3M, B2A B4P	148'-0"	100°	0	2	KRY 112 144/1
GAMMA	C1	AIR-32 B2A/B66AA	**148'-0"**	200°	0	2	-
GAMMA	C2	APXAARR24_43-U-NA20	**148'-0"**	200°	0	2	RADIO 4449 B12, B71
GAMMA	C3	AIR 21, 1.3M, B2A B4P	148'-0"	200°	0	2	KRY 112 144/1

CURRENT FIBER DISTRIBUTION/OVP BOX		CURRENT CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	(1) 1-1/4"	RMN
-	-	(6) 1-5/8"	-	RMV

STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED & REMAIN
ADD: TO BE ADDED

3 ANTENNA SCHEDULE

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	(1) 1-1/4"	RMN
-	-	-	(3) 1-5/8"	ADD

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

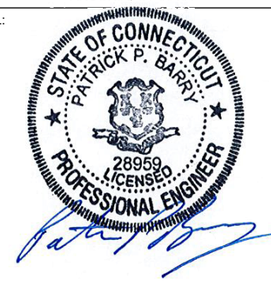
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LM	07/24/19
1	CABLE CHANGE	LM	08/02/19
4	REV CABLE LOADING	EB	04/23/20

ATC SITE NUMBER:
302470

ATC SITE NAME:
ANSONIA WAKELEE

SITE ADDRESS:
401 WAKELEE AVE
ANSONIA, CT 06401

SEAL:



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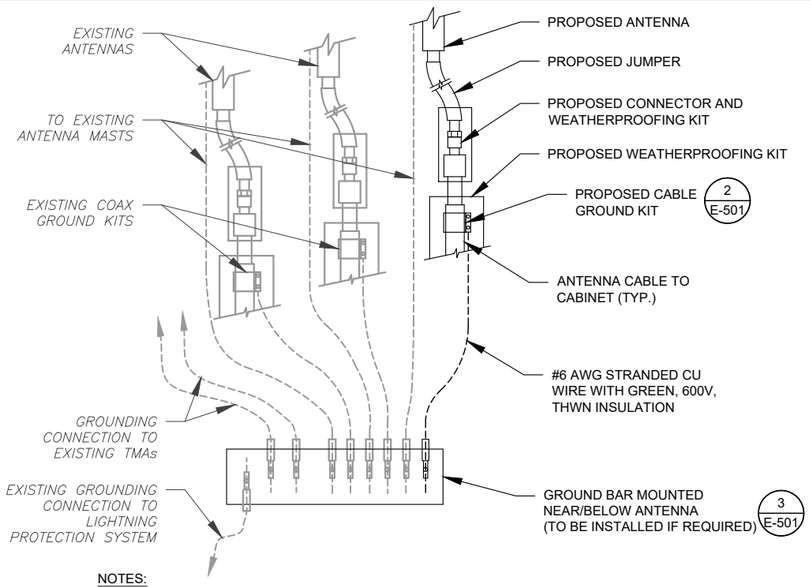
Apr 23 2020 5:49 PM

T-Mobile cosign

DRAWN BY:	LM
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12961554

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-501	4

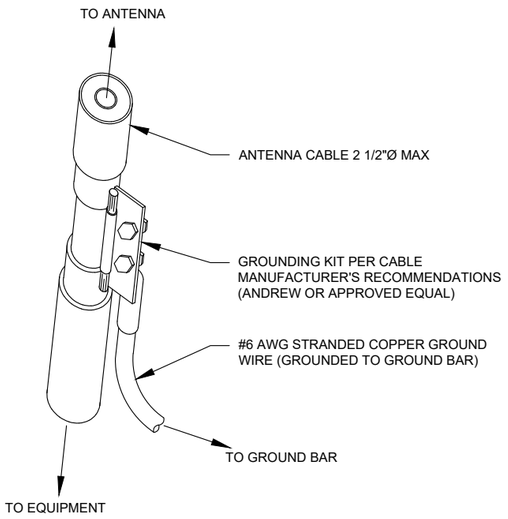


NOTES:

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: NOT TO SCALE

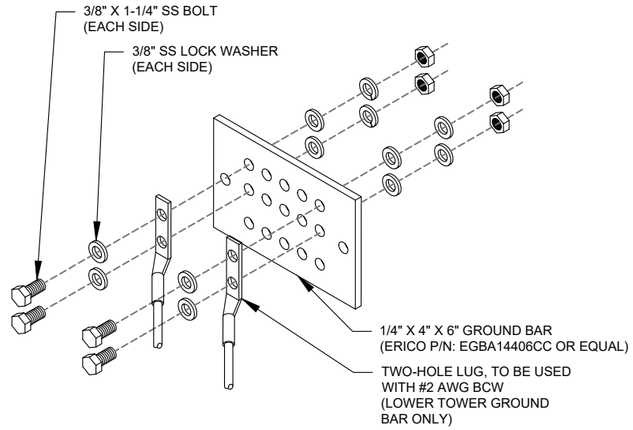


GROUND KIT NOTES:

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: NOT TO SCALE



GROUND BAR NOTES:

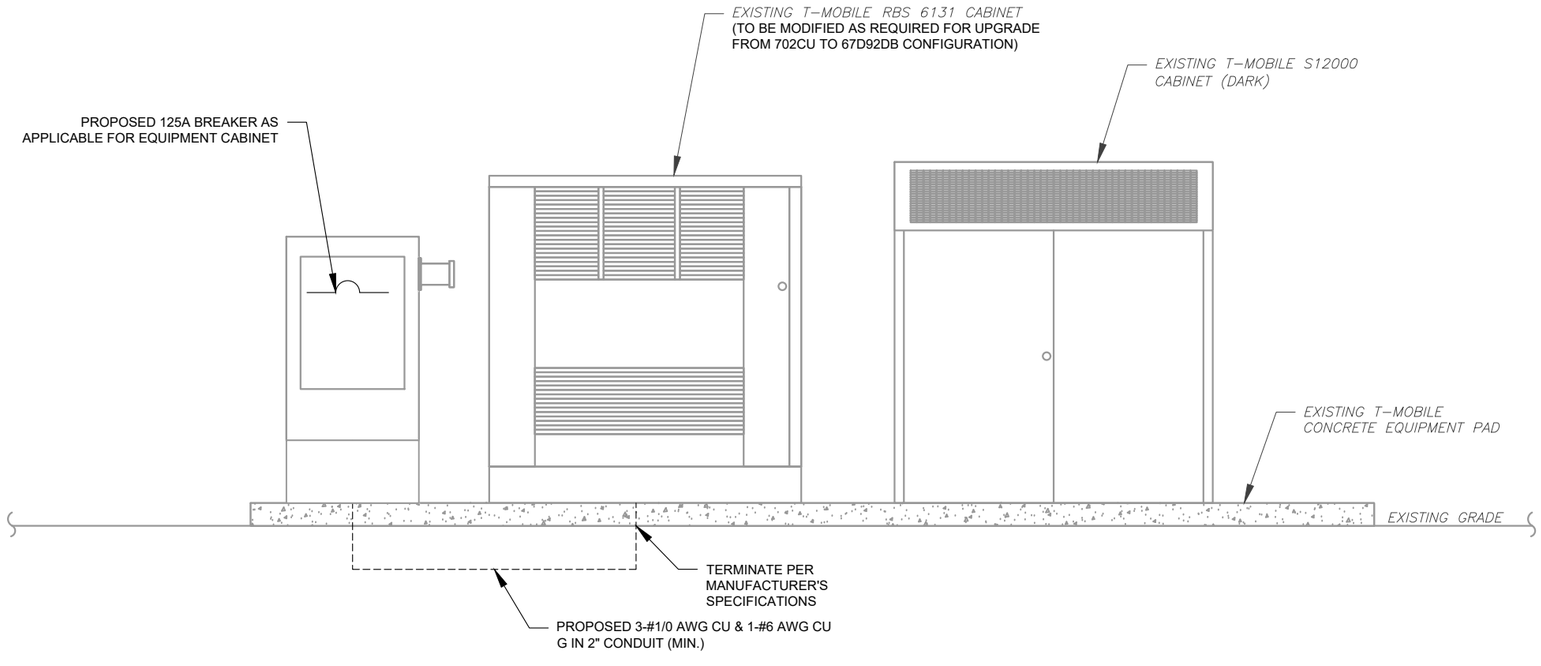
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: NOT TO SCALE

ELECTRICAL NOTES:

1. THIS DIAGRAM 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. 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.
3. ATC HAS NOT YET 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.



4 ELECTRICAL UPGRADE DIAGRAM

SCALE: NOT TO SCALE

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

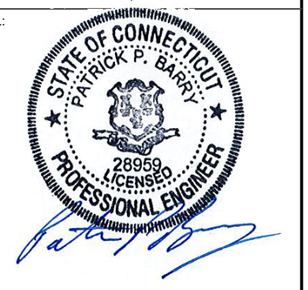
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LM	07/24/19
3	CAB. BREAKER UPGRADE	EB	10/17/19

ATC SITE NUMBER:
302470

ATC SITE NAME:
ANSONIA WAKELEE

SITE ADDRESS:
401 WAKELEE AVE
ANSONIA, CT 06401

SEAL:



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Apr 23 2020 5:49 PM

T-Mobile cosign

DRAWN BY:	LM
APPROVED BY:	PPB
DATE DRAWN:	07/24/19
ATC JOB NO:	12961554

GROUNDING DETAILS

SHEET NUMBER: E-501

REVISION: 3

RAN Template:	A&L Template:	Power System Template:
67D92DB Outdoor	67D92DB_2xAIR+1OP	Custom

CT11810A_L600_3.1_draft

Section 5 - RAN Equipment

Existing RAN Equipment

Template: 702Cu

Enclosure	1	2
Enclosure Type	RBS 6131	S12000 Outdoor
Baseband	DUW30 (x2) DUG20 DUS41	
Hybrid Cable System	Ericsson 9x18 HCS "Select Length"	
Multiplexer	XMU	
Radio	RU22 (x6)	

Proposed RAN Equipment

Template: 67D92DB Outdoor

Enclosure	1	2
Enclosure Type	RBS 6131	S12000 Outdoor
Baseband	DUW30 U2100; DUW30 U1900; DUG20 G1900; BB 6630 L2100 L1900 L700 L600; BB 6630 N600 (DARK)	
Hybrid Cable System	Ericsson 9x18 HCS "Select Length" Ericsson 6x12 HCS "Select Length & AWG" (x3)	
Radio	RU22 (x6) U2100	

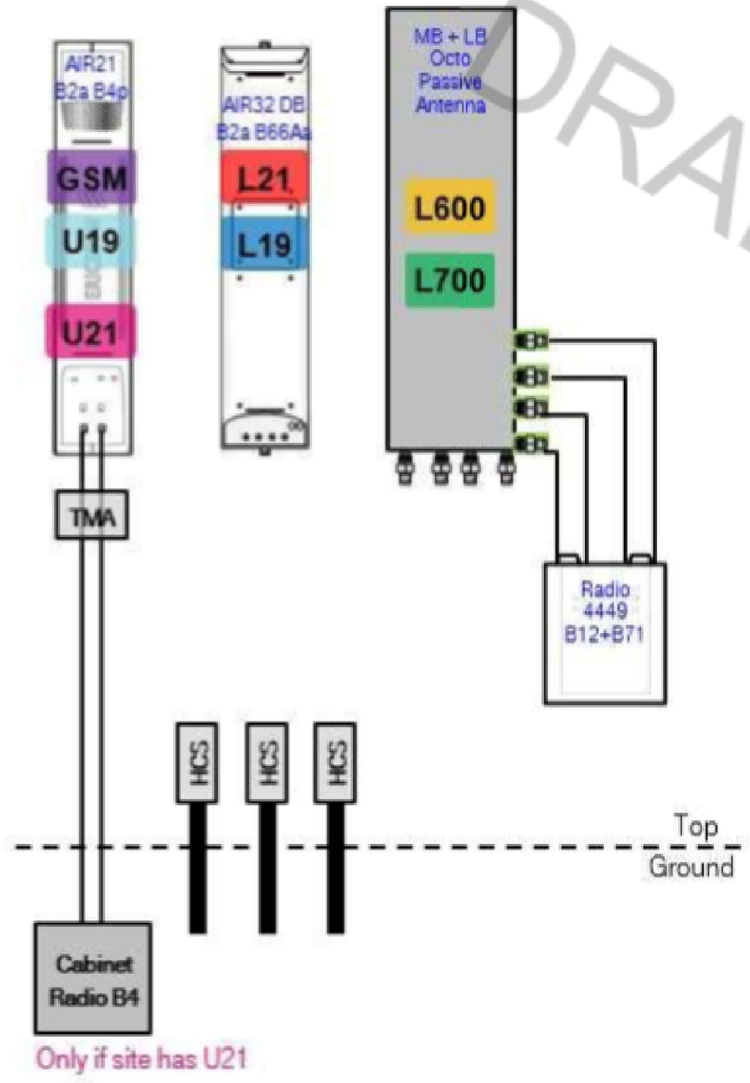
RAN Scope of Work:

Replace (1) DUS41 with (1) BB6630 for L2100, L1900, L700, and L600.
Install (1) BB6630 for future 5G N600.
Remove (1) XMU.

Rad Center: T-Mobile at 148 feet.

Add (3) 6X12 HCS.
Existing: (12) 1-5/8 Coaxial; (1) 9X18 HCS. Remove (6) Coaxial Lines.

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE



2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

Mount Analysis of Existing Sector Frames for American Tower on behalf of T-Mobile
302470 - Ansonia Wakelee
Project #: 12942673
T-Mobile Site ID: CT11810A
Program: L600

CLS Engineering PLLC Project #41124-12942673-01-MA-R2
March 31, 2020

MOUNT DESCRIPTION	Existing Sector Frames at 147 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 148 ft AGL (Eccentricity of ~1 ft)
SITE DESCRIPTION	196 ft Self-Supporting Tower
SITE ADDRESS	401 Wakelee Ave, Ansonia, CT, 06401-1226, New Haven County
GPS COORDINATES	41.35606944, -73.092
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 0.75" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	77%	Pass

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
Jennifer Soza

Reviewed and Approved by:
Tyler M. Barker, P.E.

STATE OF CONNECTICUT · TYLER M BARKER · No. 32402 · LICENSED PROFESSIONAL ENGINEER

Tyler M. Barker
CLS Engineering PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2021
COA # PEC.001833 Exp. 8/14/2020

GlobalSign
Digitally signed by Tyler M. Barker PE
Date: 2020.03.31 18:03:25-04'00'

■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS.** The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- **Install (1) Site Pro 1 STK-U stiff arm kit at each existing sector frame mount (3 total). Connect to adjacent tower leg with Site Pro 1 Universal Stiff Arm Attachment (SAM-U) included in the STK-U kit. Connect to upper face horizontal with Site Pro 1 PUCK in lieu of Site Pro 1 SCX1 crossover plate included in the STK-U kit.**
- **Install (1) Site Pro 1 SFS-V Sector Frame Stabilizer kit at each sector frame mount (3 total). Connect to existing face horizontal pipe and existing tower leg as shown in the following sketches. Field-Cut proposed angles as required. Maintain minimum bolt edge distance.**
- **All hardware for Site Pro 1 SFS-V connection to the tower leg / PUCK connection to the existing horizontal pipe should be installed with "turn of the nut" method per the following table:.**

BOLT TIGHTENING PROCEDURE

1. TIGHTEN BOLTS BY AISC "TURN OF THE NUT" METHOD USING THE CHART BELOW:

   BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS:
   +1/3 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER FOUR AND UP TO EIGHT DIAMETERS:
   +1/2 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER EIGHT AND UP TO TWELVE DIAMETERS:
   +2/3 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS AS FOLLOWS:

   "FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BE TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

   8(d)(1) TURN-OF-THE-NUT TIGHTENING.
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLIES OF A JOINT ARE IN FIRM CONTACT. THIS MAY BE OBTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. SNUG TIGHTENING SHALL PROGRESS SYSTEMATICALLY...UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

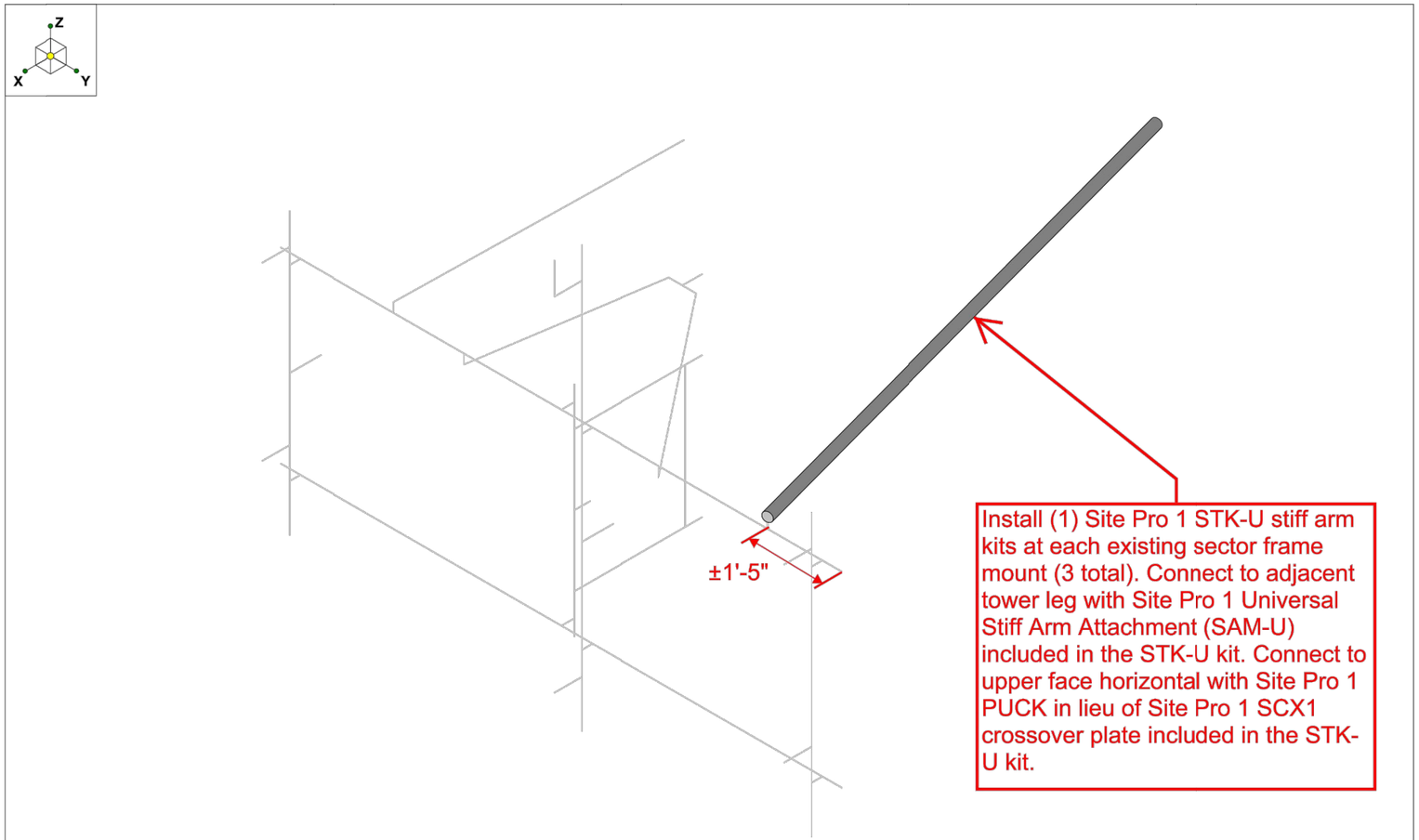
BEFORE ¼ TURN AFTER ¼ TURN

See following sketches and Site Pro 1 assembly drawings for more details.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	4



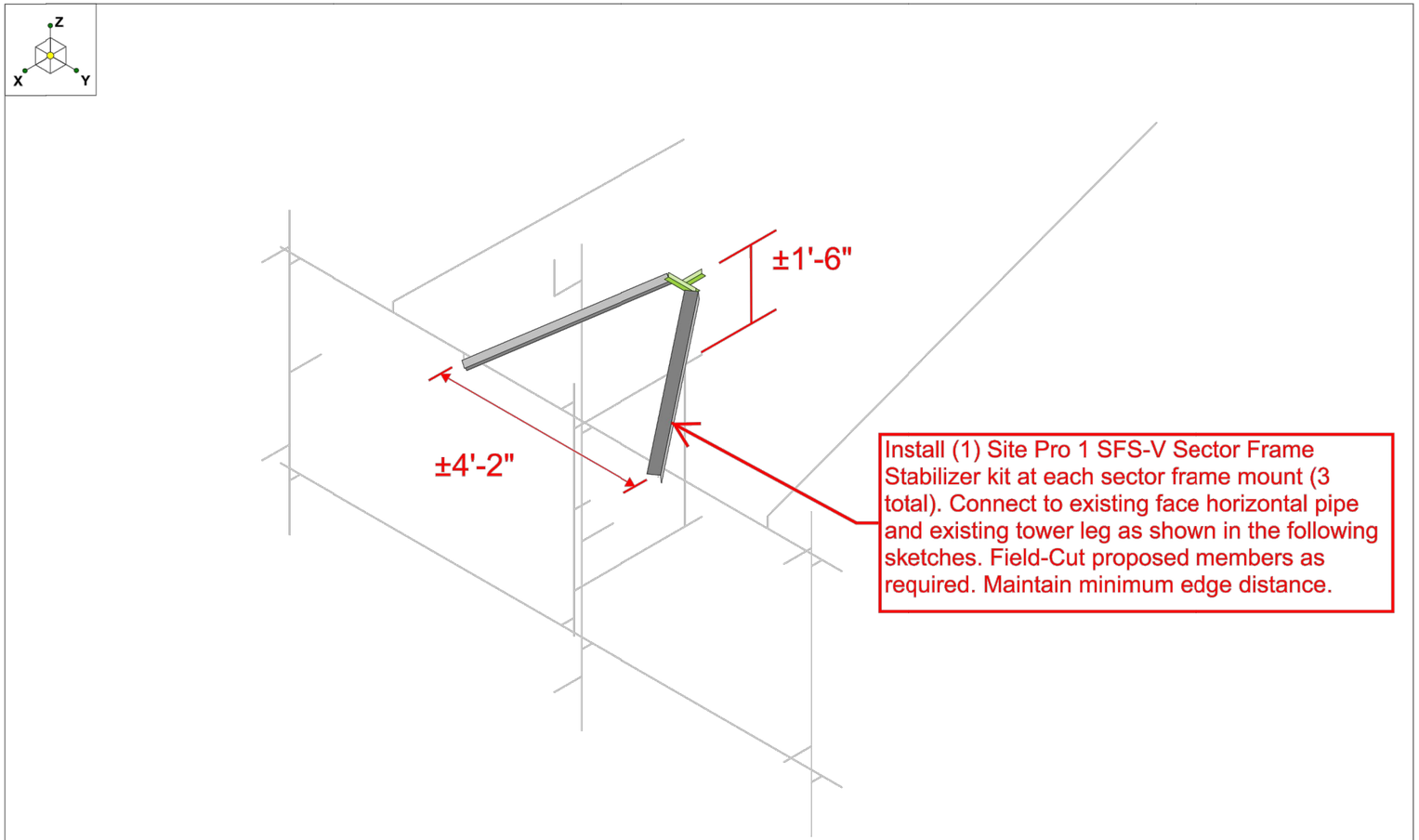
Envelope Only Solution

CLS		IN- 1
JLS	41124-12942673-Ansonia Wakelee	Mar 31, 2020 at 1:11 PM
41124-12942673-01-MA-R2	Proposed Modifications - Rendered	41124-12942673-01-MA-R2.r3d

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	4



Envelope Only Solution

CLS		IN- 2
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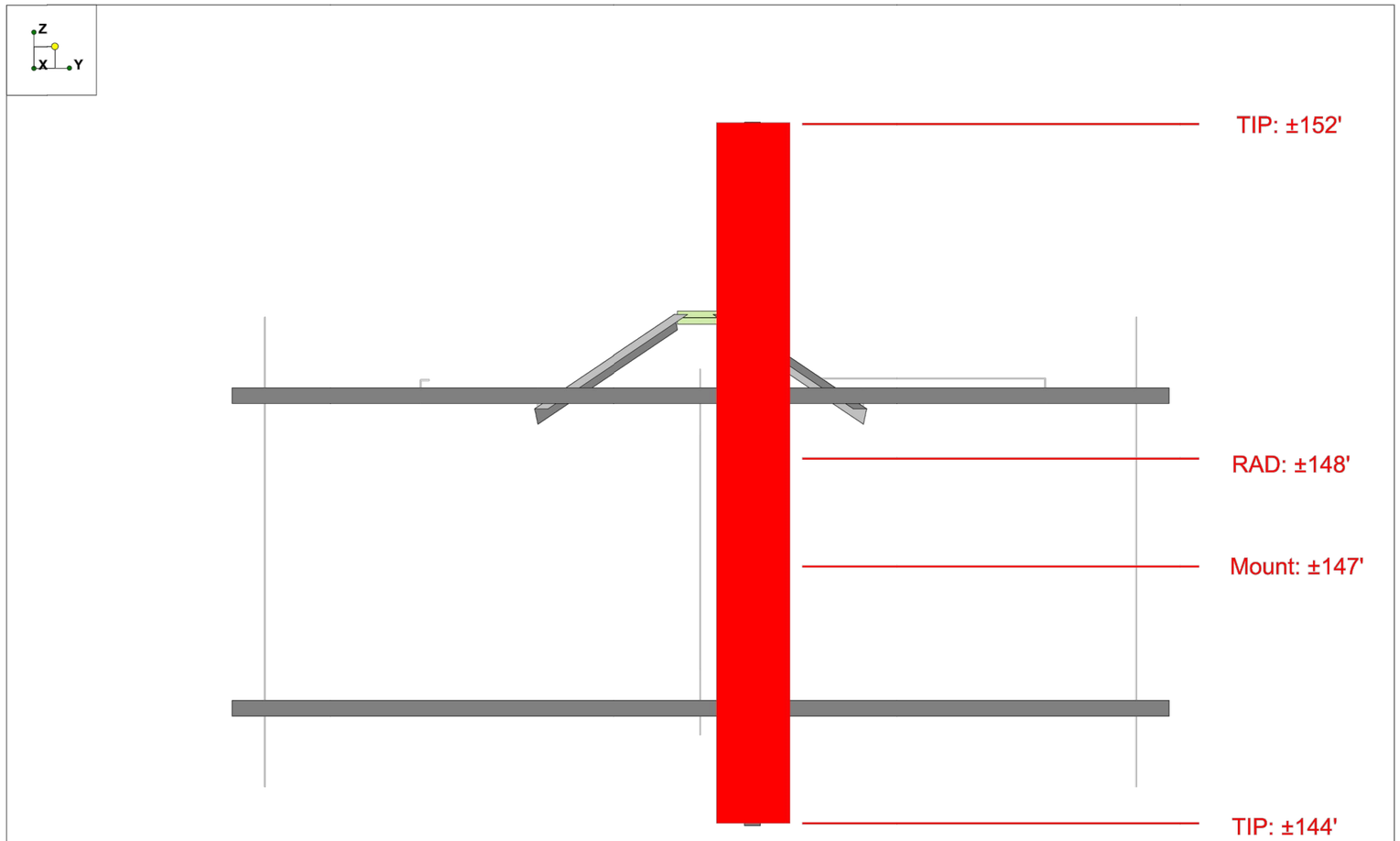
41124-12942673-01-MA-R2	Proposed Modifications - Rendered	41124-12942673-01-MA-R2.r3d

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	4



Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	IN- 3
JLS		Mar 31, 2020 at 1:11 PM
41124-12942673-01-MA-R2	Proposed Modifications - Rendered	41124-12942673-01-MA-R2.r3d

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	4

Exhibit D

Structural Analysis Report

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**196 ft Self Supported Tower**
ATC Site Name	:	**Ansonia Wakelee, CT**
ATC Asset Number	:	**302470**
Engineering Number	:	**12942673_C3_04**
Proposed Carrier	:	**T-MOBILE**
Carrier Site Name	:	**Spectrasite - Ansonia**
Carrier Site Number	:	**CT11810A**
Site Location	:	**401 Wakelee Ave** **Ansonia, CT 06401-1226** **41.356100,-73.092000**
County	:	**New Haven**
Date	:	**April 28, 2020**
Max Usage	:	**85%**
Result	:	**Pass**

Prepared By:
Jennifer Yu
Structural Engineer I

Jennifer Yu

Reviewed By:

Authorized by "EOR"
28 Apr 2020 05:18:39 cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 196 ft self supported tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	Rohn Drawing #A991899, dated July 7, 1999
Foundation Drawing	Rohn Drawing #A992523-1, dated September 22, 1999
Geotechnical Report	Tectonic Engineering Consultants W.O. #1170.C754, dated May 20, 1999
Mount Analysis	CLS Engineering PLLC Project #41124-12942673-01-MA-R2, dated March 31, 2020

Analysis

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

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
192.0	3	Alcatel-Lucent 1900 MHz 4X45 RRH	Sector Frame	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
188.0	3	Alcatel-Lucent 800MHz RRH and Type 1 Notch Filter			
185.0	1	RFS APXVSPP18-C-A20			
	2	Powerwave Allgon P40-16-XLPP-RRR			
	1	Powerwave Allgon P40-16-XLPP-RRR			
	3	KMW ET-X-WM-18-65-8P			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Alcatel-Lucent 800 MHz RRH			
178.0	3	Rymsa MGD3-800TX	Sector Frame	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
177.0	3	Samsung Outdoor CBRS 20W RRH			
	6	JMA Wireless MX06FRO660-02			
	3	Amphenol Antel BXA-80080-4CF-EDIN-X			
	2	RFS DB-T1-6Z-8AB-0Z			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	3	Commscope SSPX310R			
	3	RFS FD9R6004/2C-3L			
167.0	3	Ericsson RRUS 4478 B14	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (8) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax (1) 2" conduit	AT&T MOBILITY
	6	Kaelus DBCT108F1V92-1			
	3	Ericsson RRUS E2 B29			
	3	Ericsson RRUS-32 (77 lbs)			
	2	CCI OPA65R-BU6A			
	2	CCI OPA-65R-LCUU-H6			
	1	CCI OPA65R-BU8B			
	2	CCI TPA65R-BU6D			
	1	CCI OPA-65R-LCUU-H8			
	1	CCI TPA65R-BU8D			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			
	3	Raycap DC6-48-60-18-8F ("Squid")			
	1	Raycap DC6-48-60-0-8F (24" Height)			
	3	Ericsson RRUS 4478 B5			
	3	Ericsson Radio 8843 - B2 + B66A (w/ protruding items)			
	6	Powerwave Allgon TT19-08BP111-001			
157.0	3	Kathrein Scala 742 213	Leg	(6) 1 5/8" Coax	METRO PCS INC
148.0	3	Ericsson AIR 21, 1.3 M, B2A B4P	Sector Frame	(6) 1 5/8" Coax	T-MOBILE
	3	Ericsson KRY 112 144/1			
125.0	2	Motorola PTP54600	Leg	(2) 1/4" Coax	CITY OF ANSONIA, CT
85.0	1	Generic 10' Dipole	Stand-Off	(1) 1/2" Coax	
76.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
148.0	3	Ericsson AIR 21, 1.3M, B4A B2P	-	(6) 1 5/8" Coax	T-MOBILE
	3	Andrew LNX-6515DS-VTM			
	3	Ericsson RRUS-11			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
148.0	3	Ericsson AIR-32 B2A/B66Aa	Sector Frame with Stabilizer And Stiff Arm Kit	(1) 1 1/4" (1.25"-31.8mm) Fiber (3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson Radio 4449 B12,B71			

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

Install proposed lines stacked on top of existing T-MOBILE coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	82%	Pass
Diagonals	85%	Pass
Horizontals	13%	Pass
Anchor Bolts	72%	Pass
Leg Bolts	66%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	301.1	406.5	313.5	77%
Axial (Kips)	343.0	463.1	361.8	78%
Shear (Kips)	54.4	73.4	61.3	84%
* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1				

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)	Twist (°)	Sway (Rotation) (°)
148.0	Ericsson Radio 4449 B12,B71	T-MOBILE	0.264	0.012	0.213
	Ericsson AIR-32 B2A/B66Aa				
	RFS APXVAARR24_43-U-NA20				

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

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:

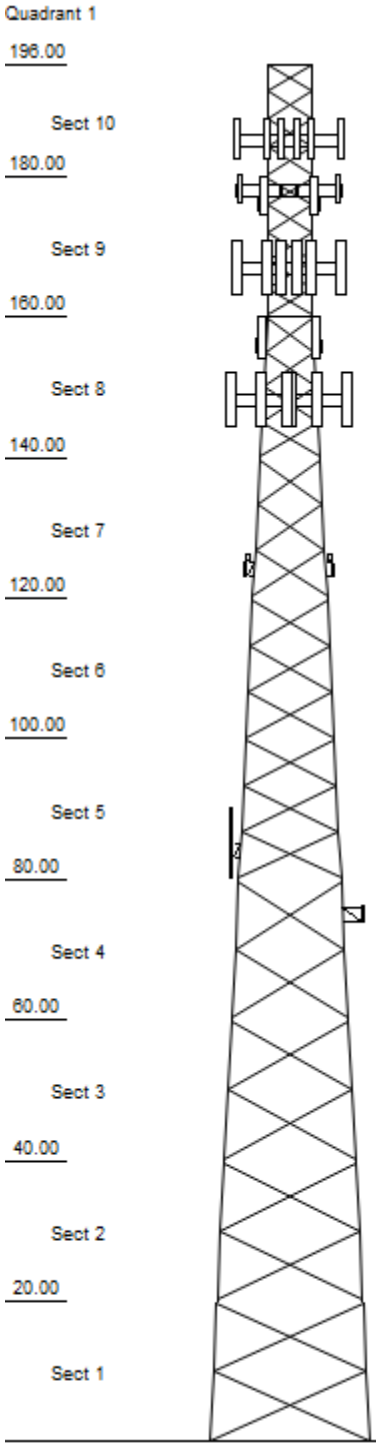
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.



Loads: 97 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.19 S1: 0.06
60 mph Serviceability

Job Information

Client : T-MOBILE			
Tower : 302470	Location : Ansonia	Base Width :	23.00 ft
Code : ANSI/TIA-222-G		Top Width :	6.65 ft
		Tower Ht :	196.00 ft
		Shape :	Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 8" DIA PIPE	SAE 50 ksi 4X4X0.25	
2	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 3.5X3.5X0.25	
4	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5	PSP 50 ksi ROHN 6 EHS	SAE 50 ksi 3X3X0.25	
6 - 7	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
8	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 2X2X0.125
9	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.1875	
10	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.125

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
192.00		3	Alcatel-Lucent 1900 MHz 4X45 R
188.00		3	Alcatel-Lucent 800MHz RRH and
185.00	Panel	1	RFS APXVSPP18-C-A20
185.00	Panel	3	KMW ET-X-WM-18-65-8P
185.00		3	Alcatel-Lucent TD-RRH8x20-25 w
185.00		3	Alcatel-Lucent 800 MHz RRH
185.00	Mounting Frame	3	Round Sector Frames
185.00	Panel	1	Powerwave Allgon P40-16-XLPP-R
185.00	Panel	2	Powerwave Allgon P40-16-XLPP-R
178.00	Mounting Frame	3	Flat Light Sector Frames
178.00	Panel	3	Rymsa MGD3-800TX
177.00	Panel	6	JMA Wireless MX06FRO660-02
177.00		2	RFS DB-T1-6Z-8AB-0Z
177.00	Panel	3	Amphenol Antel BXA-80080-4CF-E
177.00	Panel	3	Commscope SSPX310R
177.00		3	Samsung B5/B13 RRH-BR04C
177.00		3	Samsung B2/B66A RRH-BR049
177.00		3	Samsung Outdoor CBRS 20W
177.00		3	RFS FD9R6004/2C-3L
167.00	Mounting Frame	3	Round Sector Frames
167.00	Panel	1	CCI TPA65R-BU8D
167.00	Panel	1	CCI OPA-65R-LCUU-H8
167.00	Panel	2	CCI TPA65R-BU6D
167.00	Panel	1	CCI OPA65R-BU8B
167.00	Panel	2	CCI OPA-65R-LCUU-H6
167.00	Panel	2	CCI OPA65R-BU6A
167.00		3	Ericsson RRUS-32 (77 lbs)
167.00		3	Ericsson RRUS E2 B29
167.00		3	Ericsson RRUS 11 (Band 12) (55
167.00		3	Ericsson RRUS 4478 B14
167.00		3	Ericsson Radio 8843 - B2 + B66
167.00		3	Ericsson RRUS 4478 B5
167.00		1	Raycap DC6-48-60-0-8F (24" Hei
167.00		3	Raycap DC6-48-60-18-8F ("Squid
167.00		6	Kaelus DBCT108F1V92-1
167.00		6	Powerwave Allgon TT19-08BP111-
157.00	Panel	3	Kathrein Scala 742 213
148.00	Mounting Frame	3	Round Sector Frame
148.00	Panel	3	RFS APXVAARR24_43-U-NA20
148.00	Panel	3	Ericsson AIR-32 B2A/B66Aa
148.00	Panel	3	Ericsson AIR 21, 1.3 M, B2A B4
148.00		3	Ericsson Radio 4449 B12,B71
148.00		3	Ericsson KRY 112 144/1
125.00	Panel	2	Motorola PTP54600

Job Information

Client : T-MOBILE

Tower : 302470 **Location :** Ansonia **Base Width :** 23.00 ft

Code : ANSI/TIA-222-G **Top Width :** 6.65 ft

Tower Ht : 196.00 ft

Shape : Triangle

102.00	Straight Arm	2	Standoffs
85.00	Whip	1	Generic 10' Dipole
80.00	Straight Arm	1	Standoffs
76.00	Straight Arm	1	Standoffs
76.00	Whip	1	PCTEL GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft) From	To	Qty	Description
8.00	194.00	1	Wave Guide
8.00	185.00	1	Wave Guide
8.00	185.00	1	1 1/4" Hybriflex Cab
8.00	185.00	3	1 1/4" Hybriflex Cab
8.00	177.00	2	1 5/8" Hybriflex
8.00	177.00	6	1 5/8" Coax
8.00	167.00	1	Wave Guide
8.00	167.00	1	2" conduit
8.00	167.00	12	1 1/4" Coax
8.00	167.00	8	0.78" (19.7mm) 8 AWG
8.00	167.00	2	0.39" (10mm) Fiber T
8.00	157.00	1	Waveguide
8.00	157.00	6	1 5/8" Coax
8.00	148.00	1	Wave Guide
0.00	148.00	6	1 5/8" Coax
0.00	148.00	3	1 5/8" (1.63"-41.3mm
0.00	148.00	1	1 1/4" (1.25"- 31.8m
8.00	125.00	2	1/4" Coax
8.00	85.00	1	1/2" Coax
8.00	76.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	6,838.18	55.49	61.34
DL + WL + IL	2,336.15	160.37	21.73

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
361.80	313.50	37.30

Site Number:	302470	Code:	ANSI/TIA-222-G	
Site Name:	Ansonia Wakelee, CT	Engineering Number:	12942673_C3_04	4/28/2020 4:37:30 PM
Customer:	T-MOBILE			

Analysis Parameters

Location:	New Haven County, CT	Height (ft):	196
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	23.00
Tower Manufacturer:	Rohn	Top Face Width (ft):	6.65
Tower Type:	Self Support	Anchor Bolt Detail Type	d
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	97 mph
Exposure Category:	C	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.95				
T_L (sec):	6	p:	1.3	C_S:	0.034
S_S:	0.190	S_1:	0.060	C_S, Max:	0.034
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.203	S_{d1}:	0.096		

Load Cases

1.2D + 1.6W Normal	97 mph Normal with No Ice
1.2D + 1.6W 60 deg	97 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	97 mph 90 degree with No Ice
0.9D + 1.6W Normal	97 mph Normal with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	97 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	97 mph 90 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg

Site Number: 302470 Code: ANSI/TIA-222-G

Site Name: Ansonia Wakelee, CT Engineering Number: 12942673_C3_04 4/28/2020 4:37:30 PM

Customer: T-MOBILE

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	29.73	113	216
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	29.60	87	230
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.50	103	191
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	252
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	29.50	405	131
185.0	RFS APXVSPP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	29.50	257	68
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	582	154
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	291	77
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	29.50	975	1080
178.0	Rymsa MGD3-800TX	3	15	3.3	4.4	6.3	3.5	0.80	0.69	0.0	0.0	29.26	220	55
178.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.26	1074	1440
177.0	RFS FD9R6004/2C-3L	3	3	0.3	0.5	6.5	1.5	1.00	0.50	0.0	0.0	29.22	19	9
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	29.22	41	67
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	29.22	89	304
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	29.22	89	253
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	29.22	185	59
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	29.22	245	43
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	220.0	29.26	220	106
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	29.22	1337	331
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	28.87	52	115
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	28.87	60	100
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	139	114
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	46	39
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.87	87	216
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	28.87	93	270
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	28.87	95	214
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	28.87	119	198
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	28.87	148	216
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	28.87	156	277
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	28.87	390	138
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	28.87	455	175
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	28.87	352	83
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	28.87	582	162
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	28.87	408	106
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.87	852	1080
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	28.87	568	99
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	28.49	400	79
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	28.14	16	40
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	28.14	75	266
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	28.14	394	299
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	28.14	425	476
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.14	831	1080
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	28.14	1171	460
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	1.00	4.0	521.1	27.34	130	29
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	26.02	159	180
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	25.04	128	36
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	84	90
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	24.46	3	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.46	83	90
	Totals	129	9830	680.2									15073	11796

Site Number: 302470 Code: ANSI/TIA-222-G

Site Name: Ansonia Wakelee, CT Engineering Number: 12942673_C3_04 4/28/2020 4:37:30 PM

Customer: T-MOBILE

Tower Loading

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	29.73	113	162
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	29.60	87	173
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.50	103	143
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	189
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	29.50	405	98
185.0	RFS APXVSPP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	29.50	257	51
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	582	115
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	291	58
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	29.50	975	810
178.0	Rymsa MGD3-800TX	3	15	3.3	4.4	6.3	3.5	0.80	0.69	0.0	0.0	29.26	220	42
178.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.26	1074	1080
177.0	RFS FD9R6004/2C-3L	3	3	0.3	0.5	6.5	1.5	1.00	0.50	0.0	0.0	29.22	19	7
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	29.22	41	50
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	29.22	89	228
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	29.22	89	190
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	29.22	185	45
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	29.22	245	32
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	220.0	29.26	220	79
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	29.22	1337	248
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	28.87	52	86
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	28.87	60	75
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	139	86
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	46	30
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.87	87	162
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	28.87	93	203
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	28.87	95	160
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	28.87	119	149
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	28.87	148	162
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	28.87	156	208
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	28.87	390	104
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	28.87	455	131
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	28.87	352	62
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	28.87	582	122
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	28.87	408	79
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.87	852	810
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	28.87	568	74
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	28.49	400	59
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	28.14	16	30
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	28.14	75	200
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	28.14	394	224
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	28.14	425	357
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.14	831	810
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	28.14	1171	345
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	1.00	4.0	521.1	27.34	130	22
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	26.02	159	135
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	25.04	128	27
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	84	68
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	24.46	3	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.46	83	68
	Totals	129	9830	680.2									15073	8847

Site Number: 302470 Code: ANSI/TIA-222-G

Site Name: Ansonia Wakelee, CT Engineering Number: 12942673_C3_04 4/28/2020 4:37:30 PM

Customer: T-MOBILE

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
192.0	Alcatel-Lucent 1900	3	143	3.4	2.1	11.1	10.7	0.80	0.50	0.0	0.0	7.90	28	464
188.0	Alcatel-Lucent	3	139	2.7	1.3	13.8	13.0	0.80	0.50	0.0	0.0	7.86	22	454
185.0	Alcatel-Lucent 800	3	129	3.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	7.84	25	418
185.0	Alcatel-Lucent TD-	3	167	5.4	2.2	18.6	6.7	0.80	0.61	0.0	0.0	7.84	53	543
185.0	KMW ET-X-WM-18-	3	166	9.1	5.1	12.0	4.3	0.80	0.63	0.0	0.0	7.84	92	521
185.0	RFS APXVSPP18-C-	1	234	10.9	6.0	11.8	7.0	0.80	1.00	0.0	0.0	7.84	58	245
185.0	Powerwave Allgon	2	254	11.3	4.5	20.0	6.5	0.80	1.00	0.0	0.0	7.84	121	534
185.0	Powerwave Allgon	1	254	11.3	4.5	20.0	6.5	0.80	1.00	0.0	0.0	7.84	60	267
185.0	Round Sector	3	621	24.7	0.0	0.0	0.0	0.75	0.75	0.0	0.0	7.84	277	2044
178.0	Rymsa MGD3-800TX	3	85	5.1	4.4	6.3	3.5	0.80	0.69	0.0	0.0	7.77	56	263
178.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.77	331	2356
177.0	RFS FD9R6004/2C-3L	3	11	0.7	0.5	6.5	1.5	1.00	0.50	0.0	0.0	7.76	7	34
177.0	Samsung Outdoor	3	43	1.5	1.0	8.5	4.1	0.80	0.50	0.0	0.0	7.76	12	140
177.0	Samsung B2/B66A	3	149	2.8	1.3	15.0	10.0	0.80	0.50	0.0	0.0	7.76	22	498
177.0	Samsung B5/B13	3	128	2.8	1.3	15.0	8.1	0.80	0.50	0.0	0.0	7.76	22	427
177.0	Commscope	3	83	4.1	2.5	11.8	4.5	0.80	0.67	0.0	0.0	7.76	44	259
177.0	Amphenol Antel BXA-	3	101	5.4	4.0	8.0	5.9	0.80	0.72	0.0	0.0	7.76	62	311
177.0	RFS DB-T1-6Z-8AB-	2	172	6.2	2.0	24.0	10.0	0.80	0.72	1.0	47.5	7.77	48	361
177.0	JMA Wireless	6	289	12.7	5.9	15.4	10.7	0.80	0.71	0.0	0.0	7.76	285	1791
167.0	Powerwave Allgon	6	36	1.1	0.8	6.7	5.4	0.80	0.50	0.0	0.0	7.67	17	238
167.0	Kaelus	6	39	1.2	0.9	7.1	6.8	0.80	0.50	0.0	0.0	7.67	19	253
167.0	Raycap DC6-48-60-	3	94	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	7.67	34	302
167.0	Raycap DC6-48-60-0-	1	141	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	7.67	11	148
167.0	Ericsson RRUS 4478	3	116	2.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	7.67	22	384
167.0	Ericsson Radio 8843	3	148	2.9	1.5	13.2	11.3	0.80	0.50	0.0	0.0	7.67	23	488
167.0	Ericsson RRUS 4478	3	122	3.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	7.67	23	401
167.0	Ericsson RRUS 11	3	123	3.6	1.5	17.0	7.2	0.80	0.50	0.0	0.0	7.67	28	403
167.0	Ericsson RRUS E2	3	142	4.3	1.7	18.5	7.5	0.80	0.50	0.0	0.0	7.67	34	462
167.0	Ericsson RRUS-32	3	176	4.6	2.5	13.3	9.5	0.80	0.50	0.0	0.0	7.67	36	573
167.0	CCI OPA65R-BU6A	2	243	10.6	5.9	11.7	8.4	0.80	0.79	0.0	0.0	7.67	88	509
167.0	CCI OPA-65R-LCUU-	2	280	12.5	6.0	14.8	7.4	0.80	0.75	0.0	0.0	7.67	98	588
167.0	CCI OPA65R-BU8B	1	314	14.5	8.0	11.7	8.4	0.80	1.00	0.0	0.0	7.67	76	328
167.0	CCI TPA65R-BU6D	2	333	15.7	5.9	21.0	7.8	0.80	0.72	0.0	0.0	7.67	118	692
167.0	CCI OPA-65R-LCUU-	1	349	16.6	7.7	14.8	7.4	0.80	1.00	0.0	0.0	7.67	87	366
167.0	Round Sector	3	618	24.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.67	242	2034
167.0	CCI TPA65R-BU8D	1	432	21.8	8.0	21.0	7.8	0.80	1.00	0.0	0.0	7.67	114	449
157.0	Kathrein Scala 742	3	135	6.4	6.4	6.1	2.7	1.00	0.67	0.0	0.0	7.57	83	418
148.0	Ericsson KRY 112	3	22	0.8	0.6	6.1	2.7	0.80	0.50	0.0	0.0	7.48	6	72
148.0	Ericsson Radio 4449	3	130	2.5	1.2	13.2	9.3	0.80	0.50	0.0	0.0	7.48	19	435
148.0	Ericsson AIR 21, 1.3	3	229	8.2	4.7	12.0	8.0	0.80	0.71	0.0	0.0	7.48	89	738
148.0	Ericsson AIR-32	3	292	8.7	4.7	12.9	8.7	0.80	0.71	0.0	0.0	7.48	94	956
148.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.48	297	2186
148.0	RFS	3	521	24.0	8.0	24.0	8.7	0.80	0.63	0.0	0.0	7.48	230	1641
125.0	Motorola PTP54600	2	51	2.6	1.2	14.5	3.8	1.00	1.00	4.0	129.0	7.26	32	108
102.0	Standoffs	2	100	2.8	0.0	0.0	0.0	1.00	0.90	0.0	0.0	6.91	30	231
85.00	Generic 10' Dipole	1	136	9.5	10.0	3.0	3.0	1.00	1.00	0.0	0.0	6.65	54	142
80.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.57	16	114
76.00	PCTEL GPS-TMG-HR-	1	5	0.3	0.4	3.2	3.2	1.00	1.00	0.0	0.0	6.50	1	5
76.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.50	16	114
	Totals	129	25742	1006.8									3658	27708

Tower Loading

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	11.37	27	180
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	11.32	21	192
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	11.29	25	159
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	11.29	57	210
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	11.29	97	109
185.0	RFS APXVSPP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	11.29	62	57
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	11.29	139	128
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	11.29	70	64
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	11.29	233	900
178.0	Rymsa MGD3-800TX	3	15	3.3	4.4	6.3	3.5	0.80	0.69	0.0	0.0	11.19	53	46
178.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.19	257	1200
177.0	RFS FD9R6004/2C-3L	3	3	0.3	0.5	6.5	1.5	1.00	0.50	0.0	0.0	11.18	4	8
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	11.18	10	56
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	11.18	21	253
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	11.18	21	211
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	11.18	44	50
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	11.18	59	36
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	52.6	11.19	53	88
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	11.18	320	276
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	11.04	12	96
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	11.04	14	83
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	11.04	33	95
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	11.04	11	33
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	11.04	21	180
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	11.04	22	225
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	11.04	23	178
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	11.04	28	165
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	11.04	35	180
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	11.04	37	231
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	11.04	93	115
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	11.04	109	146
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	11.04	84	69
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	11.04	139	135
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	11.04	97	88
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.04	204	900
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	11.04	136	83
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	10.90	96	66
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	10.77	4	33
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	10.77	18	222
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	10.77	94	249
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	10.77	102	397
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.77	199	900
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	10.77	280	384
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	1.00	4.0	124.6	10.46	31	24
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	9.96	38	150
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	9.58	31	30
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.46	20	75
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	9.36	1	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.36	20	75
	Totals	129	9830	680.2									3604	9830

Site Number: 302470 Code: ANSI/TIA-222-G

Site Name: Ansonia Wakelee, CT Engineering Number: 12942673_C3_04 4/28/2020 4:37:30 PM

Customer: T-MOBILE

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
8.00	194.0	Wave Guide	1	1.25	5.00	100	3	Individual	0.00	N	1.00	1.00	0.00
8.00	185.0	1 1/4" Hybriflex	3	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.46
8.00	185.0	1 1/4" Hybriflex	1	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
8.00	185.0	Wave Guide	1	1.25	5.00	100	2	Individual	0.00	N	1.00	1.00	0.00
8.00	177.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.36
8.00	177.0	1 5/8" Hybriflex	2	1.98	1.30	100	3	Individual	0.00	N	1.00	1.00	0.52
8.00	167.0	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	0.78" (19.7mm) 8	8	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	1 1/4" Coax	12	1.55	0.63	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	167.0	2" conduit	1	2.38	3.65	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	Wave Guide	1	1.25	5.00	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	157.0	1 5/8" Coax	6	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	157.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	148.0	1 1/4" (1.25"-	1	1.25	1.05	100	3	Individual	0.00	N	1.00	1.00	0.01
0.00	148.0	1 5/8" (1.63"-	3	1.63	1.61	100	3	Individual	0.00	N	1.00	1.00	0.01
0.00	148.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.36
8.00	148.0	Wave Guide	1	1.25	5.00	100	3	Individual	0.00	N	1.00	1.00	0.00
8.00	125.0	1/4" Coax	2	0.34	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	85.00	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	76.00	1/2" Coax	1	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00

Equivalent Lateral Force Method

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s:	0.03
Lower Limit C_s:	0.03
Period based on Rayleigh Method (sec):	0.95
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.22
Total Unfactored Dead Load:	46.24 k
Seismic Base Shear (E):	2.03 k

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	496,143	0.038	77	1,017
9	170.00	1,739	930,643	0.071	144	2,158
8	150.00	2,802	1,286,33	0.098	199	3,476
7	130.00	3,506	1,351,00	0.103	209	4,349
6	110.00	3,637	1,142,48	0.087	177	4,511
5	90.00	4,114	1,011,08	0.077	156	5,103
4	70.00	4,407	796,467	0.061	123	5,467
3	50.00	4,803	575,206	0.044	89	5,959
2	30.00	5,144	329,770	0.025	51	6,381
1	10.00	5,437	90,906	0.007	14	6,744
Alcatel-Lucent 1900 MHz 4X45 RRH	192.00	180	111,773	0.009	17	223
Alcatel-Lucent 800MHz RRH and Type 1	188.00	192	116,194	0.009	18	238
Alcatel-Lucent 800 MHz RRH	185.00	159	94,348	0.007	15	197
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	124,611	0.009	19	261
KMW ET-X-WM-18-65-8P	185.00	109	64,797	0.005	10	135
RFS APXVSPP18-C-A20	185.00	57	33,823	0.003	5	71
Powerwave Allgon P40-16-XLPP-RRR	185.00	128	75,953	0.006	12	159
Powerwave Allgon P40-16-XLPP-RRR	185.00	64	37,977	0.003	6	79
Round Sector Frames	185.00	900	534,045	0.041	83	1,116
Rymsa MGD3-800TX	178.00	46	26,151	0.002	4	57
Flat Light Sector Frames	178.00	1,200	679,243	0.052	105	1,489
RFS FD9R6004/2C-3L	177.00	8	4,385	0.000	1	10
Samsung Outdoor CBRS 20W RRH	177.00	56	31,368	0.002	5	69
Samsung B2/B66A RRH-BR049	177.00	253	142,336	0.011	22	314
Samsung B5/B13 RRH-BR04C	177.00	211	118,557	0.009	18	262

Equivalent Lateral Force Method

Commscope SSPX310R	177.00	49	27,826	0.002	4	61
Amphenol Antel BXA-80080-4CF-EDIN-X	177.00	36	20,237	0.002	3	45
RFS DB-T1-6Z-8AB-0Z	177.00	88	49,469	0.004	8	109
JMA Wireless MX06FRO660-02	177.00	276	155,153	0.012	24	342
Powerwave Allgon TT19-08BP111-001	167.00	96	50,260	0.004	8	119
Kaelus DBCT108F1V92-1	167.00	83	43,664	0.003	7	103
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	49,946	0.004	8	118
Raycap DC6-48-60-0-8F (24" Height)	167.00	33	17,172	0.001	3	41
Ericsson RRUS 4478 B5	167.00	180	94,081	0.007	15	223
Ericsson Radio 8843 - B2 + B66A (w/ prot	167.00	225	117,798	0.009	18	279
Ericsson RRUS 4478 B14	167.00	178	93,296	0.007	14	221
Ericsson RRUS 11 (Band 12) (55 lb)	167.00	165	86,385	0.007	13	205
Ericsson RRUS E2 B29	167.00	180	94,238	0.007	15	223
Ericsson RRUS-32 (77 lbs)	167.00	231	120,939	0.009	19	287
CCI OPA65R-BU6A	167.00	115	60,208	0.005	9	143
CCI OPA-65R-LCUU-H6	167.00	146	76,438	0.006	12	181
CCI OPA65R-BU8B	167.00	69	36,125	0.003	6	86
CCI TPA65R-BU6D	167.00	135	70,679	0.005	11	167
CCI OPA-65R-LCUU-H8	167.00	88	46,072	0.004	7	109
Round Sector Frames	167.00	900	471,192	0.036	73	1,116
CCI TPA65R-BU8D	167.00	83	43,193	0.003	7	102
Kathrein Scala 742 213	157.00	66	32,040	0.002	5	82
Ericsson KRY 112 144/1	148.00	33	14,904	0.001	2	41
Ericsson Radio 4449 B12,B71	148.00	222	100,263	0.008	16	275
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	112,458	0.009	17	309
Ericsson AIR-32 B2A/B66Aa	148.00	397	179,119	0.014	28	492
Round Sector Frame	148.00	900	406,473	0.031	63	1,116
RFS APXVAARR24_43-U-NA20	148.00	384	173,293	0.013	27	476
Motorola PTP54600	125.00	24	8,889	0.001	1	30
Standoffs	102.00	150	42,966	0.003	7	186
Generic 10' Dipole	85.00	30	6,875	0.001	1	37
Standoffs	80.00	75	15,960	0.001	2	93
PCTEL GPS-TMG-HR-26N	76.00	1	120	0.000	0	1
Standoffs	76.00	75	14,989	0.001	2	93
		46,238	13,138,341	1.000	2,032	57,360

LoadCase (0.9 - 0.2Sds) * DL + E — Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	496,143	0.038	77	705
9	170.00	1,739	930,643	0.071	144	1,495
8	150.00	2,802	1,286,33	0.098	199	2,408
7	130.00	3,506	1,351,00	0.103	209	3,013
6	110.00	3,637	1,142,48	0.087	177	3,126
5	90.00	4,114	1,011,08	0.077	156	3,536
4	70.00	4,407	796,467	0.061	123	3,788
3	50.00	4,803	575,206	0.044	89	4,128
2	30.00	5,144	329,770	0.025	51	4,421
1	10.00	5,437	90,906	0.007	14	4,673
Alcatel-Lucent 1900 MHz 4X45 RRH	192.00	180	111,773	0.009	17	155
Alcatel-Lucent 800MHz RRH and Type 1	188.00	192	116,194	0.009	18	165
Alcatel-Lucent 800 MHz RRH	185.00	159	94,348	0.007	15	137
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	124,611	0.009	19	180

Equivalent Lateral Force Method

KMW ET-X-WM-18-65-8P	185.00	109	64,797	0.005	10	94
RFS APXVSPP18-C-A20	185.00	57	33,823	0.003	5	49
Powerwave Allgon P40-16-XLPP-RRR	185.00	128	75,953	0.006	12	110
Powerwave Allgon P40-16-XLPP-RRR	185.00	64	37,977	0.003	6	55
Round Sector Frames	185.00	900	534,045	0.041	83	774
Rymsa MGD3-800TX	178.00	46	26,151	0.002	4	40
Flat Light Sector Frames	178.00	1,200	679,243	0.052	105	1,031
RFS FD9R6004/2C-3L	177.00	8	4,385	0.000	1	7
Samsung Outdoor CBRS 20W RRH	177.00	56	31,368	0.002	5	48
Samsung B2/B66A RRH-BR049	177.00	253	142,336	0.011	22	218
Samsung B5/B13 RRH-BR04C	177.00	211	118,557	0.009	18	181
Commscope SSPX310R	177.00	49	27,826	0.002	4	43
Amphenol Antel BXA-80080-4CF-EDIN-X	177.00	36	20,237	0.002	3	31
RFS DB-T1-6Z-8AB-0Z	177.00	88	49,469	0.004	8	76
JMA Wireless MX06FRO660-02	177.00	276	155,153	0.012	24	237
Powerwave Allgon TT19-08BP111-001	167.00	96	50,260	0.004	8	83
Kaelus DBCT108F1V92-1	167.00	83	43,664	0.003	7	72
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	49,946	0.004	8	82
Raycap DC6-48-60-0-8F (24" Height)	167.00	33	17,172	0.001	3	28
Ericsson RRUS 4478 B5	167.00	180	94,081	0.007	15	154
Ericsson Radio 8843 - B2 + B66A (w/ prot	167.00	225	117,798	0.009	18	193
Ericsson RRUS 4478 B14	167.00	178	93,296	0.007	14	153
Ericsson RRUS 11 (Band 12) (55 lb)	167.00	165	86,385	0.007	13	142
Ericsson RRUS E2 B29	167.00	180	94,238	0.007	15	155
Ericsson RRUS-32 (77 lbs)	167.00	231	120,939	0.009	19	199
CCI OPA65R-BU6A	167.00	115	60,208	0.005	9	99
CCI OPA-65R-LCUU-H6	167.00	146	76,438	0.006	12	125
CCI OPA65R-BU8B	167.00	69	36,125	0.003	6	59
CCI TPA65R-BU6D	167.00	135	70,679	0.005	11	116
CCI OPA-65R-LCUU-H8	167.00	88	46,072	0.004	7	76
Round Sector Frames	167.00	900	471,192	0.036	73	774
CCI TPA65R-BU8D	167.00	83	43,193	0.003	7	71
Kathrein Scala 742 213	157.00	66	32,040	0.002	5	57
Ericsson KRY 112 144/1	148.00	33	14,904	0.001	2	28
Ericsson Radio 4449 B12,B71	148.00	222	100,263	0.008	16	191
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	112,458	0.009	17	214
Ericsson AIR-32 B2A/B66Aa	148.00	397	179,119	0.014	28	341
Round Sector Frame	148.00	900	406,473	0.031	63	774
RFS APXVAARR24_43-U-NA20	148.00	384	173,293	0.013	27	330
Motorola PTP54600	125.00	24	8,889	0.001	1	21
Standoffs	102.00	150	42,966	0.003	7	129
Generic 10' Dipole	85.00	30	6,875	0.001	1	26
Standoffs	80.00	75	15,960	0.001	2	64
PCTEL GPS-TMG-HR-26N	76.00	1	120	0.000	0	1
Standoffs	76.00	75	14,989	0.001	2	64
		46,238	13,138,341	1.000	2,032	39,740

Site Number: 302470 Code: ANSI/TIA-222-G

Site Name: Ansonia Wakelee, CT Engineering Number: 12942673_C3_04 4/28/2020 4:37:30 PM

Customer: T-MOBILE

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.95
Redundancy Factor (p):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	1.739	1.275	0.876	0.327	116	1,017
9	170.00	1,739	1.422	0.326	0.455	0.165	124	2,158
8	150.00	2,802	1.107	-0.066	0.191	0.064	78	3,476
7	130.00	3,506	0.831	-0.117	0.063	0.033	50	4,349
6	110.00	3,637	0.595	-0.051	0.014	0.039	61	4,511
5	90.00	4,114	0.399	0.019	0.007	0.047	84	5,103
4	70.00	4,407	0.241	0.057	0.018	0.046	88	5,467
3	50.00	4,803	0.123	0.070	0.034	0.038	80	5,959
2	30.00	5,144	0.044	0.071	0.042	0.031	68	6,381
1	10.00	5,437	0.005	0.044	0.025	0.018	41	6,744
Alcatel-Lucent 1900 MHz 4X45	192.00	180	1.814	1.601	1.001	0.372	29	223
Alcatel-Lucent 800MHz RRH and	188.00	192	1.739	1.275	0.876	0.327	27	238
Alcatel-Lucent 800 MHz RRH	185.00	159	1.684	1.062	0.790	0.295	20	197
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.684	1.062	0.790	0.295	27	261
KMW ET-X-WM-18-65-8P	185.00	109	1.684	1.062	0.790	0.295	14	135
RFS APXVSPP18-C-A20	185.00	57	1.684	1.062	0.790	0.295	7	71
Powerwave Allgon P40-16-XLPP-	185.00	128	1.684	1.062	0.790	0.295	16	159
Powerwave Allgon P40-16-XLPP-	185.00	64	1.684	1.062	0.790	0.295	8	79
Round Sector Frames	185.00	900	1.684	1.062	0.790	0.295	115	1,116
Rymsa MGD3-800TX	178.00	46	1.559	0.657	0.616	0.228	5	57
Flat Light Sector Frames	178.00	1,200	1.559	0.657	0.616	0.228	119	1,489
RFS FD9R6004/2C-3L	177.00	8	1.541	0.608	0.593	0.219	1	10
Samsung Outdoor CBRS 20W	177.00	56	1.541	0.608	0.593	0.219	5	69
Samsung B2/B66A RRH-BR049	177.00	253	1.541	0.608	0.593	0.219	24	314
Samsung B5/B13 RRH-BR04C	177.00	211	1.541	0.608	0.593	0.219	20	262
Commscope SSPX310R	177.00	49	1.541	0.608	0.593	0.219	5	61
Amphenol Antel BXA-80080-4CF-	177.00	36	1.541	0.608	0.593	0.219	3	45
RFS DB-T1-6Z-8AB-0Z	177.00	88	1.541	0.608	0.593	0.219	8	109
JMA Wireless MX06FRO660-02	177.00	276	1.541	0.608	0.593	0.219	26	342
Powerwave Allgon TT19-	167.00	96	1.372	0.233	0.404	0.145	6	119
Kaelus DBCT108F1V92-1	167.00	83	1.372	0.233	0.404	0.145	5	103
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	1.372	0.233	0.404	0.145	6	118
Raycap DC6-48-60-0-8F (24"	167.00	33	1.372	0.233	0.404	0.145	2	41
Ericsson RRUS 4478 B5	167.00	180	1.372	0.233	0.404	0.145	11	223
Ericsson Radio 8843 - B2 + B66A	167.00	225	1.372	0.233	0.404	0.145	14	279
Ericsson RRUS 4478 B14	167.00	178	1.372	0.233	0.404	0.145	11	221
Ericsson RRUS 11 (Band 12) (55	167.00	165	1.372	0.233	0.404	0.145	10	205
Ericsson RRUS E2 B29	167.00	180	1.372	0.233	0.404	0.145	11	223
Ericsson RRUS-32 (77 lbs)	167.00	231	1.372	0.233	0.404	0.145	14	287
CCI OPA65R-BU6A	167.00	115	1.372	0.233	0.404	0.145	7	143

Equivalent Modal Analysis Method

CCI OPA-65R-LCUU-H6	167.00	146	1.372	0.233	0.404	0.145	9	181
CCI OPA65R-BU8B	167.00	69	1.372	0.233	0.404	0.145	4	86
CCI TPA65R-BU6D	167.00	135	1.372	0.233	0.404	0.145	8	167
CCI OPA-65R-LCUU-H8	167.00	88	1.372	0.233	0.404	0.145	6	109
Round Sector Frames	167.00	900	1.372	0.233	0.404	0.145	56	1,116
CCI TPA65R-BU8D	167.00	83	1.372	0.233	0.404	0.145	5	102
Kathrein Scala 742 213	157.00	66	1.213	0.017	0.264	0.091	3	82
Ericsson KRY 112 144/1	148.00	33	1.078	-0.082	0.173	0.059	1	41
Ericsson Radio 4449 B12,B71	148.00	222	1.078	-0.082	0.173	0.059	6	275
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	1.078	-0.082	0.173	0.059	6	309
Ericsson AIR-32 B2A/B66Aa	148.00	397	1.078	-0.082	0.173	0.059	10	492
Round Sector Frame	148.00	900	1.078	-0.082	0.173	0.059	23	1,116
RFS APXVAARR24_43-U-NA20	148.00	384	1.078	-0.082	0.173	0.059	10	476
Motorola PTP54600	125.00	24	0.769	-0.105	0.045	0.032	0	30
Standoffs	102.00	150	0.512	-0.020	0.008	0.043	3	186
Generic 10' Dipole	85.00	30	0.355	0.031	0.008	0.048	1	37
Standoffs	80.00	75	0.315	0.042	0.011	0.048	2	93
PCTEL GPS-TMG-HR-26N	76.00	1	0.284	0.049	0.014	0.047	0	1
Standoffs	76.00	75	0.284	0.049	0.014	0.047	2	93
		46,238	70.817	21.649	23.373	8.945	1,524	57,360

LoadCase (0.9 - 0.2Sds) * DL + E Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	1.739	1.275	0.876	0.327	116	705
9	170.00	1,739	1.422	0.326	0.455	0.165	124	1,495
8	150.00	2,802	1.107	-0.066	0.191	0.064	78	2,408
7	130.00	3,506	0.831	-0.117	0.063	0.033	50	3,013
6	110.00	3,637	0.595	-0.051	0.014	0.039	61	3,126
5	90.00	4,114	0.399	0.019	0.007	0.047	84	3,536
4	70.00	4,407	0.241	0.057	0.018	0.046	88	3,788
3	50.00	4,803	0.123	0.070	0.034	0.038	80	4,128
2	30.00	5,144	0.044	0.071	0.042	0.031	68	4,421
1	10.00	5,437	0.005	0.044	0.025	0.018	41	4,673
Alcatel-Lucent 1900 MHz 4X45	192.00	180	1.814	1.601	1.001	0.372	29	155
Alcatel-Lucent 800MHz RRH and	188.00	192	1.739	1.275	0.876	0.327	27	165
Alcatel-Lucent 800 MHz RRH	185.00	159	1.684	1.062	0.790	0.295	20	137
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.684	1.062	0.790	0.295	27	180
KMW ET-X-WM-18-65-8P	185.00	109	1.684	1.062	0.790	0.295	14	94
RFS APXVSPP18-C-A20	185.00	57	1.684	1.062	0.790	0.295	7	49
Powerwave Allgon P40-16-XLPP-	185.00	128	1.684	1.062	0.790	0.295	16	110
Powerwave Allgon P40-16-XLPP-	185.00	64	1.684	1.062	0.790	0.295	8	55
Round Sector Frames	185.00	900	1.684	1.062	0.790	0.295	115	774
Rymsa MGD3-800TX	178.00	46	1.559	0.657	0.616	0.228	5	40
Flat Light Sector Frames	178.00	1,200	1.559	0.657	0.616	0.228	119	1,031
RFS FD9R6004/2C-3L	177.00	8	1.541	0.608	0.593	0.219	1	7
Samsung Outdoor CBRS 20W	177.00	56	1.541	0.608	0.593	0.219	5	48
Samsung B2/B66A RRH-BR049	177.00	253	1.541	0.608	0.593	0.219	24	218
Samsung B5/B13 RRH-BR04C	177.00	211	1.541	0.608	0.593	0.219	20	181
Commscope SSPX310R	177.00	49	1.541	0.608	0.593	0.219	5	43
Amphenol Antel BXA-80080-4CF-	177.00	36	1.541	0.608	0.593	0.219	3	31
RFS DB-T1-6Z-8AB-0Z	177.00	88	1.541	0.608	0.593	0.219	8	76
JMA Wireless MX06FRO660-02	177.00	276	1.541	0.608	0.593	0.219	26	237
Powerwave Allgon TT19-	167.00	96	1.372	0.233	0.404	0.145	6	83
Kaelus DBCT108F1V92-1	167.00	83	1.372	0.233	0.404	0.145	5	72
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	1.372	0.233	0.404	0.145	6	82
Raycap DC6-48-60-0-8F (24"	167.00	33	1.372	0.233	0.404	0.145	2	28
Ericsson RRUS 4478 B5	167.00	180	1.372	0.233	0.404	0.145	11	154
Ericsson Radio 8843 - B2 + B66A	167.00	225	1.372	0.233	0.404	0.145	14	193
Ericsson RRUS 4478 B14	167.00	178	1.372	0.233	0.404	0.145	11	153
Ericsson RRUS 11 (Band 12) (55	167.00	165	1.372	0.233	0.404	0.145	10	142
Ericsson RRUS E2 B29	167.00	180	1.372	0.233	0.404	0.145	11	155

Equivalent Modal Analysis Method

Ericsson RRUS-32 (77 lbs)	167.00	231	1.372	0.233	0.404	0.145	14	199
CCI OPA65R-BU6A	167.00	115	1.372	0.233	0.404	0.145	7	99
CCI OPA-65R-LCUU-H6	167.00	146	1.372	0.233	0.404	0.145	9	125
CCI OPA65R-BU8B	167.00	69	1.372	0.233	0.404	0.145	4	59
CCI TPA65R-BU6D	167.00	135	1.372	0.233	0.404	0.145	8	116
CCI OPA-65R-LCUU-H8	167.00	88	1.372	0.233	0.404	0.145	6	76
Round Sector Frames	167.00	900	1.372	0.233	0.404	0.145	56	774
CCI TPA65R-BU8D	167.00	83	1.372	0.233	0.404	0.145	5	71
Kathrein Scala 742 213	157.00	66	1.213	0.017	0.264	0.091	3	57
Ericsson KRY 112 144/1	148.00	33	1.078	-0.082	0.173	0.059	1	28
Ericsson Radio 4449 B12,B71	148.00	222	1.078	-0.082	0.173	0.059	6	191
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	1.078	-0.082	0.173	0.059	6	214
Ericsson AIR-32 B2A/B66Aa	148.00	397	1.078	-0.082	0.173	0.059	10	341
Round Sector Frame	148.00	900	1.078	-0.082	0.173	0.059	23	774
RFS APXVAARR24_43-U-NA20	148.00	384	1.078	-0.082	0.173	0.059	10	330
Motorola PTP54600	125.00	24	0.769	-0.105	0.045	0.032	0	21
Standoffs	102.00	150	0.512	-0.020	0.008	0.043	3	129
Generic 10' Dipole	85.00	30	0.355	0.031	0.008	0.048	1	26
Standoffs	80.00	75	0.315	0.042	0.011	0.048	2	64
PCTEL GPS-TMG-HR-26N	76.00	1	0.284	0.049	0.014	0.047	0	1
Standoffs	76.00	75	0.284	0.049	0.014	0.047	2	64
		46,238	70.817	21.649	23.373	8.945	1,524	39,740

Force/Stress Summary

Section: 1 15N25 Bot Elev (ft): 0.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-353.61	1.2D + 1.6W Normal	9.77	100	100	100	40.7	50.0	510.32	0	0	0.00	0.00	69	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-11.36	1.2D + 1.6W 90 deg	23.62	50	50	50	178.3	43.5	13.79	1	1	17.89	23.40	82	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	311.13	1.2D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		54	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.25	11.18	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	79	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	286.49	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	329.73	1.2D + 1.6W Normal	0.00	0		
Bot Tension	315.23	0.9D + 1.6W 60 deg	605.74	63	10	1" A354-BC
Bot Compression	362.91	1.2D + 1.6W Normal	605.74	72	10	1" A354-BC

Section: 2 14N46 Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-319.14	1.2D + 1.6W Normal	9.77	100	100	100	40.1	50.0	388.80	0	0	0.00	0.00	82	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-10.93	1.2D + 1.6W 90 deg	22.69	50	50	50	171.3	43.5	14.94	1	1	17.89	23.40	73	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	286.80	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		65	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.25	10.75	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	76	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	255.48	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	293.16	1.2D + 1.6W Normal	0.00	0		
Bot Tension	286.49	0.9D + 1.6W 60 deg	436.14	66	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 3 13N88 Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-283.12	1.2D + 1.6W Normal	9.77	100	100	100	40.1	50.0	388.78	0	0	0.00	0.00	72	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-9.80	1.2D + 1.6W 90 deg	20.87	50	50	50	182.0	50.0	11.52	1	1	17.89	23.40	85	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	255.89	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		58	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	9.67	1.2D + 1.6W 90 deg	50	65	53.79	1	1	17.89	14.14	17.98	68	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	225.05	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	257.37	1.2D + 1.6W Normal	0.00	0		
Bot Tension	255.48	0.9D + 1.6W 60 deg	436.14	59	8	1 A325
Bot Compression	0.00		0.00	0		

Section: 4 12N50 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-246.86	1.2D + 1.6W Normal	9.77	100	100	100	53.4	50.0	306.88	0	0	0.00	0.00	80	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-9.53	1.2D + 1.6W 90 deg	19.04	50	50	50	166.1	50.0	13.84	1	1	17.89	23.40	68	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	225.35	0.9D + 1.6W 60 deg	50	65	378.00	0	0	0.00	0.00		59	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	9.53	1.2D + 1.6W 90 deg	50	65	53.79	1	1	17.89	14.14	17.98	67	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	192.05	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	219.26	1.2D + 1.6W Normal	0.00	0		
Bot Tension	225.05	0.9D + 1.6W 60 deg	436.14	52	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 5 11N223 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 6 EHS	-211.22	1.2D + 1.6W Normal	6.51	100	100	100	35.1	50.0	275.92	0	0	0.00	0.00	76	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-8.71	1.2D + 1.6W 90 deg	15.90	50	50	50	161.2	50.0	12.52	1	1	17.89	23.40	69	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PSP - ROHN 6 EHS	192.35	0.9D + 1.6W 60 deg	50	65	301.95	0	0	0.00	0.00		63	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.56	1.2D + 1.6W 90 deg	50	65	44.65	1	1	17.89	14.14	14.93	60	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	156.66	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	178.88	1.2D + 1.6W Normal	0.00	0		
Bot Tension	192.05	0.9D + 1.6W 60 deg	327.10	59	6	1 A325
Bot Compression	0.00		0.00	0		

Section: 6 10N152 Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-171.43	1.2D + 1.6W Normal	6.51	100	100	100	42.5	50.0	240.59	0	0	0.00	0.00	71	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-7.39	1.2D + 1.6W 90 deg	14.13	50	50	50	172.8	36.0	9.01	1	1	12.43	17.40	82	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	156.93	0.9D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00		57	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	7.55	1.2D + 1.6W 90 deg	36	58	32.71	1	1	12.43	10.44	11.83	72	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	121.59	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	139.52	1.2D + 1.6W Normal	0.00	0		
Bot Tension	156.66	0.9D + 1.6W 60 deg	327.10	48	6	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 7 9N216 Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-131.30	1.2D + 1.6W Normal	6.51	100	100	100	42.5	50.0	240.60	0	0	0.00	0.00	54	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-7.71	1.2D + 1.6W 90 deg	11.25	50	50	50	137.5	36.0	14.22	1	1	12.43	17.40	62	Bolt Shear

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	121.75	0.9D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00		44	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	7.56	1.2D + 1.6W 90 deg	36	58	32.71	1	1	12.43	10.44	11.83	72	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	81.45	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	95.27	1.2D + 1.6W Normal	0.00	0		
Bot Tension	121.59	0.9D + 1.6W 60 deg	218.07	56	4	1 A325
Bot Compression	0.00		0.00	0		

Section: 8 A780252 Bot Elev (ft): 140.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	-88.77	1.2D + 1.6W Normal	4.88	100	100	100	39.6	50.0	176.95	0	0	0.00	0.00	50	Member X
HORIZ SAE - 2X2X0.125	-0.36	1.2D + 1.6W 60 deg	6.760	100	100	100	203.8	36.0	2.61	1	1	12.43	8.70	13	Member Z
DIAG SAE - 2X2X0.25	-6.38	1.2D + 1.6W 90 deg	9.848	50	50	50	151.1	36.0	9.30	1	1	12.43	17.40	68	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	81.65	0.9D + 1.6W 60 deg	50	65	198.45	0	0	0.00	0.00		41	Member
HORIZ SAE - 2X2X0.125	0.27	1.2D + 1.6W Normal	36	58	12.60	1	1	12.43	5.22	4.55	5	Blk Shear
DIAG SAE - 2X2X0.25	6.39	1.2D + 1.6W 90 deg	36	58	24.55	1	1	12.43	10.44	9.11	70	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	40.08	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	48.83	1.2D + 1.6W Normal	0.00	0		
Bot Tension	81.45	0.9D + 1.6W 60 deg	218.07	37	4	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 9 A780178 Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 3" DIA PIPE	-48.19	1.2D + 1.6W Normal	0.25	100	100	100	2.6	50.0	135.83	0	0	0.00	0.00	35	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2X2X0.1875	-6.29	1.2D + 1.6W 90 deg	7.798	50	50	50	119.1	36.0	10.98	2	1	24.85	26.10	57	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 3" DIA PIPE	39.80	0.9D + 1.6W 60 deg	50	65	135.90	0	0	0.00	0.00		29	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 2X2X0.1875	6.20	1.2D + 1.6W 90 deg	36	58	18.74	2	1	24.85	20.88	12.34	50	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	3.59	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	5.99	1.2D + 1.6W Normal	0.00	0		
Bot Tension	40.08	0.9D + 1.6W 60 deg	166.22	24	4	0.875" A325
Bot Compression	0.00		0.00	0		

Section: 10 A780178 Bot Elev (ft): 180.0 Height (ft): 16.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-5.89	1.2D + 1.6W Normal	0.25	100	100	100	3.2	50.0	76.62	0	0	0.00	0.00	7	Member X
HORIZ SAE - 2X2X0.125	-0.09	1.2D + 1.6W Normal	6.647	100	100	100	200.4	36.0	2.70	1	1	12.43	8.70	3	Member Z
DIAG SAE - 1.75X1.75X0.18	-1.70	1.2D + 1.6W Normal	7.758	50	50	50	135.7	36.0	7.62	1	1	12.43	13.05	22	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	3.40	1.2D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00		4	Member
HORIZ SAE - 2X2X0.125	0.09	1.2D + 1.6W 60 deg	36	58	12.60	1	1	12.43	5.22	4.55	1	Blk Shear
DIAG SAE - 1.75X1.75X0.18	1.74	1.2D + 1.6W 90 deg	36	58	15.67	1	1	12.43	7.83	5.81	29	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	0.23	(1.2 + 0.2Sds) * DL	0.00	0		
Bot Tension	3.59	0.9D + 1.6W 60 deg	120.41	3	4	0.75" A325
Bot Compression	0.00		0.00	0		

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**361.80**	**-37.30**	
	13.28	**00.00**	**120**	**1a**	**12.77**	**-153.16**	**-12.02**	
	13.28	**00.00**	**240**	**1b**	**-12.77**	**-153.16**	**-12.02**	
1.2D + 1.6W 60 deg	**13.28**	**00.00**	**0**	**1**	**-3.62**	**182.42**	**-18.28**	
	13.28	**00.00**	**120**	**1a**	**-17.64**	**182.37**	**6.00**	
	13.28	**00.00**	**240**	**1b**	**-28.88**	**-309.30**	**-16.67**	
1.2D + 1.6W 90 deg	**13.28**	**00.00**	**0**	**1**	**-4.33**	**18.50**	**-1.13**	
	13.28	**00.00**	**120**	**1a**	**-28.09**	**305.70**	**13.78**	
	13.28	**00.00**	**240**	**1b**	**-26.35**	**-268.72**	**-12.65**	
0.9D + 1.6W Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**356.73**	**-37.00**	
	13.28	**00.00**	**120**	**1a**	**13.01**	**-157.56**	**-12.17**	
	13.28	**00.00**	**240**	**1b**	**-13.01**	**-157.56**	**-12.17**	
0.9D + 1.6W 60 deg	**13.28**	**00.00**	**0**	**1**	**-3.63**	**177.59**	**-17.98**	
	13.28	**00.00**	**120**	**1a**	**-17.38**	**177.53**	**5.85**	
	13.28	**00.00**	**240**	**1b**	**-29.13**	**-313.50**	**-16.82**	
0.9D + 1.6W 90 deg	**13.28**	**00.00**	**0**	**1**	**-4.34**	**13.88**	**-0.83**	
	13.28	**00.00**	**120**	**1a**	**-27.83**	**300.70**	**13.62**	
	13.28	**00.00**	**240**	**1b**	**-26.60**	**-272.97**	**-12.79**	
1.2D + 1.0Di + 1.0Wi Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**170.74**	**-12.73**	
	13.28	**00.00**	**120**	**1a**	**4.87**	**-5.19**	**-4.50**	
	13.28	**00.00**	**240**	**1b**	**-4.87**	**-5.19**	**-4.50**	
1.2D + 1.0Di + 1.0Wi 60 deg	**13.28**	**00.00**	**0**	**1**	**-1.41**	**111.08**	**-6.21**	
	13.28	**00.00**	**120**	**1a**	**-6.08**	**111.07**	**1.89**	
	13.28	**00.00**	**240**	**1b**	**-10.92**	**-61.78**	**-6.31**	
1.2D + 1.0Di + 1.0Wi 90 deg	**13.28**	**00.00**	**0**	**1**	**-1.64**	**53.46**	**0.06**	
	13.28	**00.00**	**120**	**1a**	**-9.80**	**153.70**	**4.72**	
	13.28	**00.00**	**240**	**1b**	**-9.93**	**-46.79**	**-4.78**	
(1.2 + 0.2Sds) * DL + E Normal M1	**13.28**	**00.00**	**0**	**1**	**0.00**	**32.49**	**-2.45**	
	13.28	**00.00**	**120**	**1a**	**-0.56**	**11.76**	**0.24**	
	13.28	**00.00**	**240**	**1b**	**0.56**	**11.76**	**0.24**	
(1.2 + 0.2Sds) * DL + E Normal M2	**13.28**	**00.00**	**0**	**1**	**0.00**	**29.34**	**-2.15**	
	13.28	**00.00**	**120**	**1a**	**-0.68**	**13.33**	**0.33**	
	13.28	**00.00**	**240**	**1b**	**0.68**	**13.33**	**0.33**	
(1.2 + 0.2Sds) * DL + E 60 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.08**	**25.58**	**-1.84**	
	13.28	**00.00**	**120**	**1a**	**-1.63**	**25.58**	**0.85**	
	13.28	**00.00**	**240**	**1b**	**-0.01**	**4.85**	**-0.01**	
(1.2 + 0.2Sds) * DL + E 60 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.05**	**24.01**	**-1.68**	
	13.28	**00.00**	**120**	**1a**	**-1.48**	**24.01**	**0.80**	
	13.28	**00.00**	**240**	**1b**	**0.26**	**8.00**	**0.15**	
(1.2 + 0.2Sds) * DL + E 90 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.09**	**18.67**	**-1.22**	
	13.28	**00.00**	**120**	**1a**	**-2.00**	**30.64**	**1.11**	
	13.28	**00.00**	**240**	**1b**	**0.11**	**6.70**	**0.11**	
(1.2 + 0.2Sds) * DL + E 90 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.06**	**18.67**	**-1.22**	
	13.28	**00.00**	**120**	**1a**	**-1.77**	**27.91**	**0.99**	

	13.28	**00.00**	**240**	**1b**	**0.35**	**9.43**	**0.23**
(0.9 - 0.2Sds) * DL + E Normal M1	**13.28**	**00.00**	**0**	**1**	**0.00**	**26.73**	**-2.08**
	13.28	**00.00**	**120**	**1a**	**-0.24**	**6.04**	**0.05**
	13.28	**00.00**	**240**	**1b**	**0.24**	**6.04**	**0.05**
(0.9 - 0.2Sds) * DL + E Normal M2	**13.28**	**00.00**	**0**	**1**	**0.00**	**23.59**	**-1.77**
	13.28	**00.00**	**120**	**1a**	**-0.36**	**7.61**	**0.15**
	13.28	**00.00**	**240**	**1b**	**0.36**	**7.61**	**0.15**
(0.9 - 0.2Sds) * DL + E 60 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.08**	**19.83**	**-1.46**
	13.28	**00.00**	**120**	**1a**	**-1.30**	**19.83**	**0.66**
	13.28	**00.00**	**240**	**1b**	**-0.34**	**-0.86**	**-0.19**
(0.9 - 0.2Sds) * DL + E 60 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.05**	**18.26**	**-1.31**
	13.28	**00.00**	**120**	**1a**	**-1.16**	**18.26**	**0.61**
	13.28	**00.00**	**240**	**1b**	**-0.07**	**2.28**	**-0.04**
(0.9 - 0.2Sds) * DL + E 90 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.09**	**12.94**	**-0.85**
	13.28	**00.00**	**120**	**1a**	**-1.68**	**24.88**	**0.92**
	13.28	**00.00**	**240**	**1b**	**-0.22**	**0.99**	**-0.07**
(0.9 - 0.2Sds) * DL + E 90 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.06**	**12.94**	**-0.85**
	13.28	**00.00**	**120**	**1a**	**-1.44**	**22.16**	**0.80**
	13.28	**00.00**	**240**	**1b**	**0.02**	**3.71**	**0.05**
1.0D + 1.0W Service Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**98.51**	**-9.84**
	13.28	**00.00**	**120**	**1a**	**2.50**	**-26.14**	**-2.58**
	13.28	**00.00**	**240**	**1b**	**-2.50**	**-26.14**	**-2.58**
1.0D + 1.0W Service 60 deg	**13.28**	**00.00**	**0**	**1**	**-0.91**	**55.22**	**-5.19**
	13.28	**00.00**	**120**	**1a**	**-4.95**	**55.21**	**1.80**
	13.28	**00.00**	**240**	**1b**	**-6.44**	**-64.20**	**-3.72**
1.0D + 1.0W Service 90 deg	**13.28**	**00.00**	**0**	**1**	**-1.08**	**15.41**	**-0.98**
	13.28	**00.00**	**120**	**1a**	**-7.51**	**85.18**	**3.72**
	13.28	**00.00**	**240**	**1b**	**-5.83**	**-54.35**	**-2.74**

Max Uplift:	313.50 (kip)	Moment Ice:	2,336.15 (kip-ft)	Moment:	6,838.18 (kip-ft)	1.2D + 1.6W Normal	
Max Down:	361.80 (kip)	Total Down Ice:	160.37 (kip)	Total Down:	55.49 (kip)		
Max Shear:	37.30 (kip)	Total Shear Ice:	21.73 (kip)	Total Shear:	61.34 (kip)		

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
97 mph Normal with No Ice	79.75	0.293	0.0166	0.4681	0.4681
97 mph Normal with No Ice	80.00	0.295	0.0166	0.4722	0.4722
97 mph Normal with No Ice	86.75	0.348	0.0162	0.4589	0.4592
97 mph Normal with No Ice	100.25	0.469	0.0195	0.6040	0.6040
97 mph Normal with No Ice	126.75	0.768	0.0200	0.7239	0.7242
97 mph Normal with No Ice	150.00	1.096	0.0235	0.8890	0.8890
97 mph Normal with No Ice	154.88	1.171	0.0234	0.8905	0.8908
97 mph Normal with No Ice	168.05	1.391	0.0264	0.9872	0.9875
97 mph Normal with No Ice	175.85	1.526	0.0265	0.9938	0.9942
97 mph Normal with No Ice	179.75	1.593	0.0260	1.0703	1.0703
97 mph Normal with No Ice	184.19	1.671	0.0265	0.9818	0.9822
97 mph Normal with No Ice	188.13	1.738	0.0263	0.9937	0.9937
97 mph Normal with No Ice	192.06	1.806	0.0265	0.9902	0.9906
97 mph 60 degree with No Ice	79.75	0.281	-0.0226	0.4489	0.4489
97 mph 60 degree with No Ice	80.00	0.283	-0.0227	0.4524	0.4525
97 mph 60 degree with No Ice	86.75	0.333	-0.0232	0.4403	0.4409
97 mph 60 degree with No Ice	100.25	0.450	-0.0289	0.5792	0.5793
97 mph 60 degree with No Ice	126.75	0.738	-0.0357	0.6928	0.6935
97 mph 60 degree with No Ice	150.00	1.053	-0.0387	0.8563	0.8564
97 mph 60 degree with No Ice	154.88	1.126	-0.0380	0.8568	0.8576
97 mph 60 degree with No Ice	168.05	1.337	0.0406	0.9519	0.9520
97 mph 60 degree with No Ice	175.85	1.467	0.0410	0.9524	0.9533
97 mph 60 degree with No Ice	179.75	1.532	0.0416	1.0309	1.0310
97 mph 60 degree with No Ice	184.19	1.607	0.0410	0.9448	0.9457
97 mph 60 degree with No Ice	188.13	1.672	0.0412	0.9567	0.9568
97 mph 60 degree with No Ice	192.06	1.737	0.0410	0.9535	0.9543
97 mph 90 degree with No Ice	79.75	0.283	-0.0275	0.4489	0.4491
97 mph 90 degree with No Ice	80.00	0.285	-0.0275	0.4521	0.4524
97 mph 90 degree with No Ice	86.75	0.337	-0.0285	0.4458	0.4467
97 mph 90 degree with No Ice	100.25	0.454	-0.0354	0.5788	0.5791
97 mph 90 degree with No Ice	126.75	0.745	-0.0450	0.6981	0.6996
97 mph 90 degree with No Ice	150.00	1.063	-0.0491	0.8611	0.8615
97 mph 90 degree with No Ice	154.88	1.137	-0.0487	0.8688	0.8702
97 mph 90 degree with No Ice	168.05	1.350	-0.0524	0.9600	0.9603
97 mph 90 degree with No Ice	175.85	1.481	-0.0525	0.9648	0.9662
97 mph 90 degree with No Ice	179.75	1.547	-0.0525	1.0286	1.0289
97 mph 90 degree with No Ice	184.19	1.622	-0.0525	0.9578	0.9592
97 mph 90 degree with No Ice	188.13	1.688	-0.0525	0.9624	0.9627
97 mph 90 degree with No Ice	192.06	1.754	-0.0525	0.9648	0.9662
97 mph Normal with No Ice (Reduced DL)	79.75	0.293	0.0165	0.4676	0.4676
97 mph Normal with No Ice (Reduced DL)	80.00	0.295	0.0166	0.4716	0.4716
97 mph Normal with No Ice (Reduced DL)	86.75	0.348	0.0162	0.4581	0.4584
97 mph Normal with No Ice (Reduced DL)	100.25	0.468	0.0195	0.6029	0.6029
97 mph Normal with No Ice (Reduced DL)	126.75	0.767	0.0200	0.7224	0.7227
97 mph Normal with No Ice (Reduced DL)	150.00	1.093	0.0234	0.8869	0.8869
97 mph Normal with No Ice (Reduced DL)	154.88	1.169	0.0233	0.8884	0.8888
97 mph Normal with No Ice (Reduced DL)	168.05	1.388	0.0263	0.9847	0.9851
97 mph Normal with No Ice (Reduced DL)	175.85	1.522	0.0264	0.9914	0.9918
97 mph Normal with No Ice (Reduced DL)	179.75	1.590	0.0259	1.0676	1.0676
97 mph Normal with No Ice (Reduced DL)	184.19	1.668	0.0264	0.9795	0.9798
97 mph Normal with No Ice (Reduced DL)	188.13	1.735	0.0262	0.9914	0.9914
97 mph Normal with No Ice (Reduced DL)	192.06	1.803	0.0264	0.9879	0.9882
97 mph 60 deg with No Ice (Reduced DL)	79.75	0.280	-0.0225	0.4479	0.4479
97 mph 60 deg with No Ice (Reduced DL)	80.00	0.282	-0.0226	0.4515	0.4515
97 mph 60 deg with No Ice (Reduced DL)	86.75	0.333	-0.0231	0.4395	0.4401

97 mph 60 deg with No Ice (Reduced DL)	100.25	0.449	-0.0288	0.5781	0.5782
97 mph 60 deg with No Ice (Reduced DL)	126.75	0.737	-0.0356	0.6913	0.6920
97 mph 60 deg with No Ice (Reduced DL)	150.00	1.051	-0.0387	0.8543	0.8545
97 mph 60 deg with No Ice (Reduced DL)	154.88	1.124	-0.0379	0.8549	0.8556
97 mph 60 deg with No Ice (Reduced DL)	168.05	1.335	0.0405	0.9494	0.9495
97 mph 60 deg with No Ice (Reduced DL)	175.85	1.464	0.0409	0.9501	0.9510
97 mph 60 deg with No Ice (Reduced DL)	179.75	1.529	0.0415	1.0285	1.0286
97 mph 60 deg with No Ice (Reduced DL)	184.19	1.603	0.0408	0.9426	0.9435
97 mph 60 deg with No Ice (Reduced DL)	188.13	1.669	0.0410	0.9544	0.9545
97 mph 60 deg with No Ice (Reduced DL)	192.06	1.734	0.0409	0.9512	0.9521
97 mph 90 deg with No Ice (Reduced DL)	79.75	0.283	-0.0274	0.4483	0.4485
97 mph 90 deg with No Ice (Reduced DL)	80.00	0.285	-0.0275	0.4516	0.4518
97 mph 90 deg with No Ice (Reduced DL)	86.75	0.336	-0.0284	0.4450	0.4459
97 mph 90 deg with No Ice (Reduced DL)	100.25	0.453	-0.0354	0.5777	0.5780
97 mph 90 deg with No Ice (Reduced DL)	126.75	0.744	-0.0449	0.6966	0.6981
97 mph 90 deg with No Ice (Reduced DL)	150.00	1.061	-0.0490	0.8591	0.8595
97 mph 90 deg with No Ice (Reduced DL)	154.88	1.135	-0.0486	0.8668	0.8682
97 mph 90 deg with No Ice (Reduced DL)	168.05	1.347	-0.0523	0.9575	0.9580
97 mph 90 deg with No Ice (Reduced DL)	175.85	1.478	-0.0524	0.9624	0.9639
97 mph 90 deg with No Ice (Reduced DL)	179.75	1.544	-0.0524	1.0260	1.0263
97 mph 90 deg with No Ice (Reduced DL)	184.19	1.619	-0.0524	0.9555	0.9570
97 mph 90 deg with No Ice (Reduced DL)	188.13	1.685	-0.0523	0.9601	0.9604
97 mph 90 deg with No Ice (Reduced DL)	192.06	1.750	-0.0524	0.9625	0.9639
50 mph Normal with 0.75 in Radial Ice	79.75	0.100	0.0062	0.1556	0.1556
50 mph Normal with 0.75 in Radial Ice	80.00	0.101	0.0062	0.1572	0.1572
50 mph Normal with 0.75 in Radial Ice	86.75	0.118	0.0060	0.1519	0.1520
50 mph Normal with 0.75 in Radial Ice	100.25	0.158	0.0073	0.1995	0.1995
50 mph Normal with 0.75 in Radial Ice	126.75	0.255	0.0077	0.2313	0.2314
50 mph Normal with 0.75 in Radial Ice	150.00	0.359	0.0088	0.2788	0.2788
50 mph Normal with 0.75 in Radial Ice	154.88	0.383	0.0087	0.2789	0.2791
50 mph Normal with 0.75 in Radial Ice	168.05	0.451	0.0096	0.3059	0.3061
50 mph Normal with 0.75 in Radial Ice	175.85	0.492	0.0096	0.3071	0.3072
50 mph Normal with 0.75 in Radial Ice	179.75	0.513	0.0095	0.3279	0.3279
50 mph Normal with 0.75 in Radial Ice	184.19	0.537	0.0095	0.3035	0.3037
50 mph Normal with 0.75 in Radial Ice	188.13	0.558	0.0095	0.3064	0.3064
50 mph Normal with 0.75 in Radial Ice	192.06	0.579	0.0095	0.3054	0.3055
50 mph 60 deg with 0.75 in Radial Ice	79.75	0.099	-0.0079	0.1586	0.1586
50 mph 60 deg with 0.75 in Radial Ice	80.00	0.100	-0.0080	0.1597	0.1597
50 mph 60 deg with 0.75 in Radial Ice	86.75	0.117	-0.0081	0.1495	0.1497
50 mph 60 deg with 0.75 in Radial Ice	100.25	0.157	-0.0100	0.1973	0.1973
50 mph 60 deg with 0.75 in Radial Ice	126.75	0.252	-0.0122	0.2272	0.2274
50 mph 60 deg with 0.75 in Radial Ice	150.00	0.354	-0.0133	0.2742	0.2742
50 mph 60 deg with 0.75 in Radial Ice	154.88	0.377	-0.0131	0.2740	0.2742
50 mph 60 deg with 0.75 in Radial Ice	168.05	0.444	-0.0140	0.3024	0.3024
50 mph 60 deg with 0.75 in Radial Ice	175.85	0.485	-0.0139	0.3006	0.3009
50 mph 60 deg with 0.75 in Radial Ice	179.75	0.506	-0.0139	0.3214	0.3214
50 mph 60 deg with 0.75 in Radial Ice	184.19	0.529	-0.0138	0.2980	0.2983
50 mph 60 deg with 0.75 in Radial Ice	188.13	0.550	-0.0138	0.3021	0.3021
50 mph 60 deg with 0.75 in Radial Ice	192.06	0.571	-0.0137	0.3009	0.3012
50 mph 90 deg with 0.75 in Radial Ice	79.75	0.100	-0.0093	0.1569	0.1570
50 mph 90 deg with 0.75 in Radial Ice	80.00	0.100	-0.0093	0.1579	0.1580
50 mph 90 deg with 0.75 in Radial Ice	86.75	0.118	-0.0095	0.1504	0.1507
50 mph 90 deg with 0.75 in Radial Ice	100.25	0.157	-0.0118	0.1954	0.1955
50 mph 90 deg with 0.75 in Radial Ice	126.75	0.253	-0.0144	0.2276	0.2281
50 mph 90 deg with 0.75 in Radial Ice	150.00	0.355	-0.0158	0.2748	0.2750
50 mph 90 deg with 0.75 in Radial Ice	154.88	0.379	-0.0157	0.2765	0.2769
50 mph 90 deg with 0.75 in Radial Ice	168.05	0.446	-0.0167	0.3032	0.3033
50 mph 90 deg with 0.75 in Radial Ice	175.85	0.487	-0.0167	0.3033	0.3037
50 mph 90 deg with 0.75 in Radial Ice	179.75	0.508	-0.0167	0.3212	0.3213
50 mph 90 deg with 0.75 in Radial Ice	184.19	0.531	-0.0166	0.3006	0.3011
50 mph 90 deg with 0.75 in Radial Ice	188.13	0.552	-0.0166	0.3024	0.3025
50 mph 90 deg with 0.75 in Radial Ice	192.06	0.573	-0.0166	0.3026	0.3030

Seismic Normal M1	79.75	0.012	0.0008	0.0200	0.0200
Seismic Normal M1	80.00	0.012	0.0008	0.0200	0.0200
Seismic Normal M1	86.75	0.015	0.0008	0.0201	0.0202
Seismic Normal M1	100.25	0.020	0.0010	0.0265	0.0265
Seismic Normal M1	126.75	0.033	0.0011	0.0329	0.0329
Seismic Normal M1	150.00	0.048	0.0011	0.0417	0.0417
Seismic Normal M1	154.88	0.052	0.0011	0.0420	0.0420
Seismic Normal M1	168.05	0.062	0.0012	0.0471	0.0472
Seismic Normal M1	175.85	0.069	0.0011	0.0472	0.0472
Seismic Normal M1	179.75	0.072	0.0011	0.0516	0.0516
Seismic Normal M1	184.19	0.076	0.0011	0.0467	0.0467
Seismic Normal M1	188.13	0.079	0.0010	0.0478	0.0478
Seismic Normal M1	192.06	0.082	0.0010	0.0474	0.0474
Seismic Normal M2	79.75	0.009	0.0005	0.0156	0.0156
Seismic Normal M2	80.00	0.009	0.0005	0.0156	0.0157
Seismic Normal M2	86.75	0.011	0.0005	0.0160	0.0160
Seismic Normal M2	100.25	0.016	0.0006	0.0209	0.0209
Seismic Normal M2	126.75	0.027	0.0007	0.0278	0.0278
Seismic Normal M2	150.00	0.040	0.0007	0.0370	0.0370
Seismic Normal M2	154.88	0.043	0.0007	0.0376	0.0376
Seismic Normal M2	168.05	0.052	0.0008	0.0439	0.0439
Seismic Normal M2	175.85	0.058	0.0008	0.0442	0.0442
Seismic Normal M2	179.75	0.061	0.0008	0.0505	0.0505
Seismic Normal M2	184.19	0.065	0.0007	0.0440	0.0440
Seismic Normal M2	188.13	0.068	0.0007	0.0454	0.0454
Seismic Normal M2	192.06	0.071	0.0007	0.0448	0.0448
Seismic 60 deg M1	79.75	0.012	0.0008	0.0209	0.0209
Seismic 60 deg M1	80.00	0.012	0.0008	0.0210	0.0210
Seismic 60 deg M1	86.75	0.014	0.0008	0.0202	0.0202
Seismic 60 deg M1	100.25	0.020	0.0010	0.0268	0.0268
Seismic 60 deg M1	126.75	0.033	0.0011	0.0330	0.0330
Seismic 60 deg M1	150.00	0.048	0.0012	0.0411	0.0411
Seismic 60 deg M1	154.88	0.052	0.0011	0.0416	0.0416
Seismic 60 deg M1	168.05	0.062	0.0012	0.0472	0.0472
Seismic 60 deg M1	175.85	0.069	-0.0011	0.0469	0.0469
Seismic 60 deg M1	179.75	0.072	-0.0011	0.0514	0.0514
Seismic 60 deg M1	184.19	0.076	-0.0011	0.0466	0.0466
Seismic 60 deg M1	188.13	0.079	-0.0010	0.0478	0.0478
Seismic 60 deg M1	192.06	0.082	-0.0010	0.0475	0.0475
Seismic 60 deg M2	79.75	0.009	0.0005	0.0162	0.0162
Seismic 60 deg M2	80.00	0.009	0.0005	0.0163	0.0163
Seismic 60 deg M2	86.75	0.011	0.0005	0.0161	0.0161
Seismic 60 deg M2	100.25	0.015	0.0006	0.0211	0.0211
Seismic 60 deg M2	126.75	0.027	0.0007	0.0279	0.0279
Seismic 60 deg M2	150.00	0.040	0.0007	0.0364	0.0364
Seismic 60 deg M2	154.88	0.043	0.0007	0.0372	0.0372
Seismic 60 deg M2	168.05	0.052	-0.0008	0.0439	0.0439
Seismic 60 deg M2	175.85	0.058	-0.0007	0.0439	0.0439
Seismic 60 deg M2	179.75	0.061	-0.0007	0.0503	0.0503
Seismic 60 deg M2	184.19	0.065	-0.0007	0.0438	0.0438
Seismic 60 deg M2	188.13	0.068	-0.0007	0.0454	0.0454
Seismic 60 deg M2	192.06	0.071	-0.0007	0.0449	0.0449
Seismic 90 deg M1	79.75	0.012	-0.0009	0.0206	0.0206
Seismic 90 deg M1	80.00	0.012	-0.0009	0.0207	0.0207
Seismic 90 deg M1	86.75	0.015	-0.0009	0.0202	0.0202
Seismic 90 deg M1	100.25	0.020	-0.0011	0.0265	0.0265
Seismic 90 deg M1	126.75	0.033	-0.0013	0.0330	0.0330
Seismic 90 deg M1	150.00	0.048	-0.0013	0.0415	0.0415
Seismic 90 deg M1	154.88	0.052	-0.0013	0.0421	0.0421
Seismic 90 deg M1	168.05	0.062	-0.0013	0.0472	0.0472
Seismic 90 deg M1	175.85	0.069	-0.0013	0.0473	0.0473
Seismic 90 deg M1	179.75	0.072	-0.0013	0.0511	0.0511

Seismic 90 deg M1	184.19	0.076	-0.0012	0.0468	0.0468
Seismic 90 deg M1	188.13	0.079	-0.0012	0.0478	0.0478
Seismic 90 deg M1	192.06	0.082	-0.0012	0.0475	0.0475
Seismic 90 deg M2	79.75	0.009	-0.0006	0.0161	0.0161
Seismic 90 deg M2	80.00	0.009	-0.0006	0.0161	0.0161
Seismic 90 deg M2	86.75	0.011	-0.0006	0.0161	0.0161
Seismic 90 deg M2	100.25	0.016	-0.0007	0.0209	0.0209
Seismic 90 deg M2	126.75	0.027	-0.0008	0.0279	0.0279
Seismic 90 deg M2	150.00	0.040	-0.0008	0.0368	0.0368
Seismic 90 deg M2	154.88	0.043	-0.0008	0.0377	0.0378
Seismic 90 deg M2	168.05	0.052	-0.0009	0.0440	0.0440
Seismic 90 deg M2	175.85	0.058	-0.0009	0.0443	0.0443
Seismic 90 deg M2	179.75	0.061	-0.0008	0.0499	0.0499
Seismic 90 deg M2	184.19	0.065	-0.0008	0.0441	0.0441
Seismic 90 deg M2	188.13	0.068	-0.0008	0.0454	0.0454
Seismic 90 deg M2	192.06	0.071	-0.0008	0.0449	0.0449
Seismic (Reduced DL) Normal M1	79.75	0.012	0.0008	0.0198	0.0198
Seismic (Reduced DL) Normal M1	80.00	0.012	0.0008	0.0198	0.0199
Seismic (Reduced DL) Normal M1	86.75	0.014	0.0008	0.0201	0.0201
Seismic (Reduced DL) Normal M1	100.25	0.020	0.0010	0.0265	0.0265
Seismic (Reduced DL) Normal M1	126.75	0.033	0.0011	0.0328	0.0329
Seismic (Reduced DL) Normal M1	150.00	0.048	0.0011	0.0415	0.0415
Seismic (Reduced DL) Normal M1	154.88	0.052	0.0011	0.0419	0.0419
Seismic (Reduced DL) Normal M1	168.05	0.062	0.0012	0.0469	0.0469
Seismic (Reduced DL) Normal M1	175.85	0.068	0.0011	0.0470	0.0470
Seismic (Reduced DL) Normal M1	179.75	0.072	0.0011	0.0514	0.0514
Seismic (Reduced DL) Normal M1	184.19	0.075	0.0011	0.0466	0.0466
Seismic (Reduced DL) Normal M1	188.13	0.079	0.0010	0.0477	0.0477
Seismic (Reduced DL) Normal M1	192.06	0.082	0.0010	0.0472	0.0472
Seismic (Reduced DL) Normal M2	79.75	0.009	0.0005	0.0154	0.0154
Seismic (Reduced DL) Normal M2	80.00	0.009	0.0005	0.0155	0.0155
Seismic (Reduced DL) Normal M2	86.75	0.011	0.0005	0.0160	0.0160
Seismic (Reduced DL) Normal M2	100.25	0.015	0.0006	0.0209	0.0209
Seismic (Reduced DL) Normal M2	126.75	0.027	0.0007	0.0278	0.0278
Seismic (Reduced DL) Normal M2	150.00	0.040	0.0007	0.0368	0.0368
Seismic (Reduced DL) Normal M2	154.88	0.043	0.0007	0.0375	0.0375
Seismic (Reduced DL) Normal M2	168.05	0.052	0.0008	0.0437	0.0437
Seismic (Reduced DL) Normal M2	175.85	0.058	0.0008	0.0440	0.0440
Seismic (Reduced DL) Normal M2	179.75	0.061	0.0007	0.0504	0.0504
Seismic (Reduced DL) Normal M2	184.19	0.065	0.0007	0.0439	0.0439
Seismic (Reduced DL) Normal M2	188.13	0.068	0.0007	0.0452	0.0453
Seismic (Reduced DL) Normal M2	192.06	0.071	0.0007	0.0447	0.0447
Seismic (Reduced DL) 60 deg M1	79.75	0.012	0.0008	0.0206	0.0206
Seismic (Reduced DL) 60 deg M1	80.00	0.012	0.0008	0.0207	0.0207
Seismic (Reduced DL) 60 deg M1	86.75	0.014	0.0008	0.0201	0.0202
Seismic (Reduced DL) 60 deg M1	100.25	0.020	0.0010	0.0267	0.0267
Seismic (Reduced DL) 60 deg M1	126.75	0.033	0.0011	0.0329	0.0329
Seismic (Reduced DL) 60 deg M1	150.00	0.048	0.0011	0.0411	0.0411
Seismic (Reduced DL) 60 deg M1	154.88	0.052	0.0011	0.0416	0.0416
Seismic (Reduced DL) 60 deg M1	168.05	0.062	0.0012	0.0469	0.0469
Seismic (Reduced DL) 60 deg M1	175.85	0.068	-0.0011	0.0468	0.0468
Seismic (Reduced DL) 60 deg M1	179.75	0.072	-0.0011	0.0513	0.0513
Seismic (Reduced DL) 60 deg M1	184.19	0.075	-0.0011	0.0465	0.0465
Seismic (Reduced DL) 60 deg M1	188.13	0.079	-0.0010	0.0476	0.0477
Seismic (Reduced DL) 60 deg M1	192.06	0.082	-0.0010	0.0473	0.0473
Seismic (Reduced DL) 60 deg M2	79.75	0.009	0.0005	0.0159	0.0159
Seismic (Reduced DL) 60 deg M2	80.00	0.009	0.0005	0.0160	0.0160
Seismic (Reduced DL) 60 deg M2	86.75	0.011	0.0005	0.0160	0.0160
Seismic (Reduced DL) 60 deg M2	100.25	0.015	0.0006	0.0211	0.0211
Seismic (Reduced DL) 60 deg M2	126.75	0.027	0.0007	0.0278	0.0278
Seismic (Reduced DL) 60 deg M2	150.00	0.039	0.0007	0.0364	0.0364
Seismic (Reduced DL) 60 deg M2	154.88	0.043	0.0007	0.0372	0.0372

Seismic (Reduced DL) 60 deg M2	168.05	0.052	-0.0008	0.0436	0.0436
Seismic (Reduced DL) 60 deg M2	175.85	0.058	-0.0007	0.0438	0.0438
Seismic (Reduced DL) 60 deg M2	179.75	0.061	-0.0007	0.0502	0.0502
Seismic (Reduced DL) 60 deg M2	184.19	0.065	-0.0007	0.0437	0.0437
Seismic (Reduced DL) 60 deg M2	188.13	0.068	-0.0007	0.0453	0.0453
Seismic (Reduced DL) 60 deg M2	192.06	0.071	-0.0007	0.0448	0.0448
Seismic (Reduced DL) 90 deg M1	79.75	0.012	-0.0009	0.0203	0.0203
Seismic (Reduced DL) 90 deg M1	80.00	0.012	-0.0009	0.0204	0.0204
Seismic (Reduced DL) 90 deg M1	86.75	0.014	-0.0009	0.0202	0.0202
Seismic (Reduced DL) 90 deg M1	100.25	0.020	-0.0011	0.0264	0.0264
Seismic (Reduced DL) 90 deg M1	126.75	0.033	-0.0013	0.0329	0.0329
Seismic (Reduced DL) 90 deg M1	150.00	0.048	-0.0013	0.0413	0.0414
Seismic (Reduced DL) 90 deg M1	154.88	0.052	-0.0013	0.0420	0.0420
Seismic (Reduced DL) 90 deg M1	168.05	0.062	-0.0013	0.0469	0.0469
Seismic (Reduced DL) 90 deg M1	175.85	0.068	-0.0013	0.0471	0.0472
Seismic (Reduced DL) 90 deg M1	179.75	0.072	-0.0013	0.0510	0.0510
Seismic (Reduced DL) 90 deg M1	184.19	0.075	-0.0012	0.0466	0.0467
Seismic (Reduced DL) 90 deg M1	188.13	0.079	-0.0012	0.0477	0.0477
Seismic (Reduced DL) 90 deg M1	192.06	0.082	-0.0012	0.0473	0.0473
Seismic (Reduced DL) 90 deg M2	79.75	0.009	-0.0006	0.0158	0.0158
Seismic (Reduced DL) 90 deg M2	80.00	0.009	-0.0006	0.0158	0.0158
Seismic (Reduced DL) 90 deg M2	86.75	0.011	-0.0006	0.0160	0.0160
Seismic (Reduced DL) 90 deg M2	100.25	0.015	-0.0007	0.0209	0.0209
Seismic (Reduced DL) 90 deg M2	126.75	0.027	-0.0008	0.0278	0.0278
Seismic (Reduced DL) 90 deg M2	150.00	0.039	-0.0008	0.0367	0.0367
Seismic (Reduced DL) 90 deg M2	154.88	0.043	-0.0008	0.0376	0.0377
Seismic (Reduced DL) 90 deg M2	168.05	0.052	-0.0009	0.0437	0.0437
Seismic (Reduced DL) 90 deg M2	175.85	0.058	-0.0009	0.0442	0.0442
Seismic (Reduced DL) 90 deg M2	179.75	0.061	-0.0008	0.0497	0.0497
Seismic (Reduced DL) 90 deg M2	184.19	0.065	-0.0008	0.0440	0.0440
Seismic (Reduced DL) 90 deg M2	188.13	0.068	-0.0008	0.0453	0.0453
Seismic (Reduced DL) 90 deg M2	192.06	0.071	-0.0008	0.0448	0.0448
Serviceability - 60 mph Wind Normal	79.75	0.071	0.0040	0.1123	0.1123
Serviceability - 60 mph Wind Normal	80.00	0.071	0.0040	0.1133	0.1133
Serviceability - 60 mph Wind Normal	86.75	0.084	0.0039	0.1105	0.1106
Serviceability - 60 mph Wind Normal	100.25	0.113	0.0047	0.1452	0.1452
Serviceability - 60 mph Wind Normal	126.75	0.185	0.0047	0.1738	0.1738
Serviceability - 60 mph Wind Normal	150.00	0.264	0.0054	0.2131	0.2131
Serviceability - 60 mph Wind Normal	154.88	0.282	0.0054	0.2135	0.2136
Serviceability - 60 mph Wind Normal	168.05	0.334	0.0060	0.2366	0.2367
Serviceability - 60 mph Wind Normal	175.85	0.367	0.0059	0.2380	0.2381
Serviceability - 60 mph Wind Normal	179.75	0.383	0.0058	0.2562	0.2562
Serviceability - 60 mph Wind Normal	184.19	0.401	0.0058	0.2352	0.2353
Serviceability - 60 mph Wind Normal	188.13	0.418	0.0057	0.2378	0.2378
Serviceability - 60 mph Wind Normal	192.06	0.434	0.0057	0.2370	0.2371
Serviceability - 60 mph Wind 60 deg	79.75	0.068	-0.0055	0.1094	0.1094
Serviceability - 60 mph Wind 60 deg	80.00	0.068	-0.0056	0.1102	0.1102
Serviceability - 60 mph Wind 60 deg	86.75	0.081	-0.0057	0.1064	0.1065
Serviceability - 60 mph Wind 60 deg	100.25	0.109	-0.0071	0.1401	0.1401
Serviceability - 60 mph Wind 60 deg	126.75	0.178	-0.0089	0.1669	0.1671
Serviceability - 60 mph Wind 60 deg	150.00	0.254	-0.0096	0.2058	0.2058
Serviceability - 60 mph Wind 60 deg	154.88	0.272	-0.0094	0.2060	0.2061
Serviceability - 60 mph Wind 60 deg	168.05	0.322	-0.0100	0.2292	0.2292
Serviceability - 60 mph Wind 60 deg	175.85	0.354	-0.0099	0.2287	0.2288
Serviceability - 60 mph Wind 60 deg	179.75	0.369	-0.0099	0.2473	0.2473
Serviceability - 60 mph Wind 60 deg	184.19	0.387	-0.0098	0.2268	0.2270
Serviceability - 60 mph Wind 60 deg	188.13	0.403	-0.0098	0.2298	0.2298
Serviceability - 60 mph Wind 60 deg	192.06	0.419	-0.0097	0.2290	0.2292
Serviceability - 60 mph Wind 90 deg	79.75	0.069	-0.0066	0.1093	0.1094
Serviceability - 60 mph Wind 90 deg	80.00	0.069	-0.0066	0.1101	0.1101
Serviceability - 60 mph Wind 90 deg	86.75	0.082	-0.0068	0.1078	0.1080
Serviceability - 60 mph Wind 90 deg	100.25	0.110	-0.0084	0.1398	0.1399

Serviceability - 60 mph Wind 90 deg	126.75	0.180	-0.0106	0.1683	0.1686
Serviceability - 60 mph Wind 90 deg	150.00	0.257	-0.0115	0.2072	0.2073
Serviceability - 60 mph Wind 90 deg	154.88	0.275	-0.0114	0.2090	0.2094
Serviceability - 60 mph Wind 90 deg	168.05	0.326	-0.0122	0.2312	0.2313
Serviceability - 60 mph Wind 90 deg	175.85	0.357	-0.0121	0.2319	0.2322
Serviceability - 60 mph Wind 90 deg	179.75	0.373	-0.0121	0.2473	0.2474
Serviceability - 60 mph Wind 90 deg	184.19	0.391	-0.0120	0.2302	0.2306
Serviceability - 60 mph Wind 90 deg	188.13	0.407	-0.0120	0.2313	0.2314
Serviceability - 60 mph Wind 90 deg	192.06	0.423	-0.0119	0.2319	0.2322

Maximum Reactions Summary

	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
Anchor Group	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	55.49	160.37	361.80	37.30	61.34	21.73	6838.18	2336.15

Exhibit E

Mount Analysis

Mount Analysis of Existing Sector Frames for American Tower on behalf of T-Mobile
302470 - Ansonia Wakelee
Project #: 12942673
T-Mobile Site ID: CT11810A
Program: L600

CLS Engineering PLLC Project #41124-12942673-01-MA-R2
March 31, 2020

MOUNT DESCRIPTION	Existing Sector Frames at 147 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 148 ft AGL (Eccentricity of ~1 ft)
SITE DESCRIPTION	196 ft Self-Supporting Tower
SITE ADDRESS	401 Wakelee Ave, Ansonia, CT, 06401-1226, New Haven County
GPS COORDINATES	41.35606944, -73.092
ANALYSIS STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 0.75" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	**77%**	**Pass**

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
Jennifer Soza

Reviewed and Approved by:
Tyler M. Barker, P.E.

STATE OF CONNECTICUT
TYLER M BARKER
No. 32402
LICENSED PROFESSIONAL ENGINEER

Tyler M. Barker
CLS Engineering PLLC
Director of Engineering
PE # 32402 Exp. 1/31/2021
COA # PEC.001833 Exp. 8/14/2020

GlobalSign
Digitally signed by Tyler M. Barker PE
Date: 2020.03.31 18:03:25-04'00'

■ INTRODUCTION

The proposed equipment is to be mounted to the existing Sector Frames. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

■ STRUCTURAL DOCUMENTS PROVIDED

STRUCTURAL DATA	Site Photos, dated January 29, 2018 Site Pro 1 Assembly Drawing, #SFS-V, dated April 29, 2014 Site Pro 1 Assembly Drawing, #PUCK, dated August 30, 2012 Site Pro 1 Assembly Drawing, #STK-U dated August 16, 2012
PREVIOUS ANALYSES	Structural Analysis by American Tower Corporation, Engineering #12942673_C3_01, dated April 15, 2019
LOADING DATA	American Tower Application, Project #12942673, dated April 9, 2019

■ ANALYSIS CRITERIA

STANDARD	2015 IBC / 2018 Connecticut State Building Code / TIA-222-G
BASIC WIND SPEED	125 mph, V_{ult} / 96.8 mph, V_{asd} (3-Second Gust)
BASIC WIND SPEED W/ ICE	50 mph (3-Second Gust) w/ 0.75" Radial Ice (Escalating)
EXPOSURE CATEGORY	C
MAX. TOPOGRAPHIC FACTOR, K_{zt}	1.00
RISK CATEGORY	II
MAINTENANCE LIVE LOAD	L_M: 500 lb

■ FINAL EQUIPMENT

ELEVATION (ft)		ANTENNAS	
MOUNT	**RAD.**	**#**	**NAME**
147.0	148.0	3	RFS Celwave APXVAARR24_43-U-NA20
		3	Ericsson AIR -32 B2A/B66AA
		3	Ericsson AIR 21, 1.3 M, B2A B4P
		3	Ericsson RADIO 4449 B12/B71
		3	Ericsson KRY 112 144/1

■ RESULTS SUMMARY

Existing Mount Usage:

COMPONENT	PEAK USAGE	RESULT
Face Horizontals	**109%**	**Fail**
Mount Pipes	71%	Pass
Stand-Off Horizontals	56%	Pass
Standoff Vertical 1	32%	Pass
Stiff Arms	4%	Pass

Modified Mount Usage:

COMPONENT	PEAK USAGE	RESULT
Face Horizontals	77%	Pass
Mount Pipes	71%	Pass
Stand-Off Horizontals	39%	Pass
Standoff Vertical 1	17%	Pass
Stiff Arms	16%	Pass

■ CONCLUSION AND RECOMMENDATIONS

According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS**. The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- **Install (1) Site Pro 1 STK-U stiff arm kit at each existing sector frame mount (3 total). Connect to adjacent tower leg with Site Pro 1 Universal Stiff Arm Attachment (SAM-U) included in the STK-U kit. Connect to upper face horizontal with Site Pro 1 PUCK in lieu of Site Pro 1 SCX1 crossover plate included in the STK-U kit.**
- **Install (1) Site Pro 1 SFS-V Sector Frame Stabilizer kit at each sector frame mount (3 total). Connect to existing face horizontal pipe and existing tower leg as shown in the following sketches. Field-Cut proposed angles as required. Maintain minimum bolt edge distance.**
- **All hardware for Site Pro 1 SFS-V connection to the tower leg / PUCK connection to the existing horizontal pipe should be installed with "turn of the nut" method per the following table:.**

BOLT TIGHTENING PROCEDURE

1. TIGHTEN BOLTS BY AISC "TURN OF THE NUT" METHOD USING THE CHART BELOW:

   BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS:
   +1/3 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER FOUR AND UP TO EIGHT DIAMETERS:
   +1/2 TURN BEYOND SNUG TIGHT

   BOLT LENGTHS OVER EIGHT AND UP TO TWELVE DIAMETERS:
   +2/3 TURN BEYOND SNUG TIGHT

2. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8(d)(1) OF THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS AS FOLLOWS:

   "FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BE TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8(d)(1) THROUGH 8(d)(4).

   8(d)(1) TURN-OF-THE-NUT TIGHTENING.
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLIES OF A JOINT ARE IN FIRM CONTACT. THIS MAY BE OBTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. SNUG TIGHTENING SHALL PROGRESS SYSTEMATICALLY...UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

BEFORE ⅓ TURN AFTER ⅓ TURN

See following sketches and Site Pro 1 assembly drawings for more details.

■ ASSUMPTIONS AND CONDITIONS

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, CLS Engineering PLLC should be notified immediately to revise results.

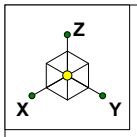
This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.

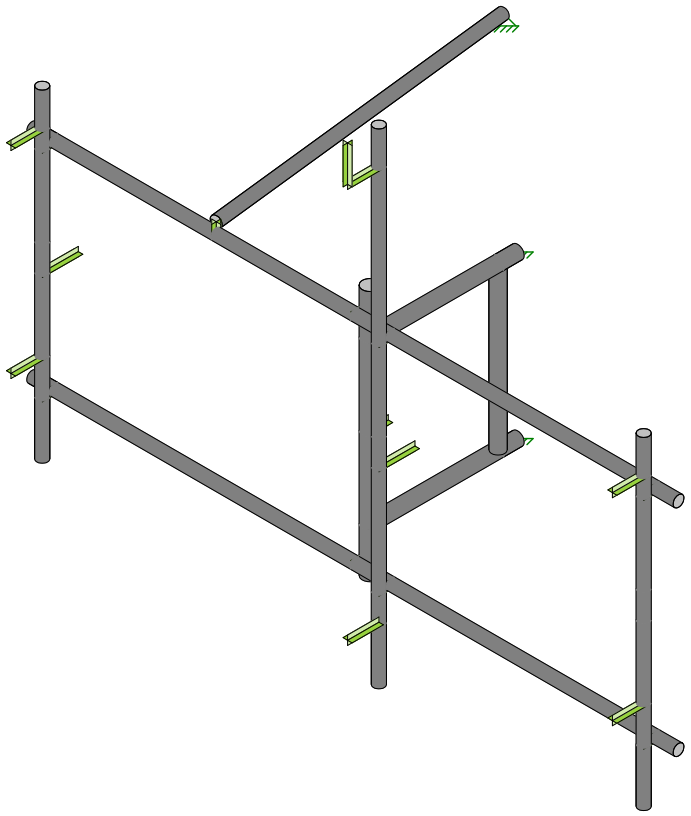
All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from CLS Engineering PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. CLS Engineering PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by CLS Engineering PLLC verifies the adequacy of the primary members of the structure. CLS Engineering PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.



Existing Mount - To Be Modified



Envelope Only Solution

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JLS		Mar 31, 2020 at 9:39 AM
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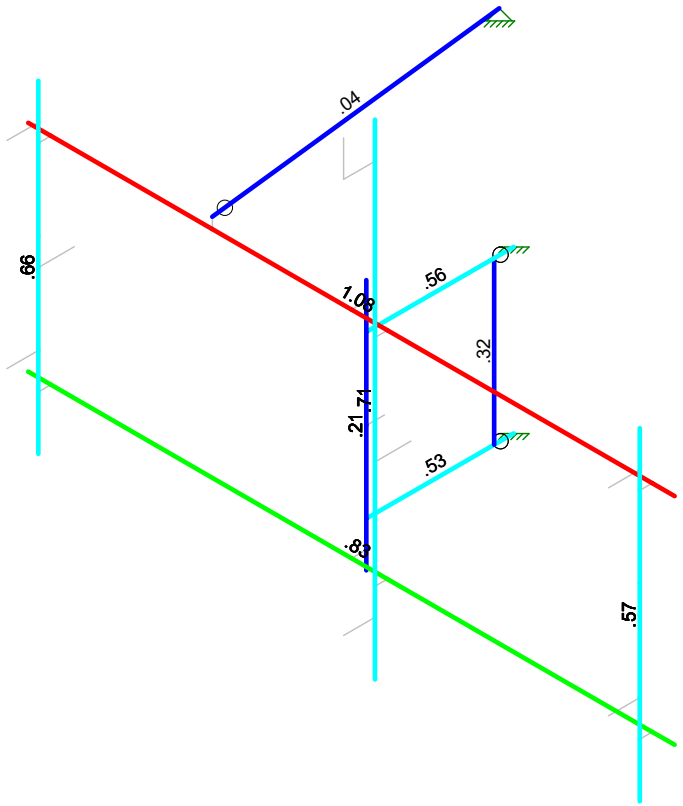
Existing Mount - To Be Modified



Code Check (Env)
- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0.-.50

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	EX - 2
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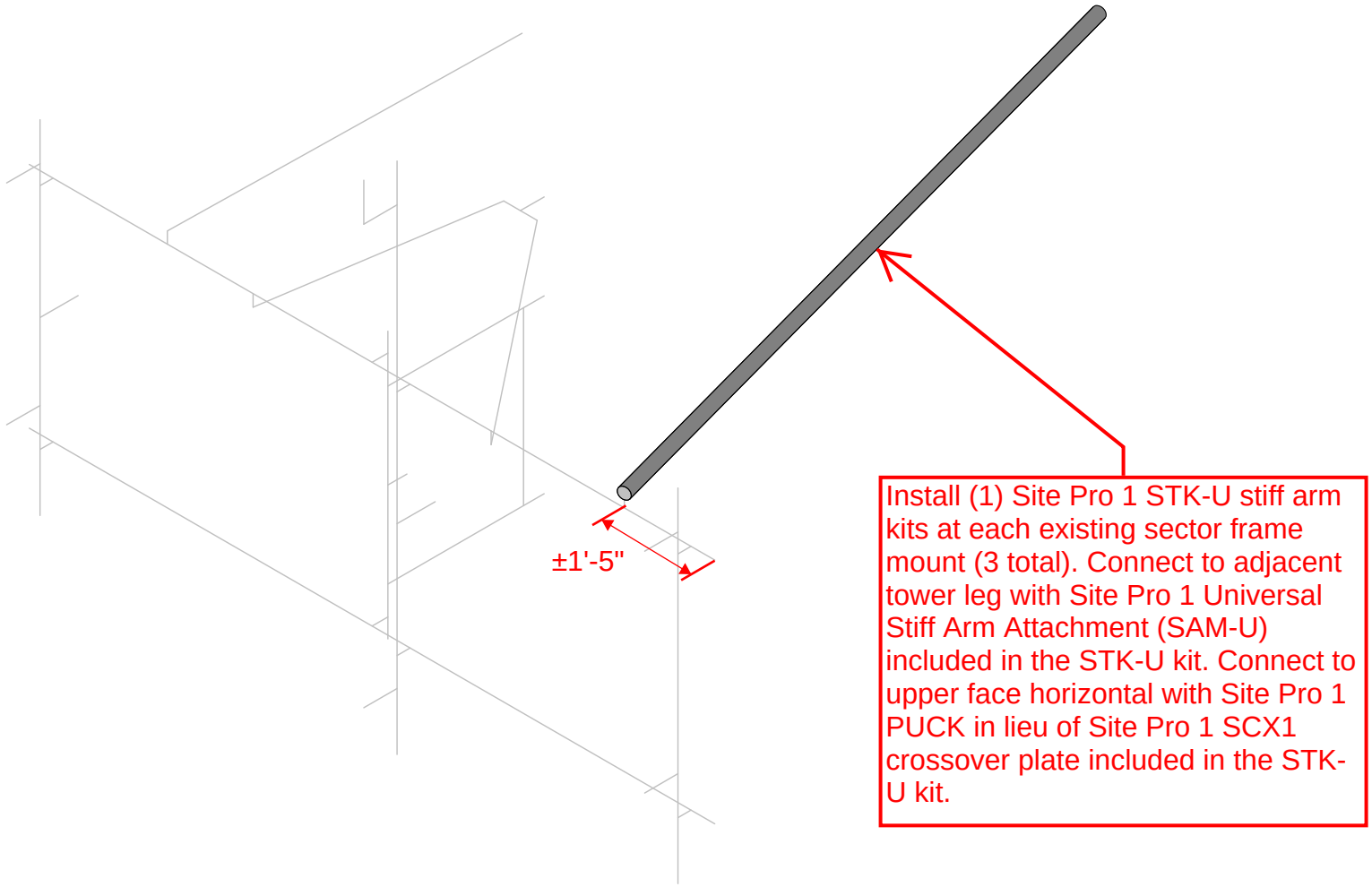

Envelope Only Solution

CLS		IN- 1
JLS	41124-12942673-Ansonia Wakelee	Mar 31, 2020 at 1:11 PM
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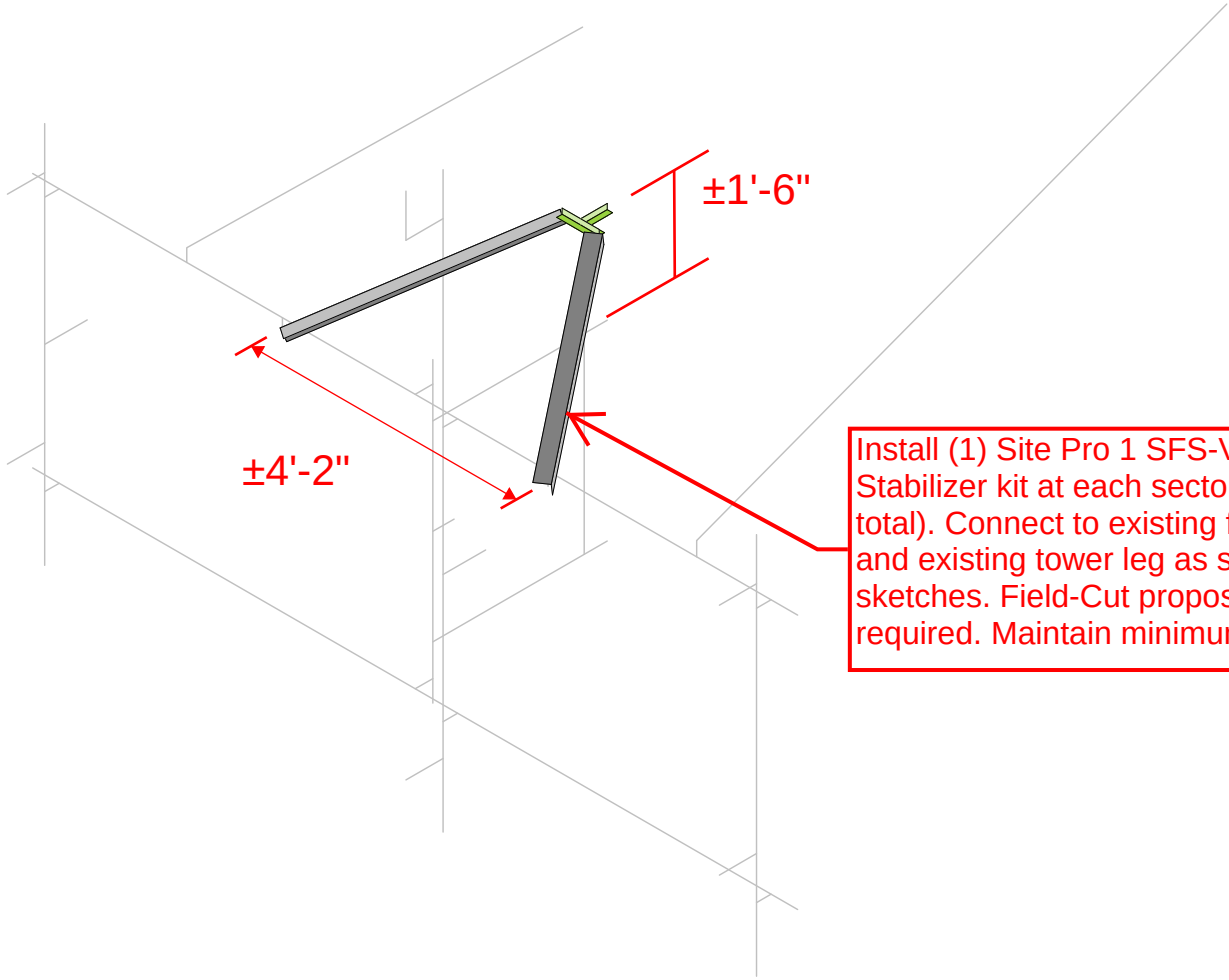
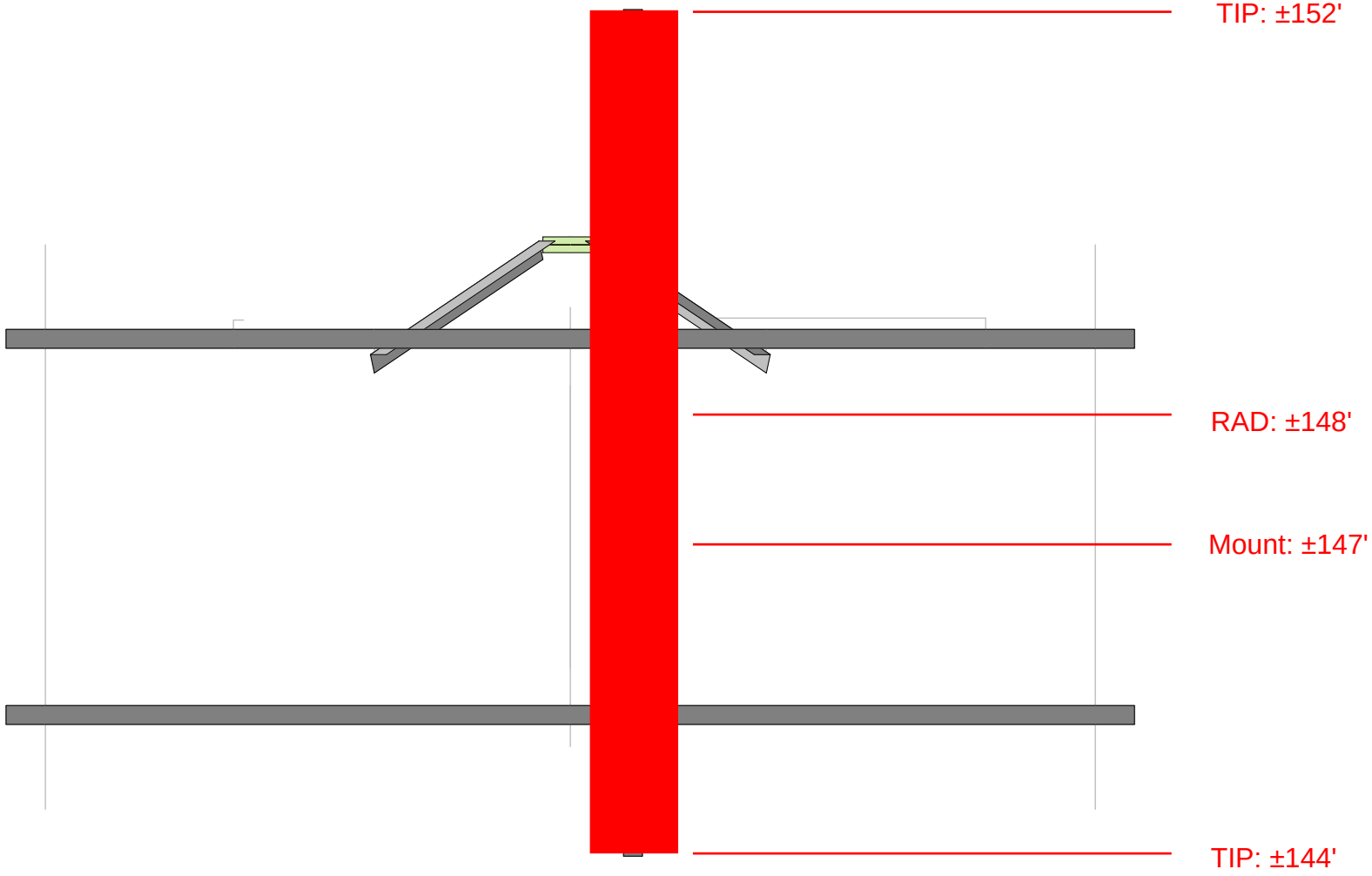


Install (1) Site Pro 1 SFS-V Sector Frame Stabilizer kit at each sector frame mount (3 total). Connect to existing face horizontal pipe and existing tower leg as shown in the following sketches. Field-Cut proposed members as required. Maintain minimum edge distance.

Envelope Only Solution

CLS		IN- 2
JLS	41124-12942673-Ansonia Wakelee	Mar 31, 2020 at 1:11 PM
41124-12942673-01-MA-R2	Proposed Modifications - Rendered	41124-12942673-01-MA-R2.r3d



Envelope Only Solution

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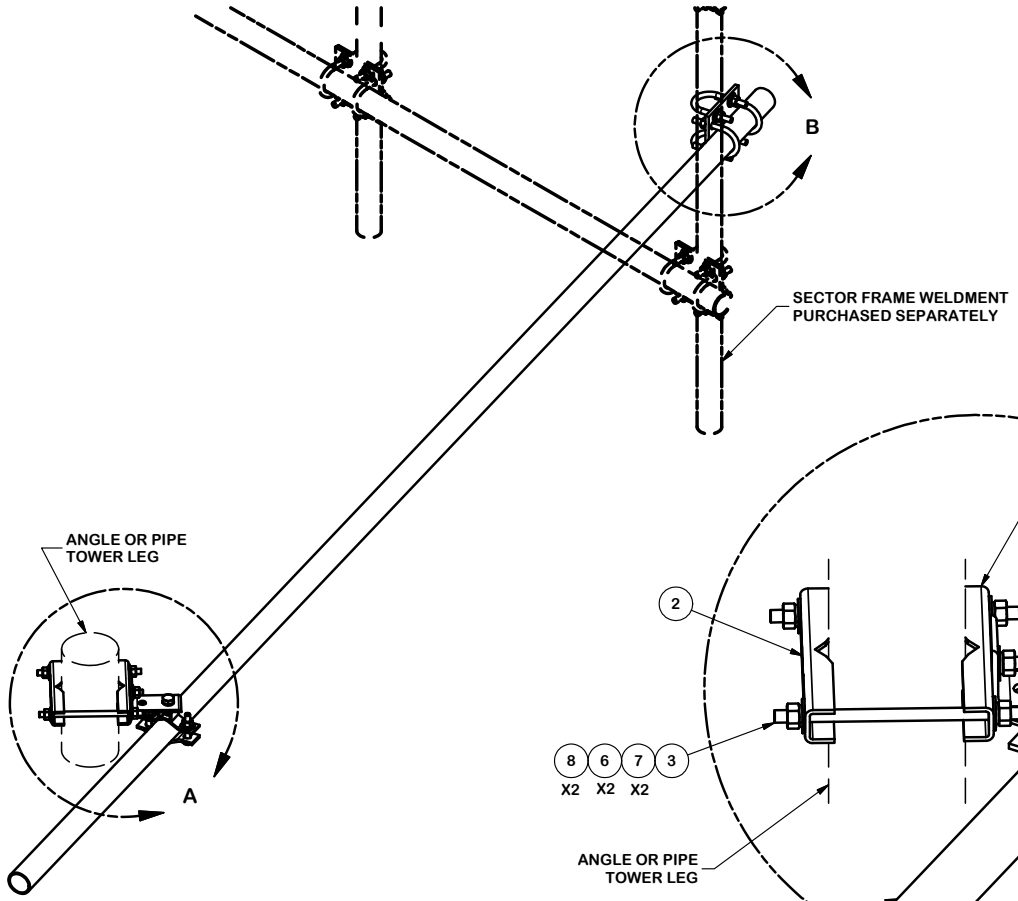
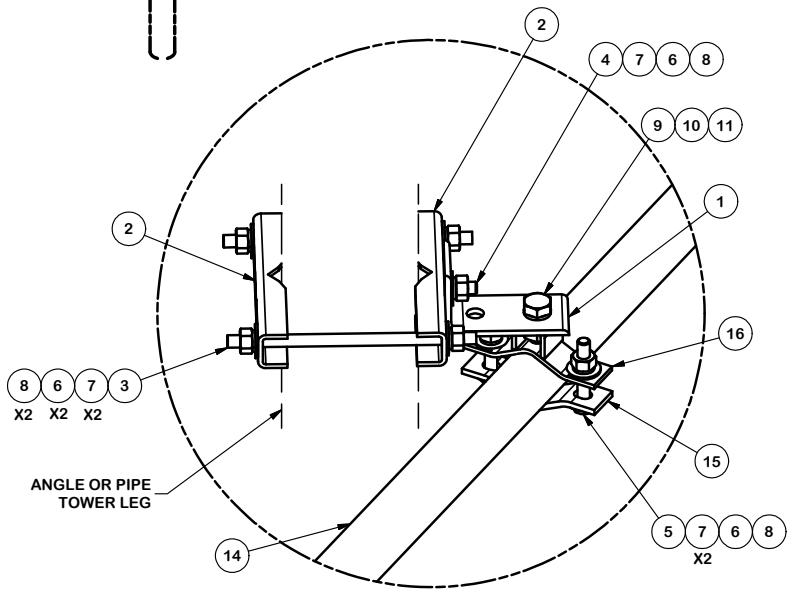
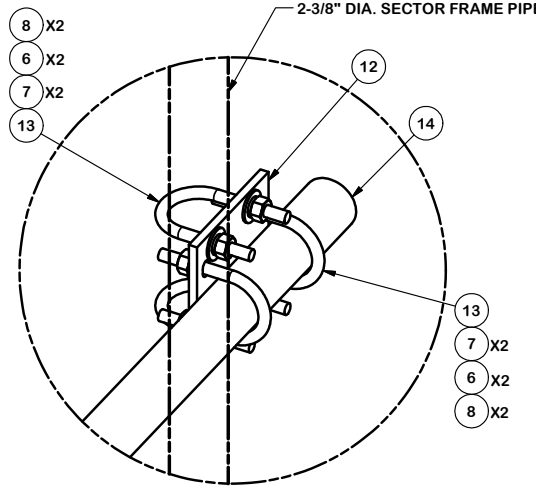
41124-12942673-01-MA-R2	Proposed Modifications - Rendered	41124-12942673-01-MA-R2.r3d

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-STA3	STIFF ARM ANGLE BRACKET	2 1/2 in	1.39	1.39
2	2	X-STU	STIFF ARM CHANNEL BRACKET		1.37	2.74
3	2	G12R-10	1/2" x 10" THREADED ROD (HDG.)		3.23	6.45
4	1	G12112	1/2" x 1-1/2" HDG HEX BOLT GR5	1 1/2 in	0.15	0.15
5	2	G1203	1/2" x 3" HDG HEX BOLT GR5 FULL THREAD	3 in	0.22	0.43
6	15	G12LW	1/2" HDG LOCKWASHER		0.01	0.21
7	17	G12FW	1/2" HDG USS FLATWASHER		0.03	0.58
8	15	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.07
9	1	G58112	5/8" x 1-1/2" HDG BOLT	1 1/2 in	0.25	0.25
10	1	G58LW	5/8" HDG LOCKWASHER		0.03	0.03
11	1	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.13
12	1	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"		3.71	3.71
13	4	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.66	2.63
14	1	P2150	2-3/8" OD X 150" SCH 40 GALVANIZED PIPE	150 in	48.06	48.06
15	1	ACP	4-1/16" CLAMP HALF, 1/4" THK.		0.65	0.65
16	1	SAM	STIFF ARM MOUNT CLAMP		0.77	0.77
					TOTAL WT. #	63.79





DETAIL A



DETAIL B

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: SECTOR FRAME STIFF ARM KIT

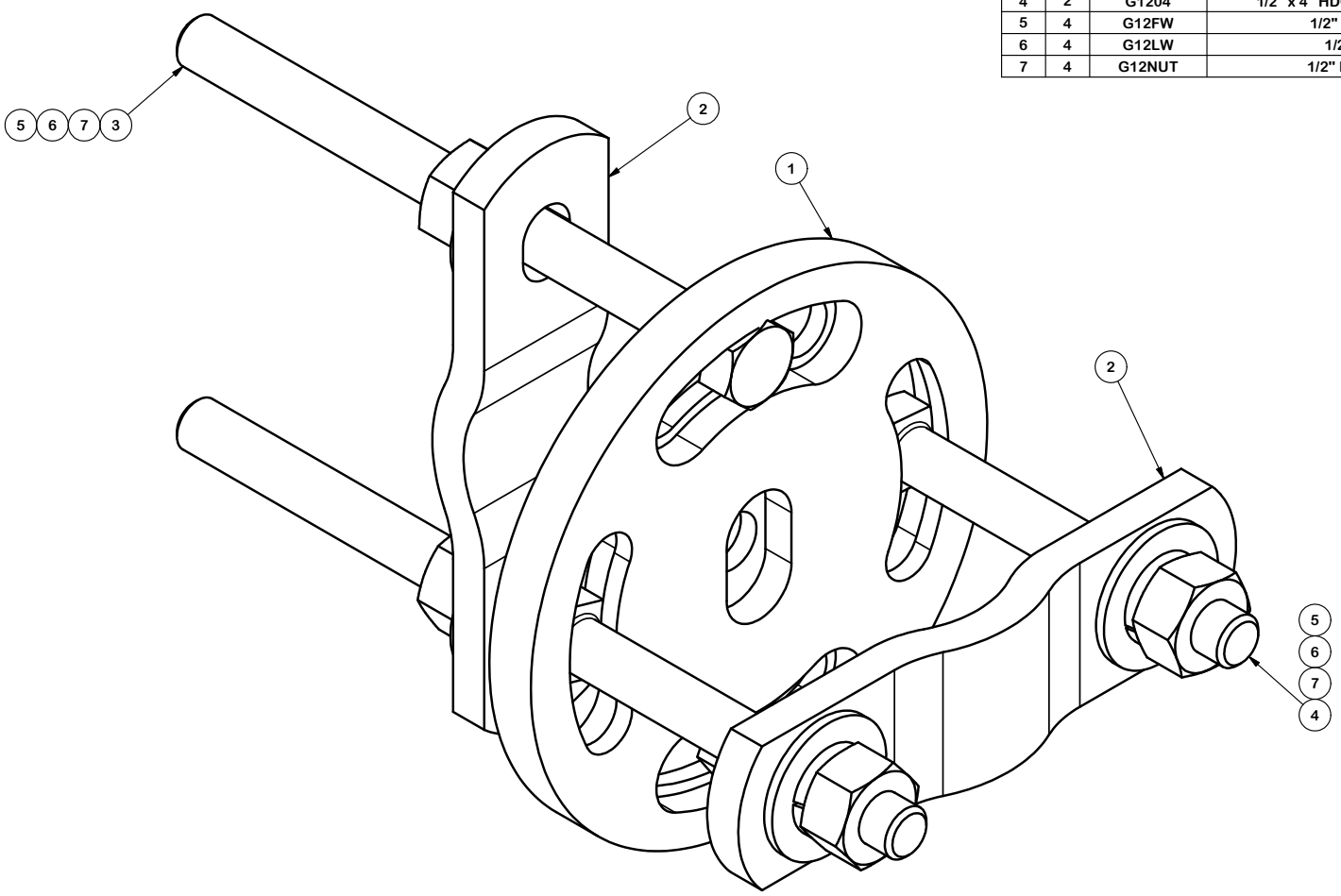
SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4647	KC8 8/16/2012		STK-U	1 OF 1
CLASS / SUB: 81 / 02	DRAWING USAGE: CUSTOMER	CHECKED BY: CEK 2/18/2013	DWG. NO.: STK-U	

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-127594	FLAT DISK CLAMP PLATE 4" CENTERS (GALVANIZED)		2.48	2.48
2	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91	1.83
3	2	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	0.82
4	2	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	0.54
5	4	G12FW	1/2" HDG USS FLATWASHER		0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER		0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	6.16



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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
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ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY

SITE PRO 1 — A valmont COMPANY

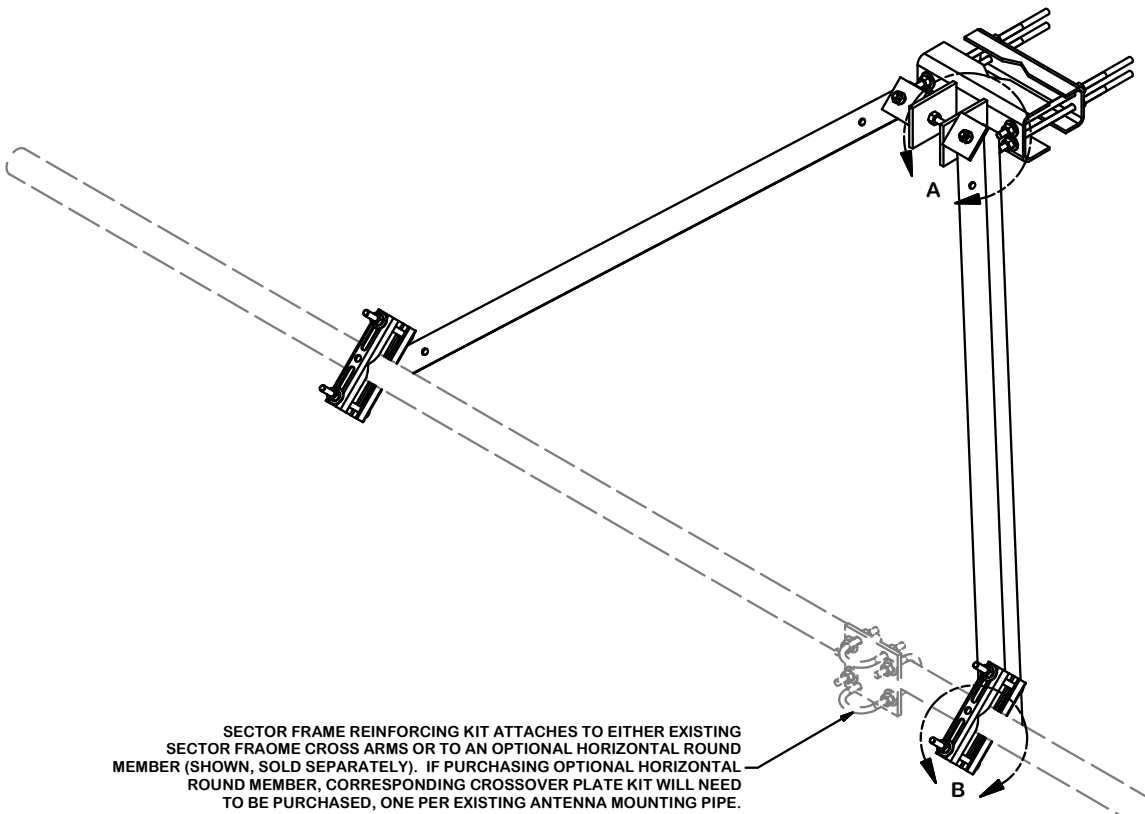
Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

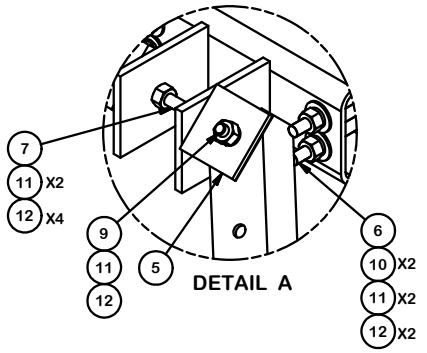
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/30/2010		PUCK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 9/1/2010	PUCK

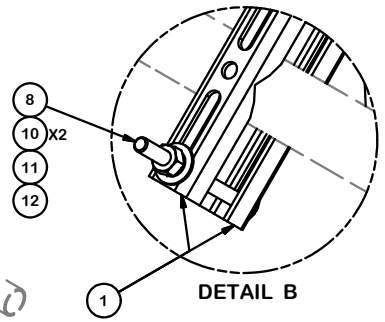
PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-STU	STIFF ARM CHANNEL BRACKET		1.37	5.49
2	2	X-232697	TRPD-HD DIAGONAL ANGLE - SITR PRO 1	52 1/2 in	14.21	28.42
3	1	CFS	LOWER GATE FOOT WELDMENT		12.72	12.72
4	1	GBB	GATE BACKING BAR		4.53	4.53
5	2	SHCM-T	CHAIN MOUNT TIGHTENER BRACKET	3 in	1.84	3.68
6	4	G12R-15	1/2" x 15" THREADED ROD (HDG.)		0.55	2.20
6	4	G12R-12	1/2" x 12" THREADED ROD (HDG.)		0.55	2.20
7	1	G12R-6	1/2" x 6" GALV. THREADED ROD		0.33	0.33
8	4	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	1.64
9	4	G12112	1/2" x 1-1/2" HDG HEX BOLT GR5	1 1/2 in	0.15	0.59
10	16	G12FW	1/2" HDG USS FLATWASHER		0.03	0.54
11	18	G12LW	1/2" HDG LOCKWASHER		0.01	0.25
12	20	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.43
					TOTAL WT. #	65.66



SECTOR FRAME REINFORCING KIT ATTACHES TO EITHER EXISTING SECTOR FRAOME CROSS ARMS OR TO AN OPTIONAL HORIZONTAL ROUND MEMBER (SHOWN, SOLD SEPARATELY). IF PURCHASING OPTIONAL HORIZONTAL ROUND MEMBER, CORRESPONDING CROSSOVER PLATE KIT WILL NEED TO BE PURCHASED, ONE PER EXISTING ANTENNA MOUNTING PIPE.



DETAIL A



DETAIL B

TOLERANCE NOTES

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SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
SECTOR FRAME
STABILIZER - VERTICAL

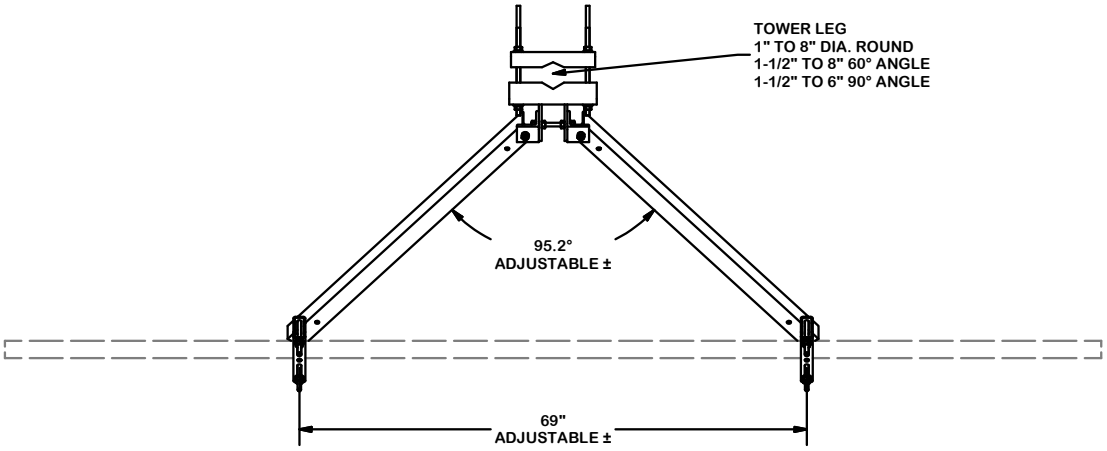
SITE PRO 1 — A valmont COMPANY

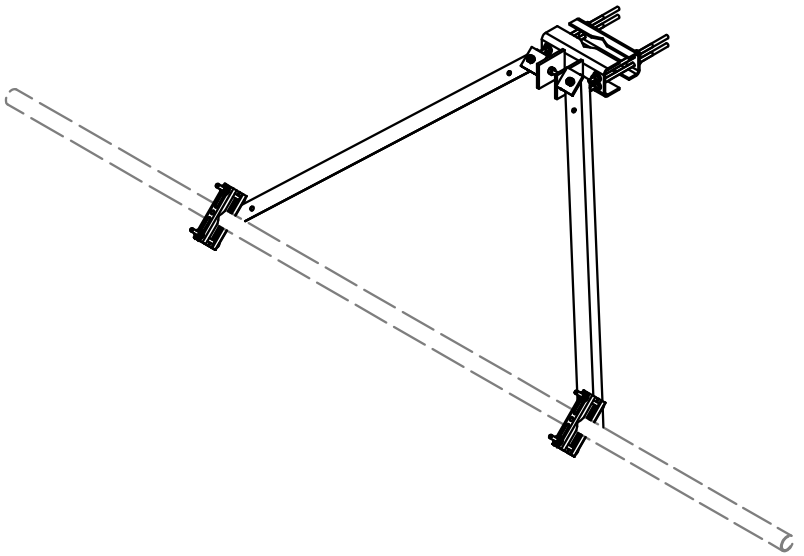
Engineering Support Team: 1-888-753-7446

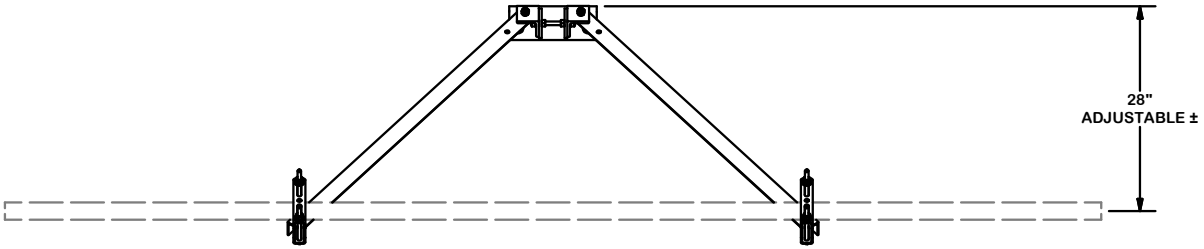
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

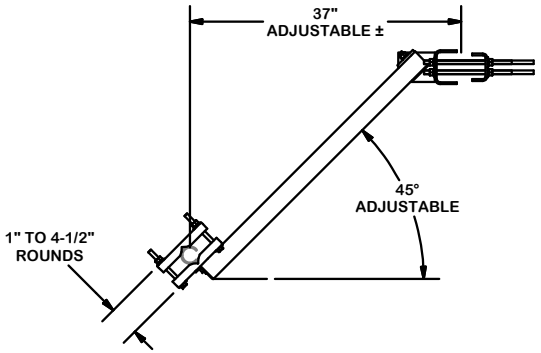
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
5563	CEK 4/29/2014		SFS-V

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/30/2014	SFS-V









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ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: SECTOR FRAME
STABILIZER - VERTICAL

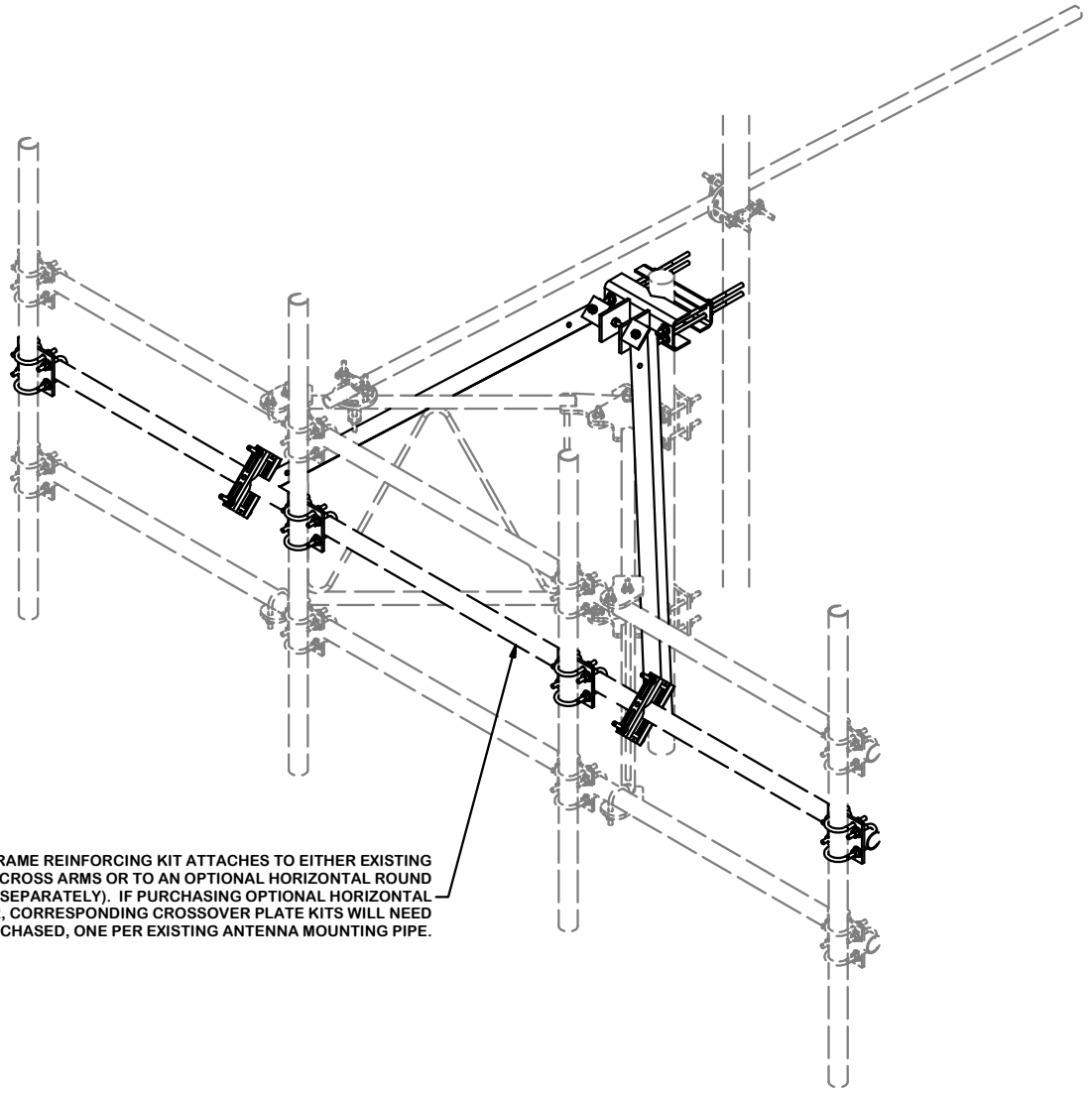
SITE PRO 1 — A valmont COMPANY

Engineering Support Team:
1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
5563	CEK 4/29/2014		SFS-V

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/30/2014	SFS-V



SECTOR FRAME REINFORCING KIT ATTACHES TO EITHER EXISTING SECTOR FRAME CROSS ARMS OR TO AN OPTIONAL HORIZONTAL ROUND MEMBER (SHOWN, SOLD SEPARATELY). IF PURCHASING OPTIONAL HORIZONTAL ROUND MEMBER, CORRESPONDING CROSSOVER PLATE KITS WILL NEED TO BE PURCHASED, ONE PER EXISTING ANTENNA MOUNTING PIPE.

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
SECTOR FRAME
STABILIZER - VERTICAL

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
5563	CEK 4/29/2014		SFS-V

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/30/2014	SFS-V

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

Wind & Ice Loading

Nominal Mount Elevation (AGL), z_{mount}	147 ft	**K_a**	0.90
Nominal Rad Elevation (AGL), z_{rad}	148 ft	**K_d**	0.95
Elevation AMSL (ft)	-	**K_e**	-
TIA Standard	G	**K_z**	1.37
Basic Wind Speed, V_{ult} (bare)	125 mph	**K_{zt}**	1.00
Basic Wind Speed, V (ice)	50 mph	**K_s**	-
Design Ice Thickness, t_i	3/4 in	**t_{iz}**	1.74 in
Exposure Category	C	**G_h**	1.00
Risk Category	II	**q_z (bare)**	52.2 psf
Seismic Response Coeff., C_s	-	**q_z (ice)**	8.3 psf

Live Loading

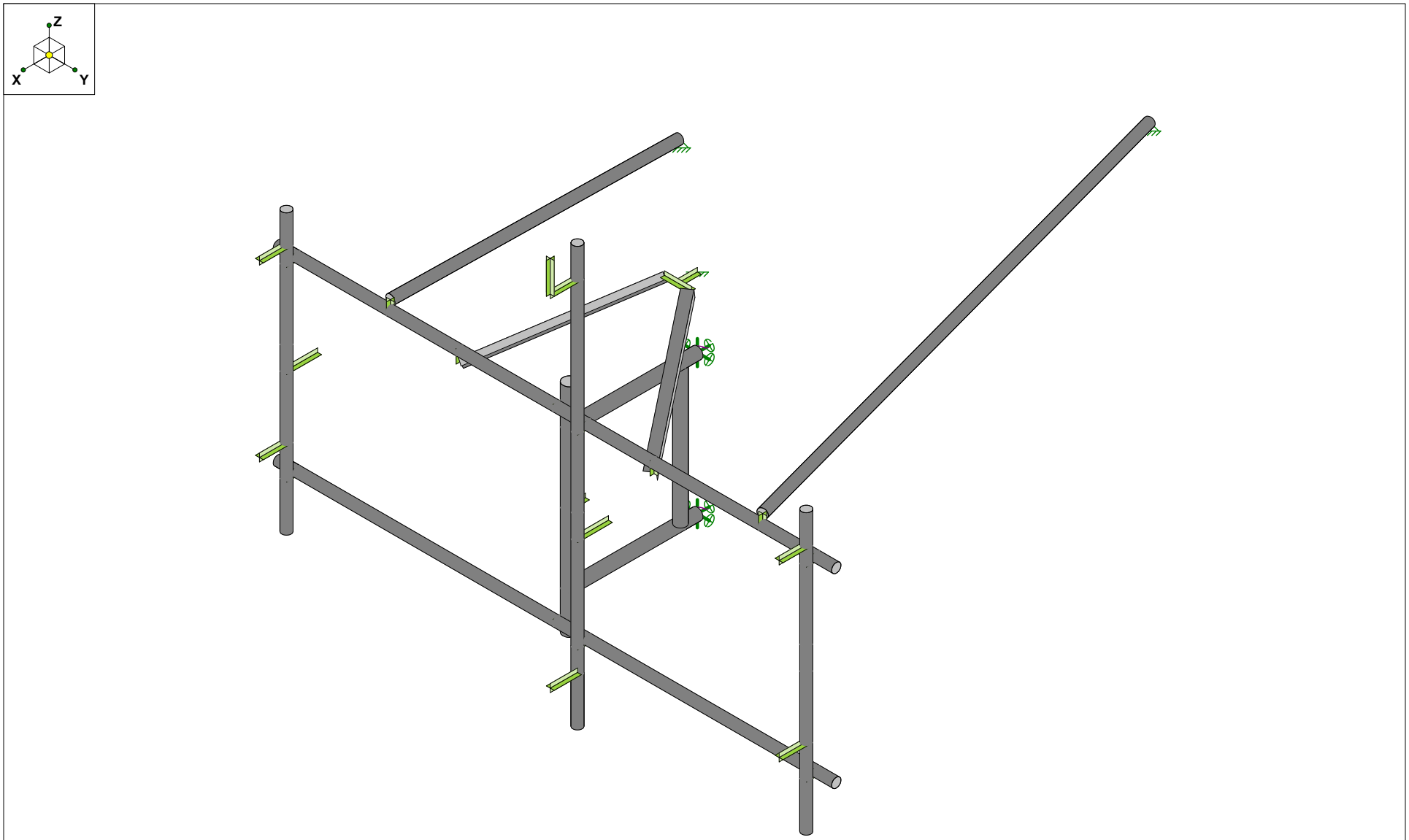
At Mount Pipes, L_M	500 lb
Joint Labels Considered	n17
	n19
	n47a

Member Distributed Loading

Section Set Label	Shape Label	F_A (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Face Horizontal	PIPE_2.0	11.15	4.40	8.76
Standoff Horizontal	PIPE_2.5	13.50	4.78	9.82
Standoff Vertical 1	PIPE_2.5	13.50	4.78	9.82
Standoff Vertical 2	PIPE_3.0	16.43	5.24	11.15
Mount Pipe	PIPE_2.0	11.15	4.40	8.76
Stiff Arm	PIPE_2.0	11.15	4.40	8.76
MOD SFS	L2.5x2.5x3	19.56	2.85	10.23
MOD Stiff Arm	PIPE_2.0	11.15	4.40	8.76

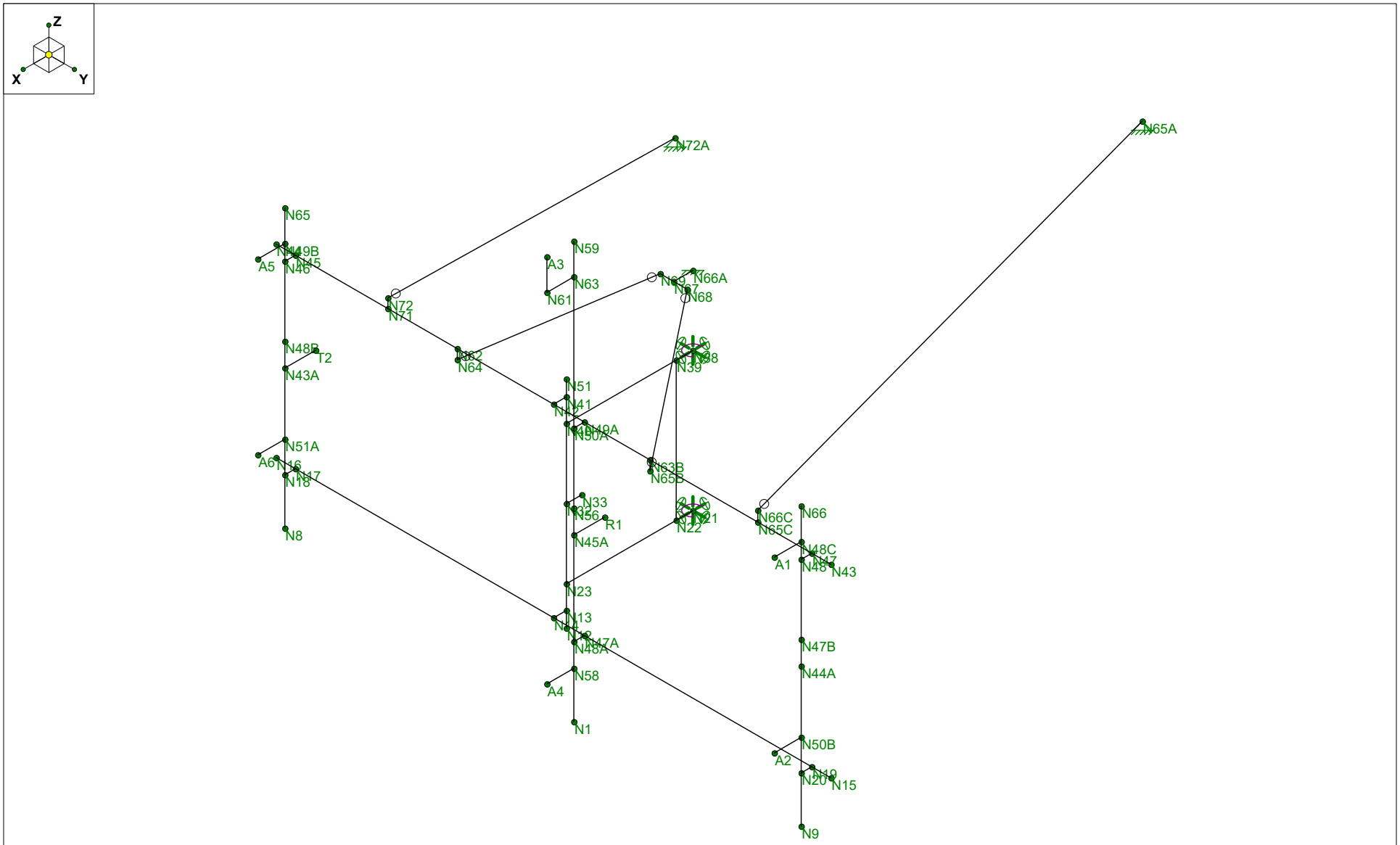
Appurtenances

Appurtenance Model	Status	Azimuth Offset (°, ↻)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty.	Total Qty. Override	0° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	EPA_A (Bare) (ft^2)		EPA_A (Ice) (ft^2)		F_A (Bare) (lb)		F_A (Ice) (lb)	
					Front	Side	0°		1	2							N	T	N	T	N	T	N	T
AIR 21, 1.3 M, B2A B4P				☐			1	***3***	A1	A2	56	12	8	83	Flat	168.66	6.05	4.36	8.06	6.26	284.37	204.75	60.61	47.07
AIR -32 B2A/B66AA				☐			1	***3***	A5	A6	56.6	12.9	8.7	132.2	Flat	159.73	6.51	4.71	8.56	6.65	306.02	221.52	64.38	50.02
APXVAARR24_43-U-NA20				☐			1	***3***	A3	A4	95.9	24	8.7	153.3	Generic	392.46	14.67	5.32	17.32	7.66	689.61	250.08	130.26	57.58
KRY 112 144/1				☐	0.25		1	***3***	T2		7	6	3	11	Flat	11.07	0.09	0.18	0.21	0.57	4.11	8.23	1.56	4.26
RADIO 4449 B12/B71				☐	0.5		1	***3***	R1		15	13.2	9.3	75	Flat	68.13	0.83	1.16	1.29	1.97	38.78	54.65	9.67	14.81



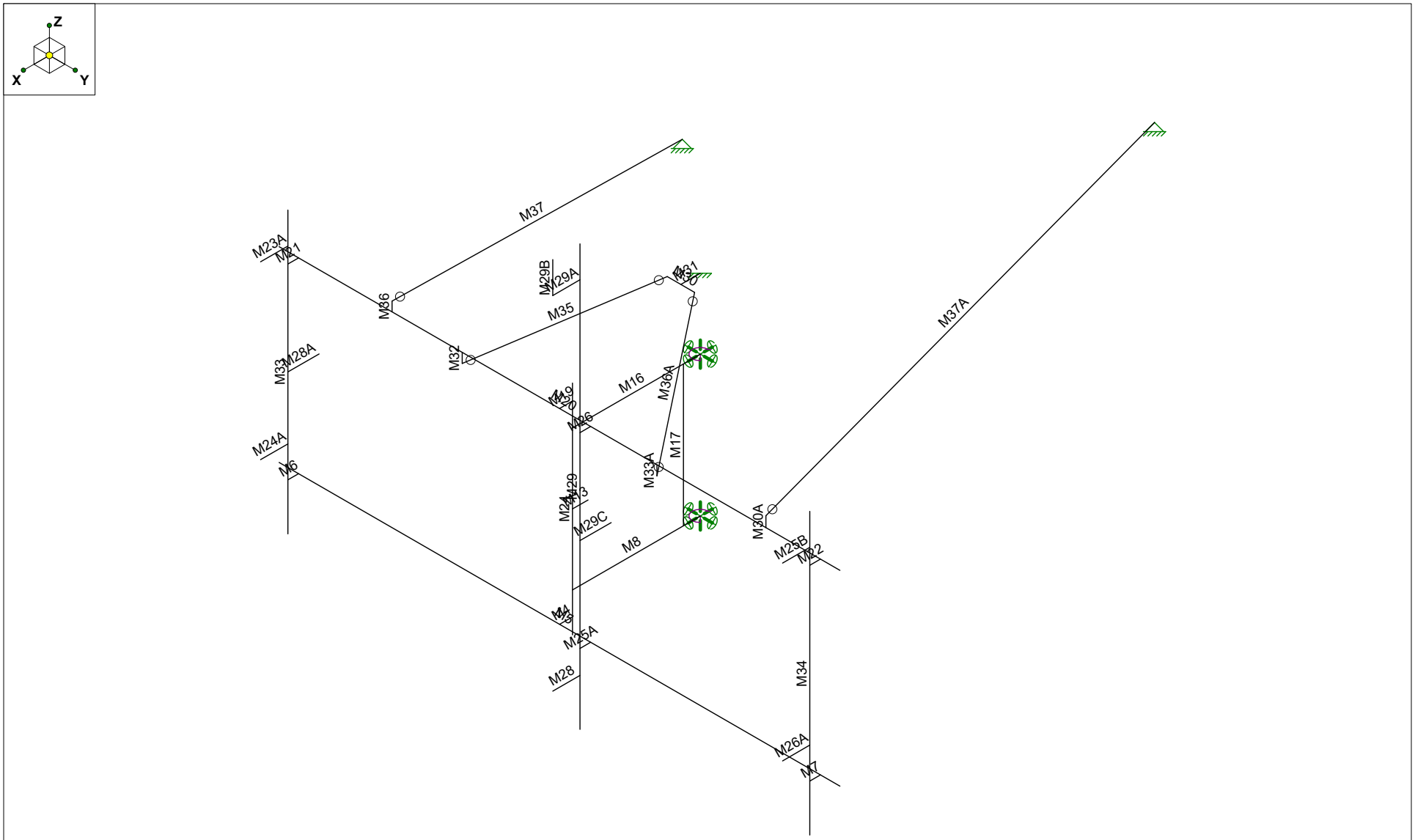
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 1
JLS		Mar 31, 2020 at 1:07 PM
41124-12942673-01-MA-R2	Rendered	41124-12942673-01-MA-R2.r3d



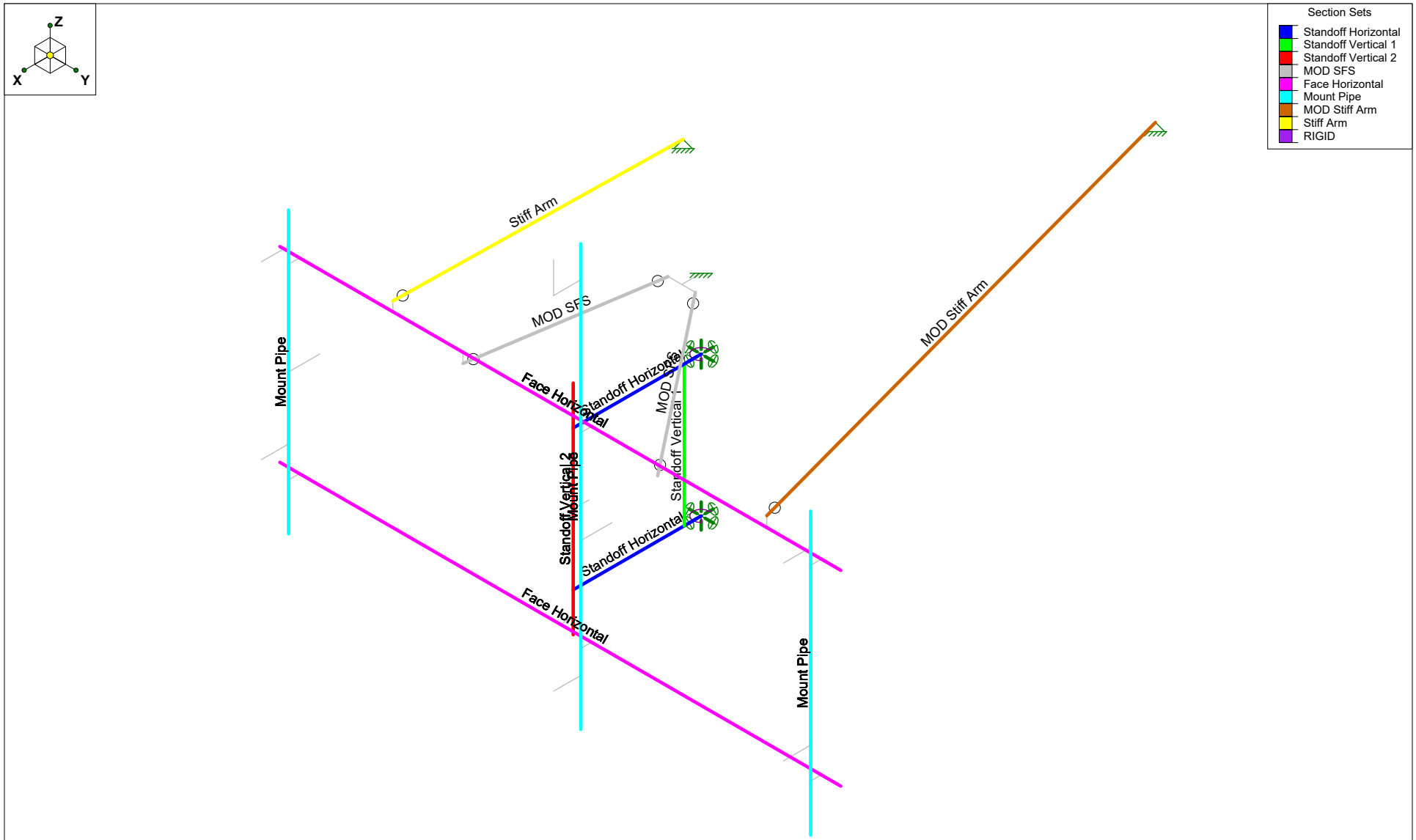
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 2
JLS		Mar 31, 2020 at 1:08 PM
41124-12942673-01-MA-R2	Joint Labels	41124-12942673-01-MA-R2.r3d



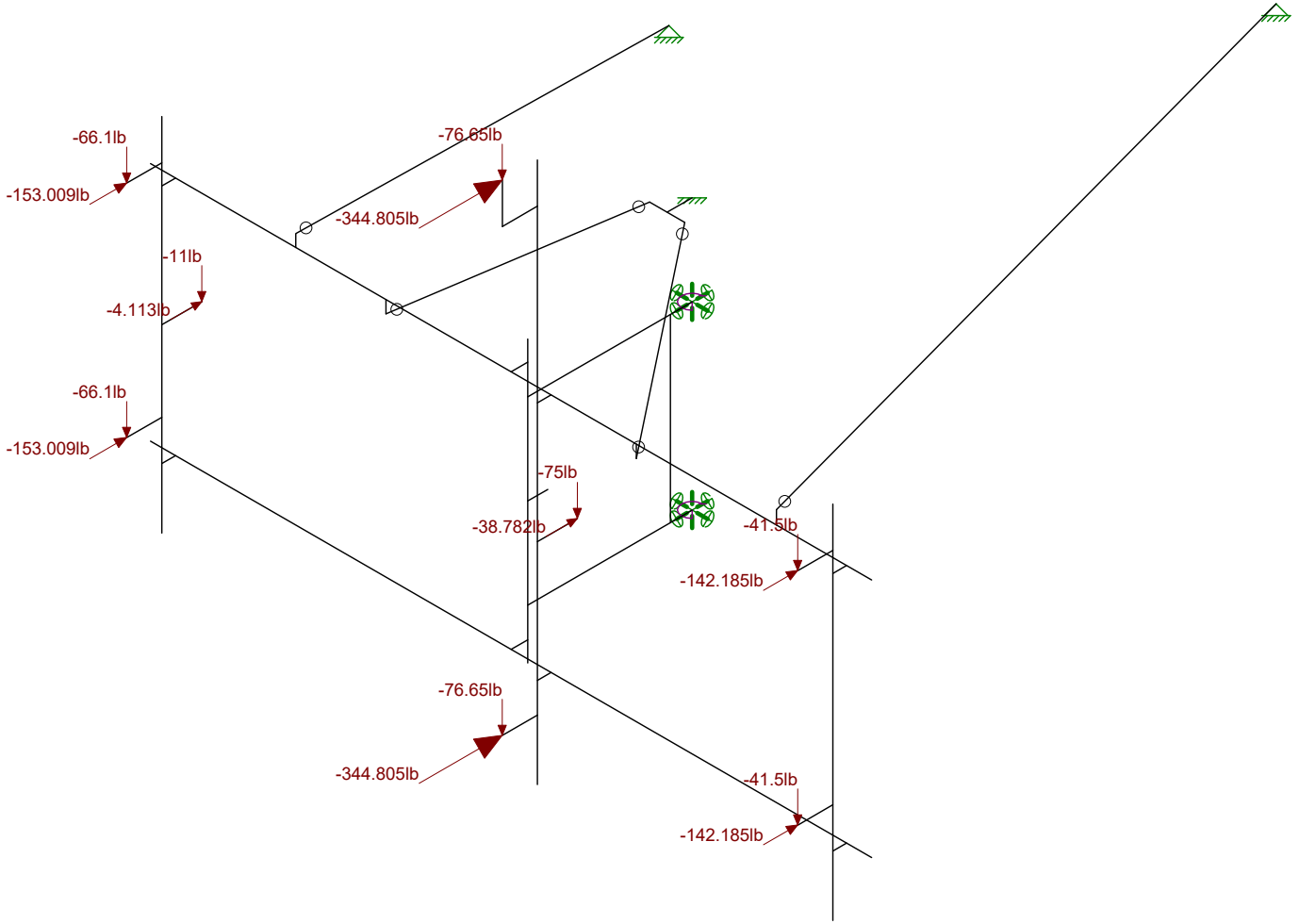
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 3
JLS		Mar 31, 2020 at 1:08 PM
41124-12942673-01-MA-R2	Member Labels	41124-12942673-01-MA-R2.r3d



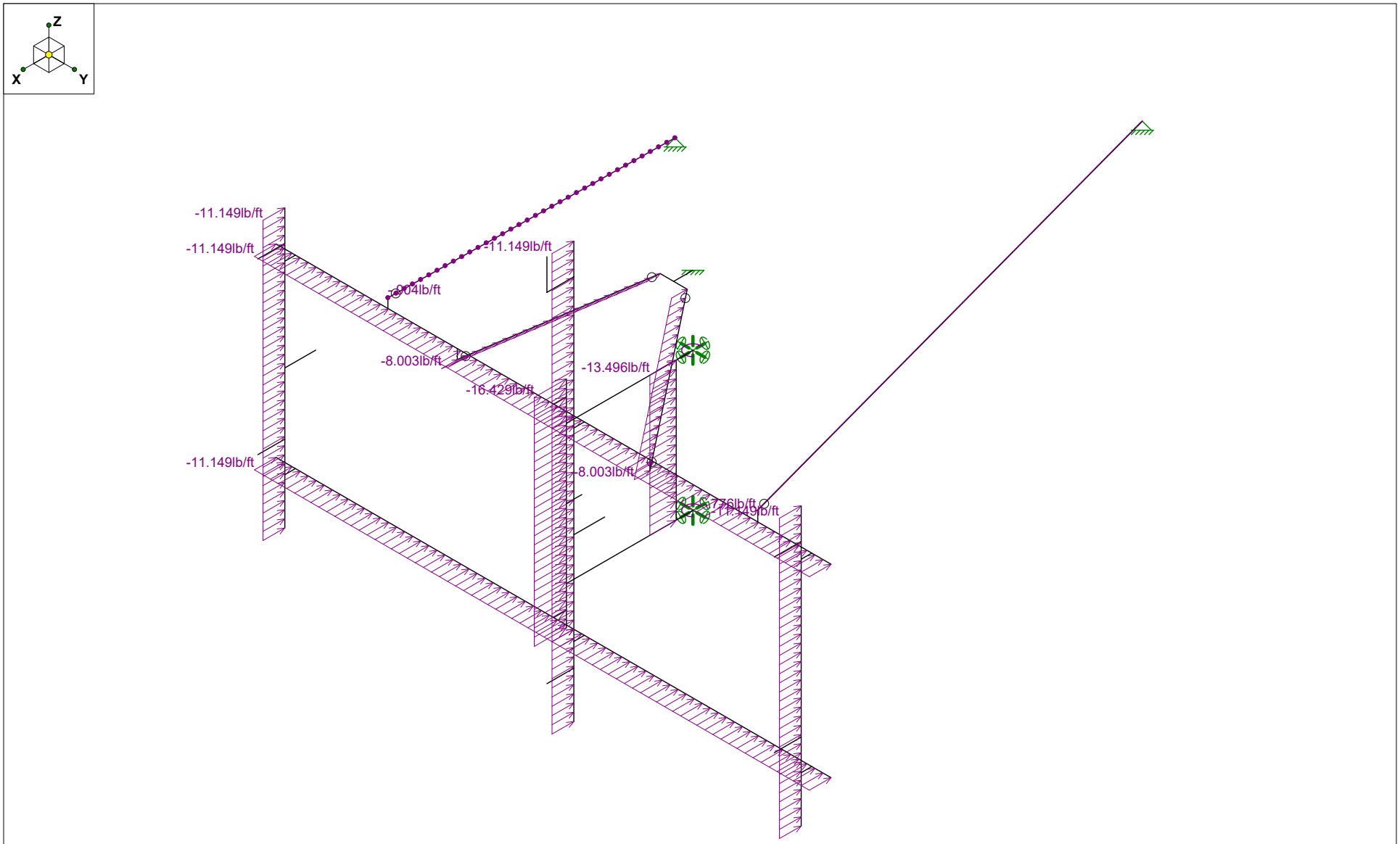
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 4
JLS		Mar 31, 2020 at 1:08 PM
41124-12942673-01-MA-R2	Section Sets	41124-12942673-01-MA-R2.r3d



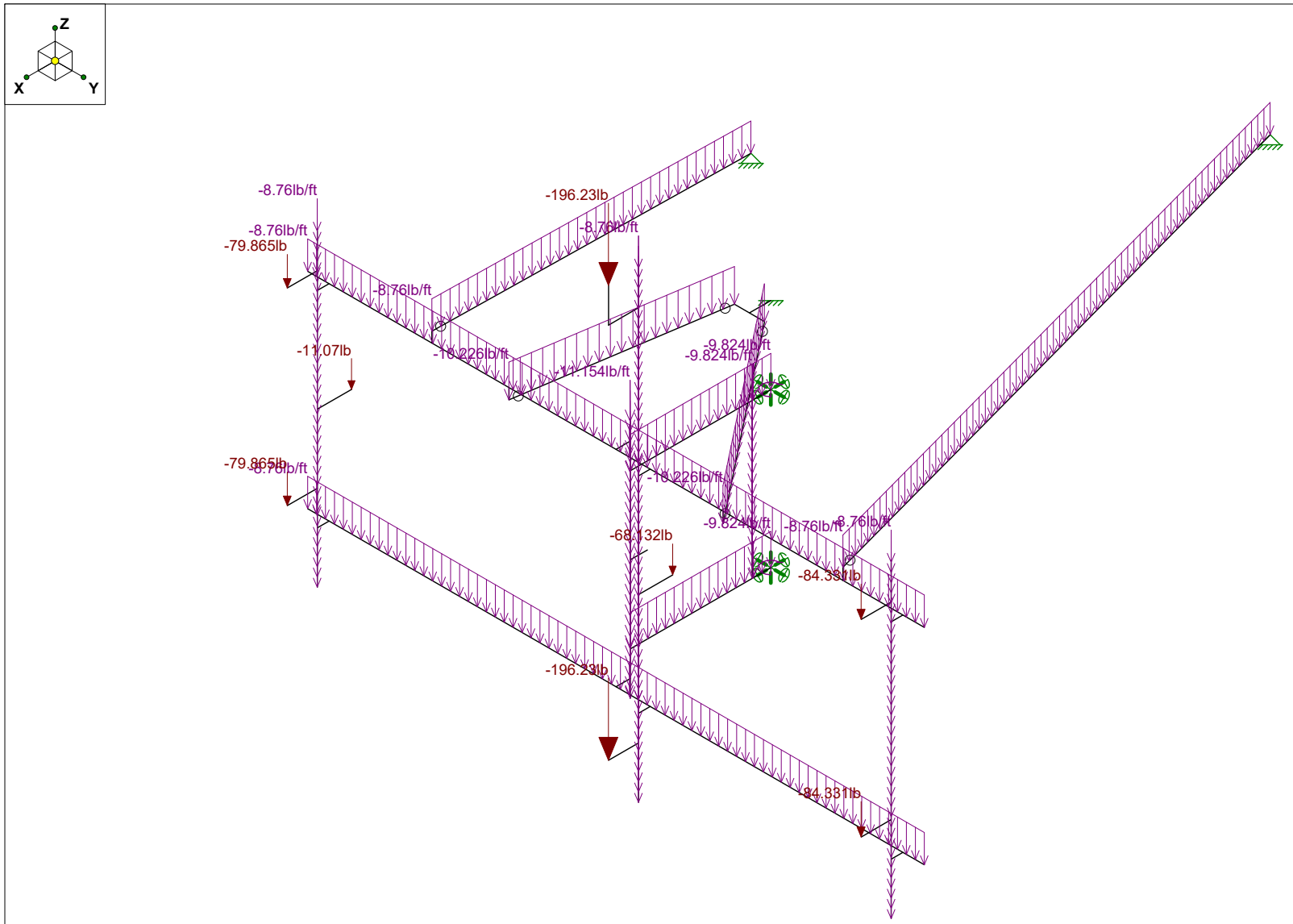
Loads: LC 1, DISPLAY (1.0D + 1.0W_0°)
Envelope Only Solution

CLS		SK - 5
JLS	41124-12942673-Ansonia Wakelee	Mar 31, 2020 at 1:09 PM
41124-12942673-01-MA-R2	Joint Loads - Dead and Normal Wind	41124-12942673-01-MA-R2.r3d



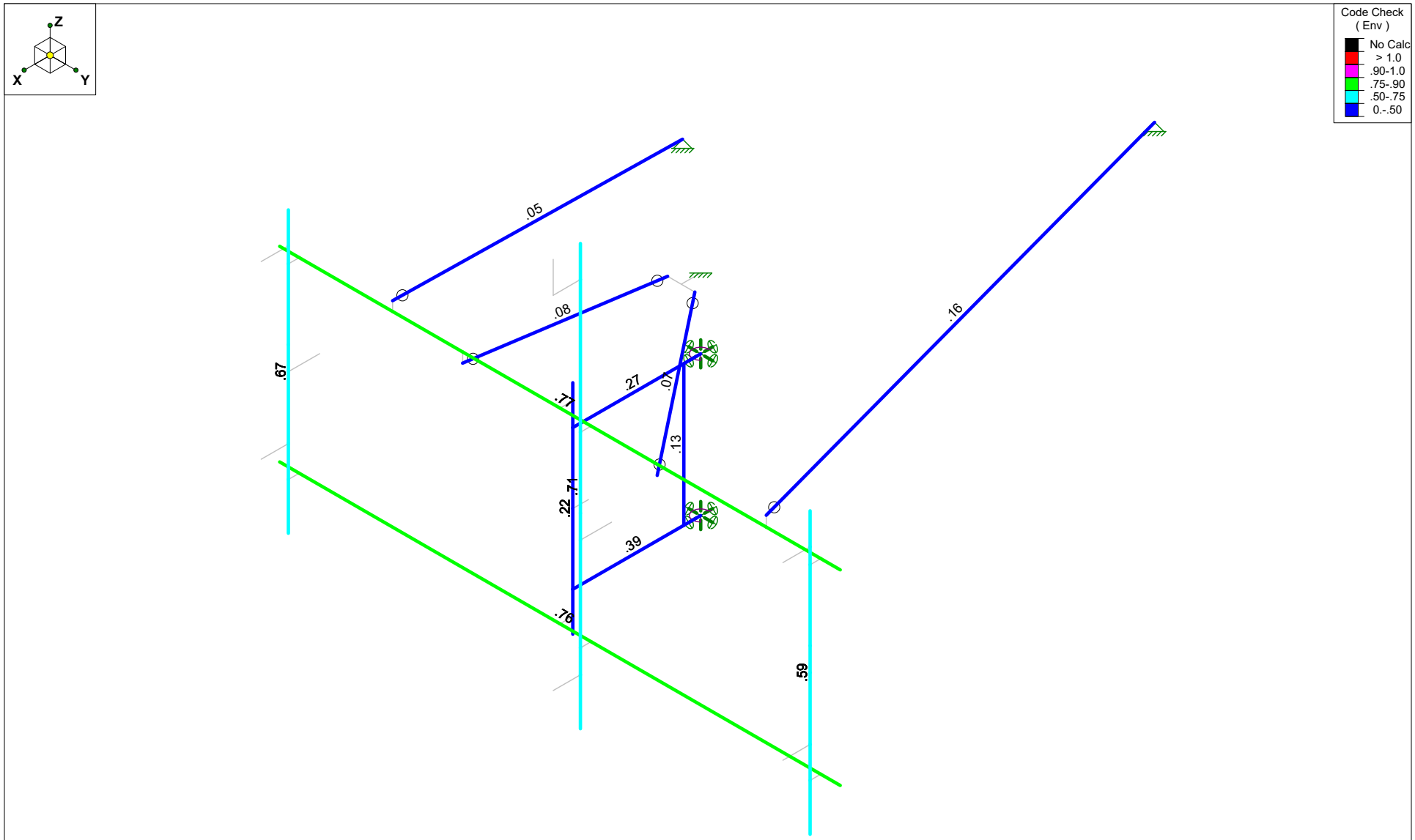
Loads: BLC 4, Structure Wind 0°
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 6
JLS		Mar 31, 2020 at 1:09 PM
41124-12942673-01-MA-R2	Distributed Load - Normal Wind	41124-12942673-01-MA-R2.r3d



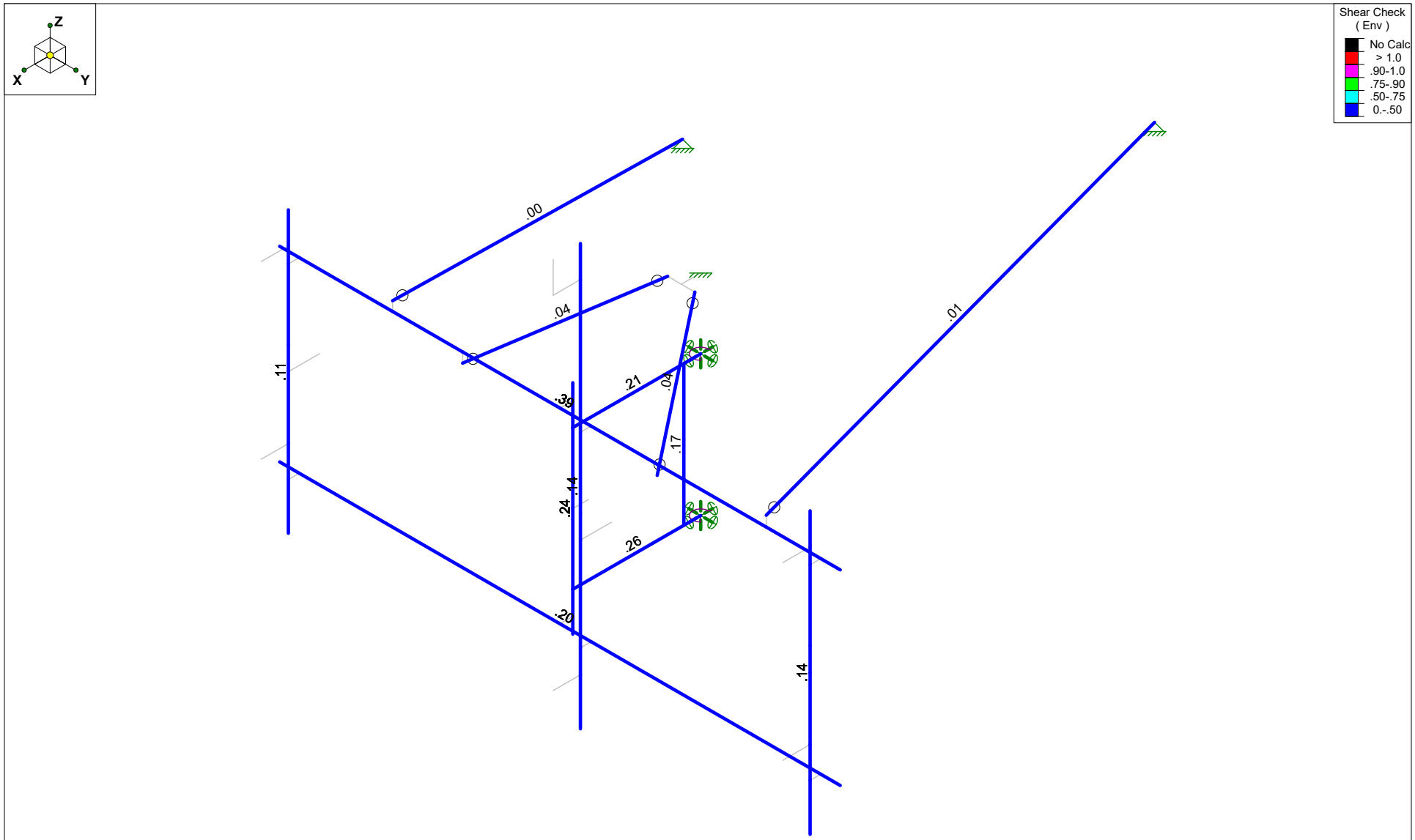
Loads: BLC 2, Ice Dead
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 7
JLS		Mar 31, 2020 at 1:09 PM
41124-12942673-01-MA-R2	Ice Dead Loads	41124-12942673-01-MA-R2.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

CLS	41124-12942673-Ansonia Wakelee	SK - 8
JLS		Mar 31, 2020 at 1:10 PM
41124-12942673-01-MA-R2	Envelope Member Unity Check Results - Bending	41124-12942673-01-MA-R2.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

CLS		SK - 9
JLS	41124-12942673-Ansonia Wakelee	Mar 31, 2020 at 1:10 PM
41124-12942673-01-MA-R2	Envelope Member Check Results - Shear	41124-12942673-01-MA-R2.r3d

Basic Load Cases

	BLC Description	Category	X Gravi...	Y Gravi...	Z Gravity	Joint	Point	Distributed	Area(Member)	Surfac...
1	Dead	DL			-1	8				
2	Ice Dead	RL				8		13		
4	Structure Wind 0°	None						11		
5	Structure Wind 30°	None						26		
6	Structure Wind 45°	None						26		
7	Structure Wind 60°	None						26		
8	Structure Wind 90°	None						11		
9	Structure Wind 120°	None						26		
10	Structure Wind 135°	None						26		
11	Structure Wind 150°	None						26		
12	Structure Wind w/ Ice 0°	None						11		
13	Structure Wind w/ Ice 30°	None						26		
14	Structure Wind w/ Ice 45°	None						26		
15	Structure Wind w/ Ice 60°	None						26		
16	Structure Wind w/ Ice 90°	None						11		
17	Structure Wind w/ Ice 120°	None						26		
18	Structure Wind w/ Ice 135°	None						26		
19	Structure Wind w/ Ice 150°	None						26		
20	Antenna Wind 0°	None				8				
21	Antenna Wind 30°	None				16				
22	Antenna Wind 45°	None				16				
23	Antenna Wind 60°	None				16				
24	Antenna Wind 90°	None				8				
25	Antenna Wind 120°	None				16				
26	Antenna Wind 135°	None				16				
27	Antenna Wind 150°	None				16				
28	Antenna Wind w/ Ice 0°	None				8				
29	Antenna Wind w/ Ice 30°	None				16				
30	Antenna Wind w/ Ice 45°	None				16				
31	Antenna Wind w/ Ice 60°	None				16				
32	Antenna Wind w/ Ice 90°	None				8				
33	Antenna Wind w/ Ice 120°	None				16				
34	Antenna Wind w/ Ice 135°	None				16				
35	Antenna Wind w/ Ice 150°	None				16				
39	Maintenance Live 500 (1)	OL1				1				
40	Maintenance Live 500 (2)	OL2				1				
41	Maintenance Live 500 (3)	OL3				1				

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	DISPLAY (1.0D + 1.0W_0°)	Yes	Y		DL	1	20	1																		
2	1.4D	Yes	Y		DL	1.4																				
3	1.2D + 1.0W_0°	Yes	Y		DL	1.2	4	1	20	1																
4	1.2D + 1.0W_30°	Yes	Y		DL	1.2	5	1	21	1																
5	1.2D + 1.0W_45°	Yes	Y		DL	1.2	6	1	22	1																
6	1.2D + 1.0W_60°	Yes	Y		DL	1.2	7	1	23	1																
7	1.2D + 1.0W_90°	Yes	Y		DL	1.2	8	1	24	1																
8	1.2D + 1.0W_120°	Yes	Y		DL	1.2	9	1	25	1																
9	1.2D + 1.0W_135°	Yes	Y		DL	1.2	10	1	26	1																
10	1.2D + 1.0W_150°	Yes	Y		DL	1.2	11	1	27	1																
11	1.2D + 1.0W_180°	Yes	Y		DL	1.2	4	-1	20	-1																
12	1.2D + 1.0W_210°	Yes	Y		DL	1.2	5	-1	21	-1																
13	1.2D + 1.0W_225°	Yes	Y		DL	1.2	6	-1	22	-1																
14	1.2D + 1.0W_240°	Yes	Y		DL	1.2	7	-1	23	-1																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
15	1.2D + 1.0W_270°	Yes	Y		DL	1.2	8	-1	24	-1																
16	1.2D + 1.0W_300°	Yes	Y		DL	1.2	9	-1	25	-1																
17	1.2D + 1.0W_315°	Yes	Y		DL	1.2	10	-1	26	-1																
18	1.2D + 1.0W_330°	Yes	Y		DL	1.2	11	-1	27	-1																
19	1.2D + 1.0Di + 1.0Wi_0°	Yes	Y		DL	1.2	12	1	28	1	RL	1														
20	1.2D + 1.0Di + 1.0Wi_30°	Yes	Y		DL	1.2	13	1	29	1	RL	1														
21	1.2D + 1.0Di + 1.0Wi_45°	Yes	Y		DL	1.2	14	1	30	1	RL	1														
22	1.2D + 1.0Di + 1.0Wi_60°	Yes	Y		DL	1.2	15	1	31	1	RL	1														
23	1.2D + 1.0Di + 1.0Wi_90°	Yes	Y		DL	1.2	16	1	32	1	RL	1														
24	1.2D + 1.0Di + 1.0Wi_120°	Yes	Y		DL	1.2	17	1	33	1	RL	1														
25	1.2D + 1.0Di + 1.0Wi_135°	Yes	Y		DL	1.2	18	1	34	1	RL	1														
26	1.2D + 1.0Di + 1.0Wi_150°	Yes	Y		DL	1.2	19	1	35	1	RL	1														
27	1.2D + 1.0Di + 1.0Wi_180°	Yes	Y		DL	1.2	12	-1	28	-1	RL	1														
28	1.2D + 1.0Di + 1.0Wi_210°	Yes	Y		DL	1.2	13	-1	29	-1	RL	1														
29	1.2D + 1.0Di + 1.0Wi_225°	Yes	Y		DL	1.2	14	-1	30	-1	RL	1														
30	1.2D + 1.0Di + 1.0Wi_240°	Yes	Y		DL	1.2	15	-1	31	-1	RL	1														
31	1.2D + 1.0Di + 1.0Wi_270°	Yes	Y		DL	1.2	16	-1	32	-1	RL	1														
32	1.2D + 1.0Di + 1.0Wi_300°	Yes	Y		DL	1.2	17	-1	33	-1	RL	1														
33	1.2D + 1.0Di + 1.0Wi_315°	Yes	Y		DL	1.2	18	-1	34	-1	RL	1														
34	1.2D + 1.0Di + 1.0Wi_330°	Yes	Y		DL	1.2	19	-1	35	-1	RL	1														
35	1.2D + 1.5Lm_1 + 1.0Wm_0°	Yes	Y		DL	1.2	4	.061	20	.061	O...	1.5														
36	1.2D + 1.5Lm_1 + 1.0Wm_30°	Yes	Y		DL	1.2	5	.061	21	.061	O...	1.5														
37	1.2D + 1.5Lm_1 + 1.0Wm_45°	Yes	Y		DL	1.2	6	.061	22	.061	O...	1.5														
38	1.2D + 1.5Lm_1 + 1.0Wm_60°	Yes	Y		DL	1.2	7	.061	23	.061	O...	1.5														
39	1.2D + 1.5Lm_1 + 1.0Wm_90°	Yes	Y		DL	1.2	8	.061	24	.061	O...	1.5														
40	1.2D + 1.5Lm_1 + 1.0Wm_1...	Yes	Y		DL	1.2	9	.061	25	.061	O...	1.5														
41	1.2D + 1.5Lm_1 + 1.0Wm_1...	Yes	Y		DL	1.2	10	.061	26	.061	O...	1.5														
42	1.2D + 1.5Lm_1 + 1.0Wm_1...	Yes	Y		DL	1.2	11	.061	27	.061	O...	1.5														
43	1.2D + 1.5Lm_1 + 1.0Wm_1...	Yes	Y		DL	1.2	4	-.061	20	-.061	O...	1.5														
44	1.2D + 1.5Lm_1 + 1.0Wm_2...	Yes	Y		DL	1.2	5	-.061	21	-.061	O...	1.5														
45	1.2D + 1.5Lm_1 + 1.0Wm_2...	Yes	Y		DL	1.2	6	-.061	22	-.061	O...	1.5														
46	1.2D + 1.5Lm_1 + 1.0Wm_2...	Yes	Y		DL	1.2	7	-.061	23	-.061	O...	1.5														
47	1.2D + 1.5Lm_1 + 1.0Wm_2...	Yes	Y		DL	1.2	8	-.061	24	-.061	O...	1.5														
48	1.2D + 1.5Lm_1 + 1.0Wm_3...	Yes	Y		DL	1.2	9	-.061	25	-.061	O...	1.5														
49	1.2D + 1.5Lm_1 + 1.0Wm_3...	Yes	Y		DL	1.2	10	-.061	26	-.061	O...	1.5														
50	1.2D + 1.5Lm_1 + 1.0Wm_3...	Yes	Y		DL	1.2	11	-.061	27	-.061	O...	1.5														
51	1.2D + 1.5Lm_2 + 1.0Wm_0°	Yes	Y		DL	1.2	4	.061	20	.061	O...	1.5														
52	1.2D + 1.5Lm_2 + 1.0Wm_30°	Yes	Y		DL	1.2	5	.061	21	.061	O...	1.5														
53	1.2D + 1.5Lm_2 + 1.0Wm_45°	Yes	Y		DL	1.2	6	.061	22	.061	O...	1.5														
54	1.2D + 1.5Lm_2 + 1.0Wm_60°	Yes	Y		DL	1.2	7	.061	23	.061	O...	1.5														
55	1.2D + 1.5Lm_2 + 1.0Wm_90°	Yes	Y		DL	1.2	8	.061	24	.061	O...	1.5														
56	1.2D + 1.5Lm_2 + 1.0Wm_1...	Yes	Y		DL	1.2	9	.061	25	.061	O...	1.5														
57	1.2D + 1.5Lm_2 + 1.0Wm_1...	Yes	Y		DL	1.2	10	.061	26	.061	O...	1.5														
58	1.2D + 1.5Lm_2 + 1.0Wm_1...	Yes	Y		DL	1.2	11	.061	27	.061	O...	1.5														
59	1.2D + 1.5Lm_2 + 1.0Wm_1...	Yes	Y		DL	1.2	4	-.061	20	-.061	O...	1.5														
60	1.2D + 1.5Lm_2 + 1.0Wm_2...	Yes	Y		DL	1.2	5	-.061	21	-.061	O...	1.5														
61	1.2D + 1.5Lm_2 + 1.0Wm_2...	Yes	Y		DL	1.2	6	-.061	22	-.061	O...	1.5														
62	1.2D + 1.5Lm_2 + 1.0Wm_2...	Yes	Y		DL	1.2	7	-.061	23	-.061	O...	1.5														
63	1.2D + 1.5Lm_2 + 1.0Wm_2...	Yes	Y		DL	1.2	8	-.061	24	-.061	O...	1.5														
64	1.2D + 1.5Lm_2 + 1.0Wm_3...	Yes	Y		DL	1.2	9	-.061	25	-.061	O...	1.5														
65	1.2D + 1.5Lm_2 + 1.0Wm_3...	Yes	Y		DL	1.2	10	-.061	26	-.061	O...	1.5														
66	1.2D + 1.5Lm_2 + 1.0Wm_3...	Yes	Y		DL	1.2	11	-.061	27	-.061	O...	1.5														
67	1.2D + 1.5Lm_3 + 1.0Wm_0°	Yes	Y		DL	1.2	4	.061	20	.061	O...	1.5														
68	1.2D + 1.5Lm_3 + 1.0Wm_30°	Yes	Y		DL	1.2	5	.061	21	.061	O...	1.5														
69	1.2D + 1.5Lm_3 + 1.0Wm_45°	Yes	Y		DL	1.2	6	.061	22	.061	O...	1.5														
70	1.2D + 1.5Lm_3 + 1.0Wm_60°	Yes	Y		DL	1.2	7	.061	23	.061	O...	1.5														
71	1.2D + 1.5Lm_3 + 1.0Wm_90°	Yes	Y		DL	1.2	8	.061	24	.061	O...	1.5														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
72	1.2D + 1.5Lm_3 + 1.0Wm_1...	Yes	Y		DL	1.2	9	.061	25	.061	O...	1.5												
73	1.2D + 1.5Lm_3 + 1.0Wm_1...	Yes	Y		DL	1.2	10	.061	26	.061	O...	1.5												
74	1.2D + 1.5Lm_3 + 1.0Wm_1...	Yes	Y		DL	1.2	11	.061	27	.061	O...	1.5												
75	1.2D + 1.5Lm_3 + 1.0Wm_1...	Yes	Y		DL	1.2	4	-.061	20	-.061	O...	1.5												
76	1.2D + 1.5Lm_3 + 1.0Wm_2...	Yes	Y		DL	1.2	5	-.061	21	-.061	O...	1.5												
77	1.2D + 1.5Lm_3 + 1.0Wm_2...	Yes	Y		DL	1.2	6	-.061	22	-.061	O...	1.5												
78	1.2D + 1.5Lm_3 + 1.0Wm_2...	Yes	Y		DL	1.2	7	-.061	23	-.061	O...	1.5												
79	1.2D + 1.5Lm_3 + 1.0Wm_2...	Yes	Y		DL	1.2	8	-.061	24	-.061	O...	1.5												
80	1.2D + 1.5Lm_3 + 1.0Wm_3...	Yes	Y		DL	1.2	9	-.061	25	-.061	O...	1.5												
81	1.2D + 1.5Lm_3 + 1.0Wm_3...	Yes	Y		DL	1.2	10	-.061	26	-.061	O...	1.5												
82	1.2D + 1.5Lm_3 + 1.0Wm_3...	Yes	Y		DL	1.2	11	-.061	27	-.061	O...	1.5												

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Universal Pipe	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
2	Standoff Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	Standoff Vertical 1	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
4	Standoff Diagonal	SR0.75	Beam	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
5	Standoff Vertical 2	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
6	MOD SFS	L2.5x2.5x3	Beam	Pipe	A36 Gr.36	Typical	.901	.535	.535	.011
7	Face Horizontal	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	MOD Stiff Arm	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
10	Stiff Arm	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Design Parameters

	Label	Shape	Length[...	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp bot[...	L-torq...	Kyy	Kzz	Cb	Functi...
1	M5	Face Horizontal	144	0	55	Lbyy						Lateral
2	M8	Standoff Horizontal	32.85			Lbyy						Lateral
3	M16	Standoff Horizontal	32.85			Lbyy						Lateral
4	M17	Standoff Vertical 1	36			Lbyy						Lateral
5	M20	Face Horizontal	144	0	55	Lbyy						Lateral
6	M24	Standoff Vertical 2	56		36	Lbyy						Lateral
7	M29	Mount Pipe	108			Lbyy						Lateral
8	M33	Mount Pipe	72			Lbyy						Lateral
9	M34	Mount Pipe	72			Lbyy						Lateral
10	M37	Stiff Arm	73.215			Lbyy						Lateral
11	M35	MOD SFS	40.541			Lbyy						Lateral
12	M36A	MOD SFS	40.541			Lbyy						Lateral
13	M37A	MOD Stiff Arm	142.375			Lbyy						Lateral

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M4						Yes	** NA **			None
2	M5						Yes	Default			None
3	M6						Yes	** NA **			None
4	M7						Yes	** NA **			None
5	M8						Yes	Default			None
6	M13						Yes	** NA **			None
7	M16						Yes	Default			None
8	M17						Yes				None
9	M19						Yes	** NA **			None
10	M20						Yes				None
11	M21						Yes	** NA **			None
12	M22						Yes	** NA **			None
13	M24						Yes	Default			None
14	M29						Yes	Default			None
15	M33						Yes				None
16	M34						Yes				None
17	M25A						Yes	** NA **			None
18	M26						Yes	** NA **			None
19	M23A						Yes	** NA **			None
20	M24A						Yes	** NA **			None
21	M25B						Yes	** NA **			None
22	M26A						Yes	** NA **			None
23	M28						Yes	** NA **			None
24	M29A						Yes	** NA **			None
25	M29B						Yes	** NA **			None
26	M28A						Yes	** NA **			None
27	M29C						Yes	** NA **			None
28	M30A						Yes	** NA **			None
29	M30						Yes	** NA **			None
30	M31						Yes	** NA **			None
31	M32						Yes	** NA **			None
32	M33A						Yes	** NA **			None
33	M36						Yes	** NA **			None
34	M37	BenPIN					Yes	Default			None
35	M35	BenPIN	BenPIN				Yes	Default			None
36	M36A	BenPIN	BenPIN				Yes				None
37	M37A	BenPIN					Yes	Default			None

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N38	max	293.281	18	120.436	4	799.837	25	536.281	62	-202.112	14	148.342	14
2		min	-345.386	10	-126.968	12	147.698	1	-535.208	38	-813.067	22	-167.444	6
3	N21	max	1455.664	19	697.329	62	866.288	21	567.622	62	-190.939	17	223.184	14
4		min	-245.205	11	-753.446	38	182.573	13	-605.916	38	-788.555	24	-247.413	6
5	N66A	max	-183.344	8	1053.229	14	832.435	32	192.765	6	-33.829	8	18.007	15
6		min	-1660.986	32	-1031.723	6	84.277	8	-193.945	14	-345.876	32	-14.149	7
7	N65A	max	880.15	4	218.206	4	76.729	28	0	82	0	82	0	82
8		min	-731.033	12	-174.044	12	20.267	1	0	1	0	1	0	1
9	N72A	max	1056.254	17	16.746	15	39.836	25	0	82	0	82	0	82
10		min	-894.985	9	-25.37	7	8.673	49	0	1	0	1	0	1
11	Totals:	max	2005.075	3	1450.436	15	2483.664	30						
12		min	-2005.065	11	-1450.437	7	773.045	1						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn
1	M20	PIPE_2.0	.765	72	40	.391	72		17	24976....	32130	1871.6...	1871.6.....	H1-1b
2	M5	PIPE_2.0	.761	72	37	.195	72		10	24976....	32130	1871.6...	1871.6.....	H1-1b
3	M29	PIPE_2.0	.709	41.625	11	.143	90		61	12143....	32130	1871.6...	1871.6.....	H1-1b
4	M33	PIPE_2.0	.671	12	46	.109	12		17	20866....	32130	1871.6...	1871.6.....	H1-1b
5	M34	PIPE_2.0	.587	12	58	.136	12		4	20866....	32130	1871.6...	1871.6.....	H1-1b
6	M8	PIPE_2.5	.386	32.85	38	.263	4.448		38	47698....	50715	3596.25	3596.25	H1-1b
7	M16	PIPE_2.5	.275	4.448	21	.215	4.448		38	47698....	50715	3596.25	3596.25	H1-1b
8	M24	PIPE_3.0	.219	46.083	36	.237	4.083		40	58029....	65205	5748.75	5748.75	H1-1b
9	M37A	PIPE_2.0	.156	71.188	22	.008	142.3...		30	6987.7...	32130	1871.6...	1871.6.....	H1-1b
10	M17	PIPE_2.5	.128	0	24	.172	36		38	47114....	50715	3596.25	3596.25	H1-1b
11	M35	L2.5x2.5x3	.082	20.271	16	.042	40.541	z	40	20115....	29192.4	872.574	1778.7.....	H2-1
12	M36A	L2.5x2.5x3	.069	20.271	6	.036	0	y	62	20115....	29192.4	872.574	1778.7.....	H2-1
13	M37	PIPE_2.0	.051	73.215	17	.004	0		31	20562....	32130	1871.6...	1871.6.....	H1-1b*

Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11810A

SpectraSite - Ansonia
401 Wakelee Avenue
Ansonia, Connecticut 06401

June 12, 2019

EBI Project Number: 6219002191

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**8.26%**

June 12, 2019

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

Emissions Analysis for Site: CT11810A - SpectraSite - Ansonia

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **401 Wakelee Avenue** in **Ansonia, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 401 Wakelee Avenue in Ansonia, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

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

2) 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.

3) 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.

4) 2 UMTS 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 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

7) 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.

8) 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.

9) 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.

10) The antennas used in this modeling are the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR 32 for the 1900 MHz / 2100 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.

11) The antenna mounting height centerline of the proposed antennas is 148 feet above ground level (AGL).

12) 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.

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

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd
Height (AGL):	148 feet	Height (AGL):	148 feet	Height (AGL):	148 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,226.43	ERP (W):	8,226.43	ERP (W):	8,226.43
Antenna A1 MPE %:	**1.35%**	Antenna B1 MPE %:	**1.35%**	Antenna C1 MPE %:	**1.35%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz
Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd
Height (AGL):	148 feet	Height (AGL):	148 feet	Height (AGL):	148 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	2,481.08	ERP (W):	2,481.08	ERP (W):	2,481.08
Antenna A2 MPE %:	**0.94%**	Antenna B2 MPE %:	**0.94%**	Antenna C2 MPE %:	**0.94%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd
Height (AGL):	148 feet	Height (AGL):	148 feet	Height (AGL):	148 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):	8,728.31	ERP (W):	8,728.31	ERP (W):	8,728.31
Antenna A3 MPE %:	**1.43%**	Antenna B3 MPE %:	**1.43%**	Antenna C3 MPE %:	**1.43%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	3.72%
AT&T	2.07%
Metro PCS	0.3%
Clearwire	0.05%
Verizon	1.19%
Sprint	0.93%
Site Total MPE % :	8.26%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	3.72%
T-Mobile Sector B Total:	3.72%
T-Mobile Sector C Total:	3.72%
Site Total MPE % :	8.26%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 1900 MHz GSM	4	1028.30	148.0	6.75	1900 MHz GSM	1000	0.68%
T-Mobile 1900 MHz UMTS	2	1028.30	148.0	3.38	1900 MHz UMTS	1000	0.34%
T-Mobile 2100 MHz UMTS	2	1028.30	148.0	3.38	2100 MHz UMTS	1000	0.34%
T-Mobile 600 MHz LTE	2	591.73	148.0	1.94	600 MHz LTE	400	0.49%
T-Mobile 700 MHz LTE	2	648.82	148.0	2.13	700 MHz LTE	467	0.46%
T-Mobile 1900 MHz LTE	2	2056.61	148.0	6.75	1900 MHz LTE	1000	0.68%
T-Mobile 2100 MHz LTE	2	2307.55	148.0	7.57	2100 MHz LTE	1000	0.76%
						Total:	**3.72%**

• 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:	3.72%
Sector B:	3.72%
Sector C:	3.72%
T-Mobile Maximum MPE % (Sector A):	3.72%
Site Total:	8.26%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **8.26%** 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.

Exhibit G

Mailing Receipts/Proof of Notice

UPS Internet Shipping: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
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   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the 'Find Locations' Quick link at ups.com.
   Schedule a same day or future day Pickup to have a UPS driver pickup all of your Internet Shipping packages.
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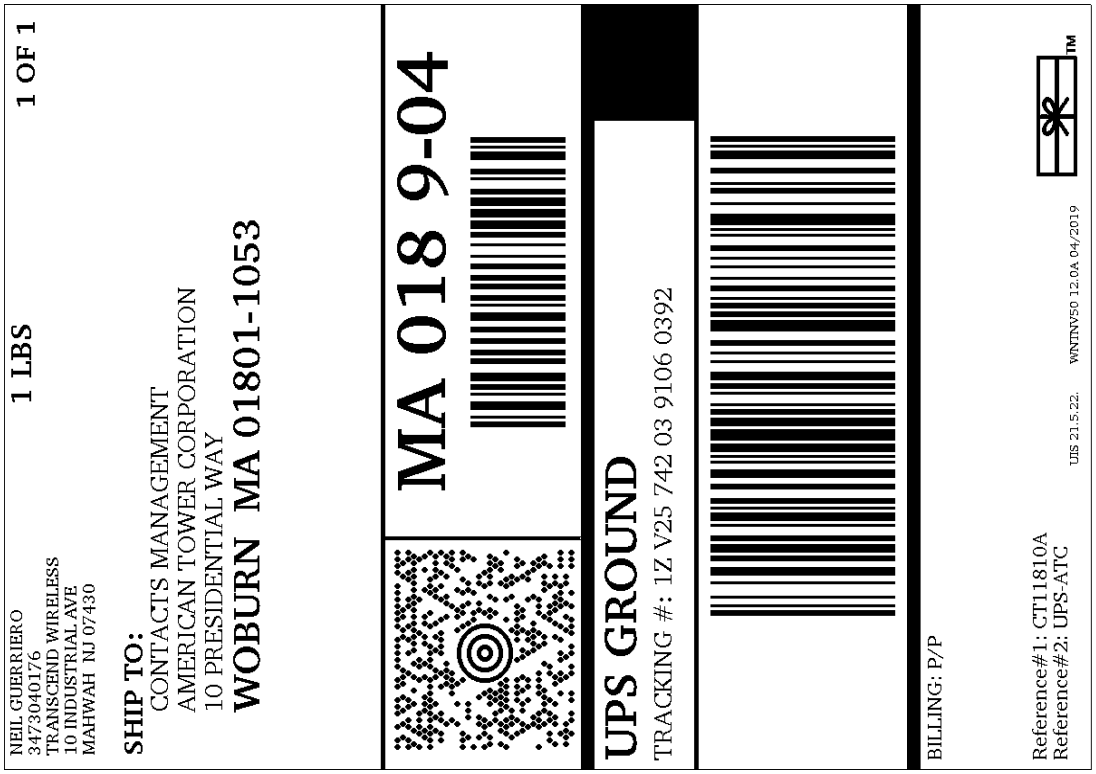


UPS Internet Shipping: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

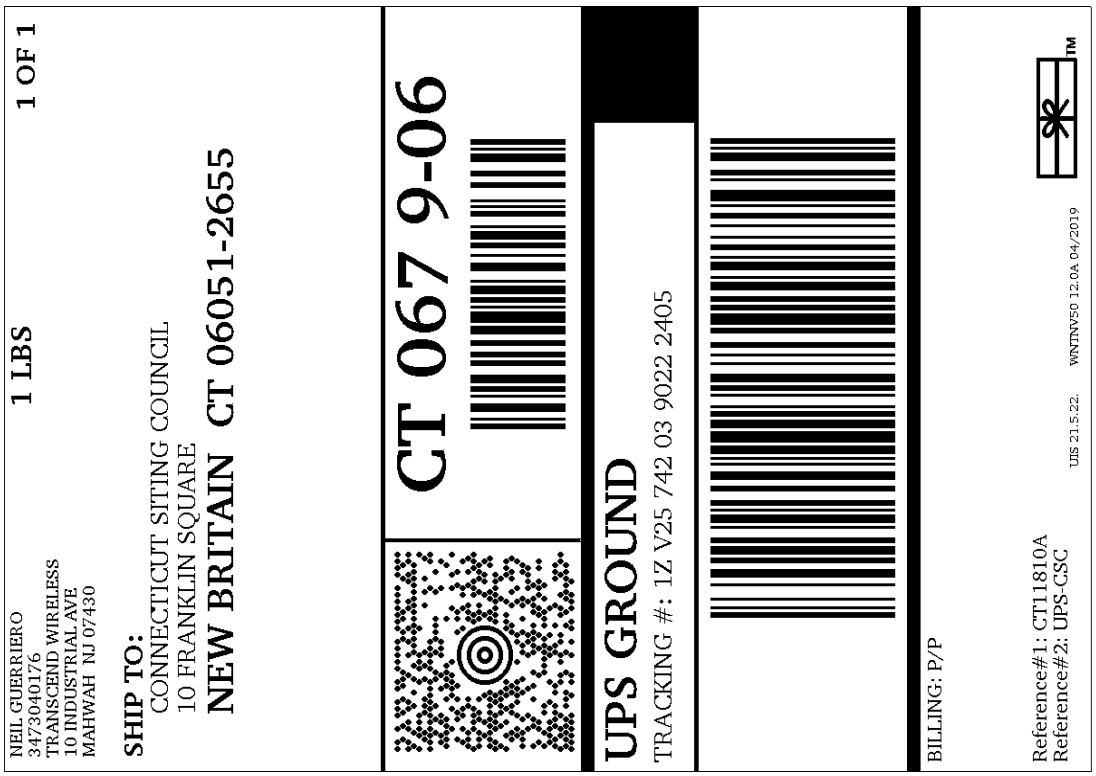
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the 'Find Locations' Quick link at ups.com.
   Schedule a same day or future day Pickup to have a UPS driver pickup all of your Internet Shipping packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
THE UPS STORE
115 FRANKLIN TPKE
MAHWAH ,NJ 07430

UPS Access Point™
THE UPS STORE
120 E MAIN ST
RAMSEY ,NJ 07446

UPS Access Point™
POSTNET NY137
74 LAFAYETTE AVE
SUFFERN ,NY 10901

FOLD HERE



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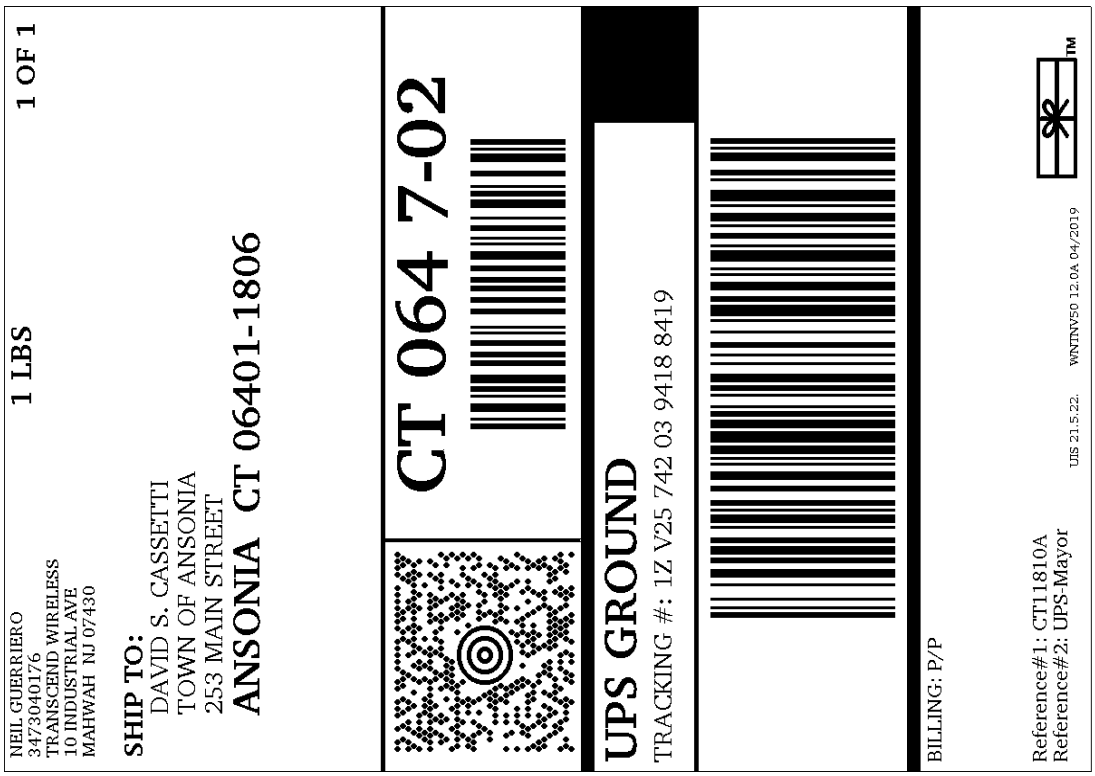

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