

Derek Maheux Program Manager  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379  
Mobile: (508)649-3407  
[Dmaheux@clinellc.com](mailto:Dmaheux@clinellc.com)

September 22, 2023

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

**RE: Notice of Exempt Modification // Site: OLD SAYBROOK EAST RELO CT (ATC:  
370625)  
77 Springbrook Road, Old Saybrook, CT 06475  
N 41.31385617 // W -72.36411623**

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 173-ft level on the existing 175ft Tower, located at 77 Springbrook Road, Old Saybrook, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of two (2) interference mitigation filters on Verizon Wireless existing antenna platform and mounting assembly.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Bethany's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated September 13, 2023, by A.T Engineering Services, LLC, a structural analysis dated September 6, 2023, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated August 3, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated September 10, 2023, by Tower Engineering Professionals.

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 new 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, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

For the foregoing reasons, Verizon Wireless 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,

*Derek Maheux*

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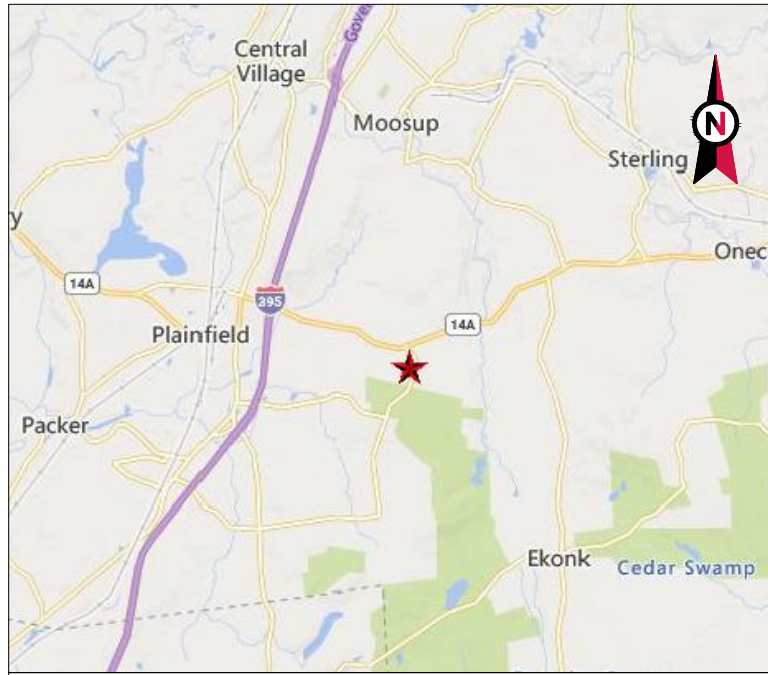
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Attachments: Exhibit 1 – Construction Drawings  
Exhibit 2 – Property Card and GIS  
Exhibit 3 – Structural Analysis  
Exhibit 4 – Mount Analysis  
Exhibit 5 – RF Emissions Analysis Report Evaluation  
Exhibit 6 – Available Original Tower Approval Records  
Exhibit 7 – Notice Deliver Confirmations

cc: Carl P. Forutna, Jr – First Selectman – Chief Elected Official  
Christina M. Costa – Town Planner - as P&Z official  
American Tower Corporation - as tower owner  
Crossroads Communications of Old – as ground owner

# EXHIBIT 1





VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: PLAINFIELD CT 6  
 ATC SITE NUMBER: 302498  
 VERIZON SITE NAME: PLAINFIELD CT  
 VERIZON SITE NUMBER: 5000244881  
 VERIZON FUZE PID: 17123908  
 SITE ADDRESS: 45 SPAULDING ROAD  
 PLAINFIELD, CT 06374-1824



LOCATION MAP

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

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	09/05/23

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 PLAINFIELD, CT 06374-1824



**VERIZON AMENDMENT DRAWINGS**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC) 2. 2022 CONNECTICUT STATE BUILDING CODE 3. 2021 INTERNATIONAL BUILDING CODE (IBC)  <u>DESIGN CRITERIA FROM TOWER STRUCTURAL ANALYSIS:</u> BASIC WIND SPEED: 120.09 MPH BASIC WIND SPEED W/ ICE: 48.73 MPH CODE(S): ANSITIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE  EXPOSURE CATEGORY: B RISK CATEGORY: II TOPO FACTOR PROCEDURE: METHOD 1 TOPOGRAPHIC CATEGORY: 1 FEATURE: FLAT SPECTRAL RESPONSE: S <sub>s</sub> =0.19, S <sub>r</sub> =0.05 SITE CLASS: D- STIFF SOIL- DEFAULT  INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 08-31-2023.	<u>SITE ADDRESS:</u> 45 SPAULDING ROAD PLAINFIELD, CT 06374-1824 COUNTY: WINDHAM  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.67480582 LONGITUDE: -71.87911766 GROUND ELEVATION: 560' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:  INSTALL (2) SWIVEL MOUNT, AND (4) FILTER(S)  EXISTING (12) ANTENNA(S), (6) RRR(S), (3) DIPLEXER(S), (2) OVP(S), AND (6) 1-5/8" COAX, AND (2) 1 5/8" HYBRIFLEX CABLE(S) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518  <u>PROPERTY OWNER:</u> 45 SPAULDING ROAD PLAINFIELD, CT 06374	PROJECT NOTES 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001 TITLE SHEET G-002 GENERAL NOTES C-101 DETAILED SITE PLAN C-201 TOWER ELEVATION C-401 ANTENNA INFORMATION & SCHEDULE C-501 CONSTRUCTION DETAILS E-501 GROUNDING DETAILS R-601 SUPPLEMENTAL	<b>CONTRACTOR PMI REQUIREMENTS</b>  PMI ACCESSED AT: HTTPS://PMI.VZWSMART.COM SMART TOOL VENDOR PROJECT NUMBER: 10208082 VZW LOCATION CODE (PSLC): 5000244881 ***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT  MOUNT MODIFICATION REQUIRED: NO VZW APPROVED SMART KIT VENDORS: REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS			
<u>UTILITY COMPANIES</u>  POWER COMPANY: C. L. & P. PHONE: (800) 286-2000  TELEPHONE COMPANY: AT&T PHONE: (800) 288-2020	<u>PROJECT LOCATION DIRECTIONS</u>  FROM BOSTON - I 90 WEST TO I 395 SOUTH TO EXIT 88 AND TURN LEFT ON TO RT 14A EAST. FOLLOW AND THEN TURN RIGHT ONTO SPAULDING RD . SITE WILL BE UP ON THE RIGHT.						

**verizon**  
 ATC JOB NO: 14519501\_GO  
 CUSTOMER ID: PLAINFIELD CT  
 CUSTOMER #: 5000244881

**TITLE SHEET**

SHEET NUMBER: **G-001**  
 REVISION: **0**



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**GENERAL CONSTRUCTION NOTES:**

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
  - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
  - B. AC/TELCO INTERFACE BOX (PPC)
  - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
  - D. TOWERS, MONOPOLES
  - E. TOWER LIGHTING
  - F. GENERATORS & LIQUID PROPANE TANK
  - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
  - H. ANTENNAS (INSTALLED BY OTHERS)
  - I. TRANSMISSION LINE
  - J. TRANSMISSION LINE JUMPERS
  - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
  - L. TRANSMISSION LINE GROUND KITS
  - M. HANGERS
  - N. HOISTING GRIPS
  - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSII/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. 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 CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. 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.
32. 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 VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. 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.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

- B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

**SPECIAL CONSTRUCTION**

**ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
  - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
  - E. INSTALL COAXIAL/HYBRID CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
  - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

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



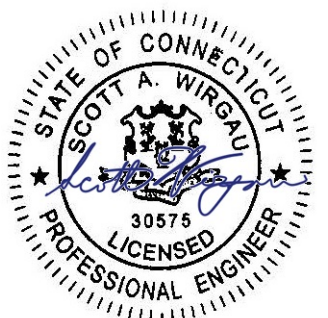
**AMERICAN TOWER®**  
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 PLAINFIELD, CT 06374-1824

SEAL:



Digitally Signed: 2023-09-06



ATC JOB NO:	14519501_GO
CUSTOMER ID:	PLAINFIELD CT
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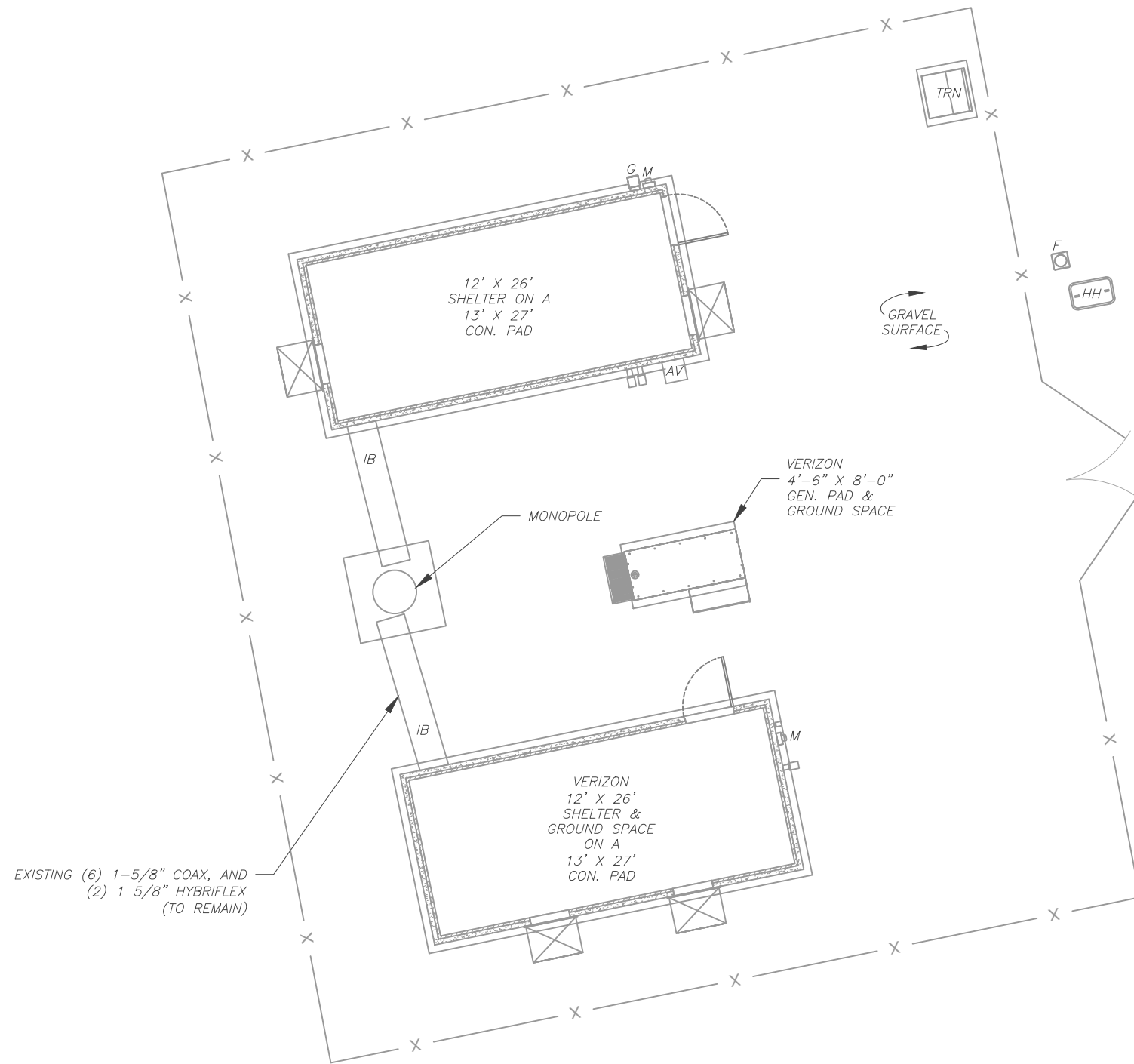
**GENERAL NOTES**

SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
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**SITE PLAN NOTES:**

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

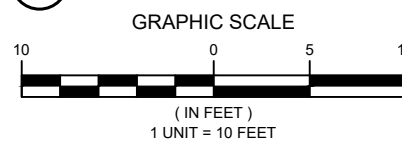


EXISTING (6) 1-5/8" COAX, AND  
(2) 1 5/8" HYBRIFLEX  
(TO REMAIN)

**LEGEND**

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

**1 DETAILED SITE PLAN**




**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICES LLC**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
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 VERIZON SITE NAME:  
PLAINFIELD CT  
 SITE ADDRESS:  
45 SPAULDING ROAD  
PLAINFIELD, CT 06374-1824



Digitally Signed: 2023-09-06



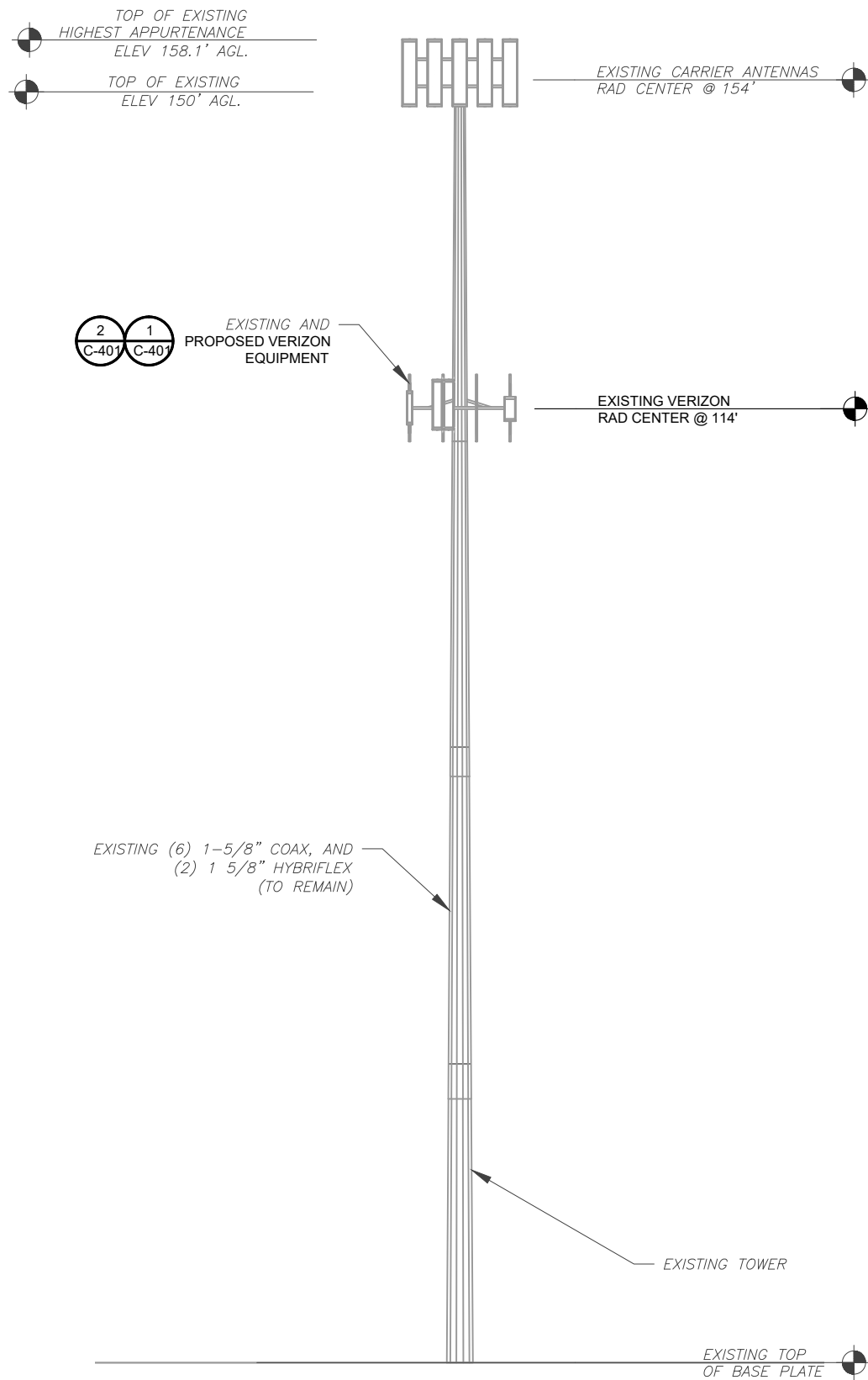
ATC JOB NO:	14519501_G0
CUSTOMER ID:	PLAINFIELD CT
CUSTOMER #:	5000244881

**DETAILED SITE PLAN**

SHEET NUMBER:	REVISION:
<b>C-101</b>	<b>0</b>

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PER MOUNT ANALYSIS COMPLETED BY COLLIERS, DATED 08/13/2023, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION  
SCALE: N.T.S.

**TOWER NOTE:**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
- TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	09/05/23

ATC SITE NUMBER:  
302498

ATC SITE NAME:  
PLAINFIELD CT 6

VERIZON SITE NAME:  
PLAINFIELD CT

SITE ADDRESS:  
45 SPAULDING ROAD  
PLAINFIELD, CT 06374-1824



Digitally Signed: 2023-09-06



ATC JOB NO:	14519501_GO
CUSTOMER ID:	PLAINFIELD CT
CUSTOMER #:	5000244881

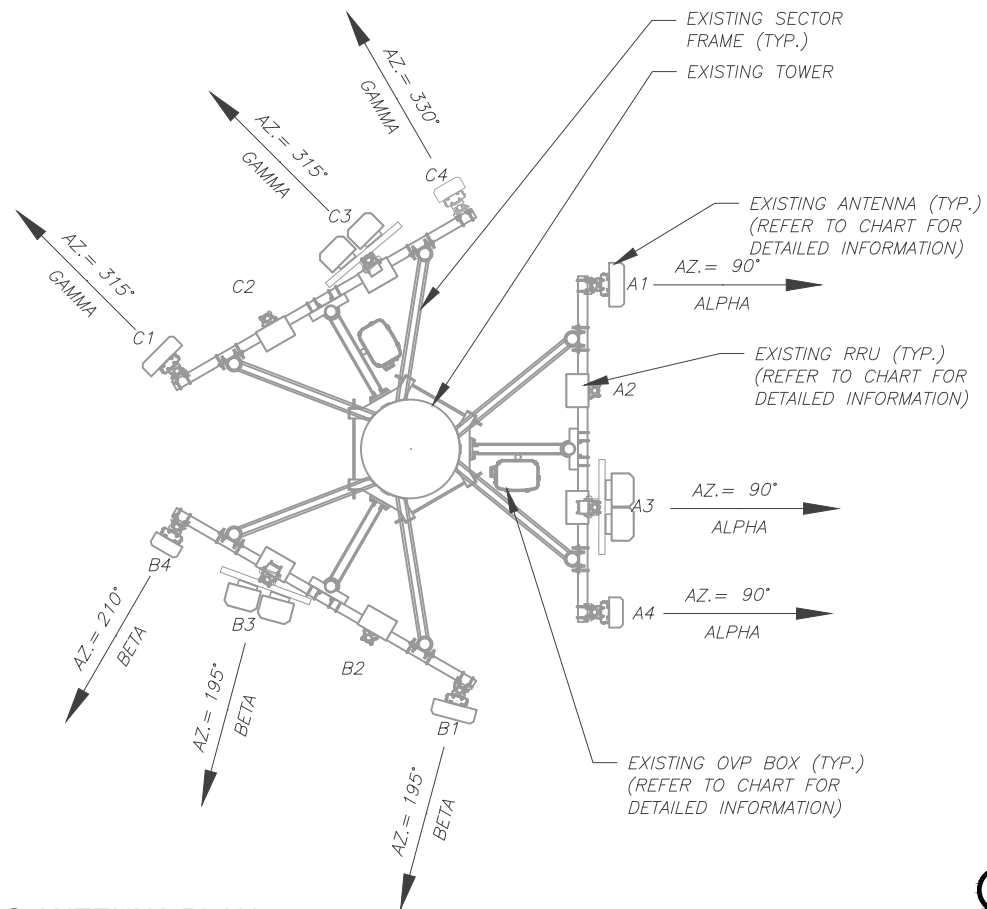
**TOWER ELEVATION**

SHEET NUMBER: <b>C-201</b>	REVISION: <b>0</b>
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1 EXISTING ANTENNA PLAN

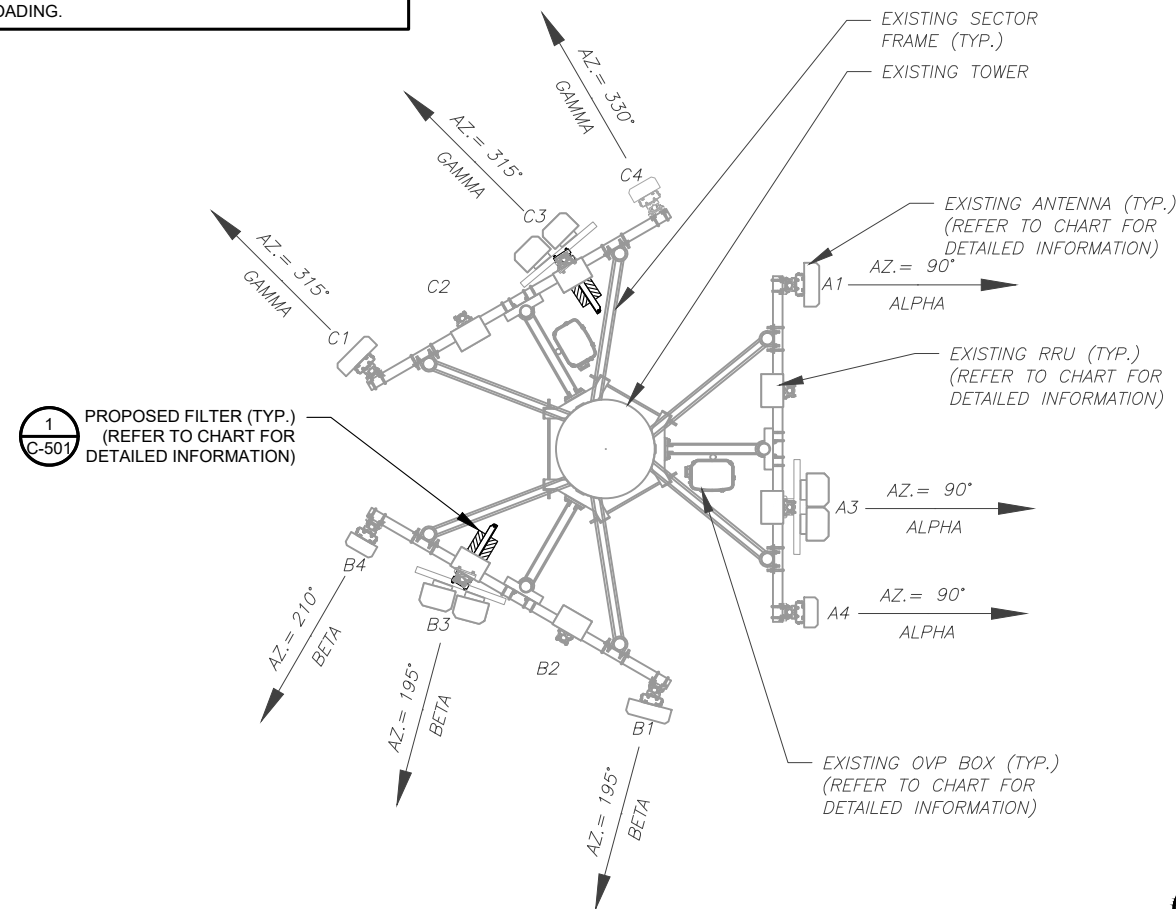
SCALE: N.T.S.



PER MOUNT ANALYSIS COMPLETED BY COLLIERS, DATED 08/13/2023, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

2 FINAL ANTENNA PLAN

SCALE: N.T.S.



EXISTING ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	
ALPHA	114'	90°	A1	MT6407-77A	L-SUB6 5G	RMN	-	-	
			A2	-	-	-	B2/B66A RRH-BR049	RMN	
			A3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	CBC1923Q-43	RMN	
			A4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	B5/B13 RRH-BR04C	RMN	
BETA	114'	195°	B1	MT6407-77A	L-SUB6 5G	RMN	-	-	
			B2	-	-	-	B2/B66A RRH-BR049	RMN	
			B3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	CBC1923Q-43	RMN	
			B4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	B5/B13 RRH-BR04C	RMN	
GAMMA	114'	315°	C1	MT6407-77A	L-SUB6 5G	RMN	-	-	
			C2	-	-	-	B2/B66A RRH-BR049	RMN	
			C3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	CBC1923Q-43	RMN	
			C4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	B5/B13 RRH-BR04C	RMN	

NOTES

1. CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.

2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE										
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY			
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS		
ALPHA	114'	90°	A1	MT6407-77A	L-SUB6 5G	RMN	-	-		
			A2	-	-	-	B2/B66A RRH-BR049	RMN		
			A3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	B5/B13 RRH-BR04C	RMN		
			A4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	-	-		
BETA	114'	195°	B1	MT6407-77A	L-SUB6 5G	RMN	-	-		
			B2	-	-	-	B2/B66A RRH-BR049	RMN		
			B3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	CBC1923Q-43	RMN		
			B4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	B5/B13 RRH-BR04C	RMN	(2) KA-6030	ADD
GAMMA	114'	315°	C1	MT6407-77A	L-SUB6 5G	RMN	-	-		
			C2	-	-	-	B2/B66A RRH-BR049	RMN		
			C3	(2) JAHH-65B-R3B	700/ 850/ 1900/ 2100 LTE	RMN	CBC1923Q-43	RMN	B5/B13 RRH-BR04C	RMN
			C4	BXA-70080-4CF-EDIN-X	850 CDMA	RMN	-	-	(2) KA-6030	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(2) BD-B1-6C-12AB-OZ	RMN	(6) 1-5/8" COAX, AND (2) 1 5/8" HYBRIFLEX	RMN
	OZ	----	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(2) BD-B1-6C-12AB-OZ	RMN	(6) 1-5/8" COAX, AND (2) 1 5/8" HYBRIFLEX	RMN
	ADD	----	ADD

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	09/05/23

ATC SITE NUMBER:  
302498

ATC SITE NAME:  
PLAINFIELD CT 6

VERIZON SITE NAME:  
PLAINFIELD CT

SITE ADDRESS:  
45 SPAULDING ROAD  
PLAINFIELD, CT 06374-1824

SEAL:

Digitally Signed: 2023-09-06

ATC JOB NO: 14519501\_G0  
CUSTOMER ID: PLAINFIELD CT  
CUSTOMER #: 5000244881

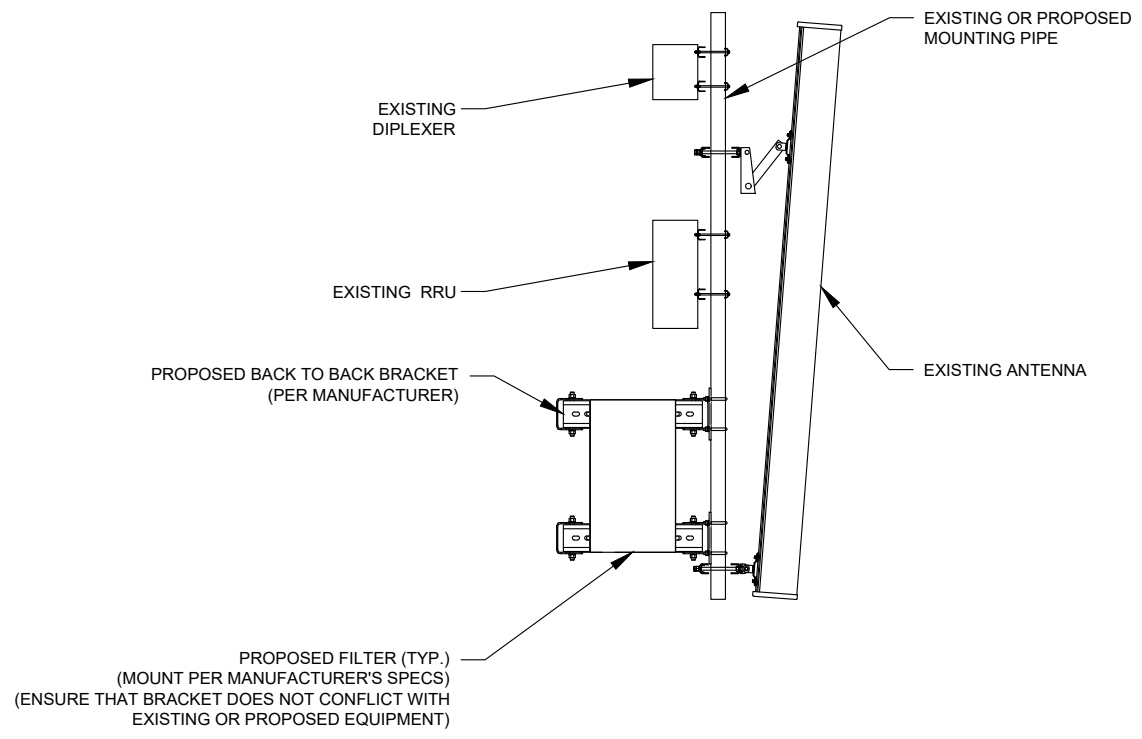
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER: C-401  
REVISION: 0

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EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



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



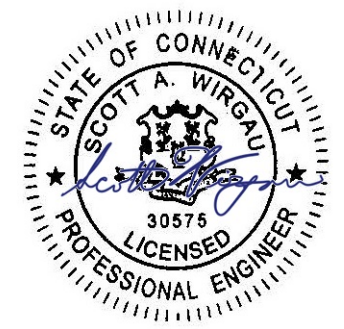
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0	FOR CONSTRUCTION	JM	09/05/23

ATC SITE NUMBER:  
**302498**  
 ATC SITE NAME:  
**PLAINFIELD CT 6**  
 VERIZON SITE NAME:  
**PLAINFIELD CT**  
 SITE ADDRESS:  
 45 SPAULDING ROAD  
 PLAINFIELD, CT 06374-1824

SEAL:



Digitally Signed: 2023-09-06

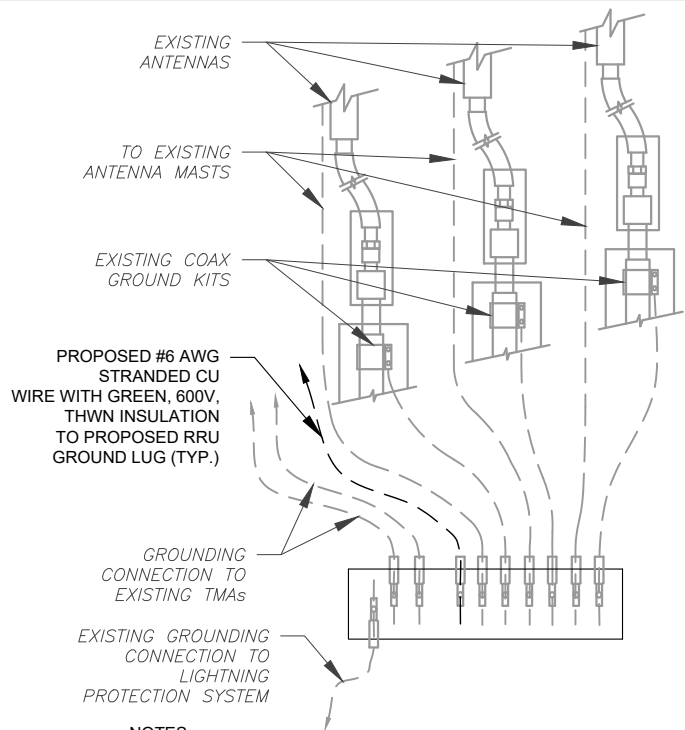


ATC JOB NO:	14519501_G0
CUSTOMER ID:	PLAINFIELD CT
CUSTOMER #:	5000244881

**CONSTRUCTION  
 DETAILS**

SHEET NUMBER:	REVISION:
<b>C-501</b>	<b>0</b>

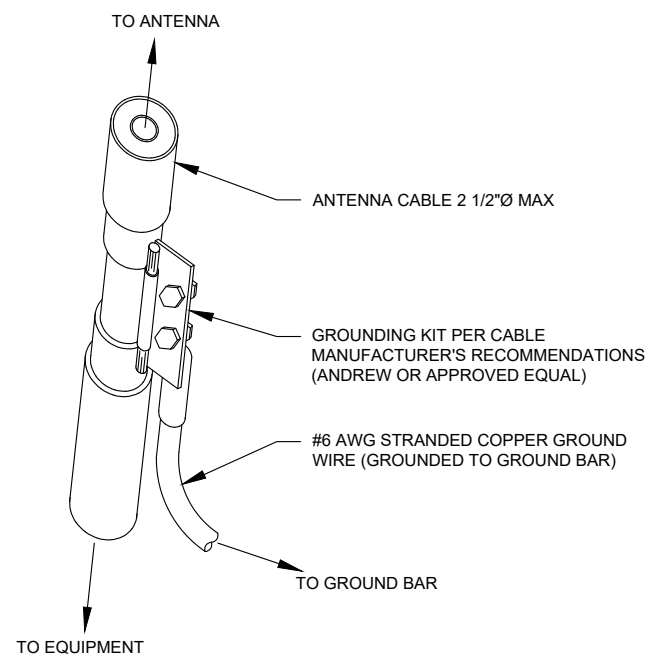
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**NOTES:**

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 VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

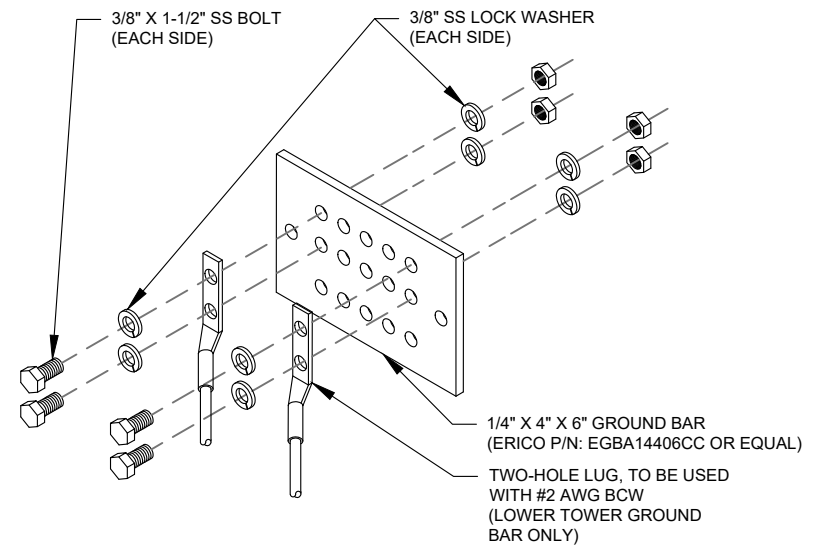
**1** TYPICAL ANTENNA GROUNDING DIAGRAM  
SCALE: N.T.S.



**GROUND KIT NOTES:**

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

**2** CABLE GROUND KIT CONNECTION DETAIL  
SCALE: N.T.S.



**GROUND BAR NOTES:**

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

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

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45 SPAULDING ROAD  
PLAINFIELD, CT 06374-1824



Digitally Signed: 2023-09-06

ATC JOB NO: 14519501\_G0  
 CUSTOMER ID: PLAINFIELD CT  
 CUSTOMER #: 5000244881

**GROUNDING DETAILS**

SHEET NUMBER: <b>E-501</b>	REVISION: <b>0</b>
-------------------------------	-----------------------

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Colliers Engineering & Design CT. P.C.  
 1055 Washington Boulevard  
 Stamford, CT 06901  
 203.324.0800  
 peter.albano@collierseng.com

Mount Structural Analysis Report  
 (3) 13.50-Ft T-Arm

August 10, 2023  
 Site ID: 5000244881-VZW / PLAINFIELD CT  
 Page | 5

## Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10208082  
 Colliers Engineering & Design CT. P.C. Project #: 23777230

August 10, 2023

### Site Information

Site ID: 5000244881-VZW / PLAINFIELD CT  
 Site Name: PLAINFIELD CT  
 Carrier Name: Verizon Wireless  
 Address: 45 Spaulding Rd.  
 Plainfield, Connecticut 06374  
 Windham County  
 Latitude: 41.674544°  
 Longitude: -71.878683°

### Structure Information

Tower Type: Monopole  
 Mount Type: 13.50-Ft T-Arm

FUZE ID # 17123908

### Analysis Results

T-Arm: 81.5% Pass\*

**\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

### \*\*\*Contractor PMI Requirements:

Included at the end of this MA report  
 Available & Submitted via portal at <https://pmi.vzwsmart.com>

For additional questions and support, please reach out to:  
[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Selene Chen



### Requirements:

The existing mounts are **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall verify modifications detailed in Construction Drawings by Maser Consulting Connecticut dated June 24, 2021 have been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

### Attachments:

1. Contractor Required Post Installation Inspection (PMI) Report Deliverables
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

0

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

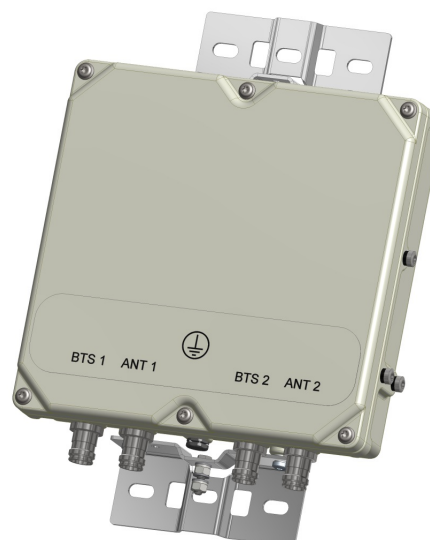
# KA-6030

## TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The KA-6030 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the KA-6030 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the KA-6030 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

### FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available



### TECHNICAL SPECIFICATIONS

BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	
<b>ELECTRICAL</b>		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
<b>DC / AISG</b>		
Passband	0 - 13MHz	
Insertion loss	0.3dB maximum	
Return loss	15dB minimum	
Input voltage range	± 33V	
DC current rating	2A continuous, 4A peak	
Compliance	3GPP TS 25.461	
<b>ENVIRONMENTAL</b>		
For further details of environmental compliance, please contact Kaelus.		
Temperature range	-20°C to +60°C   -4°F to +140°F	
Ingress protection	IP67	
Altitude	2600m   8530ft	
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.	
MTBF	>1,000,000 hours	
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE	
<b>MECHANICAL</b>		
Dimensions H x D x W	269 x 277 x 80mm   10.60 x 10.90 x 3.15in (Excluding brackets and connectors)	
Weight	8.0 kg   17.6 lbs (no bracket)	
Finish	Powder coated, light grey (RAL7035)	
Connectors	RF: 4.3-10 (F) x 4	
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.	

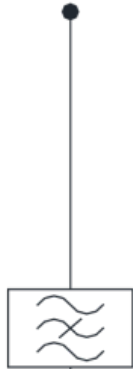


## ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
KA-6030-2032	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM

ANT1



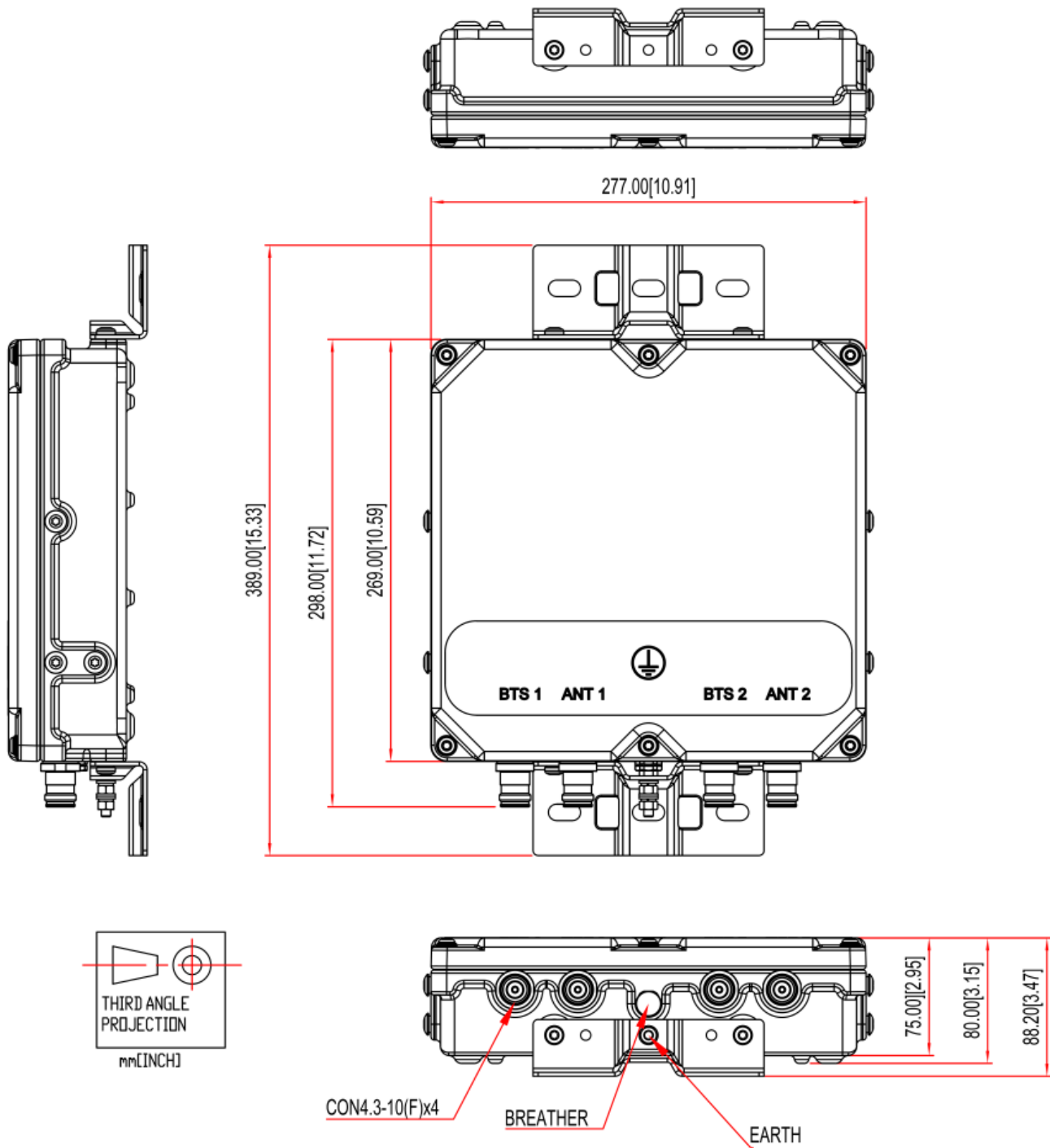
BTS1

ANT2



BTS2

MECHANICAL BLOCK DIAGRAM



# EXHIBIT 2





# 45 SPAULDING RD

**Location** 45 SPAULDING RD

**Mblu** 025/ 0036/ 027A/ /

**Acct#** 00325300

**Owner** SANCHEZ ROBERT DOMINEZ &  
NICOLE (JT)

**Assessment** \$194,680

**Appraisal** \$278,110

**PID** 3562

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$151,370	\$126,740	\$278,110

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$105,960	\$88,720	\$194,680

## Owner of Record

**Owner** SANCHEZ ROBERT DOMINEZ & NICOLE (JT)

**Sale Price** \$39,000

**Co-Owner**

**Certificate**

**Address** 308 PLAINFIELD PIKE RD  
PLAINFIELD , CT 06374

**Book & Page** 0560/0654

**Sale Date** 11/16/2020

**Instrument** 07

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
SANCHEZ ROBERT DOMINEZ & NICOLE (JT)	\$39,000		0560/0654	07	11/16/2020
ROYS SCOTT	\$10,000		0548/0710	25	01/28/2020
THEROUX BEATRICE L - C/O SPECTRASITE COM	\$0		0253/0587		09/01/1998
CREDIE MARGARET M + FLORINDA L	\$0		0161/0916		03/04/1986

## Building Information

### Building 1 : Section 1

**Year Built:** 2022

**Living Area:** 868

Replacement Cost: \$238,250

Building Percent Good: 14

Replacement Cost

Less Depreciation: \$33,360

**Building Attributes**

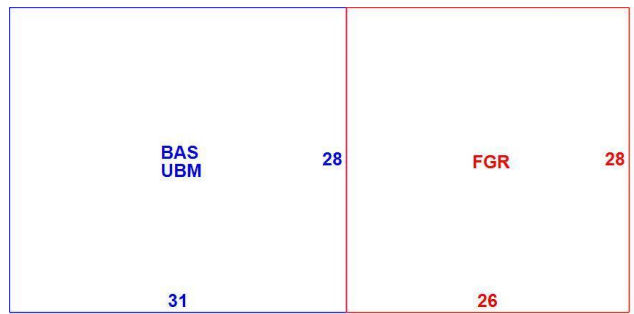
Field	Description
Style:	Ranch
Model	Residential
Grade:	C+
Stories:	1
Occupancy:	1
Exterior Wall 1:	Al/Vinyl
Exterior Wall 2:	
Roof Structure:	Gable
Roof Cover:	Asphalt/Arch
Interior Wall 1:	Drywall
Interior Wall 2:	
Interior Flr 1:	Hardwood
Interior Flr 2:	
Heat Fuel:	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	2 Bedrooms
Full Baths:	2
Half Baths:	
Extra Fixtures:	1
Total Rooms:	4
Bath Style:	Average
Kitchen Style:	Average
Fireplaces:	
Xtra Openings:	
Gas Fireplaces:	
Woodstove/Pellet	
Bsmt Gar:	
Num Park	
Fireplaces	
Color	
Basement:	
Fndtn Cndtn	
Basement	

**Building Photo**



(<https://images.vgsi.com/photos/PlainfieldCTPhotos///0008/45%20Spauldir>)

**Building Layout**



(ParcelSketch.ashx?pid=3562&bid=3562)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	868	868
FGR	Garage	728	0
UBM	Unfinished Basement	868	0
		2,464	868

**Extra Features**

Extra Features	<u>Legend</u>
No Data for Extra Features	

**Land**

Land Use	Land Line Valuation
<b>Use Code</b> 1010	<b>Size (Acres)</b> 2.79
<b>Description</b> Single Family	<b>Frontage</b>
<b>Zone</b> RA60	<b>Depth</b>
<b>Neighborhood</b> 1000	<b>Assessed Value</b> \$88,720
<b>Alt Land Appr</b> No	<b>Appraised Value</b> \$126,740
<b>Category</b>	

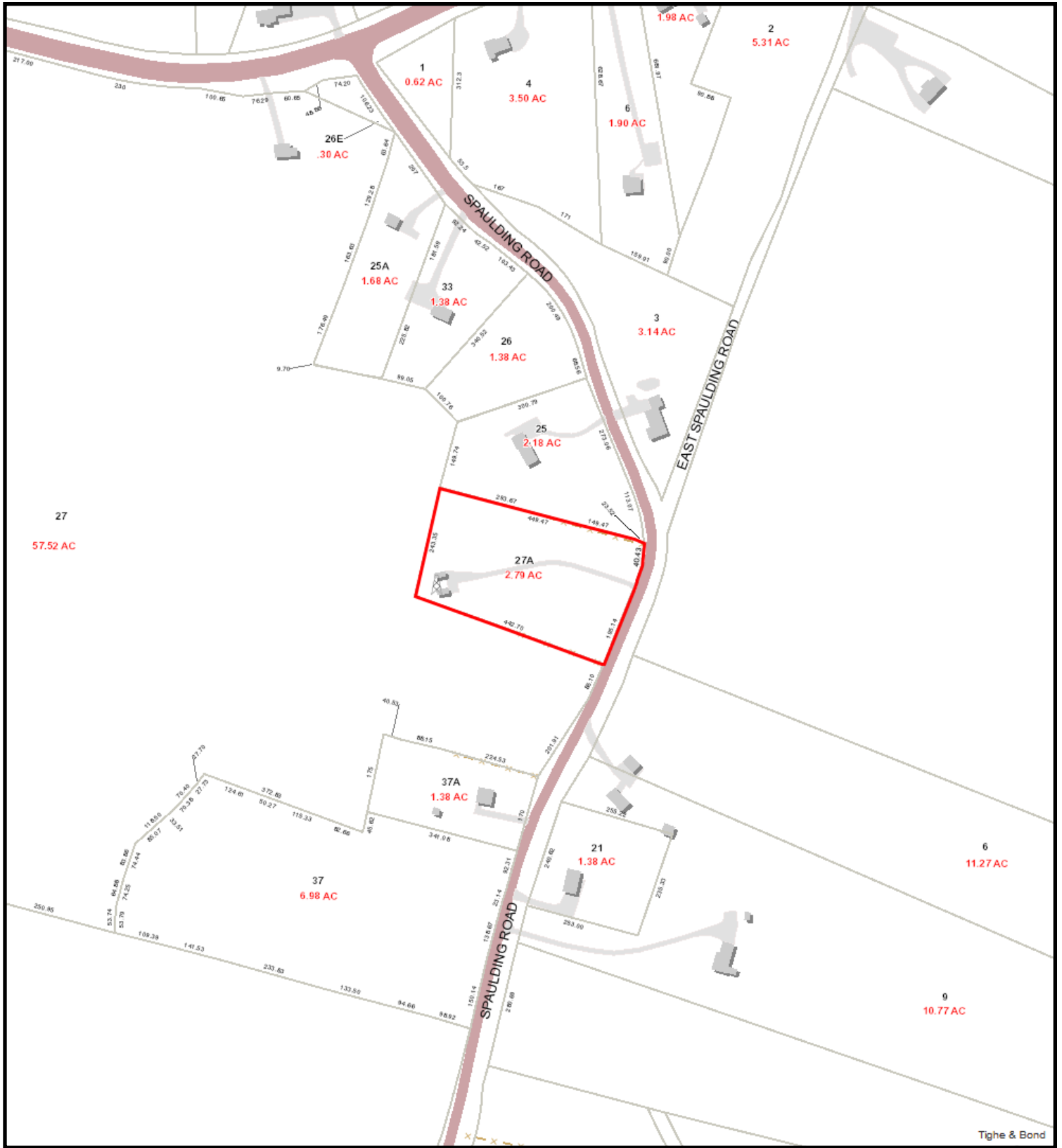
**Outbuildings**

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
RS5	Cell Tower Building			312.00 UNITS	\$23,400	1
TT4	Cell Tower			150.00 HEIGHT	\$67,500	1
FN4	Fence 8' Chain			256.00 L.F.	\$3,710	1
RS5	Cell Tower Building			312.00 UNITS	\$23,400	1

**Valuation History**

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$151,370	\$126,740	\$278,110
2021	\$128,360	\$40,090	\$168,450

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$105,960	\$88,720	\$194,680
2021	\$89,860	\$28,060	\$117,920



Tighe & Bond

9/20/2023 1:45:37 PM

Scale: 1"=300'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.



# EXHIBIT 3





**AMERICAN TOWER®**  
CORPORATION

## Structural Analysis Report

**Structure** : 150 ft Monopole  
**ATC Asset Name** : Plainfield CT 6  
**ATC Asset Number** : 302498  
**Engineering Number** : 14519501\_C3\_04  
**Proposed Carrier** : VERIZON WIRELESS  
**Carrier Site Name** : PLAINFIELD CT  
**Carrier Site Number** : 5000244881  
**Site Location** : 45 Spaulding Road  
Plainfield, CT 06374-1824  
41.6748° N, 71.8791° W  
**County** : Windham  
**Date** : August 31, 2023  
**Max Usage** : 93%  
**Analysis Result** : Pass

Created By:

Daniel K. Sheek  
Structural Engineer I



**COA: PEC.0001553**

## Introduction

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

## Supporting Documents

<b>Tower:</b>	ITT Meyer 'Type B' Specification, ATT Spec AT-8935, dated April 13, 1984
<b>Foundation:</b>	SNET Job #3C234, dated April 24, 1990
<b>Geotechnical:</b>	GEOservices Project #21-07254, dated April 20, 2009
<b>Modification:</b>	ATC Project #48651233, dated May 8, 2012 Mount Mods by Infinigy Job #1009-Z003-B, dated July 15, 2020 ATC Job #13700697_C6_08, dated June 1, 2022 ATC Job #13211930_C6_09, dated February 8, 2021
<b>Inspection:</b>	Infinigy Project #1009-Z003-B, dated July 1, 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.

<b>Basic Wind Speed:</b>	120.9 mph (3-second gust)
<b>Basic Wind Speed w/ Ice:</b>	48.73 mph (3-second gust) w/ 0.85" radial ice concurrent
<b>Code(s):</b>	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Feature:</b>	Flat
<b>Spectral Response:</b>	$S_s = 0.19$ , $S_i = 0.05$
<b>Site Class:</b>	D - Stiff Soil - Default

## Conclusion

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

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

### Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	66.3%	1.2D + 1.0W	Pass
Reinforcement	74.4%	45.48 ft to 100.08 ft	Pass
Upper Termination	66.3%	0 ft to 60.48 ft	Pass
Intermediate Connector	92.9%	99.02 ft to 132.44 ft	Pass
Lower Termination	51.1%	99.02 ft to 132.44 ft	Pass
Upper Flange Plate @ 110.0 ft	48.8%	Dywidag	Pass
Base Plate @ 0.0 ft	74.1%	Rods	Pass
Mat & Pier	93.3%	Moment [Soil]	Pass

### Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,819.9	53.4	26.1

*\*Reactions shown reflect the results from the Load Case with maximum Moment*

Structure base reactions were analyzed using available geotechnical and foundation information.



**VERIZON WIRELESS Final Loading**

Elev (ft)	Qty	Equipment	Lines
114.0	2	RFS DB-B1-6C-12AB-0Z	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex
	3	Amphenol Antel BXA-70080-4CF-EDIN-X	
	3	Commscope CBC1923Q-43	
	3	T-Arm	
	3	Samsung B2/B66A RRH-BR049	
	3	Samsung B5/B13 RRH-BR04C	
	3	Samsung MT6407-77A	
	4	Kaelus KA-6030	
	6	Commscope JAHH-65B-R3B	

**Other Existing/Reserved Loading**

Elev (ft)	Qty	Equipment	Lines	Carrier
154.0	2	Raycap DC6-48-60-18-8F (23.5" Height)	(3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (3) 2" conduit	AT&T MOBILITY
	3	CCI DMP65R-BU8D		
	3	CCI HPA65R-BU8A		
	3	CCI OPA65R-BU8D		
	3	Ericsson RRUS 4415 B30		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Powerwave Allgon 7770.00		
	6	Powerwave Allgon LGP21401		
	6	Powerwave Allgon LGP21901		
149.0	1	Platform w/ HRs w/ SitePro1 HRK	-	-
142.0	1	Platform with Handrails	(3) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Commscope VV-65A-R1		
	3	Ericsson AIR 6419 B41		
	3	Ericsson Radio 4460 B25+B66		
	3	Ericsson Radio 4480 B71+B85A		
	3	RFS APXVAALL24 43-U-NA20		

*(If table breaks across pages, please see previous page for data in merged cells)*

## **Standard Conditions**

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

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

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC 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 Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

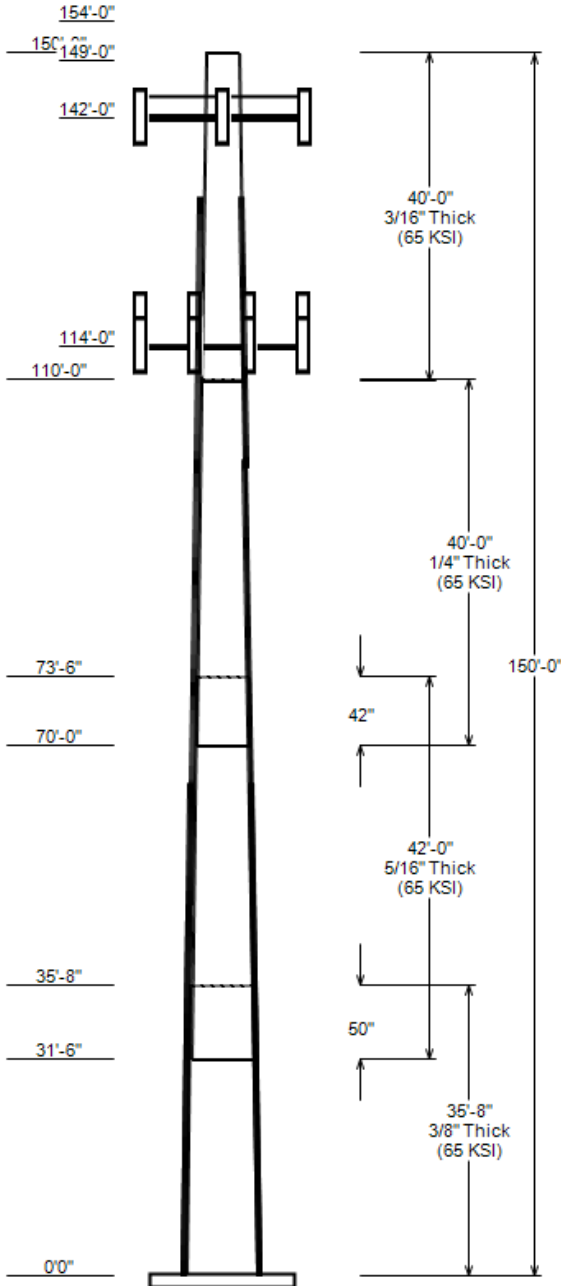
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

**ANALYSIS PARAMETERS**

Nominal Wind: 121 mph	Ice Wind: 49 mph w/ 0.85" ice	Service Wind: 60 mph
Risk Category: II	Exposure: B	S <sub>s</sub> : 0.187 S <sub>i</sub> : 0.054
Topo Category: 1	Topo Factor: Method 1	Topo Feature:
Structure Height: 150 ft	Base Elevation: 0.00 ft	Structure Type: Taper
Base Diameter: 37.38 in	Base Rotation: 0°	Taper: 0.1570 (in/ft)

**POLE SECTION PROPERTIES**

Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
		Top	Bottom					
1	35.667	31.79	37.38	0.375		0.000	12 Sides	65
2	42.000	26.49	33.07	0.312	Slip Joint	50.000	12 Sides	65
3	40.000	21.27	27.54	0.250	Slip Joint	42.000	12 Sides	65
4	40.000	15.00	21.27	0.188	Butt Joint	0.000	12 Sides	65



**DISCRETE APPURTENANCE**

Elev (ft)	Description
154.0	(6) Powerwave Allgon LGP21901
154.0	(6) Powerwave Allgon LGP21401
154.0	(2) Raycap DC6-48-60-18-8F (23.5"
154.0	(3) Ericsson RRUS 8843 B2, B66A
154.0	(3) Ericsson RRUS 4478 B14
154.0	(3) Ericsson RRUS 4415 B30
154.0	(3) Ericsson RRUS 4449 B5, B12
154.0	(3) Powerwave Allgon 7770.00
154.0	(3) CCI HPA65R-BU8A
154.0	(3) CCI DMP65R-BU8D
154.0	(3) CCI OPA65R-BU8D
149.0	(1) Platform w/ HRs w/ SitePro1 HR
142.0	(3) Ericsson Radio 4460 B25+B66
142.0	(3) Ericsson Radio 4480 B71+B85A
142.0	(3) Ericsson AIR 6419 B41
142.0	(3) Commscope VV-65A-R1
142.0	(3) RFS APXVAALL24 43-U-NA20
142.0	(1) Generic Flat Platform with Han
114.0	(3) Commscope CBC1923Q-43
114.0	(4) Kaelus KA-6030
114.0	(3) Samsung B5/B13 RRH-BR04C
114.0	(3) Samsung B2/B66A RRH-BR049
114.0	(2) RFS DB-B1-6C-12AB-0Z
114.0	(3) Amphenol Antel BXA-70080-4CF-E
114.0	(3) Samsung MT6407-77A
114.0	(6) Commscope JAHH-65B-R3B
114.0	(3) Generic Round T-Arm

**LINEAR APPURTENANCE**

Elev To (ft)	Description
154.0	(6) 0.78" (19.7mm) 8 AWG 6
154.0	(3) 0.39" (10mm) Fiber Trunk
154.0	(3) 2" conduit
154.0	(6) 1 5/8" Coax
142.0	(3) 1.99" (50.7mm) Hybrid
137.0	(1) W8 Brackets for #20
137.0	(1) W8 Brackets for #20
137.0	(1) W8 Brackets for #20
137.0	(1) #20
137.0	(1) #20
137.0	(1) #20
114.0	(6) 1 5/8" Coax
114.0	(2) 1 5/8" Hybriflex
106.0	(1) #20 w/ Angle Brackets
106.0	(1) #20 w/ Angle Brackets
106.0	(1) #20 w/ Angle Brackets
106.0	(1) #20 w/ Angle Brackets
106.0	(1) #20 w/ Angle Brackets
67.5	(1) #20 w/ Angle Brackets
67.5	(1) #20 w/ Angle Brackets
67.5	(1) #20 w/ Angle Brackets

**GLOBAL BASE REACTIONS**

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2819.94	53.38	26.13
0.9D + 1.0W	2773.05	40.02	26.10
1.2D + 1.0Di + 1.0Wi	679.40	66.51	5.69
1.2D + 1.0Ev + 1.0Eh	172.53	53.06	1.34
0.9D - 1.0Ev + 1.0Eh	168.96	36.81	1.34
1.0D + 1.0W	615.63	44.52	5.75

ANALYSIS PARAMETERS

<b>Location:</b>	Windham County,CT	<b>Height:</b>	150 ft
<b>Type and Shape:</b>	Taper, 12 Sides	<b>Base Diameter:</b>	37.38 in
<b>Manufacturer:</b>	ITT Meyer	<b>Top Diameter:</b>	15.00 in
<b>K<sub>d</sub> (non-service):</b>	0.95	<b>Taper:</b>	0.1570 in/ft
<b>K<sub>e</sub>:</b>	0.98	<b>Rotation:</b>	0.000°

ICE & WIND PARAMETERS

<b>Risk Category:</b>	II	<b>Design Wind Speed:</b>	121 mph
<b>Exposure Category:</b>	B	<b>Design Wind Speed w/ Ice:</b>	49 mph
<b>Topo Factor Procedure:</b>	Method 1	<b>Design Ice Thickness:</b>	0.85 in
<b>Topographic Category:</b>	1	<b>Service Wind Speed:</b>	60 mph
<b>Crest Height:</b>	0 ft	<b>HMSL:</b>	560.00 ft

SEISMIC PARAMETERS

<b>Analysis Method:</b>	Equivalent Lateral Force Method		
<b>Site Class:</b>	D - Stiff Soil	<b>Period Based on Rayleigh Method (sec):</b>	2.80
<b>T<sub>L</sub> (sec):</b>	6	<b>P:</b>	1
<b>S<sub>s</sub>:</b>	0.187	<b>S<sub>1</sub>:</b>	0.054
<b>F<sub>a</sub>:</b>	1.600	<b>F<sub>v</sub>:</b>	2.400
<b>S<sub>ds</sub>:</b>	0.199	<b>S<sub>d1</sub>:</b>	0.086
		<b>C<sub>s</sub>:</b>	0.030
		<b>C<sub>s</sub> Max:</b>	0.030
		<b>C<sub>s</sub> Min:</b>	0.030

LOAD CASES

1.2D + 1.0W	120.9 mph Wind with No Ice
0.9D + 1.0W	120.9 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)
1-12	35.67	0.3750	65		0.00	5,014	37.38	0.003	44.68	7,810.1	24.03	99.68	31.79	35.67	37.93	4,778.8	20.04	84.78	0.1567
2-12	42.00	0.3125	65	Slip	50.00	4,237	33.07	31.500	32.96	4,514.1	25.67	105.82	26.49	73.50	26.34	2,303.2	20.03	84.76	0.1567
3-12	40.00	0.2500	65	Slip	42.00	2,646	27.54	70.000	21.96	2,087.3	26.83	110.14	21.27	110.00	16.92	953.9	20.11	85.07	0.1567
4-12	40.00	0.1875	65	Butt	0.00	1,475	21.27	110.000	12.73	721.8	27.71	113.42	15.00	150.00	8.94	250.4	18.76	79.99	0.1567
<b>Total Shaft Weight</b>						<b>13,372</b>													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
154.00	Powerwave Allgon LGP21901	6	0.75	1.000	5.50	0.200	0.50	9.86	0.381	0.50
154.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	91.29	2.351	0.50
154.00	Ericsson RRUS 4415 B30	3	0.75	0.000	46.00	1.842	0.50	73.83	2.351	0.50
154.00	CCI OPA65R-BU8D	3	0.75	0.000	76.50	18.089	0.63	272.23	20.185	0.63
154.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	107.58	2.498	0.50
154.00	Powerwave Allgon 7770.00	3	0.75	1.000	35.00	5.508	0.65	99.53	6.715	0.65
154.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	106.79	2.119	0.50
154.00	Raycap DC6-48-60-18-8F (23.5"	2	0.75	1.000	20.00	1.260	1.00	49.89	1.634	1.00
154.00	Powerwave Allgon LGP21401	6	0.75	1.000	14.10	1.104	0.50	28.26	1.509	0.50
154.00	CCI DMP65R-BU8D	3	0.75	0.000	95.70	17.871	0.63	288.63	19.963	0.63
154.00	CCI HPA65R-BU8A	3	0.75	0.000	54.00	11.230	0.71	185.86	13.060	0.71
149.00	Platform w/ HRs w/ SitePro1 HR	1	1.00	0.000	2500.00	44.500	1.00	3486.96	62.068	1.00
142.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	3502.51	54.235	1.00
142.00	Commscope VV-65A-R1	3	0.75	0.000	23.80	5.928	0.63	90.06	7.124	0.63
142.00	Ericsson AIR 6419 B41	3	0.75	0.000	68.50	5.600	0.63	136.69	6.494	0.63
142.00	Ericsson Radio 4480 B71+B85A	3	0.75	0.000	84.00	2.852	0.67	126.63	3.482	0.67
142.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.67	158.88	3.159	0.67
142.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	342.61	22.336	0.63
114.00	Commscope JAHH-65B-R3B	6	0.80	0.000	60.60	9.113	0.69	172.17	10.643	0.69
114.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	137.81	5.547	0.61
114.00	Amphenol Antel BXA-70080-4CF-E	3	0.80	3.000	12.00	3.570	0.72	59.92	4.589	0.72
114.00	RFS DB-B1-6C-12AB-0Z	2	0.80	0.000	21.40	2.512	0.67	65.42	3.086	0.67
114.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	456.57	14.247	0.67
114.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	101.85	2.373	0.50
114.00	Kaelus KA-6030	4	0.80	0.000	17.60	0.963	0.50	30.60	1.323	0.50
114.00	Commscope CBC1923Q-43	3	0.80	0.000	7.30	0.318	0.50	13.40	0.540	0.50
114.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	119.58	2.373	0.50
<b>Totals</b>	<b>Row Count: 27</b>	<b>85</b>			<b>10,093.30</b>			<b>17,513.45</b>		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/Row	Distance Between Rows (in)	Distance Between Cols (in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
5.00	154.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	154.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
5.00	154.00	3	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	154.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	142.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE
92.00	137.00	1	#20	4	0	N	1	0	0	180	8.28	Y	
92.00	137.00	1	#20	4	0	N	1	0	0	330	8.28	Y	
92.00	137.00	1	#20	4	0	N	1	0	0	90	8.28	Y	
92.00	137.00	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	330	2.9	Y	
92.00	137.00	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	180	2.9	Y	
92.00	137.00	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	90	2.9	Y	
5.00	114.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	114.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	106.00	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	315	0	Y	
0.00	106.00	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	135	0	Y	

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	106.00	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	45	0	Y	
0.00	106.00	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	225	0	Y	
0.00	67.50	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	345	0	Y	
0.00	67.50	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	255	0	Y	
0.00	67.50	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	165	0	Y	
0.00	67.50	1	#20 w/ Angle Brackets	4	4.68	N	1	0	0	75	0	Y	

ADDITIONAL STEEL

Intermediate Connectors

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Bracket Type	Spacing (in)	Length (in)	Connectors	Continuation?
0.00	45.48	4	SOL #20 All Thread Bar	80	2.19	6" Angle Bracket	30.00	3.31	5/8" A36 U-Bolt	N
0.00	60.48	4	SOL #20 All Thread Bar	80	2.19	6" Angle Bracket	30.00	3.31	5/8" A36 U-Bolt	N
45.48	100.08	4	SOL #20 All Thread Bar	80	2.19	6" Angle Bracket	30.00	3.31	5/8" A36 U-Bolt	Y
99.02	132.44	3	SOL #20 All Thread Bar	80	8.19	6" T Bracket	38.00	3.31	5/8" A36 U-Bolt	N

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)	Additional Reinforcing		
													Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	Weight (lb)
0.00			0.3750	37.380	44.684	7,810.10	24.03	99.68	78.5	403.6	0.0	0.0	39.280	9,775.80	0.0
5.00			0.3750	36.596	43.737	7,324.40	23.47	97.59	79.1	386.6	0.0	752.2	39.280	9,429.80	668.0
10.00			0.3750	35.813	42.791	6,859.30	22.91	95.50	79.7	370.0	0.0	736.1	39.280	9,090.00	668.0
15.00			0.3750	35.029	41.845	6,414.30	22.35	93.41	80.3	353.7	0.0	720.0	39.280	8,756.50	668.0
20.00			0.3750	34.246	40.899	5,989.00	21.79	91.32	80.9	337.8	0.0	703.9	39.280	8,429.20	668.0
25.00			0.3750	33.462	39.953	5,582.90	21.23	89.23	81.6	322.3	0.0	687.8	39.280	8,108.20	668.0
30.00			0.3750	32.679	39.007	5,195.60	20.67	87.14	81.9	307.1	0.0	671.7	39.280	7,793.40	668.0
31.50	Bot - Section 2		0.3750	32.444	38.723	5,083.00	20.50	86.52	81.9	302.7	0.0	198.4	39.280	7,700.10	200.4
35.00			0.3750	31.895	38.061	4,826.60	20.11	85.05	81.9	292.3	0.0	846.5	39.280	7,730.40	467.6
35.67	Top - Section 1		0.3125	32.416	32.304	4,249.50	25.12	103.73	77.3	253.3	0.0	159.6	39.280	7,689.10	89.1
40.00			0.3125	31.737	31.621	3,985.50	24.53	101.56	78	242.6	0.0	471.3	39.280	7,423.20	578.9
45.00			0.3125	30.953	30.832	3,694.80	23.86	99.05	78.7	230.6	0.0	531.3	39.280	7,122.10	668.0
45.48	Reinf. Top Reinf Bottom		0.3125	30.878	30.757	3,667.60	23.80	98.81	78.8	229.5	0.0	50.3	39.280	7,093.50	64.1
50.00			0.3125	30.170	30.044	3,418.50	23.19	96.54	79.4	218.9	0.0	467.6	39.280	6,827.30	603.9
55.00			0.3125	29.386	29.255	3,156.40	22.52	94.04	80.2	207.5	0.0	504.5	39.280	6,538.80	668.0
60.00			0.3125	28.603	28.467	2,908.00	21.85	91.53	80.9	196.4	0.0	491.0	39.280	6,256.50	668.0
60.48	Reinf. Top		0.3125	28.527	28.391	2,884.90	21.78	91.29	81	195.4	0.0	46.4	39.280	6,229.70	64.1
65.00			0.3125	27.819	27.679	2,673.00	21.17	89.02	81.6	185.6	0.0	431.2	19.640	3,016.90	301.9
70.00	Bot - Section 3		0.3125	27.036	26.890	2,451.00	20.50	86.51	81.9	175.1	0.0	464.2	19.640	2,879.00	334.0
73.50	Top - Section 2		0.2500	26.987	21.523	1,963.90	26.25	107.95	76.1	140.6	0.0	575.9	19.640	2,870.60	233.8
75.00			0.2500	26.752	21.334	1,912.60	25.99	107.01	76.4	138.1	0.0	109.4	19.640	2,830.00	100.2
80.00			0.2500	25.968	20.703	1,747.90	25.15	103.87	77.3	130.0	0.0	357.6	19.640	2,696.50	334.0
85.00			0.2500	25.185	20.073	1,593.00	24.31	100.74	78.2	122.2	0.0	346.9	19.640	2,566.30	334.0
90.00			0.2500	24.401	19.442	1,447.50	23.47	97.61	79.1	114.6	0.0	336.1	19.640	2,439.40	334.0
95.00			0.2500	23.618	18.811	1,311.10	22.63	94.47	80	107.2	0.0	325.4	19.640	2,315.60	334.0
99.02	Reinf Bottom		0.2500	22.988	18.304	1,207.90	21.96	91.95	80.8	101.5	0.0	253.9	19.640	2,218.50	268.5
100.00			0.2500	22.834	18.180	1,183.60	21.79	91.34	80.9	100.1	0.0	60.8	34.370	5,404.80	114.6
100.08	Reinf. Top		0.2500	22.822	18.170	1,181.60	21.78	91.29	81	100.0	0.0	4.9	34.370	5,401.00	9.4
105.00			0.2500	22.051	17.550	1,064.60	20.95	88.20	81.9	93.3	0.0	299.0	14.730	3,090.50	246.5
110.00	Top - Section 3		0.2500	21.267	16.919	953.90	20.11	85.07	81.9	86.7	0.0	293.2	14.730	2,973.50	250.5
110.00	Bot - Section 4		0.1875	21.267	12.727	721.80	27.71	113.43	74.5	65.6	0.0		14.730	2,973.50	
114.00			0.1875	20.640	12.348	659.30	26.82	110.08	75.5	61.7	0.0	170.7	14.730	2,881.50	200.4
115.00			0.1875	20.484	12.254	644.30	26.59	109.25	75.7	60.8	0.0	41.9	14.730	2,858.80	50.1
120.00			0.1875	19.700	11.781	572.50	25.47	105.07	76.9	56.1	0.0	204.5	14.730	2,746.30	250.5
125.00			0.1875	18.917	11.308	506.30	24.35	100.89	78.2	51.7	0.0	196.4	14.730	2,636.10	250.5
130.00			0.1875	18.133	10.835	445.40	23.23	96.71	79.4	47.4	0.0	188.4	14.730	2,528.20	250.5
132.44	Reinf. Top		0.1875	17.751	10.604	417.50	22.69	94.67	80	45.4	0.0	89.0	14.730	2,476.40	122.2
135.00			0.1875	17.350	10.362	389.50	22.11	92.53	80.6	43.4	0.0	91.3			

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)	Additional Reinforcing		
													Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	Weight (lb)
140.00			0.1875	16.566	9.889	338.60	20.99	88.35	81.8	39.5	0.0	172.3			
142.00			0.1875	16.253	9.699	319.50	20.55	86.68	81.9	38.0	0.0	66.7			
145.00			0.1875	15.783	9.416	292.30	19.87	84.17	81.9	35.8	0.0	97.6			
149.00			0.1875	15.156	9.037	258.40	18.98	80.83	81.9	32.9	0.0	125.6			
150.00			0.1875	14.999	8.942	250.40	18.76	79.99	81.9	32.3	0.0	30.6			
<b>Totals:</b>												<b>13,372.1</b>	<b>12,399.7</b>		

CALCULATED FORCES

Load Case: 1.2D + 1.0W  
 Gust Response Factor: 1.10  
 Dead load Factor: 1.20  
 Wind Load Factor: 1.00  
 120.9 mph Wind with No Ice  
 26 Iterations

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.38	-26.13	0.00	-2,819.9	0.00	2,819.94	3,157.17	784.20	2,737.77	2,376.61	0	0	0.537
5.00	-51.21	-25.72	0.00	-2,689.3	0.00	2,689.30	3,114.35	767.59	2,623.10	2,294.24	0.12	-0.22	0.522
10.00	-49.00	-25.30	0.00	-2,560.7	0.00	2,560.69	3,070.50	750.99	2,510.88	2,212.51	0.47	-0.45	0.507
15.00	-46.83	-24.86	0.00	-2,434.2	0.00	2,434.18	3,025.61	734.38	2,401.12	2,131.45	1.06	-0.67	0.492
20.00	-44.67	-24.41	0.00	-2,309.9	0.00	2,309.86	2,979.67	717.78	2,293.81	2,051.12	1.88	-0.89	0.477
25.00	-42.54	-23.95	0.00	-2,187.8	0.00	2,187.81	2,932.70	701.17	2,188.95	1,971.58	2.93	-1.11	0.461
30.00	-40.46	-23.62	0.00	-2,068.1	0.00	2,068.09	2,875.20	684.57	2,086.54	1,886.63	4.22	-1.33	0.447
31.50	-39.82	-23.43	0.00	-2,032.7	0.00	2,032.66	2,854.27	679.59	2,056.30	1,859.12	4.65	-1.4	0.443
35.00	-37.92	-23.18	0.00	-1,950.7	0.00	1,950.66	2,805.46	667.97	1,986.59	1,795.71	5.73	-1.56	0.425
35.67	-37.53	-22.99	0.00	-1,935.2	0.00	1,935.21	2,248.06	566.93	1,717.05	1,468.68	5.95	-1.59	0.478
40.00	-35.84	-22.54	0.00	-1,835.6	0.00	1,835.58	2,218.58	554.94	1,645.20	1,418.47	7.48	-1.77	0.461
45.00	-33.94	-22.19	0.00	-1,722.9	0.00	1,722.87	2,183.59	541.11	1,564.21	1,360.95	9.46	-1.99	0.441
45.48	-33.73	-22.00	0.00	-1,712.2	0.00	1,712.22	2,180.18	539.78	1,556.54	1,355.45	9.66	-2.02	0.439
50.00	-32.01	-21.50	0.00	-1,612.8	0.00	1,612.80	2,147.57	527.27	1,485.26	1,303.92	11.66	-2.21	0.421
55.00	-30.13	-20.94	0.00	-1,505.3	0.00	1,505.33	2,110.50	513.43	1,408.36	1,247.44	14.1	-2.43	0.401
60.00	-28.29	-20.54	0.00	-1,400.6	0.00	1,400.62	2,072.40	499.59	1,333.50	1,191.56	16.76	-2.64	0.380
60.48	-28.09	-20.33	0.00	-1,390.8	0.00	1,390.76	2,068.68	498.27	1,326.42	1,186.23	17.03	-2.66	0.378
60.48	-28.09	-20.33	0.00	-1,390.8	0.00	1,390.76	2,068.68	498.27	1,326.42	1,186.23	17.03	-2.66	0.571
65.00	-26.77	-19.83	0.00	-1,298.8	0.00	1,298.85	2,033.25	485.76	1,260.68	1,136.32	19.64	-2.85	0.546
70.00	-25.39	-19.39	0.00	-1,199.7	0.00	1,199.70	1,982.07	471.92	1,189.91	1,075.81	22.8	-3.17	0.522
73.50	-24.16	-19.19	0.00	-1,131.8	0.00	1,131.84	1,473.95	377.73	952.77	802.29	25.2	-3.38	0.584
75.00	-23.77	-19.01	0.00	-1,103.0	0.00	1,103.05	1,466.27	374.41	936.10	791.03	26.28	-3.48	0.573
80.00	-22.55	-18.68	0.00	-1,008.0	0.00	1,008.00	1,439.98	363.34	881.58	753.67	30.09	-3.79	0.537
85.00	-21.36	-18.35	0.00	-914.6	0.00	914.58	1,412.66	352.27	828.70	716.63	34.22	-4.1	0.499
90.00	-20.18	-18.00	0.00	-822.8	0.00	822.84	1,384.30	341.21	777.46	679.95	38.68	-4.4	0.461
95.00	-18.97	-17.65	0.00	-732.8	0.00	732.84	1,354.89	330.14	727.85	643.70	43.43	-4.68	0.421
99.02	-17.98	-17.41	0.00	-661.9	0.00	661.88	1,330.50	321.24	689.15	614.89	47.47	-4.9	0.389
100.00	-17.68	-17.35	0.00	-644.8	0.00	644.82	1,324.45	319.07	679.87	607.91	48.48	-4.96	0.198
100.08	-17.66	-17.19	0.00	-643.4	0.00	643.44	1,323.95	318.89	679.12	607.34	48.56	-4.96	0.198
100.08	-17.66	-17.19	0.00	-643.4	0.00	643.44	1,323.95	318.89	679.12	607.34	48.56	-4.96	0.295
105.00	-16.58	-16.77	0.00	-558.8	0.00	558.85	1,292.97	308.00	633.54	572.65	53.74	-5.09	0.260
110.00	-15.58	-16.38	0.00	-475.0	0.00	475.01	1,247.09	296.93	588.83	532.25	59.15	-5.26	0.226
110.00	-15.58	-16.38	0.00	-475.0	0.00	475.01	853.22	223.36	444.16	366.32	59.15	-5.26	0.267
114.00	-12.53	-13.27	0.00	-408.8	0.00	408.75	838.71	216.72	418.15	349.29	63.61	-5.39	0.228
115.00	-12.37	-13.08	0.00	-395.5	0.00	395.47	834.98	215.06	411.77	345.05	64.75	-5.42	0.221
120.00	-11.56	-12.67	0.00	-330.1	0.00	330.09	815.69	206.75	380.60	323.94	70.5	-5.57	0.186
125.00	-10.78	-12.27	0.00	-266.7	0.00	266.73	795.37	198.45	350.66	303.07	76.4	-5.7	0.152
130.00	-10.00	-11.94	0.00	-205.4	0.00	205.40	774.00	190.15	321.94	282.47	82.42	-5.81	0.118
132.44	-9.63	-11.74	0.00	-176.3	0.00	176.28	763.20	186.10	308.37	272.53	85.39	-5.85	0.103
132.44	-9.63	-11.74	0.00	-176.3	0.00	176.28	763.20	186.10	308.37	272.53	85.39	-5.85	0.663
135.00	-9.36	-11.52	0.00	-146.2	0.00	146.23	751.60	181.85	294.45	262.19	88.54	-5.89	0.574
140.00	-8.93	-11.30	0.00	-88.7	0.00	88.66	728.15	173.54	268.19	242.29	94.94	-6.32	0.382
142.00	-4.79	-6.68	0.00	-66.1	0.00	66.06	714.94	170.22	258.03	233.29	97.61	-6.45	0.291
145.00	-4.61	-6.48	0.00	-46.0	0.00	46.01	694.02	165.24	243.15	219.76	101.71	-6.6	0.218
149.00	-1.62	-4.10	0.00	-20.1	0.00	20.08	666.12	158.60	224.01	202.35	107.29	-6.73	0.102
150.00	0.00	-3.88	0.00	-16.0	0.00	15.98	659.15	156.94	219.34	198.11	108.7	-6.75	0.081

CALCULATED FORCES



CALCULATED FORCES

Load Case: 0.9D + 1.0W 120.9 mph Wind with No Ice (Reduced DL) 26 Iterations  
 Gust Response Factor: 1.10  
 Dead load Factor: 0.90  
 Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.02	-26.10	0.00	-2,773.0	0.00	2,773.05	3,157.17	784.20	2,737.77	2,376.61	0	0	0.526
5.00	-38.37	-25.64	0.00	-2,642.6	0.00	2,642.55	3,114.35	767.59	2,623.10	2,294.24	0.12	-0.22	0.511
10.00	-36.70	-25.18	0.00	-2,514.3	0.00	2,514.34	3,070.50	750.99	2,510.88	2,212.51	0.47	-0.44	0.496
15.00	-35.04	-24.69	0.00	-2,388.5	0.00	2,388.46	3,025.61	734.38	2,401.12	2,131.45	1.04	-0.66	0.481
20.00	-33.41	-24.20	0.00	-2,265.0	0.00	2,264.99	2,979.67	717.78	2,293.81	2,051.12	1.85	-0.87	0.466
25.00	-31.79	-23.70	0.00	-2,144.0	0.00	2,143.98	2,932.70	701.17	2,188.95	1,971.58	2.88	-1.09	0.450
30.00	-30.22	-23.36	0.00	-2,025.5	0.00	2,025.47	2,875.20	684.57	2,086.54	1,886.63	4.14	-1.31	0.436
31.50	-29.73	-23.15	0.00	-1,990.4	0.00	1,990.43	2,854.27	679.59	2,056.30	1,859.12	4.56	-1.37	0.432
35.00	-28.30	-22.90	0.00	-1,909.4	0.00	1,909.40	2,805.46	667.97	1,986.59	1,795.71	5.63	-1.53	0.415
35.67	-28.00	-22.70	0.00	-1,894.1	0.00	1,894.13	2,248.06	566.93	1,717.05	1,468.68	5.84	-1.56	0.466
40.00	-26.72	-22.22	0.00	-1,795.8	0.00	1,795.78	2,218.58	554.94	1,645.20	1,418.47	7.34	-1.74	0.449
45.00	-25.29	-21.87	0.00	-1,684.7	0.00	1,684.66	2,183.59	541.11	1,564.21	1,360.95	9.28	-1.95	0.430
45.48	-25.12	-21.66	0.00	-1,674.2	0.00	1,674.17	2,180.18	539.78	1,556.54	1,355.45	9.48	-1.98	0.428
50.00	-23.82	-21.14	0.00	-1,576.3	0.00	1,576.27	2,147.57	527.27	1,485.26	1,303.92	11.44	-2.17	0.410
55.00	-22.40	-20.58	0.00	-1,470.6	0.00	1,470.56	2,110.50	513.43	1,408.36	1,247.44	13.83	-2.38	0.390
60.00	-21.02	-20.18	0.00	-1,367.7	0.00	1,367.67	2,072.40	499.59	1,333.50	1,191.56	16.44	-2.59	0.370
60.48	-20.86	-19.96	0.00	-1,358.0	0.00	1,357.99	2,068.68	498.27	1,326.42	1,186.23	16.7	-2.61	0.368
60.48	-20.86	-19.96	0.00	-1,358.0	0.00	1,357.99	2,068.68	498.27	1,326.42	1,186.23	16.7	-2.61	0.555
65.00	-19.86	-19.44	0.00	-1,267.8	0.00	1,267.75	2,033.25	485.76	1,260.68	1,136.32	19.26	-2.8	0.531
70.00	-18.81	-18.99	0.00	-1,170.5	0.00	1,170.53	1,982.07	471.92	1,189.91	1,075.81	22.35	-3.1	0.507
73.50	-17.88	-18.79	0.00	-1,104.1	0.00	1,104.08	1,473.95	377.73	952.77	802.29	24.7	-3.31	0.568
75.00	-17.57	-18.59	0.00	-1,075.9	0.00	1,075.89	1,466.27	374.41	936.10	791.03	25.76	-3.4	0.557
80.00	-16.65	-18.25	0.00	-982.9	0.00	982.94	1,439.98	363.34	881.58	753.67	29.49	-3.71	0.521
85.00	-15.74	-17.90	0.00	-891.7	0.00	891.69	1,412.66	352.27	828.70	716.63	33.53	-4.01	0.485
90.00	-14.84	-17.55	0.00	-802.2	0.00	802.18	1,384.30	341.21	777.46	679.95	37.89	-4.3	0.447
95.00	-13.92	-17.20	0.00	-714.4	0.00	714.44	1,354.89	330.14	727.85	643.70	42.54	-4.58	0.409
99.02	-13.18	-16.97	0.00	-645.3	0.00	645.31	1,330.50	321.24	689.15	614.89	46.48	-4.79	0.378
100.00	-12.96	-16.91	0.00	-628.7	0.00	628.68	1,324.45	319.07	679.87	607.91	47.47	-4.84	0.192
100.08	-12.93	-16.75	0.00	-627.3	0.00	627.33	1,323.95	318.89	679.12	607.34	47.55	-4.85	0.192
100.08	-12.93	-16.75	0.00	-627.3	0.00	627.33	1,323.95	318.89	679.12	607.34	47.55	-4.85	0.286
105.00	-12.12	-16.34	0.00	-544.9	0.00	544.92	1,292.97	308.00	633.54	572.65	52.61	-4.97	0.252
110.00	-11.38	-15.96	0.00	-463.2	0.00	463.24	1,247.09	296.93	588.83	532.25	57.91	-5.14	0.219
110.00	-11.38	-15.96	0.00	-463.2	0.00	463.24	853.22	223.36	444.16	366.32	57.91	-5.14	0.258
114.00	-9.14	-12.93	0.00	-398.7	0.00	398.66	838.71	216.72	418.15	349.29	62.27	-5.27	0.221
115.00	-9.02	-12.73	0.00	-385.7	0.00	385.72	834.98	215.06	411.77	345.05	63.37	-5.3	0.214
120.00	-8.42	-12.34	0.00	-322.1	0.00	322.06	815.69	206.75	380.60	323.94	69	-5.44	0.180
125.00	-7.83	-11.95	0.00	-260.4	0.00	260.37	795.37	198.45	350.66	303.07	74.76	-5.57	0.146
130.00	-7.25	-11.64	0.00	-200.6	0.00	200.63	774.00	190.15	321.94	282.47	80.65	-5.67	0.114
132.44	-6.97	-11.45	0.00	-172.2	0.00	172.23	763.20	186.10	308.37	272.53	83.56	-5.72	0.099
132.44	-6.97	-11.45	0.00	-172.2	0.00	172.23	763.20	186.10	308.37	272.53	83.56	-5.72	0.645
135.00	-6.77	-11.22	0.00	-142.9	0.00	142.93	751.60	181.85	294.45	262.19	86.63	-5.76	0.558
140.00	-6.44	-11.00	0.00	-86.8	0.00	86.85	728.15	173.54	268.19	242.29	92.89	-6.18	0.371
142.00	-3.44	-6.52	0.00	-64.8	0.00	64.85	714.94	170.22	258.03	233.29	95.5	-6.3	0.284
145.00	-3.30	-6.32	0.00	-45.3	0.00	45.30	694.02	165.24	243.15	219.76	99.5	-6.45	0.212
149.00	-1.11	-4.04	0.00	-20.0	0.00	20.01	666.12	158.60	224.01	202.35	104.96	-6.58	0.101
150.00	0.00	-3.88	0.00	-16.0	0.00	15.98	659.15	156.94	219.34	198.11	106.33	-6.6	0.081

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi													48.73 mph Wind with 0.85" Radial Ice		25 Iterations	
Gust Response Factor:		1.10		Ice Dead Load Factor			1.00			Ice Importance Factor			1.00			
Dead Load Factor:		1.20														
Wind Load Factor:		1.00														
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio			
0.00	-66.51	-5.69	0.00	-679.4	0.00	679.40	3,157.17	784.20	2,737.77	2,376.61	0	0	0.138			
5.00	-64.21	-5.67	0.00	-650.9	0.00	650.93	3,114.35	767.59	2,623.10	2,294.24	0.03	-0.05	0.135			
10.00	-61.84	-5.64	0.00	-622.6	0.00	622.59	3,070.50	750.99	2,510.88	2,212.51	0.11	-0.11	0.132			
15.00	-59.49	-5.61	0.00	-594.4	0.00	594.40	3,025.61	734.38	2,401.12	2,131.45	0.26	-0.16	0.128			
20.00	-57.15	-5.57	0.00	-566.4	0.00	566.37	2,979.67	717.78	2,293.81	2,051.12	0.46	-0.22	0.125			
25.00	-54.83	-5.54	0.00	-538.5	0.00	538.50	2,932.70	701.17	2,188.95	1,971.58	0.71	-0.27	0.121			
30.00	-52.52	-5.51	0.00	-510.8	0.00	510.82	2,875.20	684.57	2,086.54	1,886.63	1.02	-0.33	0.117			
31.50	-51.83	-5.49	0.00	-502.6	0.00	502.56	2,854.27	679.59	2,056.30	1,859.12	1.13	-0.34	0.117			
35.00	-49.77	-5.46	0.00	-483.4	0.00	483.36	2,805.46	667.97	1,986.59	1,795.71	1.4	-0.38	0.112			
35.67	-49.37	-5.44	0.00	-479.7	0.00	479.72	2,248.06	566.93	1,717.05	1,468.68	1.45	-0.39	0.126			
40.00	-47.50	-5.39	0.00	-456.2	0.00	456.15	2,218.58	554.94	1,645.20	1,418.47	1.82	-0.43	0.122			
45.00	-45.37	-5.35	0.00	-429.2	0.00	429.19	2,183.59	541.11	1,564.21	1,360.95	2.31	-0.49	0.117			
45.48	-45.16	-5.33	0.00	-426.6	0.00	426.62	2,180.18	539.78	1,556.54	1,355.45	2.36	-0.49	0.116			
50.00	-43.24	-5.27	0.00	-402.5	0.00	402.52	2,147.57	527.27	1,485.26	1,303.92	2.85	-0.54	0.112			
55.00	-41.14	-5.20	0.00	-376.2	0.00	376.16	2,110.50	513.43	1,408.36	1,247.44	3.45	-0.6	0.107			
60.00	-39.06	-5.15	0.00	-350.1	0.00	350.14	2,072.40	499.59	1,333.50	1,191.56	4.1	-0.65	0.101			
60.48	-38.85	-5.13	0.00	-347.7	0.00	347.67	2,068.68	498.27	1,326.42	1,186.23	4.17	-0.66	0.101			
60.48	-38.85	-5.13	0.00	-347.7	0.00	347.67	2,068.68	498.27	1,326.42	1,186.23	4.17	-0.66	0.151			
65.00	-37.35	-5.07	0.00	-324.5	0.00	324.50	2,033.25	485.76	1,260.68	1,136.32	4.82	-0.7	0.145			
70.00	-35.78	-5.02	0.00	-299.2	0.00	299.16	1,982.07	471.92	1,189.91	1,075.81	5.6	-0.78	0.138			
73.50	-34.44	-4.98	0.00	-281.6	0.00	281.61	1,473.95	377.73	952.77	802.29	6.19	-0.84	0.155			
75.00	-34.03	-4.95	0.00	-274.1	0.00	274.14	1,466.27	374.41	936.10	791.03	6.46	-0.86	0.152			
80.00	-32.67	-4.89	0.00	-249.4	0.00	249.40	1,439.98	363.34	881.58	753.67	7.4	-0.94	0.142			
85.00	-31.33	-4.82	0.00	-225.0	0.00	224.96	1,412.66	352.27	828.70	716.63	8.42	-1.01	0.132			
90.00	-30.01	-4.76	0.00	-200.8	0.00	200.85	1,384.30	341.21	777.46	679.95	9.52	-1.09	0.121			
95.00	-28.55	-4.64	0.00	-177.1	0.00	177.07	1,354.89	330.14	727.85	643.70	10.7	-1.16	0.110			
99.02	-27.31	-4.51	0.00	-158.4	0.00	158.43	1,330.50	321.24	689.15	614.89	11.7	-1.21	0.101			
100.00	-26.95	-4.47	0.00	-154.0	0.00	154.01	1,324.45	319.07	679.87	607.91	11.95	-1.22	0.053			
100.08	-26.92	-4.44	0.00	-153.6	0.00	153.65	1,323.95	318.89	679.12	607.34	11.97	-1.22	0.053			
100.08	-26.92	-4.44	0.00	-153.6	0.00	153.65	1,323.95	318.89	679.12	607.34	11.97	-1.22	0.080			
105.00	-25.51	-4.24	0.00	-131.8	0.00	131.81	1,292.97	308.00	633.54	572.65	13.24	-1.25	0.070			
110.00	-24.23	-4.07	0.00	-110.6	0.00	110.60	1,247.09	296.93	588.83	532.25	14.58	-1.29	0.061			
110.00	-24.23	-4.07	0.00	-110.6	0.00	110.60	853.22	223.36	444.16	366.32	14.58	-1.29	0.072			
114.00	-19.40	-3.31	0.00	-94.2	0.00	94.19	838.71	216.72	418.15	349.29	15.67	-1.32	0.061			
115.00	-19.18	-3.25	0.00	-90.9	0.00	90.87	834.98	215.06	411.77	345.05	15.95	-1.33	0.059			
120.00	-18.10	-3.07	0.00	-74.6	0.00	74.62	815.69	206.75	380.60	323.94	17.36	-1.36	0.050			
125.00	-17.02	-2.89	0.00	-59.3	0.00	59.26	795.37	198.45	350.66	303.07	18.81	-1.39	0.041			
130.00	-15.96	-2.72	0.00	-44.8	0.00	44.81	774.00	190.15	321.94	282.47	20.28	-1.42	0.033			
132.44	-15.45	-2.63	0.00	-38.2	0.00	38.18	763.20	186.10	308.37	272.53	21.01	-1.43	0.029			
132.44	-15.45	-2.63	0.00	-38.2	0.00	38.18	763.20	186.10	308.37	272.53	21.01	-1.43	0.161			
135.00	-15.07	-2.53	0.00	-31.5	0.00	31.46	751.60	181.85	294.45	262.19	21.78	-1.44	0.140			
140.00	-14.49	-2.44	0.00	-18.8	0.00	18.80	728.15	173.54	268.19	242.29	23.33	-1.53	0.098			
142.00	-8.12	-1.46	0.00	-13.9	0.00	13.92	714.94	170.22	258.03	233.29	23.98	-1.55	0.071			
145.00	-7.87	-1.41	0.00	-9.5	0.00	9.53	694.02	165.24	243.15	219.76	24.97	-1.59	0.055			
149.00	-3.82	-0.84	0.00	-3.9	0.00	3.88	666.12	158.60	224.01	202.35	26.31	-1.61	0.025			
150.00	0.00	-0.74	0.00	-3.0	0.00	3.03	659.15	156.94	219.34	198.11	26.65	-1.62	0.015			

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

24 Iterations

Gust Response Factor: 1.10  
 Dead load Factor: 1.00  
 Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.52	-5.75	0.00	-615.6	0.00	615.63	3,157.17	784.20	2,737.77	2,376.61	0	0	0.123
5.00	-42.79	-5.66	0.00	-586.9	0.00	586.86	3,114.35	767.59	2,623.10	2,294.24	0.03	-0.05	0.119
10.00	-41.03	-5.56	0.00	-558.6	0.00	558.57	3,070.50	750.99	2,510.88	2,212.51	0.1	-0.1	0.116
15.00	-39.29	-5.46	0.00	-530.8	0.00	530.78	3,025.61	734.38	2,401.12	2,131.45	0.23	-0.15	0.112
20.00	-37.56	-5.35	0.00	-503.5	0.00	503.50	2,979.67	717.78	2,293.81	2,051.12	0.41	-0.19	0.108
25.00	-35.85	-5.24	0.00	-476.8	0.00	476.76	2,932.70	701.17	2,188.95	1,971.58	0.64	-0.24	0.105
30.00	-34.15	-5.17	0.00	-450.5	0.00	450.54	2,875.20	684.57	2,086.54	1,886.63	0.92	-0.29	0.101
31.50	-33.65	-5.12	0.00	-442.8	0.00	442.79	2,854.27	679.59	2,056.30	1,859.12	1.01	-0.31	0.101
35.00	-32.09	-5.07	0.00	-424.8	0.00	424.85	2,805.46	667.97	1,986.59	1,795.71	1.25	-0.34	0.097
35.67	-31.79	-5.03	0.00	-421.5	0.00	421.47	2,248.06	566.93	1,717.05	1,468.68	1.3	-0.35	0.109
40.00	-30.43	-4.92	0.00	-399.7	0.00	399.70	2,218.58	554.94	1,645.20	1,418.47	1.63	-0.39	0.105
45.00	-28.88	-4.85	0.00	-375.1	0.00	375.08	2,183.59	541.11	1,564.21	1,360.95	2.06	-0.43	0.100
45.48	-28.73	-4.80	0.00	-372.8	0.00	372.75	2,180.18	539.78	1,556.54	1,355.45	2.11	-0.44	0.100
50.00	-27.34	-4.69	0.00	-351.0	0.00	351.05	2,147.57	527.27	1,485.26	1,303.92	2.54	-0.48	0.095
55.00	-25.81	-4.57	0.00	-327.6	0.00	327.61	2,110.50	513.43	1,408.36	1,247.44	3.07	-0.53	0.091
60.00	-24.30	-4.48	0.00	-304.8	0.00	304.77	2,072.40	499.59	1,333.50	1,191.56	3.65	-0.58	0.086
60.48	-24.16	-4.43	0.00	-302.6	0.00	302.62	2,068.68	498.27	1,326.42	1,186.23	3.71	-0.58	0.086
60.48	-24.16	-4.43	0.00	-302.6	0.00	302.62	2,068.68	498.27	1,326.42	1,186.23	3.71	-0.58	0.129
65.00	-23.10	-4.32	0.00	-282.6	0.00	282.59	2,033.25	485.76	1,260.68	1,136.32	4.28	-0.62	0.124
70.00	-22.00	-4.22	0.00	-261.0	0.00	261.00	1,982.07	471.92	1,189.91	1,075.81	4.97	-0.69	0.118
73.50	-21.00	-4.18	0.00	-246.2	0.00	246.23	1,473.95	377.73	952.77	802.29	5.49	-0.74	0.132
75.00	-20.72	-4.14	0.00	-240.0	0.00	239.96	1,466.27	374.41	936.10	791.03	5.73	-0.76	0.130
80.00	-19.76	-4.06	0.00	-219.3	0.00	219.28	1,439.98	363.34	881.58	753.67	6.56	-0.83	0.122
85.00	-18.82	-3.99	0.00	-199.0	0.00	198.96	1,412.66	352.27	828.70	716.63	7.46	-0.89	0.113
90.00	-17.89	-3.91	0.00	-179.0	0.00	179.02	1,384.30	341.21	777.46	679.95	8.43	-0.96	0.105
95.00	-16.91	-3.84	0.00	-159.5	0.00	159.46	1,354.89	330.14	727.85	643.70	9.47	-1.02	0.096
99.02	-16.11	-3.78	0.00	-144.0	0.00	144.04	1,330.50	321.24	689.15	614.89	10.35	-1.07	0.089
100.00	-15.86	-3.77	0.00	-140.3	0.00	140.33	1,324.45	319.07	679.87	607.91	10.57	-1.08	0.046
100.08	-15.84	-3.74	0.00	-140.0	0.00	140.03	1,323.95	318.89	679.12	607.34	10.59	-1.08	0.046
100.08	-15.84	-3.74	0.00	-140.0	0.00	140.03	1,323.95	318.89	679.12	607.34	10.59	-1.08	0.069
105.00	-14.95	-3.65	0.00	-121.6	0.00	121.65	1,292.97	308.00	633.54	572.65	11.71	-1.11	0.061
110.00	-14.13	-3.56	0.00	-103.4	0.00	103.42	1,247.09	296.93	588.83	532.25	12.9	-1.15	0.053
110.00	-14.13	-3.56	0.00	-103.4	0.00	103.42	853.22	223.36	444.16	366.32	12.9	-1.15	0.063
114.00	-11.38	-2.89	0.00	-89.0	0.00	89.00	838.71	216.72	418.15	349.29	13.87	-1.17	0.054
115.00	-11.25	-2.84	0.00	-86.1	0.00	86.12	834.98	215.06	411.77	345.05	14.11	-1.18	0.052
120.00	-10.57	-2.76	0.00	-71.9	0.00	71.90	815.69	206.75	380.60	323.94	15.37	-1.21	0.044
125.00	-9.90	-2.67	0.00	-58.1	0.00	58.12	795.37	198.45	350.66	303.07	16.66	-1.24	0.036
130.00	-9.24	-2.60	0.00	-44.8	0.00	44.78	774.00	190.15	321.94	282.47	17.97	-1.26	0.029
132.44	-8.93	-2.56	0.00	-38.4	0.00	38.44	763.20	186.10	308.37	272.53	18.62	-1.27	0.025
132.44	-8.93	-2.56	0.00	-38.4	0.00	38.44	763.20	186.10	308.37	272.53	18.62	-1.27	0.153
135.00	-8.72	-2.51	0.00	-31.9	0.00	31.89	751.60	181.85	294.45	262.19	19.3	-1.28	0.133
140.00	-8.38	-2.46	0.00	-19.4	0.00	19.36	728.15	173.54	268.19	242.29	20.7	-1.38	0.092
142.00	-4.56	-1.46	0.00	-14.4	0.00	14.44	714.94	170.22	258.03	233.29	21.28	-1.4	0.068
145.00	-4.41	-1.41	0.00	-10.1	0.00	10.07	694.02	165.24	243.15	219.76	22.18	-1.44	0.052
149.00	-1.72	-0.90	0.00	-4.4	0.00	4.42	666.12	158.60	224.01	202.35	23.39	-1.47	0.024
150.00	0.00	-0.86	0.00	-3.5	0.00	3.52	659.15	156.94	219.34	198.11	23.7	-1.47	0.018

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period ( $S_S$ ):	0.187
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.054
Long-Period Transition Period ( $T_L$ – Seconds):	6
Importance Factor ( $I_e$ ):	1.000
Site Coefficient $F_a$ :	1.600
Site Coefficient $F_v$ :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.199
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.086
Seismic Response Coefficient ( $C_s$ ):	0.030
Upper Limit $C_s$ :	0.030
Lower Limit $C_s$ :	0.030
Period based on Rayleigh Method (sec):	2.800
Redundancy Factor ( $p$ ):	1.000
Seismic Force Distribution Exponent ( $k$ ):	2.000
Total Unfactored Dead Load:	44.530 k
Seismic Base Shear (E):	1.340 k

SEISMIC FORCES

Segment	1.2D + 1.0Ev + 1.0Eh	Seismic	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
41			149.5	50	1,122	0.003	4	62
40			147	204	4,407	0.012	16	253
39			143.5	156	3,219	0.009	12	194
38			141	117	2,331	0.006	9	145
37			137.5	337	6,362	0.018	24	417
36			133.72	204	3,656	0.010	14	253
35			131.22	319	5,494	0.015	20	396
34			127.5	660	10,726	0.030	40	818
33			122.5	668	10,022	0.028	37	828
32			117.5	676	9,332	0.026	35	838
31			114.5	136	1,785	0.005	7	169
30			112	578	7,249	0.020	27	717
29			107.5	821	9,488	0.026	35	1,018
28			102.54	892	9,379	0.026	35	1,106
27			100.04	20	200	0.001	1	25
26			99.51	244	2,420	0.007	9	303
25			97.01	806	7,581	0.021	28	999
24			92.5	974	8,332	0.023	31	1,207
23			87.5	928	7,103	0.020	26	1,150
22			82.5	939	6,388	0.018	24	1,164
21			77.5	949	5,701	0.016	21	1,177
20			74.25	287	1,581	0.004	6	356
19			71.75	990	5,097	0.014	19	1,228
18			67.5	1,103	5,024	0.014	19	1,367
17			62.74	1,051	4,136	0.012	15	1,303
16			60.24	144	524	0.002	2	179
15			57.5	1,510	4,993	0.014	19	1,873
14			52.5	1,524	4,200	0.012	16	1,889
13			47.74	1,389	3,166	0.009	12	1,722
12			45.24	148	303	0.001	1	184
11			42.5	1,551	2,801	0.008	10	1,922
10			37.8334	1,355	1,939	0.005	7	1,680
9			35.3334	296	369	0.001	1	366
8			33.25	1,560	1,725	0.005	6	1,934
7			30.75	504	477	0.001	2	625
6			27.5	1,691	1,279	0.004	5	2,097
5			22.5	1,707	864	0.002	3	2,117
4			17.5	1,723	528	0.002	2	2,137

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
3	12.5	1,739	272	0.001	1	2,156
2	7.5	1,755	99	0.000	0	2,176
1	2.5	1,728	11	0.000	0	2,143
Powerwave Allgon LGP21901	150	33	742	0.002	3	41
Powerwave Allgon LGP21401	150	85	1,904	0.005	7	105
Raycap DC6-48-60-18-8F (23.5" Height)	150	40	900	0.002	3	50
Ericsson RRUS 8843 B2, B66A	150	216	4,860	0.014	18	268
Ericsson RRUS 4478 B14	150	180	4,043	0.011	15	223
Ericsson RRUS 4415 B30	150	138	3,105	0.009	12	171
Ericsson RRUS 4449 B5, B12	150	213	4,792	0.013	18	264
Powerwave Allgon 7770.00	150	105	2,362	0.007	9	130
CCI HPA65R-BU8A	150	162	3,645	0.010	14	201
CCI DMP65R-BU8D	150	287	6,460	0.018	24	356
CCI OPA65R-BU8D	150	230	5,164	0.014	19	285
Platform w/ HRs w/ SitePro1 HRK	149	2,500	55,502	0.155	207	3,100
Ericsson Radio 4460 B25+B66	142	327	6,594	0.018	25	405
Ericsson Radio 4480 B71+B85A	142	252	5,081	0.014	19	312
Ericsson AIR 6419 B41	142	206	4,144	0.012	15	255
Commscope VV-65A-R1	142	71	1,440	0.004	5	89
RFS APXVAALL24 43-U-NA20	142	368	7,428	0.021	28	457
Generic Flat Platform with Handrails	142	2,500	50,410	0.141	188	3,100
Commscope CBC1923Q-43	114	22	285	0.001	1	27
Kaelus KA-6030	114	70	915	0.003	3	87
Samsung B5/B13 RRH-BR04C	114	211	2,741	0.008	10	261
Samsung B2/B66A RRH-BR049	114	253	3,291	0.009	12	314
RFS DB-B1-6C-12AB-OZ	114	43	556	0.002	2	53
Amphenol Antel BXA-70080-4CF-EDIN-X	114	36	468	0.001	2	45
Samsung MT6407-77A	114	245	3,181	0.009	12	304
Commscope JAHH-65B-R3B	114	364	4,725	0.013	18	451
Generic Round T-Arm	114	938	12,184	0.034	45	1,162
<b>Totals:</b>		<b>44,525</b>	<b>358,604</b>	<b>1.000</b>	<b>1,336</b>	<b>55,207</b>

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
41	149.5	50	1,122	0.003	4	43
40	147	204	4,407	0.012	16	175
39	143.5	156	3,219	0.009	12	134
38	141	117	2,331	0.006	9	101
37	137.5	337	6,362	0.018	24	289
36	133.72	204	3,656	0.010	14	176
35	131.22	319	5,494	0.015	20	274
34	127.5	660	10,726	0.030	40	568
33	122.5	668	10,022	0.028	37	574
32	117.5	676	9,332	0.026	35	581
31	114.5	136	1,785	0.005	7	117
30	112	578	7,249	0.020	27	497
29	107.5	821	9,488	0.026	35	706
28	102.54	892	9,379	0.026	35	767
27	100.04	20	200	0.001	1	17
26	99.51	244	2,420	0.007	9	210
25	97.01	806	7,581	0.021	28	693
24	92.5	974	8,332	0.023	31	838
23	87.5	928	7,103	0.020	26	798
22	82.5	939	6,388	0.018	24	807
21	77.5	949	5,701	0.016	21	816
20	74.25	287	1,581	0.004	6	247
19	71.75	990	5,097	0.014	19	852
18	67.5	1,103	5,024	0.014	19	948
17	62.74	1,051	4,136	0.012	15	904

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
16	60.24	144	524	0.002	2	124
15	57.5	1,510	4,993	0.014	19	1,299
14	52.5	1,524	4,200	0.012	16	1,311
13	47.74	1,389	3,166	0.009	12	1,195
12	45.24	148	303	0.001	1	127
11	42.5	1,551	2,801	0.008	10	1,334
10	37.8334	1,355	1,939	0.005	7	1,165
9	35.3334	296	369	0.001	1	254
8	33.25	1,560	1,725	0.005	6	1,342
7	30.75	504	477	0.001	2	434
6	27.5	1,691	1,279	0.004	5	1,454
5	22.5	1,707	864	0.002	3	1,468
4	17.5	1,723	528	0.002	2	1,482
3	12.5	1,739	272	0.001	1	1,496
2	7.5	1,755	99	0.000	0	1,510
1	2.5	1,728	11	0.000	0	1,486
Powerwave Allgon LGP21901	150	33	742	0.002	3	28
Powerwave Allgon LGP21401	150	85	1,904	0.005	7	73
Raycap DC6-48-60-18-8F (23.5" Height)	150	40	900	0.002	3	34
Ericsson RRUS 8843 B2, B66A	150	216	4,860	0.014	18	186
Ericsson RRUS 4478 B14	150	180	4,043	0.011	15	155
Ericsson RRUS 4415 B30	150	138	3,105	0.009	12	119
Ericsson RRUS 4449 B5, B12	150	213	4,792	0.013	18	183
Powerwave Allgon 7770.00	150	105	2,362	0.007	9	90
CCI HPA65R-BU8A	150	162	3,645	0.010	14	139
CCI DMP65R-BU8D	150	287	6,460	0.018	24	247
CCI OPA65R-BU8D	150	230	5,164	0.014	19	197
Platform w/ HRs w/ SitePro1 HRK	149	2,500	55,502	0.155	207	2,150
Ericsson Radio 4460 B25+B66	142	327	6,594	0.018	25	281
Ericsson Radio 4480 B71+B85A	142	252	5,081	0.014	19	217
Ericsson AIR 6419 B41	142	206	4,144	0.012	15	177
Commscope VV-65A-R1	142	71	1,440	0.004	5	61
RFS APXVAALL24 43-U-NA20	142	368	7,428	0.021	28	317
Generic Flat Platform with Handrails	142	2,500	50,410	0.141	188	2,150
Commscope CBC1923Q-43	114	22	285	0.001	1	19
Kaelus KA-6030	114	70	915	0.003	3	61
Samsung B5/B13 RRH-BR04C	114	211	2,741	0.008	10	181
Samsung B2/B66A RRH-BR049	114	253	3,291	0.009	12	218
RFS DB-B1-6C-12AB-OZ	114	43	556	0.002	2	37
Amphenol Antel BXA-70080-4CF-EDIN-X	114	36	468	0.001	2	31
Samsung MT6407-77A	114	245	3,181	0.009	12	211
Commscope JAHH-65B-R3B	114	364	4,725	0.013	18	313
Generic Round T-Arm	114	938	12,184	0.034	45	806
<b>Totals:</b>		<b>44,525</b>	<b>358,604</b>	<b>1.000</b>	<b>1,336</b>	<b>38,296</b>

1.2D + 1.0Ev + 1.0Eh

Seismic

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.06	-1.34	0.00	-172.53	0.00	172.53	3,157.17	784.20	2,738	2,376.61	0.00	0.00	0.04
5.00	-50.89	-1.35	0.00	-165.82	0.00	165.82	3,114.35	767.59	2,623	2,294.24	0.01	-0.01	0.04
10.00	-48.73	-1.36	0.00	-159.06	0.00	159.06	3,070.50	750.99	2,511	2,212.51	0.03	-0.03	0.04
15.00	-46.59	-1.37	0.00	-152.24	0.00	152.24	3,025.61	734.38	2,401	2,131.45	0.07	-0.04	0.04
20.00	-44.48	-1.38	0.00	-145.39	0.00	145.39	2,979.67	717.78	2,294	2,051.12	0.12	-0.06	0.04
25.00	-42.38	-1.38	0.00	-138.50	0.00	138.50	2,932.70	701.17	2,189	1,971.58	0.18	-0.07	0.04
30.00	-41.75	-1.38	0.00	-131.60	0.00	131.60	2,875.20	684.57	2,087	1,886.63	0.26	-0.08	0.04
31.50	-39.82	-1.38	0.00	-129.53	0.00	129.53	2,854.27	679.59	2,056	1,859.12	0.29	-0.09	0.04
35.00	-39.45	-1.38	0.00	-124.70	0.00	124.70	2,805.46	667.97	1,987	1,795.71	0.36	-0.10	0.03
35.67	-37.77	-1.38	0.00	-123.78	0.00	123.78	2,248.06	566.93	1,717	1,468.68	0.37	-0.10	0.04

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
40.00	-35.85	-1.37	0.00	-117.81	0.00	117.81	2,218.58	554.94	1,645	1,418.47	0.47	-0.11	0.04
45.00	-35.67	-1.37	0.00	-110.96	0.00	110.96	2,183.59	541.11	1,564	1,360.95	0.59	-0.13	0.04
45.48	-33.94	-1.36	0.00	-110.30	0.00	110.30	2,180.18	539.78	1,557	1,355.45	0.60	-0.13	0.04
45.48	-33.94	-1.36	0.00	-110.30	0.00	110.30	2,180.18	539.78	1,557	1,355.45	0.60	-0.13	0.04
50.00	-32.05	-1.35	0.00	-104.14	0.00	104.14	2,147.57	527.27	1,485	1,303.92	0.73	-0.14	0.03
55.00	-30.18	-1.33	0.00	-97.39	0.00	97.39	2,110.50	513.43	1,408	1,247.44	0.88	-0.15	0.03
60.00	-30.00	-1.34	0.00	-90.73	0.00	90.73	2,072.40	499.59	1,334	1,191.56	1.05	-0.17	0.03
60.48	-28.70	-1.32	0.00	-90.08	0.00	90.08	2,068.68	498.27	1,326	1,186.23	1.07	-0.17	0.03
60.48	-28.70	-1.32	0.00	-90.08	0.00	90.08	2,068.68	498.27	1,326	1,186.23	1.07	-0.17	0.05
65.00	-27.33	-1.30	0.00	-84.12	0.00	84.12	2,033.25	485.76	1,261	1,136.32	1.24	-0.18	0.04
70.00	-26.10	-1.29	0.00	-77.60	0.00	77.60	1,982.07	471.92	1,190	1,075.81	1.44	-0.20	0.04
73.50	-25.75	-1.29	0.00	-73.09	0.00	73.09	1,473.95	377.73	953	802.29	1.59	-0.22	0.05
75.00	-24.57	-1.27	0.00	-71.16	0.00	71.16	1,466.27	374.41	936	791.03	1.66	-0.22	0.05
80.00	-23.41	-1.25	0.00	-64.82	0.00	64.82	1,439.98	363.34	882	753.67	1.90	-0.24	0.04
85.00	-22.26	-1.22	0.00	-58.59	0.00	58.59	1,412.66	352.27	829	716.63	2.16	-0.26	0.04
90.00	-21.05	-1.19	0.00	-52.48	0.00	52.48	1,384.30	341.21	777	679.95	2.45	-0.28	0.04
95.00	-20.05	-1.16	0.00	-46.52	0.00	46.52	1,354.89	330.14	728	643.70	2.75	-0.30	0.03
99.02	-19.75	-1.16	0.00	-41.84	0.00	41.84	1,330.50	321.24	689	614.89	3.01	-0.31	0.03
100.00	-19.72	-1.16	0.00	-40.70	0.00	40.70	1,324.45	319.07	680	607.91	3.08	-0.32	0.02
100.08	-18.62	-1.12	0.00	-40.61	0.00	40.61	1,323.95	318.89	679	607.34	3.08	-0.32	0.02
100.08	-18.62	-1.12	0.00	-40.61	0.00	40.61	1,323.95	318.89	679	607.34	3.08	-0.32	0.03
105.00	-17.60	-1.08	0.00	-35.11	0.00	35.11	1,292.97	308.00	634	572.65	3.41	-0.32	0.02
110.00	-16.88	-1.05	0.00	-29.72	0.00	29.72	1,247.09	296.93	589	532.25	3.76	-0.34	0.02
110.00	-16.88	-1.05	0.00	-29.72	0.00	29.72	853.22	223.36	444	366.32	3.76	-0.34	0.03
114.00	-14.01	-0.92	0.00	-25.52	0.00	25.52	838.71	216.72	418	349.29	4.04	-0.34	0.02
115.00	-13.17	-0.88	0.00	-24.59	0.00	24.59	834.98	215.06	412	345.05	4.11	-0.35	0.02
120.00	-12.34	-0.84	0.00	-20.17	0.00	20.17	815.69	206.75	381	323.94	4.48	-0.35	0.02
125.00	-11.53	-0.80	0.00	-15.95	0.00	15.95	795.37	198.45	351	303.07	4.86	-0.36	0.02
130.00	-11.13	-0.78	0.00	-11.95	0.00	11.95	774.00	190.15	322	282.47	5.24	-0.37	0.01
132.44	-10.88	-0.76	0.00	-10.05	0.00	10.05	763.20	186.10	308	272.53	5.43	-0.37	0.01
132.44	-10.88	-0.76	0.00	-10.05	0.00	10.05	763.20	186.10	308	272.53	5.43	-0.37	0.05
135.00	-10.46	-0.74	0.00	-8.10	0.00	8.10	751.60	181.85	294	262.19	5.63	-0.37	0.05
140.00	-10.31	-0.73	0.00	-4.40	0.00	4.40	728.15	173.54	268	242.29	6.03	-0.40	0.03
142.00	-5.50	-0.41	0.00	-2.94	0.00	2.94	714.94	170.22	258	233.29	6.20	-0.40	0.02
145.00	-5.25	-0.39	0.00	-1.72	0.00	1.72	694.02	165.24	243	219.76	6.45	-0.41	0.02
149.00	-2.09	-0.16	0.00	-0.16	0.00	0.16	666.12	158.60	224	202.35	6.80	-0.41	0.00
150.00	0.00	-0.14	0.00	0.00	0.00	0.00	659.15	156.94	219	198.11	6.89	-0.41	0.00

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-36.81	-1.34	0.00	-168.96	0.00	168.96	3,157.17	784.20	2,738	2,376.61	0.00	0.00	0.04
5.00	-35.30	-1.35	0.00	-162.26	0.00	162.26	3,114.35	767.59	2,623	2,294.24	0.01	-0.01	0.04
10.00	-33.80	-1.35	0.00	-155.53	0.00	155.53	3,070.50	750.99	2,511	2,212.51	0.03	-0.03	0.04
15.00	-32.32	-1.36	0.00	-148.76	0.00	148.76	3,025.61	734.38	2,401	2,131.45	0.06	-0.04	0.04
20.00	-30.85	-1.36	0.00	-141.97	0.00	141.97	2,979.67	717.78	2,294	2,051.12	0.11	-0.05	0.03
25.00	-29.40	-1.36	0.00	-135.16	0.00	135.16	2,932.70	701.17	2,189	1,971.58	0.18	-0.07	0.03
30.00	-28.96	-1.36	0.00	-128.35	0.00	128.35	2,875.20	684.57	2,087	1,886.63	0.26	-0.08	0.03
31.50	-27.62	-1.36	0.00	-126.31	0.00	126.31	2,854.27	679.59	2,056	1,859.12	0.28	-0.09	0.03
35.00	-27.37	-1.36	0.00	-121.55	0.00	121.55	2,805.46	667.97	1,987	1,795.71	0.35	-0.10	0.03
35.67	-26.20	-1.35	0.00	-120.64	0.00	120.64	2,248.06	566.93	1,717	1,468.68	0.36	-0.10	0.04
40.00	-24.87	-1.35	0.00	-114.78	0.00	114.78	2,218.58	554.94	1,645	1,418.47	0.46	-0.11	0.03
45.00	-24.74	-1.35	0.00	-108.04	0.00	108.04	2,183.59	541.11	1,564	1,360.95	0.58	-0.12	0.03
45.48	-23.55	-1.34	0.00	-107.40	0.00	107.40	2,180.18	539.78	1,557	1,355.45	0.59	-0.12	0.03
45.48	-23.55	-1.34	0.00	-107.40	0.00	107.40	2,180.18	539.78	1,557	1,355.45	0.59	-0.12	0.03
50.00	-22.24	-1.32	0.00	-101.35	0.00	101.35	2,147.57	527.27	1,485	1,303.92	0.71	-0.14	0.03
55.00	-20.94	-1.31	0.00	-94.74	0.00	94.74	2,110.50	513.43	1,408	1,247.44	0.86	-0.15	0.03
60.00	-20.81	-1.31	0.00	-88.20	0.00	88.20	2,072.40	499.59	1,334	1,191.56	1.03	-0.16	0.03

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
60.48	-19.91	-1.29	0.00	-87.57	0.00	87.57	2,068.68	498.27	1,326	1,186.23	1.04	-0.16	0.03
60.48	-19.91	-1.29	0.00	-87.57	0.00	87.57	2,068.68	498.27	1,326	1,186.23	1.04	-0.16	0.04
65.00	-18.96	-1.28	0.00	-81.74	0.00	81.74	2,033.25	485.76	1,261	1,136.32	1.21	-0.18	0.04
70.00	-18.11	-1.26	0.00	-75.36	0.00	75.36	1,982.07	471.92	1,190	1,075.81	1.40	-0.20	0.04
73.50	-17.86	-1.25	0.00	-70.96	0.00	70.96	1,473.95	377.73	953	802.29	1.55	-0.21	0.04
75.00	-17.04	-1.23	0.00	-69.08	0.00	69.08	1,466.27	374.41	936	791.03	1.62	-0.22	0.04
80.00	-16.24	-1.21	0.00	-62.90	0.00	62.90	1,439.98	363.34	882	753.67	1.85	-0.24	0.04
85.00	-15.44	-1.19	0.00	-56.84	0.00	56.84	1,412.66	352.27	829	716.63	2.11	-0.25	0.04
90.00	-14.60	-1.16	0.00	-50.90	0.00	50.90	1,384.30	341.21	777	679.95	2.39	-0.27	0.03
95.00	-13.91	-1.13	0.00	-45.11	0.00	45.11	1,354.89	330.14	728	643.70	2.68	-0.29	0.03
99.02	-13.70	-1.12	0.00	-40.57	0.00	40.57	1,330.50	321.24	689	614.89	2.94	-0.30	0.03
100.00	-13.68	-1.12	0.00	-39.47	0.00	39.47	1,324.45	319.07	680	607.91	3.00	-0.31	0.02
100.08	-12.91	-1.08	0.00	-39.38	0.00	39.38	1,323.95	318.89	679	607.34	3.00	-0.31	0.02
100.08	-12.91	-1.08	0.00	-39.38	0.00	39.38	1,323.95	318.89	679	607.34	3.00	-0.31	0.02
105.00	-12.21	-1.05	0.00	-34.05	0.00	34.05	1,292.97	308.00	634	572.65	3.32	-0.32	0.02
110.00	-11.71	-1.02	0.00	-28.82	0.00	28.82	1,247.09	296.93	589	532.25	3.66	-0.33	0.02
110.00	-11.71	-1.02	0.00	-28.82	0.00	28.82	853.22	223.36	444	366.32	3.66	-0.33	0.02
114.00	-9.72	-0.90	0.00	-24.74	0.00	24.74	838.71	216.72	418	349.29	3.94	-0.33	0.02
115.00	-9.14	-0.86	0.00	-23.85	0.00	23.85	834.98	215.06	412	345.05	4.01	-0.34	0.02
120.00	-8.56	-0.82	0.00	-19.56	0.00	19.56	815.69	206.75	381	323.94	4.37	-0.34	0.02
125.00	-7.99	-0.78	0.00	-15.47	0.00	15.47	795.37	198.45	351	303.07	4.73	-0.35	0.01
130.00	-7.72	-0.75	0.00	-11.58	0.00	11.58	774.00	190.15	322	282.47	5.10	-0.36	0.01
132.44	-7.54	-0.74	0.00	-9.74	0.00	9.74	763.20	186.10	308	272.53	5.29	-0.36	0.01
132.44	-7.54	-0.74	0.00	-9.74	0.00	9.74	763.20	186.10	308	272.53	5.29	-0.36	0.05
135.00	-7.25	-0.72	0.00	-7.85	0.00	7.85	751.60	181.85	294	262.19	5.48	-0.36	0.04
140.00	-7.15	-0.71	0.00	-4.26	0.00	4.26	728.15	173.54	268	242.29	5.87	-0.39	0.03
142.00	-3.82	-0.39	0.00	-2.85	0.00	2.85	714.94	170.22	258	233.29	6.04	-0.39	0.02
145.00	-3.64	-0.38	0.00	-1.66	0.00	1.66	694.02	165.24	243	219.76	6.29	-0.40	0.01
149.00	-1.45	-0.15	0.00	-0.15	0.00	0.15	666.12	158.60	224	202.35	6.62	-0.40	0.00
150.00	0.00	-0.14	0.00	0.00	0.00	0.00	659.15	156.94	219	198.11	6.70	-0.40	0.00



ANALYSIS SUMMARY

Load Case	Base Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	26.13	0.00	53.38	0.00	0.00	2819.94	132.44	0.66
0.9D + 1.0W	26.10	0.00	40.02	0.00	0.00	2773.05	132.44	0.64
1.2D + 1.0Di + 1.0Wi	5.69	0.00	66.51	0.00	0.00	679.40	132.44	0.16
1.2D + 1.0Ev + 1.0Eh	1.38	0.00	53.06	0.00	0.00	172.53	132.44	0.05
0.9D - 1.0Ev + 1.0Eh	1.36	0.00	36.81	0.00	0.00	168.96	132.44	0.05
1.0D + 1.0W	5.75	0.00	44.52	0.00	0.00	615.63	132.44	0.15

ADDITIONAL STEEL SUMMARY

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors				Max Member		
			VQ/I (k/in)	Shear Applied (kips)	phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
0.00	45.48	SOL #20 All Thread Bar	192.6	5.8	16.8	0.3438	215.3	330.5	
0.00	60.48	SOL #20 All Thread Bar	195.3	5.9	16.8	0.3485	212.2	330.5	
45.48	100.08	SOL #20 All Thread Bar	374.3	11.2	16.8	0.668	245.8	330.5	
99.02	132.44	SOL #20 All Thread Bar	411.1	15.6	16.8	0.9294	182.7	317.3	

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors					Lower Termination Connectors				
			MQ/I (kips)	phiVn (kips)	Number Required	Number Actual	Ratio	MQ/I (kips)	phiVn (kip)	Number Required	Number Actual	Ratio
0.00	45.48	SOL #20 All Thread Bar	0	12	0	20	0.0000	0	12	0	0	0.0000
0.00	60.48	SOL #20 All Thread Bar	159.163	12	14	20	0.6632	0	12	0	0	0.0000
45.48	100.08	SOL #20 All Thread Bar	85.9199	12	8	16	0.4475	0	12	0	0	0.0000
99.02	132.44	SOL #20 All Thread Bar	65.7352	12	6	12	0.4565	122.5855	12	11	20	0.5108

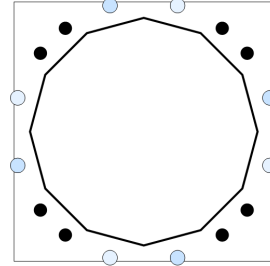
**BASE PLATE ANALYSIS @ 0 FT**

**APPLIED REACTIONS**

Moment (k-ft)	Axial (k)	Shear (k)
2819.94	53.38	26.13

**PLATE PARAMETERS (ID# 19550)**

Width:	44	in
Shape:	Square	
Thickness:	2.5	in
Grade:	A633 Gr. E	
Yield Strength:	60	ksi
Tensile Strength:	80	ksi
Clip Length:		in
Rod Detail Type:	c	
Clear Distance:	-	in
Base Weld Size:	0.25	in
Orientation Offset:	-	°
Analysis Type:	Elastic	
Neutral Axis:	319	°



**ANCHOR ROD PARAMETERS**

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Spacing (in)	Offset (°)
Original [ID#20055]	Cluster	8	2.25	44	A615-75	75	100	6	-

**DYWIDAG BAR PARAMETERS**

Quantity	Bar Size	Bar Diameter (in)	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Bracket Type	Bracket Offset (in)	Circle (in)	Offset (°)
4 [ID# 1507]	#20	2.5	80	100	Angle	2.19	44.26	75
4 [ID# 1509]	#20	2.5	80	100	Angle	2.19	44.26	15

**COMPONENT PROPERTIES**

Component	ID	Gross Area (in <sup>2</sup> )	Net Area (in <sup>2</sup> )	Individual Inertia (in <sup>4</sup> )	Moment of Inertia (in <sup>4</sup> )	Threads/in
Pole	37.38"ø x 0.375" (12 Sides)	43.0992	-	-	7379.37	-
Bolt Group	Original (8) 2.25"ø	3.9761	3.2477	0.8393	5566.40	4.5
Dywidag Group	(4) #20	4.9087	4.9087	1.9175	4815.65	-
Dywidag Group	(4) #20	4.9087	4.9087	1.9175	4815.65	-

**REACTION DISTRIBUTION**

Component	ID	Moment M <sub>u</sub> (k-ft)	Axial Load P <sub>u</sub> (k)	Shear V <sub>u</sub> (k)	Moment Factor
Pole	37.38"ø x 0.375" (12 Sides)	1223.3	53.38	26.13	0.434
Bolt Group	Original (8) 2.25"ø	1223.3	-	26.13	0.434
Dywidag Group	(4) #20	798.3	-	-	0.283
Dywidag Group	(4) #20	798.3	-	-	0.283

ASSET: 302498, Plainfield CT 6  
 CUSTOMER: VERIZON WIRELESS

CODE: ANSI/TIA-222-H  
 PROJECT: 14519501

**BASE PLATE BEND LINE ANALYSIS @ 0 FT**

**POLE PROPERTIES**

Flat-to-Flat Diameter: 37.63 in  
 Point-to-Point Diameter: 38.96 in  
 Orientation Offset: - °

Flat Width: 10.083 in  
 Flat Radians: 0.524 rad

**PLATE PROPERTIES**

Neutral Axis: 319 °

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in <sup>3</sup> )	Applied Moment M <sub>u</sub> (k-in)	Moment Capacity ΦM <sub>n</sub> (k-in)	Flexure Result M <sub>u</sub> /ΦM <sub>n</sub>	
Flats	24.595	0.00	38.430	581.2	2075.2	28.0%	✓
Corners	23.268	0.00	36.356	344.9	1963.2	17.6%	✓

**ELASTIC ANCHOR ROD ANALYSIS**

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P <sub>u</sub> (k)	Applied Shear Load V <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Compressive Result	Interaction Result	
Original	8	2.25	179.7	0.4	243.6	0.738	74.1%	✓

**DYWIDAG BAR ANALYSIS**

Group Quantity	Bar Size	Bar Circle (in)	Applied Axial Load P <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Compressive Result P <sub>u</sub> / ΦP <sub>n</sub>	
4	#20	44.26	198.0	368.2	53.8%	✓
4	#20	44.26	198.0	368.2	53.8%	✓

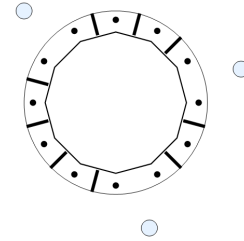
**UPPER FLANGE PLATE ANALYSIS @ 110 FT**

**APPLIED REACTIONS**

Moment (k-ft)	Axial (k)	Shear (k)
475.01	15.58	16.38

**PLATE PARAMETERS (ID# 19549)**

Width:	28.5	in
Shape:	Round	
Thickness:	1	in
Grade:	A572-60	
Yield Strength:	60	ksi
Tensile Strength:	75	ksi
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Elastic	
Neutral Axis:	318	°



**FLANGE BOLT PARAMETERS**

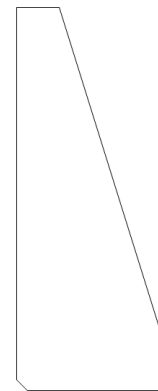
Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Spacing (in)	Offset (°)
Original [ID#20054]	Radial	12	1	25.75	A325	92	120	-	-

**DYWIDAG BAR PARAMETERS**

Quantity	Bar Size	Bar Diameter (in)	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Bracket Type	Bracket Offset (in)	Circle (in)	Offset (°)
3 [ID# 1508]	#20	2.5	80	100	W8x21	8.28	40.33	15

**STIFFENER PARAMETERS**

Arrangement:	Radial	
Quantity:	9	
Height:	9	in
Width:	3.5	in
Thickness:	0.625	in
Notch:	0.25	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Horizontal Weld Type:	Fillet	
Horizontal Weld Fillet Size:	0.25	in
Vertical Weld Fillet Size:	0.25	in
Weld Strength:	70	ksi
Orientation Offset:	-	°



ASSET: 302498, Plainfield CT 6  
 CUSTOMER: VERIZON WIRELESS

CODE: ANSI/TIA-222-H  
 PROJECT: 14519501

COMPONENT PROPERTIES						
Component	ID	Gross Area (in <sup>2</sup> )	Net Area (in <sup>2</sup> )	Individual Inertia (in <sup>4</sup> )	Moment of Inertia (in <sup>4</sup> )	Threads/in
Pole	21.2673"Ø x 0.1875" (12 Sides)	12.2757	-	-	681.99	-
Bolt Group	Original (12) 1"Ø	0.7854	0.6057	0.0292	545.75	8.0
Dywidag Group	(3) #20	4.9087	4.9087	1.9175	2006.98	-
Stiffeners	(9) 9"H x 3.5"W x 0.625"T	2.0313	1.8281	8.9323	1410.28	-

REACTION DISTRIBUTION					
Component	ID	Moment M <sub>u</sub> (k-ft)	Axial Load P <sub>u</sub> (k)	Shear V <sub>u</sub> (k)	Moment Factor
Pole	21.2673"Ø x 0.1875" (12 Sides)	120.5	15.58	16.38	0.254
Bolt Group	Original (12) 1"Ø	120.5	-	16.38	0.254
Dywidag Group	(3) #20	354.5	-	-	0.746
Stiffeners	(9) 9"H x 3.5"W x 0.625"T	81.2	-	11.04	0.171

**UPPER FLANGE PLATE BEND LINE ANALYSIS @ 110 FT**

**POLE PROPERTIES**

Flat-to-Flat Diameter: 21.39 in  
 Point-to-Point Diameter: 22.15 in  
 Orientation Offset: - °

Flat Width: 5.732 in  
 Flat Radians: 0.524 rad

**PLATE PROPERTIES**

Neutral Axis: 318 °  
 Bend Line Limits: 0.214 to 1.357 rad

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in <sup>3</sup> )	Applied Moment M <sub>u</sub> (k-in)	Moment Capacity ΦM <sub>n</sub> (k-in)	Flexure Result M <sub>u</sub> /ΦM <sub>n</sub>
Flats	17.001	5.27	5.567	43.3	300.6	14.4%
Corners	16.005	3.21	4.804	28.8	259.4	11.1%
Circumferential	21.079	8.25	7.332	45.4	395.9	11.5%

**ELASTIC FLANGE BOLT ANALYSIS**

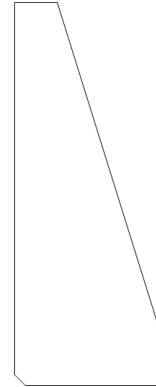
Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P <sub>u</sub> (k)	Applied Shear Load V <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Compressive Result	Interaction Result
Original	12	1	19.6	0.4	54.5	0.359	37.0%

**DYWIDAG BAR ANALYSIS**

Group Quantity	Bar Size	Bar Circle (in)	Applied Axial Load P <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Compressive Result P <sub>u</sub> / ΦP <sub>n</sub>
3	#20	40.33	179.8	368.2	48.8%

**UPPER FLANGE PLATE STIFFENER ANALYSIS**

Quantity:	9	
Height:	9	in
Width:	3.5	in
Effective Width:	3.500	in
Thickness:	0.625	in
Notch:	0.25	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Horizontal Weld Type:	Fillet	
Horizontal Weld Fillet Size:	0.25	in
Horizontal Weld Bevel Size:		in
Vertical Weld Fillet Size:	0.25	in
Weld Strength:	70	ksi
Electrode Coefficient:	1.000	



**PLATE COMPRESSION**

Radius of Gyration:	0.180	in <sup>3</sup>
k/r:	29.93	
$4.71 \sqrt{(E/F_y)}$ :	113.43	
Buckling Stress, $F_e$ :	319.51	ksi
Crit. Buckling Stress, $F_{cr}$ :	280.21	ksi
Applied Compression, $P_u$ :	15.92	k
Compressive Capacity, $\Phi P_n$ :	512.26	k
Compressive Result, $P_u/\Phi P_n$ :	1.6%	✓

**PLATE TENSION**

Gross Cross Section:	2.0313	in <sup>2</sup>
Net Cross Section:	1.8281	in <sup>2</sup>
Applied Tension, $T_u$ :	15.33	k
Tensile Capacity, $\Phi T_n$ :	89.12	k
Tension Result, $T_u/\Phi T_n$ :	8.6%	✓

**VERTICAL WELD TO POLE**

Vertical Eccentricity Ratio, $a=e_x/l$ :	0.130	
Spacing Ratio, k:	0.069	
Weld Coefficient, C:	3.720	
Applied Compression, $P_u$ :	15.92	k
Compressive Capacity, $\Phi P_n$ :	100.44	k
Horizontal Eccentricity Ratio, $a=e_x/l$ :	0.333	
Weld Coefficient, C:	2.940	
Applied Shear, $V_u$ :	0.09	k
Shear Capacity, $\Phi V_n$ :	79.38	k
Weld Result, $P_u/\Phi P_n + V_u/\Phi V_n$ :	16.0%	✓

**HORIZONTAL WELD TO PLATE**

Horizontal Eccentricity Ratio, $a=e_x/l$ :	0.167	
Spacing Ratio, k:	0.179	
Weld Coefficient, C:	3.940	
Effective Fillet Size:	0.250	in
Applied Compression, $P_u$ :	15.92	k
Compressive Capacity, $\Phi P_n$ :	41.37	k
Vertical Eccentricity Ratio, $a=e_x/l$ :	0.429	
Weld Coefficient, C:	2.670	
Applied Shear, $V_u$ :	0.09	k
Shear Capacity, $\Phi V_n$ :	28.04	k
Weld Result, $P_u/\Phi P_n + V_u/\Phi V_n$ :	38.8%	✓

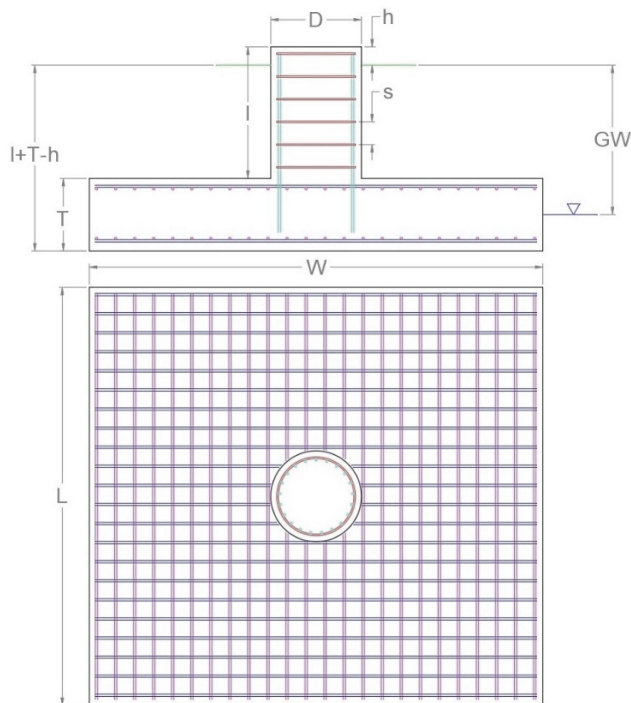


**APPLIED GLOBAL REACTIONS**

Moment (k-ft)	Axial (k)	Shear (k)
2,819.94	53.38	26.13

**FOUNDATION PARAMETERS**

Mat Length:	L	18	ft
Mat Width:	W	18	ft
Mat Thickness:	T	3	ft
Base Depth:	L+T-h	8	ft
Pier Shape:		Round	
Pier Diameter:	D	6	ft
Pier Height above Grade:	h	0.5	ft
Concrete Compressive Strength:		3,000	psi
Mat Top Rebar:		(36) #5 bars [60 ksi]	
Mat Bottom Rebar:		(36) #10 bars [60 ksi]	
Pier Vertical Rebar:		(52) #11 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 12.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



**SOIL PARAMETERS**

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		136	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		15,000	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.3	

**SOIL STRENGTH ANALYSIS**

Soil Strength Reduction Factor, $\Phi_s$	Uplift Strength Reduction Factor, $\Phi_s$	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

**SOIL OVERTURNING ANALYSIS**

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$
3,042.04	3,260.82	93.3% <span style="float: right;">✔</span>

**SOIL BEARING ANALYSIS**

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$
9,206.00	11,250.00	Parallel to Pad Edge	81.8% <span style="float: right;">✔</span>

**SOIL SLIDING SHEAR ANALYSIS**

Applied Shear Force, $V_u$ (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$
26.13	0.00	728.0	39.31	110.66	24.0% <span style="float: right;">✔</span>

**MAT REINFORCING STEEL STRENGTH ANALYSIS**

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
29,000	0.9	0.75	0.65

**MAT REINFORCING ONE WAY SHEAR ANALYSIS**

One Way Design Shear, $V_u$ (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$
502.63	563.44	Parallel to Pad Edge	89.2%

**MAT REINFORCING PUNCHING SHEAR ANALYSIS**

Punching Shear Design Stress, $v_u$ (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$
42.7	164.3	26.0%

**MAT REINFORCING MOMENT TRANSFER ANALYSIS**

Moment Transfer Effective Flexural Width, $w_f$ (in)	Neutral Axis Depth (in)	Pier Moment at Joint, $M_{ut}$ (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6 M_{ut} / \Phi M_{sc,f}$
15.00	5.16	0.00	63,018.0	0.0%

**MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL**

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$
285.25	1,568.54	Parallel to Pad Edge	18.2%

**MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL**

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$
2,363.90	6,501.32	Diagonal to Pad Edge	36.4%

**PIER REINFORCING STEEL STRENGTH ANALYSIS**

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
63.62	29,000	0.9	0.75	0.65

**PIER REINFORCING MOMENT ANALYSIS**

Design Moment, $M_u$ (k-ft)	Nominal Moment Capacity, $\Phi_u M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u / \Phi_u M_n$
2,963.66	11,356.30	0.020	26.1%

**PIER REINFORCING COMPRESSION ANALYSIS**

Design Compression, $P_u$ (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
53.38	5,339.92	1.0%

**PIER REINFORCING SHEAR ANALYSIS**

Design Shear, $V_u$ (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
26.13	423.10	6.2%



# EXHIBIT 4



Colliers Engineering & Design CT. P.C.  
1055 Washington Boulevard  
Stamford, CT 06901  
203.324.0800  
peter.albano@collierseng.com

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## Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10208082  
Colliers Engineering & Design CT. P.C. Project #: 23777230

August 10, 2023

### Site Information

Site ID: 5000244881-VZW / PLAINFIELD CT  
Site Name: PLAINFIELD CT  
Carrier Name: Verizon Wireless  
Address: 45 Spaulding Rd.  
Plainfield, Connecticut 06374  
Windham County  
Latitude: 41.674544°  
Longitude: -71.878683°

### Structure Information

Tower Type: Monopole  
Mount Type: 13.50-Ft T-Arm

FUZE ID # 17123908

### Analysis Results

T-Arm: 81.5% Pass\*

**\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

### \*\*\*Contractor PMI Requirements:

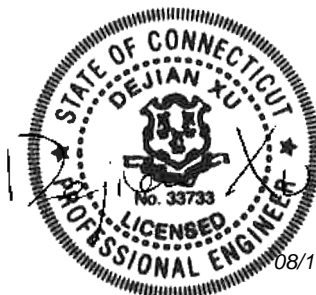
*Included at the end of this MA report*

*Available & Submitted via portal at <https://pmi.vzwsmart.com>*

*For additional questions and support, please reach out to:*

*[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)*

Report Prepared By: Selene Chen



08/13/2023

**Executive Summary:**

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

**Sources of Information:**

Document Type	Remarks
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS Site ID: 324674, dated March 23, 2021</i>
<i>Mount Mapping Report</i>	<i>Hudson Design Group, LLC., Site ID: 468617, dated March 30, 2021</i>
<i>Previous Mount Analysis Report</i>	<i>Maser Consulting Connecticut, Project #: 21777483A, Dated June 24, 2021</i>
<i>Filter Add Scope</i>	<i>Provided by Verizon Wireless</i>

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 125 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.980
Seismic Parameters:	$S_s$ : 0.187 g $S_1$ : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, $L_v$ : 250 lbs. Maintenance Load, $L_m$ : 500 lbs.
Analysis Software:	RISA-3D (V17)

**Final Loading Configuration:**

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
112.75	114.00	6	Commscope	JAHH-65B-R3B	Retained
		3	Samsung	MT6407-77A	
		3	Commscope	CBC1923Q-43	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		2	RFS	DB-B1-6C-12AB-0Z	
		3	Amphenol Antel	BXA-70080-4BF-EDIN-0	
		4	KAelus	KA-6030	Added

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design CT. P.C. and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design CT. P.C. to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design CT. P.C. is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                              ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                        F1554 (Gr. 36)
  - o Bolts    ASTM A325

**Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design CT. P.C..**

**Analysis Results:**

Component	Utilization %	Pass/Fail
<i>Standoff Arm</i>	59.2 %	Pass
<i>Standoff Pipe</i>	0.0 %	Pass
<i>Horizontal</i>	81.5 %	Pass
<i>Antenna Pipe</i>	43.7 %	Pass
<i>Dual Mount Pipe</i>	42.8 %	Pass
<i>Mod Face Horizontal</i>	24.9 %	Pass
<i>Mod SFS</i>	11.5 %	Pass
<i>Connection Check</i>	62.8 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>81.5%</b>
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**Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:**

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	17.1	8.4	24.3	15.6
0.5	22.2	10.9	32.2	20.9
1	27.1	13.3	40.0	26.2

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

## **Requirements:**

The existing mounts are **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall verify modifications detailed in Construction Drawings by Maser Consulting Connecticut dated June 24, 2021 have been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

## **Attachments:**

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

# Mount Desktop – Post Modification Inspection (PMI) Report Requirements

## Documents & Photos Required from Contractor – **Passing Mount Analysis**

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>.

For additional questions and support, please reach out to [pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

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MDG #: 5000244881

SMART Project #: 10208082

Fuze Project ID: 17123908

**Purpose** – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

### **Base Requirements:**

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

### **Photo Requirements:**

- Photos taken at ground level
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

- These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

**Antenna & equipment placement and Geometry Confirmation:**

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.
  - The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

**Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:**

**Issue:**

Contractor shall verify modifications detailed in Construction Drawings by Maser Consulting Connecticut dated June 24, 2021 have been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications.**

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

**Response:**

**Special Instruction Confirmation:**

- The contractor has read and acknowledges the above special instructions.
- All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.
- The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR



The material utilized was approved by a SMART Tool engineering vendor as an “equivalent” and this approval is included as part of the contractor submission.

**Comments:**

--

**Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:**

Yes       No

**Contractor certifies no new damage created during the current installation:**

Yes       No

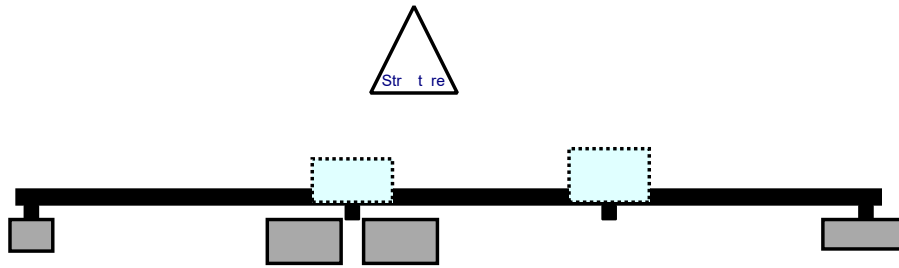
**Contractor to certify the condition of the safety climb and verify no damage when leaving the site:**

Safety Climb in Good Condition       Safety Climb Damaged

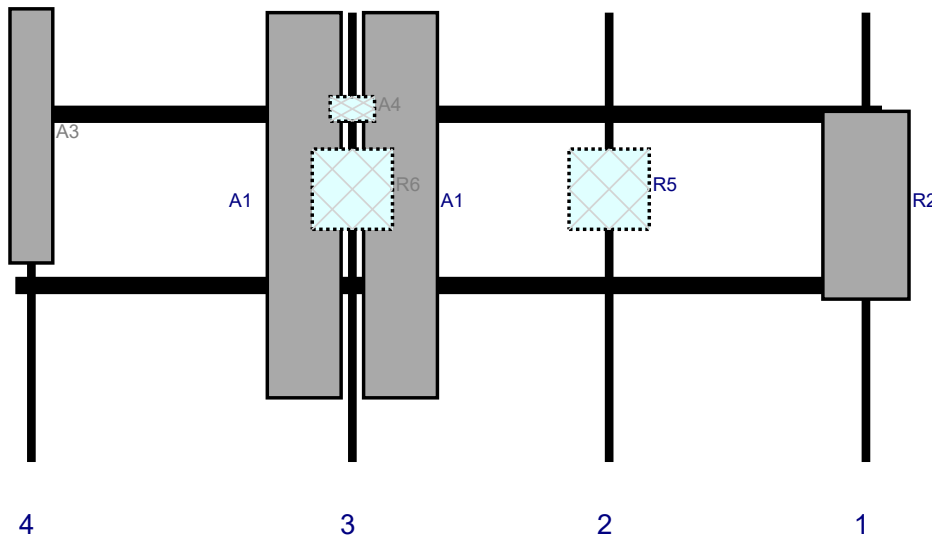
**Certifying Individual:**

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Plan View

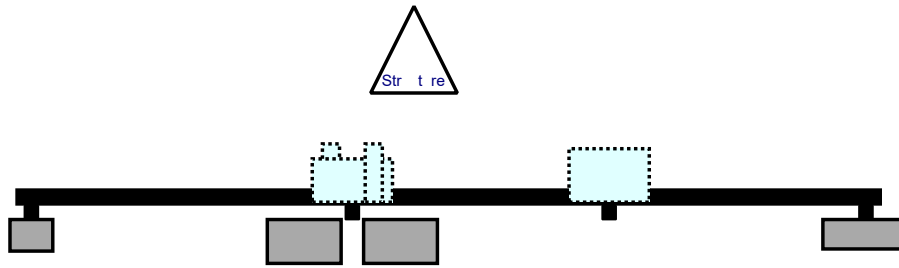


Front View - Looking at Str t re

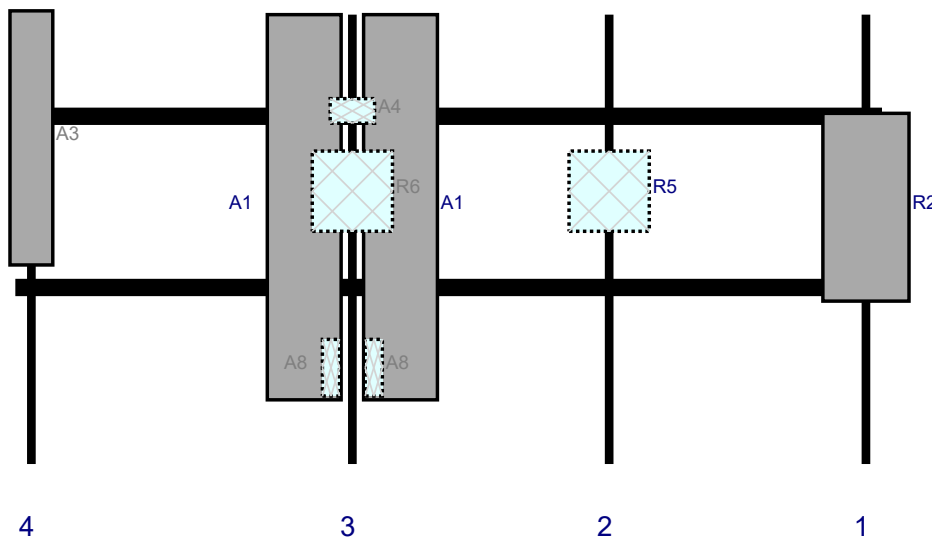


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
R2	MT6407-77A	35.1	16.1	159	1		Fro t	36	0	Ret i ed	
R5	B2/B66A RRH-BR049	15	15	111	2		Behi d	33	0	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	9	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	-9	Ret i ed	
A4	CBC1923Q-43	4.6	8.3	63	3		Behi d	18	0	Ret i ed	
R6	B5/B13 RRH-BR04C	15	15	63	3		Behi d	33	0	Ret i ed	
A3	B A-70080-4BF-EDIN-0	47.5	8	3	4		Fro t	23.04	0	Ret i ed	03/30/2021
OVP	DB-B1-6C-12AB-0Z	28.9	15.7			Me er				Ret i ed	

Plan View

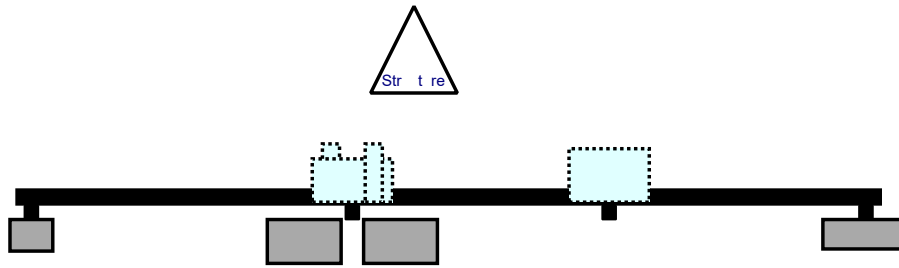


Front View - Looking at Structure

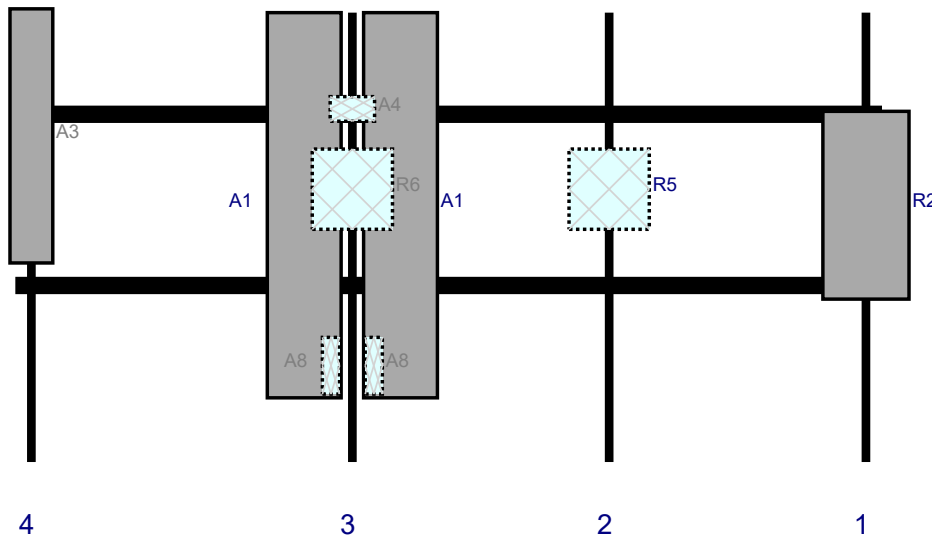


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
R2	MT6407-77A	35.1	16.1	159	1		Fro t	36	0	Ret i ed	
R5	B2/B66A RRH-BR049	15	15	111	2		Behi d	33	0	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	9	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	-9	Ret i ed	
A4	CBC1923Q-43	4.6	8.3	63	3		Behi d	18	0	Ret i ed	
R6	B5/B13 RRH-BR04C	15	15	63	3		Behi d	33	0	Ret i ed	
A8	A-6030	10.6	3.2	63	3		Behi d	66	4	Added	
A8	A-6030	10.6	3.2	63	3		Behi d	66	-4	Added	
A3	B A-70080-4BF-EDIN-0	47.5	8	3	4		Fro t	23.04	0	Ret i ed	03/30/2021

Plan View




Front View - Looking at Structure



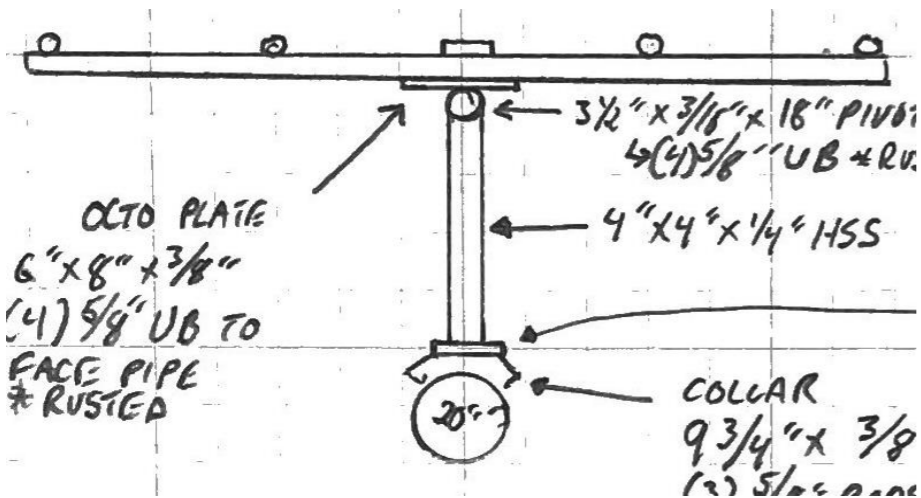
Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
R2	MT6407-77A	35.1	16.1	159	1		Fro t	36	0	Ret i ed	
R5	B2/B66A RRH-BR049	15	15	111	2		Behi d	33	0	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	9	Ret i ed	
A1	JAHH-65B-R3B	72	13.8	63	3		Fro t	36	-9	Ret i ed	
A4	CBC1923Q-43	4.6	8.3	63	3		Behi d	18	0	Ret i ed	
R6	B5/B13 RRH-BR04C	15	15	63	3		Behi d	33	0	Ret i ed	
A8	A-6030	10.6	3.2	63	3		Behi d	66	4	Added	
A8	A-6030	10.6	3.2	63	3		Behi d	66	-4	Added	
A3	B A-70080-4BF-EDIN-0	47.5	8	3	4		Fro t	23.04	0	Ret i ed	03/30/2021





	<b>Antenna Mount Mapping Form (PATENT PENDING)</b>			FCC #
				302498
Tower Owner:	AMERICAN TOWER	Mapping Date:	3/30/2021	
Site Name:	PLAINFIELD CT	Tower Type:	Monopole	
Site Number or ID:	468617	Tower Height (Ft.):		
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	111	

This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.



Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD. PIPE X 72" LONG	51.00	3.00	C1	2" STD. PIPE X 72" LONG	51.00	3.00
A2	2" STD. PIPE X 84" LONG	48.00	51.00	C2	2" STD. PIPE X 84" LONG	48.00	51.00
A3	2" STD. PIPE X 72" LONG	51.00	111.00	C3	2" STD. PIPE X 72" LONG	51.00	111.00
A4	2" STD. PIPE X 48" LONG	38.00	159.00	C4	2" STD. PIPE X 48" LONG	38.00	159.00
A5				C5			
A6				C6			
B1	2" STD. PIPE X 72" LONG	51.00	3.00	D1			
B2	2" STD. PIPE X 84" LONG	48.00	51.00	D2			
B3	2" STD. PIPE X 72" LONG	51.00	111.00	D3			
B4	2" STD. PIPE X 48" LONG	38.00	159.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :

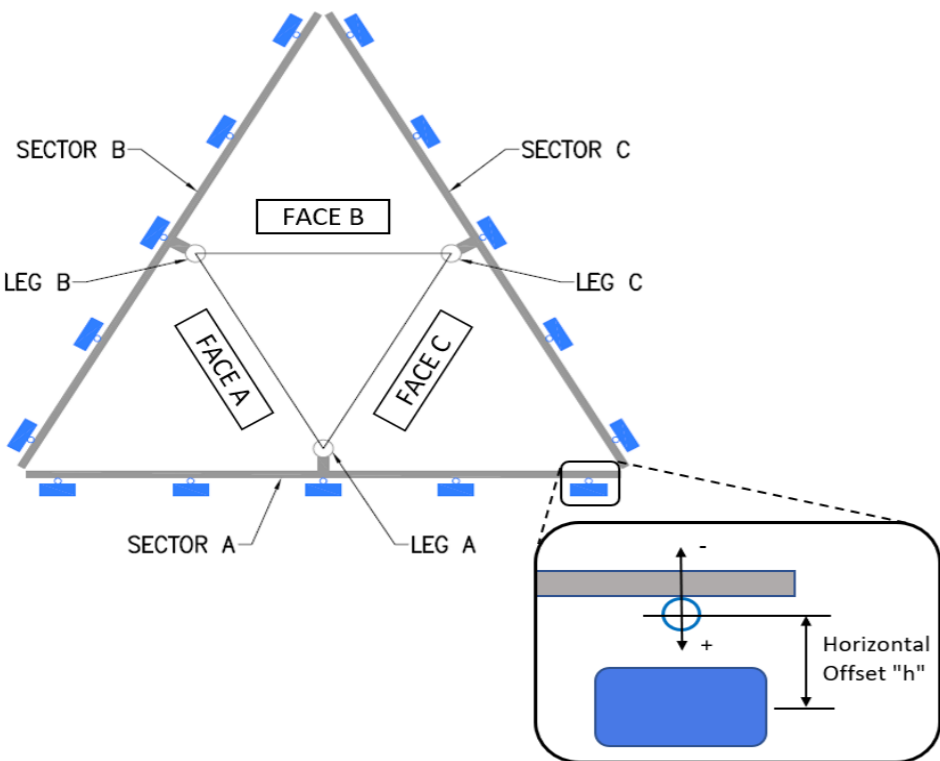
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :

Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :

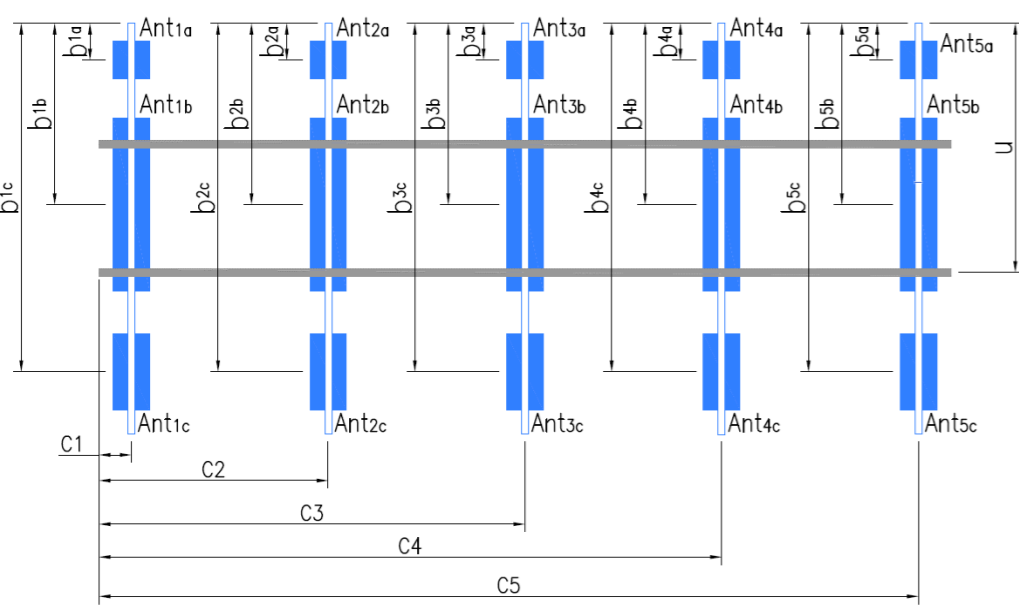
Please enter additional information or comments below.

MONOPOLE WALL THICKNESS: 0.219"

Tower Face Width at Mount Elev. (ft.):	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	20
--	---	----

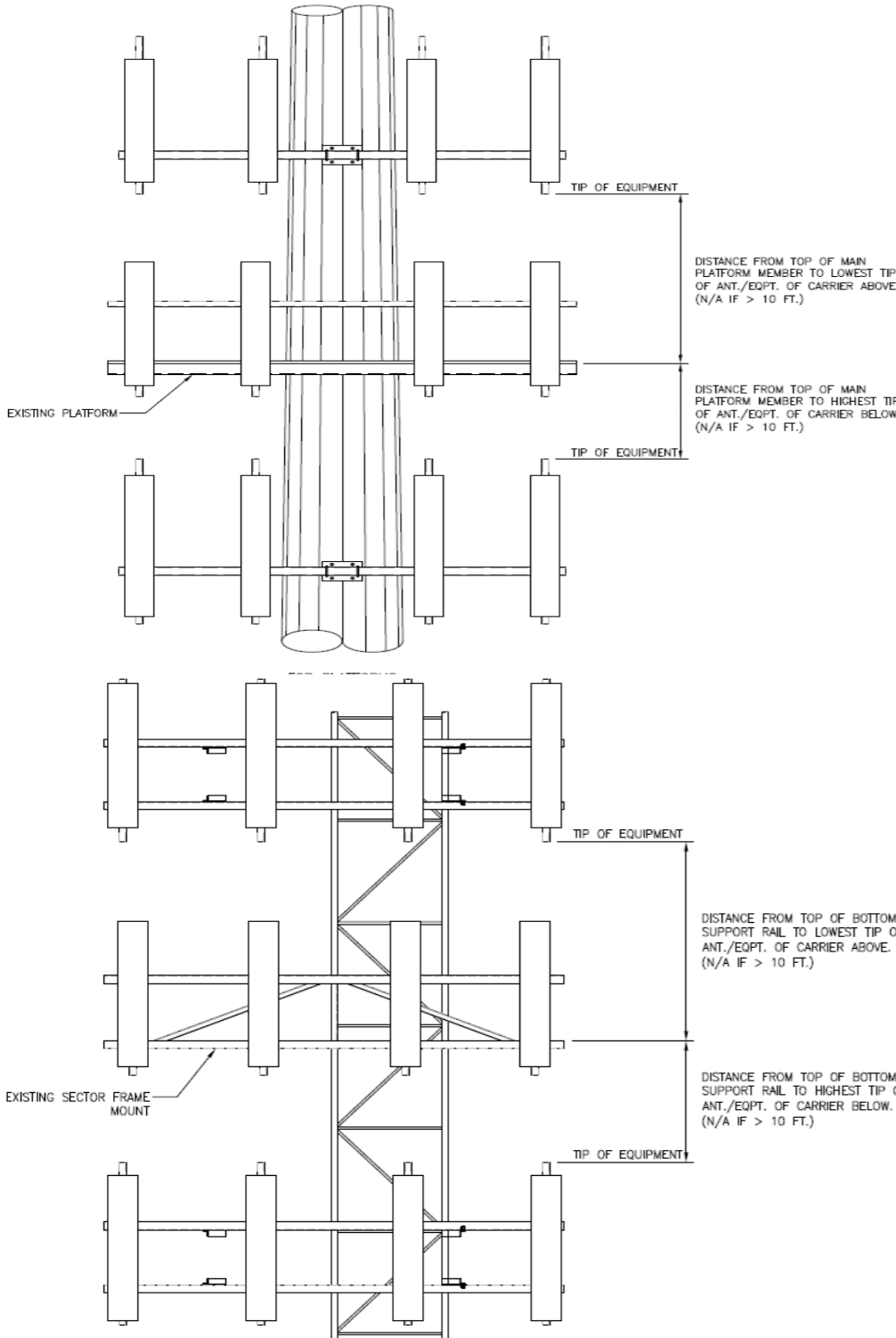


Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b <sub>1a</sub> , b <sub>2a</sub> , b <sub>3a</sub> , b <sub>1b</sub> ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
<b>Sector A</b>										
Ant <sub>1a</sub>	B4 RRH	11.00	6.00	36.00		112.75	30.00	-6.50		78
Ant <sub>1b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	5.00	75,78
Ant <sub>1c</sub>										
Ant <sub>2a</sub>	TMA					115				78
Ant <sub>2b</sub>	BXA-70063-6CF-EDIN	11.00	5.00	71.00		112.167	34.00	9.00	5.00	62,78
Ant <sub>2c</sub>										
Ant <sub>3a</sub>	TMA					115.25				80
Ant <sub>3b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	5.00	75,80
Ant <sub>3c</sub>										
Ant <sub>4a</sub>										
Ant <sub>4b</sub>	BXA-70080-48F-EDIN	8.00	6.00	48.00		112.167	24.00	8.50	5.00	63,80
Ant <sub>4c</sub>										
Ant <sub>5a</sub>										
Ant <sub>5b</sub>										
Ant <sub>5c</sub>										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRFDC-4415-PF	15.00	10.00	28.00						103
Ant on Tower										



**Antenna Layout (Looking Out From Tower)**

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B									
Sector A:	5.00	Deg	Leg A:		Deg	Ant <sub>1a</sub>	B4 RRH	11.00	6.00	36.00		112.75	30.00	-6.50		81	
Sector B:	120.00	Deg	Leg B:		Deg	Ant <sub>1b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	120.00	75,81	
Sector C:	245.00	Deg	Leg C:		Deg	Ant <sub>1c</sub>											
Sector D:		Deg	Leg D:		Deg	Ant <sub>2a</sub>	TMA					115				81	
<b>Climbing Facility Information</b>							Ant <sub>2b</sub>	BXA-70063-6CF-EDIN	11.00	5.00	71.00		112.167	34.00	9.00	120.00	62,81
Location:	100.00	Deg	N/A				Ant <sub>2c</sub>										
Climbing Facility	Corrosion Type:		Good condition.				Ant <sub>3a</sub>	TMA					115.25				82
	Access:		Climbing path was unobstructed.				Ant <sub>3b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	120.00	75,82
	Condition:		Good condition.				Ant <sub>3c</sub>										
							Ant <sub>4a</sub>										
							Ant <sub>4b</sub>	BXA-70080-48F-EDIN	8.00	6.00	48.00		112.167	24.00	8.50	120.00	63,82
							Ant <sub>4c</sub>										
							Ant <sub>5a</sub>										
							Ant <sub>5b</sub>										
							Ant <sub>5c</sub>										
							Ant on Standoff										
							Ant on Standoff										
							Ant on Tower										
							Ant on Tower										
							Sector C										
							Ant <sub>1a</sub>	B4 RRH	11.00	6.00	36.00		112.75	30.00	-6.50		39
							Ant <sub>1b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	245.00	39,75
							Ant <sub>1c</sub>										
							Ant <sub>2a</sub>	TMA					115				83
							Ant <sub>2b</sub>	BXA-70063-6CF-EDIN	11.00	5.00	71.00		112.167	34.00	9.00	245.00	62,83
							Ant <sub>2c</sub>										
							Ant <sub>3a</sub>	TMA					115.25				84
							Ant <sub>3b</sub>	HBXX-6517DS-A2M	12.00	6.00	75.00		113.125	25.50	9.50	245.00	75,84
							Ant <sub>3c</sub>										
							Ant <sub>4a</sub>										
							Ant <sub>4b</sub>	BXA-70080-48F-EDIN	8.00	6.00	48.00		112.167	24.00	8.50	245.00	63,84
							Ant <sub>4c</sub>										
							Ant <sub>5a</sub>										
							Ant <sub>5b</sub>										
							Ant <sub>5c</sub>										
							Ant on Standoff										
							Ant on Standoff										
							Ant on Tower										
							Ant on Tower										
							Sector D										
							Ant <sub>1a</sub>										
							Ant <sub>1b</sub>										
							Ant <sub>1c</sub>										
							Ant <sub>2a</sub>										
							Ant <sub>2b</sub>										
							Ant <sub>2c</sub>										
							Ant <sub>3a</sub>										
							Ant <sub>3b</sub>										
							Ant <sub>3c</sub>										
							Ant <sub>4a</sub>										
							Ant <sub>4b</sub>										
							Ant <sub>4c</sub>										
							Ant <sub>5a</sub>										
							Ant <sub>5b</sub>										
							Ant <sub>5c</sub>										
							Ant on Standoff										
							Ant on Standoff										
							Ant on Tower										
							Ant on Tower										



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

1		
2	(3) 1-5/8"Ø COAX, (9) 1-1/4"Ø COAX, (1) 1-1/4"Ø HYBRID	46-53
3	wall thickness .221 .219 .217	76
4		
5		
6		
7		
8		

**Mapping Notes**

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

**Standard Conditions**

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





### Antenna Mount Mapping Form (PATENT PENDING)

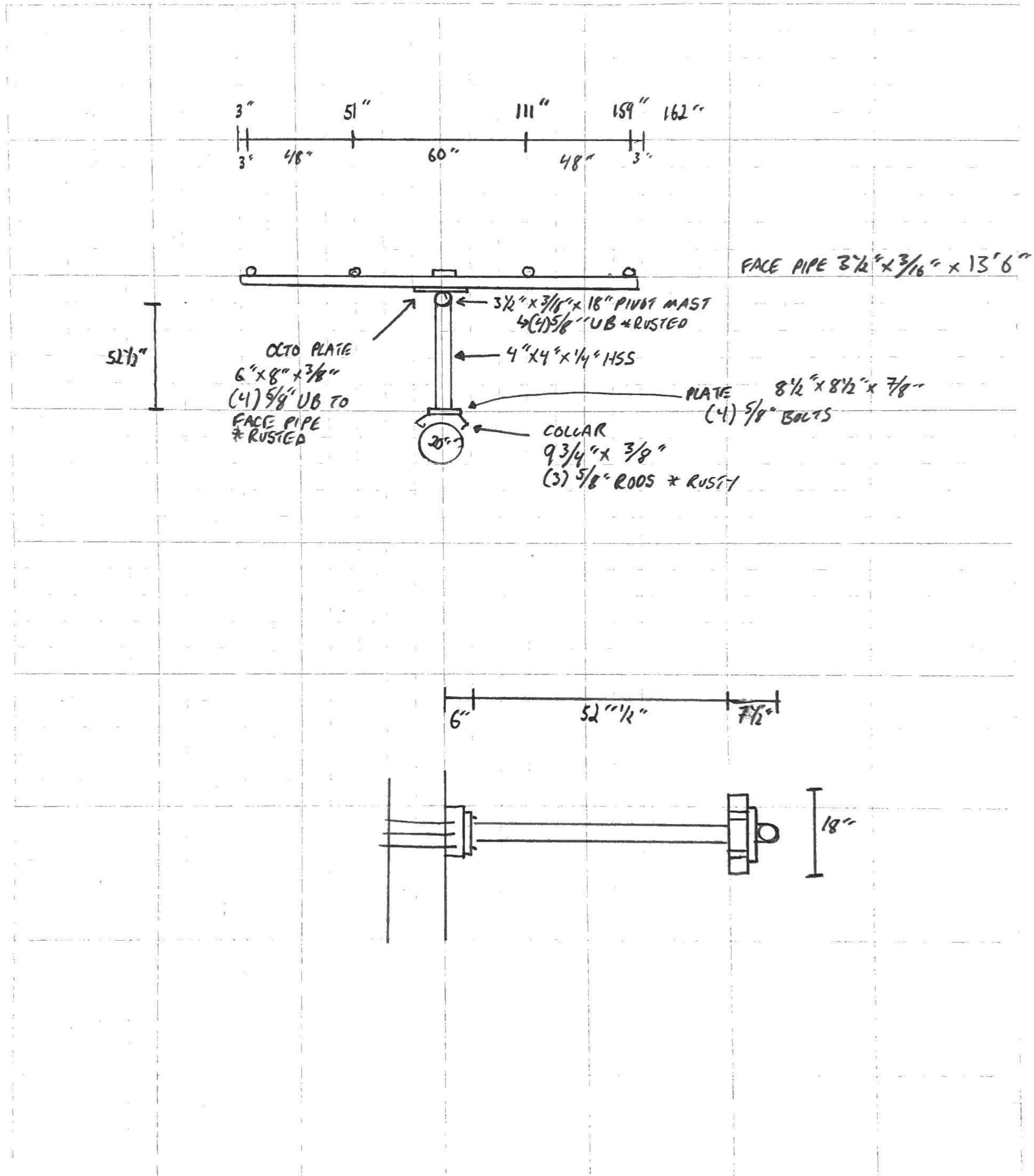
FCC #  
302498

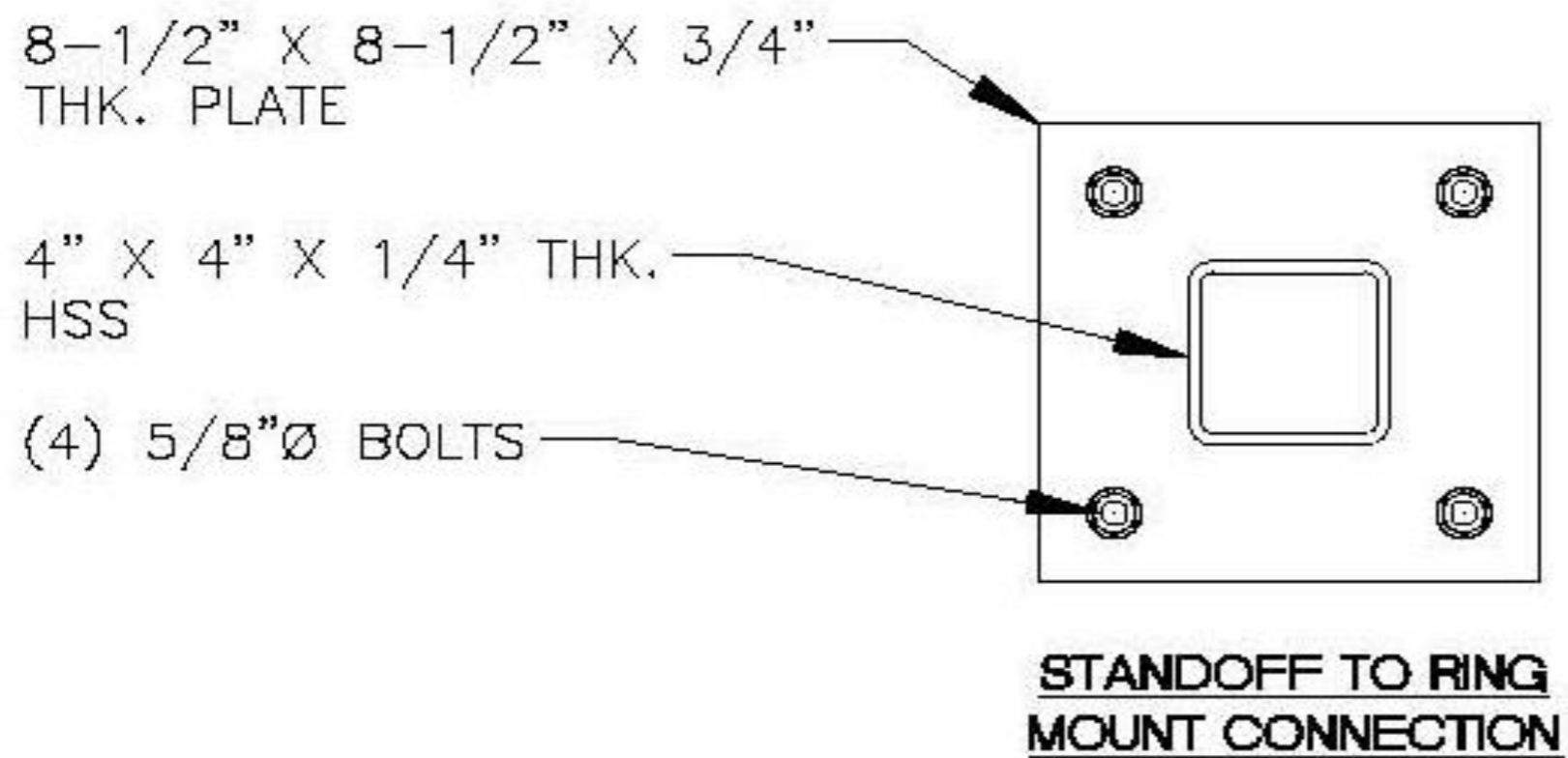
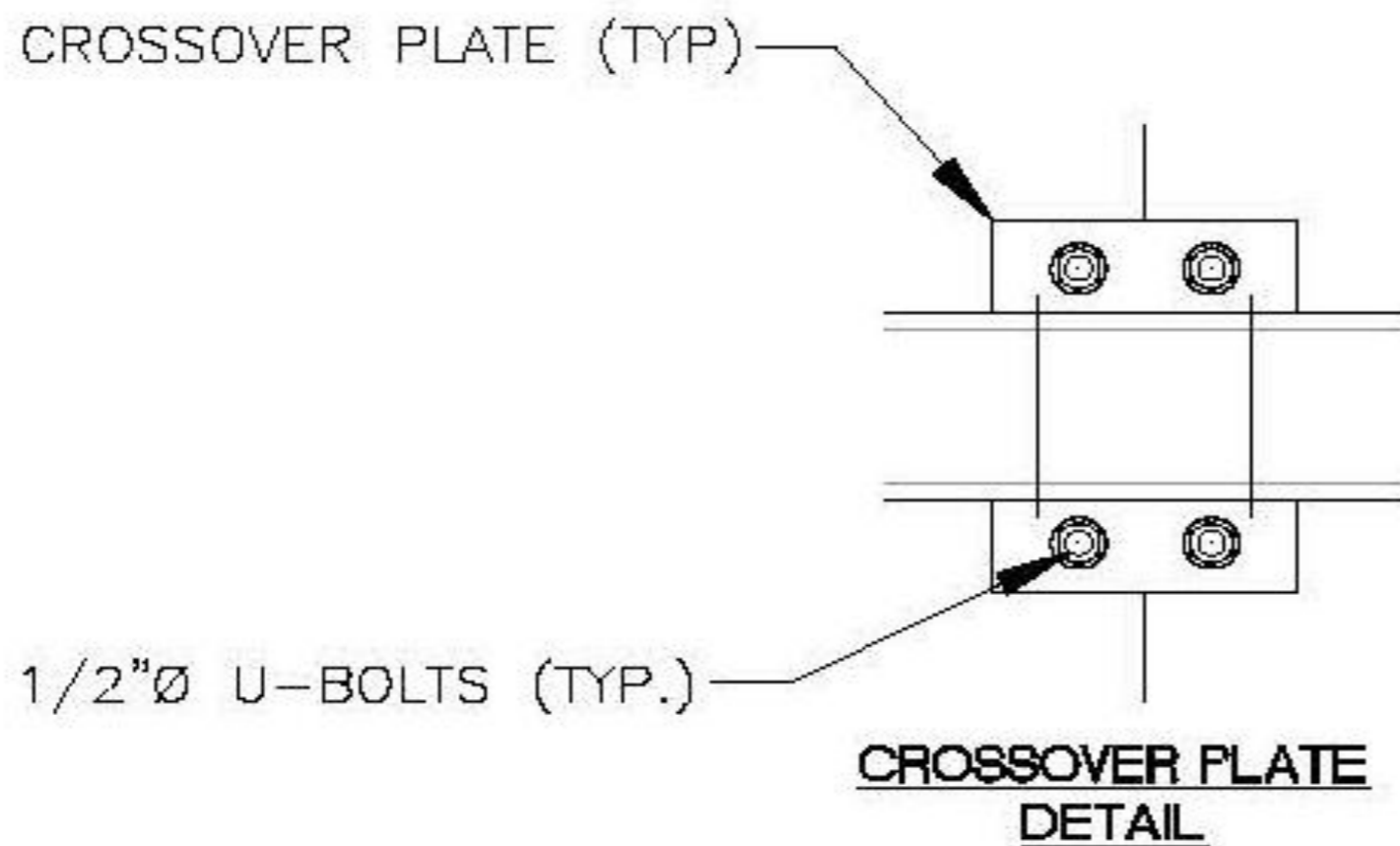
Tower Owner:	AMERICAN TOWER	Mapping Date:	3/30/2021
Site Name:	PLAINFIELD CT	Tower Type:	Monopole
Site Number or ID:	468617	Tower Height (Ft.):	
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	111

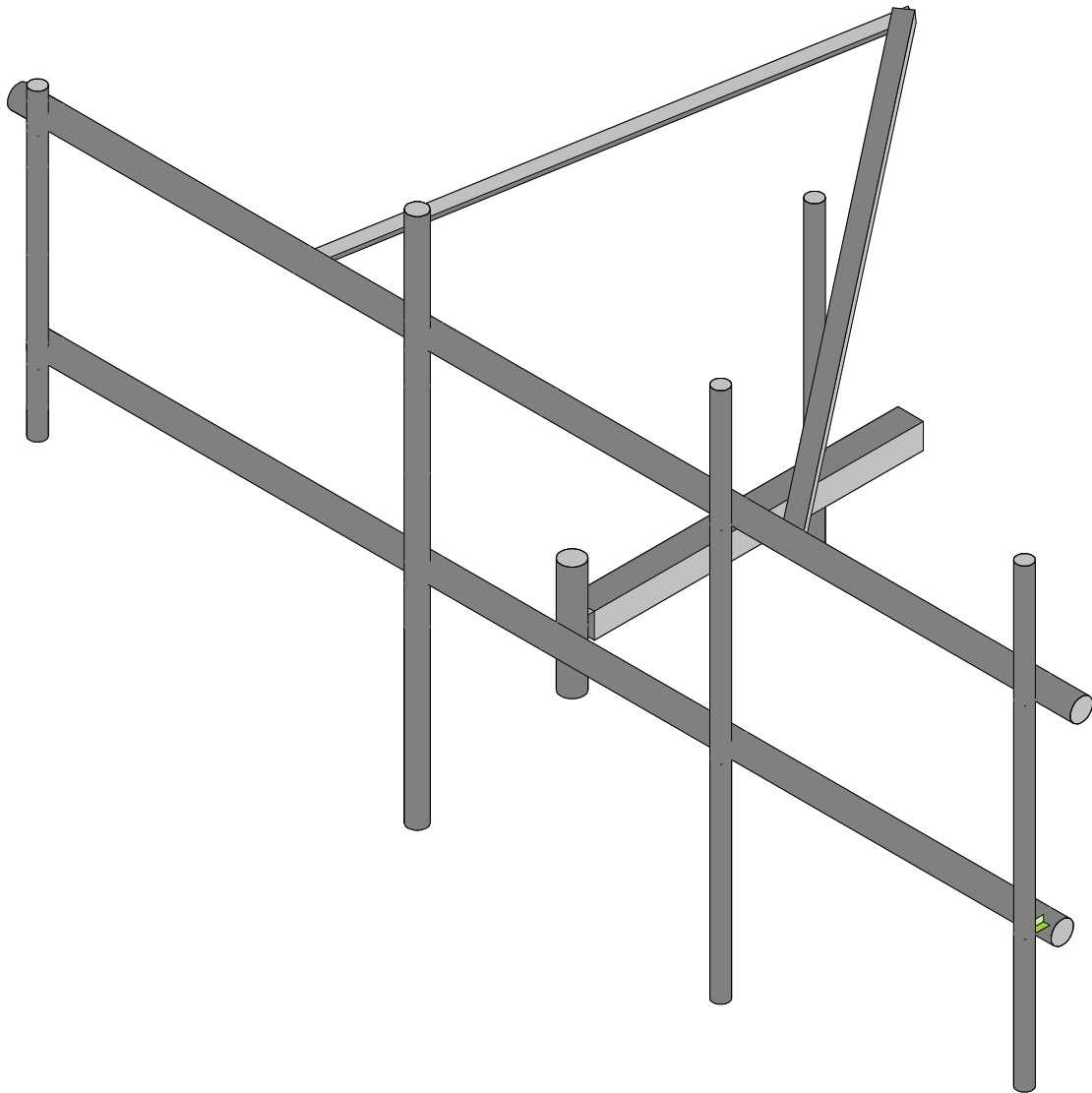
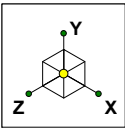
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please Insert Sketches of the Antenna Mount

DATE: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Project No.: PLAINFIELD CT  
 Design By: CR Chk'd By: \_\_\_\_\_ Page 2 of 2

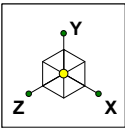




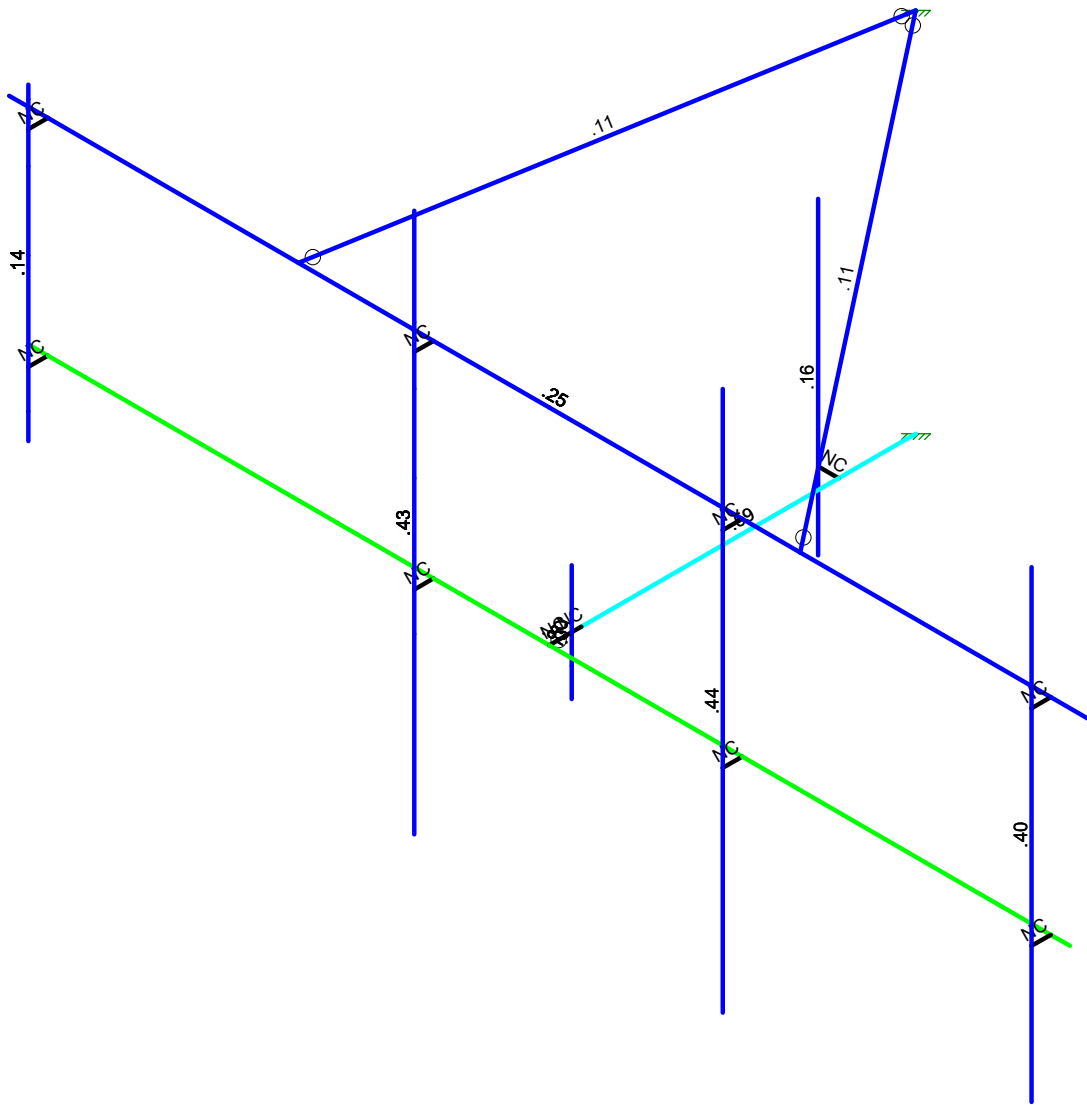


Envelope Only Solution

Colliers Engineering & De...		SK - 1
	5000244881-VZW_MT_LOT_SectorB_H	Aug 10, 2023 at 3:04 PM
Project No. 10208082		5000244881-VZW_MT_LOT_B_H....

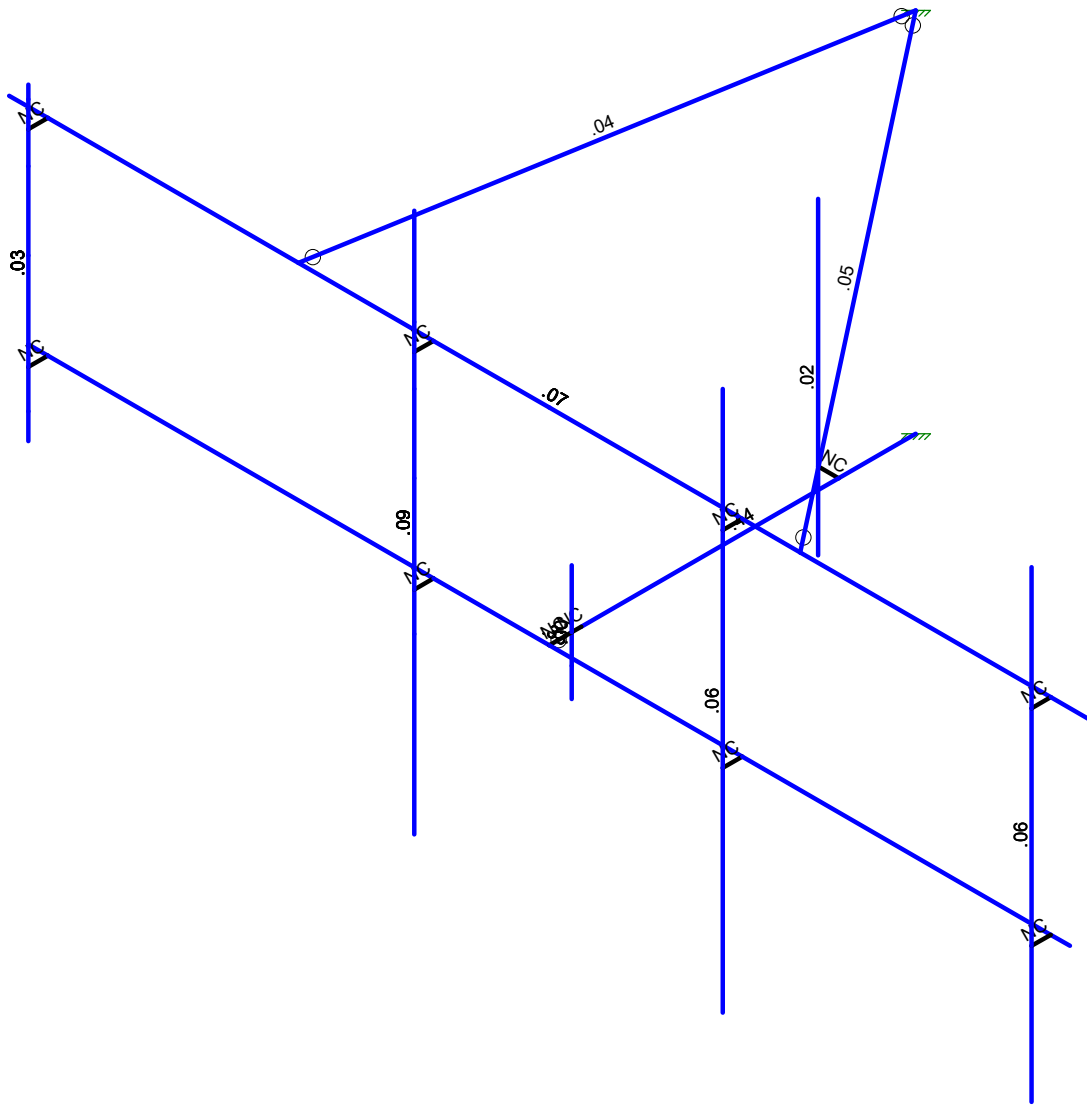
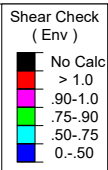
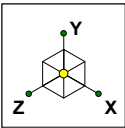


Code Check ( Env )	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & De...	5000244881-VZW_MT_LOT_SectorB_H	SK - 2
Project No. 10208082		Aug 10, 2023 at 3:04 PM
		5000244881-VZW_MT_LOT_B_H....



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Colliers Engineering & De...		SK - 3
	5000244881-VZW_MT_LOT_SectorB_H	Aug 10, 2023 at 3:05 PM
Project No. 10208082		5000244881-VZW_MT_LOT_B_H....



**Basic Load Cases**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Antenna D	None					48		
2	Antenna Di	None					48		
3	Antenna Wo (0 Deg)	None					48		
4	Antenna Wo (30 Deg)	None					48		
5	Antenna Wo (60 Deg)	None					48		
6	Antenna Wo (90 Deg)	None					48		
7	Antenna Wo (120 Deg)	None					48		
8	Antenna Wo (150 Deg)	None					48		
9	Antenna Wo (180 Deg)	None					48		
10	Antenna Wo (210 Deg)	None					48		
11	Antenna Wo (240 Deg)	None					48		
12	Antenna Wo (270 Deg)	None					48		
13	Antenna Wo (300 Deg)	None					48		
14	Antenna Wo (330 Deg)	None					48		
15	Antenna Wi (0 Deg)	None					48		
16	Antenna Wi (30 Deg)	None					48		
17	Antenna Wi (60 Deg)	None					48		
18	Antenna Wi (90 Deg)	None					48		
19	Antenna Wi (120 Deg)	None					48		
20	Antenna Wi (150 Deg)	None					48		
21	Antenna Wi (180 Deg)	None					48		
22	Antenna Wi (210 Deg)	None					48		
23	Antenna Wi (240 Deg)	None					48		
24	Antenna Wi (270 Deg)	None					48		
25	Antenna Wi (300 Deg)	None					48		
26	Antenna Wi (330 Deg)	None					48		
27	Antenna Wm (0 Deg)	None					48		
28	Antenna Wm (30 Deg)	None					48		
29	Antenna Wm (60 Deg)	None					48		
30	Antenna Wm (90 Deg)	None					48		
31	Antenna Wm (120 Deg)	None					48		
32	Antenna Wm (150 Deg)	None					48		
33	Antenna Wm (180 Deg)	None					48		
34	Antenna Wm (210 Deg)	None					48		
35	Antenna Wm (240 Deg)	None					48		
36	Antenna Wm (270 Deg)	None					48		
37	Antenna Wm (300 Deg)	None					48		
38	Antenna Wm (330 Deg)	None					48		
39	Structure D	None		-1					
40	Structure Di	None						11	
41	Structure Wo (0 Deg)	None						22	
42	Structure Wo (30 Deg)	None						22	
43	Structure Wo (60 Deg)	None						22	
44	Structure Wo (90 Deg)	None						22	
45	Structure Wo (120 Deg)	None						22	
46	Structure Wo (150 Deg)	None						22	
47	Structure Wo (180 Deg)	None						22	
48	Structure Wo (210 Deg)	None						22	
49	Structure Wo (240 Deg)	None						22	
50	Structure Wo (270 Deg)	None						22	
51	Structure Wo (300 Deg)	None						22	
52	Structure Wo (330 Deg)	None						22	
53	Structure Wi (0 Deg)	None						22	
54	Structure Wi (30 Deg)	None						22	
55	Structure Wi (60 Deg)	None						22	
56	Structure Wi (90 Deg)	None						22	





**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
57	Structure Wi (120 Deg)	None						22	
58	Structure Wi (150 Deg)	None						22	
59	Structure Wi (180 Deg)	None						22	
60	Structure Wi (210 Deg)	None						22	
61	Structure Wi (240 Deg)	None						22	
62	Structure Wi (270 Deg)	None						22	
63	Structure Wi (300 Deg)	None						22	
64	Structure Wi (330 Deg)	None						22	
65	Structure Wm (0 Deg)	None						22	
66	Structure Wm (30 Deg)	None						22	
67	Structure Wm (60 Deg)	None						22	
68	Structure Wm (90 Deg)	None						22	
69	Structure Wm (120 Deg)	None						22	
70	Structure Wm (150 Deg)	None						22	
71	Structure Wm (180 Deg)	None						22	
72	Structure Wm (210 Deg)	None						22	
73	Structure Wm (240 Deg)	None						22	
74	Structure Wm (270 Deg)	None						22	
75	Structure Wm (300 Deg)	None						22	
76	Structure Wm (330 Deg)	None						22	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		
81	Antenna Ev	None					48		
82	Antenna Eh (0 Deg)	None					32		
83	Antenna Eh (90 Deg)	None					32		
84	Structure Ev	ELY		-.04					
85	Structure Eh (0 Deg)	ELZ			-.1				
86	Structure Eh (90 Deg)	ELX	.1						

**Load Combinations**

	Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1				
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1				
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1				
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1				
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1				
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1				
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1				
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1				
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1				
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1				
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1				
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1				
13	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1
14	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1
15	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1
16	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1
17	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1
18	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1
19	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1
20	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1
21	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1
22	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1

### **Load Combinations (Continued)**

	Description	So...	P...	S...	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..		
23	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1						
26	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1						
27	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1						
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5										
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5										
51	1.4D	Yes	Y		1	1.4	39	1.4												
52	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5
54	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866
55	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866
57	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5
58	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5
60	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866
61	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866
63	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5
64	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5
66	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866
67	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866
69	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5
70	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5
72	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866
73	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866
75	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5





**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-0.	0	-2.552083	0	
2	N2	-0.	0	1.90625	0	
3	N3	-0.	-.75	1.90625	0	
4	N4	-0.	.75	1.90625	0	
5	N5	0	0	2.197917	0	
6	N6	6.75	0	2.197917	0	
7	N7	-6.75	0	2.197917	0	
8	N11	6.5	0	2.197917	0	
9	N12	6.5	0	2.447917	0	
10	N13	6.5	4.25	2.447917	0	
11	N14	6.5	-1.75	2.447917	0	
12	N21	-0.	-.375	1.90625	0	
13	N13A	2.5	0	2.197917	0	
14	N14A	2.5	0	2.447917	0	
15	N15	2.5	4.25	2.447917	0	
16	N16	2.5	-2.75	2.447917	0	
17	N17	-1.5	0	2.197917	0	
18	N18	-1.5	0	2.447917	0	
19	N19	-1.5	4.25	2.447917	0	
20	N20	-1.5	-2.75	2.447917	0	
21	N21A	-6.5	0	2.197917	0	
22	N22	-6.5	0	2.447917	0	
23	N23	-6.5	3.166667	2.447917	0	
24	N24	-6.5	-0.833333	2.447917	0	
25	N25	0.	0	1.78125	0	
26	N26	-6.5	-.5	2.447917	0	
27	N27	-6.5	3	2.447917	0	
28	N28	-6.5	1.25	2.447917	0	
29	N29	-0.	0	-1.552083	0	
30	N30	-0.266667	0	-1.552083	0	
31	N31	-0.266667	-1	-1.552083	0	
32	N32	-0.266667	3	-1.552083	0	
33	N33	-1.5	1.25	2.447917	0	
34	N34	-6.5	2.25	2.447917	0	
35	N35	-6.5	.25	2.447917	0	
36	N36	-1.5	3	2.447917	0	
37	N37	-1.5	-.5	2.447917	0	
38	N39	-1.5	2.25	2.447917	0	
39	N40	-1.5	.25	2.447917	0	
40	N41	0	2.666667	2.197917	0	
41	N42	7	2.666667	2.197917	0	
42	N43	-7	2.666667	2.197917	0	
43	N44	6.5	2.666667	2.197917	0	
44	N45	6.5	2.666667	2.447917	0	
45	N46	2.5	2.666667	2.197917	0	
46	N47	2.5	2.666667	2.447917	0	
47	N48	-1.5	2.666667	2.197917	0	
48	N49	-1.5	2.666667	2.447917	0	
49	N50	-6.5	2.666667	2.197917	0	
50	N51	-6.5	2.666667	2.447917	0	
51	N52	-6.5	2.75	2.447917	0	
52	N53	-3.25	2.666667	2.197917	0	
53	N54	3.25	2.666667	2.197917	0	
54	N55	-0.	4.75	-2.552083	0	



### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Mod Face Horizontal	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
3	Dual Mount Pipe	PIPE 2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
4	Standoff Arm	HSS4X4X4	Beam	Tube	A500 Gr.46	Typical	3.37	7.8	7.8	12.8
5	Mod Standoff Arm	HSS3X3X4	Beam	Tube	A500 Gr.46	Typical	2.44	3.02	3.02	5.08
6	Mod SFS	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011
7	Standoff Pipe	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
8	Horizontal	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69

### Hot Rolled Steel Properties

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

### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N25			Standoff Arm	Beam	Tube	A500 Gr.46	Typical
2	M2	N4	N3			Standoff Pipe	Column	Pipe	A53 Gr. B	Typical
3	M4	N7	N6			Horizontal	Column	Pipe	A53 Gr. B	Typical
4	MP1A	N13	N14			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
5	M8	N11	N12			RIGID	None	None	RIGID	Typical
6	M10A	N2	N5			RIGID	None	None	RIGID	Typical
7	MP2A	N15	N16			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
8	M8A	N13A	N14A			RIGID	None	None	RIGID	Typical
9	MP3A	N19	N20			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
10	M10	N17	N18			RIGID	None	None	RIGID	Typical
11	MP4A	N23	N24			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
12	M12	N21A	N22			RIGID	None	None	RIGID	Typical
13	M13	N2	N25			RIGID	None	None	RIGID	Typical
14	M14	N29	N30			RIGID	None	None	RIGID	Typical
15	OVP	N32	N31			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
16	M16	N43	N42			Mod Face Hori...	Column	Pipe	A53 Gr. B	Typical
17	M17	N44	N45			RIGID	None	None	RIGID	Typical
18	M18	N46	N47			RIGID	None	None	RIGID	Typical
19	M19	N48	N49			RIGID	None	None	RIGID	Typical
20	M20	N50	N51			RIGID	None	None	RIGID	Typical
21	M22	N53	N55		90	Mod SFS	Beam	Single Angle	A36 Gr.36	Typical
22	M23	N54	N55		180	Mod SFS	Beam	Single Angle	A36 Gr.36	Typical

### Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	Default			None
2	M2						Yes	** NA **			None
3	M4						Yes	** NA **			None
4	MP1A						Yes	** NA **			None
5	M8						Yes	** NA **			None



**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
6	M10A	OOOXXO					Yes	** NA **			None
7	MP2A						Yes	** NA **			None
8	M8A						Yes	** NA **			None
9	MP3A						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	MP4A						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	OVP						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M22	BenPIN	BenPIN				Yes				None
22	M23	BenPIN	BenPIN				Yes				None

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	Y	-31.65	1.25
2	MP3A	My	-.017	1.25
3	MP3A	Mz	.029	1.25
4	MP3A	Y	-31.65	4.75
5	MP3A	My	-.017	4.75
6	MP3A	Mz	.029	4.75
7	MP3A	Y	-31.65	1.25
8	MP3A	My	-.029	1.25
9	MP3A	Mz	-.017	1.25
10	MP3A	Y	-31.65	4.75
11	MP3A	My	-.029	4.75
12	MP3A	Mz	-.017	4.75
13	MP1A	Y	-43.55	2
14	MP1A	My	-.021	2
15	MP1A	Mz	.006	2
16	MP1A	Y	-43.55	4
17	MP1A	My	-.021	4
18	MP1A	Mz	.006	4
19	MP4A	Y	-6	.17
20	MP4A	My	-.004	.17
21	MP4A	Mz	0	.17
22	MP4A	Y	-6	3.67
23	MP4A	My	-.004	3.67
24	MP4A	Mz	0	3.67
25	MP3A	Y	-7.9	1.5
26	MP3A	My	.003	1.5
27	MP3A	Mz	0	1.5
28	MP2A	Y	-84.4	2.75
29	MP2A	My	.042	2.75
30	MP2A	Mz	0	2.75
31	MP3A	Y	-70.3	2.75
32	MP3A	My	.035	2.75
33	MP3A	Mz	0	2.75
34	OVP	Y	-32	1
35	OVP	My	0	1



Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10208082  
 Model Name : 5000244881-VZW\_MT\_LOT\_SectorB\_H

Aug 10, 2023  
 3:05 PM  
 Checked By: \_\_\_\_\_

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
36	OVP	Mz	0	1
37	MP3A	Y	-8.8	5
38	MP3A	My	.009	5
39	MP3A	Mz	.003	5
40	MP3A	Y	-8.8	6
41	MP3A	My	.009	6
42	MP3A	Mz	.003	6
43	MP3A	Y	-8.8	5
44	MP3A	My	.009	5
45	MP3A	Mz	-.003	5
46	MP3A	Y	-8.8	6
47	MP3A	My	.009	6
48	MP3A	Mz	-.003	6

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	Y	-68.407	1.25
2	MP3A	My	-.036	1.25
3	MP3A	Mz	.063	1.25
4	MP3A	Y	-68.407	4.75
5	MP3A	My	-.036	4.75
6	MP3A	Mz	.063	4.75
7	MP3A	Y	-68.407	1.25
8	MP3A	My	-.063	1.25
9	MP3A	Mz	-.036	1.25
10	MP3A	Y	-68.407	4.75
11	MP3A	My	-.063	4.75
12	MP3A	Mz	-.036	4.75
13	MP1A	Y	-34.815	2
14	MP1A	My	-.017	2
15	MP1A	Mz	.005	2
16	MP1A	Y	-34.815	4
17	MP1A	My	-.017	4
18	MP1A	Mz	.005	4
19	MP4A	Y	-30.018	.17
20	MP4A	My	-.021	.17
21	MP4A	Mz	0	.17
22	MP4A	Y	-30.018	3.67
23	MP4A	My	-.021	3.67
24	MP4A	Mz	0	3.67
25	MP3A	Y	-8.223	1.5
26	MP3A	My	.003	1.5
27	MP3A	Mz	0	1.5
28	MP2A	Y	-43.879	2.75
29	MP2A	My	.022	2.75
30	MP2A	Mz	0	2.75
31	MP3A	Y	-39.455	2.75
32	MP3A	My	.02	2.75
33	MP3A	Mz	0	2.75
34	OVP	Y	-74.263	1
35	OVP	My	0	1
36	OVP	Mz	0	1
37	MP3A	Y	3.3	5
38	MP3A	My	-.003	5
39	MP3A	Mz	-.001	5
40	MP3A	Y	3.3	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP3A	My	-.003	6
42	MP3A	Mz	-.001	6
43	MP3A	Y	3.3	5
44	MP3A	My	-.003	5
45	MP3A	Mz	.001	5
46	MP3A	Y	3.3	6
47	MP3A	My	-.003	6
48	MP3A	Mz	.001	6

**Member Point Loads (BLC 3 : Antenna Wo (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1.25
2	MP3A	Z	-152.544	1.25
3	MP3A	Mx	-.14	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	-152.544	4.75
6	MP3A	Mx	-.14	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	-152.544	1.25
9	MP3A	Mx	.081	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	-152.544	4.75
12	MP3A	Mx	.081	4.75
13	MP1A	X	0	2
14	MP1A	Z	-64.233	2
15	MP1A	Mx	-.008	2
16	MP1A	X	0	4
17	MP1A	Z	-64.233	4
18	MP1A	Mx	-.008	4
19	MP4A	X	0	.17
20	MP4A	Z	-61.014	.17
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	-61.014	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5
26	MP3A	Z	-10.969	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	-53.13	2.75
30	MP2A	Mx	0	2.75
31	MP3A	X	0	2.75
32	MP3A	Z	-53.13	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	-118.932	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	-16.453	5
39	MP3A	Mx	-.005	5
40	MP3A	X	0	6
41	MP3A	Z	-16.453	6
42	MP3A	Mx	-.005	6
43	MP3A	X	0	5
44	MP3A	Z	-16.453	5
45	MP3A	Mx	.005	5



**Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
46	MP3A	X	0	6
47	MP3A	Z	-16.453	6
48	MP3A	Mx	.005	6

**Member Point Loads (BLC 4 : Antenna Wo (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	64.67	1.25
2	MP3A	Z	-112.012	1.25
3	MP3A	Mx	-.137	1.25
4	MP3A	X	64.67	4.75
5	MP3A	Z	-112.012	4.75
6	MP3A	Mx	-.137	4.75
7	MP3A	X	64.67	1.25
8	MP3A	Z	-112.012	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	64.67	4.75
11	MP3A	Z	-112.012	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	22.58	2
14	MP1A	Z	-39.11	2
15	MP1A	Mx	-.016	2
16	MP1A	X	22.58	4
17	MP1A	Z	-39.11	4
18	MP1A	Mx	-.016	4
19	MP4A	X	28.863	.17
20	MP4A	Z	-49.993	.17
21	MP4A	Mx	-.02	.17
22	MP4A	X	28.863	3.67
23	MP4A	Z	-49.993	3.67
24	MP4A	Mx	-.02	3.67
25	MP3A	X	4.655	1.5
26	MP3A	Z	-8.063	1.5
27	MP3A	Mx	.002	1.5
28	MP2A	X	24.38	2.75
29	MP2A	Z	-42.227	2.75
30	MP2A	Mx	.012	2.75
31	MP3A	X	23.566	2.75
32	MP3A	Z	-40.817	2.75
33	MP3A	Mx	.012	2.75
34	OVP	X	64.956	1
35	OVP	Z	-112.507	1
36	OVP	Mx	0	1
37	MP3A	X	8.233	5
38	MP3A	Z	-14.259	5
39	MP3A	Mx	.003	5
40	MP3A	X	8.233	6
41	MP3A	Z	-14.259	6
42	MP3A	Mx	.003	6
43	MP3A	X	8.233	5
44	MP3A	Z	-14.259	5
45	MP3A	Mx	.013	5
46	MP3A	X	8.233	6
47	MP3A	Z	-14.259	6
48	MP3A	Mx	.013	6



**Member Point Loads (BLC 5 : Antenna Wo (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	91.917	1.25
2	MP3A	Z	-53.068	1.25
3	MP3A	Mx	-.097	1.25
4	MP3A	X	91.917	4.75
5	MP3A	Z	-53.068	4.75
6	MP3A	Mx	-.097	4.75
7	MP3A	X	91.917	1.25
8	MP3A	Z	-53.068	1.25
9	MP3A	Mx	-.056	1.25
10	MP3A	X	91.917	4.75
11	MP3A	Z	-53.068	4.75
12	MP3A	Mx	-.056	4.75
13	MP1A	X	22.593	2
14	MP1A	Z	-13.044	2
15	MP1A	Mx	-.013	2
16	MP1A	X	22.593	4
17	MP1A	Z	-13.044	4
18	MP1A	Mx	-.013	4
19	MP4A	X	44.299	.17
20	MP4A	Z	-25.576	.17
21	MP4A	Mx	-.031	.17
22	MP4A	X	44.299	3.67
23	MP4A	Z	-25.576	3.67
24	MP4A	Mx	-.031	3.67
25	MP3A	X	5.191	1.5
26	MP3A	Z	-2.997	1.5
27	MP3A	Mx	.002	1.5
28	MP2A	X	34.657	2.75
29	MP2A	Z	-20.009	2.75
30	MP2A	Mx	.017	2.75
31	MP3A	X	30.427	2.75
32	MP3A	Z	-17.567	2.75
33	MP3A	Mx	.015	2.75
34	OVP	X	102.998	1
35	OVP	Z	-59.466	1
36	OVP	Mx	0	1
37	MP3A	X	14.28	5
38	MP3A	Z	-8.245	5
39	MP3A	Mx	.012	5
40	MP3A	X	14.28	6
41	MP3A	Z	-8.245	6
42	MP3A	Mx	.012	6
43	MP3A	X	14.28	5
44	MP3A	Z	-8.245	5
45	MP3A	Mx	.017	5
46	MP3A	X	14.28	6
47	MP3A	Z	-8.245	6
48	MP3A	Mx	.017	6

**Member Point Loads (BLC 6 : Antenna Wo (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	106.137	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	-.056	1.25
4	MP3A	X	106.137	4.75
5	MP3A	Z	0	4.75





**Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP3A	Mx	-0.056	4.75
7	MP3A	X	106.137	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	-0.097	1.25
10	MP3A	X	106.137	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	-0.097	4.75
13	MP1A	X	26.088	2
14	MP1A	Z	0	2
15	MP1A	Mx	-0.013	2
16	MP1A	X	26.088	4
17	MP1A	Z	0	4
18	MP1A	Mx	-0.013	4
19	MP4A	X	47.866	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	-0.034	.17
22	MP4A	X	47.866	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	-0.034	3.67
25	MP3A	X	4.336	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	.002	1.5
28	MP2A	X	35.649	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	.018	2.75
31	MP3A	X	29.136	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	.015	2.75
34	OVP	X	96.971	1
35	OVP	Z	0	1
36	OVP	Mx	0	1
37	MP3A	X	16.502	5
38	MP3A	Z	0	5
39	MP3A	Mx	.017	5
40	MP3A	X	16.502	6
41	MP3A	Z	0	6
42	MP3A	Mx	.017	6
43	MP3A	X	16.502	5
44	MP3A	Z	0	5
45	MP3A	Mx	.017	5
46	MP3A	X	16.502	6
47	MP3A	Z	0	6
48	MP3A	Mx	.017	6

**Member Point Loads (BLC 7 : Antenna Wo (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	112.012	1.25
2	MP3A	Z	64.67	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	112.012	4.75
5	MP3A	Z	64.67	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	112.012	1.25
8	MP3A	Z	64.67	1.25
9	MP3A	Mx	-0.137	1.25
10	MP3A	X	112.012	4.75





**Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
11	MP3A	Z	64.67	4.75
12	MP3A	Mx	-.137	4.75
13	MP1A	X	39.11	2
14	MP1A	Z	22.58	2
15	MP1A	Mx	-.016	2
16	MP1A	X	39.11	4
17	MP1A	Z	22.58	4
18	MP1A	Mx	-.016	4
19	MP4A	X	44.299	.17
20	MP4A	Z	25.576	.17
21	MP4A	Mx	-.031	.17
22	MP4A	X	44.299	3.67
23	MP4A	Z	25.576	3.67
24	MP4A	Mx	-.031	3.67
25	MP3A	X	5.191	1.5
26	MP3A	Z	2.997	1.5
27	MP3A	Mx	.002	1.5
28	MP2A	X	34.657	2.75
29	MP2A	Z	20.009	2.75
30	MP2A	Mx	.017	2.75
31	MP3A	X	30.427	2.75
32	MP3A	Z	17.567	2.75
33	MP3A	Mx	.015	2.75
34	OVP	X	74.471	1
35	OVP	Z	42.996	1
36	OVP	Mx	0	1
37	MP3A	X	14.28	5
38	MP3A	Z	8.245	5
39	MP3A	Mx	.017	5
40	MP3A	X	14.28	6
41	MP3A	Z	8.245	6
42	MP3A	Mx	.017	6
43	MP3A	X	14.28	5
44	MP3A	Z	8.245	5
45	MP3A	Mx	.012	5
46	MP3A	X	14.28	6
47	MP3A	Z	8.245	6
48	MP3A	Mx	.012	6

**Member Point Loads (BLC 8 : Antenna Wo (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	76.272	1.25
2	MP3A	Z	132.107	1.25
3	MP3A	Mx	.081	1.25
4	MP3A	X	76.272	4.75
5	MP3A	Z	132.107	4.75
6	MP3A	Mx	.081	4.75
7	MP3A	X	76.272	1.25
8	MP3A	Z	132.107	1.25
9	MP3A	Mx	-.14	1.25
10	MP3A	X	76.272	4.75
11	MP3A	Z	132.107	4.75
12	MP3A	Mx	-.14	4.75
13	MP1A	X	32.117	2
14	MP1A	Z	55.628	2
15	MP1A	Mx	-.008	2



Company : Colliers Engineering & Design  
 Designer :  
 Job Number : Project No. 10208082  
 Model Name : 5000244881-VZW\_MT\_LOT\_SectorB\_H

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

**Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
16	MP1A	X	32.117	4
17	MP1A	Z	55.628	4
18	MP1A	Mx	-.008	4
19	MP4A	X	28.863	.17
20	MP4A	Z	49.993	.17
21	MP4A	Mx	-.02	.17
22	MP4A	X	28.863	3.67
23	MP4A	Z	49.993	3.67
24	MP4A	Mx	-.02	3.67
25	MP3A	X	4.655	1.5
26	MP3A	Z	8.063	1.5
27	MP3A	Mx	.002	1.5
28	MP2A	X	24.38	2.75
29	MP2A	Z	42.227	2.75
30	MP2A	Mx	.012	2.75
31	MP3A	X	23.566	2.75
32	MP3A	Z	40.817	2.75
33	MP3A	Mx	.012	2.75
34	OVP	X	48.486	1
35	OVP	Z	83.98	1
36	OVP	Mx	0	1
37	MP3A	X	8.233	5
38	MP3A	Z	14.259	5
39	MP3A	Mx	.013	5
40	MP3A	X	8.233	6
41	MP3A	Z	14.259	6
42	MP3A	Mx	.013	6
43	MP3A	X	8.233	5
44	MP3A	Z	14.259	5
45	MP3A	Mx	.003	5
46	MP3A	X	8.233	6
47	MP3A	Z	14.259	6
48	MP3A	Mx	.003	6

**Member Point Loads (BLC 9 : Antenna Wo (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1.25
2	MP3A	Z	152.544	1.25
3	MP3A	Mx	.14	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	152.544	4.75
6	MP3A	Mx	.14	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	152.544	1.25
9	MP3A	Mx	-.081	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	152.544	4.75
12	MP3A	Mx	-.081	4.75
13	MP1A	X	0	2
14	MP1A	Z	64.233	2
15	MP1A	Mx	.008	2
16	MP1A	X	0	4
17	MP1A	Z	64.233	4
18	MP1A	Mx	.008	4
19	MP4A	X	0	.17
20	MP4A	Z	61.014	.17



**Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	61.014	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5
26	MP3A	Z	10.969	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	53.13	2.75
30	MP2A	Mx	0	2.75
31	MP3A	X	0	2.75
32	MP3A	Z	53.13	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	118.932	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	16.453	5
39	MP3A	Mx	.005	5
40	MP3A	X	0	6
41	MP3A	Z	16.453	6
42	MP3A	Mx	.005	6
43	MP3A	X	0	5
44	MP3A	Z	16.453	5
45	MP3A	Mx	-.005	5
46	MP3A	X	0	6
47	MP3A	Z	16.453	6
48	MP3A	Mx	-.005	6

**Member Point Loads (BLC 10 : Antenna Wo (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-64.67	1.25
2	MP3A	Z	112.012	1.25
3	MP3A	Mx	.137	1.25
4	MP3A	X	-64.67	4.75
5	MP3A	Z	112.012	4.75
6	MP3A	Mx	.137	4.75
7	MP3A	X	-64.67	1.25
8	MP3A	Z	112.012	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	-64.67	4.75
11	MP3A	Z	112.012	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	-22.58	2
14	MP1A	Z	39.11	2
15	MP1A	Mx	.016	2
16	MP1A	X	-22.58	4
17	MP1A	Z	39.11	4
18	MP1A	Mx	.016	4
19	MP4A	X	-28.863	.17
20	MP4A	Z	49.993	.17
21	MP4A	Mx	.02	.17
22	MP4A	X	-28.863	3.67
23	MP4A	Z	49.993	3.67
24	MP4A	Mx	.02	3.67
25	MP3A	X	-4.655	1.5



**Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
26	MP3A	Z	8.063	1.5
27	MP3A	Mx	-0.002	1.5
28	MP2A	X	-24.38	2.75
29	MP2A	Z	42.227	2.75
30	MP2A	Mx	-0.12	2.75
31	MP3A	X	-23.566	2.75
32	MP3A	Z	40.817	2.75
33	MP3A	Mx	-0.12	2.75
34	OVP	X	-64.956	1
35	OVP	Z	112.507	1
36	OVP	Mx	0	1
37	MP3A	X	-8.233	5
38	MP3A	Z	14.259	5
39	MP3A	Mx	-0.003	5
40	MP3A	X	-8.233	6
41	MP3A	Z	14.259	6
42	MP3A	Mx	-0.003	6
43	MP3A	X	-8.233	5
44	MP3A	Z	14.259	5
45	MP3A	Mx	-0.13	5
46	MP3A	X	-8.233	6
47	MP3A	Z	14.259	6
48	MP3A	Mx	-0.13	6

**Member Point Loads (BLC 11 : Antenna Wo (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-91.917	1.25
2	MP3A	Z	53.068	1.25
3	MP3A	Mx	.097	1.25
4	MP3A	X	-91.917	4.75
5	MP3A	Z	53.068	4.75
6	MP3A	Mx	.097	4.75
7	MP3A	X	-91.917	1.25
8	MP3A	Z	53.068	1.25
9	MP3A	Mx	.056	1.25
10	MP3A	X	-91.917	4.75
11	MP3A	Z	53.068	4.75
12	MP3A	Mx	.056	4.75
13	MP1A	X	-22.593	2
14	MP1A	Z	13.044	2
15	MP1A	Mx	.013	2
16	MP1A	X	-22.593	4
17	MP1A	Z	13.044	4
18	MP1A	Mx	.013	4
19	MP4A	X	-44.299	.17
20	MP4A	Z	25.576	.17
21	MP4A	Mx	.031	.17
22	MP4A	X	-44.299	3.67
23	MP4A	Z	25.576	3.67
24	MP4A	Mx	.031	3.67
25	MP3A	X	-5.191	1.5
26	MP3A	Z	2.997	1.5
27	MP3A	Mx	-0.002	1.5
28	MP2A	X	-34.657	2.75
29	MP2A	Z	20.009	2.75
30	MP2A	Mx	-0.17	2.75



**Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP3A	X	-30.427	2.75
32	MP3A	Z	17.567	2.75
33	MP3A	Mx	-.015	2.75
34	OVP	X	-102.998	1
35	OVP	Z	59.466	1
36	OVP	Mx	0	1
37	MP3A	X	-14.28	5
38	MP3A	Z	8.245	5
39	MP3A	Mx	-.012	5
40	MP3A	X	-14.28	6
41	MP3A	Z	8.245	6
42	MP3A	Mx	-.012	6
43	MP3A	X	-14.28	5
44	MP3A	Z	8.245	5
45	MP3A	Mx	-.017	5
46	MP3A	X	-14.28	6
47	MP3A	Z	8.245	6
48	MP3A	Mx	-.017	6

**Member Point Loads (BLC 12 : Antenna Wo (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-106.137	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	.056	1.25
4	MP3A	X	-106.137	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.056	4.75
7	MP3A	X	-106.137	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	.097	1.25
10	MP3A	X	-106.137	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.097	4.75
13	MP1A	X	-26.088	2
14	MP1A	Z	0	2
15	MP1A	Mx	.013	2
16	MP1A	X	-26.088	4
17	MP1A	Z	0	4
18	MP1A	Mx	.013	4
19	MP4A	X	-47.866	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	.034	.17
22	MP4A	X	-47.866	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	.034	3.67
25	MP3A	X	-4.336	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	-.002	1.5
28	MP2A	X	-35.649	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	-.018	2.75
31	MP3A	X	-29.136	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	-.015	2.75
34	OVP	X	-96.971	1
35	OVP	Z	0	1



**Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
36	OVP	Mx	0	1
37	MP3A	X	-16.502	5
38	MP3A	Z	0	5
39	MP3A	Mx	-.017	5
40	MP3A	X	-16.502	6
41	MP3A	Z	0	6
42	MP3A	Mx	-.017	6
43	MP3A	X	-16.502	5
44	MP3A	Z	0	5
45	MP3A	Mx	-.017	5
46	MP3A	X	-16.502	6
47	MP3A	Z	0	6
48	MP3A	Mx	-.017	6

**Member Point Loads (BLC 13 : Antenna Wo (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-112.012	1.25
2	MP3A	Z	-64.67	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	-112.012	4.75
5	MP3A	Z	-64.67	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	-112.012	1.25
8	MP3A	Z	-64.67	1.25
9	MP3A	Mx	.137	1.25
10	MP3A	X	-112.012	4.75
11	MP3A	Z	-64.67	4.75
12	MP3A	Mx	.137	4.75
13	MP1A	X	-39.11	2
14	MP1A	Z	-22.58	2
15	MP1A	Mx	.016	2
16	MP1A	X	-39.11	4
17	MP1A	Z	-22.58	4
18	MP1A	Mx	.016	4
19	MP4A	X	-44.299	.17
20	MP4A	Z	-25.576	.17
21	MP4A	Mx	.031	.17
22	MP4A	X	-44.299	3.67
23	MP4A	Z	-25.576	3.67
24	MP4A	Mx	.031	3.67
25	MP3A	X	-5.191	1.5
26	MP3A	Z	-2.997	1.5
27	MP3A	Mx	-.002	1.5
28	MP2A	X	-34.657	2.75
29	MP2A	Z	-20.009	2.75
30	MP2A	Mx	-.017	2.75
31	MP3A	X	-30.427	2.75
32	MP3A	Z	-17.567	2.75
33	MP3A	Mx	-.015	2.75
34	OVP	X	-74.471	1
35	OVP	Z	-42.996	1
36	OVP	Mx	0	1
37	MP3A	X	-14.28	5
38	MP3A	Z	-8.245	5
39	MP3A	Mx	-.017	5
40	MP3A	X	-14.28	6



**Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP3A	Z	-8.245	6
42	MP3A	Mx	-.017	6
43	MP3A	X	-14.28	5
44	MP3A	Z	-8.245	5
45	MP3A	Mx	-.012	5
46	MP3A	X	-14.28	6
47	MP3A	Z	-8.245	6
48	MP3A	Mx	-.012	6

**Member Point Loads (BLC 14 : Antenna Wo (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-76.272	1.25
2	MP3A	Z	-132.107	1.25
3	MP3A	Mx	-.081	1.25
4	MP3A	X	-76.272	4.75
5	MP3A	Z	-132.107	4.75
6	MP3A	Mx	-.081	4.75
7	MP3A	X	-76.272	1.25
8	MP3A	Z	-132.107	1.25
9	MP3A	Mx	.14	1.25
10	MP3A	X	-76.272	4.75
11	MP3A	Z	-132.107	4.75
12	MP3A	Mx	.14	4.75
13	MP1A	X	-32.117	2
14	MP1A	Z	-55.628	2
15	MP1A	Mx	.008	2
16	MP1A	X	-32.117	4
17	MP1A	Z	-55.628	4
18	MP1A	Mx	.008	4
19	MP4A	X	-28.863	.17
20	MP4A	Z	-49.993	.17
21	MP4A	Mx	.02	.17
22	MP4A	X	-28.863	3.67
23	MP4A	Z	-49.993	3.67
24	MP4A	Mx	.02	3.67
25	MP3A	X	-4.655	1.5
26	MP3A	Z	-8.063	1.5
27	MP3A	Mx	-.002	1.5
28	MP2A	X	-24.38	2.75
29	MP2A	Z	-42.227	2.75
30	MP2A	Mx	-.012	2.75
31	MP3A	X	-23.566	2.75
32	MP3A	Z	-40.817	2.75
33	MP3A	Mx	-.012	2.75
34	OVP	X	-48.486	1
35	OVP	Z	-83.98	1
36	OVP	Mx	0	1
37	MP3A	X	-8.233	5
38	MP3A	Z	-14.259	5
39	MP3A	Mx	-.013	5
40	MP3A	X	-8.233	6
41	MP3A	Z	-14.259	6
42	MP3A	Mx	-.013	6
43	MP3A	X	-8.233	5
44	MP3A	Z	-14.259	5
45	MP3A	Mx	-.003	5



**Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
46	MP3A	X	-8.233	6
47	MP3A	Z	-14.259	6
48	MP3A	Mx	-.003	6

**Member Point Loads (BLC 15 : Antenna Wi (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	0	1.25
2	MP3A	Z	-26.742	1.25
3	MP3A	Mx	-.025	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	-26.742	4.75
6	MP3A	Mx	-.025	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	-26.742	1.25
9	MP3A	Mx	.014	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	-26.742	4.75
12	MP3A	Mx	.014	4.75
13	MP1A	X	0	2
14	MP1A	Z	-13.966	2
15	MP1A	Mx	-.002	2
16	MP1A	X	0	4
17	MP1A	Z	-13.966	4
18	MP1A	Mx	-.002	4
19	MP4A	X	0	.17
20	MP4A	Z	-11.31	.17
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	-11.31	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5
26	MP3A	Z	-2.659	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	-12.228	2.75
30	MP2A	Mx	0	2.75
31	MP3A	X	0	2.75
32	MP3A	Z	-12.228	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	-21.698	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	-1.259	5
39	MP3A	Mx	-.00042	5
40	MP3A	X	0	6
41	MP3A	Z	-1.259	6
42	MP3A	Mx	-.00042	6
43	MP3A	X	0	5
44	MP3A	Z	-1.259	5
45	MP3A	Mx	.00042	5
46	MP3A	X	0	6
47	MP3A	Z	-1.259	6
48	MP3A	Mx	.00042	6





**Member Point Loads (BLC 16 : Antenna Wi (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	11.488	1.25
2	MP3A	Z	-19.897	1.25
3	MP3A	Mx	-.024	1.25
4	MP3A	X	11.488	4.75
5	MP3A	Z	-19.897	4.75
6	MP3A	Mx	-.024	4.75
7	MP3A	X	11.488	1.25
8	MP3A	Z	-19.897	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	11.488	4.75
11	MP3A	Z	-19.897	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	5.175	2
14	MP1A	Z	-8.964	2
15	MP1A	Mx	-.004	2
16	MP1A	X	5.175	4
17	MP1A	Z	-8.964	4
18	MP1A	Mx	-.004	4
19	MP4A	X	5.382	.17
20	MP4A	Z	-9.322	.17
21	MP4A	Mx	-.004	.17
22	MP4A	X	5.382	3.67
23	MP4A	Z	-9.322	3.67
24	MP4A	Mx	-.004	3.67
25	MP3A	X	1.16	1.5
26	MP3A	Z	-2.01	1.5
27	MP3A	Mx	.000483	1.5
28	MP2A	X	5.648	2.75
29	MP2A	Z	-9.783	2.75
30	MP2A	Mx	.003	2.75
31	MP3A	X	5.471	2.75
32	MP3A	Z	-9.476	2.75
33	MP3A	Mx	.003	2.75
34	OVP	X	11.781	1
35	OVP	Z	-20.406	1
36	OVP	Mx	0	1
37	MP3A	X	.892	5
38	MP3A	Z	-1.545	5
39	MP3A	Mx	.000377	5
40	MP3A	X	.892	6
41	MP3A	Z	-1.545	6
42	MP3A	Mx	.000377	6
43	MP3A	X	.892	5
44	MP3A	Z	-1.545	5
45	MP3A	Mx	.001	5
46	MP3A	X	.892	6
47	MP3A	Z	-1.545	6
48	MP3A	Mx	.001	6

**Member Point Loads (BLC 17 : Antenna Wi (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	16.635	1.25
2	MP3A	Z	-9.604	1.25
3	MP3A	Mx	-.018	1.25
4	MP3A	X	16.635	4.75
5	MP3A	Z	-9.604	4.75



**Member Point Loads (BLC 17 : Antenna Wi (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[ft.%]
6	MP3A	Mx	-.018	4.75
7	MP3A	X	16.635	1.25
8	MP3A	Z	-9.604	1.25
9	MP3A	Mx	-.01	1.25
10	MP3A	X	16.635	4.75
11	MP3A	Z	-9.604	4.75
12	MP3A	Mx	-.01	4.75
13	MP1A	X	5.833	2
14	MP1A	Z	-3.368	2
15	MP1A	Mx	-.003	2
16	MP1A	X	5.833	4
17	MP1A	Z	-3.368	4
18	MP1A	Mx	-.003	4
19	MP4A	X	8.377	.17
20	MP4A	Z	-4.836	.17
21	MP4A	Mx	-.006	.17
22	MP4A	X	8.377	3.67
23	MP4A	Z	-4.836	3.67
24	MP4A	Mx	-.006	3.67
25	MP3A	X	1.424	1.5
26	MP3A	Z	-.822	1.5
27	MP3A	Mx	.000593	1.5
28	MP2A	X	8.168	2.75
29	MP2A	Z	-4.716	2.75
30	MP2A	Mx	.004	2.75
31	MP3A	X	7.247	2.75
32	MP3A	Z	-4.184	2.75
33	MP3A	Mx	.004	2.75
34	OVP	X	18.791	1
35	OVP	Z	-10.849	1
36	OVP	Mx	0	1
37	MP3A	X	2.453	5
38	MP3A	Z	-1.416	5
39	MP3A	Mx	.002	5
40	MP3A	X	2.453	6
41	MP3A	Z	-1.416	6
42	MP3A	Mx	.002	6
43	MP3A	X	2.453	5
44	MP3A	Z	-1.416	5
45	MP3A	Mx	.003	5
46	MP3A	X	2.453	6
47	MP3A	Z	-1.416	6
48	MP3A	Mx	.003	6

**Member Point Loads (BLC 18 : Antenna Wi (90 Deg))**

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[ft.%]
1	MP3A	X	19.209	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	-.01	1.25
4	MP3A	X	19.209	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	-.01	4.75
7	MP3A	X	19.209	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	-.018	1.25
10	MP3A	X	19.209	4.75



**Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
11	MP3A	Z	0	4.75
12	MP3A	Mx	-.018	4.75
13	MP1A	X	6.736	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.003	2
16	MP1A	X	6.736	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.003	4
19	MP4A	X	9.127	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	-.006	.17
22	MP4A	X	9.127	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	-.006	3.67
25	MP3A	X	1.306	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	.000544	1.5
28	MP2A	X	8.499	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	.004	2.75
31	MP3A	X	7.082	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	.004	2.75
34	OVP	X	17.969	1
35	OVP	Z	0	1
36	OVP	Mx	0	1
37	MP3A	X	3.357	5
38	MP3A	Z	0	5
39	MP3A	Mx	.003	5
40	MP3A	X	3.357	6
41	MP3A	Z	0	6
42	MP3A	Mx	.003	6
43	MP3A	X	3.357	5
44	MP3A	Z	0	5
45	MP3A	Mx	.003	5
46	MP3A	X	3.357	6
47	MP3A	Z	0	6
48	MP3A	Mx	.003	6

**Member Point Loads (BLC 19 : Antenna Wi (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	19.897	1.25
2	MP3A	Z	11.488	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	19.897	4.75
5	MP3A	Z	11.488	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	19.897	1.25
8	MP3A	Z	11.488	1.25
9	MP3A	Mx	-.024	1.25
10	MP3A	X	19.897	4.75
11	MP3A	Z	11.488	4.75
12	MP3A	Mx	-.024	4.75
13	MP1A	X	8.964	2
14	MP1A	Z	5.175	2
15	MP1A	Mx	-.004	2



**Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
16	MP1A	X	8.964	4
17	MP1A	Z	5.175	4
18	MP1A	Mx	-.004	4
19	MP4A	X	8.377	.17
20	MP4A	Z	4.836	.17
21	MP4A	Mx	-.006	.17
22	MP4A	X	8.377	3.67
23	MP4A	Z	4.836	3.67
24	MP4A	Mx	-.006	3.67
25	MP3A	X	1.424	1.5
26	MP3A	Z	.822	1.5
27	MP3A	Mx	.000593	1.5
28	MP2A	X	8.168	2.75
29	MP2A	Z	4.716	2.75
30	MP2A	Mx	.004	2.75
31	MP3A	X	7.247	2.75
32	MP3A	Z	4.184	2.75
33	MP3A	Mx	.004	2.75
34	OVP	X	13.947	1
35	OVP	Z	8.052	1
36	OVP	Mx	0	1
37	MP3A	X	2.453	5
38	MP3A	Z	1.416	5
39	MP3A	Mx	.003	5
40	MP3A	X	2.453	6
41	MP3A	Z	1.416	6
42	MP3A	Mx	.003	6
43	MP3A	X	2.453	5
44	MP3A	Z	1.416	5
45	MP3A	Mx	.002	5
46	MP3A	X	2.453	6
47	MP3A	Z	1.416	6
48	MP3A	Mx	.002	6

**Member Point Loads (BLC 20 : Antenna Wi (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	13.371	1.25
2	MP3A	Z	23.159	1.25
3	MP3A	Mx	.014	1.25
4	MP3A	X	13.371	4.75
5	MP3A	Z	23.159	4.75
6	MP3A	Mx	.014	4.75
7	MP3A	X	13.371	1.25
8	MP3A	Z	23.159	1.25
9	MP3A	Mx	-.025	1.25
10	MP3A	X	13.371	4.75
11	MP3A	Z	23.159	4.75
12	MP3A	Mx	-.025	4.75
13	MP1A	X	6.983	2
14	MP1A	Z	12.095	2
15	MP1A	Mx	-.002	2
16	MP1A	X	6.983	4
17	MP1A	Z	12.095	4
18	MP1A	Mx	-.002	4
19	MP4A	X	5.382	.17
20	MP4A	Z	9.322	.17



**Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP4A	Mx	-.004	.17
22	MP4A	X	5.382	3.67
23	MP4A	Z	9.322	3.67
24	MP4A	Mx	-.004	3.67
25	MP3A	X	1.16	1.5
26	MP3A	Z	2.01	1.5
27	MP3A	Mx	.000483	1.5
28	MP2A	X	5.648	2.75
29	MP2A	Z	9.783	2.75
30	MP2A	Mx	.003	2.75
31	MP3A	X	5.471	2.75
32	MP3A	Z	9.476	2.75
33	MP3A	Mx	.003	2.75
34	OVP	X	8.984	1
35	OVP	Z	15.561	1
36	OVP	Mx	0	1
37	MP3A	X	.892	5
38	MP3A	Z	1.545	5
39	MP3A	Mx	.001	5
40	MP3A	X	.892	6
41	MP3A	Z	1.545	6
42	MP3A	Mx	.001	6
43	MP3A	X	.892	5
44	MP3A	Z	1.545	5
45	MP3A	Mx	.000377	5
46	MP3A	X	.892	6
47	MP3A	Z	1.545	6
48	MP3A	Mx	.000377	6

**Member Point Loads (BLC 21 : Antenna Wi (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1.25
2	MP3A	Z	26.742	1.25
3	MP3A	Mx	.025	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	26.742	4.75
6	MP3A	Mx	.025	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	26.742	1.25
9	MP3A	Mx	-.014	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	26.742	4.75
12	MP3A	Mx	-.014	4.75
13	MP1A	X	0	2
14	MP1A	Z	13.966	2
15	MP1A	Mx	.002	2
16	MP1A	X	0	4
17	MP1A	Z	13.966	4
18	MP1A	Mx	.002	4
19	MP4A	X	0	.17
20	MP4A	Z	11.31	.17
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	11.31	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5



**Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
26	MP3A	Z	2.659	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	12.228	2.75
30	MP2A	Mx	0	2.75
31	MP3A	X	0	2.75
32	MP3A	Z	12.228	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	21.698	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	1.259	5
39	MP3A	Mx	.00042	5
40	MP3A	X	0	6
41	MP3A	Z	1.259	6
42	MP3A	Mx	.00042	6
43	MP3A	X	0	5
44	MP3A	Z	1.259	5
45	MP3A	Mx	-.00042	5
46	MP3A	X	0	6
47	MP3A	Z	1.259	6
48	MP3A	Mx	-.00042	6

**Member Point Loads (BLC 22 : Antenna Wi (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-11.488	1.25
2	MP3A	Z	19.897	1.25
3	MP3A	Mx	.024	1.25
4	MP3A	X	-11.488	4.75
5	MP3A	Z	19.897	4.75
6	MP3A	Mx	.024	4.75
7	MP3A	X	-11.488	1.25
8	MP3A	Z	19.897	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	-11.488	4.75
11	MP3A	Z	19.897	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	-5.175	2
14	MP1A	Z	8.964	2
15	MP1A	Mx	.004	2
16	MP1A	X	-5.175	4
17	MP1A	Z	8.964	4
18	MP1A	Mx	.004	4
19	MP4A	X	-5.382	.17
20	MP4A	Z	9.322	.17
21	MP4A	Mx	.004	.17
22	MP4A	X	-5.382	3.67
23	MP4A	Z	9.322	3.67
24	MP4A	Mx	.004	3.67
25	MP3A	X	-1.16	1.5
26	MP3A	Z	2.01	1.5
27	MP3A	Mx	-.000483	1.5
28	MP2A	X	-5.648	2.75
29	MP2A	Z	9.783	2.75
30	MP2A	Mx	-.003	2.75



**Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP3A	X	-5.471	2.75
32	MP3A	Z	9.476	2.75
33	MP3A	Mx	-.003	2.75
34	OVP	X	-11.781	1
35	OVP	Z	20.406	1
36	OVP	Mx	0	1
37	MP3A	X	-.892	5
38	MP3A	Z	1.545	5
39	MP3A	Mx	-.000377	5
40	MP3A	X	-.892	6
41	MP3A	Z	1.545	6
42	MP3A	Mx	-.000377	6
43	MP3A	X	-.892	5
44	MP3A	Z	1.545	5
45	MP3A	Mx	-.001	5
46	MP3A	X	-.892	6
47	MP3A	Z	1.545	6
48	MP3A	Mx	-.001	6

**Member Point Loads (BLC 23 : Antenna Wi (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-16.635	1.25
2	MP3A	Z	9.604	1.25
3	MP3A	Mx	.018	1.25
4	MP3A	X	-16.635	4.75
5	MP3A	Z	9.604	4.75
6	MP3A	Mx	.018	4.75
7	MP3A	X	-16.635	1.25
8	MP3A	Z	9.604	1.25
9	MP3A	Mx	.01	1.25
10	MP3A	X	-16.635	4.75
11	MP3A	Z	9.604	4.75
12	MP3A	Mx	.01	4.75
13	MP1A	X	-5.833	2
14	MP1A	Z	3.368	2
15	MP1A	Mx	.003	2
16	MP1A	X	-5.833	4
17	MP1A	Z	3.368	4
18	MP1A	Mx	.003	4
19	MP4A	X	-8.377	.17
20	MP4A	Z	4.836	.17
21	MP4A	Mx	.006	.17
22	MP4A	X	-8.377	3.67
23	MP4A	Z	4.836	3.67
24	MP4A	Mx	.006	3.67
25	MP3A	X	-1.424	1.5
26	MP3A	Z	.822	1.5
27	MP3A	Mx	-.000593	1.5
28	MP2A	X	-8.168	2.75
29	MP2A	Z	4.716	2.75
30	MP2A	Mx	-.004	2.75
31	MP3A	X	-7.247	2.75
32	MP3A	Z	4.184	2.75
33	MP3A	Mx	-.004	2.75
34	OVP	X	-18.791	1
35	OVP	Z	10.849	1



**Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
36	OVP	Mx	0	1
37	MP3A	X	-2.453	5
38	MP3A	Z	1.416	5
39	MP3A	Mx	-.002	5
40	MP3A	X	-2.453	6
41	MP3A	Z	1.416	6
42	MP3A	Mx	-.002	6
43	MP3A	X	-2.453	5
44	MP3A	Z	1.416	5
45	MP3A	Mx	-.003	5
46	MP3A	X	-2.453	6
47	MP3A	Z	1.416	6
48	MP3A	Mx	-.003	6

**Member Point Loads (BLC 24 : Antenna Wi (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-19.209	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	.01	1.25
4	MP3A	X	-19.209	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.01	4.75
7	MP3A	X	-19.209	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	.018	1.25
10	MP3A	X	-19.209	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.018	4.75
13	MP1A	X	-6.736	2
14	MP1A	Z	0	2
15	MP1A	Mx	.003	2
16	MP1A	X	-6.736	4
17	MP1A	Z	0	4
18	MP1A	Mx	.003	4
19	MP4A	X	-9.127	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	.006	.17
22	MP4A	X	-9.127	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	.006	3.67
25	MP3A	X	-1.306	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	-.000544	1.5
28	MP2A	X	-8.499	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	-.004	2.75
31	MP3A	X	-7.082	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	-.004	2.75
34	OVP	X	-17.969	1
35	OVP	Z	0	1
36	OVP	Mx	0	1
37	MP3A	X	-3.357	5
38	MP3A	Z	0	5
39	MP3A	Mx	-.003	5
40	MP3A	X	-3.357	6





**Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP3A	Z	0	6
42	MP3A	Mx	-.003	6
43	MP3A	X	-3.357	5
44	MP3A	Z	0	5
45	MP3A	Mx	-.003	5
46	MP3A	X	-3.357	6
47	MP3A	Z	0	6
48	MP3A	Mx	-.003	6

**Member Point Loads (BLC 25 : Antenna Wi (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-19.897	1.25
2	MP3A	Z	-11.488	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	-19.897	4.75
5	MP3A	Z	-11.488	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	-19.897	1.25
8	MP3A	Z	-11.488	1.25
9	MP3A	Mx	.024	1.25
10	MP3A	X	-19.897	4.75
11	MP3A	Z	-11.488	4.75
12	MP3A	Mx	.024	4.75
13	MP1A	X	-8.964	2
14	MP1A	Z	-5.175	2
15	MP1A	Mx	.004	2
16	MP1A	X	-8.964	4
17	MP1A	Z	-5.175	4
18	MP1A	Mx	.004	4
19	MP4A	X	-8.377	.17
20	MP4A	Z	-4.836	.17
21	MP4A	Mx	.006	.17
22	MP4A	X	-8.377	3.67
23	MP4A	Z	-4.836	3.67
24	MP4A	Mx	.006	3.67
25	MP3A	X	-1.424	1.5
26	MP3A	Z	-.822	1.5
27	MP3A	Mx	-.000593	1.5
28	MP2A	X	-8.168	2.75
29	MP2A	Z	-4.716	2.75
30	MP2A	Mx	-.004	2.75
31	MP3A	X	-7.247	2.75
32	MP3A	Z	-4.184	2.75
33	MP3A	Mx	-.004	2.75
34	OVP	X	-13.947	1
35	OVP	Z	-8.052	1
36	OVP	Mx	0	1
37	MP3A	X	-2.453	5
38	MP3A	Z	-1.416	5
39	MP3A	Mx	-.003	5
40	MP3A	X	-2.453	6
41	MP3A	Z	-1.416	6
42	MP3A	Mx	-.003	6
43	MP3A	X	-2.453	5
44	MP3A	Z	-1.416	5
45	MP3A	Mx	-.002	5



**Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
46	MP3A	X	-2.453	6
47	MP3A	Z	-1.416	6
48	MP3A	Mx	-.002	6

**Member Point Loads (BLC 26 : Antenna Wi (330 Deg))**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.371	1.25
2	MP3A	Z	-23.159	1.25
3	MP3A	Mx	-.014	1.25
4	MP3A	X	-13.371	4.75
5	MP3A	Z	-23.159	4.75
6	MP3A	Mx	-.014	4.75
7	MP3A	X	-13.371	1.25
8	MP3A	Z	-23.159	1.25
9	MP3A	Mx	.025	1.25
10	MP3A	X	-13.371	4.75
11	MP3A	Z	-23.159	4.75
12	MP3A	Mx	.025	4.75
13	MP1A	X	-6.983	2
14	MP1A	Z	-12.095	2
15	MP1A	Mx	.002	2
16	MP1A	X	-6.983	4
17	MP1A	Z	-12.095	4
18	MP1A	Mx	.002	4
19	MP4A	X	-5.382	.17
20	MP4A	Z	-9.322	.17
21	MP4A	Mx	.004	.17
22	MP4A	X	-5.382	3.67
23	MP4A	Z	-9.322	3.67
24	MP4A	Mx	.004	3.67
25	MP3A	X	-1.16	1.5
26	MP3A	Z	-2.01	1.5
27	MP3A	Mx	-.000483	1.5
28	MP2A	X	-5.648	2.75
29	MP2A	Z	-9.783	2.75
30	MP2A	Mx	-.003	2.75
31	MP3A	X	-5.471	2.75
32	MP3A	Z	-9.476	2.75
33	MP3A	Mx	-.003	2.75
34	OVP	X	-8.984	1
35	OVP	Z	-15.561	1
36	OVP	Mx	0	1
37	MP3A	X	-.892	5
38	MP3A	Z	-1.545	5
39	MP3A	Mx	-.001	5
40	MP3A	X	-.892	6
41	MP3A	Z	-1.545	6
42	MP3A	Mx	-.001	6
43	MP3A	X	-.892	5
44	MP3A	Z	-1.545	5
45	MP3A	Mx	-.000377	5
46	MP3A	X	-.892	6
47	MP3A	Z	-1.545	6
48	MP3A	Mx	-.000377	6



**Member Point Loads (BLC 27 : Antenna Wm (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1.25
2	MP3A	Z	-8.787	1.25
3	MP3A	Mx	-.008	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	-8.787	4.75
6	MP3A	Mx	-.008	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	-8.787	1.25
9	MP3A	Mx	.005	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	-8.787	4.75
12	MP3A	Mx	.005	4.75
13	MP1A	X	0	2
14	MP1A	Z	-3.7	2
15	MP1A	Mx	-.000479	2
16	MP1A	X	0	4
17	MP1A	Z	-3.7	4
18	MP1A	Mx	-.000479	4
19	MP4A	X	0	.17
20	MP4A	Z	-3.514	.17
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	-3.514	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5
26	MP3A	Z	-.632	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	-3.06	2.75
30	MP2A	Mx	0	2.75
31	MP3A	X	0	2.75
32	MP3A	Z	-3.06	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	-6.85	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	-.948	5
39	MP3A	Mx	-.000316	5
40	MP3A	X	0	6
41	MP3A	Z	-.948	6
42	MP3A	Mx	-.000316	6
43	MP3A	X	0	5
44	MP3A	Z	-.948	5
45	MP3A	Mx	.000316	5
46	MP3A	X	0	6
47	MP3A	Z	-.948	6
48	MP3A	Mx	.000316	6

**Member Point Loads (BLC 28 : Antenna Wm (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	3.725	1.25
2	MP3A	Z	-6.452	1.25
3	MP3A	Mx	-.008	1.25
4	MP3A	X	3.725	4.75
5	MP3A	Z	-6.452	4.75



**Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP3A	Mx	-0.08	4.75
7	MP3A	X	3.725	1.25
8	MP3A	Z	-6.452	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	3.725	4.75
11	MP3A	Z	-6.452	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	1.301	2
14	MP1A	Z	-2.253	2
15	MP1A	Mx	-0.0092	2
16	MP1A	X	1.301	4
17	MP1A	Z	-2.253	4
18	MP1A	Mx	-0.0092	4
19	MP4A	X	1.663	.17
20	MP4A	Z	-2.88	.17
21	MP4A	Mx	-0.01	.17
22	MP4A	X	1.663	3.67
23	MP4A	Z	-2.88	3.67
24	MP4A	Mx	-0.01	3.67
25	MP3A	X	.268	1.5
26	MP3A	Z	-.464	1.5
27	MP3A	Mx	.000112	1.5
28	MP2A	X	1.404	2.75
29	MP2A	Z	-2.432	2.75
30	MP2A	Mx	.000702	2.75
31	MP3A	X	1.357	2.75
32	MP3A	Z	-2.351	2.75
33	MP3A	Mx	.000678	2.75
34	OVP	X	3.741	1
35	OVP	Z	-6.48	1
36	OVP	Mx	0	1
37	MP3A	X	.474	5
38	MP3A	Z	-.821	5
39	MP3A	Mx	.0002	5
40	MP3A	X	.474	6
41	MP3A	Z	-.821	6
42	MP3A	Mx	.0002	6
43	MP3A	X	.474	5
44	MP3A	Z	-.821	5
45	MP3A	Mx	.000748	5
46	MP3A	X	.474	6
47	MP3A	Z	-.821	6
48	MP3A	Mx	.000748	6

**Member Point Loads (BLC 29 : Antenna Wm (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	5.294	1.25
2	MP3A	Z	-3.057	1.25
3	MP3A	Mx	-.006	1.25
4	MP3A	X	5.294	4.75
5	MP3A	Z	-3.057	4.75
6	MP3A	Mx	-.006	4.75
7	MP3A	X	5.294	1.25
8	MP3A	Z	-3.057	1.25
9	MP3A	Mx	-.003	1.25
10	MP3A	X	5.294	4.75



**Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
11	MP3A	Z	-3.057	4.75
12	MP3A	Mx	-.003	4.75
13	MP1A	X	1.301	2
14	MP1A	Z	-.751	2
15	MP1A	Mx	-.000726	2
16	MP1A	X	1.301	4
17	MP1A	Z	-.751	4
18	MP1A	Mx	-.000726	4
19	MP4A	X	2.552	.17
20	MP4A	Z	-1.473	.17
21	MP4A	Mx	-.002	.17
22	MP4A	X	2.552	3.67
23	MP4A	Z	-1.473	3.67
24	MP4A	Mx	-.002	3.67
25	MP3A	X	.299	1.5
26	MP3A	Z	-.173	1.5
27	MP3A	Mx	.000125	1.5
28	MP2A	X	1.996	2.75
29	MP2A	Z	-1.153	2.75
30	MP2A	Mx	.000998	2.75
31	MP3A	X	1.753	2.75
32	MP3A	Z	-1.012	2.75
33	MP3A	Mx	.000876	2.75
34	OVP	X	5.933	1
35	OVP	Z	-3.425	1
36	OVP	Mx	0	1
37	MP3A	X	.823	5
38	MP3A	Z	-.475	5
39	MP3A	Mx	.000665	5
40	MP3A	X	.823	6
41	MP3A	Z	-.475	6
42	MP3A	Mx	.000665	6
43	MP3A	X	.823	5
44	MP3A	Z	-.475	5
45	MP3A	Mx	.000981	5
46	MP3A	X	.823	6
47	MP3A	Z	-.475	6
48	MP3A	Mx	.000981	6

**Member Point Loads (BLC 30 : Antenna Wm (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	6.113	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	-.003	1.25
4	MP3A	X	6.113	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	-.003	4.75
7	MP3A	X	6.113	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	-.006	1.25
10	MP3A	X	6.113	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	-.006	4.75
13	MP1A	X	1.503	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.000726	2



**Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
16	MP1A	X	1.503	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.000726	4
19	MP4A	X	2.757	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	-.002	.17
22	MP4A	X	2.757	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	-.002	3.67
25	MP3A	X	.25	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	.000104	1.5
28	MP2A	X	2.053	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	.001	2.75
31	MP3A	X	1.678	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	.000839	2.75
34	OVP	X	5.586	1
35	OVP	Z	0	1
36	OVP	Mx	0	1
37	MP3A	X	.951	5
38	MP3A	Z	0	5
39	MP3A	Mx	.000951	5
40	MP3A	X	.951	6
41	MP3A	Z	0	6
42	MP3A	Mx	.000951	6
43	MP3A	X	.951	5
44	MP3A	Z	0	5
45	MP3A	Mx	.000951	5
46	MP3A	X	.951	6
47	MP3A	Z	0	6
48	MP3A	Mx	.000951	6

**Member Point Loads (BLC 31 : Antenna Wm (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	6.452	1.25
2	MP3A	Z	3.725	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	6.452	4.75
5	MP3A	Z	3.725	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	6.452	1.25
8	MP3A	Z	3.725	1.25
9	MP3A	Mx	-.008	1.25
10	MP3A	X	6.452	4.75
11	MP3A	Z	3.725	4.75
12	MP3A	Mx	-.008	4.75
13	MP1A	X	2.253	2
14	MP1A	Z	1.301	2
15	MP1A	Mx	-.00092	2
16	MP1A	X	2.253	4
17	MP1A	Z	1.301	4
18	MP1A	Mx	-.00092	4
19	MP4A	X	2.552	.17
20	MP4A	Z	1.473	.17



**Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP4A	Mx	-0.02	.17
22	MP4A	X	2.552	3.67
23	MP4A	Z	1.473	3.67
24	MP4A	Mx	-0.02	3.67
25	MP3A	X	.299	1.5
26	MP3A	Z	.173	1.5
27	MP3A	Mx	.000125	1.5
28	MP2A	X	1.996	2.75
29	MP2A	Z	1.153	2.75
30	MP2A	Mx	.000998	2.75
31	MP3A	X	1.753	2.75
32	MP3A	Z	1.012	2.75
33	MP3A	Mx	.000876	2.75
34	OVP	X	4.29	1
35	OVP	Z	2.477	1
36	OVP	Mx	0	1
37	MP3A	X	.823	5
38	MP3A	Z	.475	5
39	MP3A	Mx	.000981	5
40	MP3A	X	.823	6
41	MP3A	Z	.475	6
42	MP3A	Mx	.000981	6
43	MP3A	X	.823	5
44	MP3A	Z	.475	5
45	MP3A	Mx	.000665	5
46	MP3A	X	.823	6
47	MP3A	Z	.475	6
48	MP3A	Mx	.000665	6

**Member Point Loads (BLC 32 : Antenna Wm (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	4.393	1.25
2	MP3A	Z	7.609	1.25
3	MP3A	Mx	.005	1.25
4	MP3A	X	4.393	4.75
5	MP3A	Z	7.609	4.75
6	MP3A	Mx	.005	4.75
7	MP3A	X	4.393	1.25
8	MP3A	Z	7.609	1.25
9	MP3A	Mx	-0.008	1.25
10	MP3A	X	4.393	4.75
11	MP3A	Z	7.609	4.75
12	MP3A	Mx	-0.008	4.75
13	MP1A	X	1.85	2
14	MP1A	Z	3.204	2
15	MP1A	Mx	-0.00479	2
16	MP1A	X	1.85	4
17	MP1A	Z	3.204	4
18	MP1A	Mx	-0.00479	4
19	MP4A	X	1.663	.17
20	MP4A	Z	2.88	.17
21	MP4A	Mx	-0.01	.17
22	MP4A	X	1.663	3.67
23	MP4A	Z	2.88	3.67
24	MP4A	Mx	-0.01	3.67
25	MP3A	X	.268	1.5



**Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
26	MP3A	Z	.464	1.5
27	MP3A	Mx	.000112	1.5
28	MP2A	X	1.404	2.75
29	MP2A	Z	2.432	2.75
30	MP2A	Mx	.000702	2.75
31	MP3A	X	1.357	2.75
32	MP3A	Z	2.351	2.75
33	MP3A	Mx	.000678	2.75
34	OVP	X	2.793	1
35	OVP	Z	4.837	1
36	OVP	Mx	0	1
37	MP3A	X	.474	5
38	MP3A	Z	.821	5
39	MP3A	Mx	.000748	5
40	MP3A	X	.474	6
41	MP3A	Z	.821	6
42	MP3A	Mx	.000748	6
43	MP3A	X	.474	5
44	MP3A	Z	.821	5
45	MP3A	Mx	.0002	5
46	MP3A	X	.474	6
47	MP3A	Z	.821	6
48	MP3A	Mx	.0002	6

**Member Point Loads (BLC 33 : Antenna Wm (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1.25
2	MP3A	Z	8.787	1.25
3	MP3A	Mx	.008	1.25
4	MP3A	X	0	4.75
5	MP3A	Z	8.787	4.75
6	MP3A	Mx	.008	4.75
7	MP3A	X	0	1.25
8	MP3A	Z	8.787	1.25
9	MP3A	Mx	-.005	1.25
10	MP3A	X	0	4.75
11	MP3A	Z	8.787	4.75
12	MP3A	Mx	-.005	4.75
13	MP1A	X	0	2
14	MP1A	Z	3.7	2
15	MP1A	Mx	.000479	2
16	MP1A	X	0	4
17	MP1A	Z	3.7	4
18	MP1A	Mx	.000479	4
19	MP4A	X	0	.17
20	MP4A	Z	3.514	.17
21	MP4A	Mx	0	.17
22	MP4A	X	0	3.67
23	MP4A	Z	3.514	3.67
24	MP4A	Mx	0	3.67
25	MP3A	X	0	1.5
26	MP3A	Z	.632	1.5
27	MP3A	Mx	0	1.5
28	MP2A	X	0	2.75
29	MP2A	Z	3.06	2.75
30	MP2A	Mx	0	2.75





**Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP3A	X	0	2.75
32	MP3A	Z	3.06	2.75
33	MP3A	Mx	0	2.75
34	OVP	X	0	1
35	OVP	Z	6.85	1
36	OVP	Mx	0	1
37	MP3A	X	0	5
38	MP3A	Z	.948	5
39	MP3A	Mx	.000316	5
40	MP3A	X	0	6
41	MP3A	Z	.948	6
42	MP3A	Mx	.000316	6
43	MP3A	X	0	5
44	MP3A	Z	.948	5
45	MP3A	Mx	-.000316	5
46	MP3A	X	0	6
47	MP3A	Z	.948	6
48	MP3A	Mx	-.000316	6

**Member Point Loads (BLC 34 : Antenna Wm (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-3.725	1.25
2	MP3A	Z	6.452	1.25
3	MP3A	Mx	.008	1.25
4	MP3A	X	-3.725	4.75
5	MP3A	Z	6.452	4.75
6	MP3A	Mx	.008	4.75
7	MP3A	X	-3.725	1.25
8	MP3A	Z	6.452	1.25
9	MP3A	Mx	0	1.25
10	MP3A	X	-3.725	4.75
11	MP3A	Z	6.452	4.75
12	MP3A	Mx	0	4.75
13	MP1A	X	-1.301	2
14	MP1A	Z	2.253	2
15	MP1A	Mx	.00092	2
16	MP1A	X	-1.301	4
17	MP1A	Z	2.253	4
18	MP1A	Mx	.00092	4
19	MP4A	X	-1.663	.17
20	MP4A	Z	2.88	.17
21	MP4A	Mx	.001	.17
22	MP4A	X	-1.663	3.67
23	MP4A	Z	2.88	3.67
24	MP4A	Mx	.001	3.67
25	MP3A	X	-.268	1.5
26	MP3A	Z	.464	1.5
27	MP3A	Mx	-.000112	1.5
28	MP2A	X	-1.404	2.75
29	MP2A	Z	2.432	2.75
30	MP2A	Mx	-.000702	2.75
31	MP3A	X	-1.357	2.75
32	MP3A	Z	2.351	2.75
33	MP3A	Mx	-.000678	2.75
34	OVP	X	-3.741	1
35	OVP	Z	6.48	1



**Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[ft. %]
36	OVP	Mx	0	1
37	MP3A	X	-.474	5
38	MP3A	Z	.821	5
39	MP3A	Mx	-.0002	5
40	MP3A	X	-.474	6
41	MP3A	Z	.821	6
42	MP3A	Mx	-.0002	6
43	MP3A	X	-.474	5
44	MP3A	Z	.821	5
45	MP3A	Mx	-.000748	5
46	MP3A	X	-.474	6
47	MP3A	Z	.821	6
48	MP3A	Mx	-.000748	6

**Member Point Loads (BLC 35 : Antenna Wm (240 Deg))**

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[ft. %]
1	MP3A	X	-5.294	1.25
2	MP3A	Z	3.057	1.25
3	MP3A	Mx	.006	1.25
4	MP3A	X	-5.294	4.75
5	MP3A	Z	3.057	4.75
6	MP3A	Mx	.006	4.75
7	MP3A	X	-5.294	1.25
8	MP3A	Z	3.057	1.25
9	MP3A	Mx	.003	1.25
10	MP3A	X	-5.294	4.75
11	MP3A	Z	3.057	4.75
12	MP3A	Mx	.003	4.75
13	MP1A	X	-1.301	2
14	MP1A	Z	.751	2
15	MP1A	Mx	.000726	2
16	MP1A	X	-1.301	4
17	MP1A	Z	.751	4
18	MP1A	Mx	.000726	4
19	MP4A	X	-2.552	.17
20	MP4A	Z	1.473	.17
21	MP4A	Mx	.002	.17
22	MP4A	X	-2.552	3.67
23	MP4A	Z	1.473	3.67
24	MP4A	Mx	.002	3.67
25	MP3A	X	-.299	1.5
26	MP3A	Z	.173	1.5
27	MP3A	Mx	-.000125	1.5
28	MP2A	X	-1.996	2.75
29	MP2A	Z	1.153	2.75
30	MP2A	Mx	-.000998	2.75
31	MP3A	X	-1.753	2.75
32	MP3A	Z	1.012	2.75
33	MP3A	Mx	-.000876	2.75
34	OVP	X	-5.933	1
35	OVP	Z	3.425	1
36	OVP	Mx	0	1
37	MP3A	X	-.823	5
38	MP3A	Z	.475	5
39	MP3A	Mx	-.000665	5
40	MP3A	X	-.823	6



**Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP3A	Z	.475	6
42	MP3A	Mx	-.000665	6
43	MP3A	X	-.823	5
44	MP3A	Z	.475	5
45	MP3A	Mx	-.000981	5
46	MP3A	X	-.823	6
47	MP3A	Z	.475	6
48	MP3A	Mx	-.000981	6

**Member Point Loads (BLC 36 : Antenna Wm (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-6.113	1.25
2	MP3A	Z	0	1.25
3	MP3A	Mx	.003	1.25
4	MP3A	X	-6.113	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.003	4.75
7	MP3A	X	-6.113	1.25
8	MP3A	Z	0	1.25
9	MP3A	Mx	.006	1.25
10	MP3A	X	-6.113	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.006	4.75
13	MP1A	X	-1.503	2
14	MP1A	Z	0	2
15	MP1A	Mx	.000726	2
16	MP1A	X	-1.503	4
17	MP1A	Z	0	4
18	MP1A	Mx	.000726	4
19	MP4A	X	-2.757	.17
20	MP4A	Z	0	.17
21	MP4A	Mx	.002	.17
22	MP4A	X	-2.757	3.67
23	MP4A	Z	0	3.67
24	MP4A	Mx	.002	3.67
25	MP3A	X	-.25	1.5
26	MP3A	Z	0	1.5
27	MP3A	Mx	-.000104	1.5
28	MP2A	X	-2.053	2.75
29	MP2A	Z	0	2.75
30	MP2A	Mx	-.001	2.75
31	MP3A	X	-1.678	2.75
32	MP3A	Z	0	2.75
33	MP3A	Mx	-.000839	2.75
34	OVP	X	-5.586	1
35	OVP	Z	0	1
36	OVP	Mx	0	1
37	MP3A	X	-.951	5
38	MP3A	Z	0	5
39	MP3A	Mx	-.000951	5
40	MP3A	X	-.951	6
41	MP3A	Z	0	6
42	MP3A	Mx	-.000951	6
43	MP3A	X	-.951	5
44	MP3A	Z	0	5
45	MP3A	Mx	-.000951	5



**Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
46	MP3A	X	-951	6
47	MP3A	Z	0	6
48	MP3A	Mx	-000951	6

**Member Point Loads (BLC 37 : Antenna Wm (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	-6.452	1.25
2	MP3A	Z	-3.725	1.25
3	MP3A	Mx	0	1.25
4	MP3A	X	-6.452	4.75
5	MP3A	Z	-3.725	4.75
6	MP3A	Mx	0	4.75
7	MP3A	X	-6.452	1.25
8	MP3A	Z	-3.725	1.25
9	MP3A	Mx	.008	1.25
10	MP3A	X	-6.452	4.75
11	MP3A	Z	-3.725	4.75
12	MP3A	Mx	.008	4.75
13	MP1A	X	-2.253	2
14	MP1A	Z	-1.301	2
15	MP1A	Mx	.00092	2
16	MP1A	X	-2.253	4
17	MP1A	Z	-1.301	4
18	MP1A	Mx	.00092	4
19	MP4A	X	-2.552	.17
20	MP4A	Z	-1.473	.17
21	MP4A	Mx	.002	.17
22	MP4A	X	-2.552	3.67
23	MP4A	Z	-1.473	3.67
24	MP4A	Mx	.002	3.67
25	MP3A	X	-.299	1.5
26	MP3A	Z	-.173	1.5
27	MP3A	Mx	-.000125	1.5
28	MP2A	X	-1.996	2.75
29	MP2A	Z	-1.153	2.75
30	MP2A	Mx	-.000998	2.75
31	MP3A	X	-1.753	2.75
32	MP3A	Z	-1.012	2.75
33	MP3A	Mx	-.000876	2.75
34	OVP	X	-4.29	1
35	OVP	Z	-2.477	1
36	OVP	Mx	0	1
37	MP3A	X	-.823	5
38	MP3A	Z	-.475	5
39	MP3A	Mx	-.000981	5
40	MP3A	X	-.823	6
41	MP3A	Z	-.475	6
42	MP3A	Mx	-.000981	6
43	MP3A	X	-.823	5
44	MP3A	Z	-.475	5
45	MP3A	Mx	-.000665	5
46	MP3A	X	-.823	6
47	MP3A	Z	-.475	6
48	MP3A	Mx	-.000665	6



**Member Point Loads (BLC 38 : Antenna Wm (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-4.393	1.25
2	MP3A	Z	-7.609	1.25
3	MP3A	Mx	-.005	1.25
4	MP3A	X	-4.393	4.75
5	MP3A	Z	-7.609	4.75
6	MP3A	Mx	-.005	4.75
7	MP3A	X	-4.393	1.25
8	MP3A	Z	-7.609	1.25
9	MP3A	Mx	.008	1.25
10	MP3A	X	-4.393	4.75
11	MP3A	Z	-7.609	4.75
12	MP3A	Mx	.008	4.75
13	MP1A	X	-1.85	2
14	MP1A	Z	-3.204	2
15	MP1A	Mx	.000479	2
16	MP1A	X	-1.85	4
17	MP1A	Z	-3.204	4
18	MP1A	Mx	.000479	4
19	MP4A	X	-1.663	.17
20	MP4A	Z	-2.88	.17
21	MP4A	Mx	.001	.17
22	MP4A	X	-1.663	3.67
23	MP4A	Z	-2.88	3.67
24	MP4A	Mx	.001	3.67
25	MP3A	X	-.268	1.5
26	MP3A	Z	-.464	1.5
27	MP3A	Mx	-.000112	1.5
28	MP2A	X	-1.404	2.75
29	MP2A	Z	-2.432	2.75
30	MP2A	Mx	-.000702	2.75
31	MP3A	X	-1.357	2.75
32	MP3A	Z	-2.351	2.75
33	MP3A	Mx	-.000678	2.75
34	OVP	X	-2.793	1
35	OVP	Z	-4.837	1
36	OVP	Mx	0	1
37	MP3A	X	-.474	5
38	MP3A	Z	-.821	5
39	MP3A	Mx	-.000748	5
40	MP3A	X	-.474	6
41	MP3A	Z	-.821	6
42	MP3A	Mx	-.000748	6
43	MP3A	X	-.474	5
44	MP3A	Z	-.821	5
45	MP3A	Mx	-.0002	5
46	MP3A	X	-.474	6
47	MP3A	Z	-.821	6
48	MP3A	Mx	-.0002	6

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M4	Y	-500	%98

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M4	Y	-500	%39



**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M4	Y	-250	%50

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M4	Y	-250	%100

**Member Point Loads (BLC 81 : Antenna Ev)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	Y	-1.263	1.25
2	MP3A	My	-0.0067	1.25
3	MP3A	Mz	.001	1.25
4	MP3A	Y	-1.263	4.75
5	MP3A	My	-0.0067	4.75
6	MP3A	Mz	.001	4.75
7	MP3A	Y	-1.263	1.25
8	MP3A	My	-.001	1.25
9	MP3A	Mz	-0.0067	1.25
10	MP3A	Y	-1.263	4.75
11	MP3A	My	-.001	4.75
12	MP3A	Mz	-0.0067	4.75
13	MP1A	Y	-1.737	2
14	MP1A	My	-0.00839	2
15	MP1A	Mz	.000225	2
16	MP1A	Y	-1.737	4
17	MP1A	My	-0.00839	4
18	MP1A	Mz	.000225	4
19	MP4A	Y	-.239	.17
20	MP4A	My	-0.0017	.17
21	MP4A	Mz	0	.17
22	MP4A	Y	-.239	3.67
23	MP4A	My	-0.0017	3.67
24	MP4A	Mz	0	3.67
25	MP3A	Y	-.315	1.5
26	MP3A	My	.000131	1.5
27	MP3A	Mz	0	1.5
28	MP2A	Y	-3.367	2.75
29	MP2A	My	.002	2.75
30	MP2A	Mz	0	2.75
31	MP3A	Y	-2.805	2.75
32	MP3A	My	.001	2.75
33	MP3A	Mz	0	2.75
34	OVP	Y	-1.277	1
35	OVP	My	0	1
36	OVP	Mz	0	1
37	MP3A	Y	-.351	5
38	MP3A	My	.000351	5
39	MP3A	Mz	.000117	5
40	MP3A	Y	-.351	6
41	MP3A	My	.000351	6
42	MP3A	Mz	.000117	6
43	MP3A	Y	-.351	5
44	MP3A	My	.000351	5
45	MP3A	Mz	-0.00117	5
46	MP3A	Y	-.351	6
47	MP3A	My	.000351	6
48	MP3A	Mz	-0.00117	6



**Member Point Loads (BLC 82 : Antenna Eh (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	Z	-3.157	1.25
2	MP3A	Mx	-.003	1.25
3	MP3A	Z	-3.157	4.75
4	MP3A	Mx	-.003	4.75
5	MP3A	Z	-3.157	1.25
6	MP3A	Mx	.002	1.25
7	MP3A	Z	-3.157	4.75
8	MP3A	Mx	.002	4.75
9	MP1A	Z	-4.343	2
10	MP1A	Mx	-.000562	2
11	MP1A	Z	-4.343	4
12	MP1A	Mx	-.000562	4
13	MP4A	Z	-.598	.17
14	MP4A	Mx	0	.17
15	MP4A	Z	-.598	3.67
16	MP4A	Mx	0	3.67
17	MP3A	Z	-.788	1.5
18	MP3A	Mx	0	1.5
19	MP2A	Z	-8.417	2.75
20	MP2A	Mx	0	2.75
21	MP3A	Z	-7.011	2.75
22	MP3A	Mx	0	2.75
23	OVP	Z	-3.191	1
24	OVP	Mx	0	1
25	MP3A	Z	-.878	5
26	MP3A	Mx	-.000293	5
27	MP3A	Z	-.878	6
28	MP3A	Mx	-.000293	6
29	MP3A	Z	-.878	5
30	MP3A	Mx	.000293	5
31	MP3A	Z	-.878	6
32	MP3A	Mx	.000293	6

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	3.157	1.25
2	MP3A	Mx	-.002	1.25
3	MP3A	X	3.157	4.75
4	MP3A	Mx	-.002	4.75
5	MP3A	X	3.157	1.25
6	MP3A	Mx	-.003	1.25
7	MP3A	X	3.157	4.75
8	MP3A	Mx	-.003	4.75
9	MP1A	X	4.343	2
10	MP1A	Mx	-.002	2
11	MP1A	X	4.343	4
12	MP1A	Mx	-.002	4
13	MP4A	X	.598	.17
14	MP4A	Mx	-.000424	.17
15	MP4A	X	.598	3.67
16	MP4A	Mx	-.000424	3.67
17	MP3A	X	.788	1.5
18	MP3A	Mx	.000328	1.5
19	MP2A	X	8.417	2.75
20	MP2A	Mx	.004	2.75
21	MP3A	X	7.011	2.75



**Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
22	MP3A	Mx	.004	2.75
23	OVP	X	3.191	1
24	OVP	Mx	0	1
25	MP3A	X	.878	5
26	MP3A	Mx	.000878	5
27	MP3A	X	.878	6
28	MP3A	Mx	.000878	6
29	MP3A	X	.878	5
30	MP3A	Mx	.000878	5
31	MP3A	X	.878	6
32	MP3A	Mx	.000878	6

**Member Distributed Loads (BLC 40 : Structure Di)**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,F...]	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.377	-9.377	0	%100
2	M2	Y	-6.397	-6.397	0	%100
3	M4	Y	-6.397	-6.397	0	%100
4	MP1A	Y	-4.843	-4.843	0	%100
5	MP2A	Y	-4.843	-4.843	0	%100
6	MP3A	Y	-5.534	-5.534	0	%100
7	MP4A	Y	-4.843	-4.843	0	%100
8	OVP	Y	-4.843	-4.843	0	%100
9	M16	Y	-6.397	-6.397	0	%100
10	M22	Y	-6.446	-6.446	0	%100
11	M23	Y	-6.446	-6.446	0	%100

**Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,F...]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-7.585	-7.585	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-11.997	-11.997	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-8.141	-8.141	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-8.141	-8.141	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-9.855	-9.855	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-7.419	-7.419	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-7.419	-7.419	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-11.997	-11.997	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	-5.681	-5.681	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	-5.681	-5.681	0	%100

**Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,F...]	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.452	1.452	0	%100





**Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
2	M1	Z	-2.515	-2.515	0	%100
3	M2	X	3.793	3.793	0	%100
4	M2	Z	-6.569	-6.569	0	%100
5	M4	X	4.499	4.499	0	%100
6	M4	Z	-7.792	-7.792	0	%100
7	MP1A	X	4.07	4.07	0	%100
8	MP1A	Z	-7.05	-7.05	0	%100
9	MP2A	X	4.07	4.07	0	%100
10	MP2A	Z	-7.05	-7.05	0	%100
11	MP3A	X	4.927	4.927	0	%100
12	MP3A	Z	-8.534	-8.534	0	%100
13	MP4A	X	3.709	3.709	0	%100
14	MP4A	Z	-6.425	-6.425	0	%100
15	OVP	X	3.709	3.709	0	%100
16	OVP	Z	-6.425	-6.425	0	%100
17	M16	X	4.499	4.499	0	%100
18	M16	Z	-7.792	-7.792	0	%100
19	M22	X	.864	.864	0	%100
20	M22	Z	-1.497	-1.497	0	%100
21	M23	X	5.961	5.961	0	%100
22	M23	Z	-10.324	-10.324	0	%100

**Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	7.545	7.545	0	%100
2	M1	Z	-4.356	-4.356	0	%100
3	M2	X	6.569	6.569	0	%100
4	M2	Z	-3.793	-3.793	0	%100
5	M4	X	2.597	2.597	0	%100
6	M4	Z	-1.5	-1.5	0	%100
7	MP1A	X	7.05	7.05	0	%100
8	MP1A	Z	-4.07	-4.07	0	%100
9	MP2A	X	7.05	7.05	0	%100
10	MP2A	Z	-4.07	-4.07	0	%100
11	MP3A	X	8.534	8.534	0	%100
12	MP3A	Z	-4.927	-4.927	0	%100
13	MP4A	X	6.425	6.425	0	%100
14	MP4A	Z	-3.709	-3.709	0	%100
15	OVP	X	6.425	6.425	0	%100
16	OVP	Z	-3.709	-3.709	0	%100
17	M16	X	2.597	2.597	0	%100
18	M16	Z	-1.5	-1.5	0	%100
19	M22	X	3.478	3.478	0	%100
20	M22	Z	-2.008	-2.008	0	%100
21	M23	X	12.305	12.305	0	%100
22	M23	Z	-7.104	-7.104	0	%100

**Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	11.616	11.616	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	7.585	7.585	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	8.141	8.141	0	%100



**Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
8	MP1A	Z	0	0	0	%100
9	MP2A	X	8.141	8.141	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	9.855	9.855	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	7.419	7.419	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	7.419	7.419	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	10.256	10.256	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	10.256	10.256	0	%100
22	M23	Z	0	0	0	%100

**Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	7.545	7.545	0	%100
2	M1	Z	4.356	4.356	0	%100
3	M2	X	6.569	6.569	0	%100
4	M2	Z	3.793	3.793	0	%100
5	M4	X	2.597	2.597	0	%100
6	M4	Z	1.5	1.5	0	%100
7	MP1A	X	7.05	7.05	0	%100
8	MP1A	Z	4.07	4.07	0	%100
9	MP2A	X	7.05	7.05	0	%100
10	MP2A	Z	4.07	4.07	0	%100
11	MP3A	X	8.534	8.534	0	%100
12	MP3A	Z	4.927	4.927	0	%100
13	MP4A	X	6.425	6.425	0	%100
14	MP4A	Z	3.709	3.709	0	%100
15	OVP	X	6.425	6.425	0	%100
16	OVP	Z	3.709	3.709	0	%100
17	M16	X	2.597	2.597	0	%100
18	M16	Z	1.5	1.5	0	%100
19	M22	X	12.305	12.305	0	%100
20	M22	Z	7.104	7.104	0	%100
21	M23	X	3.478	3.478	0	%100
22	M23	Z	2.008	2.008	0	%100

**Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	1.452	1.452	0	%100
2	M1	Z	2.515	2.515	0	%100
3	M2	X	3.793	3.793	0	%100
4	M2	Z	6.569	6.569	0	%100
5	M4	X	4.499	4.499	0	%100
6	M4	Z	7.792	7.792	0	%100
7	MP1A	X	4.07	4.07	0	%100
8	MP1A	Z	7.05	7.05	0	%100
9	MP2A	X	4.07	4.07	0	%100
10	MP2A	Z	7.05	7.05	0	%100
11	MP3A	X	4.927	4.927	0	%100
12	MP3A	Z	8.534	8.534	0	%100
13	MP4A	X	3.709	3.709	0	%100



**Member Distributed Loads (BLC 46 : Structure Wo (150 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
14	MP4A	Z	6.425	6.425	0	%100
15	OVP	X	3.709	3.709	0	%100
16	OVP	Z	6.425	6.425	0	%100
17	M16	X	4.499	4.499	0	%100
18	M16	Z	7.792	7.792	0	%100
19	M22	X	5.961	5.961	0	%100
20	M22	Z	10.324	10.324	0	%100
21	M23	X	.864	.864	0	%100
22	M23	Z	1.497	1.497	0	%100

**Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	7.585	7.585	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	11.997	11.997	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	8.141	8.141	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	8.141	8.141	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	9.855	9.855	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	7.419	7.419	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	7.419	7.419	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	11.997	11.997	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	5.681	5.681	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	5.681	5.681	0	%100

**Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.452	-1.452	0	%100
2	M1	Z	2.515	2.515	0	%100
3	M2	X	-3.793	-3.793	0	%100
4	M2	Z	6.569	6.569	0	%100
5	M4	X	-4.499	-4.499	0	%100
6	M4	Z	7.792	7.792	0	%100
7	MP1A	X	-4.07	-4.07	0	%100
8	MP1A	Z	7.05	7.05	0	%100
9	MP2A	X	-4.07	-4.07	0	%100
10	MP2A	Z	7.05	7.05	0	%100
11	MP3A	X	-4.927	-4.927	0	%100
12	MP3A	Z	8.534	8.534	0	%100
13	MP4A	X	-3.709	-3.709	0	%100
14	MP4A	Z	6.425	6.425	0	%100
15	OVP	X	-3.709	-3.709	0	%100
16	OVP	Z	6.425	6.425	0	%100
17	M16	X	-4.499	-4.499	0	%100
18	M16	Z	7.792	7.792	0	%100
19	M22	X	-.864	-.864	0	%100



**Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
20	M22	Z	1.497	1.497	0	%100
21	M23	X	-5.961	-5.961	0	%100
22	M23	Z	10.324	10.324	0	%100

**Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-7.545	-7.545	0	%100
2	M1	Z	4.356	4.356	0	%100
3	M2	X	-6.569	-6.569	0	%100
4	M2	Z	3.793	3.793	0	%100
5	M4	X	-2.597	-2.597	0	%100
6	M4	Z	1.5	1.5	0	%100
7	MP1A	X	-7.05	-7.05	0	%100
8	MP1A	Z	4.07	4.07	0	%100
9	MP2A	X	-7.05	-7.05	0	%100
10	MP2A	Z	4.07	4.07	0	%100
11	MP3A	X	-8.534	-8.534	0	%100
12	MP3A	Z	4.927	4.927	0	%100
13	MP4A	X	-6.425	-6.425	0	%100
14	MP4A	Z	3.709	3.709	0	%100
15	OVP	X	-6.425	-6.425	0	%100
16	OVP	Z	3.709	3.709	0	%100
17	M16	X	-2.597	-2.597	0	%100
18	M16	Z	1.5	1.5	0	%100
19	M22	X	-3.478	-3.478	0	%100
20	M22	Z	2.008	2.008	0	%100
21	M23	X	-12.305	-12.305	0	%100
22	M23	Z	7.104	7.104	0	%100

**Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-11.616	-11.616	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-7.585	-7.585	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-8.141	-8.141	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-8.141	-8.141	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-9.855	-9.855	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-7.419	-7.419	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	-7.419	-7.419	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	-10.256	-10.256	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	-10.256	-10.256	0	%100
22	M23	Z	0	0	0	%100

**Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
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**Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-7.545	-7.545	0	%100
2	M1	Z	-4.356	-4.356	0	%100
3	M2	X	-6.569	-6.569	0	%100
4	M2	Z	-3.793	-3.793	0	%100
5	M4	X	-2.597	-2.597	0	%100
6	M4	Z	-1.5	-1.5	0	%100
7	MP1A	X	-7.05	-7.05	0	%100
8	MP1A	Z	-4.07	-4.07	0	%100
9	MP2A	X	-7.05	-7.05	0	%100
10	MP2A	Z	-4.07	-4.07	0	%100
11	MP3A	X	-8.534	-8.534	0	%100
12	MP3A	Z	-4.927	-4.927	0	%100
13	MP4A	X	-6.425	-6.425	0	%100
14	MP4A	Z	-3.709	-3.709	0	%100
15	OVP	X	-6.425	-6.425	0	%100
16	OVP	Z	-3.709	-3.709	0	%100
17	M16	X	-2.597	-2.597	0	%100
18	M16	Z	-1.5	-1.5	0	%100
19	M22	X	-12.305	-12.305	0	%100
20	M22	Z	-7.104	-7.104	0	%100
21	M23	X	-3.478	-3.478	0	%100
22	M23	Z	-2.008	-2.008	0	%100

**Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-1.452	-1.452	0	%100
2	M1	Z	-2.515	-2.515	0	%100
3	M2	X	-3.793	-3.793	0	%100
4	M2	Z	-6.569	-6.569	0	%100
5	M4	X	-4.499	-4.499	0	%100
6	M4	Z	-7.792	-7.792	0	%100
7	MP1A	X	-4.07	-4.07	0	%100
8	MP1A	Z	-7.05	-7.05	0	%100
9	MP2A	X	-4.07	-4.07	0	%100
10	MP2A	Z	-7.05	-7.05	0	%100
11	MP3A	X	-4.927	-4.927	0	%100
12	MP3A	Z	-8.534	-8.534	0	%100
13	MP4A	X	-3.709	-3.709	0	%100
14	MP4A	Z	-6.425	-6.425	0	%100
15	OVP	X	-3.709	-3.709	0	%100
16	OVP	Z	-6.425	-6.425	0	%100
17	M16	X	-4.499	-4.499	0	%100
18	M16	Z	-7.792	-7.792	0	%100
19	M22	X	-5.961	-5.961	0	%100
20	M22	Z	-10.324	-10.324	0	%100
21	M23	X	-.864	-.864	0	%100
22	M23	Z	-1.497	-1.497	0	%100

**Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-2.063	-2.063	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-3.16	-3.16	0	%100



**Member Distributed Loads (BLC 53 : Structure Wi (0 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-2.543	-2.543	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-2.543	-2.543	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-2.817	-2.817	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-2.341	-2.341	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-2.341	-2.341	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-3.16	-3.16	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	-1.402	-1.402	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	-1.402	-1.402	0	%100

**Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.382	.382	0	%100
2	M1	Z	-.661	-.661	0	%100
3	M2	X	1.031	1.031	0	%100
4	M2	Z	-1.786	-1.786	0	%100
5	M4	X	1.185	1.185	0	%100
6	M4	Z	-2.052	-2.052	0	%100
7	MP1A	X	1.271	1.271	0	%100
8	MP1A	Z	-2.202	-2.202	0	%100
9	MP2A	X	1.271	1.271	0	%100
10	MP2A	Z	-2.202	-2.202	0	%100
11	MP3A	X	1.409	1.409	0	%100
12	MP3A	Z	-2.44	-2.44	0	%100
13	MP4A	X	1.17	1.17	0	%100
14	MP4A	Z	-2.027	-2.027	0	%100
15	OVP	X	1.17	1.17	0	%100
16	OVP	Z	-2.027	-2.027	0	%100
17	M16	X	1.185	1.185	0	%100
18	M16	Z	-2.052	-2.052	0	%100
19	M22	X	.213	.213	0	%100
20	M22	Z	-.369	-.369	0	%100
21	M23	X	1.471	1.471	0	%100
22	M23	Z	-2.548	-2.548	0	%100

**Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	1.983	1.983	0	%100
2	M1	Z	-1.145	-1.145	0	%100
3	M2	X	1.786	1.786	0	%100
4	M2	Z	-1.031	-1.031	0	%100
5	M4	X	.684	.684	0	%100
6	M4	Z	-.395	-.395	0	%100
7	MP1A	X	2.202	2.202	0	%100
8	MP1A	Z	-1.271	-1.271	0	%100
9	MP2A	X	2.202	2.202	0	%100
10	MP2A	Z	-1.271	-1.271	0	%100
11	MP3A	X	2.44	2.44	0	%100
12	MP3A	Z	-1.409	-1.409	0	%100



**Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
13	MP4A	X	2.027	2.027	0	%100
14	MP4A	Z	-1.17	-1.17	0	%100
15	OVP	X	2.027	2.027	0	%100
16	OVP	Z	-1.17	-1.17	0	%100
17	M16	X	.684	.684	0	%100
18	M16	Z	-.395	-.395	0	%100
19	M22	X	.858	.858	0	%100
20	M22	Z	-.496	-.496	0	%100
21	M23	X	3.037	3.037	0	%100
22	M23	Z	-1.754	-1.754	0	%100

**Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	3.053	3.053	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	2.063	2.063	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	2.543	2.543	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	2.543	2.543	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	2.817	2.817	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	2.341	2.341	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	2.341	2.341	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	2.532	2.532	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	2.532	2.532	0	%100
22	M23	Z	0	0	0	%100

**Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	1.983	1.983	0	%100
2	M1	Z	1.145	1.145	0	%100
3	M2	X	1.786	1.786	0	%100
4	M2	Z	1.031	1.031	0	%100
5	M4	X	.684	.684	0	%100
6	M4	Z	.395	.395	0	%100
7	MP1A	X	2.202	2.202	0	%100
8	MP1A	Z	1.271	1.271	0	%100
9	MP2A	X	2.202	2.202	0	%100
10	MP2A	Z	1.271	1.271	0	%100
11	MP3A	X	2.44	2.44	0	%100
12	MP3A	Z	1.409	1.409	0	%100
13	MP4A	X	2.027	2.027	0	%100
14	MP4A	Z	1.17	1.17	0	%100
15	OVP	X	2.027	2.027	0	%100
16	OVP	Z	1.17	1.17	0	%100
17	M16	X	.684	.684	0	%100
18	M16	Z	.395	.395	0	%100





**Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
19	M22	X	3.037	3.037	0	%100
20	M22	Z	1.754	1.754	0	%100
21	M23	X	.858	.858	0	%100
22	M23	Z	.496	.496	0	%100

**Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.382	.382	0	%100
2	M1	Z	.661	.661	0	%100
3	M2	X	1.031	1.031	0	%100
4	M2	Z	1.786	1.786	0	%100
5	M4	X	1.185	1.185	0	%100
6	M4	Z	2.052	2.052	0	%100
7	MP1A	X	1.271	1.271	0	%100
8	MP1A	Z	2.202	2.202	0	%100
9	MP2A	X	1.271	1.271	0	%100
10	MP2A	Z	2.202	2.202	0	%100
11	MP3A	X	1.409	1.409	0	%100
12	MP3A	Z	2.44	2.44	0	%100
13	MP4A	X	1.17	1.17	0	%100
14	MP4A	Z	2.027	2.027	0	%100
15	OVP	X	1.17	1.17	0	%100
16	OVP	Z	2.027	2.027	0	%100
17	M16	X	1.185	1.185	0	%100
18	M16	Z	2.052	2.052	0	%100
19	M22	X	1.471	1.471	0	%100
20	M22	Z	2.548	2.548	0	%100
21	M23	X	.213	.213	0	%100
22	M23	Z	.369	.369	0	%100

**Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	2.063	2.063	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	3.16	3.16	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	2.543	2.543	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	2.543	2.543	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	2.817	2.817	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	2.341	2.341	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	2.341	2.341	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	3.16	3.16	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	1.402	1.402	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	1.402	1.402	0	%100





**Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.382	-.382	0	%100
2	M1	Z	.661	.661	0	%100
3	M2	X	-1.031	-1.031	0	%100
4	M2	Z	1.786	1.786	0	%100
5	M4	X	-1.185	-1.185	0	%100
6	M4	Z	2.052	2.052	0	%100
7	MP1A	X	-1.271	-1.271	0	%100
8	MP1A	Z	2.202	2.202	0	%100
9	MP2A	X	-1.271	-1.271	0	%100
10	MP2A	Z	2.202	2.202	0	%100
11	MP3A	X	-1.409	-1.409	0	%100
12	MP3A	Z	2.44	2.44	0	%100
13	MP4A	X	-1.17	-1.17	0	%100
14	MP4A	Z	2.027	2.027	0	%100
15	OVP	X	-1.17	-1.17	0	%100
16	OVP	Z	2.027	2.027	0	%100
17	M16	X	-1.185	-1.185	0	%100
18	M16	Z	2.052	2.052	0	%100
19	M22	X	-.213	-.213	0	%100
20	M22	Z	.369	.369	0	%100
21	M23	X	-1.471	-1.471	0	%100
22	M23	Z	2.548	2.548	0	%100

**Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-1.983	-1.983	0	%100
2	M1	Z	1.145	1.145	0	%100
3	M2	X	-1.786	-1.786	0	%100
4	M2	Z	1.031	1.031	0	%100
5	M4	X	-.684	-.684	0	%100
6	M4	Z	.395	.395	0	%100
7	MP1A	X	-2.202	-2.202	0	%100
8	MP1A	Z	1.271	1.271	0	%100
9	MP2A	X	-2.202	-2.202	0	%100
10	MP2A	Z	1.271	1.271	0	%100
11	MP3A	X	-2.44	-2.44	0	%100
12	MP3A	Z	1.409	1.409	0	%100
13	MP4A	X	-2.027	-2.027	0	%100
14	MP4A	Z	1.17	1.17	0	%100
15	OVP	X	-2.027	-2.027	0	%100
16	OVP	Z	1.17	1.17	0	%100
17	M16	X	-.684	-.684	0	%100
18	M16	Z	.395	.395	0	%100
19	M22	X	-.858	-.858	0	%100
20	M22	Z	.496	.496	0	%100
21	M23	X	-3.037	-3.037	0	%100
22	M23	Z	1.754	1.754	0	%100

**Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-3.053	-3.053	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-2.063	-2.063	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100



**Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
7	MP1A	X	-2.543	-2.543	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-2.543	-2.543	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-2.817	-2.817	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-2.341	-2.341	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	-2.341	-2.341	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	-2.532	-2.532	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	-2.532	-2.532	0	%100
22	M23	Z	0	0	0	%100

**Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-1.983	-1.983	0	%100
2	M1	Z	-1.145	-1.145	0	%100
3	M2	X	-1.786	-1.786	0	%100
4	M2	Z	-1.031	-1.031	0	%100
5	M4	X	-.684	-.684	0	%100
6	M4	Z	-.395	-.395	0	%100
7	MP1A	X	-2.202	-2.202	0	%100
8	MP1A	Z	-1.271	-1.271	0	%100
9	MP2A	X	-2.202	-2.202	0	%100
10	MP2A	Z	-1.271	-1.271	0	%100
11	MP3A	X	-2.44	-2.44	0	%100
12	MP3A	Z	-1.409	-1.409	0	%100
13	MP4A	X	-2.027	-2.027	0	%100
14	MP4A	Z	-1.17	-1.17	0	%100
15	OVP	X	-2.027	-2.027	0	%100
16	OVP	Z	-1.17	-1.17	0	%100
17	M16	X	-.684	-.684	0	%100
18	M16	Z	-.395	-.395	0	%100
19	M22	X	-3.037	-3.037	0	%100
20	M22	Z	-1.754	-1.754	0	%100
21	M23	X	-.858	-.858	0	%100
22	M23	Z	-.496	-.496	0	%100

**Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.382	-.382	0	%100
2	M1	Z	-.661	-.661	0	%100
3	M2	X	-1.031	-1.031	0	%100
4	M2	Z	-1.786	-1.786	0	%100
5	M4	X	-1.185	-1.185	0	%100
6	M4	Z	-2.052	-2.052	0	%100
7	MP1A	X	-1.271	-1.271	0	%100
8	MP1A	Z	-2.202	-2.202	0	%100
9	MP2A	X	-1.271	-1.271	0	%100
10	MP2A	Z	-2.202	-2.202	0	%100
11	MP3A	X	-1.409	-1.409	0	%100
12	MP3A	Z	-2.44	-2.44	0	%100



**Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
13	MP4A	X	-1.17	-1.17	0	%100
14	MP4A	Z	-2.027	-2.027	0	%100
15	OVP	X	-1.17	-1.17	0	%100
16	OVP	Z	-2.027	-2.027	0	%100
17	M16	X	-1.185	-1.185	0	%100
18	M16	Z	-2.052	-2.052	0	%100
19	M22	X	-1.471	-1.471	0	%100
20	M22	Z	-2.548	-2.548	0	%100
21	M23	X	-.213	-.213	0	%100
22	M23	Z	-.369	-.369	0	%100

**Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.437	-.437	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-.691	-.691	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.469	-.469	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.469	-.469	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-.568	-.568	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-.427	-.427	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-.427	-.427	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-.691	-.691	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	-.327	-.327	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	-.327	-.327	0	%100

**Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.084	.084	0	%100
2	M1	Z	-.145	-.145	0	%100
3	M2	X	.218	.218	0	%100
4	M2	Z	-.378	-.378	0	%100
5	M4	X	.259	.259	0	%100
6	M4	Z	-.449	-.449	0	%100
7	MP1A	X	.234	.234	0	%100
8	MP1A	Z	-.406	-.406	0	%100
9	MP2A	X	.234	.234	0	%100
10	MP2A	Z	-.406	-.406	0	%100
11	MP3A	X	.284	.284	0	%100
12	MP3A	Z	-.492	-.492	0	%100
13	MP4A	X	.214	.214	0	%100
14	MP4A	Z	-.37	-.37	0	%100
15	OVP	X	.214	.214	0	%100
16	OVP	Z	-.37	-.37	0	%100
17	M16	X	.259	.259	0	%100
18	M16	Z	-.449	-.449	0	%100



**Member Distributed Loads (BLC 66 : Structure Wm (30 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
19	M22	X	.05	.05	0	%100
20	M22	Z	-.086	-.086	0	%100
21	M23	X	.343	.343	0	%100
22	M23	Z	-.595	-.595	0	%100

**Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.435	.435	0	%100
2	M1	Z	-.251	-.251	0	%100
3	M2	X	.378	.378	0	%100
4	M2	Z	-.218	-.218	0	%100
5	M4	X	.15	.15	0	%100
6	M4	Z	-.086	-.086	0	%100
7	MP1A	X	.406	.406	0	%100
8	MP1A	Z	-.234	-.234	0	%100
9	MP2A	X	.406	.406	0	%100
10	MP2A	Z	-.234	-.234	0	%100
11	MP3A	X	.492	.492	0	%100
12	MP3A	Z	-.284	-.284	0	%100
13	MP4A	X	.37	.37	0	%100
14	MP4A	Z	-.214	-.214	0	%100
15	OVP	X	.37	.37	0	%100
16	OVP	Z	-.214	-.214	0	%100
17	M16	X	.15	.15	0	%100
18	M16	Z	-.086	-.086	0	%100
19	M22	X	.2	.2	0	%100
20	M22	Z	-.116	-.116	0	%100
21	M23	X	.709	.709	0	%100
22	M23	Z	-.409	-.409	0	%100

**Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.669	.669	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	.437	.437	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	.469	.469	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	.469	.469	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	.568	.568	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	.427	.427	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	.427	.427	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	.591	.591	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	.591	.591	0	%100
22	M23	Z	0	0	0	%100



**Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.435	.435	0	%100
2	M1	Z	.251	.251	0	%100
3	M2	X	.378	.378	0	%100
4	M2	Z	.218	.218	0	%100
5	M4	X	.15	.15	0	%100
6	M4	Z	.086	.086	0	%100
7	MP1A	X	.406	.406	0	%100
8	MP1A	Z	.234	.234	0	%100
9	MP2A	X	.406	.406	0	%100
10	MP2A	Z	.234	.234	0	%100
11	MP3A	X	.492	.492	0	%100
12	MP3A	Z	.284	.284	0	%100
13	MP4A	X	.37	.37	0	%100
14	MP4A	Z	.214	.214	0	%100
15	OVP	X	.37	.37	0	%100
16	OVP	Z	.214	.214	0	%100
17	M16	X	.15	.15	0	%100
18	M16	Z	.086	.086	0	%100
19	M22	X	.709	.709	0	%100
20	M22	Z	.409	.409	0	%100
21	M23	X	.2	.2	0	%100
22	M23	Z	.116	.116	0	%100

**Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.084	.084	0	%100
2	M1	Z	.145	.145	0	%100
3	M2	X	.218	.218	0	%100
4	M2	Z	.378	.378	0	%100
5	M4	X	.259	.259	0	%100
6	M4	Z	.449	.449	0	%100
7	MP1A	X	.234	.234	0	%100
8	MP1A	Z	.406	.406	0	%100
9	MP2A	X	.234	.234	0	%100
10	MP2A	Z	.406	.406	0	%100
11	MP3A	X	.284	.284	0	%100
12	MP3A	Z	.492	.492	0	%100
13	MP4A	X	.214	.214	0	%100
14	MP4A	Z	.37	.37	0	%100
15	OVP	X	.214	.214	0	%100
16	OVP	Z	.37	.37	0	%100
17	M16	X	.259	.259	0	%100
18	M16	Z	.449	.449	0	%100
19	M22	X	.343	.343	0	%100
20	M22	Z	.595	.595	0	%100
21	M23	X	.05	.05	0	%100
22	M23	Z	.086	.086	0	%100

**Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.437	.437	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	.691	.691	0	%100



**Member Distributed Loads (BLC 71 : Structure Wm (180 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.469	.469	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.469	.469	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.568	.568	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	.427	.427	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	.427	.427	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	.691	.691	0	%100
19	M22	X	0	0	0	%100
20	M22	Z	.327	.327	0	%100
21	M23	X	0	0	0	%100
22	M23	Z	.327	.327	0	%100

**Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.084	-.084	0	%100
2	M1	Z	.145	.145	0	%100
3	M2	X	-.218	-.218	0	%100
4	M2	Z	.378	.378	0	%100
5	M4	X	-.259	-.259	0	%100
6	M4	Z	.449	.449	0	%100
7	MP1A	X	-.234	-.234	0	%100
8	MP1A	Z	.406	.406	0	%100
9	MP2A	X	-.234	-.234	0	%100
10	MP2A	Z	.406	.406	0	%100
11	MP3A	X	-.284	-.284	0	%100
12	MP3A	Z	.492	.492	0	%100
13	MP4A	X	-.214	-.214	0	%100
14	MP4A	Z	.37	.37	0	%100
15	OVP	X	-.214	-.214	0	%100
16	OVP	Z	.37	.37	0	%100
17	M16	X	-.259	-.259	0	%100
18	M16	Z	.449	.449	0	%100
19	M22	X	-.05	-.05	0	%100
20	M22	Z	.086	.086	0	%100
21	M23	X	-.343	-.343	0	%100
22	M23	Z	.595	.595	0	%100

**Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.435	-.435	0	%100
2	M1	Z	.251	.251	0	%100
3	M2	X	-.378	-.378	0	%100
4	M2	Z	.218	.218	0	%100
5	M4	X	-.15	-.15	0	%100
6	M4	Z	.086	.086	0	%100
7	MP1A	X	-.406	-.406	0	%100
8	MP1A	Z	.234	.234	0	%100
9	MP2A	X	-.406	-.406	0	%100
10	MP2A	Z	.234	.234	0	%100
11	MP3A	X	-.492	-.492	0	%100
12	MP3A	Z	.284	.284	0	%100



**Member Distributed Loads (BLC 73 : Structure Wm (240 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
13	MP4A	X	-.37	-.37	0	%100
14	MP4A	Z	.214	.214	0	%100
15	OVP	X	-.37	-.37	0	%100
16	OVP	Z	.214	.214	0	%100
17	M16	X	-.15	-.15	0	%100
18	M16	Z	.086	.086	0	%100
19	M22	X	-.2	-.2	0	%100
20	M22	Z	.116	.116	0	%100
21	M23	X	-.709	-.709	0	%100
22	M23	Z	.409	.409	0	%100

**Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.669	-.669	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-.437	-.437	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-.469	-.469	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-.469	-.469	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-.568	-.568	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-.427	-.427	0	%100
14	MP4A	Z	0	0	0	%100
15	OVP	X	-.427	-.427	0	%100
16	OVP	Z	0	0	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	0	0	0	%100
19	M22	X	-.591	-.591	0	%100
20	M22	Z	0	0	0	%100
21	M23	X	-.591	-.591	0	%100
22	M23	Z	0	0	0	%100

**Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.435	-.435	0	%100
2	M1	Z	-.251	-.251	0	%100
3	M2	X	-.378	-.378	0	%100
4	M2	Z	-.218	-.218	0	%100
5	M4	X	-.15	-.15	0	%100
6	M4	Z	-.086	-.086	0	%100
7	MP1A	X	-.406	-.406	0	%100
8	MP1A	Z	-.234	-.234	0	%100
9	MP2A	X	-.406	-.406	0	%100
10	MP2A	Z	-.234	-.234	0	%100
11	MP3A	X	-.492	-.492	0	%100
12	MP3A	Z	-.284	-.284	0	%100
13	MP4A	X	-.37	-.37	0	%100
14	MP4A	Z	-.214	-.214	0	%100
15	OVP	X	-.37	-.37	0	%100
16	OVP	Z	-.214	-.214	0	%100
17	M16	X	-.15	-.15	0	%100
18	M16	Z	-.086	-.086	0	%100





**Member Distributed Loads (BLC 75 : Structure Wm (300 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
19	M22	X	-709	-709	0	%100
20	M22	Z	-409	-409	0	%100
21	M23	X	-.2	-.2	0	%100
22	M23	Z	-.116	-.116	0	%100

**Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.084	-.084	0	%100
2	M1	Z	-.145	-.145	0	%100
3	M2	X	-.218	-.218	0	%100
4	M2	Z	-.378	-.378	0	%100
5	M4	X	-.259	-.259	0	%100
6	M4	Z	-.449	-.449	0	%100
7	MP1A	X	-.234	-.234	0	%100
8	MP1A	Z	-.406	-.406	0	%100
9	MP2A	X	-.234	-.234	0	%100
10	MP2A	Z	-.406	-.406	0	%100
11	MP3A	X	-.284	-.284	0	%100
12	MP3A	Z	-.492	-.492	0	%100
13	MP4A	X	-.214	-.214	0	%100
14	MP4A	Z	-.37	-.37	0	%100
15	OVP	X	-.214	-.214	0	%100
16	OVP	Z	-.37	-.37	0	%100
17	M16	X	-.259	-.259	0	%100
18	M16	Z	-.449	-.449	0	%100
19	M22	X	-.343	-.343	0	%100
20	M22	Z	-.595	-.595	0	%100
21	M23	X	-.05	-.05	0	%100
22	M23	Z	-.086	-.086	0	%100

**Member Area Loads**

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

**Envelope Joint Reactions**

Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	N1	max	1453.563	11	1643.893	13	1527.741	1	-1.529	7	6.1	11	5.469	29
2		min	-1449.599	5	521.482	7	-665.999	7	-5.161	13	-6.059	5	-2.179	11
3	N55	max	235.257	6	521.911	19	279.951	1	0	25	.002	11	.008	29
4		min	-252.136	12	-86.672	1	-1141.63	7	0	7	-.004	29	-.003	11
5	Totals:	max	1230.1	11	2031.266	23	1807.692	1						
6		min	-1230.107	5	738.149	66	-1807.63	7						

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

Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [...phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn		
1	M1	HSS4X4X4	.592	0	5	.437	0	y	29	128973.4...	139518	16.181	16.181	2...	H3-6
2	M2	PIPE 3.0	.000	.75	5	.000	.75		5	64424.35	65205	5.749	5.749	1...	H1-1b
3	M4	PIPE 3.0	.815	6.75	29	.330	6.75		29	24533.227	65205	5.749	5.749	1...	H3-6
4	MP1A	PIPE 2.0	.404	1.625	36	.063	4.25		35	20866.733	32130	1.872	1.872	4...	H1-1b
5	MP2A	PIPE 2.0	.437	4.229	36	.055	4.229		1	17855.085	32130	1.872	1.872	2...	H1-1b
6	MP3A	PIPE 2.5	.428	4.229	27	.091	4.229		6	33961.614	50715	3.596	3.596	1...	H1-1b
7	MP4A	PIPE 2.0	.139	3.167	17	.034	3.167		4	26521.424	32130	1.872	1.872	1...	H1-1b





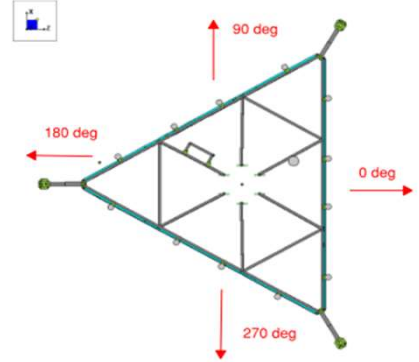
***Envelope AISC 15th(360-16): LFRD Steel Code Checks (Continued)***

Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [...]	phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn	
8	OVP	PIPE 2.0	.158	3	8	.016	3	8	26521.424	32130	1.872	1.872	1...	H1-1b	
9	M16	PIPE 3.0	.249	9.625	29	.071	10.354	26	22812.146	65205	5.749	5.749	2...	H1-1b	
10	M22	L2.5x2.5x3	.115	3.06	5	.040	0	z	29	8765.31	29192.4	.873	1.521	1...	H2-1
11	M23	L2.5x2.5x3	.108	3.06	9	.051	6.121	y	29	8765.31	29192.4	.873	1.521	1...	H2-1

**I. Mount-to-Tower Connection Check**

Custom Orientation Required Yes

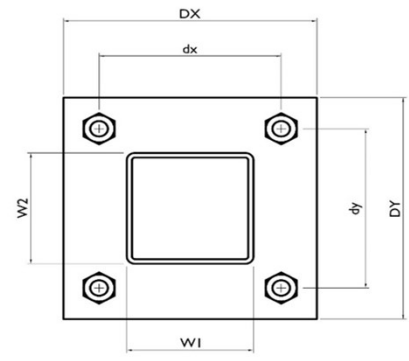
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0



Tower Connection Bolt Checks Yes

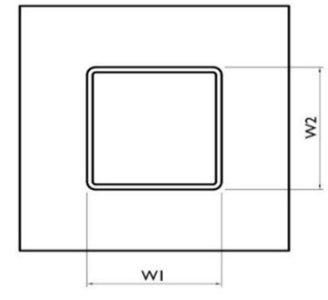
Bolt Orientation Paralle

Bolt Quantity per Reaction:	4
$d_x$ (in) (Delta X of typ. bolt config. sketch):	6
$d_y$ (in) (Delta Y of typ. bolt config. sketch):	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	8.9
Required Shear Strength / bolt (kips):	2.0
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	<b>42.9%</b>



Tower Connection Baseplate Checks Yes

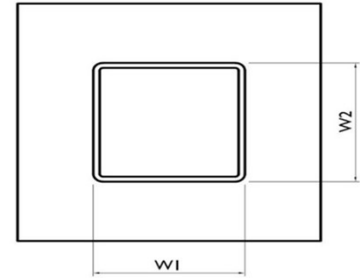
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, $D_x$ (in):	8.5
Plate Height, $D_y$ (in):	8.5
$W1$ (in):	4
$W2$ (in):	4
Member Thickness (in):	0.25
Stiffener location $a_1$ (in):	
Stiffener location $b_1$ (in):	
Stiffener location $a_2$ (in):	
Stiffener location $b_2$ (in):	
$F_y$ (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, $L_y$ (in):	6.34
Bolt Eccentricity, $e$ (in):	1.65
$M_u$ (kip-in):	14.65
$\Phi \cdot M_n$ (kip-in):	28.86
Plate Bending Utilization:	<b>50.7%</b>



Tower Connection Weld Checks

Weld Shape:  
Weld Stiffener Configuration:  
Weld Size (1/16 in):  
W1 (in):  
W2 (in):  
Weld Total Length (in):  
 $Z_x$  (in<sup>3</sup>/in):  
 $Z_y$  (in<sup>3</sup>/in):  
 $J_p$  (in<sup>4</sup>/in):  
 $c_x$  (in)  
 $c_y$  (in)  
Required combined strength (kip/in):  
Weld Capacity (kip/in):  
Weld Utilization:

Yes
Rectangle
None
4
4
4
16.00
21.33
21.33
85.33
2.25
2.25
3.50
5.57
<b>62.8%</b>



# EXHIBIT 5





# Non-Ionizing Electromagnetic Radiation (NIER) Study

*Site Number:*

302498

*Site Name:*

Plainfield CT 6

*Location:*

Plainfield, Connecticut

*Tenants:*

AT&T Mobility, T-Mobile, & Verizon Wireless

*Prepared For:*

American Tower, Inc.  
Woburn, Massachusetts

September 10<sup>th</sup>, 2023

93995 P-4053-5

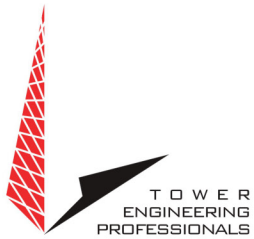
Prepared By:

Adam Carlson MS, CBRE, CPI  
Program Manager RF Design & Service  
Tower Engineering Professionals

Approved By:



09/13/2023



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## Disclaimer Notice

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TOWER ENGINEERING PROFESSIONALS

RALIEGH, NORTH CAROLINA



## Non-Ionizing Electromagnetic Radiation (NIER) Study

302490 Plainfield CT 6  
Plainfield, Connecticut

### INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

### SITE AND FACILITY CONSIDERATIONS

Site 302490 Plainfield CT 6 is located at 45 Spaulding Rd., in Plainfield, Connecticut at coordinates 41.674806, -71.879118. The support structure is a 149' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T), T-Mobile (T-Mobile), & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

### POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 90 from the base of the tower with a height of 6' above ground level was used, beyond 90' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.





All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 302498 Plainfield CT 6.RF NIER Study 8/21/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

### SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

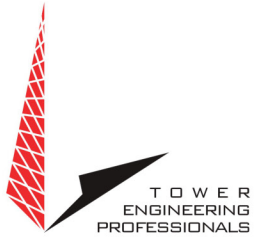
### COMPLIANCE DETERMINATION

This installation IS in compliance with current FCC MPE limits as described in FCC OET-65.

## APPENDIX 1 Site Photos

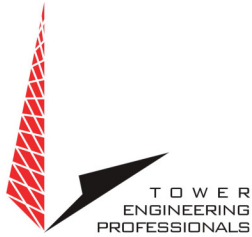


Aerial View of Site



## Appendix 2.1    Antenna Inventory

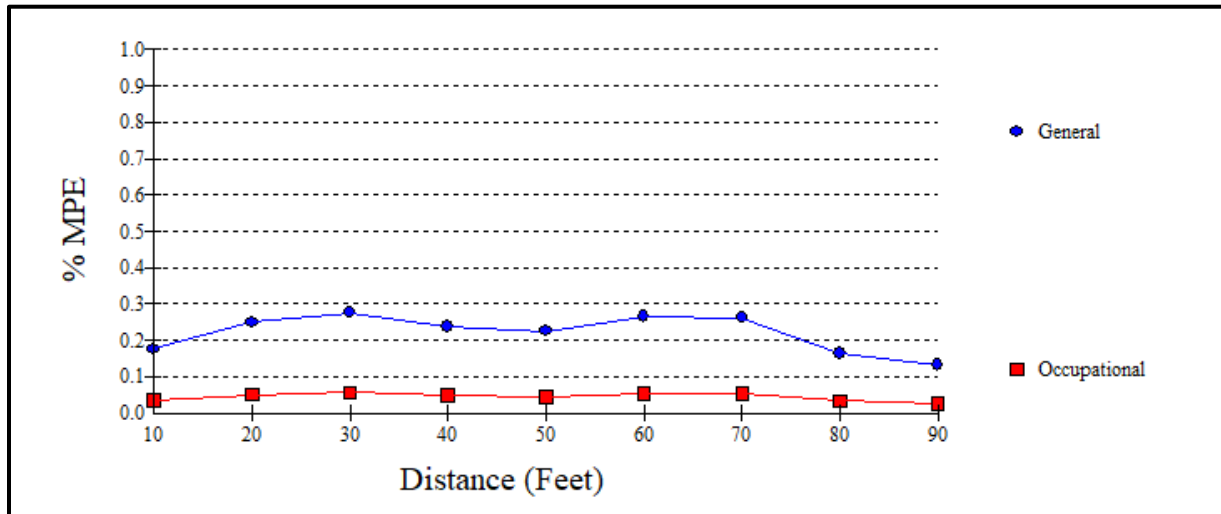
302498 Plainfield CT 6							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	AT&T	CCI	OPA65R-BU8D	700	045	7655	152
2	AT&T	CCI	OPA65R-BU8D	700	165	7655	152
3	AT&T	CCI	OPA65R-BU8D	700	275	7655	152
4	AT&T	Powerwave	7770	800	045	6124	152
5	AT&T	Powerwave	7770	800	165	6124	152
6	AT&T	Powerwave	7770	800	275	6124	152
7	AT&T	CCI	HPA65R-BU8A	2300	045	11537	152
8	AT&T	CCI	HPA65R-BU8A	2300	165	11537	152
9	AT&T	CCI	HPA65R-BU8A	2300	275	11537	152
10	AT&T	CCI	DMP65R-BU8D	700/1800/1900	045	57910	152
11	AT&T	CCI	DMP65R-BU8D	700/1800/1900	165	57910	152
12	AT&T	CCI	DMP65R-BU8D	700/1800/1900	275	57910	152



## Appendix 2.2     Antenna Inventory

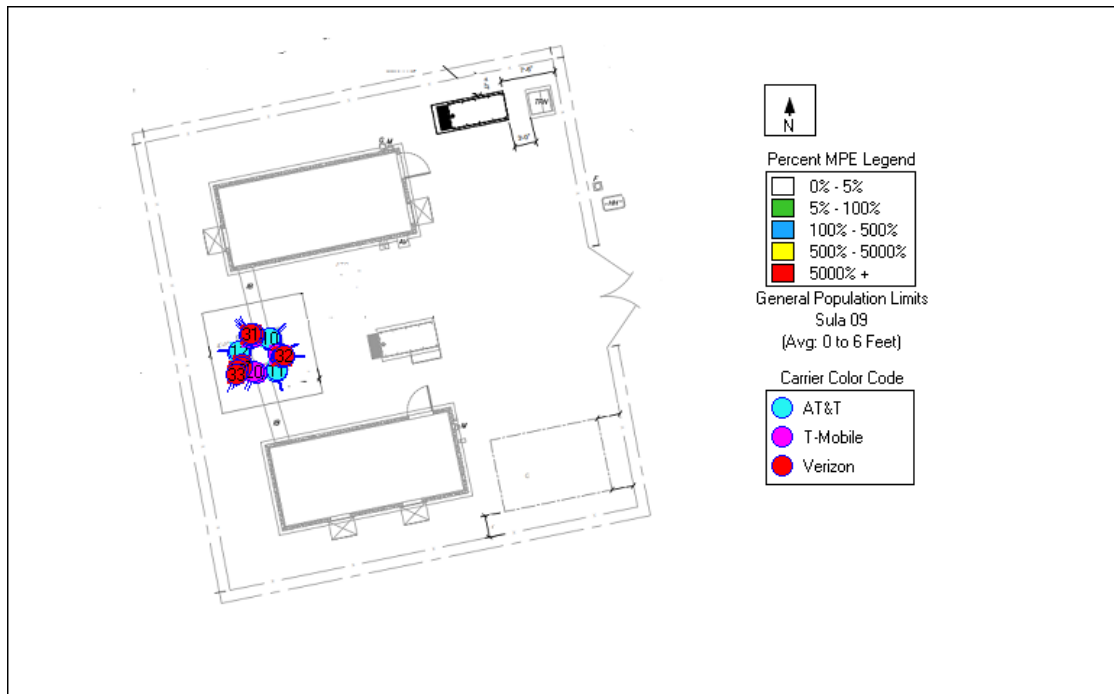
302498 Plainfield CT 6							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
13	T-Mobile	Commscope	VV-65A-R1B	1900/2100	060	25027	142
14	T-Mobile	Commscope	VV-65A-R1B	1900/2100	210	25027	142
15	T-Mobile	Commscope	VV-65A-R1B	1900/2100	310	25027	142
16	T-Mobile	Ericsson	Air 6419	2500/2600	060	20253	142
17	T-Mobile	Ericsson	Air 6419	2500/2600	210	20253	142
18	T-Mobile	Ericsson	Air 6419	2500/2600	310	20253	142
19	T-Mobile	RFS	APXVAALL24	600	060	11065	142
20	T-Mobile	RFS	APXVAALL24	600	210	11065	142
21	T-Mobile	RFS	APXVAALL24	600	310	11065	142
22	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	090	59387	114
23	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	195	59387	114
24	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	315	59387	114
25	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	090	59387	114
26	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	195	59387	114
27	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100/2300	315	59387	114
28	Verizon	Samsung	MT6407-77A	3700/3800/3900	090	18700	114
29	Verizon	Samsung	MT6407-77A	3700/3800/3900	195	18700	114
30	Verizon	Samsung	MT6407-77A	3700/3800/3900	315	18700	114
31	Verizon	Antel	BXA-70080	800	330	35334	114
32	Verizon	Antel	BXA-70080	800	090	61549	114
33	Verizon	Antel	BXA-70080	800	210	61549	114

### Appendix 3.1 MPE Limit Study



Maximum Power Density (@30'):	0.0017 mW/cm <sup>2</sup>
General Population MPE (@30'):	0.2764%
Occupational MPE (@30'):	0.0553%

## Appendix 3.2 MPE Limit Study





## Appendix 4 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.



MPE limits are defined in terms of power density (units of milliwatts per centimeter squared:  $\text{mW}/\text{cm}^2$ ), electric field strength (units of volts per meter:  $\text{V}/\text{m}$ ) and magnetic field strength (units of amperes per meter:  $\text{A}/\text{m}$ ). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

**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.

**General population/uncontrolled exposure** limits apply to situations in which the general public 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 public 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. Additional details can be found in FCC OET 65.





## Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

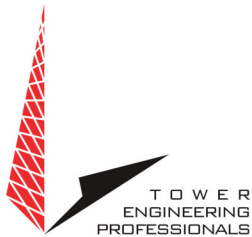
Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F <sup>2</sup>	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

\* = Plane-wave equivalent power density



Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/F <sup>2</sup>	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

\* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.



The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

### **Cylindrical Model (Near Field Predictions)**

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length



For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

$\theta_{BW}$  = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.



### **Spherical Model (Far Field Predictions)**

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

# EXHIBIT 6



DOCKET NO. 136 - An application of SNET Cellular, Inc., for a Certificate of Environmental Compatibility and Public Need for the construction, operation, and maintenance of a cellular telephone tower and associated equipment in the Town of Plainfield, Connecticut.

Connecticut

Siting

Council

September 26, 1990

ORIGINAL

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council finds that the effects associated with the construction, operation, and maintenance of a cellular telecommunications tower and equipment building at the proposed Plainfield, Connecticut, site including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not significant either alone or cumulatively with other effects, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by section 16-50k of the Connecticut General Statutes (CGS), be issued to SNET Cellular, Inc., for the construction, operation, and maintenance of a cellular telecommunications tower, associated equipment, and building at the proposed site in Plainfield, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The facility shall be constructed in accordance with the State of Connecticut Basic Building Code.
2. The self-supporting monopole tower shall be no taller than necessary to provide the proposed communication service and in no event shall the tower exceed a total height of 167 feet above ground level, with antennas and appurtenances.
3. The tower shall be moved further southwest to reduce visibility to nearby landowners, provided the tower's fall zone does not extend beyond the lessor's property line. This change shall be made and subject to approval by the Council in a Development and Management (D&M) Plan.
4. The Certificate holder shall prepare a D&M Plan for this site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M plan shall include detailed plans of the tower, tower foundation, tower pedestal, equipment building, access road, and security fence. In addition, the D&M plan shall include detailed plans for erosion and sedimentation control.



5. The Certificate Holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facility granted in this Decision and Order shall be brought into compliance with such standards.
6. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
7. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
8. If the facility does not initially provide, or permanently ceases to provide, cellular service following completion of construction, this Decision and Order shall be void, and the tower and all associated equipment shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.
9. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to Section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Norwich Bulletin.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with section 16-50j-17 of the Regulations of State Agencies.

The party to this proceeding is:

(PARTY)

SNET Cellular, Inc.  
227 Church Street  
New Haven, CT 06506

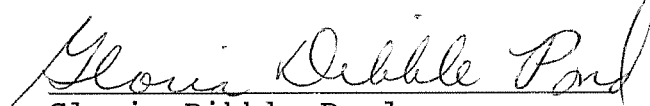


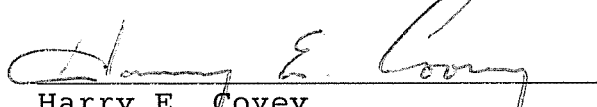

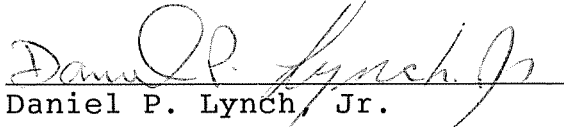
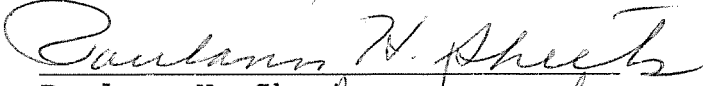
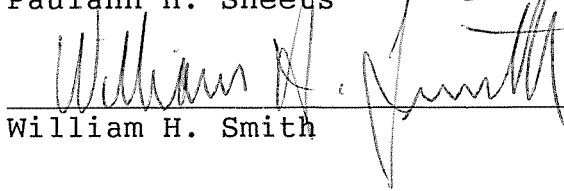
(ITS REPRESENTATIVES)

Peter J. Tyrrell  
Senior Attorney  
SNET Cellular, Inc.  
227 Church Street  
Room 1021  
New Haven, CT 06506  
(203) 771-7381

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in Docket No. 136 or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut the 26th day of September, 1990.

<u>Council Members</u>	<u>Vote Cast</u>
 Gloria Dibble Pond Chairperson	Yes
 Commissioner Peter Boucher Designee: Mark Marcus	Yes
 Commissioner Leslie Carothers Designee: Brian Emerick	Yes
 Harry E. Covey	Yes
 Mortimer A. Gelston	Yes
 Daniel P. Lynch, Jr.	Yes
 Paulann H. Sheets	Yes
 William H. Smith	Yes
  _____ Colin C. Tait	Absent

# EXHIBIT 7



**From:** [UPS](#)  
**To:** [Barbara Kassabian](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030302784164  
**Date:** Monday, September 25, 2023 10:39:27 AM

---



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

**Delivery Date:** Monday, 09/25/2023

**Delivery Time:** 10:38 AM

**Signed by:** LISA

## CENTERLINE SITE ACQUISITION

<b>Tracking Number:</b>	<a href="#">1Z9Y45030302784164</a>
<b>Ship To:</b>	BOARD OF SELECTMEN 8 COMMUNITY AVENUE PLAINFIELD, CT 063741238 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	14519501

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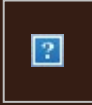
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**From:** [UPS](#)  
**To:** [Barbara Kassabian](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030319619178  
**Date:** Monday, September 25, 2023 10:41:34 AM

---



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

**Delivery Date:** Monday, 09/25/2023

**Delivery Time:** 10:40 AM

**Signed by:** MARY ANN

## CENTERLINE SITE ACQUISITION

<b>Tracking Number:</b>	<a href="#">1Z9Y45030319619178</a>
<b>Ship To:</b>	TOWN PLANNER 8 COMMUNITY AVENUE PLAINFIELD, CT 063741238 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	14519501

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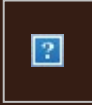
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**From:** [UPS](#)  
**To:** [Barbara Kassabian](#)  
**Subject:** UPS Delivery Notification, Tracking Number 1Z9Y45030328306631  
**Date:** Monday, September 25, 2023 10:52:57 AM

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

**Delivery Date:** Monday, 09/25/2023

**Delivery Time:** 10:51 AM

**Left At:** DOCK

**Signed by:** ANCRI

## CENTERLINE SITE ACQUISITION

<b>Tracking Number:</b>	<a href="#">1Z9Y45030328306631</a>
<b>Ship To:</b>	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	14519501

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