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

March 21, 2024

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

RE: Notice of Exempt Modification // Site: COLUBMIA SOUTH CT (ATC: 302528)
330 Route 66 South (a/k/a/ 330 Middletown Road), Columbia, CT 06237
N 41.68986389 // W -72.32518611

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 135-ft level on the existing 148 ft Tower, located at 330 Route 66 South, Columbia, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of a new mount modification and side by side mounts, adding three (3) antenna and six (6) RRH 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 Columbia'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 March 7, 2023, by A.T Engineering Services, LLC, a structural analysis dated February 14, 2024, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated February 6, 2024, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated March 19, 2024, 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

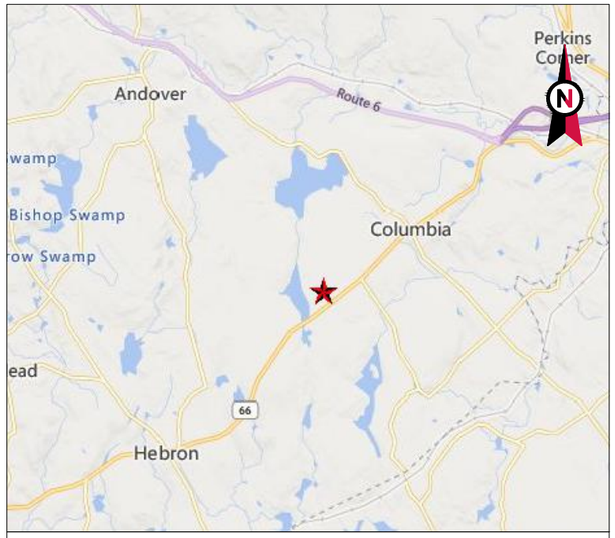
_____

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 2307
Dmaheux@clinellc.com

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: Steven M. Everett – First Selectman – Chief Elected Official
Constance Kisluk – Zoning Enforcement - as P&Z official
American Tower Corporation - as tower owner and ground owner

EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: COLUMBIA CENTRAL
ATC SITE NUMBER: 302528
VERIZON SITE NAME: COLUMBIA SOUTH CT
VERIZON FUZE PID: 16067472
SITE ADDRESS: 330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

LOCATION MAP

BIRD WATCH SITE:
PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE

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

1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC)
2. 2022 CONNECTICUT STATE BUILDING CODE
3. 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CRITERIA FROM TOWER STRUCTUAL ANALYSIS:

BASIC WIND SPEED:	120 MPH
BASIC WIND SPEED W/ ICE:	50 MPH
CODE(S):	ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE
EXPOSURE CATEGORY:	B
RISK CATEGORY:	II
TOPO FACTOR PROCEDURE:	METHOD 1
TOPOGRAPHIC CATEGORY:	1
SPECTRAL RESPONSE:	S_S=0.20, S_1=0.06
SITE CLASS:	D - STIFF SOIL - DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 02/15/2024.

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE
PHONE: (877) 659-6326

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

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

PROJECT SUMMARY

SITE ADDRESS:

330 MIDDLETOWN ROAD
COLUMBIA, CT 06237
COUNTY: TOLLAND

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 41' 23.510" N

LONGITUDE: 72° 19' 30.670" W

GROUND ELEVATION: 638' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

JOHN PEKARSKI
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

PROJECT DESCRIPTION

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

REMOVE (6) ANTENNA(s), (6) DIPLEXERS, AND (6) 1-5/8" COAX CABLE(s)

INSTALL MOUNT MODIFICATIONS, (9) ANTENNA(s), (2) SIDE-BY-SIDE MOUNTS, (6) RRH(s), (2) OVP(s), AND (2) 1-5/8" HYBRIFLEX

EXISTING (6) ANTENNA(s), AND (6) 1-5/8" COAX CABLE(s) TO REMAIN

PROJECT NOTES

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

PROJECT LOCATION DIRECTIONS

TAKE RT 2 TO EXIT 12 (RT 66 EAST). FOLLOW INTO COLUMBIA PAST JCT W/RT 85. JUST BEFORE THE JCT W / RT 87, ACCESS ROAD WILL BE ON LEFT SIDE OF ROAD.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	3/7/2024	FER
G-002	GENERAL NOTES	0	3/7/2024	FER
C-001	OVERALL SITE PLAN	0	3/7/2024	FER
C-101	DETAILED SITE PLAN	0	3/7/2024	FER
C-201	TOWER ELEVATION	0	3/7/2024	FER
C-401	ANTENNA INFORMATION & SCHEDULE	0	3/7/2024	FER
C-501	CONSTRUCTION DETAILS	0	3/7/2024	FER
E-501	GROUNDING DETAILS	0	3/7/2024	FER
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10221515
VZW LOCATION CODE (PSLC):	5000120820

***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

MOUNT MODIFICATION REQUIRED:	YES
VZW APPROVED SMART KIT VENDORS:	REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
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.

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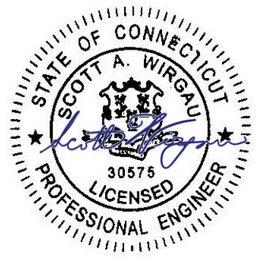

verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	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 ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE 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 PPM 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.

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

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

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

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VERIZON SITE NAME:
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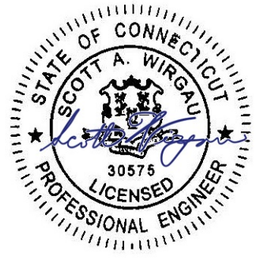
SEAL:



Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

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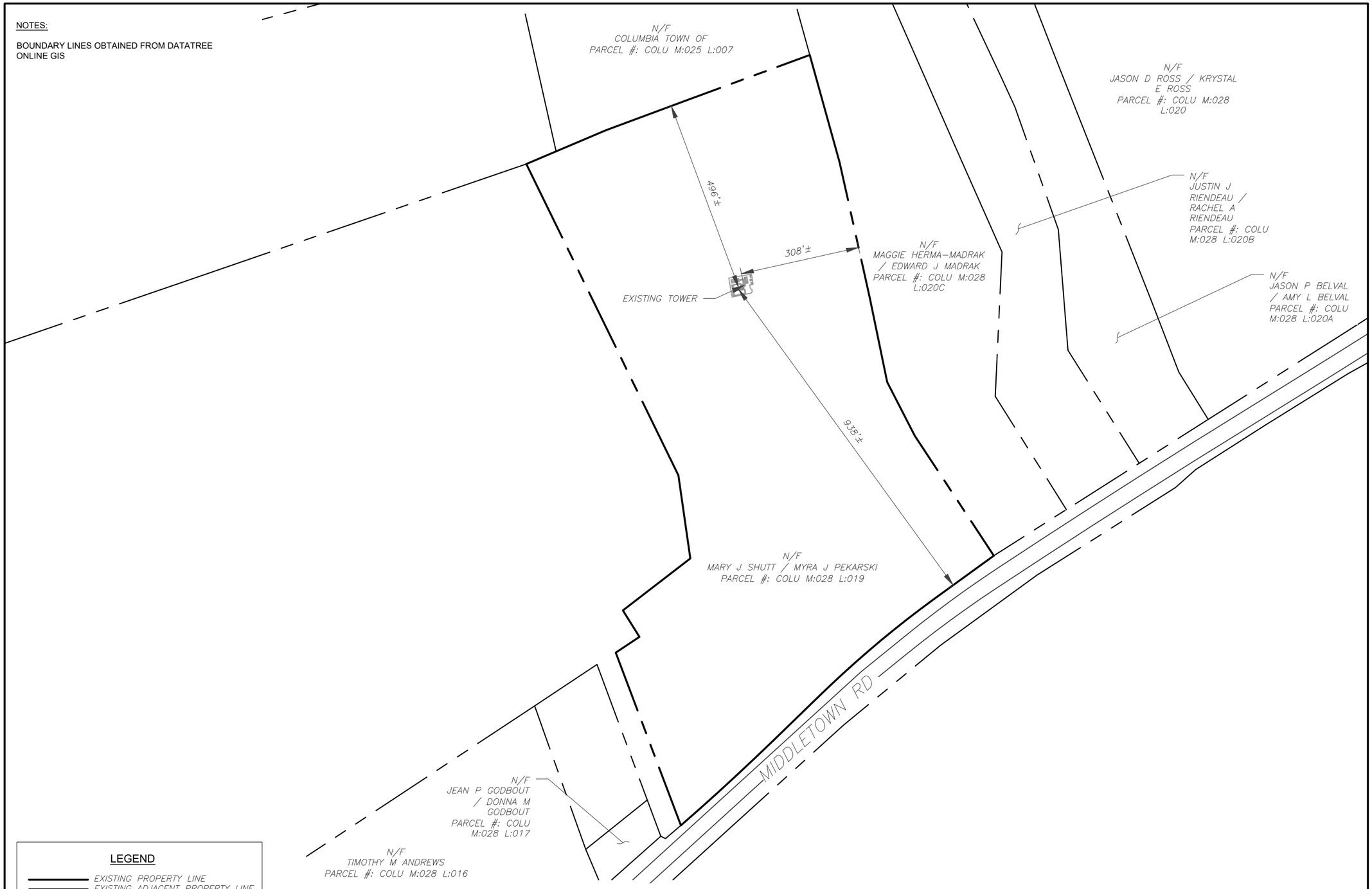
NOTES:

BOUNDARY LINES OBTAINED FROM DATATREE ONLINE GIS



LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA
- EXISTING EASEMENT
- EXISTING WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING METAL FENCE
- EXISTING GUARD RAIL
- EXISTING CHAINLINK FENCE
- EXISTING ROAD (DIRT)
- EXISTING ROAD (STONE)
- EXISTING ROAD (PAVED)

1 OVERALL SITE PLAN

0 250' 500'

SCALE: 1"=250' (11X17)
1"=125' (22X34)

N

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC

1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

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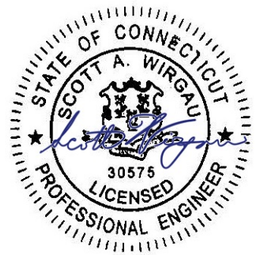

Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	0

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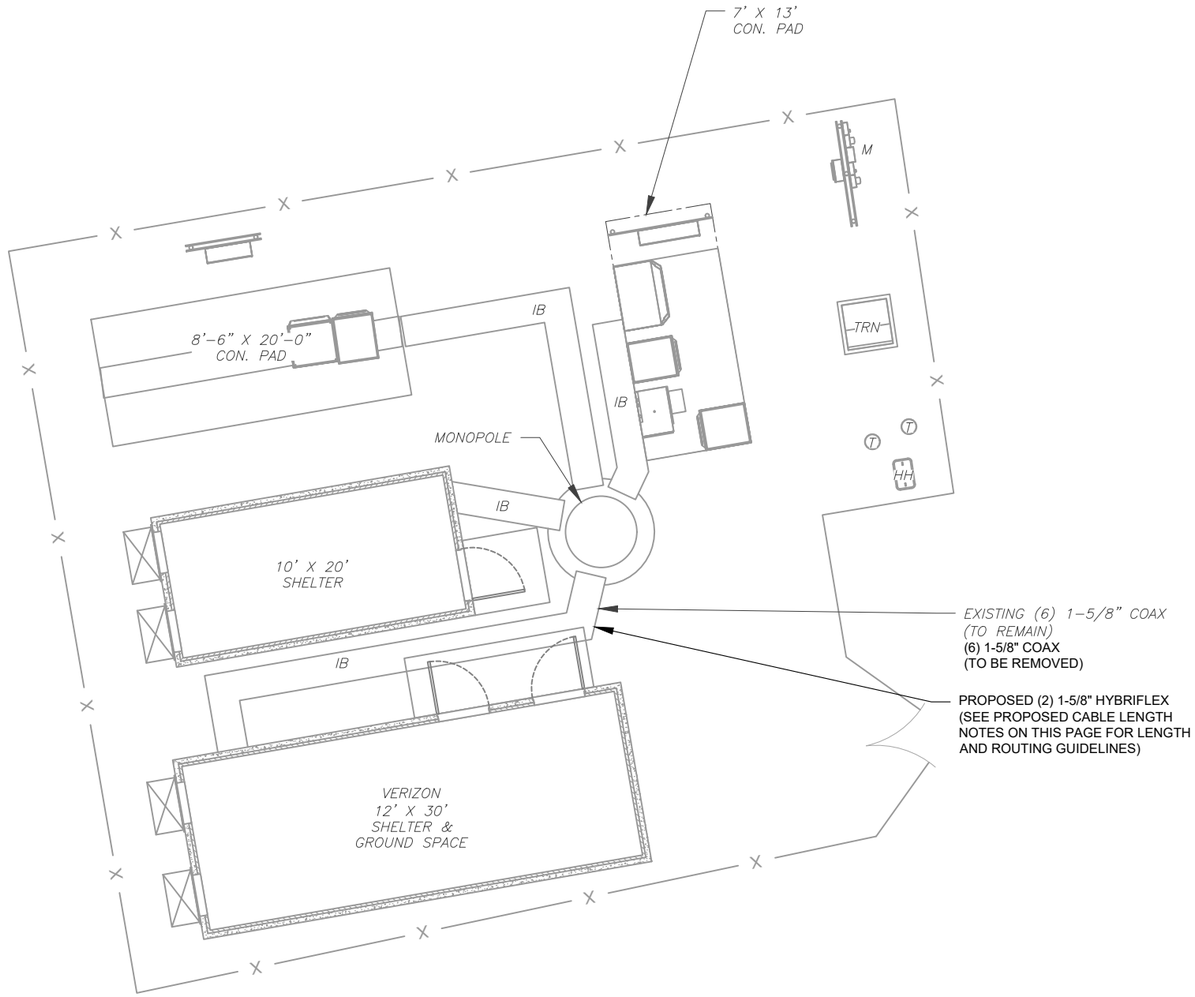
SITE PLAN NOTES:

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

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

3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.



LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR 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

PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **224'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	3/7/2024

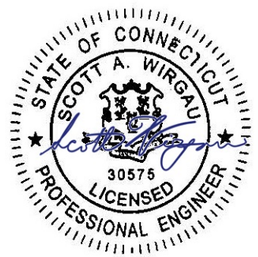
ATC SITE NUMBER:
302528

ATC SITE NAME:
COLUMBIA CENTRAL

VERIZON SITE NAME:
COLUMBIA SOUTH CT

SITE ADDRESS:
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

SEAL:



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verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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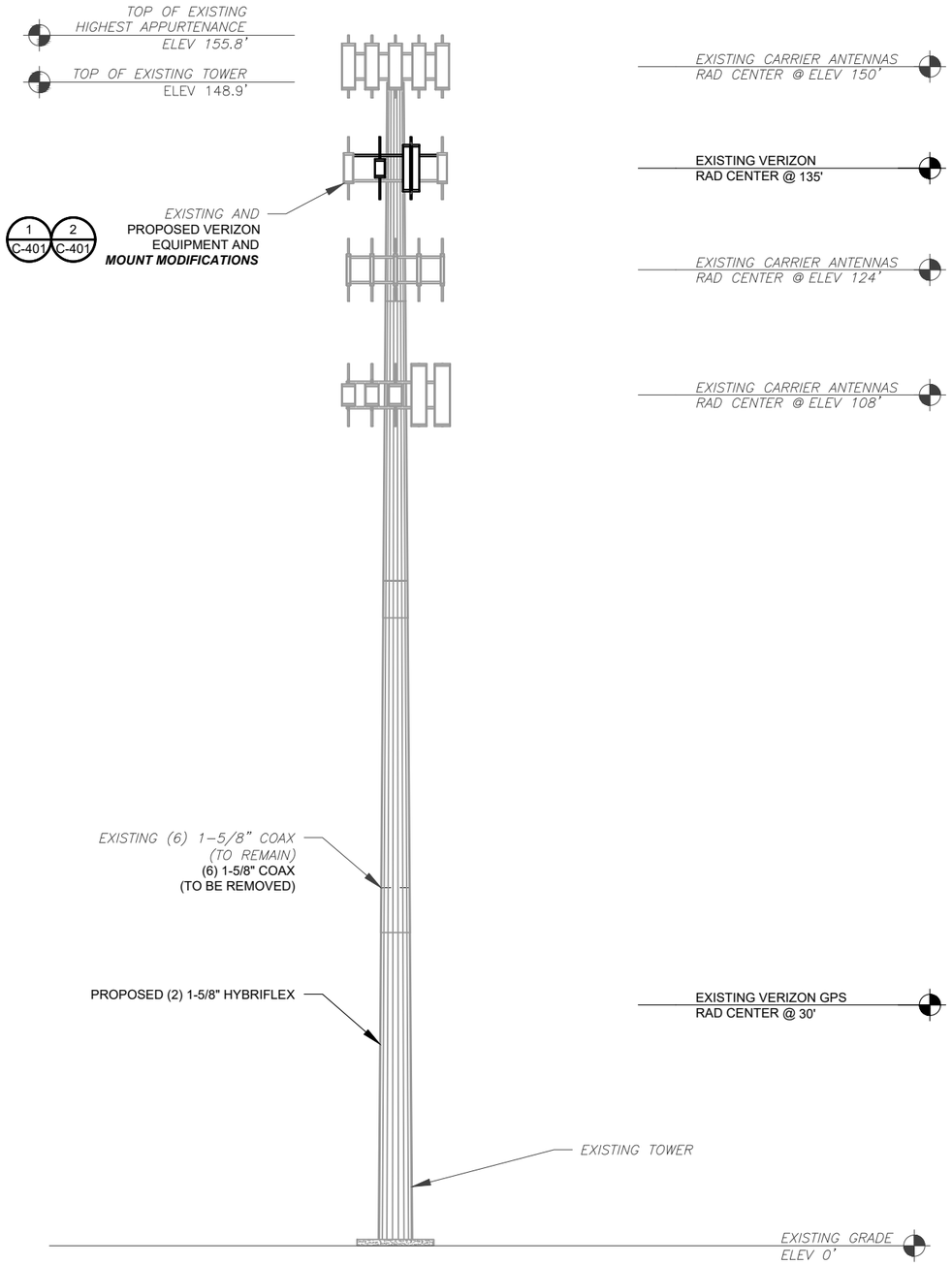
PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/06/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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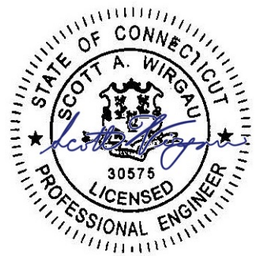
302528

ATC SITE NAME:
COLUMBIA CENTRAL

VERIZON SITE NAME:
COLUMBIA SOUTH CT

SITE ADDRESS:
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

SEAL:



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verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

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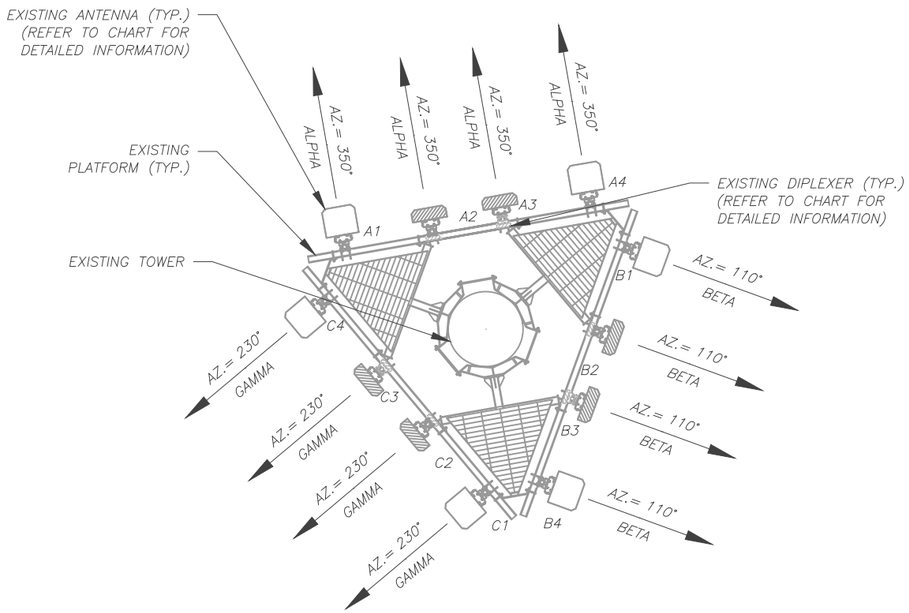
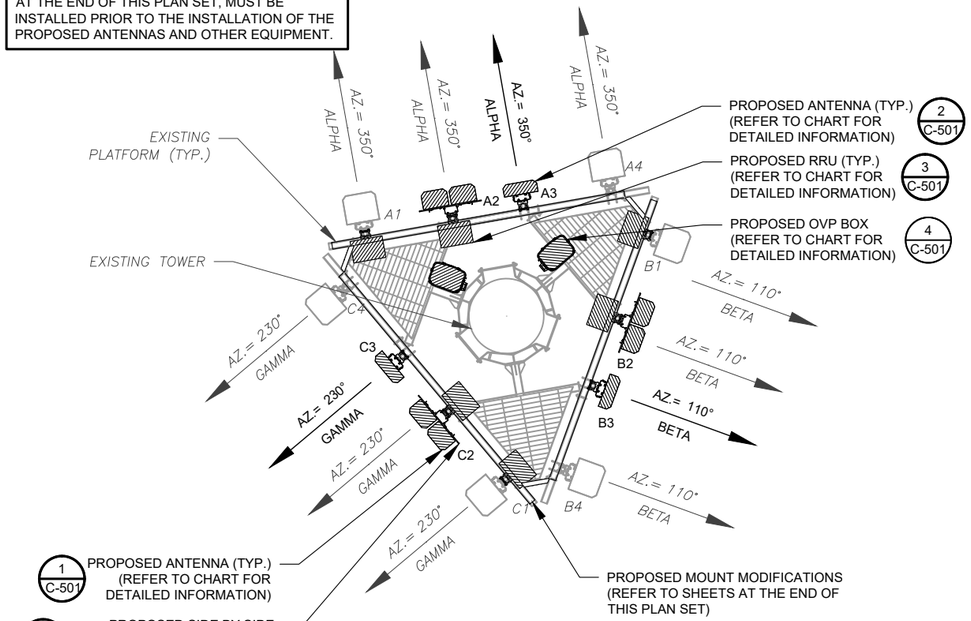


1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/06/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	135'	350°	A1	LPA-80063-4CF-EDIN-0	–	RMN	–	–
			A2	BXA-70063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			A3	BXA-171063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			A4	LPA-80063-4CF-EDIN-0	–	RMN	–	–
BETA	135'	110°	B1	LPA-80063-4CF-EDIN-0	–	RMN	–	–
			B2	BXA-70063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			B3	BXA-171063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			B4	LPA-80063-4CF-EDIN-0	–	RMN	–	–
GAMMA	135'	230°	C1	LPA-80063-4CF-EDIN-0	–	RMN	–	–
			C2	BXA-70063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			C3	BXA-171063	LTE 700	RMV	FD9R6004/2C-3L	RMV
			C4	LPA-80063-4CF-EDIN-0	–	RMN	–	–

NOTES

1. GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
2. GC TO CAP ALL UNUSED PORTS.
3. GC TO 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	135'	350°	A1	LPA-80063-4CF-EDIN-0	–	RMN	RF4439D-25A	ADD
			A2	(2) NHH-65B-R2B	LTE 700, 5G 850, LTE 850, LTE 1900, LTE AWS	ADD	RF4461D-13A	ADD
			A3	MT6413-77A	5G L-SUB6	ADD	-	-
			A4	LPA-80063-4CF-EDIN-0	–	RMN	-	-
BETA	135'	110°	B1	LPA-80063-4CF-EDIN-0	–	RMN	RF4439D-25A	ADD
			B2	(2) NHH-65B-R2B	LTE 700, 5G 850, LTE 850, LTE 1900, LTE AWS	ADD	RF4461D-13A	ADD
			B3	MT6413-77A	5G L-SUB6	ADD	-	-
			B4	LPA-80063-4CF-EDIN-0	–	RMN	-	-
GAMMA	135'	230°	C1	LPA-80063-4CF-EDIN-0	–	RMN	RF4439D-25A	ADD
			C2	(2) NHH-65B-R2B	LTE 700, 5G 850, LTE 850, LTE 1900, LTE AWS	ADD	RF4461D-13A	ADD
			C3	MT6413-77A	5G L-SUB6	ADD	-	-
			C4	LPA-80063-4CF-EDIN-0	–	RMN	-	-

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
–	RMN	(6) 1-5/8" COAX	RMN
–	RMV	(6) 1-5/8" COAX	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
–	RMN	(6) 1-5/8" COAX	RMN
(2) DB-B1-6C-12AB-0Z	ADD	(2) 1-5/8" HYBRIFLEX	ADD

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
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PHONE: (919) 468-0112
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	FER	3/7/2024

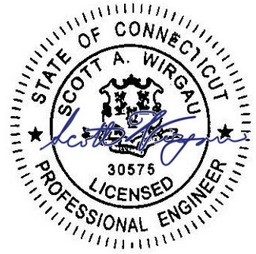
ATC SITE NUMBER:
302528

ATC SITE NAME:
COLUMBIA CENTRAL

VERIZON SITE NAME:
COLUMBIA SOUTH CT

SITE ADDRESS:
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

SEAL:



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ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

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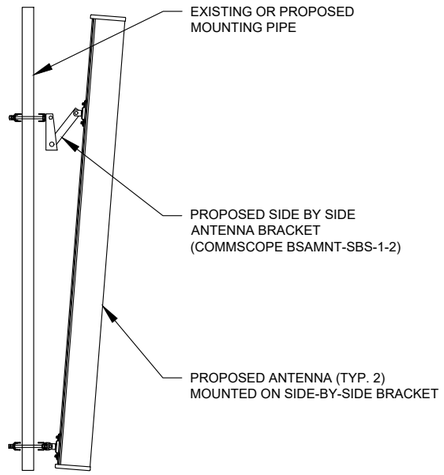
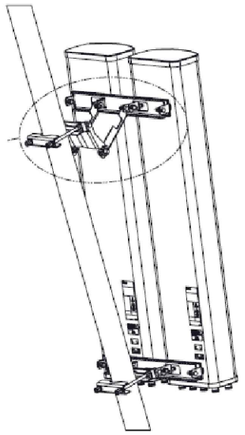
EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



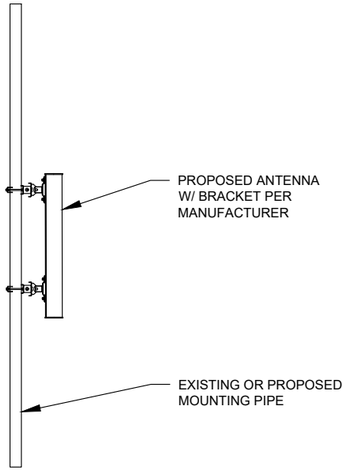
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

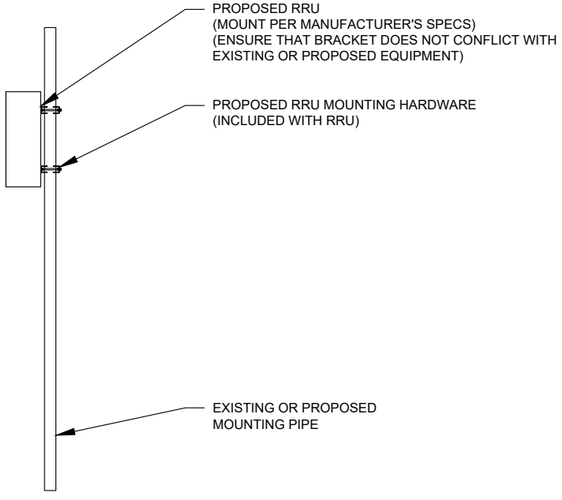
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



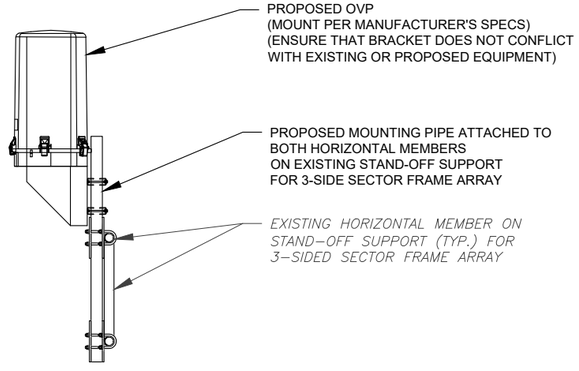
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



4 PROPOSED OVP MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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A.T. ENGINEERING SERVICES LLC

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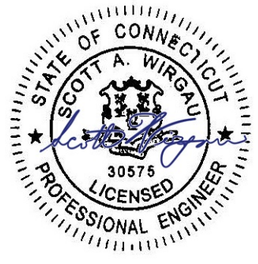
SITE ADDRESS:
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237

SEAL:



Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14569549_G0
CUSTOMER ID:	COLUMBIA SOUTH CT
CUSTOMER #:	5000120820

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

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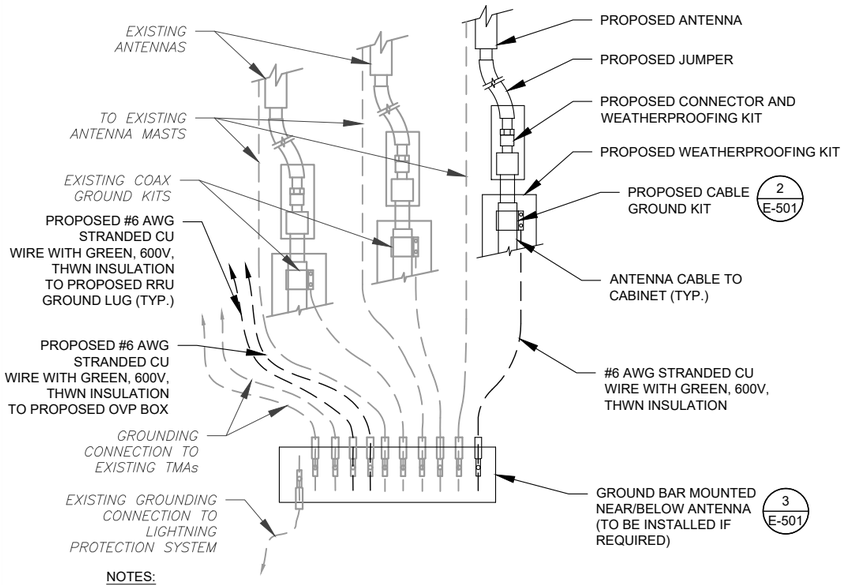
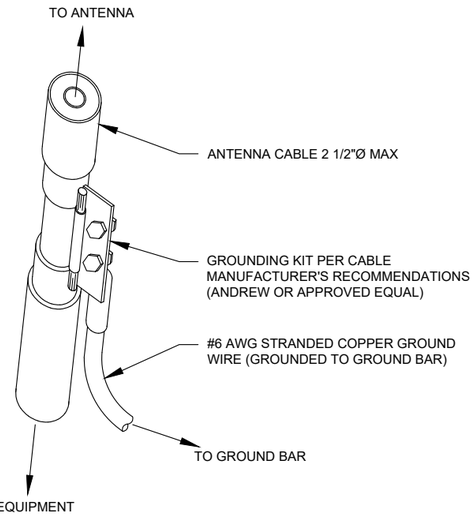


NOTES:

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.

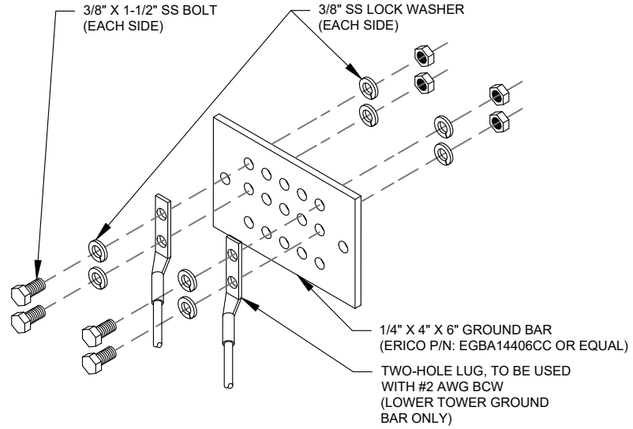


GROUND KIT NOTES:

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.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

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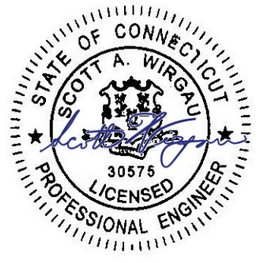

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CUSTOMER #:	5000120820

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10221515
Colliers Engineering & Design Project #: 21777855 (Rev 1)

February 6, 2024

Site Information

Site ID:	*5000120820-VZW / COLUMBIA SOUTH CT*
Site Name:	*COLUMBIA SOUTH CT*
Carrier Name:	*Verizon Wireless*
Address:	*330 Middletown Road* *Columbia, Connecticut 06237* *Tolland County*
Latitude:	*41.68986389°*
Longitude:	*-72.32518611°*

Structure Information

Tower Type:	*Monopole*
Mount Type:	*14.50-Ft Platform*

FUZE ID # 16067472

Analysis Results

Platform: **56.9% Pass w/ Modifications***

***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

Report Prepared By: Vincent DiGirolamo

STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER
02/06/2024

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	26.1	26.1	39.8	39.8
0.5	34.6	34.6	54.1	54.1
1	42.2	42.2	67.4	67.4

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mount will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

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

1 MOUNT ANALYSIS

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 VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

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verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 14.50' PLATFORM

TOWER OWNER: AMERICAN TOWER CO.
TOWER OWNER SITE NUMBER: 302528

CARRIER SITE NAME: COLUMBIA SOUTH CT
CARRIER SITE NUMBER: 5000120820
FUZE ID: 16067472

330 MIDDLETOWN ROAD
COLUMBIA, CT 06237
TOLLAND COUNTY

LATITUDE: 41.68986389° N
LONGITUDE: 72.32518611° W

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DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 135 MPH
EXPOSURE CATEGORY: C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 631.9'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY: B
SHORT TERM MCER GROUND MOTION, S_s = .195
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 806.797.0412
EMAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10251515
VZW MDG #: 5000120820
ANALYSIS DATE: 3/4/2024

PMI REQUIRMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

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Fax: 860.243.0801
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SHEET NUMBER: ST-1
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BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
2	VZWSMART	VZWSMART-MSK6	BACK TO BACK CROSSOVER PLATE		34	68
1		VZWSMART-PLK1	SUPPORT RAIL KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	504	504
2		VZWSMART-PKD-228X048	48" LONG, PIPE 2 SCH40 (2.375"OD' X 0.154" THK)		15	30

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
-	-		1/2" U-BOLTS	-	-	

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISION	PV-CLAMP-LW-0106	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CP0C-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	602

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAPEY
PHONE	(706) 335-7045 (O), (706) 980-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 438-6937
EMAIL	AEWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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SHEET NUMBER: SBOM-1
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GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H, MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 20 MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-222.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

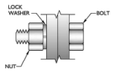
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWING TO
      PETER.ALBANO@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.3 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE, MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL) AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN.)

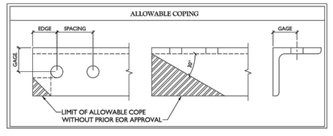
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



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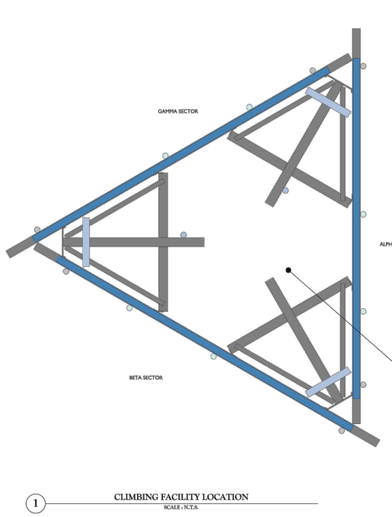
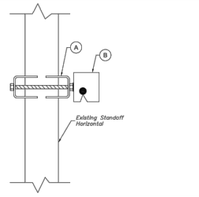


1 CLIMBING FACILITY LOCATION
SCALE: N.T.S.



ITEM #	QTY	PART NUMBER	DESCRIPTIONS
A	1	PV-CLAMP-LW-0106	CLAMP BRACKET (PERFECT VISION OR EOR APPROVED EQ.)
B	1	PV-CP0C-CG-SM	WIRE ROPE GUIDE (PERFECT VISION OR EOR APPROVED EQ.)

2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW
SCALE: N.T.S.

NOTE: CONTRACTOR SHALL ENSURE THAT WIRE ROPE GUIDE DOES NOT PUSH THE WIRE ROPE OUTSIDE OF THE VERTICAL PLANE OF THE SAFETY CLIMB. CONTRACTOR WITH PHOTOS OF SAFETY CLIMB AND COLLAR FOR FURTHER DIRECTION IF NEEDED.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 11/8/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (137'-4") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

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100 Northfield Boulevard
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Phone: 860.243.0800
Fax: 860.243.0801
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SHEET TITLE: CLIMBING FACILITY DETAIL
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1 MOUNT MODIFICATIONS

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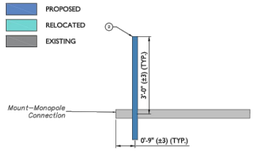
- PROPOSED
- RELOCATED
- EXISTING

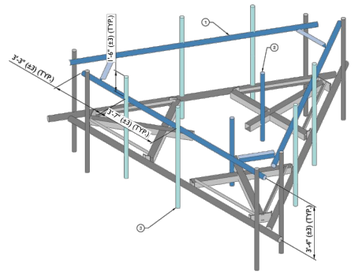


MOUNT MODIFICATION SCHEDULE

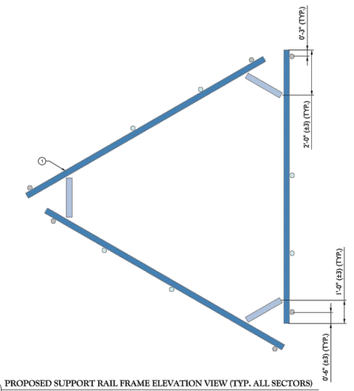
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	133'-4"	1	PROPOSED SUPPORT RAIL KIT (PART #: VZWSMART-PLK1)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEAL NOTES ON SHEET SGN-1. RADIO AND/OR THE POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN.
2		2	PROPOSED 48" LONG, PIPE 2 SCH40 (PART #: VZWSMART-P40-238X048)	CONNECT NEW CVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH BACK TO BACK CROSSOVER PLATE (VZWSMART-MSK6) ON STANDOFF ARMS BETWEEN BETA AND GAMMA & ALPHA AND GAMMA.
3		6	RELOCATED MOUNT PIPE	CONTRACTOR SHALL CONNECT RELOCATED MOUNT PIPE TO EXISTING FACE HORIZONTAL AND SUPPORT RAIL WITH EXISTING CROSSOVER PLATES AND NEW BOLTING HARDWARE. DO NOT REUSE EXISTING BOLTS.

GENERAL NOTES:
A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR.
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.

1 PROPOSED SIDE ELEVATION VIEW
SCALE: N.T.S.



2 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE: N.T.S.



3 PROPOSED SUPPORT RAIL FRAME ELEVATION VIEW (TYP. ALL SECTORS)
SCALE: N.T.S.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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811 Know what's below. Call before you dig.
PROJECT SOURCE#
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS TO CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION TO ESTABLISH THE LOCATION OF UNDERGROUND UTILITIES.
FOR STATES WHERE DIRECT PHONE NUMBERS ARE NOT PROVIDED, VISIT
SCALE: AS SHOWN | DRAWING #: 21171000S

REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
A				
B	10/2/23	ZONING SET	TAD	SK
C	10/31/23	ZONING SET	JD	SK

COLLIERS ENGINEERING & DESIGN (CT), P.C.
CT: (P-0838810)

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
COLUMBIA SOUTH CT
500010230
330 MIDDLETOWN ROAD
COLUMBIA, CT 06237
TOLLAND COUNTY

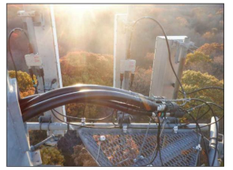
Colliers Engineering & Design
CONNECTICUT
100 Great Meadow Road, Suite 200
Stamford, CT 06902
Phone: 203.324.6800
(Email Address Omitted)
(Email Address Omitted)

SHEET TITLE: MODIFICATION DETAILS
SHEET NUMBER: SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3



MOUNT PHOTO 4

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FOR STATES WHERE DIRECT PHONE NUMBERS ARE NOT PROVIDED, VISIT
SCALE: AS SHOWN | DRAWING #: 21171000S

REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
A				
B	10/2/23	ZONING SET	TAD	SK
C	10/31/23	ZONING SET	JD	SK

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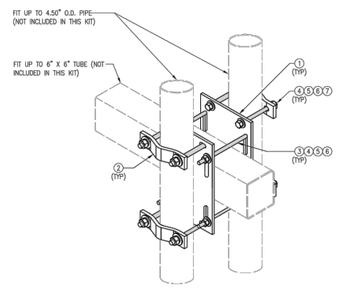
Colliers Engineering & Design
CONNECTICUT
100 Great Meadow Road, Suite 200
Stamford, CT 06902
Phone: 203.324.6800
(Email Address Omitted)
(Email Address Omitted)

SHEET TITLE: MOUNT PHOTOS
SHEET NUMBER: SS-2



ISOMETRIC VIEW
BACK TO BACK CROSSOVER

VZWSMART–MSK6 (VZWSMART–MSK6 – BACK TO BACK CROSSOVER)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	PL375–8512	PL 3/8" X 8 1/2" X 1'–0" A36	MSK6–F2	20.7
2	4	VCP	PL 1/2" X 2" X 8 5/8" A36 BENT PLATE	MSK6–F1	9.6
3	4	----	THREADED ROD 5/8" DIA. X 10" F1554–36 HDG	----	----
4	16	NUT–625	5/8" HDG HEX NUT	----	2
5	16	FW–625	5/8" HDG USS FLAT WASHER	----	1
6	16	LW–625	5/8" HDG LOCK WASHER	----	0
7	8	----	BOLT 5/8" X 6" SAE GRADE 5 ALL THREAD	----	1
				GALVANIZED WT	34

NOTES:
1. HOT–DIPPED GALVANIZED PER ASTM A123.

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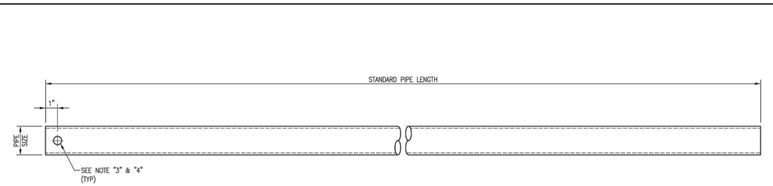
FOR REFERENCE ONLY

DRAWN BY: SK | CHECKED BY: BT/KW

REV.	DESCRIPTION	BY	DATE
A	FIRST ISSUE	SK	09/04/23

SHEET TITLE: VZWSMART–MSK6 BACK TO BACK CROSSOVER
SHEET NUMBER: VZWSMART–MSK6 | REV #: 0



VZWSMART Standard Pipe

VZWSMART Number	Size	Length
P40–238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40–238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40–238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40–238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40–238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40–238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40–238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40–278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40–278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40–278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40–278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40–278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40–278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40–278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40–312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40–312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40–312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40–312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40–312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53–B OR BETTER.
2. HOT–DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U.N.O.
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

VzW SMART Tool© Vendor

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DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
A	FIRST ISSUE	BT	09/04/23

SHEET TITLE: VZWSMART STANDARD PIPE
SHEET NUMBER: VZWSMART–PIPE | REV #: 0

1 MOUNT MODIFICATIONS

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 VERIYFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-603 | REVISION: 0

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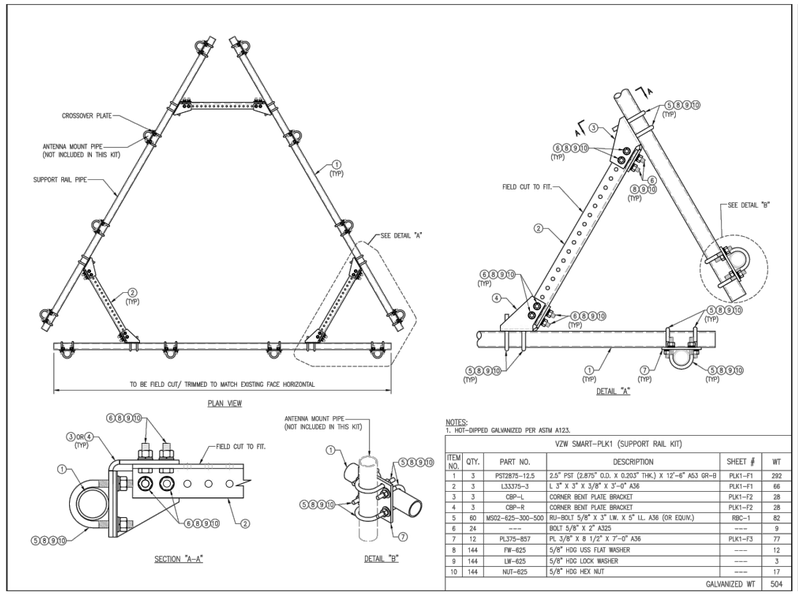

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZW SMART-PLK1 (SUPPORT RAIL KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	PST2875-12.5	2.5" PST (2.875" O.D. X 0.203" THK.) X 12'-8" A53 GR-B	PLK1-F1	292
2	3	L33375-3	L 3" X 3" X 3/8" X 3'-0" A36	PLK1-F1	66
3	3	CBP-L	CORNER BENT PLATE BRACKET	PLK1-F2	28
4	3	CBP-R	CORNER BENT PLATE BRACKET	PLK1-F2	28
5	60	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" LL. A36 (OR EQUIV.)	RBC-1	82
6	24	---	BOLT 5/8" X 2" A325	---	9
7	12	PL375-857	PL 3/8" X 8 1/2" X 7'-0" A36	PLK1-F3	77
8	144	FW-625	5/8" HDG USS FLAT WASHER	---	12
9	144	LW-625	5/8" HDG LOCK WASHER	---	3
10	144	NUT-625	5/8" HDG HEX NUT	---	17
				GALVANIZED WT	504

VzW SMART Tool© Vendor

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DRAWN BY: HJR | CHECKED BY: MAR

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	HJR	05/08/20

SHEET TITLE:
VZWSMART-PLK1
SUPPORT RAIL KIT

SHEET NUMBER: VZWSMART-PLK1 | REV #: 0

1 MOUNT MODIFICATIONS

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SUPPLEMENTAL

SHEET NUMBER: R-604 | REVISION: 0

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EXHIBIT 2

Columbia

Unique ID: 028019CEL **Card No:** 1 Of 1

Location:	330 RT 66. CELL	Map Id:	028 019 CELL	Zone:	LCR	Date Printed:	3/14/2024
		Neighborhood:	C			Last Update:	3/14/2024

Owner Of Record	Volume/Page	Date	Sales Type	Valid	Sale Price
AMERICAN TOWER CORPORATION	0000/0000	9/30/2011		No	0
SPECTRASITE COMMUNICATIONS INC., P.O. BOX 723597, ATLANTA, GA 31139			Exempt		

Prior Owner History

Permit Number	Date	Permit Description
3536COM	5/22/2023	INSTALL BACKUP SELF-CONTAINED 30KW DIESEL GENERATOR AND 4'X10' CONCRETE PAD
3385COM	2/6/2023	REMOVE 6 ANTENNAS AND 6 DIPLEXERS. MODIFY THE ANTENNA MOUNTS AND COLLOCATE 9 NEW ANTENNAS. 6 RRHS. 2
22-2E	3/16/2022	INSTALL NEW 100 AMP TMOBILE CABINET WITH BATTERY CABINET ON EXISTING PLATFORM REMOVE OLD CABINET
2835COM	12/27/2021	T MOBILE/SPRINT ANTENNA AND GROUND EQUIPMENT SWAP NO ADDITIONAL HEIGHT OR FOOTPRINT ON GROUND.
2243COM	11/23/2020	AT&T EQUIPMENT MODIFICATION - SWAPPING ANTENNAS SWAPPING AND ADDING REMOTE RADIO UNTIS AND OTHER REL
7798	5/16/2013	CO 3766 UPGRADE

Supplemental Data

Census/Tract	VisionPID	102278
Dev Map ID		
GIS ID		
Route		
District		
Utilities		

Appraised Value

Total Land Value	0
Total Building Value	0
Total Outbldg Value	1,093,700
Total Market Value	1,093,700

Acres

Land Type	Acres	490	Total Value
Total	0.0000	0.00	0

State Item Codes

Code	Quantity	Value
25-Commercial Outbuilding	4.00	765.590

Assessment History (Prior Years as of Oct 1)

	2024	2023	2022	2021	2020
Land	0	0	0	0	0
Building	0	0	0	0	0
Outbuilding	765,590	765,590	765,590	765,590	721,400
Total	**765,590**	**765,590**	**765,590**	**765,590**	**721,400**

490 Appraised Totals

Type	Acres	Value	Type	Acres	Value
			Totals	**0.00**	**0**

Application Date: **Expiration Date:**

Comments

9/21/2021 $2500 month x 5% VAC X 5% EXP 10 CAP X 4 SITES

Information may be deemed reliable, but not guaranteed.

Revaluation Date: 10/1/2021

Columbia

Unique ID: 028019CEL

Location:	330 RT 66, CELL	**Unit**	

Commercial Building Description	Description	Area/Qty
Building Use		
Class		
Overall Condition		
Construction Quality		
Stories		
Year Built		
Remodel		
Percent Complete		
GLA		
Basement		
Basement Area		
HVAC		
Heating Type		
Fuel Type		
Cooling Type		
Interior		
Floors		
Walls		
Wall Height		
Exterior		
Exterior Walls		
Roof Type		
Roof Cover		
Special Features		

Attached Component Computations

Type	Yr Blt	Area/Qty

Detached Component Computations

Type	Year	Condition	Area/Qty	Type	Year	Condition	Area/Qty

Information may be deemed reliable, but not guaranteed.

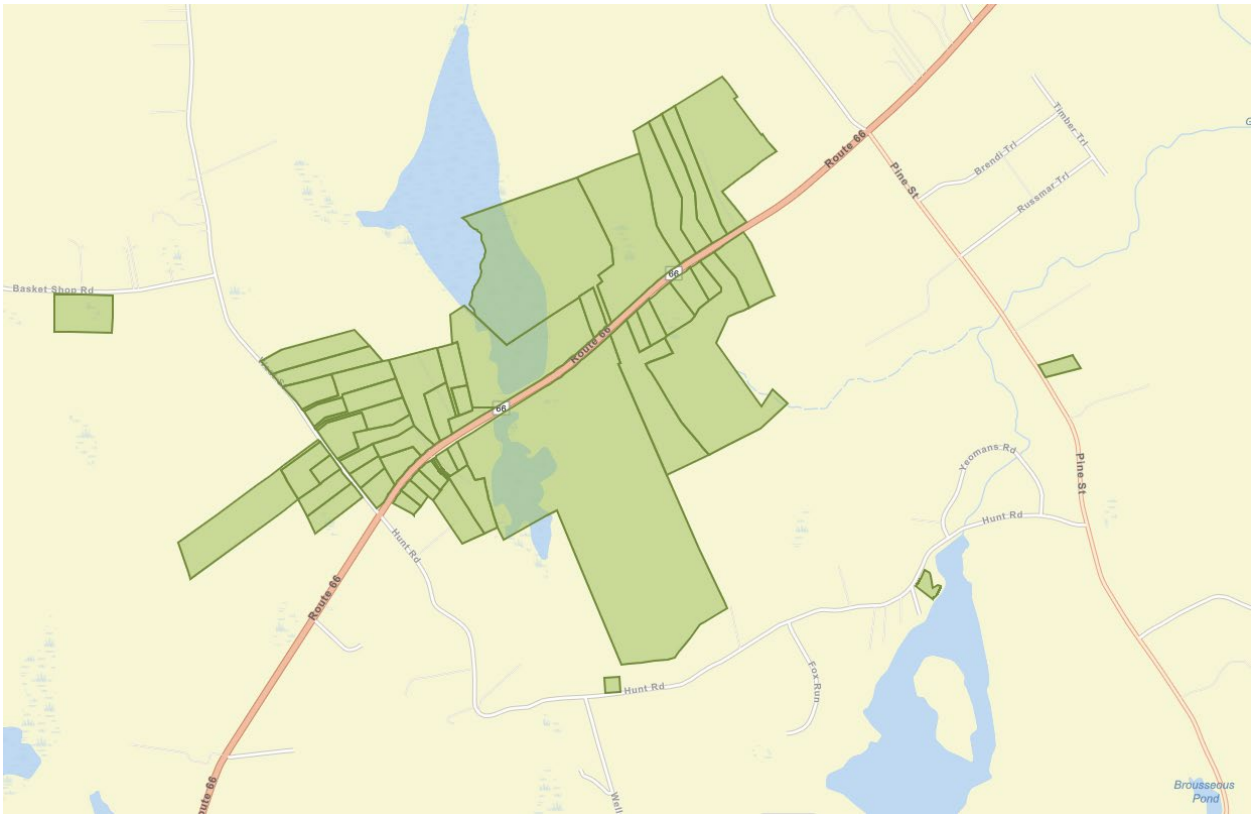

Route 66
Pine St
Timber Trl
Brendl Trl
Russmar Trl
Basket Shop Rd
Route 66
66
Yeomans Rd
Pine St
Hunt Rd
Hunt Rd
Route 66
Hunt Rd
Fox Run
Brousseau Pond

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	148 ft Monopole
ATC Asset Name	:	Columbia Central
ATC Asset Number	:	302528
Engineering Number	:	14569549_C3_02
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	COLUMBIA SOUTH CT
Carrier Site Number	:	5000120820
Site Location	:	330 Middletown Road Columbia, CT 06237-1528 41.6899° N, 72.3252° W
County	:	Tolland
Date	:	February 14, 2024
Max Usage	:	60%
Analysis Result	:	Pass

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 148 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	Summit Manufacturing Design #13998, dated May 2, 2001
Foundation:	Summit Manufacturing Design #13998, dated April 30, 2001
Geotechnical:	Tectonic Engineering Consultants Report #1170-C878B, dated January 26, 2001

Analysis

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

Basic Wind Speed:	120 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Conclusion

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

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **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	59.8%	1.2D + 1.0W	Pass
Serviceability Usage	33.0%	1.0D + 1.0W	Pass
Upper Flange Plate @ 120.0 ft	60.0%	Bolts	Pass
Base Plate @ 0.0 ft	51.8%	Rods	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,548.6	45.8	23.6

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
137.0	1	Low Profile Platform	-
135.0	2	RFS DB-B1-6C-12AB-0Z	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	6	Antel LPA-80063/4CF	
	6	Commscope NHH-65B-R2B	
30.0	1	GPS	(1) 1/2" Coax

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
150.0	2	Raycap DC6-48-60-18-8F ("Squid")	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (2) 2" conduit	AT&T MOBILITY
	3	CCI DMP65R-BU6DA		
	3	CCI OPA65R-BU6D		
	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		
146.0	1	Platform with Handrails	-	AT&T MOBILITY
	1	Mount Reinforcement	-	SPRINT NEXTEL
124.0	1	Low Profile Platform	(12) 1 1/4" Coax	SPRINT NEXTEL
	12	Decibel DB844H90E-XY		
108.0	1	Platform with Handrails	-	-
	1	Mount Reinforcement	(3) 1.99" (50.7mm) Hybrid	SPRINT NEXTEL
	3	Ericsson Air6449 B41		
	3	Ericsson Radio 4460 B25+B66		
	3	Ericsson Radio 4480 B71+B85A		
	3	RFS APXVAALL24 43-U-NA20		
58.0	1	GPS	-	SPRINT NEXTEL
30.0	1	Stand-Off	-	--

(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.

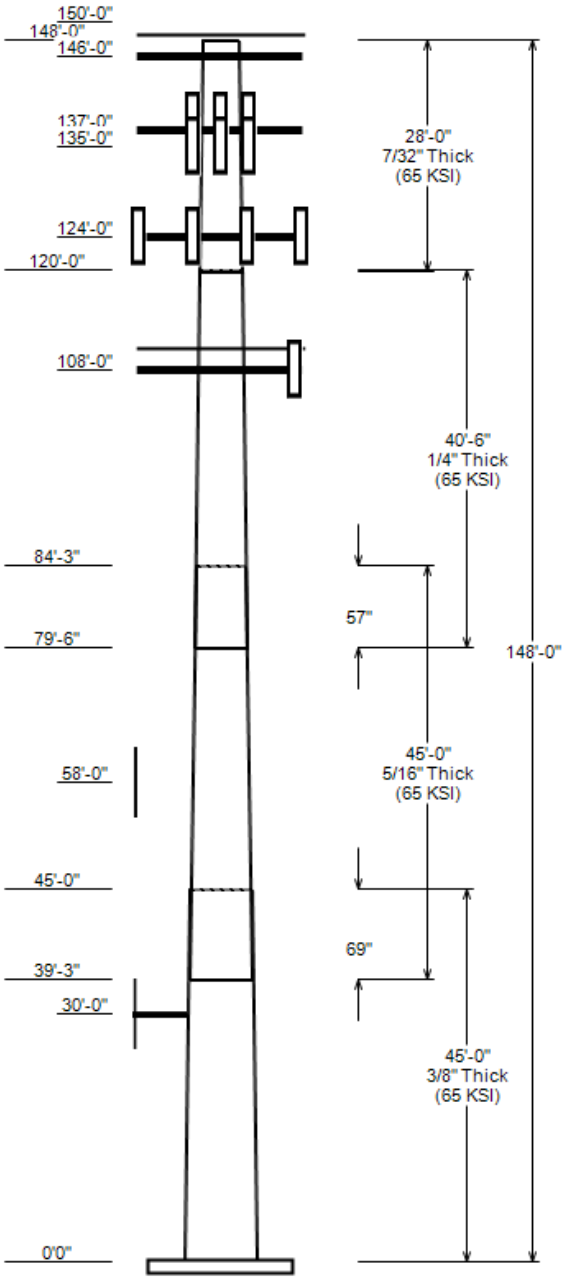
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with 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:	120 mph	**Ice Wind:**	50 mph w/ 1" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.196	**S_1:** 0.055
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	148 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	51.73 in	**Base Rotation:**	0°	**Taper:**	0.1810 (in/ft)



POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	45.000	43.56	51.73	0.375		0.000	18 Sides	65
2	45.000	37.07	45.23	0.312	Slip Joint	69.000	18 Sides	65
3	40.500	31.08	38.43	0.250	Slip Joint	57.000	18 Sides	65
4	28.000	26.00	31.08	0.219	Butt Joint	0.000	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
150.0	(6) Powerwave Allgon LGP21401
150.0	(2) Raycap DC6-48-60-18-8F ("Squid
150.0	(3) Ericsson RRUS 8843 B2, B66A
150.0	(3) Ericsson RRUS 4478 B14
150.0	(3) Ericsson RRUS 4449 B5, B12
150.0	(3) Powerwave Allgon 7770.00
150.0	(3) CCI DMP65R-BU6DA
150.0	(3) CCI OPA65R-BU6D
146.0	(1) Generic Mount Reinforcement
146.0	(1) Generic Round Platform with Ha
137.0	(1) Generic Round Low Profile Plat
135.0	(3) Samsung B2/B66A RRH ORAN (RF 4
135.0	(3) Samsung RF4461d-13A
135.0	(2) RFS DB-B1-6C-12AB-0Z
135.0	(3) Samsung MT6413-77A
135.0	(6) Antel LPA-80063/4CF
135.0	(6) Commscope NHH-65B-R2B
124.0	(12) Decibel DB844H90E-XY
124.0	(1) Generic Round Low Profile Plat
108.0	(3) Ericsson Radio 4460 B25+B66
108.0	(3) Ericsson Radio 4480 B71+B85A
108.0	(3) Ericsson Air6449 B41
108.0	(1) Generic Mount Reinforcement
108.0	(3) RFS APXVAALL24 43-U-NA20
108.0	(1) Generic Round Platform with Ha
58.0	(1) Generic GPS
30.0	(1) Generic GPS
30.0	(1) Stand-Off

LINEAR APPURTENANCE

Elev To (ft)	Description
150.0	(2) 2" conduit
150.0	(6) 1 5/8" Coax
150.0	(4) 0.78" (19.7mm) 8 AWG 6
150.0	(2) 0.39" (10mm) Fiber Trunk
135.0	(2) 1 5/8" Hybriflex
135.0	(6) 1 5/8" Coax
124.0	(12) 1 1/4" Coax
108.0	(3) 1.99" (50.7mm) Hybrid
30.0	(1) 1/2" Coax

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2548.61	45.84	23.63
0.9D + 1.0W	2514.19	34.37	23.61
1.2D + 1.0Di + 1.0Wi	667.14	61.24	6.25
1.2D + 1.0Ev + 1.0Eh	145.30	45.97	1.15
0.9D - 1.0Ev + 1.0Eh	142.78	31.77	1.15
1.0D + 1.0W	565.38	38.23	5.28

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ANALYSIS PARAMETERS

Location:	Tolland County,CT	**Height:**	148 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	51.73 in
Manufacturer:	Summit	**Top Diameter:**	26.00 in
K_d (non-service):	0.95	**Taper:**	0.1810 in/ft
K_e:	0.98	**Rotation:**	0.000º

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	120 mph
Exposure Category:	B	**Design Wind Speed w/ Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Design Ice Thickness:**	1.00 in
Topographic Category:	1	**Service Wind Speed:**	60 mph
Crest Height:	0 ft	**HMSL:**	638.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil		**Period Based on Rayleigh Method (sec):**		2.55
T_L (sec):	6	**P:**	1	**$C_{s:}$**	0.030
$S_{s:}$	0.196	**$S_{1:}$**	0.055	**C_s Max:**	0.030
$F_{a:}$	1.600	**$F_{v:}$**	2.400	**C_s Min:**	0.030
$S_{ds:}$	0.209	**$S_{d1:}$**	0.088		

LOAD CASES

1.2D + 1.0W	120 mph Wind with No Ice
0.9D + 1.0W	120 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1" 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

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SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	45.00	0.3750	65		0.00	8,615	51.73	0.000	61.12	20,362.1	22.56	137.94	43.56	45.00	51.40	12,112.	18.72	116.17	0.1814
2-18	45.00	0.3125	65	Slip	69.00	6,202	45.23	39.250	44.55	11,356.3	23.76	144.74	37.07	84.25	36.45	6,221.2	19.15	118.61	0.1814
3-18	40.50	0.2500	65	Slip	57.00	3,773	38.43	79.500	30.29	5,578.3	25.34	153.71	31.08	120.00	24.46	2,937.5	20.16	124.32	0.1814
4-18	28.00	0.2187	65	Butt	0.00	1,873	31.08	120.000	21.42	2,577.6	23.29	142.11	26.00	148.00	17.90	1,502.7	19.20	118.88	0.1814
			Total Shaft Weight			**20,463**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
150.00	CCI DMP65R-BU6DA	3	0.75	0.000	79.40	12.709	0.63	251.14	14.568	0.63
150.00	Raycap DC6-48-60-18-8F ("Squid	2	0.75	-4.000	18.90	1.470	1.00	60.04	1.936	1.00
150.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	113.97	2.591	0.50
150.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	96.76	2.440	0.50
150.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	112.86	2.202	0.50
150.00	CCI OPA65R-BU6D	3	0.75	0.000	63.20	12.871	0.63	237.44	14.736	0.63
150.00	Powerwave Allgon 7770.00	3	0.75	-4.000	35.00	5.508	0.65	110.78	6.925	0.65
150.00	Powerwave Allgon LGP21401	6	0.75	-4.000	14.10	1.104	0.50	30.73	1.580	0.50
146.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	328.89	12.487	1.00
146.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3578.74	43.480	1.00
137.00	Generic Round Low Profile Plat	1	1.00	0.000	1875.00	21.700	1.00	2410.74	34.401	1.00
135.00	Samsung MT6413-77A	3	0.80	0.000	57.30	3.805	0.61	113.32	4.681	0.61
135.00	Antel LPA-80063/4CF	6	0.80	2.000	20.00	6.142	0.76	148.58	6.813	0.76
135.00	RFS DB-B1-6C-12AB-0Z	2	0.80	0.000	21.40	2.512	0.67	74.07	3.199	0.67
135.00	Samsung RF4461d-13A	3	0.80	0.000	79.10	1.875	0.50	121.64	2.471	0.50
135.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.80	0.000	74.70	1.875	0.50	116.86	2.469	0.50
135.00	Commscope NHH-65B-R2B	6	0.80	0.000	43.70	8.079	0.69	158.74	9.917	0.69
124.00	Generic Round Low Profile Plat	1	1.00	0.000	1875.00	21.700	1.00	2404.95	34.263	1.00
124.00	Decibel DB844H90E-XY	12	0.80	0.000	14.00	3.615	0.73	80.16	3.604	0.73
108.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3545.60	42.980	1.00
108.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	374.24	22.637	0.63
108.00	Generic Mount Reinforcement	1	1.00	0.000	200.00	7.500	1.00	324.93	12.333	1.00
108.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	191.98	6.707	0.63
108.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.67	166.06	3.244	0.67
108.00	Ericsson Radio 4480 B71+B85A	3	0.75	0.000	84.00	2.852	0.67	132.77	3.573	0.67
58.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	27.73	1.287	1.00
30.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	26.50	1.261	1.00
30.00	Stand-Off	1	1.00	0.000	100.00	3.000	1.00	127.49	3.884	1.00
Totals	**Row Count: 28**	**82**			**13,019.60**			**22,453.47**		

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	150.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	150.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	150.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	150.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	135.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	124.00	12	1 1/4" Coax	1.55	0.63	N	0	0	0	0	0	N	SPRINT NEXTEL
0.00	108.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	SPRINT NEXTEL
0.00	30.00	1	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	VERIZON WIRELESS

SEGMENT PROPERTIES

Seg Top	Description *(Max Length: 5 ft)*	Thick	Flat Dia	Area	Ix	W/t	D/t	F'y	S	Z	Weight

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Elev (ft)		(in)	(in)	(in^2)	(in^4)	Ratio	Ratio	(ksi)	(in^3)	(in^3)	(lb)
0.00		0.3750	51.726	61.118	20,362.10	22.56	137.94	74.9	775.3	0.0	0.0
5.00		0.3750	50.819	60.039	19,301.90	22.13	135.52	75.4	748.1	0.0	1,030.7
10.00		0.3750	49.912	58.959	18,279.20	21.71	133.10	75.9	721.3	0.0	1,012.3
15.00		0.3750	49.005	57.879	17,293.20	21.28	130.68	76.4	695.1	0.0	993.9
20.00		0.3750	48.097	56.800	16,343.40	20.85	128.26	76.9	669.3	0.0	975.6
25.00		0.3750	47.190	55.720	15,429.00	20.43	125.84	77.4	644.0	0.0	957.2
30.00		0.3750	46.283	54.640	14,549.40	20.00	123.42	77.9	619.2	0.0	938.8
35.00		0.3750	45.376	53.560	13,703.80	19.57	121.00	78.4	594.8	0.0	920.5
39.25	Bot - Section 2	0.3750	44.605	52.643	13,011.40	19.21	118.95	78.8	574.5	0.0	767.9
40.00		0.3750	44.469	52.481	12,891.60	19.15	118.58	78.9	571.0	0.0	247.7
45.00	Top - Section 1	0.3125	44.187	43.516	10,583.30	23.17	141.40	74.1	471.7	0.0	1,631.7
50.00		0.3125	43.280	42.616	9,940.30	22.66	138.49	74.8	452.4	0.0	732.7
55.00		0.3125	42.372	41.717	9,323.90	22.15	135.59	75.4	433.4	0.0	717.4
58.00		0.3125	41.828	41.177	8,966.60	21.84	133.85	75.7	422.2	0.0	423.1
60.00		0.3125	41.465	40.817	8,733.50	21.63	132.69	76	414.8	0.0	279.0
65.00		0.3125	40.558	39.917	8,168.60	21.12	129.79	76.6	396.7	0.0	686.8
70.00		0.3125	39.651	39.017	7,628.60	20.61	126.88	77.2	378.9	0.0	671.5
75.00		0.3125	38.744	38.118	7,112.90	20.10	123.98	77.8	361.6	0.0	656.2
79.50	Bot - Section 3	0.3125	37.927	37.308	6,669.20	19.64	121.37	78.3	346.3	0.0	577.5
80.00		0.3125	37.837	37.218	6,621.00	19.59	121.08	78.4	344.7	0.0	114.9
84.25	Top - Section 2	0.2500	37.566	29.609	5,209.00	24.73	150.26	72.3	273.1	0.0	965.3
85.00		0.2500	37.429	29.501	5,152.20	24.64	149.72	72.4	271.1	0.0	75.4
90.00		0.2500	36.522	28.781	4,784.20	24.00	146.09	73.2	258.0	0.0	495.8
95.00		0.2500	35.615	28.061	4,434.20	23.36	142.46	73.9	245.2	0.0	483.6
100.00		0.2500	34.708	27.341	4,101.60	22.72	138.83	74.7	232.8	0.0	471.3
105.00		0.2500	33.801	26.622	3,786.10	22.08	135.20	75.4	220.6	0.0	459.1
108.00		0.2500	33.257	26.190	3,604.80	21.69	133.03	75.9	213.5	0.0	269.6
110.00		0.2500	32.894	25.902	3,487.20	21.44	131.57	76.2	208.8	0.0	177.3
115.00		0.2500	31.987	25.182	3,204.50	20.80	127.95	76.9	197.3	0.0	434.6
120.00	Top - Section 3	0.2500	31.079	24.462	2,937.50	20.16	124.32	77.7	186.2	0.0	422.3
120.00	Bot - Section 4	0.2187	31.079	21.421	2,577.60	23.29	142.11	74	163.4	0.0	
124.00		0.2187	30.354	20.918	2,400.00	22.71	138.79	74.7	155.7	0.0	288.1
125.00		0.2187	30.172	20.792	2,356.90	22.56	137.96	74.9	153.9	0.0	71.0
130.00		0.2187	29.265	20.162	2,149.20	21.83	133.81	75.7	144.6	0.0	348.4
135.00		0.2187	28.358	19.532	1,954.00	21.10	129.67	76.6	135.7	0.0	337.7
137.00		0.2187	27.995	19.280	1,879.40	20.81	128.01	76.9	132.2	0.0	132.1
140.00		0.2187	27.451	18.903	1,771.10	20.37	125.52	77.4	127.1	0.0	194.9
145.00		0.2187	26.544	18.273	1,599.90	19.64	121.37	78.3	118.7	0.0	316.2
146.00		0.2187	26.362	18.147	1,567.10	19.49	120.54	78.5	117.1	0.0	62.0
148.00		0.2187	25.999	17.895	1,502.70	19.20	118.88	78.8	113.8	0.0	122.6
										Total:	**20,462.7**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 120 mph Wind with No Ice — 24 Iterations

Gust Response Factor: 1.10
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	-45.84	-23.63	0.00	-2,548.6	0.00	2,548.61	4,118.22	1,072.63	4,974.93	4,353.63	0	0	0.597
5.00	-44.32	-23.35	0.00	-2,430.5	0.00	2,430.48	4,072.57	1,053.68	4,800.73	4,228.77	0.09	-0.17	0.586
10.00	-42.82	-23.06	0.00	-2,313.8	0.00	2,313.75	4,025.95	1,034.73	4,629.63	4,104.63	0.37	-0.35	0.575
15.00	-41.35	-22.78	0.00	-2,198.4	0.00	2,198.43	3,978.36	1,015.78	4,461.64	3,981.27	0.83	-0.52	0.563
20.00	-39.90	-22.50	0.00	-2,084.5	0.00	2,084.52	3,929.79	996.83	4,296.76	3,858.74	1.47	-0.7	0.551
25.00	-38.47	-22.21	0.00	-1,972.0	0.00	1,972.03	3,880.25	977.88	4,134.97	3,737.11	2.3	-0.88	0.538
30.00	-36.94	-21.82	0.00	-1,861.0	0.00	1,860.96	3,829.73	958.93	3,976.30	3,616.41	3.31	-1.05	0.525
35.00	-35.57	-21.54	0.00	-1,751.9	0.00	1,751.86	3,778.24	939.99	3,820.72	3,496.72	4.51	-1.23	0.511
39.25	-34.44	-21.37	0.00	-1,660.3	0.00	1,660.33	3,733.71	923.88	3,690.93	3,395.80	5.68	-1.38	0.499
40.00	-34.08	-21.19	0.00	-1,644.3	0.00	1,644.30	3,725.77	921.04	3,668.26	3,378.08	5.9	-1.41	0.496
45.00	-31.86	-20.83	0.00	-1,538.3	0.00	1,538.33	2,904.05	763.71	3,026.37	2,623.51	7.46	-1.58	0.598
50.00	-30.71	-20.49	0.00	-1,434.2	0.00	1,434.18	2,867.09	747.92	2,902.53	2,536.20	9.22	-1.76	0.577
55.00	-29.59	-20.21	0.00	-1,331.7	0.00	1,331.73	2,829.16	732.13	2,781.28	2,449.42	11.16	-1.96	0.555
58.00	-28.92	-20.00	0.00	-1,271.1	0.00	1,271.10	2,805.94	722.65	2,709.77	2,397.65	12.43	-2.08	0.541

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CALCULATED FORCES

60.00	-28.46	-19.77	0.00	-1,231.1	0.00	1,231.09	2,790.26	716.34	2,662.61	2,363.26	13.32	-2.15	0.532
65.00	-27.38	-19.41	0.00	-1,132.3	0.00	1,132.26	2,750.38	700.55	2,546.53	2,277.74	15.68	-2.35	0.508
70.00	-26.32	-19.04	0.00	-1,035.2	0.00	1,035.23	2,709.52	684.75	2,433.04	2,192.94	18.24	-2.54	0.483
75.00	-25.28	-18.68	0.00	-940.0	0.00	940.04	2,667.70	668.96	2,322.14	2,108.90	20.99	-2.72	0.456
79.50	-24.38	-18.47	0.00	-856.0	0.00	855.99	2,629.22	654.75	2,224.53	2,033.97	23.63	-2.88	0.431
80.00	-24.20	-18.30	0.00	-846.8	0.00	846.75	2,624.89	653.17	2,213.82	2,025.69	23.94	-2.9	0.428
84.25	-22.85	-18.06	0.00	-769.0	0.00	768.97	1,926.95	519.63	1,751.33	1,481.20	26.58	-3.05	0.532
85.00	-22.70	-17.86	0.00	-755.4	0.00	755.43	1,922.92	517.74	1,738.58	1,472.68	27.07	-3.07	0.526
90.00	-21.86	-17.49	0.00	-666.1	0.00	666.11	1,895.50	505.11	1,654.79	1,416.02	30.39	-3.27	0.483
95.00	-21.04	-17.10	0.00	-578.7	0.00	578.69	1,867.10	492.47	1,573.06	1,359.68	33.91	-3.45	0.438
100.00	-20.24	-16.71	0.00	-493.2	0.00	493.18	1,837.72	479.84	1,493.40	1,303.72	37.62	-3.63	0.391
105.00	-19.46	-16.39	0.00	-409.6	0.00	409.61	1,807.37	467.21	1,415.82	1,248.19	41.51	-3.78	0.340
108.00	-14.47	-12.84	0.00	-360.4	0.00	360.44	1,788.69	459.63	1,370.26	1,215.10	43.91	-3.87	0.306
110.00	-14.19	-12.58	0.00	-334.8	0.00	334.75	1,776.05	454.58	1,340.30	1,193.15	45.54	-3.92	0.289
115.00	-13.49	-12.18	0.00	-271.9	0.00	271.87	1,743.75	441.94	1,266.85	1,138.65	49.72	-4.05	0.247
120.00	-12.81	-11.81	0.00	-211.0	0.00	210.99	1,710.47	429.31	1,195.47	1,084.74	54.01	-4.16	0.203
120.00	-12.81	-11.81	0.00	-211.0	0.00	210.99	1,426.70	375.94	1,047.89	906.62	54.01	-4.16	0.243
124.00	-10.02	-9.56	0.00	-163.8	0.00	163.76	1,406.11	367.10	999.19	872.37	57.53	-4.23	0.196
125.00	-9.92	-9.34	0.00	-154.2	0.00	154.20	1,400.86	364.89	987.19	863.85	58.41	-4.25	0.186
130.00	-9.38	-8.95	0.00	-107.5	0.00	107.50	1,374.04	353.84	928.31	821.46	62.9	-4.33	0.138
135.00	-7.79	-6.06	0.00	-60.9	0.00	60.94	1,346.25	342.79	871.24	779.53	67.46	-4.38	0.084
137.00	-5.43	-4.82	0.00	-48.8	0.00	48.82	1,334.86	338.37	848.92	762.89	69.3	-4.4	0.068
140.00	-5.16	-4.52	0.00	-34.4	0.00	34.36	1,317.49	331.74	815.98	738.09	72.07	-4.42	0.051
145.00	-4.71	-4.28	0.00	-11.8	0.00	11.75	1,287.75	320.69	762.53	697.20	76.7	-4.44	0.021
146.00	-1.51	-2.49	0.00	-7.5	0.00	7.47	1,281.68	318.48	752.05	689.10	77.63	-4.44	0.012
148.00	0.00	-2.37	0.00	-2.5	0.00	2.48	1,269.43	314.06	731.32	672.96	79.49	-4.44	0.004

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CALCULATED FORCES

Load Case: 0.9D + 1.0W — 120 mph Wind with No Ice (Reduced DL) — 24 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	-34.37	-23.61	0.00	-2,514.2	0.00	2,514.19	4,118.22	1,072.63	4,974.93	4,353.63	0	0	0.586
5.00	-33.21	-23.29	0.00	-2,396.2	0.00	2,396.15	4,072.57	1,053.68	4,800.73	4,228.77	0.09	-0.17	0.575
10.00	-32.08	-22.98	0.00	-2,279.7	0.00	2,279.68	4,025.95	1,034.73	4,629.63	4,104.63	0.36	-0.34	0.564
15.00	-30.96	-22.67	0.00	-2,164.8	0.00	2,164.79	3,978.36	1,015.78	4,461.64	3,981.27	0.82	-0.52	0.552
20.00	-29.85	-22.35	0.00	-2,051.5	0.00	2,051.46	3,929.79	996.83	4,296.76	3,858.74	1.45	-0.69	0.540
25.00	-28.77	-22.04	0.00	-1,939.7	0.00	1,939.70	3,880.25	977.88	4,134.97	3,737.11	2.27	-0.86	0.527
30.00	-27.61	-21.63	0.00	-1,829.5	0.00	1,829.48	3,829.73	958.93	3,976.30	3,616.41	3.27	-1.04	0.514
35.00	-26.57	-21.32	0.00	-1,721.4	0.00	1,721.36	3,778.24	939.99	3,820.72	3,496.72	4.45	-1.21	0.500
39.25	-25.71	-21.15	0.00	-1,630.7	0.00	1,630.73	3,733.71	923.88	3,690.93	3,395.80	5.59	-1.36	0.488
40.00	-25.44	-20.96	0.00	-1,614.9	0.00	1,614.87	3,725.77	921.04	3,668.26	3,378.08	5.81	-1.39	0.485
45.00	-23.76	-20.58	0.00	-1,510.1	0.00	1,510.09	2,904.05	763.71	3,026.37	2,623.51	7.35	-1.56	0.585
50.00	-22.89	-20.22	0.00	-1,407.2	0.00	1,407.18	2,867.09	747.92	2,902.53	2,536.20	9.08	-1.73	0.564
55.00	-22.04	-19.93	0.00	-1,306.1	0.00	1,306.06	2,829.16	732.13	2,781.28	2,449.42	10.99	-1.92	0.542
58.00	-21.53	-19.72	0.00	-1,246.3	0.00	1,246.27	2,805.94	722.65	2,709.77	2,397.65	12.24	-2.04	0.528
60.00	-21.18	-19.47	0.00	-1,206.8	0.00	1,206.84	2,790.26	716.34	2,662.61	2,363.26	13.11	-2.12	0.519
65.00	-20.35	-19.09	0.00	-1,109.5	0.00	1,109.51	2,750.38	700.55	2,546.53	2,277.74	15.43	-2.31	0.495
70.00	-19.55	-18.71	0.00	-1,014.0	0.00	1,014.05	2,709.52	684.75	2,433.04	2,192.94	17.94	-2.49	0.470
75.00	-18.76	-18.34	0.00	-920.5	0.00	920.50	2,667.70	668.96	2,322.14	2,108.90	20.65	-2.67	0.444
79.50	-18.08	-18.13	0.00	-838.0	0.00	837.96	2,629.22	654.75	2,224.53	2,033.97	23.24	-2.83	0.420
80.00	-17.95	-17.96	0.00	-828.9	0.00	828.89	2,624.89	653.17	2,213.82	2,025.69	23.54	-2.85	0.417
84.25	-16.93	-17.73	0.00	-752.6	0.00	752.57	1,926.95	519.63	1,751.33	1,481.20	26.14	-2.99	0.518
85.00	-16.81	-17.52	0.00	-739.3	0.00	739.27	1,922.92	517.74	1,738.58	1,472.68	26.62	-3.02	0.512
90.00	-16.18	-17.13	0.00	-651.7	0.00	651.68	1,895.50	505.11	1,654.79	1,416.02	29.88	-3.21	0.470
95.00	-15.55	-16.74	0.00	-566.0	0.00	566.02	1,867.10	492.47	1,573.06	1,359.68	33.34	-3.39	0.426
100.00	-14.95	-16.35	0.00	-482.3	0.00	482.30	1,837.72	479.84	1,493.40	1,303.72	36.98	-3.56	0.379
105.00	-14.37	-16.03	0.00	-400.5	0.00	400.54	1,807.37	467.21	1,415.82	1,248.19	40.79	-3.71	0.330
108.00	-10.67	-12.57	0.00	-352.4	0.00	352.45	1,788.69	459.63	1,370.26	1,215.10	43.15	-3.8	0.297
110.00	-10.45	-12.30	0.00	-327.3	0.00	327.31	1,776.05	454.58	1,340.30	1,193.15	44.75	-3.85	0.281
115.00	-9.93	-11.91	0.00	-265.8	0.00	265.80	1,743.75	441.94	1,266.85	1,138.65	48.85	-3.97	0.240
120.00	-9.43	-11.55	0.00	-206.3	0.00	206.27	1,710.47	429.31	1,195.47	1,084.74	53.06	-4.08	0.196
120.00	-9.43	-11.55	0.00	-206.3	0.00	206.27	1,426.70	375.94	1,047.89	906.62	53.06	-4.08	0.235
124.00	-7.37	-9.35	0.00	-160.1	0.00	160.10	1,406.11	367.10	999.19	872.37	56.51	-4.15	0.189
125.00	-7.29	-9.13	0.00	-150.7	0.00	150.74	1,400.86	364.89	987.19	863.85	57.38	-4.17	0.180
130.00	-6.90	-8.75	0.00	-105.1	0.00	105.09	1,374.04	353.84	928.31	821.46	61.78	-4.24	0.134
135.00	-5.75	-5.89	0.00	-59.5	0.00	59.52	1,346.25	342.79	871.24	779.53	66.25	-4.3	0.081
137.00	-4.00	-4.70	0.00	-47.7	0.00	47.74	1,334.86	338.37	848.92	762.89	68.06	-4.31	0.066
140.00	-3.80	-4.41	0.00	-33.6	0.00	33.63	1,317.49	331.74	815.98	738.09	70.77	-4.33	0.049
145.00	-3.47	-4.18	0.00	-11.6	0.00	11.58	1,287.75	320.69	762.53	697.20	75.32	-4.35	0.019
146.00	-1.09	-2.46	0.00	-7.4	0.00	7.40	1,281.68	318.48	752.05	689.10	76.23	-4.35	0.012
148.00	0.00	-2.37	0.00	-2.5	0.00	2.48	1,269.43	314.06	731.32	672.96	78.05	-4.35	0.004

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CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph Wind with 1" Radial Ice — 23 Iterations

Gust Response Factor: 1.10 — Ice Dead Load Factor 1.00
Dead load Factor: 1.20 — Ice Importance Factor 1.00
Wind Load Factor: 1.00

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	-61.24	-6.25	0.00	-667.1	0.00	667.14	4,118.22	1,072.63	4,974.93	4,353.63	0	0	0.168
5.00	-59.54	-6.18	0.00	-635.9	0.00	635.87	4,072.57	1,053.68	4,800.73	4,228.77	0.02	-0.05	0.165
10.00	-57.83	-6.10	0.00	-605.0	0.00	604.98	4,025.95	1,034.73	4,629.63	4,104.63	0.1	-0.09	0.162
15.00	-56.14	-6.03	0.00	-574.5	0.00	574.46	3,978.36	1,015.78	4,461.64	3,981.27	0.22	-0.14	0.158
20.00	-54.46	-5.95	0.00	-544.3	0.00	544.33	3,929.79	996.83	4,296.76	3,858.74	0.39	-0.18	0.155
25.00	-52.80	-5.87	0.00	-514.6	0.00	514.58	3,880.25	977.88	4,134.97	3,737.11	0.6	-0.23	0.151
30.00	-51.00	-5.77	0.00	-485.2	0.00	485.22	3,829.73	958.93	3,976.30	3,616.41	0.87	-0.28	0.148
35.00	-49.39	-5.69	0.00	-456.4	0.00	456.38	3,778.24	939.99	3,820.72	3,496.72	1.18	-0.32	0.144
39.25	-48.04	-5.64	0.00	-432.2	0.00	432.19	3,733.71	923.88	3,690.93	3,395.80	1.48	-0.36	0.140
40.00	-47.66	-5.59	0.00	-428.0	0.00	427.96	3,725.77	921.04	3,668.26	3,378.08	1.54	-0.37	0.140
45.00	-45.20	-5.49	0.00	-400.0	0.00	399.98	2,904.05	763.71	3,026.37	2,623.51	1.95	-0.41	0.168
50.00	-43.82	-5.40	0.00	-372.5	0.00	372.52	2,867.09	747.92	2,902.53	2,536.20	2.41	-0.46	0.162
55.00	-42.45	-5.32	0.00	-345.5	0.00	345.53	2,829.16	732.13	2,781.28	2,449.42	2.92	-0.51	0.156
58.00	-41.62	-5.26	0.00	-329.6	0.00	329.57	2,805.94	722.65	2,709.77	2,397.65	3.25	-0.54	0.152
60.00	-41.09	-5.19	0.00	-319.0	0.00	319.05	2,790.26	716.34	2,662.61	2,363.26	3.48	-0.56	0.150
65.00	-39.77	-5.09	0.00	-293.1	0.00	293.08	2,750.38	700.55	2,546.53	2,277.74	4.09	-0.61	0.143
70.00	-38.47	-4.99	0.00	-267.6	0.00	267.62	2,709.52	684.75	2,433.04	2,192.94	4.76	-0.66	0.136
75.00	-37.20	-4.88	0.00	-242.7	0.00	242.69	2,667.70	668.96	2,322.14	2,108.90	5.48	-0.71	0.129
79.50	-36.08	-4.82	0.00	-220.7	0.00	220.72	2,629.22	654.75	2,224.53	2,033.97	6.16	-0.75	0.122
80.00	-35.89	-4.77	0.00	-218.3	0.00	218.31	2,624.89	653.17	2,213.82	2,025.69	6.24	-0.75	0.121
84.25	-34.32	-4.70	0.00	-198.0	0.00	198.02	1,926.95	519.63	1,751.33	1,481.20	6.93	-0.79	0.152
85.00	-34.16	-4.65	0.00	-194.5	0.00	194.49	1,922.92	517.74	1,738.58	1,472.68	7.06	-0.8	0.150
90.00	-33.09	-4.54	0.00	-171.3	0.00	171.26	1,895.50	505.11	1,654.79	1,416.02	7.92	-0.85	0.138
95.00	-32.04	-4.43	0.00	-148.6	0.00	148.57	1,867.10	492.47	1,573.06	1,359.68	8.84	-0.9	0.127
100.00	-31.01	-4.31	0.00	-126.4	0.00	126.45	1,837.72	479.84	1,493.40	1,303.72	9.8	-0.94	0.114
105.00	-30.00	-4.21	0.00	-104.9	0.00	104.90	1,807.37	467.21	1,415.82	1,248.19	10.81	-0.98	0.101
108.00	-22.72	-3.33	0.00	-92.3	0.00	92.26	1,788.69	459.63	1,370.26	1,215.10	11.43	-1	0.089
110.00	-22.34	-3.25	0.00	-85.6	0.00	85.60	1,776.05	454.58	1,340.30	1,193.15	11.85	-1.02	0.084
115.00	-21.40	-3.12	0.00	-69.4	0.00	69.37	1,743.75	441.94	1,266.85	1,138.65	12.94	-1.05	0.073
120.00	-20.49	-3.01	0.00	-53.7	0.00	53.74	1,710.47	429.31	1,195.47	1,084.74	14.05	-1.08	0.062
120.00	-20.49	-3.01	0.00	-53.7	0.00	53.74	1,426.70	375.94	1,047.89	906.62	14.05	-1.08	0.074
124.00	-16.17	-2.47	0.00	-41.7	0.00	41.70	1,406.11	367.10	999.19	872.37	14.96	-1.09	0.059
125.00	-16.02	-2.40	0.00	-39.2	0.00	39.23	1,400.86	364.89	987.19	863.85	15.19	-1.1	0.057
130.00	-15.25	-2.28	0.00	-27.2	0.00	27.23	1,374.04	353.84	928.31	821.46	16.35	-1.12	0.044
135.00	-11.51	-1.61	0.00	-15.5	0.00	15.48	1,346.25	342.79	871.24	779.53	17.54	-1.13	0.028
137.00	-8.57	-1.25	0.00	-12.3	0.00	12.26	1,334.86	338.37	848.92	762.89	18.01	-1.14	0.023
140.00	-8.16	-1.16	0.00	-8.5	0.00	8.50	1,317.49	331.74	815.98	738.09	18.73	-1.14	0.018
145.00	-7.50	-1.08	0.00	-2.7	0.00	2.70	1,287.75	320.69	762.53	697.20	19.93	-1.15	0.010
146.00	-3.19	-0.56	0.00	-1.6	0.00	1.61	1,281.68	318.48	752.05	689.10	20.17	-1.15	0.005
148.00	0.00	-0.50	0.00	-0.5	0.00	0.48	1,269.43	314.06	731.32	672.96	20.65	-1.15	0.001

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CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 23 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	-38.23	-5.28	0.00	-565.4	0.00	565.38	4,118.22	1,072.63	4,974.93	4,353.63	0	0	0.139
5.00	-37.02	-5.21	0.00	-539.0	0.00	538.97	4,072.57	1,053.68	4,800.73	4,228.77	0.02	-0.04	0.137
10.00	-35.82	-5.15	0.00	-512.9	0.00	512.90	4,025.95	1,034.73	4,629.63	4,104.63	0.08	-0.08	0.134
15.00	-34.65	-5.08	0.00	-487.2	0.00	487.17	3,978.36	1,015.78	4,461.64	3,981.27	0.18	-0.12	0.131
20.00	-33.49	-5.01	0.00	-461.8	0.00	461.78	3,929.79	996.83	4,296.76	3,858.74	0.33	-0.16	0.128
25.00	-32.35	-4.94	0.00	-436.7	0.00	436.73	3,880.25	977.88	4,134.97	3,737.11	0.51	-0.19	0.125
30.00	-31.12	-4.85	0.00	-412.0	0.00	412.01	3,829.73	958.93	3,976.30	3,616.41	0.73	-0.23	0.122
35.00	-30.02	-4.79	0.00	-387.8	0.00	387.75	3,778.24	939.99	3,820.72	3,496.72	1	-0.27	0.119
39.25	-29.10	-4.75	0.00	-367.4	0.00	367.41	3,733.71	923.88	3,690.93	3,395.80	1.26	-0.31	0.116
40.00	-28.83	-4.71	0.00	-363.8	0.00	363.85	3,725.77	921.04	3,668.26	3,378.08	1.31	-0.31	0.115
45.00	-27.01	-4.62	0.00	-340.3	0.00	340.32	2,904.05	763.71	3,026.37	2,623.51	1.65	-0.35	0.139
50.00	-26.10	-4.55	0.00	-317.2	0.00	317.20	2,867.09	747.92	2,902.53	2,536.20	2.04	-0.39	0.134
55.00	-25.20	-4.48	0.00	-294.5	0.00	294.47	2,829.16	732.13	2,781.28	2,449.42	2.47	-0.43	0.129
58.00	-24.66	-4.43	0.00	-281.0	0.00	281.03	2,805.94	722.65	2,709.77	2,397.65	2.75	-0.46	0.126
60.00	-24.31	-4.38	0.00	-272.2	0.00	272.16	2,790.26	716.34	2,662.61	2,363.26	2.95	-0.48	0.124
65.00	-23.44	-4.30	0.00	-250.3	0.00	250.26	2,750.38	700.55	2,546.53	2,277.74	3.47	-0.52	0.118
70.00	-22.59	-4.21	0.00	-228.8	0.00	228.78	2,709.52	684.75	2,433.04	2,192.94	4.04	-0.56	0.113
75.00	-21.76	-4.13	0.00	-207.7	0.00	207.71	2,667.70	668.96	2,322.14	2,108.90	4.65	-0.6	0.107
79.50	-21.02	-4.09	0.00	-189.1	0.00	189.12	2,629.22	654.75	2,224.53	2,033.97	5.23	-0.64	0.101
80.00	-20.89	-4.05	0.00	-187.1	0.00	187.08	2,624.89	653.17	2,213.82	2,025.69	5.3	-0.64	0.100
84.25	-19.77	-3.99	0.00	-169.9	0.00	169.88	1,926.95	519.63	1,751.33	1,481.20	5.89	-0.67	0.125
85.00	-19.67	-3.95	0.00	-166.9	0.00	166.88	1,922.92	517.74	1,738.58	1,472.68	5.99	-0.68	0.124
90.00	-18.99	-3.86	0.00	-147.1	0.00	147.14	1,895.50	505.11	1,654.79	1,416.02	6.73	-0.72	0.114
95.00	-18.33	-3.78	0.00	-127.8	0.00	127.81	1,867.10	492.47	1,573.06	1,359.68	7.51	-0.76	0.104
100.00	-17.68	-3.69	0.00	-108.9	0.00	108.93	1,837.72	479.84	1,493.40	1,303.72	8.33	-0.8	0.093
105.00	-17.04	-3.62	0.00	-90.5	0.00	90.47	1,807.37	467.21	1,415.82	1,248.19	9.19	-0.84	0.082
108.00	-12.72	-2.84	0.00	-79.6	0.00	79.61	1,788.69	459.63	1,370.26	1,215.10	9.72	-0.86	0.073
110.00	-12.48	-2.78	0.00	-73.9	0.00	73.94	1,776.05	454.58	1,340.30	1,193.15	10.08	-0.87	0.069
115.00	-11.90	-2.69	0.00	-60.0	0.00	60.05	1,743.75	441.94	1,266.85	1,138.65	11.01	-0.9	0.060
120.00	-11.33	-2.61	0.00	-46.6	0.00	46.60	1,710.47	429.31	1,195.47	1,084.74	11.96	-0.92	0.050
120.00	-11.33	-2.61	0.00	-46.6	0.00	46.60	1,426.70	375.94	1,047.89	906.62	11.96	-0.92	0.059
124.00	-8.88	-2.11	0.00	-36.2	0.00	36.17	1,406.11	367.10	999.19	872.37	12.74	-0.94	0.048
125.00	-8.79	-2.06	0.00	-34.1	0.00	34.06	1,400.86	364.89	987.19	863.85	12.93	-0.94	0.046
130.00	-8.33	-1.98	0.00	-23.7	0.00	23.74	1,374.04	353.84	928.31	821.46	13.93	-0.96	0.035
135.00	-6.84	-1.33	0.00	-13.4	0.00	13.45	1,346.25	342.79	871.24	779.53	14.94	-0.97	0.022
137.00	-4.80	-1.06	0.00	-10.8	0.00	10.78	1,334.86	338.37	848.92	762.89	15.34	-0.97	0.018
140.00	-4.57	-1.00	0.00	-7.6	0.00	7.60	1,317.49	331.74	815.98	738.09	15.96	-0.98	0.014
145.00	-4.18	-0.95	0.00	-2.6	0.00	2.61	1,287.75	320.69	762.53	697.20	16.98	-0.98	0.007
146.00	-1.41	-0.55	0.00	-1.7	0.00	1.66	1,281.68	318.48	752.05	689.10	17.19	-0.98	0.004
148.00	0.00	-0.53	0.00	-0.6	0.00	0.56	1,269.43	314.06	731.32	672.96	17.6	-0.98	0.001

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EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.196
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.055
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}):	0.209
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.088
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):	2.550
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	2.000
Total Unfactored Dead Load:	38.230 k
Seismic Base Shear (E):	1.150 k

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	147	152	3,286	0.010	11	189
37	145.5	77	1,623	0.005	5	95
36	142.5	390	7,914	0.023	26	484
35	138.5	239	4,584	0.013	15	297
34	136	161	2,987	0.009	10	201
33	132.5	449	7,879	0.023	26	557
32	127.5	459	7,470	0.022	25	571
31	124.5	93	1,444	0.004	5	116
30	122	407	6,062	0.017	20	506
29	117.5	571	7,886	0.023	26	709
28	112.5	583	7,385	0.021	24	725
27	109	237	2,814	0.008	9	294
26	106.5	376	4,265	0.012	14	467
25	102.5	636	6,687	0.019	22	790
24	97.5	649	6,167	0.018	20	806
23	92.5	661	5,655	0.016	19	821
22	87.5	673	5,154	0.015	17	836
21	84.625	102	731	0.002	2	127
20	82.125	1,116	7,528	0.022	25	1,386
19	79.75	133	843	0.002	3	165
18	77.25	737	4,399	0.013	15	915
17	72.5	834	4,382	0.013	14	1,035
16	67.5	849	3,868	0.011	13	1,054
15	62.5	864	3,376	0.010	11	1,073
14	59	350	1,218	0.004	4	435
13	56.5	530	1,690	0.005	6	658
12	52.5	895	2,466	0.007	8	1,111
11	47.5	910	2,053	0.006	7	1,130
10	42.5	1,809	3,268	0.009	11	2,247
9	39.625	274	431	0.001	1	341
8	37.125	919	1,266	0.004	4	1,141
7	32.5	1,098	1,160	0.003	4	1,363
6	27.5	1,117	845	0.002	3	1,387
5	22.5	1,135	575	0.002	2	1,410
4	17.5	1,154	353	0.001	1	1,433
3	12.5	1,172	183	0.000	1	1,456
2	7.5	1,190	67	0.000	0	1,478
1	2.5	1,209	8	0.000	0	1,501

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SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Powerwave Allgon LGP21401	148	85	1,853	0.005	6	105
Raycap DC6-48-60-18-8F ("Squid")	148	38	828	0.002	3	47
Ericsson RRUS 8843 B2, B66A	148	216	4,731	0.014	16	268
Ericsson RRUS 4478 B14	148	180	3,936	0.011	13	223
Ericsson RRUS 4449 B5, B12	148	213	4,666	0.013	15	265
Powerwave Allgon 7770.00	148	105	2,300	0.007	8	130
CCI DMP65R-BU6DA	148	238	5,218	0.015	17	296
CCI OPA65R-BU6D	148	190	4,153	0.012	14	235
Generic Mount Reinforcement	146	200	4,263	0.012	14	248
Generic Mount Reinforcement	108	200	2,333	0.007	8	248
Generic Round Platform with Handrails	146	2,500	53,290	0.153	176	3,105
Generic Round Platform with Handrails	108	2,500	29,160	0.084	96	3,105
Generic Round Low Profile Platform	137	1,875	35,192	0.101	116	2,328
Generic Round Low Profile Platform	124	1,875	28,830	0.083	95	2,328
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	135	224	4,084	0.012	13	278
Samsung RF4461d-13A	135	237	4,325	0.012	14	295
RFS DB-B1-6C-12AB-0Z	135	43	780	0.002	3	53
Samsung MT6413-77A	135	172	3,133	0.009	10	213
Antel LPA-80063/4CF	135	120	2,187	0.006	7	149
Commscope NHH-65B-R2B	135	262	4,779	0.014	16	326
Decibel DB844H90E-XY	124	168	2,583	0.007	9	209
Ericsson Radio 4460 B25+B66	108	327	3,814	0.011	13	406
Ericsson Radio 4480 B71+B85A	108	252	2,939	0.008	10	313
Ericsson Air6449 B41	108	312	3,639	0.010	12	387
RFS APXVAALL24 43-U-NA20	108	368	4,297	0.012	14	457
Generic GPS	58	10	34	0.000	0	12
Generic GPS	30	10	9	0.000	0	12
Stand-Off	30	100	90	0.000	0	124
	Totals:	**38,231**	**347,415**	**1.000**	**1,147**	**47,475**

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	147	152	3,286	0.010	11	130
37	145.5	77	1,623	0.005	5	66
36	142.5	390	7,914	0.023	26	334
35	138.5	239	4,584	0.013	15	205
34	136	161	2,987	0.009	10	139
33	132.5	449	7,879	0.023	26	385
32	127.5	459	7,470	0.022	25	394
31	124.5	93	1,444	0.004	5	80
30	122	407	6,062	0.017	20	350
29	117.5	571	7,886	0.023	26	490
28	112.5	583	7,385	0.021	24	501
27	109	237	2,814	0.008	9	203
26	106.5	376	4,265	0.012	14	323
25	102.5	636	6,687	0.019	22	546
24	97.5	649	6,167	0.018	20	557
23	92.5	661	5,655	0.016	19	567
22	87.5	673	5,154	0.015	17	578
21	84.625	102	731	0.002	2	88
20	82.125	1,116	7,528	0.022	25	958
19	79.75	133	843	0.002	3	114
18	77.25	737	4,399	0.013	15	633
17	72.5	834	4,382	0.013	14	715
16	67.5	849	3,868	0.011	13	729
15	62.5	864	3,376	0.010	11	742
14	59	350	1,218	0.004	4	300
13	56.5	530	1,690	0.005	6	454
12	52.5	895	2,466	0.007	8	768

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SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
11	47.5	910	2,053	0.006	7	781
10	42.5	1,809	3,268	0.009	11	1,553
9	39.625	274	431	0.001	1	235
8	37.125	919	1,266	0.004	4	788
7	32.5	1,098	1,160	0.003	4	942
6	27.5	1,117	845	0.002	3	959
5	22.5	1,135	575	0.002	2	974
4	17.5	1,154	353	0.001	1	990
3	12.5	1,172	183	0.000	1	1,006
2	7.5	1,190	67	0.000	0	1,022
1	2.5	1,209	8	0.000	0	1,037
Powerwave Allgon LGP21401	148	85	1,853	0.005	6	73
Raycap DC6-48-60-18-8F ("Squid")	148	38	828	0.002	3	32
Ericsson RRUS 8843 B2, B66A	148	216	4,731	0.014	16	185
Ericsson RRUS 4478 B14	148	180	3,936	0.011	13	154
Ericsson RRUS 4449 B5, B12	148	213	4,666	0.013	15	183
Powerwave Allgon 7770.00	148	105	2,300	0.007	8	90
CCI DMP65R-BU6DA	148	238	5,218	0.015	17	204
CCI OPA65R-BU6D	148	190	4,153	0.012	14	163
Generic Mount Reinforcement	146	200	4,263	0.012	14	172
Generic Mount Reinforcement	108	200	2,333	0.007	8	172
Generic Round Platform with Handrails	146	2,500	53,290	0.153	176	2,145
Generic Round Platform with Handrails	108	2,500	29,160	0.084	96	2,145
Generic Round Low Profile Platform	137	1,875	35,192	0.101	116	1,609
Generic Round Low Profile Platform	124	1,875	28,830	0.083	95	1,609
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	135	224	4,084	0.012	13	192
Samsung RF4461d-13A	135	237	4,325	0.012	14	204
RFS DB-B1-6C-12AB-0Z	135	43	780	0.002	3	37
Samsung MT6413-77A	135	172	3,133	0.009	10	148
Antel LPA-80063/4CF	135	120	2,187	0.006	7	103
Commscope NHH-65B-R2B	135	262	4,779	0.014	16	225
Decibel DB844H90E-XY	124	168	2,583	0.007	9	144
Ericsson Radio 4460 B25+B66	108	327	3,814	0.011	13	281
Ericsson Radio 4480 B71+B85A	108	252	2,939	0.008	10	216
Ericsson Air6449 B41	108	312	3,639	0.010	12	268
RFS APXVAALL24 43-U-NA20	108	368	4,297	0.012	14	316
Generic GPS	58	10	34	0.000	0	9
Generic GPS	30	10	9	0.000	0	9
Stand-Off	30	100	90	0.000	0	86
	Totals:	**38,231**	**347,415**	**1.000**	**1,147**	**32,809**

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	-45.97	-1.15	0.00	-145.30	0.00	145.30	4,118.22	1,072.63	4,975	4,353.63	0.00	0.00	0.05
5.00	-44.50	-1.16	0.00	-139.55	0.00	139.55	4,072.57	1,053.68	4,801	4,228.77	0.01	-0.01	0.04
10.00	-43.04	-1.16	0.00	-133.76	0.00	133.76	4,025.95	1,034.73	4,630	4,104.63	0.02	-0.02	0.04
15.00	-41.61	-1.17	0.00	-127.94	0.00	127.94	3,978.36	1,015.78	4,462	3,981.27	0.05	-0.03	0.04
20.00	-40.20	-1.17	0.00	-122.09	0.00	122.09	3,929.79	996.83	4,297	3,858.74	0.08	-0.04	0.04
25.00	-38.81	-1.18	0.00	-116.22	0.00	116.22	3,880.25	977.88	4,135	3,737.11	0.13	-0.05	0.04
30.00	-37.31	-1.18	0.00	-110.33	0.00	110.33	3,829.73	958.93	3,976	3,616.41	0.19	-0.06	0.04
35.00	-36.17	-1.18	0.00	-104.43	0.00	104.43	3,778.24	939.99	3,821	3,496.72	0.26	-0.07	0.04
39.25	-35.83	-1.18	0.00	-99.42	0.00	99.42	3,733.71	923.88	3,691	3,395.80	0.33	-0.08	0.04
40.00	-33.58	-1.17	0.00	-98.54	0.00	98.54	3,725.77	921.04	3,668	3,378.08	0.34	-0.08	0.04
45.00	-32.45	-1.17	0.00	-92.68	0.00	92.68	2,904.05	763.71	3,026	2,623.51	0.43	-0.09	0.05
50.00	-31.34	-1.16	0.00	-86.84	0.00	86.84	2,867.09	747.92	2,903	2,536.20	0.54	-0.10	0.05
55.00	-30.68	-1.16	0.00	-81.02	0.00	81.02	2,829.16	732.13	2,781	2,449.42	0.65	-0.12	0.04
58.00	-30.23	-1.16	0.00	-77.54	0.00	77.54	2,805.94	722.65	2,710	2,397.65	0.73	-0.12	0.04

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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
60.00	-29.16	-1.15	0.00	-75.22	0.00	75.22	2,790.26	716.34	2,663	2,363.26	0.78	-0.13	0.04
65.00	-28.11	-1.14	0.00	-69.46	0.00	69.46	2,750.38	700.55	2,547	2,277.74	0.92	-0.14	0.04
70.00	-27.07	-1.13	0.00	-63.75	0.00	63.75	2,709.52	684.75	2,433	2,192.94	1.07	-0.15	0.04
75.00	-26.16	-1.12	0.00	-58.10	0.00	58.10	2,667.70	668.96	2,322	2,108.90	1.24	-0.16	0.04
79.50	-25.99	-1.12	0.00	-53.07	0.00	53.07	2,629.22	654.75	2,225	2,033.97	1.39	-0.17	0.04
80.00	-24.60	-1.09	0.00	-52.51	0.00	52.51	2,624.89	653.17	2,214	2,025.69	1.41	-0.17	0.04
84.25	-24.48	-1.09	0.00	-47.88	0.00	47.88	1,926.95	519.63	1,751	1,481.20	1.57	-0.18	0.05
85.00	-23.64	-1.07	0.00	-47.06	0.00	47.06	1,922.92	517.74	1,739	1,472.68	1.60	-0.18	0.04
90.00	-22.82	-1.06	0.00	-41.69	0.00	41.69	1,895.50	505.11	1,655	1,416.02	1.80	-0.20	0.04
95.00	-22.02	-1.04	0.00	-36.41	0.00	36.41	1,867.10	492.47	1,573	1,359.68	2.01	-0.21	0.04
100.00	-21.22	-1.02	0.00	-31.22	0.00	31.22	1,837.72	479.84	1,493	1,303.72	2.24	-0.22	0.04
105.00	-20.76	-1.00	0.00	-26.14	0.00	26.14	1,807.37	467.21	1,416	1,248.19	2.47	-0.23	0.03
108.00	-15.55	-0.82	0.00	-23.13	0.00	23.13	1,788.69	459.63	1,370	1,215.10	2.62	-0.23	0.03
110.00	-14.82	-0.80	0.00	-21.49	0.00	21.49	1,776.05	454.58	1,340	1,193.15	2.72	-0.24	0.03
115.00	-14.11	-0.77	0.00	-17.51	0.00	17.51	1,743.75	441.94	1,267	1,138.65	2.97	-0.25	0.02
120.00	-13.61	-0.75	0.00	-13.66	0.00	13.66	1,710.47	429.31	1,195	1,084.74	3.23	-0.25	0.02
120.00	-13.61	-0.75	0.00	-13.66	0.00	13.66	1,426.70	375.94	1,048	906.62	3.23	-0.25	0.03
124.00	-10.96	-0.63	0.00	-10.67	0.00	10.67	1,406.11	367.10	999	872.37	3.44	-0.26	0.02
125.00	-10.39	-0.60	0.00	-10.04	0.00	10.04	1,400.86	364.89	987	863.85	3.50	-0.26	0.02
130.00	-9.83	-0.57	0.00	-7.03	0.00	7.03	1,374.04	353.84	928	821.46	3.77	-0.26	0.02
135.00	-8.31	-0.49	0.00	-4.16	0.00	4.16	1,346.25	342.79	871	779.53	4.05	-0.27	0.01
137.00	-5.69	-0.35	0.00	-3.18	0.00	3.18	1,334.86	338.37	849	762.89	4.16	-0.27	0.01
140.00	-5.20	-0.32	0.00	-2.12	0.00	2.12	1,317.49	331.74	816	738.09	4.33	-0.27	0.01
145.00	-5.11	-0.32	0.00	-0.51	0.00	0.51	1,287.75	320.69	763	697.20	4.62	-0.27	0.01
146.00	-1.57	-0.10	0.00	-0.20	0.00	0.20	1,281.68	318.48	752	689.10	4.67	-0.27	0.00
148.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,269.43	314.06	731	672.96	4.79	-0.27	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	-31.77	-1.15	0.00	-142.78	0.00	142.78	4,118.22	1,072.63	4,975	4,353.63	0.00	0.00	0.04
5.00	-30.75	-1.15	0.00	-137.03	0.00	137.03	4,072.57	1,053.68	4,801	4,228.77	0.01	-0.01	0.04
10.00	-29.74	-1.16	0.00	-131.26	0.00	131.26	4,025.95	1,034.73	4,630	4,104.63	0.02	-0.02	0.04
15.00	-28.75	-1.16	0.00	-125.47	0.00	125.47	3,978.36	1,015.78	4,462	3,981.27	0.05	-0.03	0.04
20.00	-27.78	-1.16	0.00	-119.66	0.00	119.66	3,929.79	996.83	4,297	3,858.74	0.08	-0.04	0.04
25.00	-26.82	-1.17	0.00	-113.84	0.00	113.84	3,880.25	977.88	4,135	3,737.11	0.13	-0.05	0.04
30.00	-25.78	-1.16	0.00	-108.02	0.00	108.02	3,829.73	958.93	3,976	3,616.41	0.19	-0.06	0.04
35.00	-24.99	-1.16	0.00	-102.19	0.00	102.19	3,778.24	939.99	3,821	3,496.72	0.26	-0.07	0.04
39.25	-24.76	-1.16	0.00	-97.24	0.00	97.24	3,733.71	923.88	3,691	3,395.80	0.32	-0.08	0.04
40.00	-23.21	-1.15	0.00	-96.37	0.00	96.37	3,725.77	921.04	3,668	3,378.08	0.34	-0.08	0.04
45.00	-22.43	-1.15	0.00	-90.60	0.00	90.60	2,904.05	763.71	3,026	2,623.51	0.43	-0.09	0.04
50.00	-21.66	-1.14	0.00	-84.85	0.00	84.85	2,867.09	747.92	2,903	2,536.20	0.53	-0.10	0.04
55.00	-21.20	-1.14	0.00	-79.13	0.00	79.13	2,829.16	732.13	2,781	2,449.42	0.64	-0.11	0.04
58.00	-20.89	-1.14	0.00	-75.70	0.00	75.70	2,805.94	722.65	2,710	2,397.65	0.71	-0.12	0.04
60.00	-20.15	-1.13	0.00	-73.42	0.00	73.42	2,790.26	716.34	2,663	2,363.26	0.76	-0.12	0.04
65.00	-19.42	-1.12	0.00	-67.78	0.00	67.78	2,750.38	700.55	2,547	2,277.74	0.90	-0.14	0.04
70.00	-18.71	-1.11	0.00	-62.18	0.00	62.18	2,709.52	684.75	2,433	2,192.94	1.05	-0.15	0.04
75.00	-18.07	-1.09	0.00	-56.65	0.00	56.65	2,667.70	668.96	2,322	2,108.90	1.21	-0.16	0.03
79.50	-17.96	-1.09	0.00	-51.73	0.00	51.73	2,629.22	654.75	2,225	2,033.97	1.37	-0.17	0.03
80.00	-17.00	-1.07	0.00	-51.19	0.00	51.19	2,624.89	653.17	2,214	2,025.69	1.38	-0.17	0.03
84.25	-16.92	-1.06	0.00	-46.66	0.00	46.66	1,926.95	519.63	1,751	1,481.20	1.54	-0.18	0.04
85.00	-16.34	-1.05	0.00	-45.86	0.00	45.86	1,922.92	517.74	1,739	1,472.68	1.57	-0.18	0.04
90.00	-15.77	-1.03	0.00	-40.62	0.00	40.62	1,895.50	505.11	1,655	1,416.02	1.76	-0.19	0.04
95.00	-15.21	-1.01	0.00	-35.47	0.00	35.47	1,867.10	492.47	1,573	1,359.68	1.97	-0.20	0.03
100.00	-14.67	-0.99	0.00	-30.41	0.00	30.41	1,837.72	479.84	1,493	1,303.72	2.19	-0.21	0.03
105.00	-14.34	-0.98	0.00	-25.47	0.00	25.47	1,807.37	467.21	1,416	1,248.19	2.42	-0.22	0.03
108.00	-10.74	-0.80	0.00	-22.54	0.00	22.54	1,788.69	459.63	1,370	1,215.10	2.56	-0.23	0.03
110.00	-10.24	-0.78	0.00	-20.93	0.00	20.93	1,776.05	454.58	1,340	1,193.15	2.66	-0.23	0.02

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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
115.00	-9.75	-0.75	0.00	-17.06	0.00	17.06	1,743.75	441.94	1,267	1,138.65	2.90	-0.24	0.02
120.00	-9.40	-0.73	0.00	-13.31	0.00	13.31	1,710.47	429.31	1,195	1,084.74	3.16	-0.25	0.02
120.00	-9.40	-0.73	0.00	-13.31	0.00	13.31	1,426.70	375.94	1,048	906.62	3.16	-0.25	0.02
124.00	-7.57	-0.61	0.00	-10.40	0.00	10.40	1,406.11	367.10	999	872.37	3.37	-0.25	0.02
125.00	-7.18	-0.59	0.00	-9.79	0.00	9.79	1,400.86	364.89	987	863.85	3.42	-0.25	0.02
130.00	-6.79	-0.56	0.00	-6.85	0.00	6.85	1,374.04	353.84	928	821.46	3.69	-0.26	0.01
135.00	-5.74	-0.48	0.00	-4.06	0.00	4.06	1,346.25	342.79	871	779.53	3.96	-0.26	0.01
137.00	-3.93	-0.34	0.00	-3.10	0.00	3.10	1,334.86	338.37	849	762.89	4.07	-0.26	0.01
140.00	-3.60	-0.31	0.00	-2.07	0.00	2.07	1,317.49	331.74	816	738.09	4.24	-0.26	0.01
145.00	-3.53	-0.31	0.00	-0.50	0.00	0.50	1,287.75	320.69	763	697.20	4.51	-0.26	0.00
146.00	-1.08	-0.10	0.00	-0.19	0.00	0.19	1,281.68	318.48	752	689.10	4.57	-0.26	0.00
148.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,269.43	314.06	731	672.96	4.68	-0.26	0.00

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ANALYSIS SUMMARY

Load Case	Base Reactions: Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage: Elev (ft)	Interaction Ratio
1.2D + 1.0W	23.63	0.00	45.84	0.00	0.00	2548.61	45.00	0.6
0.9D + 1.0W	23.61	0.00	34.37	0.00	0.00	2514.19	0.00	0.59
1.2D + 1.0Di + 1.0Wi	6.25	0.00	61.24	0.00	0.00	667.14	0.00	0.17
1.2D + 1.0Ev + 1.0Eh	1.18	0.00	45.97	0.00	0.00	145.30	45.00	0.05
0.9D - 1.0Ev + 1.0Eh	1.17	0.00	31.77	0.00	0.00	142.78	45.00	0.04
1.0D + 1.0W	5.28	0.00	38.23	0.00	0.00	565.38	0.00	0.14

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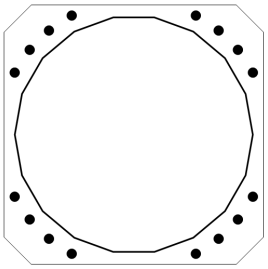
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2548.61	45.84	23.63

PLATE PARAMETERS (ID# 12487)

Width:	57	in
Shape:	Square	
Thickness:	3	in
Grade:	A572-55	
Yield Strength:	55	ksi
Tensile Strength:	70	ksi
Clip Length:	6	in
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	45	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#3280]	Cluster	16	2.25	59	A615-75	75	100	6	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	51.726"ø x 0.375" (18 Sides)	60.1898	-	-	19842.33	-
Bolt Group	Original (16) 2.25"ø	3.9761	3.2477	0.8393	20656.66	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	51.726"ø x 0.375" (18 Sides)	2548.6	45.84	23.63	1.000
Bolt Group	Original (16) 2.25"ø	2548.6	-	23.63	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

						PLATE PROPERTIES		
Flat-to-Flat Diameter:	51.85	in	Flat Width:	9.143	in	Neutral Axis:	45	°
Point-to-Point Diameter:	52.65	in	Flat Radians:	0.349	rad			
Orientation Offset:	-	°						

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$
Flats	28.759	0.00	64.708	836.7	3203.1	26.1%
Corners	27.959	0.00	62.908	620.8	3114.0	19.9%

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	16	2.25	121.1	2.5	243.6	51.8%

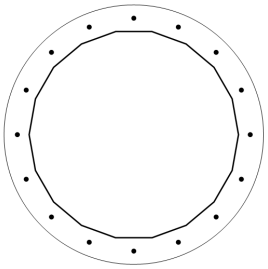
UPPER FLANGE PLATE ANALYSIS @ 120 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
210.99	12.81	11.81

PLATE PARAMETERS (ID# 2524)

Width:	39	in
Shape:	Round	
Thickness:	1	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	225	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#3281]	Radial	16	0.75	35	A325	92	120	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	31.0794"ø x 0.2187" (18 Sides)	21.0959	-	-	2511.75	-
Bolt Group	Original (16) 0.75"ø	0.4418	0.3345	0.0089	776.26	10.0

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	31.0794"ø x 0.2187" (18 Sides)	211.0	12.81	11.81	1.000
Bolt Group	Original (16) 0.75"ø	211.0	-	11.81	1.000

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 120 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	31.20	in	Flat Width:	5.502	in	Neutral Axis:	225	°
Point-to-Point Diameter:	31.69	in	Flat Radians:	0.349	rad	Bend Line Limits:	4.839 to 6.156	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$
Flats	18.374	0.00	4.593	32.5	206.7	15.7%
Corners	17.531	0.00	4.383	23.0	197.2	11.7%
Circumferential	28.020	0.00	7.005	65.7	315.2	20.9%

PLASTIC FLANGE BOLT ANALYSIS

Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	16	0.75	16.4	1.2	30.1	60.0%

EXHIBIT 4

Colliers Engineering & Design,
Architecture, Landscape Architecture,
Surveying, CT P.C.
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Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10221515
Colliers Engineering & Design Project #: 21777855 (Rev 1)

February 6, 2024

Site Information	*Site ID:*	*5000120820-VZW / COLUMBIA SOUTH CT*
	Site Name:	*COLUMBIA SOUTH CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*330 Middletown Road* *Columbia, Connecticut 06237* *Tolland County*
	Latitude:	*41.68986389°*
	Longitude:	*-72.32518611°*
Structure Information	*Tower Type:*	*Monopole*
	Mount Type:	*14.50-Ft Platform*

FUZE ID # 16067472

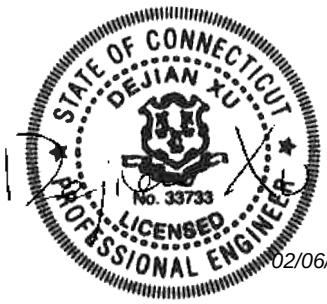
Analysis Results

Platform: **56.9% Pass w/ Modifications***

***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

Report Prepared By: Vincent DiGirolamo



02/06/2024

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 674865* *Dated September 19, 2023*
Mount Mapping Report	*RKS Design & Engineering, LLC Site ID: ATC: 302528* *Dated November 8, 2021*
Failing Mount Analysis	*Colliers Engineering & Design Project #: 21777855, Rev 1* *Dated January 23, 2024*
Mount Modification Drawings	*Colliers Engineering & Design Project #: 21777855, Rev 1* *Dated February 6, 2024*

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:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.977
Seismic Parameters:	S_S:	0.195 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
133.30	135.00	6	Commscope	NHH-65B-R2B	Added
		3	Samsung	MT6413-77A	
		3	Samsung	RF4461d-13A	
		3	Samsung	RF4439d-25A	
		2	RFS	DB-B1-6C-12AB-0Z	
		6	Amphenol Antel	LPA-80063-4CF-EDIN-0	Retained

The recent mount mapping did not report existing OVP units. However, 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.

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 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 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 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:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	*16.0*	*Pass*
Standoff Horizontal	*38.6*	*Pass*
Corner Plate	*22.5*	*Pass*
Platform Crossmember	*17.1*	*Pass*
Grating Support	*17.6*	*Pass*
Mount Pipe	*50.8*	*Pass*
Support Rail	*18.3*	*Pass*
Support Rail Corner	*39.1*	*Pass*
Cross Arm Plate	*34.2*	*Pass*
Mount Connection	*56.9*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**56.9%**

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Standoff	133.3	N3	2074	2994	5.646	1.363	2586	941	5.429	0.364
Sector C Standoff	133.3	N87	2024	2779	5.303	1.251	2423	795	5.264	0.342
Sector B Standoff	133.3	N124	2072	2980	5.666	1.381	2587	889	5.485	0.434

Notes:
- Axial loads act along the axis of the tower
- Lateral reactions act perpendicular to the tower
- Moment loads introduce bending moment to the tower
- Torsion loads introduce twisting moment to the tower
- Batch solutions by individual load cases are included at the end of this document

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	26.1	26.1	39.8	39.8
0.5	34.6	34.6	54.1	54.1
1	42.2	42.2	67.4	67.4

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mount will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

---

MDG #: 5000120820 SMART Project #: 10221515 Fuze Project ID: 16067472

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor 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 modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- If installation of the modification 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 drawings" showing contractor's name, 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 post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is 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 of the modifications.
  - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to modification.
  - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation of modifications. Each entire sector must 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.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
    - If the materials are as specified on the drawings
        - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
        - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
    - If seeking permission to use an equivalent
        - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

☐ All hardware has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings 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.

Antenna & Equipment Placement and Geometry Confirmation:

☐ 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.

Comments:

Was the mount modification completed in conjunction with the equipment change / installation?

☐ Yes ☐ No

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Contractor shall install one proposed OVP per proposed OVP pipe, 12” from top of OVP pipe.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

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

Comments:

Certifying Individual:

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

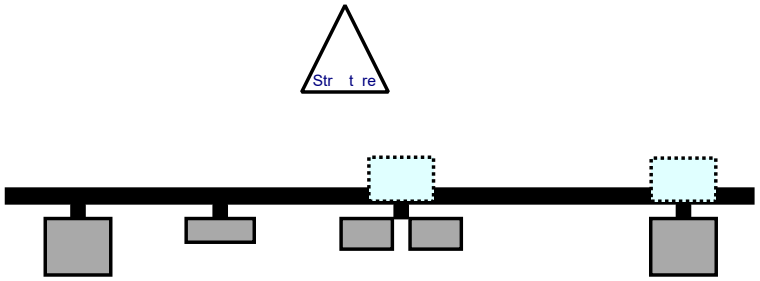
Structure: 5000120820-VZW - COLUMBIA SOUTH CT

Se tor: **A** 2/5/2024

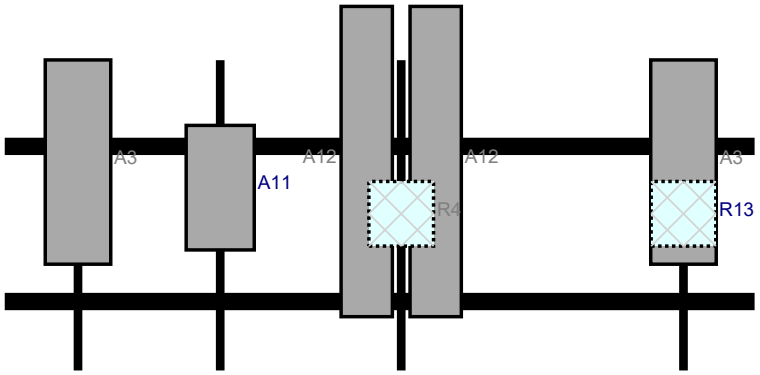
Str t re Type: Mo opole 10221515

Mo t Elev: 133.30 P ge: 1

Plan View



Front View - Loo i g t Str t re



4 3 2 1

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
A3	LPA-80063-4CF-EDIN-0	47.4	15.2	157.5	1		Fro t	23.64	0	Ret i ed	11/08/2021
R13	RF4439d-25A	15	15	157.5	1		Behi d	35.64	0	No e	
A12	NHH-65B-R2B	72	11.9	92	2		Fro t	23.52	8	No e	
A12	NHH-65B-R2B	72	11.9	92	2		Fro t	23.52	-8	No e	
R4	RF4461d-13A	15	15	92	2		Behi d	35.64	0	Added	
A11	MT6413-77A	28.9	15.8	50	3		Fro t	29.58	0	No e	
A3	LPA-80063-4CF-EDIN-0	47.4	15.2	17	4		Fro t	23.64	0	Ret i ed	11/08/2021
OVP1	DB-B1-6C-12AB-0Z	29.5	16.5		Me er					Added	
OVP2	DB-B1-6C-12AB-0Z	29.5	16.5		Me er					Added	

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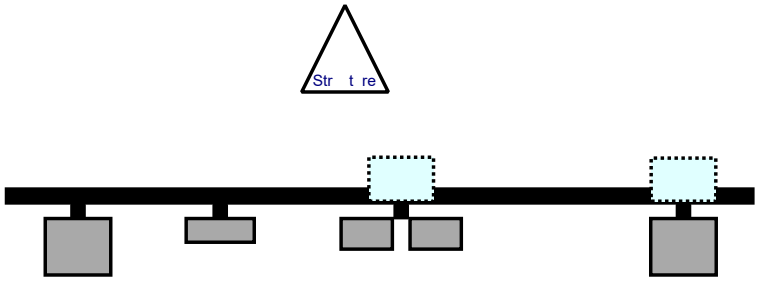
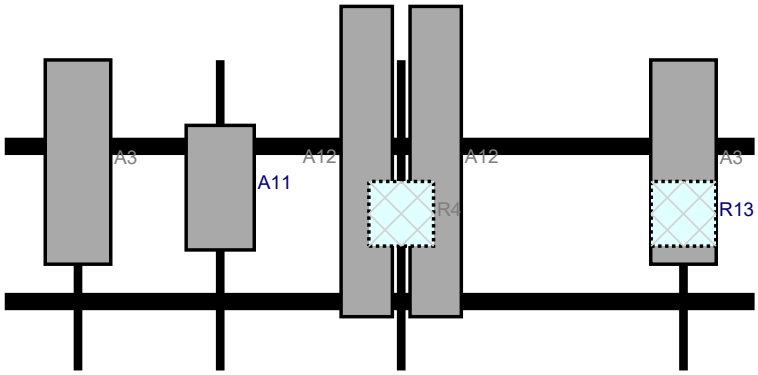
Plan View



Front View - Loo i g t Str t re



4 3 2 1

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
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R13	RF4439d-25A	15	15	157.5	1		Behi d	35.64	0	No e	
A12	NHH-65B-R2B	72	11.9	92	2		Fro t	23.52	8	No e	
A12	NHH-65B-R2B	72	11.9	92	2		Fro t	23.52	-8	No e	
R4	RF4461d-13A	15	15	92	2		Behi d	35.64	0	Added	
A11	MT6413-77A	28.9	15.8	50	3		Fro t	29.58	0	No e	
A3	LPA-80063-4CF-EDIN-0	47.4	15.2	17	4		Fro t	23.64	0	Ret i ed	11/08/2021

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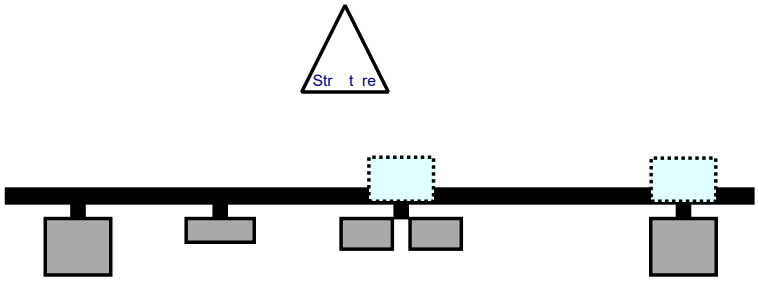
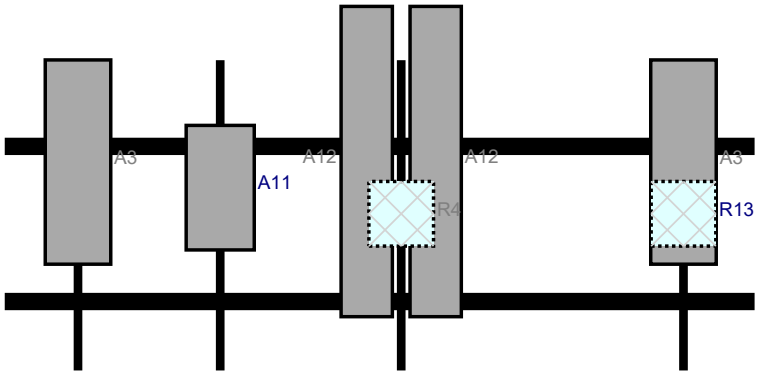
Plan View



Front View - Loo i g t Str t re



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A3	LPA-80063-4CF-EDIN-0	47.4	15.2	17	4		Fro t	23.64	0	Ret i ed	11/08/2021

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MOUNT MODIFICATION DRAWINGS
EXISTING 14.50' PLATFORM

TOWER OWNER: AMERICAN TOWER CO.
TOWER OWNER SITE NUMBER: 302528

CARRIER SITE NAME: COLUMBIA SOUTH CT
CARRIER SITE NUMBER: 5000120820
FUZE ID: 16067472

330 MIDDLETOWN ROAD
COLUMBIA, CT 06237
TOLLAND COUNTY

LATITUDE: 41.68986389° N
LONGITUDE: 72.32518611° W

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DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 631.9'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .195
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856.797.0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10221515
VZW MDG #: 5000120820
ANALYSIS DATE: 2/6/2024

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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JOB NUMBER: 21777855

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	2/6/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	12/1/21	ISSUED FOR CONSTRUCTION	AE	DH

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C.T. JPC.0000131

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COLUMBIA SOUTH CT
5000120820

330 MIDDLETOWN ROAD
COLUMBIA, CT 06237
TOLLAND COUNTY

Colliers Engineering & Design
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
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SHEET TITLE: TITLE SHEET

SHEET NUMBER: ST-1

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Last Saved By: VRAMOS on 2/6/2024 - 10:50:21 AM
File Name: C:\Users\vramos\Desktop\Projects\2021\21777855A\21777855A_CurrentSite.rvt

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
2	VZWSMART	VZWSMART-MSK6	BACK TO BACK CROSSOVER PLATE		34	68
1		VZWSMART-PLK1	SUPPORT RAIL KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	504	504
2		VZWSMART-P40-238X048	48" LONG, PIPE 2 SCH40 (2.375"OD X 0.154" THK)		15	30

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
-	-		1/2" U-BOLTS	-	-	

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISON	PV-CLAMP-LW-0106	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	602

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

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GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

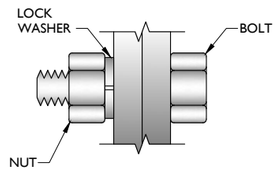
1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

BOLT SCHEDULE (IN.)				
BOLT DIAMETER	**STANDARD HOLE**	**SHORT SLOT**	**MIN. EDGE DISTANCE**	**SPACING**
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

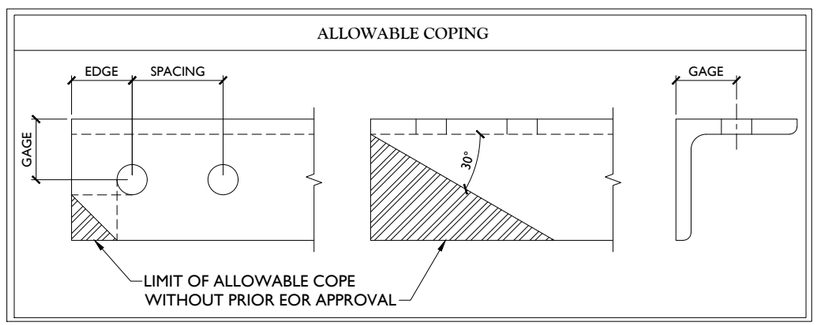
WORKABLE GAGES (IN.)	
LEG	**GAGE**
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



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SHEET TITLE: GENERAL NOTES

SHEET NUMBER: SGN-1

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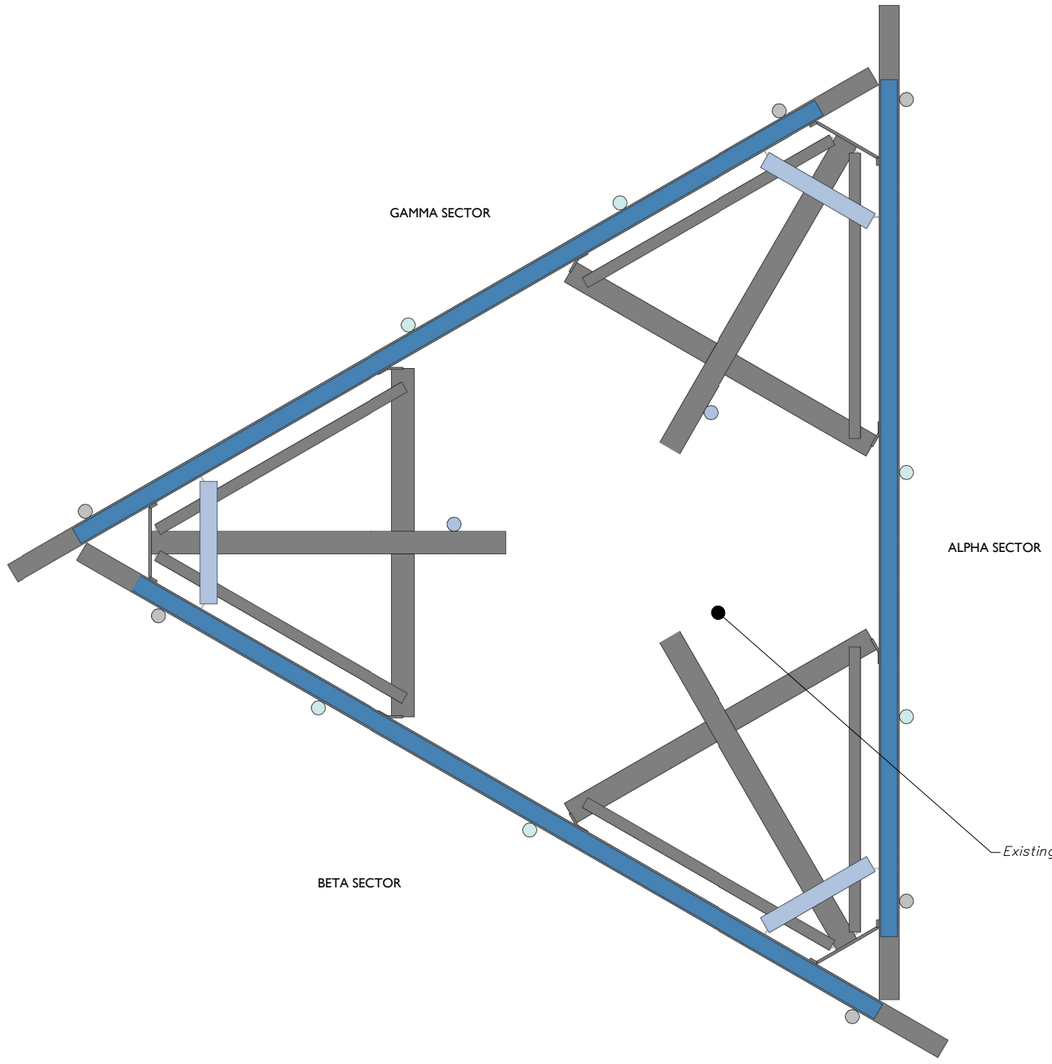


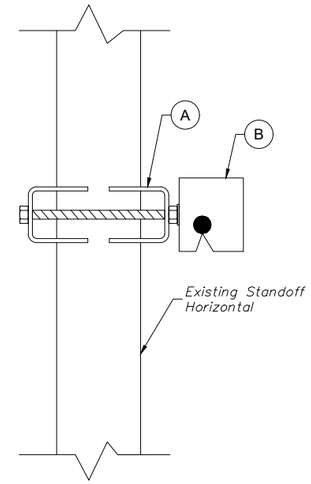
1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 11/8/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (133'-4") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



ITEM #	QTY	PART NUMBER	DESCRIPTIONS
A	1	PV-CLAMP-LW-0106	CLAMP BRACKET (PERFECT VISION OR EOR APPROVED EQ.)
B	1	PV-CMX-CG-SM	WIRE ROPE GUIDE (PERFECT VISION OR EOR APPROVED EQ.)

2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW

SCALE : N.T.S.

NOTE: CONTRACTOR SHALL ENSURE THAT WIRE ROPE GUIDE DOES NOT PUSH THE WIRE ROPE OUTSIDE OF THE VERTICAL PLANE OF THE SAFETY CLIMB. CONTRACT EOR WITH PHOTOS OF SAFETY CLIMB AND COLLAR FOR FURTHER DIRECTION IF NEEDED.

CLIMBING FACILITY PHOTO

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SHEET TITLE :
CLIMBING FACILITY DETAIL

SHEET NUMBER :
SCF-1

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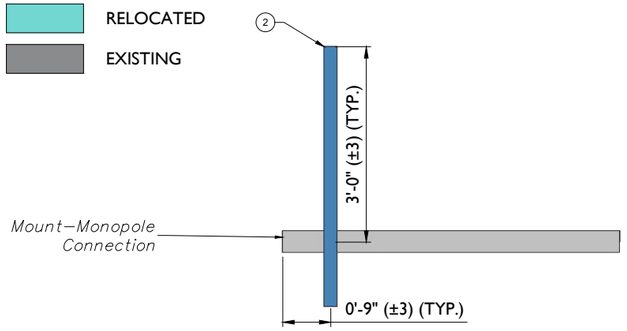
Plotted By: Vincent.Rinaldi@colliersengineering.com 2/6/2024 8:28:36 AM
J:\projects\Columbia\Projects\2021\21777001\A\21777B\SA\Construction\Rev 1\05021B3B3V_11X17.dwg

LEGEND:

PROPOSED

RELOCATED

EXISTING



MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	133'-4"	1	PROPOSED SUPPORT RAIL KIT (PART #: VZWSMART-PLK1)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN.
2		2	PROPOSED 48" LONG, PIPE 2 SCH40 (PART #: VZWSMART-P40-238X048)	CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH BACK TO BACK CROSSOVER PLATE (VZWSMART-MSK6) ON STANDOFF ARMS BETWEEN BETA AND GAMMA & ALPHA AND GAMMA.
3		6	RELOCATED MOUNT PIPE	CONTRACTOR SHALL CONNECT RELOCATED MOUNT PIPE TO EXISTING FACE HORIZONTAL AND SUPPORT RAIL WITH EXISTING CROSSOVER PLATES AND NEW BOLTING HARDWARE. DO NOT REUSE EXISTING BOLTS.

GENERAL NOTES:

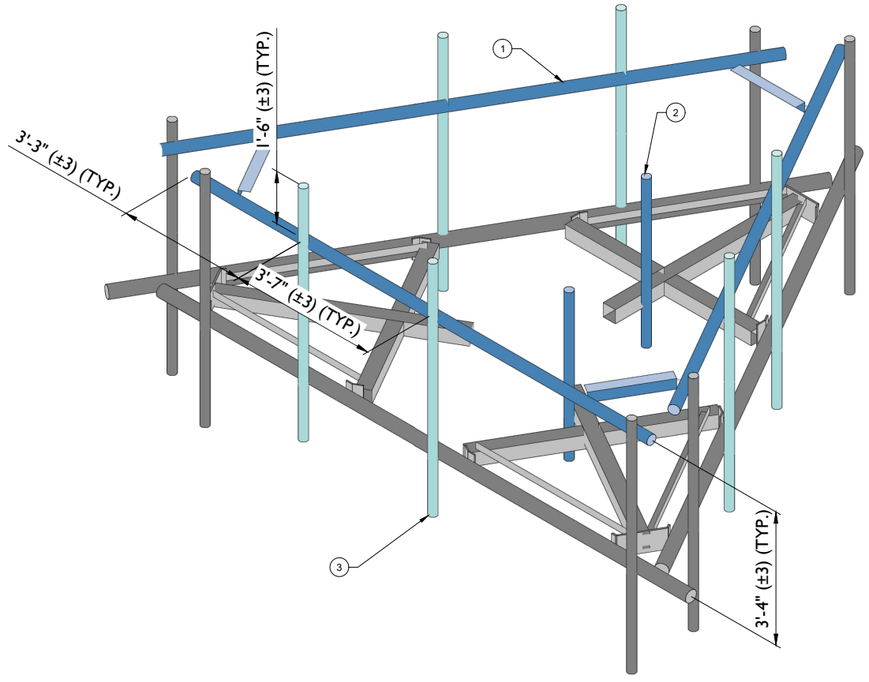
A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR

B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).

C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.

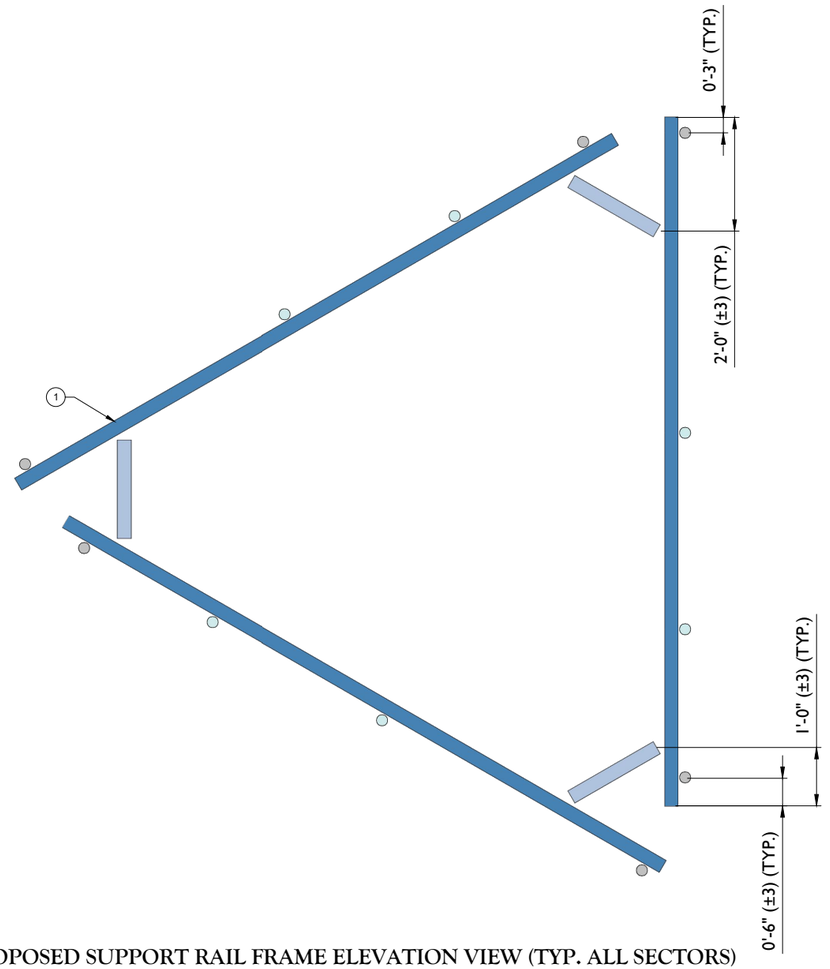
1 PROPOSED SIDE ELEVATION VIEW

SCALE : N.T.S.



2 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



3 PROPOSED SUPPORT RAIL FRAME ELEVATION VIEW (TYP. ALL SECTORS)

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SHEET NUMBER :

SS-1

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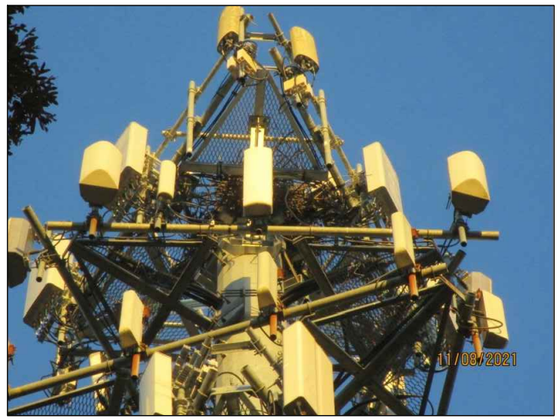
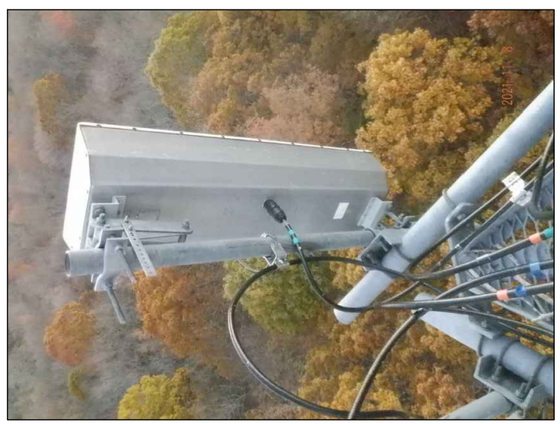


MOUNT PHOTO 1

MOUNT PHOTO 2



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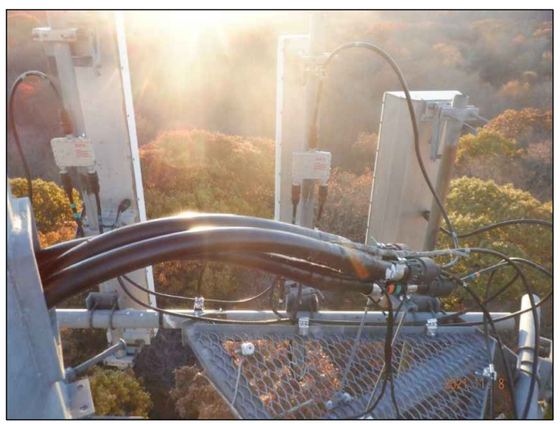

MOUNT PHOTO 4

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SHEET NUMBER : SS-2

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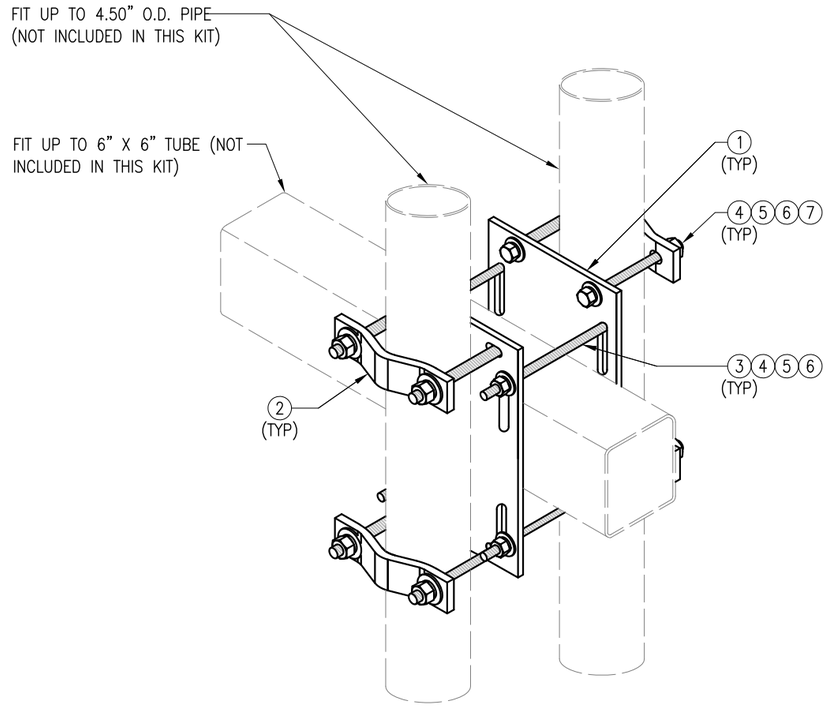
Plotted By: VDUBEK2,MD Date/Time: Jun 07, 2024 - 8:39:31am Drawing Name: C:\Users\vdubek2\Desktop\21777855A Columbia South CT\Construction\Rev 1\5000120820_1606747_MOD\MD-Mount.dwg



ISOMETRIC VIEW
BACK TO BACK CROSSOVER

VZWSMART-MSK6 (VZWSMART-MSK6 - BACK TO BACK CROSSOVER)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	PL375-8512	PL 3/8" X 8 1/2" X 1'-0" A36	MSK6-F2	20.7
2	4	VCP	PL 1/2" X 2" X 8 5/8" A36 BENT PLATE	MSK6-F1	9.6
3	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	---
4	16	NUT-625	5/8" HDG HEX NUT	---	2
5	16	FW-625	5/8" HDG USS FLAT WASHER	---	1
6	16	LW-625	5/8" HDG LOCK WASHER	---	0
7	8	---	BOLT 5/8" X 6" SAE GRADE 5 ALL THREAD	---	1
				GALVANIZED WT	34

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

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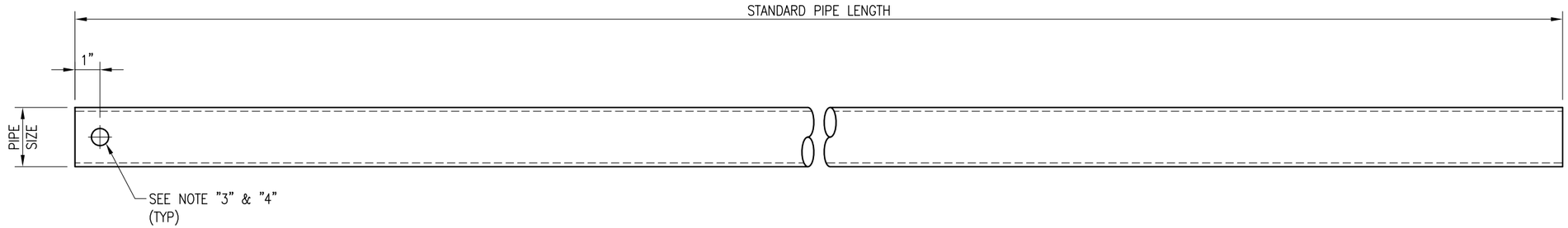
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	SK	05/08/20

SHEET TITLE:
VZWSMART-MSK6
BACK TO BACK
CROSSOVER

SHEET NUMBER: VZWSMART-MSK6

REV #: 0



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U.N.O
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

VzW SMART Tool© Vendor

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REV.	DESCRIPTION	BY	DATE
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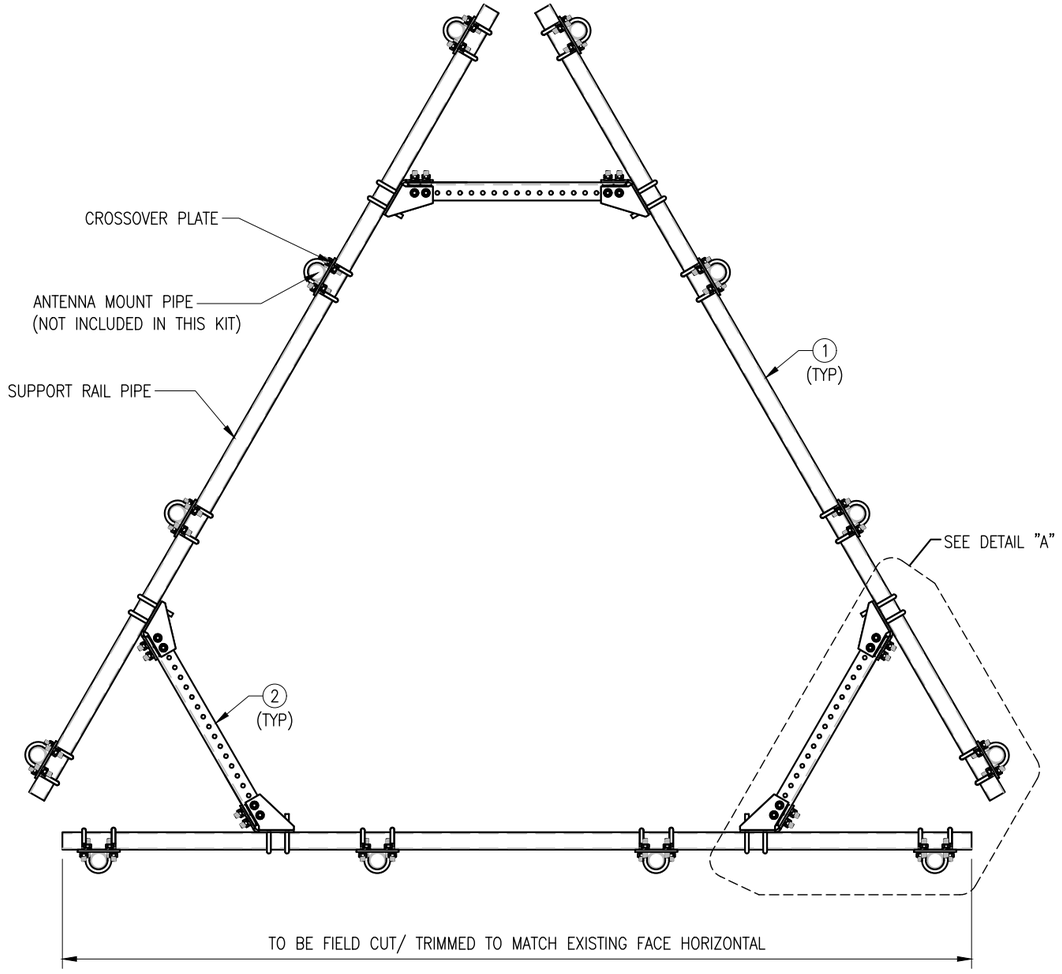
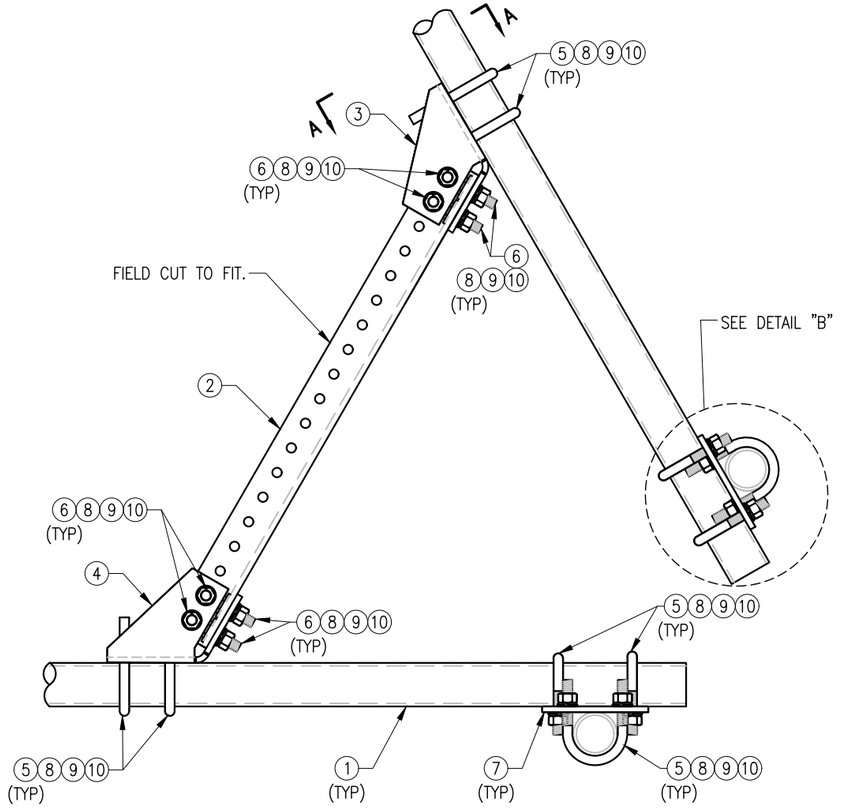
SHEET TITLE:
VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE

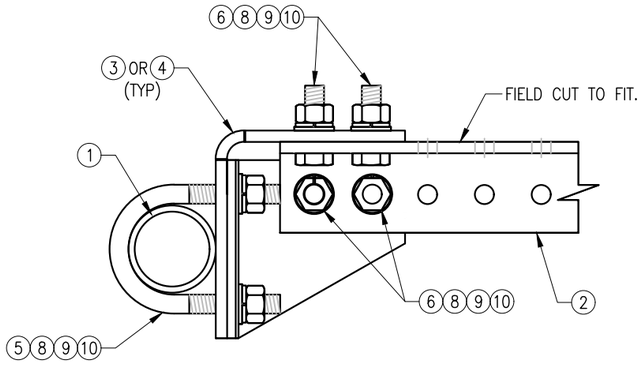
REV #: 0



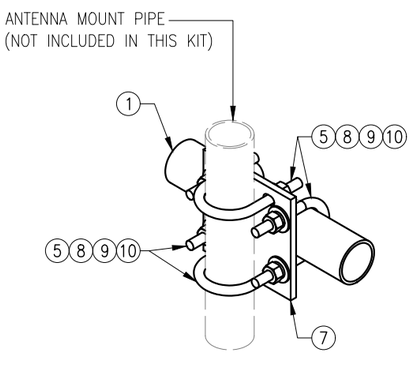
PLAN VIEW



DETAIL "A"



SECTION "A–A"



DETAIL "B"

NOTES:
1. HOT–DIPPED GALVANIZED PER ASTM A123.

VZW SMART–PLK1 (SUPPORT RAIL KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	PST2875–12.5	2.5" PST (2.875" O.D. X 0.203" THK.) X 12'–6" A53 GR–B	PLK1–F1	292
2	3	L33375–3	L 3" X 3" X 3/8" X 3'–0" A36	PLK1–F1	66
3	3	CBP–L	CORNER BENT PLATE BRACKET	PLK1–F2	28
4	3	CBP–R	CORNER BENT PLATE BRACKET	PLK1–F2	28
5	60	MS02–625–300–500	RU–BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC–1	82
6	24	---	BOLT 5/8" X 2" A325	---	9
7	12	PL375–857	PL 3/8" X 8 1/2" X 7'–0" A36	PLK1–F3	77
8	144	FW–625	5/8" HDG USS FLAT WASHER	---	12
9	144	LW–625	5/8" HDG LOCK WASHER	---	3
10	144	NUT–625	5/8" HDG HEX NUT	---	17
				GALVANIZED WT	504

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART–PLK1
SUPPORT RAIL KIT

SHEET NUMBER: VZWSMART–PLK1

REV #: 0

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #: UNKNOWN

Tower Owner:	ATC	**Mapping Date:**	11/8/2021
Site Name:	ATC: Columbia Central; VZW: NE Columbia South	**Tower Type:**	Monopole
Site Number or ID:	ATC: 302528	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	**Mount Elevation (Ft.):**	133.3

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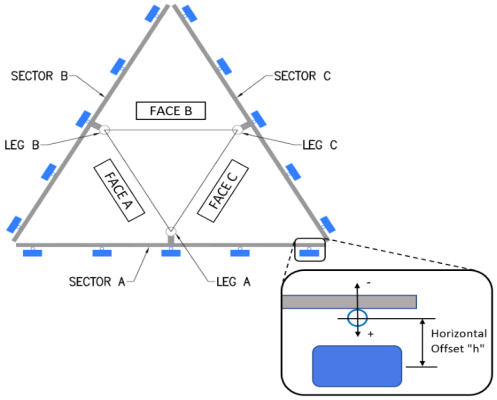
Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

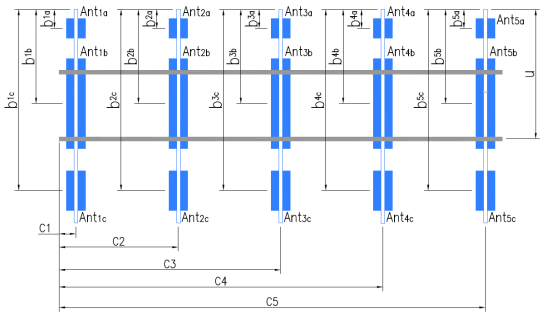
Mount Pipe Configuration and Geometries [Unit = Inches]

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	PIPE 2.4"Ø X 0.16" X 72" LONG	44.50	21.00	C1	PIPE 2.4"Ø X 0.16" X 72" LONG	44.50	21.00
A2	PIPE 2.4"Ø X 0.16" X 72" LONG	57.75	87.75	C2	PIPE 2.4"Ø X 0.16" X 72" LONG	57.75	87.75
A3	PIPE 2.4"Ø X 0.16" X 72" LONG	55.50	134.50	C3	PIPE 2.4"Ø X 0.16" X 72" LONG	55.50	134.50
A4	PIPE 2.4"Ø X 0.16" X 72" LONG	44.00	158.75	C4	PIPE 2.4"Ø X 0.16" X 72" LONG	44.00	158.75
A5				C5			
A6				C6			
B1	PIPE 2.4"Ø X 0.16" X 96" LONG	44.50	21.00	D1			
B2	PIPE 2.4"Ø X 0.16" X 72" LONG	57.75	87.75	D2			
B3	PIPE 2.4"Ø X 0.16" X 72" LONG	55.50	134.50	D3			
B4	PIPE 2.4"Ø X 0.16" X 72" LONG	44.00	158.75	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.) :	6.2
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	
Please enter additional infomation or comments below.	

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	27.8
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			0.375





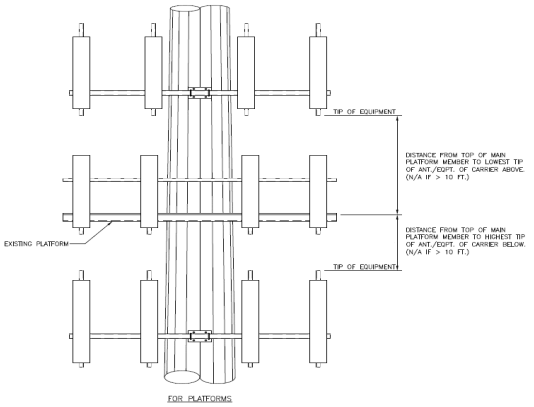
Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.425	31.00	12.00	30.00	37, 146
Ant_{1c}										
Ant_{2a}	FD9R6004/2C-3L	6.50	1.50	6.00		135.988	25.50	-2.50		147
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	5.00	71.00		135.321	33.50	13.00	30.00	37, 147
Ant_{2c}										
Ant_{3a}	FD9R6004/2C-3L	6.50	1.50	6.00		136.133	21.50	-2.50		148
Ant_{3b}	BXA-171063-8BF-EDIN	6.00	4.00	48.50		135.383	30.50	9.00	30.00	37, 148
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.383	31.00	12.00	30.00	37, 148
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

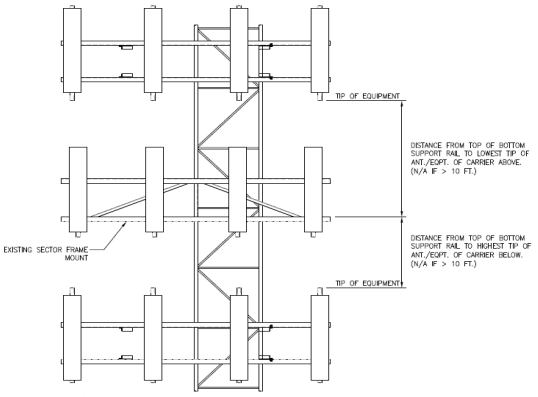
Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	30.00	Deg	Leg A:		Deg
Sector B:	150.00	Deg	Leg B:		Deg
Sector C:	270.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	60.00 Deg	N/A
Climbing Facility	Corrosion Type:	N/A
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.

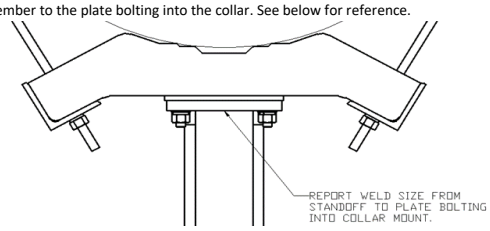
Please insert a photo of the mount centerline measurement here.



FOR PLATFORMS



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}										
Ant_{1b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.425	31.00	12.00	150.00	43, 149
Ant_{1c}										
Ant_{2a}	FD9R6004/2C-3L	6.50	1.50	6.00		135.988	25.50	-2.50		150
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	5.00	71.00		135.321	33.50	13.00	150.00	43, 150
Ant_{2c}										
Ant_{3a}	FD9R6004/2C-3L	6.50	1.50	6.00		136.133	21.50	-2.50		150
Ant_{3b}	BXA-171063-8BF-EDIN	6.00	4.00	48.50		135.383	30.50	9.00	150.00	43, 150
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.383	31.00	12.00	150.00	43, 150
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.425	31.00	12.00	270.00	52, 151
Ant_{1c}										
Ant_{2a}	FD9R6004/2C-3L	6.50	1.50	6.00		135.988	25.50	-2.50		152
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	5.00	71.00		135.321	33.50	13.00	270.00	52, 152
Ant_{2c}										
Ant_{3a}	FD9R6004/2C-3L	6.50	1.50	6.00		136.133	21.50	-2.50		152
Ant_{3b}	BXA-171063-8BF-EDIN	6.00	4.00	48.50		135.383	30.50	9.00	270.00	52, 152
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80063-4CF-EDIN	15.00	13.00	47.50		134.383	31.00	12.00	270.00	52, 152
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1	COAX TOTAL (12): (12) FH 1-5/8	
2	SEC-A, A3 Pipe Tilted	280, 281
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	
Lighting Technology:		Photo #			
Elevation (AGL) at base of light (Ft.):		Photo #			
Is a service loop available?		Photo #			
Is beacon installed on an extension?		Photo #			

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.

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
UNKNOWN

Tower Owner:	ATC	**Mapping Date:**	11/8/2021
Site Name:	ATC: Columbia Central; VZW: NE Columbia South	**Tower Type:**	Monopole
Site Number or ID:	ATC: 302528	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	**Mount Elevation (Ft.):**	133.3

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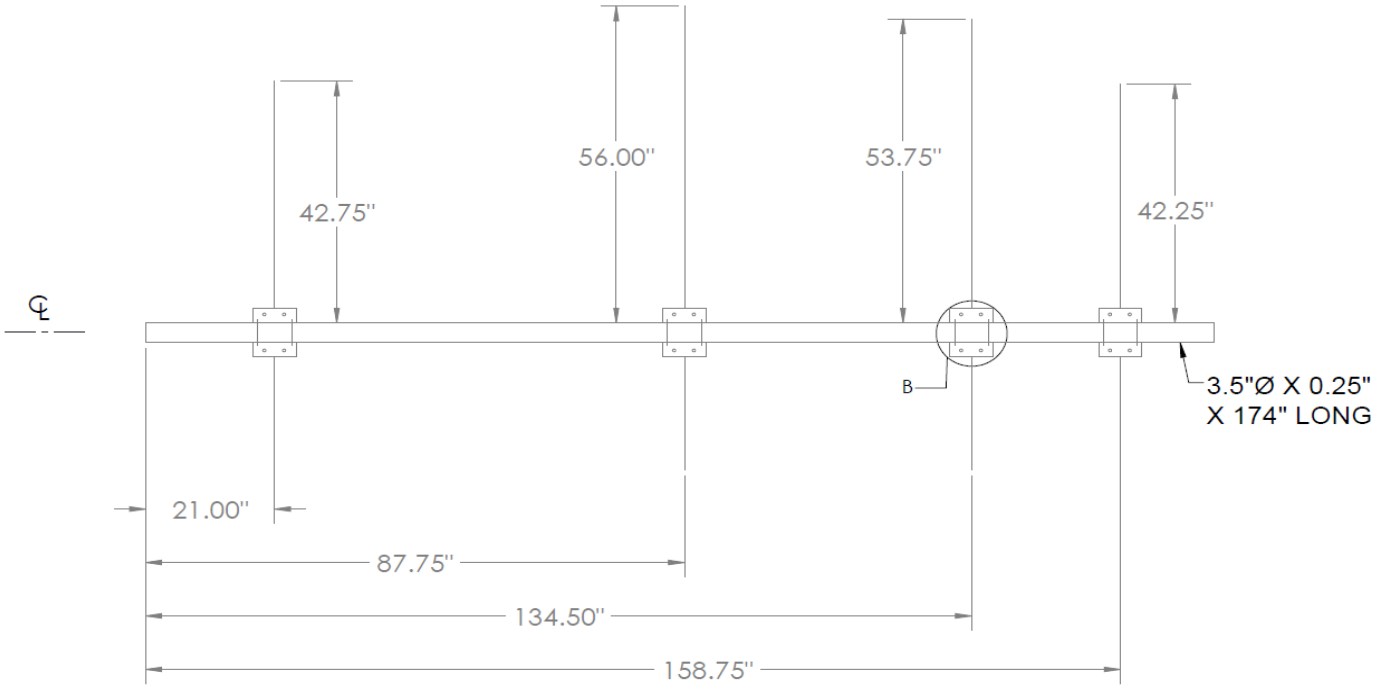
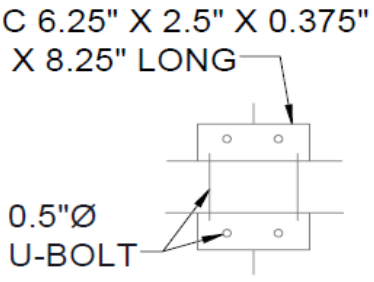
Please Insert Sketches of the Antenna Mount

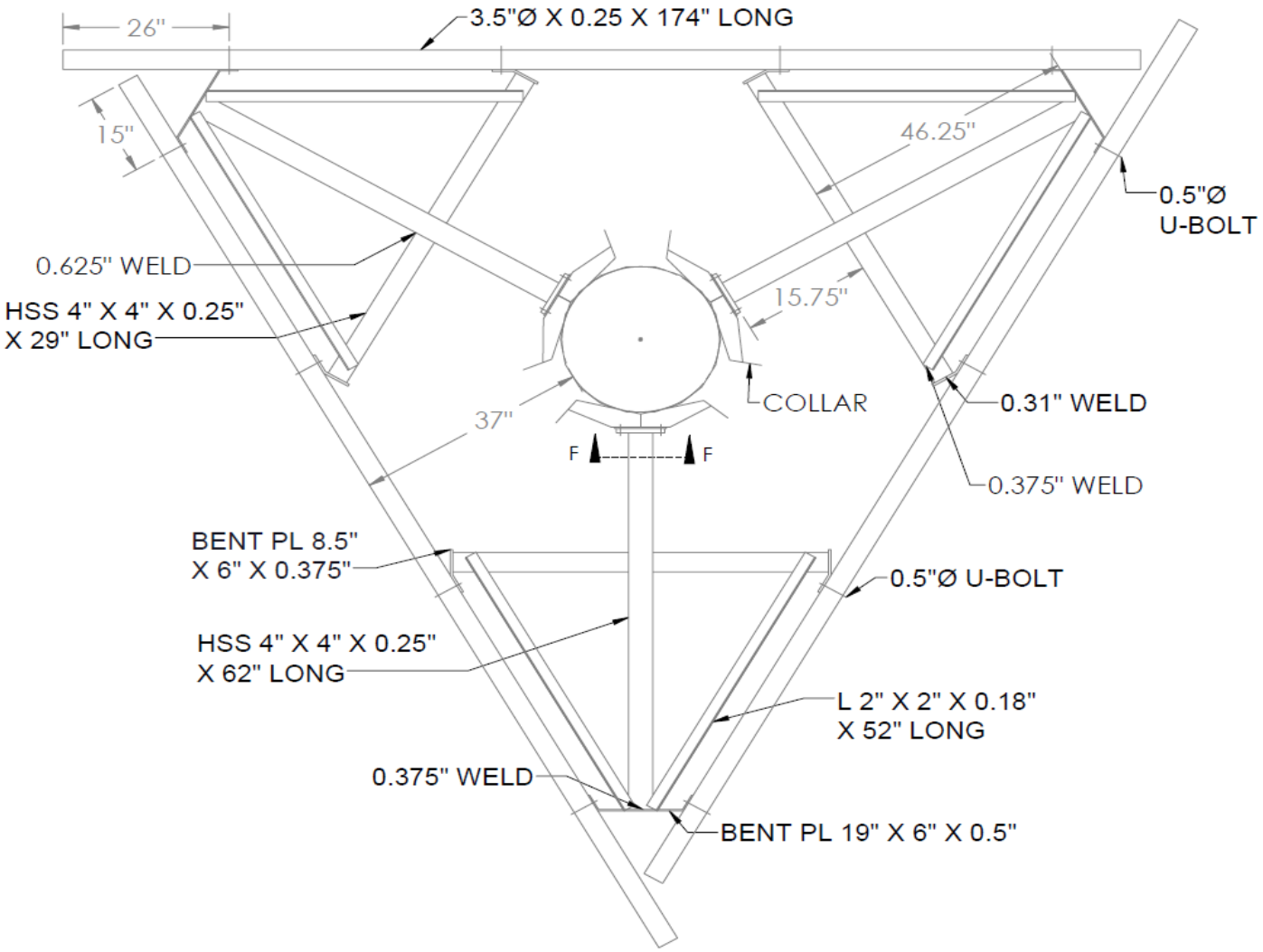


SECTOR A,B,C

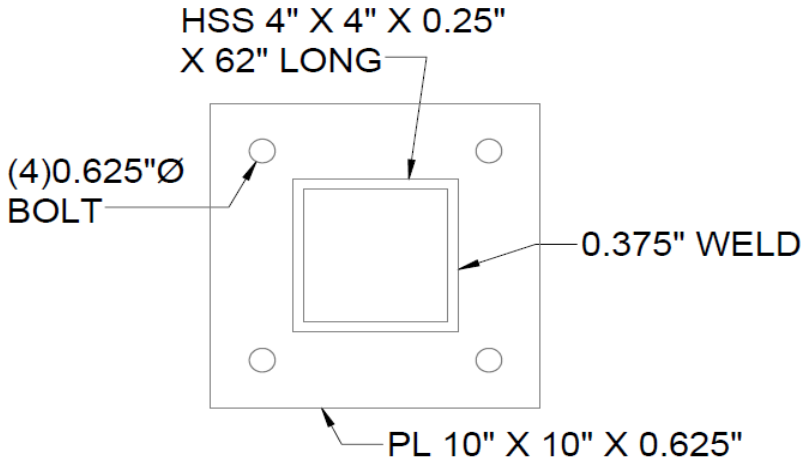


DETAIL B

Please Insert Sketches of the Antenna Mount, cont'd



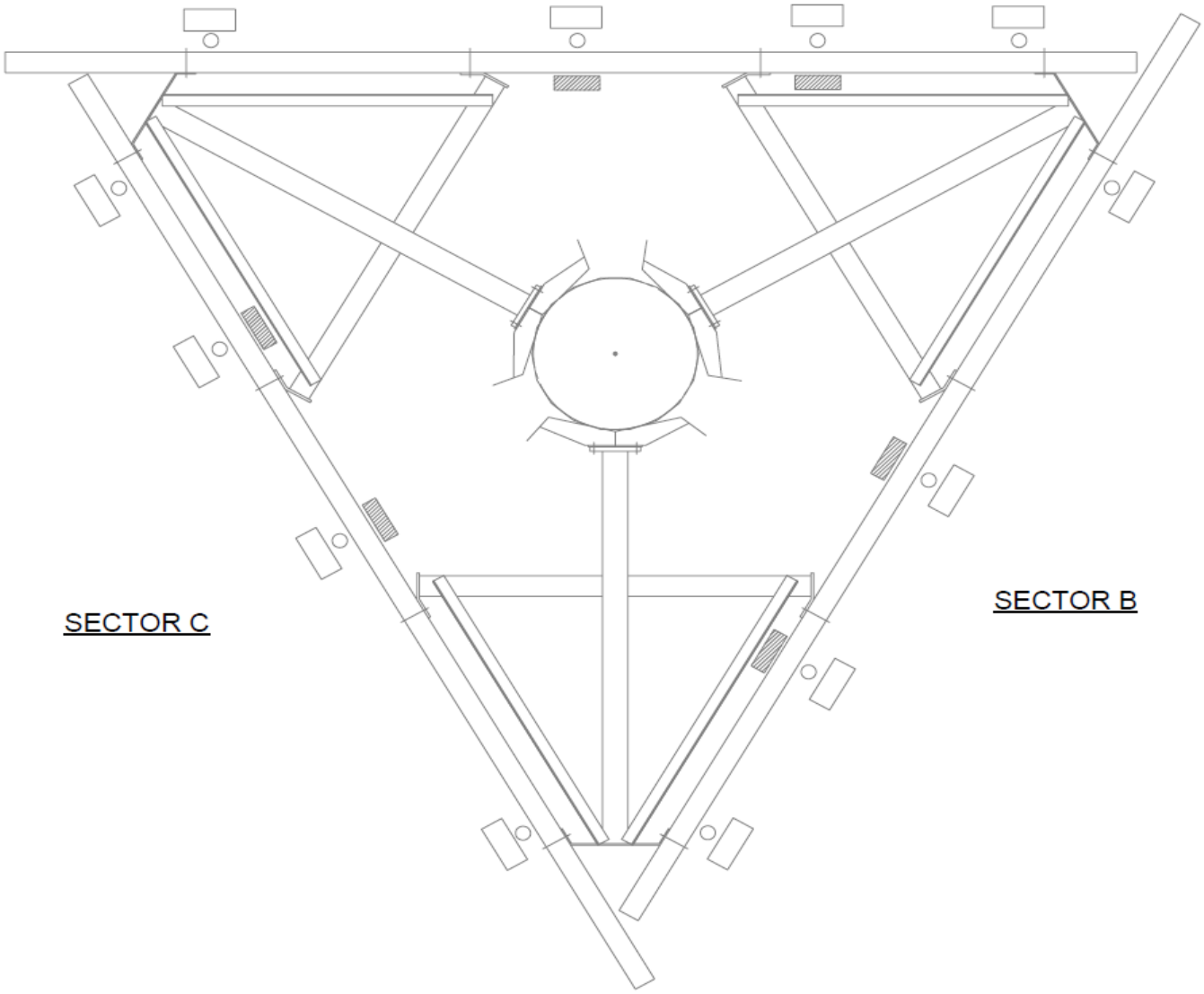
MOUNT PLAN VIEW



SECTION F-F

Please Insert Sketches of the Antenna Mount, cont'd

SECTOR A

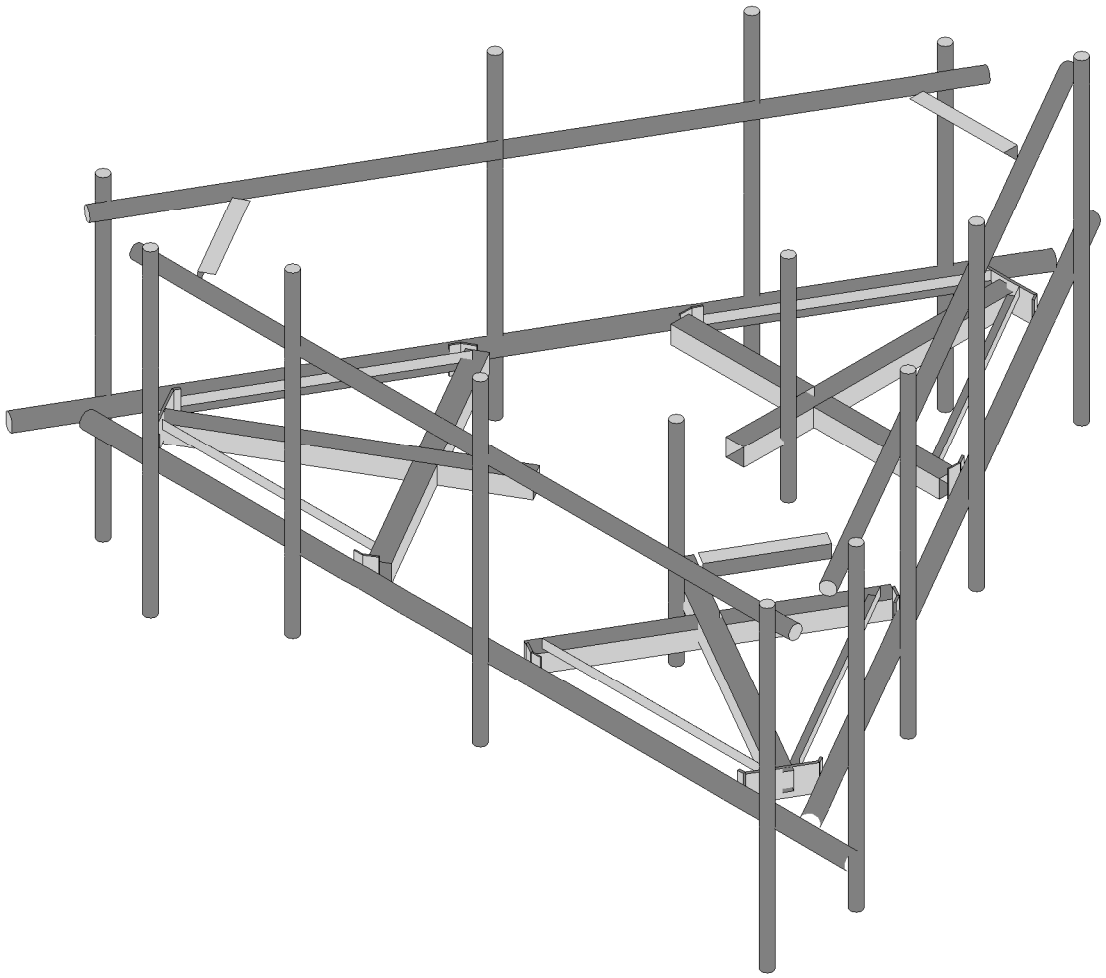


SECTOR C

SECTOR B

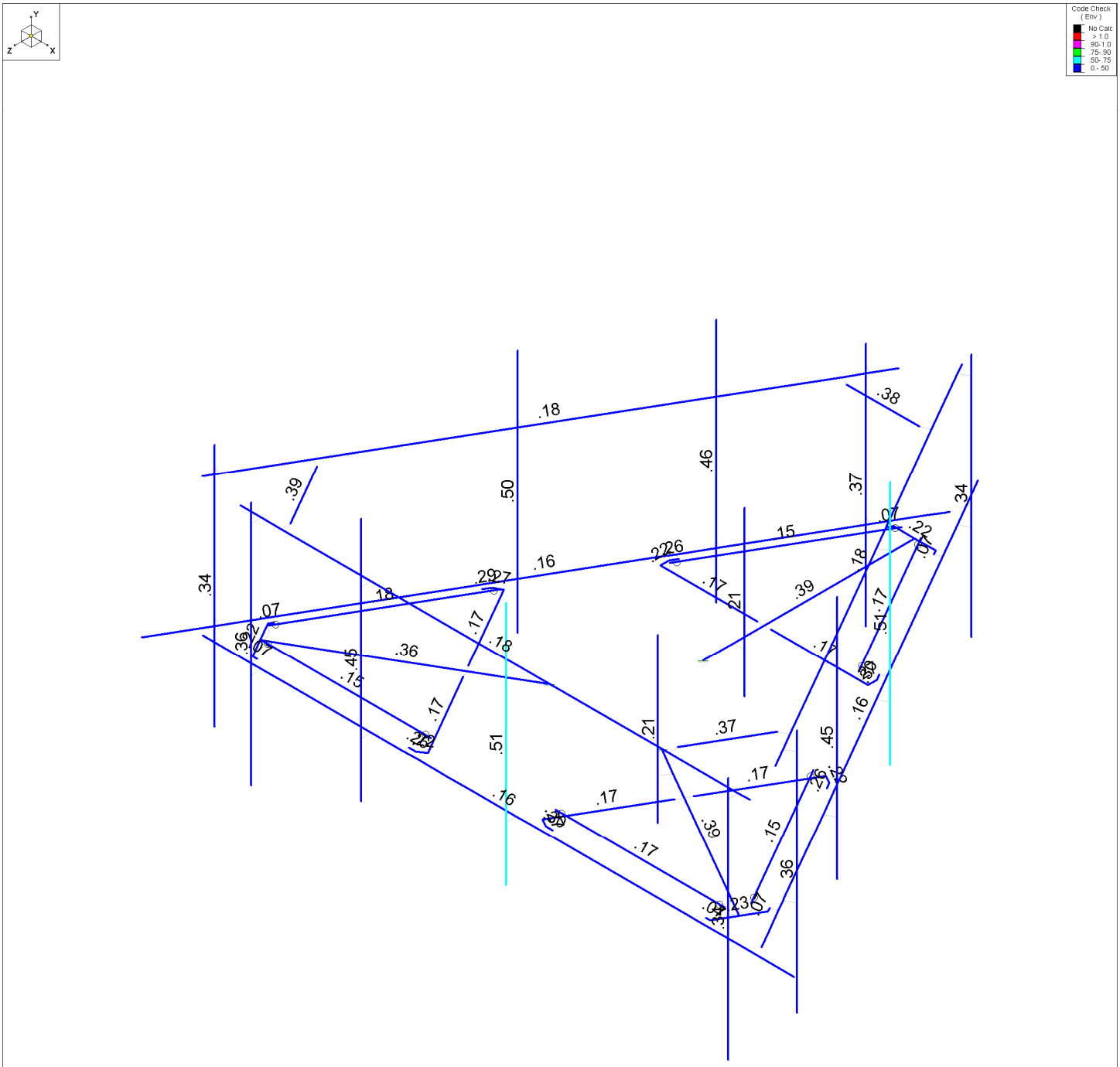
ANTENNA PLAN VIEW

Please Insert Sketches of the Antenna Mount, cont'd



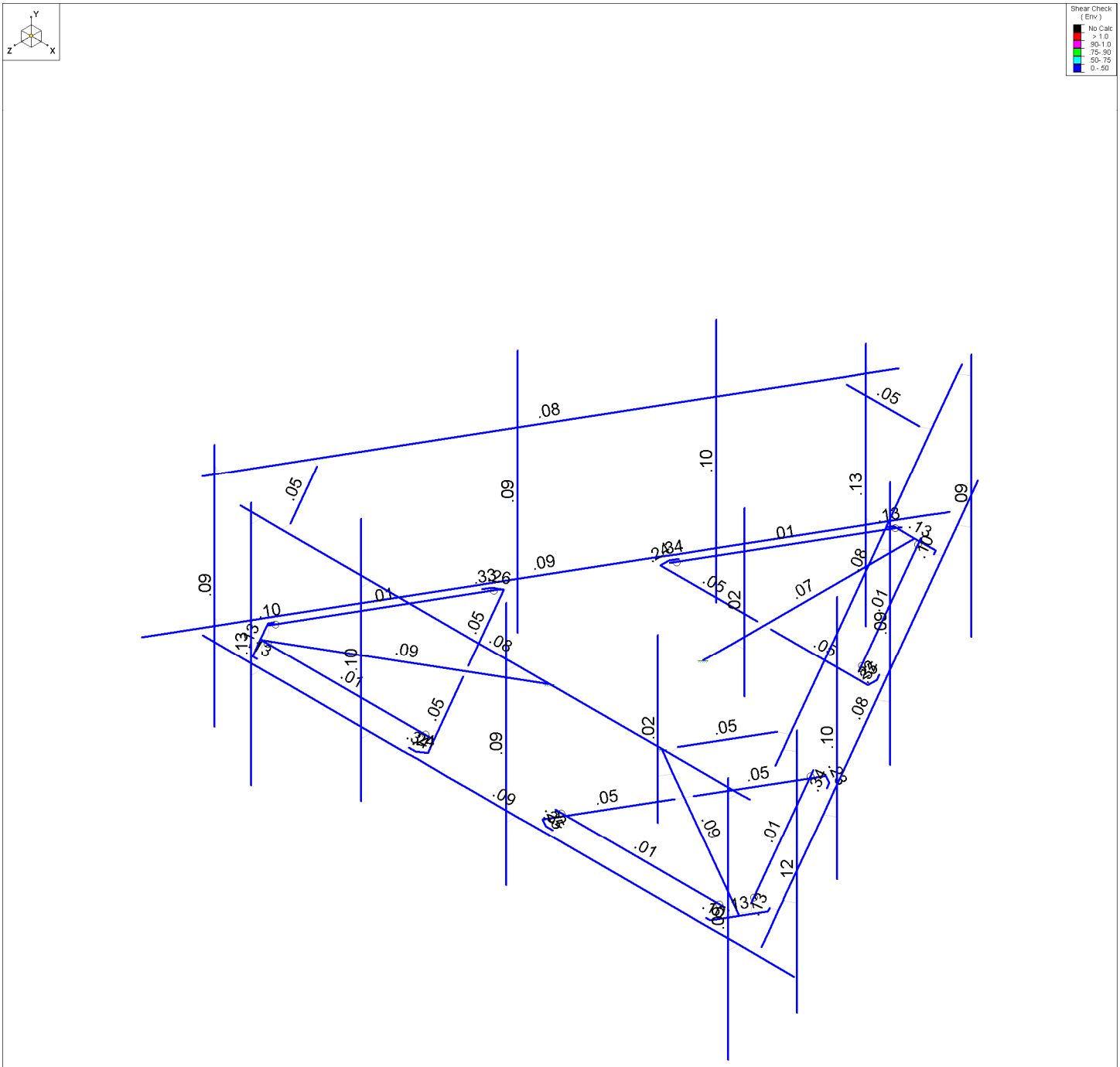
Envelope Only Solution

	Rendered Model	SK - 1
		Feb 5, 2024 at 10:40 AM
		5000120820-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		Feb 5, 2024 at 10:40 AM
	Bending Check	5000120820-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		Feb 5, 2024 at 10:40 AM
	Shear Check	5000120820-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					114			
2	Antenna Di	None					114			
3	Antenna Wo (0 Deg)	None					114			
4	Antenna Wo (30 Deg)	None					114			
5	Antenna Wo (60 Deg)	None					114			
6	Antenna Wo (90 Deg)	None					114			
7	Antenna Wo (120 Deg)	None					114			
8	Antenna Wo (150 Deg)	None					114			
9	Antenna Wo (180 Deg)	None					114			
10	Antenna Wo (210 Deg)	None					114			
11	Antenna Wo (240 Deg)	None					114			
12	Antenna Wo (270 Deg)	None					114			
13	Antenna Wo (300 Deg)	None					114			
14	Antenna Wo (330 Deg)	None					114			
15	Antenna Wi (0 Deg)	None					114			
16	Antenna Wi (30 Deg)	None					114			
17	Antenna Wi (60 Deg)	None					114			
18	Antenna Wi (90 Deg)	None					114			
19	Antenna Wi (120 Deg)	None					114			
20	Antenna Wi (150 Deg)	None					114			
21	Antenna Wi (180 Deg)	None					114			
22	Antenna Wi (210 Deg)	None					114			
23	Antenna Wi (240 Deg)	None					114			
24	Antenna Wi (270 Deg)	None					114			
25	Antenna Wi (300 Deg)	None					114			
26	Antenna Wi (330 Deg)	None					114			
27	Antenna Wm (0 Deg)	None					114			
28	Antenna Wm (30 Deg)	None					114			
29	Antenna Wm (60 Deg)	None					114			
30	Antenna Wm (90 Deg)	None					114			
31	Antenna Wm (120 Deg)	None					114			
32	Antenna Wm (150 Deg)	None					114			
33	Antenna Wm (180 Deg)	None					114			
34	Antenna Wm (210 Deg)	None					114			
35	Antenna Wm (240 Deg)	None					114			
36	Antenna Wm (270 Deg)	None					114			
37	Antenna Wm (300 Deg)	None					114			
38	Antenna Wm (330 Deg)	None					114			
39	Structure D	None		-1					3	
40	Structure Di	None						59	3	
41	Structure Wo (0 Deg)	None						118		
42	Structure Wo (30 Deg)	None						118		
43	Structure Wo (60 Deg)	None						118		
44	Structure Wo (90 Deg)	None						118		
45	Structure Wo (120 D...	None						118		
46	Structure Wo (150 D...	None						118		
47	Structure Wo (180 D...	None						118		
48	Structure Wo (210 D...	None						118		
49	Structure Wo (240 D...	None						118		
50	Structure Wo (270 D...	None						118		
51	Structure Wo (300 D...	None						118		
52	Structure Wo (330 D...	None						118		
53	Structure Wi (0 Deg)	None						118		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
54	Structure Wi (30 Deg)	None						118		
55	Structure Wi (60 Deg)	None						118		
56	Structure Wi (90 Deg)	None						118		
57	Structure Wi (120 De...	None						118		
58	Structure Wi (150 De...	None						118		
59	Structure Wi (180 De...	None						118		
60	Structure Wi (210 De...	None						118		
61	Structure Wi (240 De...	None						118		
62	Structure Wi (270 De...	None						118		
63	Structure Wi (300 De...	None						118		
64	Structure Wi (330 De...	None						118		
65	Structure Wm (0 Deg)	None						118		
66	Structure Wm (30 De...	None						118		
67	Structure Wm (60 De...	None						118		
68	Structure Wm (90 De...	None						118		
69	Structure Wm (120 D...	None						118		
70	Structure Wm (150 D...	None						118		
71	Structure Wm (180 D...	None						118		
72	Structure Wm (210 D...	None						118		
73	Structure Wm (240 D...	None						118		
74	Structure Wm (270 D...	None						118		
75	Structure Wm (300 D...	None						118		
76	Structure Wm (330 D...	None						118		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					114			
82	Antenna Eh (0 Deg)	None					76			
83	Antenna Eh (90 Deg)	None					76			
84	Structure Ev	ELY		-.042					3	
85	Structure Eh (0 Deg)	ELZ			-.104				3	
86	Structure Eh (90 Deg)	ELX	.104						3	
87	BLC 39 Transient Are...	None						30		
88	BLC 40 Transient Are...	None						30		
89	BLC 84 Transient Are...	None						30		
90	BLC 85 Transient Are...	None						30		
91	BLC 86 Transient Are...	None						30		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	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 (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	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 (0 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		E...	1	E...					
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	E...	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	E...	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	E...		E...	1				
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	E...	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	E...	-.8...	E...	.5				
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		E...	-1	E...					
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	E...	-.8...	E...	-.5				
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	E...	-.5	E...	-.8...				
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	E...		E...	-1				
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	E...	.5	E...	-.8...				
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	E...	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		E...	1	E...					
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	E...	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	E...	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	E...		E...	1				
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	E...	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	E...	-.8...	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		E...	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	E...	-.8...	E...	-.5				

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	E...	-.5	E...	-.8...				
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	E...		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	E...	.5	E...	-.8...				
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	E...	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff Horizontal	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
3	Corner Plate	PL1/2x6	Beam	BAR	A36 Gr.36	Typical	3	.063	9	.237
4	Platform Crossmem...	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	Grating Support	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
6	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Dual Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	Support Rail	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
9	Support Rail Corner	L3X3X4	Column	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
10	Cross Arm Plate	PL3/8x6	Column	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	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	N2	N1			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M4	N3	N27			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
3	M10	N101	N103A			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
4	M19	N8	N9			RIGID	None	None	RIGID	Typical
5	M20	N10	N11			RIGID	None	None	RIGID	Typical
6	M21	N12	N13			RIGID	None	None	RIGID	Typical
7	M22	N14	MCL=133.3			RIGID	None	None	RIGID	Typical
8	MP3A	N17	N16			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
9	MP4A	N19	N18			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
10	MP2A	N21	N20			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
11	MP1A	N23	N22			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
12	M43	N102	N5			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
13	M46	N86C	N87A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
14	M35A	N7	N30			RIGID	None	None	RIGID	Typical
15	M36A	N6	N29			RIGID	None	None	RIGID	Typical
16	M51B	N87C	N6			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
17	M52B	N7	N87B			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
18	M52	N87B	N88C			RIGID	None	None	RIGID	Typical
19	M58	N102	N24			RIGID	None	None	RIGID	Typical
20	M59	N24	N103A			RIGID	None	None	RIGID	Typical
21	M76	N101	N105			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
22	M77	N105	N131			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
23	M79	N131	N86A			RIGID	None	None	RIGID	Typical
24	M80	N87A	N135			Corner Plate	Beam	BAR	A36 Gr.36	Typical
25	M83	N135	N86D			RIGID	None	None	RIGID	Typical
26	M84	N5	N104A			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
27	M85	N104A	N144			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
28	M88	N144	N86B			RIGID	None	None	RIGID	Typical
29	M91	N86C	N148			Corner Plate	Beam	BAR	A36 Gr.36	Typical
30	M92	N148	N86E			RIGID	None	None	RIGID	Typical
31	M50	N88C	N88A			RIGID	None	None	RIGID	Typical
32	M51	N88A	N86G			RIGID	None	None	RIGID	Typical
33	M51A	N87C	N86G			RIGID	None	None	RIGID	Typical
34	M44	N87	N92			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
35	M45	N96	N98			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
36	M46A	N97	N88			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
37	M47	N107	N108			Corner Plate	Beam	BAR	A36 Gr.36	Typical
38	M48	N90	N95		240	RIGID	None	None	RIGID	Typical
39	M49	N89	N183B		240	RIGID	None	None	RIGID	Typical
40	M50A	N112	N89			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
41	M51C	N90	N114			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
42	M52A	N114	N115		240	RIGID	None	None	RIGID	Typical
43	M53	N97	N91			RIGID	None	None	RIGID	Typical
44	M54	N91	N98			RIGID	None	None	RIGID	Typical
45	M55	N96	N100			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
46	M56	N100	N101A			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
47	M57	N101A	N105B			RIGID	None	None	RIGID	Typical
48	M58A	N108	N102A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
49	M59A	N102A	N109A			RIGID	None	None	RIGID	Typical
50	M60	N88	N99			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
51	M61	N99	N103			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
52	M62	N103	N106			RIGID	None	None	RIGID	Typical
53	M63	N107	N104			Corner Plate	Beam	BAR	A36 Gr.36	Typical
54	M64	N104	N110			RIGID	None	None	RIGID	Typical
55	M65	N115	N111			RIGID	None	None	RIGID	Typical
56	M66	N111	N113			RIGID	None	None	RIGID	Typical
57	M67	N112	N113		240	RIGID	None	None	RIGID	Typical
58	M71	N124	N129			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
59	M72	N133	N135A			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
60	M73	N134	N125			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
61	M74	N144A	N145			Corner Plate	Beam	BAR	A36 Gr.36	Typical
62	M75	N127	N132A		120	RIGID	None	None	RIGID	Typical
63	M76A	N126	N131A		120	RIGID	None	None	RIGID	Typical
64	M77A	N149	N126			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
65	M78	N127	N151			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
66	M79A	N151	N152		120	RIGID	None	None	RIGID	Typical
67	M80A	N134	N128			RIGID	None	None	RIGID	Typical
68	M81	N128	N135A			RIGID	None	None	RIGID	Typical
69	M82	N133	N137			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
70	M83A	N137	N138			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
71	M84A	N138	N142			RIGID	None	None	RIGID	Typical
72	M85A	N145	N139			Corner Plate	Beam	BAR	A36 Gr.36	Typical
73	M86	N139	N146			RIGID	None	None	RIGID	Typical
74	M87	N125	N136A			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
75	M88A	N136A	N140			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
76	M89	N140	N143A			RIGID	None	None	RIGID	Typical
77	M90	N144A	N141			Corner Plate	Beam	BAR	A36 Gr.36	Typical
78	M91A	N141	N147			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
79	M92A	N152	N148A			RIGID	None	None	RIGID	Typical
80	M93	N148A	N150			RIGID	None	None	RIGID	Typical
81	M94	N149	N150		120	RIGID	None	None	RIGID	Typical
82	M98	N187A	N186A			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
83	M99A	N190	N189			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
84	M84B	N125A	N126A			RIGID	None	None	RIGID	Typical
85	M85B	N127A	N128A			RIGID	None	None	RIGID	Typical
86	MP4C	N136B	N135B		240	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
87	MP1C	N140A	N139A		240	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
88	M92B	N145A	N146A			RIGID	None	None	RIGID	Typical
89	M93A	N147A	N148B			RIGID	None	None	RIGID	Typical
90	MP4B	N156	N155		120	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
91	MP1B	N160	N159		120	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
92	M92C	N151A	N152A			RIGID	None	None	RIGID	Typical
93	M93B	N153	N154			RIGID	None	None	RIGID	Typical
94	MP3C	N156A	N155A		240	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
95	MP2C	N158	N157		240	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
96	M96	N162A	N163B			RIGID	None	None	RIGID	Typical
97	M97A	N164	N165A			RIGID	None	None	RIGID	Typical
98	MP3B	N167A	N166A		120	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
99	MP2B	N169	N168A		120	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
100	M100	N175	N176			RIGID	None	None	RIGID	Typical
101	OVP1	N178A	N177			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
102	M102	N180	N181			RIGID	None	None	RIGID	Typical
103	OVP2	N183	N182		120	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
104	M104	N187B	N188			RIGID	None	None	RIGID	Typical
105	M105	N189A	N190A			RIGID	None	None	RIGID	Typical
106	M106	N191	N192			RIGID	None	None	RIGID	Typical
107	M107	N193	N194			RIGID	None	None	RIGID	Typical
108	M108	N186	N185			Support Rail	Column	Pipe	A53 Gr.B	Typical
109	M109	N197	N196			Support Rail	Column	Pipe	A53 Gr.B	Typical
110	M110	N200	N199			Support Rail	Column	Pipe	A53 Gr.B	Typical
111	M111	N200A	N205A			RIGID	None	None	RIGID	Typical
112	M112	N199A	N207			RIGID	None	None	RIGID	Typical
113	M113	N203	N210A			RIGID	None	None	RIGID	Typical
114	M114	N202	N211			RIGID	None	None	RIGID	Typical
115	M115	N206	N215			RIGID	None	None	RIGID	Typical
116	M116	N205	N216			RIGID	None	None	RIGID	Typical
117	M117	N207	N215		90	Support Rail C...	Column	Single Angle	A36 Gr.36	Typical
118	M118	N211	N205A		90	Support Rail C...	Column	Single Angle	A36 Gr.36	Typical
119	M119	N216	N210A		90	Support Rail C...	Column	Single Angle	A36 Gr.36	Typical
120	M120	N214	N215A			RIGID	None	None	RIGID	Typical
121	M121	N216A	N217			RIGID	None	None	RIGID	Typical
122	M122	N218	N219			RIGID	None	None	RIGID	Typical
123	M123	N220	N221			RIGID	None	None	RIGID	Typical
124	M124	N225	N226			RIGID	None	None	RIGID	Typical
125	M125	N227	N228A			RIGID	None	None	RIGID	Typical
126	M126	N229A	N230A			RIGID	None	None	RIGID	Typical
127	M127	N231	N232			RIGID	None	None	RIGID	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	M4						Yes				None
3	M10						Yes	Default			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...
4	M19						Yes	** NA **			None
5	M20						Yes	** NA **			None
6	M21						Yes	** NA **			None
7	M22						Yes	** NA **			None
8	MP3A						Yes	** NA **			None
9	MP4A						Yes	** NA **			None
10	MP2A						Yes	** NA **			None
11	MP1A						Yes	** NA **			None
12	M43						Yes	Default			None
13	M46						Yes	Default			None
14	M35A						Yes	** NA **			None
15	M36A						Yes	** NA **			None
16	M51B	OOOOOX	OOOOOX				Yes	Default			None
17	M52B	OOOOOX	OOOOOX				Yes	Default			None
18	M52						Yes	** NA **			None
19	M58						Yes	** NA **			None
20	M59						Yes	** NA **			None
21	M76						Yes	** NA **			None
22	M77						Yes	** NA **			None
23	M79		BenPIN				Yes	** NA **			None
24	M80						Yes				None
25	M83		BenPIN				Yes	** NA **			None
26	M84						Yes	** NA **			None
27	M85						Yes	** NA **			None
28	M88		BenPIN				Yes	** NA **			None
29	M91						Yes				None
30	M92		BenPIN				Yes	** NA **			None
31	M50						Yes	** NA **			None
32	M51						Yes	** NA **			None
33	M51A						Yes	** NA **			None
34	M44						Yes				None
35	M45						Yes	Default			None
36	M46A						Yes	Default			None
37	M47						Yes	Default			None
38	M48						Yes	** NA **			None
39	M49						Yes	** NA **			None
40	M50A	OOOOOX	OOOOOX				Yes	Default			None
41	M51C	OOOOOX	OOOOOX				Yes	Default			None
42	M52A						Yes	** NA **			None
43	M53						Yes	** NA **			None
44	M54						Yes	** NA **			None
45	M55						Yes	** NA **			None
46	M56						Yes	** NA **			None
47	M57		BenPIN				Yes	** NA **			None
48	M58A						Yes				None
49	M59A		BenPIN				Yes	** NA **			None
50	M60						Yes	** NA **			None
51	M61						Yes	** NA **			None
52	M62		BenPIN				Yes	** NA **			None
53	M63						Yes				None
54	M64		BenPIN				Yes	** NA **			None
55	M65						Yes	** NA **			None
56	M66						Yes	** NA **			None
57	M67						Yes	** NA **			None
58	M71						Yes				None
59	M72						Yes	Default			None
60	M73						Yes	Default			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...
61	M74						Yes	Default			None
62	M75						Yes	** NA **			None
63	M76A						Yes	** NA **			None
64	M77A	OOOOOX	OOOOOX				Yes	Default			None
65	M78	OOOOOX	OOOOOX				Yes	Default			None
66	M79A						Yes	** NA **			None
67	M80A						Yes	** NA **			None
68	M81						Yes	** NA **			None
69	M82						Yes	** NA **			None
70	M83A						Yes	** NA **			None
71	M84A		BenPIN				Yes	** NA **			None
72	M85A						Yes				None
73	M86		BenPIN				Yes	** NA **			None
74	M87						Yes	** NA **			None
75	M88A						Yes	** NA **			None
76	M89		BenPIN				Yes	** NA **			None
77	M90						Yes				None
78	M91A		BenPIN				Yes	** NA **			None
79	M92A						Yes	** NA **			None
80	M93						Yes	** NA **			None
81	M94						Yes	** NA **			None
82	M98						Yes	Default			None
83	M99A						Yes	Default			None
84	M84B						Yes	** NA **			None
85	M85B						Yes	** NA **			None
86	MP4C						Yes	** NA **			None
87	MP1C						Yes	** NA **			None
88	M92B						Yes	** NA **			None
89	M93A						Yes	** NA **			None
90	MP4B						Yes	** NA **			None
91	MP1B						Yes	** NA **			None
92	M92C						Yes	** NA **			None
93	M93B						Yes	** NA **			None
94	MP3C						Yes	** NA **			None
95	MP2C						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	M97A						Yes	** NA **			None
98	MP3B						Yes	** NA **			None
99	MP2B						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	OVP1						Yes	** NA **			None
102	M102						Yes	** NA **			None
103	OVP2						Yes	** NA **			None
104	M104						Yes	** NA **			None
105	M105						Yes	** NA **			None
106	M106						Yes	** NA **			None
107	M107						Yes	** NA **			None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111	OOOOOX					Yes	** NA **			None
112	M112	OOOOOX					Yes	** NA **			None
113	M113	OOOOOX					Yes	** NA **			None
114	M114	OOOOOX					Yes	** NA **			None
115	M115	OOOOOX					Yes	** NA **			None
116	M116	OOOOOX					Yes	** NA **			None
117	M117						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...
118	M118						Yes	** NA **			None
119	M119						Yes	** NA **			None
120	M120						Yes	** NA **			None
121	M121						Yes	** NA **			None
122	M122						Yes	** NA **			None
123	M123						Yes	** NA **			None
124	M124						Yes	** NA **			None
125	M125						Yes	** NA **			None
126	M126						Yes	** NA **			None
127	M127						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-21.85	1.2
2	MP2A	My	-.002	1.2
3	MP2A	Mz	.021	1.2
4	MP2A	Y	-21.85	4.72
5	MP2A	My	-.002	4.72
6	MP2A	Mz	.021	4.72
7	MP2B	Y	-21.85	1.2
8	MP2B	My	-.017	1.2
9	MP2B	Mz	-.012	1.2
10	MP2B	Y	-21.85	4.72
11	MP2B	My	-.017	4.72
12	MP2B	Mz	-.012	4.72
13	MP2C	Y	-21.85	1.2
14	MP2C	My	.019	1.2
15	MP2C	Mz	-.009	1.2
16	MP2C	Y	-21.85	4.72
17	MP2C	My	.019	4.72
18	MP2C	Mz	-.009	4.72
19	MP2A	Y	-21.85	1.2
20	MP2A	My	-.021	1.2
21	MP2A	Mz	-.002	1.2
22	MP2A	Y	-21.85	4.72
23	MP2A	My	-.021	4.72
24	MP2A	Mz	-.002	4.72
25	MP2B	Y	-21.85	1.2
26	MP2B	My	.012	1.2
27	MP2B	Mz	-.017	1.2
28	MP2B	Y	-21.85	4.72
29	MP2B	My	.012	4.72
30	MP2B	Mz	-.017	4.72
31	MP2C	Y	-21.85	1.2
32	MP2C	My	.009	1.2
33	MP2C	Mz	.019	1.2
34	MP2C	Y	-21.85	4.72
35	MP2C	My	.009	4.72
36	MP2C	Mz	.019	4.72
37	MP3A	Y	-28.65	1.97
38	MP3A	My	-.011	1.97
39	MP3A	Mz	.009	1.97
40	MP3A	Y	-28.65	3.96
41	MP3A	My	-.011	3.96
42	MP3A	Mz	.009	3.96

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3B	Y	-28.65	1.97
44	MP3B	My	-.002	1.97
45	MP3B	Mz	-.014	1.97
46	MP3B	Y	-28.65	3.96
47	MP3B	My	-.002	3.96
48	MP3B	Mz	-.014	3.96
49	MP3C	Y	-28.65	1.97
50	MP3C	My	.013	1.97
51	MP3C	Mz	.005	1.97
52	MP3C	Y	-28.65	3.96
53	MP3C	My	.013	3.96
54	MP3C	Mz	.005	3.96
55	MP1A	Y	-10	.22
56	MP1A	My	-.008	.22
57	MP1A	Mz	.006	.22
58	MP1A	Y	-10	3.72
59	MP1A	My	-.008	3.72
60	MP1A	Mz	.006	3.72
61	MP1B	Y	-10	.22
62	MP1B	My	-.002	.22
63	MP1B	Mz	-.01	.22
64	MP1B	Y	-10	3.72
65	MP1B	My	-.002	3.72
66	MP1B	Mz	-.01	3.72
67	MP1C	Y	-10	.22
68	MP1C	My	.009	.22
69	MP1C	Mz	.003	.22
70	MP1C	Y	-10	3.72
71	MP1C	My	.009	3.72
72	MP1C	Mz	.003	3.72
73	MP4A	Y	-10	.22
74	MP4A	My	-.008	.22
75	MP4A	Mz	.006	.22
76	MP4A	Y	-10	3.72
77	MP4A	My	-.008	3.72
78	MP4A	Mz	.006	3.72
79	MP4B	Y	-10	.22
80	MP4B	My	-.002	.22
81	MP4B	Mz	-.01	.22
82	MP4B	Y	-10	3.72
83	MP4B	My	-.002	3.72
84	MP4B	Mz	-.01	3.72
85	MP4C	Y	-10	.22
86	MP4C	My	.009	.22
87	MP4C	Mz	.003	.22
88	MP4C	Y	-10	3.72
89	MP4C	My	.009	3.72
90	MP4C	Mz	.003	3.72
91	MP2A	Y	-79.1	2.97
92	MP2A	My	.03	2.97
93	MP2A	Mz	-.025	2.97
94	MP2B	Y	-79.1	2.97
95	MP2B	My	.007	2.97
96	MP2B	Mz	.039	2.97
97	MP2C	Y	-79.1	2.97
98	MP2C	My	-.037	2.97
99	MP2C	Mz	-.014	2.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
100	MP1A	Y	-74.7	1.97
101	MP1A	My	.029	1.97
102	MP1A	Mz	-.024	1.97
103	MP1B	Y	-74.7	1.97
104	MP1B	My	.006	1.97
105	MP1B	Mz	.037	1.97
106	MP1C	Y	-74.7	1.97
107	MP1C	My	-.035	1.97
108	MP1C	Mz	-.013	1.97
109	OVP1	Y	-32	1
110	OVP1	My	0	1
111	OVP1	Mz	0	1
112	OVP2	Y	-32	1
113	OVP2	My	0	1
114	OVP2	Mz	0	1

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-60.352	1.2
2	MP2A	My	-.005	1.2
3	MP2A	Mz	.057	1.2
4	MP2A	Y	-60.352	4.72
5	MP2A	My	-.005	4.72
6	MP2A	Mz	.057	4.72
7	MP2B	Y	-60.352	1.2
8	MP2B	My	-.047	1.2
9	MP2B	Mz	-.033	1.2
10	MP2B	Y	-60.352	4.72
11	MP2B	My	-.047	4.72
12	MP2B	Mz	-.033	4.72
13	MP2C	Y	-60.352	1.2
14	MP2C	My	.052	1.2
15	MP2C	Mz	-.024	1.2
16	MP2C	Y	-60.352	4.72
17	MP2C	My	.052	4.72
18	MP2C	Mz	-.024	4.72
19	MP2A	Y	-60.352	1.2
20	MP2A	My	-.057	1.2
21	MP2A	Mz	-.005	1.2
22	MP2A	Y	-60.352	4.72
23	MP2A	My	-.057	4.72
24	MP2A	Mz	-.005	4.72
25	MP2B	Y	-60.352	1.2
26	MP2B	My	.033	1.2
27	MP2B	Mz	-.047	1.2
28	MP2B	Y	-60.352	4.72
29	MP2B	My	.033	4.72
30	MP2B	Mz	-.047	4.72
31	MP2C	Y	-60.352	1.2
32	MP2C	My	.024	1.2
33	MP2C	Mz	.052	1.2
34	MP2C	Y	-60.352	4.72
35	MP2C	My	.024	4.72
36	MP2C	Mz	.052	4.72
37	MP3A	Y	-29.658	1.97
38	MP3A	My	-.011	1.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
39	MP3A	Mz	.01	1.97
40	MP3A	Y	-29.658	3.96
41	MP3A	My	-.011	3.96
42	MP3A	Mz	.01	3.96
43	MP3B	Y	-29.658	1.97
44	MP3B	My	-.003	1.97
45	MP3B	Mz	-.015	1.97
46	MP3B	Y	-29.658	3.96
47	MP3B	My	-.003	3.96
48	MP3B	Mz	-.015	3.96
49	MP3C	Y	-29.658	1.97
50	MP3C	My	.014	1.97
51	MP3C	Mz	.005	1.97
52	MP3C	Y	-29.658	3.96
53	MP3C	My	.014	3.96
54	MP3C	Mz	.005	3.96
55	MP1A	Y	-62.603	.22
56	MP1A	My	-.048	.22
57	MP1A	Mz	.04	.22
58	MP1A	Y	-62.603	3.72
59	MP1A	My	-.048	3.72
60	MP1A	Mz	.04	3.72
61	MP1B	Y	-62.603	.22
62	MP1B	My	-.011	.22
63	MP1B	Mz	-.062	.22
64	MP1B	Y	-62.603	3.72
65	MP1B	My	-.011	3.72
66	MP1B	Mz	-.062	3.72
67	MP1C	Y	-62.603	.22
68	MP1C	My	.059	.22
69	MP1C	Mz	.021	.22
70	MP1C	Y	-62.603	3.72
71	MP1C	My	.059	3.72
72	MP1C	Mz	.021	3.72
73	MP4A	Y	-62.603	.22
74	MP4A	My	-.048	.22
75	MP4A	Mz	.04	.22
76	MP4A	Y	-62.603	3.72
77	MP4A	My	-.048	3.72
78	MP4A	Mz	.04	3.72
79	MP4B	Y	-62.603	.22
80	MP4B	My	-.011	.22
81	MP4B	Mz	-.062	.22
82	MP4B	Y	-62.603	3.72
83	MP4B	My	-.011	3.72
84	MP4B	Mz	-.062	3.72
85	MP4C	Y	-62.603	.22
86	MP4C	My	.059	.22
87	MP4C	Mz	.021	.22
88	MP4C	Y	-62.603	3.72
89	MP4C	My	.059	3.72
90	MP4C	Mz	.021	3.72
91	MP2A	Y	-45.191	2.97
92	MP2A	My	.017	2.97
93	MP2A	Mz	-.015	2.97
94	MP2B	Y	-45.191	2.97
95	MP2B	My	.004	2.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	MP2B	Mz	.022	2.97
97	MP2C	Y	-45.191	2.97
98	MP2C	My	-.021	2.97
99	MP2C	Mz	-.008	2.97
100	MP1A	Y	-44.716	1.97
101	MP1A	My	.017	1.97
102	MP1A	Mz	-.014	1.97
103	MP1B	Y	-44.716	1.97
104	MP1B	My	.004	1.97
105	MP1B	Mz	.022	1.97
106	MP1C	Y	-44.716	1.97
107	MP1C	My	-.021	1.97
108	MP1C	Mz	-.008	1.97
109	OVP1	Y	-87.565	1
110	OVP1	My	0	1
111	OVP1	Mz	0	1
112	OVP2	Y	-87.565	1
113	OVP2	My	0	1
114	OVP2	Mz	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	-93.24	1.2
3	MP2A	Mx	-.088	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	-93.24	4.72
6	MP2A	Mx	-.088	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	-54.461	1.2
9	MP2B	Mx	.029	1.2
10	MP2B	X	0	4.72
11	MP2B	Z	-54.461	4.72
12	MP2B	Mx	.029	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	-113.875	1.2
15	MP2C	Mx	.045	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	-113.875	4.72
18	MP2C	Mx	.045	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	-93.24	1.2
21	MP2A	Mx	.008	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	-93.24	4.72
24	MP2A	Mx	.008	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	-54.461	1.2
27	MP2B	Mx	.042	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	-54.461	4.72
30	MP2B	Mx	.042	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	-113.875	1.2
33	MP2C	Mx	-.097	1.2
34	MP2C	X	0	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP2C	Z	-113.875	4.72
36	MP2C	Mx	-.097	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	-51.978	1.97
39	MP3A	Mx	-.017	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	-51.978	3.96
42	MP3A	Mx	-.017	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	-26.333	1.97
45	MP3B	Mx	.013	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	-26.333	3.96
48	MP3B	Mx	.013	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	-65.623	1.97
51	MP3C	Mx	-.011	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	-65.623	3.96
54	MP3C	Mx	-.011	3.96
55	MP1A	X	0	.22
56	MP1A	Z	-131.136	.22
57	MP1A	Mx	-.084	.22
58	MP1A	X	0	3.72
59	MP1A	Z	-131.136	3.72
60	MP1A	Mx	-.084	3.72
61	MP1B	X	0	.22
62	MP1B	Z	-121.614	.22
63	MP1B	Mx	.12	.22
64	MP1B	X	0	3.72
65	MP1B	Z	-121.614	3.72
66	MP1B	Mx	.12	3.72
67	MP1C	X	0	.22
68	MP1C	Z	-136.203	.22
69	MP1C	Mx	-.047	.22
70	MP1C	X	0	3.72
71	MP1C	Z	-136.203	3.72
72	MP1C	Mx	-.047	3.72
73	MP4A	X	0	.22
74	MP4A	Z	-131.136	.22
75	MP4A	Mx	-.084	.22
76	MP4A	X	0	3.72
77	MP4A	Z	-131.136	3.72
78	MP4A	Mx	-.084	3.72
79	MP4B	X	0	.22
80	MP4B	Z	-121.614	.22
81	MP4B	Mx	.12	.22
82	MP4B	X	0	3.72
83	MP4B	Z	-121.614	3.72
84	MP4B	Mx	.12	3.72
85	MP4C	X	0	.22
86	MP4C	Z	-136.203	.22
87	MP4C	Mx	-.047	.22
88	MP4C	X	0	3.72
89	MP4C	Z	-136.203	3.72
90	MP4C	Mx	-.047	3.72
91	MP2A	X	0	2.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
92	MP2A	Z	-72.997	2.97
93	MP2A	Mx	.023	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	-58.11	2.97
96	MP2B	Mx	-.029	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	-80.918	2.97
99	MP2C	Mx	.014	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	-60.193	1.97
102	MP1A	Mx	.019	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	-47.433	1.97
105	MP1B	Mx	-.023	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	-66.982	1.97
108	MP1C	Mx	.011	1.97
109	OVP1	X	0	1
110	OVP1	Z	-162.558	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	-162.558	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	30.255	1.2
2	MP2A	Z	-52.403	1.2
3	MP2A	Mx	-.052	1.2
4	MP2A	X	30.255	4.72
5	MP2A	Z	-52.403	4.72
6	MP2A	Mx	-.052	4.72
7	MP2B	X	40.572	1.2
8	MP2B	Z	-70.272	1.2
9	MP2B	Mx	.007	1.2
10	MP2B	X	40.572	4.72
11	MP2B	Z	-70.272	4.72
12	MP2B	Mx	.007	4.72
13	MP2C	X	59.962	1.2
14	MP2C	Z	-103.857	1.2
15	MP2C	Mx	.093	1.2
16	MP2C	X	59.962	4.72
17	MP2C	Z	-103.857	4.72
18	MP2C	Mx	.093	4.72
19	MP2A	X	30.255	1.2
20	MP2A	Z	-52.403	1.2
21	MP2A	Mx	-.024	1.2
22	MP2A	X	30.255	4.72
23	MP2A	Z	-52.403	4.72
24	MP2A	Mx	-.024	4.72
25	MP2B	X	40.572	1.2
26	MP2B	Z	-70.272	1.2
27	MP2B	Mx	.076	1.2
28	MP2B	X	40.572	4.72
29	MP2B	Z	-70.272	4.72
30	MP2B	Mx	.076	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP2C	X	59.962	1.2
32	MP2C	Z	-103.857	1.2
33	MP2C	Mx	-.065	1.2
34	MP2C	X	59.962	4.72
35	MP2C	Z	-103.857	4.72
36	MP2C	Mx	-.065	4.72
37	MP3A	X	15.167	1.97
38	MP3A	Z	-26.269	1.97
39	MP3A	Mx	-.014	1.97
40	MP3A	X	15.167	3.96
41	MP3A	Z	-26.269	3.96
42	MP3A	Mx	-.014	3.96
43	MP3B	X	21.989	1.97
44	MP3B	Z	-38.086	1.97
45	MP3B	Mx	.017	1.97
46	MP3B	X	21.989	3.96
47	MP3B	Z	-38.086	3.96
48	MP3B	Mx	.017	3.96
49	MP3C	X	34.811	1.97
50	MP3C	Z	-60.295	1.97
51	MP3C	Mx	.006	1.97
52	MP3C	X	34.811	3.96
53	MP3C	Z	-60.295	3.96
54	MP3C	Mx	.006	3.96
55	MP1A	X	61.55	.22
56	MP1A	Z	-106.607	.22
57	MP1A	Mx	-.116	.22
58	MP1A	X	61.55	3.72
59	MP1A	Z	-106.607	3.72
60	MP1A	Mx	-.116	3.72
61	MP1B	X	64.083	.22
62	MP1B	Z	-110.995	.22
63	MP1B	Mx	.098	.22
64	MP1B	X	64.083	3.72
65	MP1B	Z	-110.995	3.72
66	MP1B	Mx	.098	3.72
67	MP1C	X	68.844	.22
68	MP1C	Z	-119.241	.22
69	MP1C	Mx	.024	.22
70	MP1C	X	68.844	3.72
71	MP1C	Z	-119.241	3.72
72	MP1C	Mx	.024	3.72
73	MP4A	X	61.55	.22
74	MP4A	Z	-106.607	.22
75	MP4A	Mx	-.116	.22
76	MP4A	X	61.55	3.72
77	MP4A	Z	-106.607	3.72
78	MP4A	Mx	-.116	3.72
79	MP4B	X	64.083	.22
80	MP4B	Z	-110.995	.22
81	MP4B	Mx	.098	.22
82	MP4B	X	64.083	3.72
83	MP4B	Z	-110.995	3.72
84	MP4B	Mx	.098	3.72
85	MP4C	X	68.844	.22
86	MP4C	Z	-119.241	.22
87	MP4C	Mx	.024	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
88	MP4C	X	68.844	3.72
89	MP4C	Z	-119.241	3.72
90	MP4C	Mx	.024	3.72
91	MP2A	X	30.216	2.97
92	MP2A	Z	-52.336	2.97
93	MP2A	Mx	.028	2.97
94	MP2B	X	34.177	2.97
95	MP2B	Z	-59.196	2.97
96	MP2B	Mx	-.026	2.97
97	MP2C	X	41.62	2.97
98	MP2C	Z	-72.088	2.97
99	MP2C	Mx	-.007	2.97
100	MP1A	X	24.712	1.97
101	MP1A	Z	-42.802	1.97
102	MP1A	Mx	.023	1.97
103	MP1B	X	28.106	1.97
104	MP1B	Z	-48.682	1.97
105	MP1B	Mx	-.022	1.97
106	MP1C	X	34.486	1.97
107	MP1C	Z	-59.732	1.97
108	MP1C	Mx	-.006	1.97
109	OVP1	X	73.498	1
110	OVP1	Z	-127.302	1
111	OVP1	Mx	0	1
112	OVP2	X	73.498	1
113	OVP2	Z	-127.302	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	47.164	1.2
2	MP2A	Z	-27.23	1.2
3	MP2A	Mx	-.029	1.2
4	MP2A	X	47.164	4.72
5	MP2A	Z	-27.23	4.72
6	MP2A	Mx	-.029	4.72
7	MP2B	X	98.618	1.2
8	MP2B	Z	-56.937	1.2
9	MP2B	Mx	-.045	1.2
10	MP2B	X	98.618	4.72
11	MP2B	Z	-56.937	4.72
12	MP2B	Mx	-.045	4.72
13	MP2C	X	80.749	1.2
14	MP2C	Z	-46.62	1.2
15	MP2C	Mx	.088	1.2
16	MP2C	X	80.749	4.72
17	MP2C	Z	-46.62	4.72
18	MP2C	Mx	.088	4.72
19	MP2A	X	47.164	1.2
20	MP2A	Z	-27.23	1.2
21	MP2A	Mx	-.042	1.2
22	MP2A	X	47.164	4.72
23	MP2A	Z	-27.23	4.72
24	MP2A	Mx	-.042	4.72
25	MP2B	X	98.618	1.2
26	MP2B	Z	-56.937	1.2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2B	Mx	.097	1.2
28	MP2B	X	98.618	4.72
29	MP2B	Z	-56.937	4.72
30	MP2B	Mx	.097	4.72
31	MP2C	X	80.749	1.2
32	MP2C	Z	-46.62	1.2
33	MP2C	Mx	-.008	1.2
34	MP2C	X	80.749	4.72
35	MP2C	Z	-46.62	4.72
36	MP2C	Mx	-.008	4.72
37	MP3A	X	22.805	1.97
38	MP3A	Z	-13.167	1.97
39	MP3A	Mx	-.013	1.97
40	MP3A	X	22.805	3.96
41	MP3A	Z	-13.167	3.96
42	MP3A	Mx	-.013	3.96
43	MP3B	X	56.831	1.97
44	MP3B	Z	-32.812	1.97
45	MP3B	Mx	.011	1.97
46	MP3B	X	56.831	3.96
47	MP3B	Z	-32.812	3.96
48	MP3B	Mx	.011	3.96
49	MP3C	X	45.014	1.97
50	MP3C	Z	-25.989	1.97
51	MP3C	Mx	.017	1.97
52	MP3C	X	45.014	3.96
53	MP3C	Z	-25.989	3.96
54	MP3C	Mx	.017	3.96
55	MP1A	X	105.321	.22
56	MP1A	Z	-60.807	.22
57	MP1A	Mx	-.12	.22
58	MP1A	X	105.321	3.72
59	MP1A	Z	-60.807	3.72
60	MP1A	Mx	-.12	3.72
61	MP1B	X	117.955	.22
62	MP1B	Z	-68.101	.22
63	MP1B	Mx	.047	.22
64	MP1B	X	117.955	3.72
65	MP1B	Z	-68.101	3.72
66	MP1B	Mx	.047	3.72
67	MP1C	X	113.567	.22
68	MP1C	Z	-65.568	.22
69	MP1C	Mx	.084	.22
70	MP1C	X	113.567	3.72
71	MP1C	Z	-65.568	3.72
72	MP1C	Mx	.084	3.72
73	MP4A	X	105.321	.22
74	MP4A	Z	-60.807	.22
75	MP4A	Mx	-.12	.22
76	MP4A	X	105.321	3.72
77	MP4A	Z	-60.807	3.72
78	MP4A	Mx	-.12	3.72
79	MP4B	X	117.955	.22
80	MP4B	Z	-68.101	.22
81	MP4B	Mx	.047	.22
82	MP4B	X	117.955	3.72
83	MP4B	Z	-68.101	3.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
84	MP4B	Mx	.047	3.72
85	MP4C	X	113.567	.22
86	MP4C	Z	-65.568	.22
87	MP4C	Mx	.084	.22
88	MP4C	X	113.567	3.72
89	MP4C	Z	-65.568	3.72
90	MP4C	Mx	.084	3.72
91	MP2A	X	50.325	2.97
92	MP2A	Z	-29.055	2.97
93	MP2A	Mx	.029	2.97
94	MP2B	X	70.077	2.97
95	MP2B	Z	-40.459	2.97
96	MP2B	Mx	-.014	2.97
97	MP2C	X	63.217	2.97
98	MP2C	Z	-36.498	2.97
99	MP2C	Mx	-.023	2.97
100	MP1A	X	41.078	1.97
101	MP1A	Z	-23.717	1.97
102	MP1A	Mx	.023	1.97
103	MP1B	X	58.008	1.97
104	MP1B	Z	-33.491	1.97
105	MP1B	Mx	-.011	1.97
106	MP1C	X	52.129	1.97
107	MP1C	Z	-30.097	1.97
108	MP1C	Mx	-.019	1.97
109	OVP1	X	120.564	1
110	OVP1	Z	-69.607	1
111	OVP1	Mx	0	1
112	OVP2	X	120.564	1
113	OVP2	Z	-69.607	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	81.143	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-.007	1.2
4	MP2A	X	81.143	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	-.007	4.72
7	MP2B	X	119.923	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	-.093	1.2
10	MP2B	X	119.923	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	-.093	4.72
13	MP2C	X	60.509	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	.052	1.2
16	MP2C	X	60.509	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	.052	4.72
19	MP2A	X	81.143	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	-.076	1.2
22	MP2A	X	81.143	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	0	4.72
24	MP2A	Mx	-.076	4.72
25	MP2B	X	119.923	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	.065	1.2
28	MP2B	X	119.923	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	.065	4.72
31	MP2C	X	60.509	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	.024	1.2
34	MP2C	X	60.509	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	.024	4.72
37	MP3A	X	43.978	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	-.017	1.97
40	MP3A	X	43.978	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	-.017	3.96
43	MP3B	X	69.623	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	-.006	1.97
46	MP3B	X	69.623	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	-.006	3.96
49	MP3C	X	30.333	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	.014	1.97
52	MP3C	X	30.333	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	.014	3.96
55	MP1A	X	128.166	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	-.098	.22
58	MP1A	X	128.166	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	-.098	3.72
61	MP1B	X	137.688	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	-.024	.22
64	MP1B	X	137.688	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	-.024	3.72
67	MP1C	X	123.099	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	.116	.22
70	MP1C	X	123.099	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	.116	3.72
73	MP4A	X	128.166	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	-.098	.22
76	MP4A	X	128.166	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	-.098	3.72
79	MP4B	X	137.688	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP4B	Z	0	.22
81	MP4B	Mx	-.024	.22
82	MP4B	X	137.688	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	-.024	3.72
85	MP4C	X	123.099	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	.116	.22
88	MP4C	X	123.099	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	.116	3.72
91	MP2A	X	68.353	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	.026	2.97
94	MP2B	X	83.239	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	.007	2.97
97	MP2C	X	60.432	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	-.028	2.97
100	MP1A	X	56.213	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	.022	1.97
103	MP1B	X	68.972	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	.006	1.97
106	MP1C	X	49.423	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	-.023	1.97
109	OVP1	X	146.996	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	146.996	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	98.618	1.2
2	MP2A	Z	56.937	1.2
3	MP2A	Mx	.045	1.2
4	MP2A	X	98.618	4.72
5	MP2A	Z	56.937	4.72
6	MP2A	Mx	.045	4.72
7	MP2B	X	80.749	1.2
8	MP2B	Z	46.62	1.2
9	MP2B	Mx	-.088	1.2
10	MP2B	X	80.749	4.72
11	MP2B	Z	46.62	4.72
12	MP2B	Mx	-.088	4.72
13	MP2C	X	47.164	1.2
14	MP2C	Z	27.23	1.2
15	MP2C	Mx	.029	1.2
16	MP2C	X	47.164	4.72
17	MP2C	Z	27.23	4.72
18	MP2C	Mx	.029	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP2A	X	98.618	1.2
20	MP2A	Z	56.937	1.2
21	MP2A	Mx	-.097	1.2
22	MP2A	X	98.618	4.72
23	MP2A	Z	56.937	4.72
24	MP2A	Mx	-.097	4.72
25	MP2B	X	80.749	1.2
26	MP2B	Z	46.62	1.2
27	MP2B	Mx	.008	1.2
28	MP2B	X	80.749	4.72
29	MP2B	Z	46.62	4.72
30	MP2B	Mx	.008	4.72
31	MP2C	X	47.164	1.2
32	MP2C	Z	27.23	1.2
33	MP2C	Mx	.042	1.2
34	MP2C	X	47.164	4.72
35	MP2C	Z	27.23	4.72
36	MP2C	Mx	.042	4.72
37	MP3A	X	56.831	1.97
38	MP3A	Z	32.812	1.97
39	MP3A	Mx	-.011	1.97
40	MP3A	X	56.831	3.96
41	MP3A	Z	32.812	3.96
42	MP3A	Mx	-.011	3.96
43	MP3B	X	45.014	1.97
44	MP3B	Z	25.989	1.97
45	MP3B	Mx	-.017	1.97
46	MP3B	X	45.014	3.96
47	MP3B	Z	25.989	3.96
48	MP3B	Mx	-.017	3.96
49	MP3C	X	22.805	1.97
50	MP3C	Z	13.167	1.97
51	MP3C	Mx	.013	1.97
52	MP3C	X	22.805	3.96
53	MP3C	Z	13.167	3.96
54	MP3C	Mx	.013	3.96
55	MP1A	X	117.955	.22
56	MP1A	Z	68.101	.22
57	MP1A	Mx	-.047	.22
58	MP1A	X	117.955	3.72
59	MP1A	Z	68.101	3.72
60	MP1A	Mx	-.047	3.72
61	MP1B	X	113.567	.22
62	MP1B	Z	65.568	.22
63	MP1B	Mx	-.084	.22
64	MP1B	X	113.567	3.72
65	MP1B	Z	65.568	3.72
66	MP1B	Mx	-.084	3.72
67	MP1C	X	105.321	.22
68	MP1C	Z	60.807	.22
69	MP1C	Mx	.12	.22
70	MP1C	X	105.321	3.72
71	MP1C	Z	60.807	3.72
72	MP1C	Mx	.12	3.72
73	MP4A	X	117.955	.22
74	MP4A	Z	68.101	.22
75	MP4A	Mx	-.047	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
76	MP4A	X	117.955	3.72
77	MP4A	Z	68.101	3.72
78	MP4A	Mx	-.047	3.72
79	MP4B	X	113.567	.22
80	MP4B	Z	65.568	.22
81	MP4B	Mx	-.084	.22
82	MP4B	X	113.567	3.72
83	MP4B	Z	65.568	3.72
84	MP4B	Mx	-.084	3.72
85	MP4C	X	105.321	.22
86	MP4C	Z	60.807	.22
87	MP4C	Mx	.12	.22
88	MP4C	X	105.321	3.72
89	MP4C	Z	60.807	3.72
90	MP4C	Mx	.12	3.72
91	MP2A	X	70.077	2.97
92	MP2A	Z	40.459	2.97
93	MP2A	Mx	.014	2.97
94	MP2B	X	63.217	2.97
95	MP2B	Z	36.498	2.97
96	MP2B	Mx	.023	2.97
97	MP2C	X	50.325	2.97
98	MP2C	Z	29.055	2.97
99	MP2C	Mx	-.029	2.97
100	MP1A	X	58.008	1.97
101	MP1A	Z	33.491	1.97
102	MP1A	Mx	.011	1.97
103	MP1B	X	52.129	1.97
104	MP1B	Z	30.097	1.97
105	MP1B	Mx	.019	1.97
106	MP1C	X	41.078	1.97
107	MP1C	Z	23.717	1.97
108	MP1C	Mx	-.023	1.97
109	OVP1	X	140.779	1
110	OVP1	Z	81.279	1
111	OVP1	Mx	0	1
112	OVP2	X	140.779	1
113	OVP2	Z	81.279	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	59.962	1.2
2	MP2A	Z	103.857	1.2
3	MP2A	Mx	.093	1.2
4	MP2A	X	59.962	4.72
5	MP2A	Z	103.857	4.72
6	MP2A	Mx	.093	4.72
7	MP2B	X	30.255	1.2
8	MP2B	Z	52.403	1.2
9	MP2B	Mx	-.052	1.2
10	MP2B	X	30.255	4.72
11	MP2B	Z	52.403	4.72
12	MP2B	Mx	-.052	4.72
13	MP2C	X	40.572	1.2
14	MP2C	Z	70.272	1.2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP2C	Mx	.007	1.2
16	MP2C	X	40.572	4.72
17	MP2C	Z	70.272	4.72
18	MP2C	Mx	.007	4.72
19	MP2A	X	59.962	1.2
20	MP2A	Z	103.857	1.2
21	MP2A	Mx	-.065	1.2
22	MP2A	X	59.962	4.72
23	MP2A	Z	103.857	4.72
24	MP2A	Mx	-.065	4.72
25	MP2B	X	30.255	1.2
26	MP2B	Z	52.403	1.2
27	MP2B	Mx	-.024	1.2
28	MP2B	X	30.255	4.72
29	MP2B	Z	52.403	4.72
30	MP2B	Mx	-.024	4.72
31	MP2C	X	40.572	1.2
32	MP2C	Z	70.272	1.2
33	MP2C	Mx	.076	1.2
34	MP2C	X	40.572	4.72
35	MP2C	Z	70.272	4.72
36	MP2C	Mx	.076	4.72
37	MP3A	X	34.811	1.97
38	MP3A	Z	60.295	1.97
39	MP3A	Mx	.006	1.97
40	MP3A	X	34.811	3.96
41	MP3A	Z	60.295	3.96
42	MP3A	Mx	.006	3.96
43	MP3B	X	15.167	1.97
44	MP3B	Z	26.269	1.97
45	MP3B	Mx	-.014	1.97
46	MP3B	X	15.167	3.96
47	MP3B	Z	26.269	3.96
48	MP3B	Mx	-.014	3.96
49	MP3C	X	21.989	1.97
50	MP3C	Z	38.086	1.97
51	MP3C	Mx	.017	1.97
52	MP3C	X	21.989	3.96
53	MP3C	Z	38.086	3.96
54	MP3C	Mx	.017	3.96
55	MP1A	X	68.844	.22
56	MP1A	Z	119.241	.22
57	MP1A	Mx	.024	.22
58	MP1A	X	68.844	3.72
59	MP1A	Z	119.241	3.72
60	MP1A	Mx	.024	3.72
61	MP1B	X	61.55	.22
62	MP1B	Z	106.607	.22
63	MP1B	Mx	-.116	.22
64	MP1B	X	61.55	3.72
65	MP1B	Z	106.607	3.72
66	MP1B	Mx	-.116	3.72
67	MP1C	X	64.083	.22
68	MP1C	Z	110.995	.22
69	MP1C	Mx	.098	.22
70	MP1C	X	64.083	3.72
71	MP1C	Z	110.995	3.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP1C	Mx	.098	3.72
73	MP4A	X	68.844	.22
74	MP4A	Z	119.241	.22
75	MP4A	Mx	.024	.22
76	MP4A	X	68.844	3.72
77	MP4A	Z	119.241	3.72
78	MP4A	Mx	.024	3.72
79	MP4B	X	61.55	.22
80	MP4B	Z	106.607	.22
81	MP4B	Mx	-.116	.22
82	MP4B	X	61.55	3.72
83	MP4B	Z	106.607	3.72
84	MP4B	Mx	-.116	3.72
85	MP4C	X	64.083	.22
86	MP4C	Z	110.995	.22
87	MP4C	Mx	.098	.22
88	MP4C	X	64.083	3.72
89	MP4C	Z	110.995	3.72
90	MP4C	Mx	.098	3.72
91	MP2A	X	41.62	2.97
92	MP2A	Z	72.088	2.97
93	MP2A	Mx	-.007	2.97
94	MP2B	X	30.216	2.97
95	MP2B	Z	52.336	2.97
96	MP2B	Mx	.028	2.97
97	MP2C	X	34.177	2.97
98	MP2C	Z	59.196	2.97
99	MP2C	Mx	-.026	2.97
100	MP1A	X	34.486	1.97
101	MP1A	Z	59.732	1.97
102	MP1A	Mx	-.006	1.97
103	MP1B	X	24.712	1.97
104	MP1B	Z	42.802	1.97
105	MP1B	Mx	.023	1.97
106	MP1C	X	28.106	1.97
107	MP1C	Z	48.682	1.97
108	MP1C	Mx	-.022	1.97
109	OVP1	X	85.169	1
110	OVP1	Z	147.518	1
111	OVP1	Mx	0	1
112	OVP2	X	85.169	1
113	OVP2	Z	147.518	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	93.24	1.2
3	MP2A	Mx	.088	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	93.24	4.72
6	MP2A	Mx	.088	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	54.461	1.2
9	MP2B	Mx	-.029	1.2
10	MP2B	X	0	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2B	Z	54.461	4.72
12	MP2B	Mx	-.029	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	113.875	1.2
15	MP2C	Mx	-.045	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	113.875	4.72
18	MP2C	Mx	-.045	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	93.24	1.2
21	MP2A	Mx	-.008	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	93.24	4.72
24	MP2A	Mx	-.008	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	54.461	1.2
27	MP2B	Mx	-.042	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	54.461	4.72
30	MP2B	Mx	-.042	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	113.875	1.2
33	MP2C	Mx	.097	1.2
34	MP2C	X	0	4.72
35	MP2C	Z	113.875	4.72
36	MP2C	Mx	.097	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	51.978	1.97
39	MP3A	Mx	.017	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	51.978	3.96
42	MP3A	Mx	.017	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	26.333	1.97
45	MP3B	Mx	-.013	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	26.333	3.96
48	MP3B	Mx	-.013	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	65.623	1.97
51	MP3C	Mx	.011	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	65.623	3.96
54	MP3C	Mx	.011	3.96
55	MP1A	X	0	.22
56	MP1A	Z	131.136	.22
57	MP1A	Mx	.084	.22
58	MP1A	X	0	3.72
59	MP1A	Z	131.136	3.72
60	MP1A	Mx	.084	3.72
61	MP1B	X	0	.22
62	MP1B	Z	121.614	.22
63	MP1B	Mx	-.12	.22
64	MP1B	X	0	3.72
65	MP1B	Z	121.614	3.72
66	MP1B	Mx	-.12	3.72
67	MP1C	X	0	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP1C	Z	136.203	.22
69	MP1C	Mx	.047	.22
70	MP1C	X	0	3.72
71	MP1C	Z	136.203	3.72
72	MP1C	Mx	.047	3.72
73	MP4A	X	0	.22
74	MP4A	Z	131.136	.22
75	MP4A	Mx	.084	.22
76	MP4A	X	0	3.72
77	MP4A	Z	131.136	3.72
78	MP4A	Mx	.084	3.72
79	MP4B	X	0	.22
80	MP4B	Z	121.614	.22
81	MP4B	Mx	-.12	.22
82	MP4B	X	0	3.72
83	MP4B	Z	121.614	3.72
84	MP4B	Mx	-.12	3.72
85	MP4C	X	0	.22
86	MP4C	Z	136.203	.22
87	MP4C	Mx	.047	.22
88	MP4C	X	0	3.72
89	MP4C	Z	136.203	3.72
90	MP4C	Mx	.047	3.72
91	MP2A	X	0	2.97
92	MP2A	Z	72.997	2.97
93	MP2A	Mx	-.023	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	58.11	2.97
96	MP2B	Mx	.029	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	80.918	2.97
99	MP2C	Mx	-.014	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	60.193	1.97
102	MP1A	Mx	-.019	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	47.433	1.97
105	MP1B	Mx	.023	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	66.982	1.97
108	MP1C	Mx	-.011	1.97
109	OVP1	X	0	1
110	OVP1	Z	162.558	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	162.558	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-30.255	1.2
2	MP2A	Z	52.403	1.2
3	MP2A	Mx	.052	1.2
4	MP2A	X	-30.255	4.72
5	MP2A	Z	52.403	4.72
6	MP2A	Mx	.052	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2B	X	-40.572	1.2
8	MP2B	Z	70.272	1.2
9	MP2B	Mx	-.007	1.2
10	MP2B	X	-40.572	4.72
11	MP2B	Z	70.272	4.72
12	MP2B	Mx	-.007	4.72
13	MP2C	X	-59.962	1.2
14	MP2C	Z	103.857	1.2
15	MP2C	Mx	-.093	1.2
16	MP2C	X	-59.962	4.72
17	MP2C	Z	103.857	4.72
18	MP2C	Mx	-.093	4.72
19	MP2A	X	-30.255	1.2
20	MP2A	Z	52.403	1.2
21	MP2A	Mx	.024	1.2
22	MP2A	X	-30.255	4.72
23	MP2A	Z	52.403	4.72
24	MP2A	Mx	.024	4.72
25	MP2B	X	-40.572	1.2
26	MP2B	Z	70.272	1.2
27	MP2B	Mx	-.076	1.2
28	MP2B	X	-40.572	4.72
29	MP2B	Z	70.272	4.72
30	MP2B	Mx	-.076	4.72
31	MP2C	X	-59.962	1.2
32	MP2C	Z	103.857	1.2
33	MP2C	Mx	.065	1.2
34	MP2C	X	-59.962	4.72
35	MP2C	Z	103.857	4.72
36	MP2C	Mx	.065	4.72
37	MP3A	X	-15.167	1.97
38	MP3A	Z	26.269	1.97
39	MP3A	Mx	.014	1.97
40	MP3A	X	-15.167	3.96
41	MP3A	Z	26.269	3.96
42	MP3A	Mx	.014	3.96
43	MP3B	X	-21.989	1.97
44	MP3B	Z	38.086	1.97
45	MP3B	Mx	-.017	1.97
46	MP3B	X	-21.989	3.96
47	MP3B	Z	38.086	3.96
48	MP3B	Mx	-.017	3.96
49	MP3C	X	-34.811	1.97
50	MP3C	Z	60.295	1.97
51	MP3C	Mx	-.006	1.97
52	MP3C	X	-34.811	3.96
53	MP3C	Z	60.295	3.96
54	MP3C	Mx	-.006	3.96
55	MP1A	X	-61.55	.22
56	MP1A	Z	106.607	.22
57	MP1A	Mx	.116	.22
58	MP1A	X	-61.55	3.72
59	MP1A	Z	106.607	3.72
60	MP1A	Mx	.116	3.72
61	MP1B	X	-64.083	.22
62	MP1B	Z	110.995	.22
63	MP1B	Mx	-.098	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
64	MP1B	X	-64.083	3.72
65	MP1B	Z	110.995	3.72
66	MP1B	Mx	-.098	3.72
67	MP1C	X	-68.844	.22
68	MP1C	Z	119.241	.22
69	MP1C	Mx	-.024	.22
70	MP1C	X	-68.844	3.72
71	MP1C	Z	119.241	3.72
72	MP1C	Mx	-.024	3.72
73	MP4A	X	-61.55	.22
74	MP4A	Z	106.607	.22
75	MP4A	Mx	.116	.22
76	MP4A	X	-61.55	3.72
77	MP4A	Z	106.607	3.72
78	MP4A	Mx	.116	3.72
79	MP4B	X	-64.083	.22
80	MP4B	Z	110.995	.22
81	MP4B	Mx	-.098	.22
82	MP4B	X	-64.083	3.72
83	MP4B	Z	110.995	3.72
84	MP4B	Mx	-.098	3.72
85	MP4C	X	-68.844	.22
86	MP4C	Z	119.241	.22
87	MP4C	Mx	-.024	.22
88	MP4C	X	-68.844	3.72
89	MP4C	Z	119.241	3.72
90	MP4C	Mx	-.024	3.72
91	MP2A	X	-30.216	2.97
92	MP2A	Z	52.336	2.97
93	MP2A	Mx	-.028	2.97
94	MP2B	X	-34.177	2.97
95	MP2B	Z	59.196	2.97
96	MP2B	Mx	.026	2.97
97	MP2C	X	-41.62	2.97
98	MP2C	Z	72.088	2.97
99	MP2C	Mx	.007	2.97
100	MP1A	X	-24.712	1.97
101	MP1A	Z	42.802	1.97
102	MP1A	Mx	-.023	1.97
103	MP1B	X	-28.106	1.97
104	MP1B	Z	48.682	1.97
105	MP1B	Mx	.022	1.97
106	MP1C	X	-34.486	1.97
107	MP1C	Z	59.732	1.97
108	MP1C	Mx	.006	1.97
109	OVP1	X	-73.498	1
110	OVP1	Z	127.302	1
111	OVP1	Mx	0	1
112	OVP2	X	-73.498	1
113	OVP2	Z	127.302	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-47.164	1.2
2	MP2A	Z	27.23	1.2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP2A	Mx	.029	1.2
4	MP2A	X	-47.164	4.72
5	MP2A	Z	27.23	4.72
6	MP2A	Mx	.029	4.72
7	MP2B	X	-98.618	1.2
8	MP2B	Z	56.937	1.2
9	MP2B	Mx	.045	1.2
10	MP2B	X	-98.618	4.72
11	MP2B	Z	56.937	4.72
12	MP2B	Mx	.045	4.72
13	MP2C	X	-80.749	1.2
14	MP2C	Z	46.62	1.2
15	MP2C	Mx	-.088	1.2
16	MP2C	X	-80.749	4.72
17	MP2C	Z	46.62	4.72
18	MP2C	Mx	-.088	4.72
19	MP2A	X	-47.164	1.2
20	MP2A	Z	27.23	1.2
21	MP2A	Mx	.042	1.2
22	MP2A	X	-47.164	4.72
23	MP2A	Z	27.23	4.72
24	MP2A	Mx	.042	4.72
25	MP2B	X	-98.618	1.2
26	MP2B	Z	56.937	1.2
27	MP2B	Mx	-.097	1.2
28	MP2B	X	-98.618	4.72
29	MP2B	Z	56.937	4.72
30	MP2B	Mx	-.097	4.72
31	MP2C	X	-80.749	1.2
32	MP2C	Z	46.62	1.2
33	MP2C	Mx	.008	1.2
34	MP2C	X	-80.749	4.72
35	MP2C	Z	46.62	4.72
36	MP2C	Mx	.008	4.72
37	MP3A	X	-22.805	1.97
38	MP3A	Z	13.167	1.97
39	MP3A	Mx	.013	1.97
40	MP3A	X	-22.805	3.96
41	MP3A	Z	13.167	3.96
42	MP3A	Mx	.013	3.96
43	MP3B	X	-56.831	1.97
44	MP3B	Z	32.812	1.97
45	MP3B	Mx	-.011	1.97
46	MP3B	X	-56.831	3.96
47	MP3B	Z	32.812	3.96
48	MP3B	Mx	-.011	3.96
49	MP3C	X	-45.014	1.97
50	MP3C	Z	25.989	1.97
51	MP3C	Mx	-.017	1.97
52	MP3C	X	-45.014	3.96
53	MP3C	Z	25.989	3.96
54	MP3C	Mx	-.017	3.96
55	MP1A	X	-105.321	.22
56	MP1A	Z	60.807	.22
57	MP1A	Mx	.12	.22
58	MP1A	X	-105.321	3.72
59	MP1A	Z	60.807	3.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1A	Mx	.12	3.72
61	MP1B	X	-117.955	.22
62	MP1B	Z	68.101	.22
63	MP1B	Mx	-.047	.22
64	MP1B	X	-117.955	3.72
65	MP1B	Z	68.101	3.72
66	MP1B	Mx	-.047	3.72
67	MP1C	X	-113.567	.22
68	MP1C	Z	65.568	.22
69	MP1C	Mx	-.084	.22
70	MP1C	X	-113.567	3.72
71	MP1C	Z	65.568	3.72
72	MP1C	Mx	-.084	3.72
73	MP4A	X	-105.321	.22
74	MP4A	Z	60.807	.22
75	MP4A	Mx	.12	.22
76	MP4A	X	-105.321	3.72
77	MP4A	Z	60.807	3.72
78	MP4A	Mx	.12	3.72
79	MP4B	X	-117.955	.22
80	MP4B	Z	68.101	.22
81	MP4B	Mx	-.047	.22
82	MP4B	X	-117.955	3.72
83	MP4B	Z	68.101	3.72
84	MP4B	Mx	-.047	3.72
85	MP4C	X	-113.567	.22
86	MP4C	Z	65.568	.22
87	MP4C	Mx	-.084	.22
88	MP4C	X	-113.567	3.72
89	MP4C	Z	65.568	3.72
90	MP4C	Mx	-.084	3.72
91	MP2A	X	-50.325	2.97
92	MP2A	Z	29.055	2.97
93	MP2A	Mx	-.029	2.97
94	MP2B	X	-70.077	2.97
95	MP2B	Z	40.459	2.97
96	MP2B	Mx	.014	2.97
97	MP2C	X	-63.217	2.97
98	MP2C	Z	36.498	2.97
99	MP2C	Mx	.023	2.97
100	MP1A	X	-41.078	1.97
101	MP1A	Z	23.717	1.97
102	MP1A	Mx	-.023	1.97
103	MP1B	X	-58.008	1.97
104	MP1B	Z	33.491	1.97
105	MP1B	Mx	.011	1.97
106	MP1C	X	-52.129	1.97
107	MP1C	Z	30.097	1.97
108	MP1C	Mx	.019	1.97
109	OVP1	X	-120.564	1
110	OVP1	Z	69.607	1
111	OVP1	Mx	0	1
112	OVP2	X	-120.564	1
113	OVP2	Z	69.607	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-81.143	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	.007	1.2
4	MP2A	X	-81.143	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	.007	4.72
7	MP2B	X	-119.923	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	.093	1.2
10	MP2B	X	-119.923	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	.093	4.72
13	MP2C	X	-60.509	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	-.052	1.2
16	MP2C	X	-60.509	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	-.052	4.72
19	MP2A	X	-81.143	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	.076	1.2
22	MP2A	X	-81.143	4.72
23	MP2A	Z	0	4.72
24	MP2A	Mx	.076	4.72
25	MP2B	X	-119.923	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	-.065	1.2
28	MP2B	X	-119.923	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	-.065	4.72
31	MP2C	X	-60.509	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	-.024	1.2
34	MP2C	X	-60.509	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	-.024	4.72
37	MP3A	X	-43.978	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	.017	1.97
40	MP3A	X	-43.978	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	.017	3.96
43	MP3B	X	-69.623	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	.006	1.97
46	MP3B	X	-69.623	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	.006	3.96
49	MP3C	X	-30.333	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	-.014	1.97
52	MP3C	X	-30.333	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	-.014	3.96
55	MP1A	X	-128.166	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	.098	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-128.166	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	.098	3.72
61	MP1B	X	-137.688	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	.024	.22
64	MP1B	X	-137.688	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	.024	3.72
67	MP1C	X	-123.099	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	-.116	.22
70	MP1C	X	-123.099	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	-.116	3.72
73	MP4A	X	-128.166	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	.098	.22
76	MP4A	X	-128.166	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	.098	3.72
79	MP4B	X	-137.688	.22
80	MP4B	Z	0	.22
81	MP4B	Mx	.024	.22
82	MP4B	X	-137.688	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	.024	3.72
85	MP4C	X	-123.099	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	-.116	.22
88	MP4C	X	-123.099	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	-.116	3.72
91	MP2A	X	-68.353	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	-.026	2.97
94	MP2B	X	-83.239	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	-.007	2.97
97	MP2C	X	-60.432	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	.028	2.97
100	MP1A	X	-56.213	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	-.022	1.97
103	MP1B	X	-68.972	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	-.006	1.97
106	MP1C	X	-49.423	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	.023	1.97
109	OVP1	X	-146.996	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	-146.996	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-98.618	1.2
2	MP2A	Z	-56.937	1.2
3	MP2A	Mx	-.045	1.2
4	MP2A	X	-98.618	4.72
5	MP2A	Z	-56.937	4.72
6	MP2A	Mx	-.045	4.72
7	MP2B	X	-80.749	1.2
8	MP2B	Z	-46.62	1.2
9	MP2B	Mx	.088	1.2
10	MP2B	X	-80.749	4.72
11	MP2B	Z	-46.62	4.72
12	MP2B	Mx	.088	4.72
13	MP2C	X	-47.164	1.2
14	MP2C	Z	-27.23	1.2
15	MP2C	Mx	-.029	1.2
16	MP2C	X	-47.164	4.72
17	MP2C	Z	-27.23	4.72
18	MP2C	Mx	-.029	4.72
19	MP2A	X	-98.618	1.2
20	MP2A	Z	-56.937	1.2
21	MP2A	Mx	.097	1.2
22	MP2A	X	-98.618	4.72
23	MP2A	Z	-56.937	4.72
24	MP2A	Mx	.097	4.72
25	MP2B	X	-80.749	1.2
26	MP2B	Z	-46.62	1.2
27	MP2B	Mx	-.008	1.2
28	MP2B	X	-80.749	4.72
29	MP2B	Z	-46.62	4.72
30	MP2B	Mx	-.008	4.72
31	MP2C	X	-47.164	1.2
32	MP2C	Z	-27.23	1.2
33	MP2C	Mx	-.042	1.2
34	MP2C	X	-47.164	4.72
35	MP2C	Z	-27.23	4.72
36	MP2C	Mx	-.042	4.72
37	MP3A	X	-56.831	1.97
38	MP3A	Z	-32.812	1.97
39	MP3A	Mx	.011	1.97
40	MP3A	X	-56.831	3.96
41	MP3A	Z	-32.812	3.96
42	MP3A	Mx	.011	3.96
43	MP3B	X	-45.014	1.97
44	MP3B	Z	-25.989	1.97
45	MP3B	Mx	.017	1.97
46	MP3B	X	-45.014	3.96
47	MP3B	Z	-25.989	3.96
48	MP3B	Mx	.017	3.96
49	MP3C	X	-22.805	1.97
50	MP3C	Z	-13.167	1.97
51	MP3C	Mx	-.013	1.97
52	MP3C	X	-22.805	3.96
53	MP3C	Z	-13.167	3.96
54	MP3C	Mx	-.013	3.96
55	MP1A	X	-117.955	.22
56	MP1A	Z	-68.101	.22
57	MP1A	Mx	.047	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-117.955	3.72
59	MP1A	Z	-68.101	3.72
60	MP1A	Mx	.047	3.72
61	MP1B	X	-113.567	.22
62	MP1B	Z	-65.568	.22
63	MP1B	Mx	.084	.22
64	MP1B	X	-113.567	3.72
65	MP1B	Z	-65.568	3.72
66	MP1B	Mx	.084	3.72
67	MP1C	X	-105.321	.22
68	MP1C	Z	-60.807	.22
69	MP1C	Mx	-.12	.22
70	MP1C	X	-105.321	3.72
71	MP1C	Z	-60.807	3.72
72	MP1C	Mx	-.12	3.72
73	MP4A	X	-117.955	.22
74	MP4A	Z	-68.101	.22
75	MP4A	Mx	.047	.22
76	MP4A	X	-117.955	3.72
77	MP4A	Z	-68.101	3.72
78	MP4A	Mx	.047	3.72
79	MP4B	X	-113.567	.22
80	MP4B	Z	-65.568	.22
81	MP4B	Mx	.084	.22
82	MP4B	X	-113.567	3.72
83	MP4B	Z	-65.568	3.72
84	MP4B	Mx	.084	3.72
85	MP4C	X	-105.321	.22
86	MP4C	Z	-60.807	.22
87	MP4C	Mx	-.12	.22
88	MP4C	X	-105.321	3.72
89	MP4C	Z	-60.807	3.72
90	MP4C	Mx	-.12	3.72
91	MP2A	X	-70.077	2.97
92	MP2A	Z	-40.459	2.97
93	MP2A	Mx	-.014	2.97
94	MP2B	X	-63.217	2.97
95	MP2B	Z	-36.498	2.97
96	MP2B	Mx	-.023	2.97
97	MP2C	X	-50.325	2.97
98	MP2C	Z	-29.055	2.97
99	MP2C	Mx	.029	2.97
100	MP1A	X	-58.008	1.97
101	MP1A	Z	-33.491	1.97
102	MP1A	Mx	-.011	1.97
103	MP1B	X	-52.129	1.97
104	MP1B	Z	-30.097	1.97
105	MP1B	Mx	-.019	1.97
106	MP1C	X	-41.078	1.97
107	MP1C	Z	-23.717	1.97
108	MP1C	Mx	.023	1.97
109	OVP1	X	-140.779	1
110	OVP1	Z	-81.279	1
111	OVP1	Mx	0	1
112	OVP2	X	-140.779	1
113	OVP2	Z	-81.279	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-59.962	1.2
2	MP2A	Z	-103.857	1.2
3	MP2A	Mx	-.093	1.2
4	MP2A	X	-59.962	4.72
5	MP2A	Z	-103.857	4.72
6	MP2A	Mx	-.093	4.72
7	MP2B	X	-30.255	1.2
8	MP2B	Z	-52.403	1.2
9	MP2B	Mx	.052	1.2
10	MP2B	X	-30.255	4.72
11	MP2B	Z	-52.403	4.72
12	MP2B	Mx	.052	4.72
13	MP2C	X	-40.572	1.2
14	MP2C	Z	-70.272	1.2
15	MP2C	Mx	-.007	1.2
16	MP2C	X	-40.572	4.72
17	MP2C	Z	-70.272	4.72
18	MP2C	Mx	-.007	4.72
19	MP2A	X	-59.962	1.2
20	MP2A	Z	-103.857	1.2
21	MP2A	Mx	.065	1.2
22	MP2A	X	-59.962	4.72
23	MP2A	Z	-103.857	4.72
24	MP2A	Mx	.065	4.72
25	MP2B	X	-30.255	1.2
26	MP2B	Z	-52.403	1.2
27	MP2B	Mx	.024	1.2
28	MP2B	X	-30.255	4.72
29	MP2B	Z	-52.403	4.72
30	MP2B	Mx	.024	4.72
31	MP2C	X	-40.572	1.2
32	MP2C	Z	-70.272	1.2
33	MP2C	Mx	-.076	1.2
34	MP2C	X	-40.572	4.72
35	MP2C	Z	-70.272	4.72
36	MP2C	Mx	-.076	4.72
37	MP3A	X	-34.811	1.97
38	MP3A	Z	-60.295	1.97
39	MP3A	Mx	-.006	1.97
40	MP3A	X	-34.811	3.96
41	MP3A	Z	-60.295	3.96
42	MP3A	Mx	-.006	3.96
43	MP3B	X	-15.167	1.97
44	MP3B	Z	-26.269	1.97
45	MP3B	Mx	.014	1.97
46	MP3B	X	-15.167	3.96
47	MP3B	Z	-26.269	3.96
48	MP3B	Mx	.014	3.96
49	MP3C	X	-21.989	1.97
50	MP3C	Z	-38.086	1.97
51	MP3C	Mx	-.017	1.97
52	MP3C	X	-21.989	3.96
53	MP3C	Z	-38.086	3.96
54	MP3C	Mx	-.017	3.96
55	MP1A	X	-68.844	.22
56	MP1A	Z	-119.241	.22
57	MP1A	Mx	-.024	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-68.844	3.72
59	MP1A	Z	-119.241	3.72
60	MP1A	Mx	-.024	3.72
61	MP1B	X	-61.55	.22
62	MP1B	Z	-106.607	.22
63	MP1B	Mx	.116	.22
64	MP1B	X	-61.55	3.72
65	MP1B	Z	-106.607	3.72
66	MP1B	Mx	.116	3.72
67	MP1C	X	-64.083	.22
68	MP1C	Z	-110.995	.22
69	MP1C	Mx	-.098	.22
70	MP1C	X	-64.083	3.72
71	MP1C	Z	-110.995	3.72
72	MP1C	Mx	-.098	3.72
73	MP4A	X	-68.844	.22
74	MP4A	Z	-119.241	.22
75	MP4A	Mx	-.024	.22
76	MP4A	X	-68.844	3.72
77	MP4A	Z	-119.241	3.72
78	MP4A	Mx	-.024	3.72
79	MP4B	X	-61.55	.22
80	MP4B	Z	-106.607	.22
81	MP4B	Mx	.116	.22
82	MP4B	X	-61.55	3.72
83	MP4B	Z	-106.607	3.72
84	MP4B	Mx	.116	3.72
85	MP4C	X	-64.083	.22
86	MP4C	Z	-110.995	.22
87	MP4C	Mx	-.098	.22
88	MP4C	X	-64.083	3.72
89	MP4C	Z	-110.995	3.72
90	MP4C	Mx	-.098	3.72
91	MP2A	X	-41.62	2.97
92	MP2A	Z	-72.088	2.97
93	MP2A	Mx	.007	2.97
94	MP2B	X	-30.216	2.97
95	MP2B	Z	-52.336	2.97
96	MP2B	Mx	-.028	2.97
97	MP2C	X	-34.177	2.97
98	MP2C	Z	-59.196	2.97
99	MP2C	Mx	.026	2.97
100	MP1A	X	-34.486	1.97
101	MP1A	Z	-59.732	1.97
102	MP1A	Mx	.006	1.97
103	MP1B	X	-24.712	1.97
104	MP1B	Z	-42.802	1.97
105	MP1B	Mx	-.023	1.97
106	MP1C	X	-28.106	1.97
107	MP1C	Z	-48.682	1.97
108	MP1C	Mx	.022	1.97
109	OVP1	X	-85.169	1
110	OVP1	Z	-147.518	1
111	OVP1	Mx	0	1
112	OVP2	X	-85.169	1
113	OVP2	Z	-147.518	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	-27.925	1.2
3	MP2A	Mx	-.026	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	-27.925	4.72
6	MP2A	Mx	-.026	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	-22.388	1.2
9	MP2B	Mx	.012	1.2
10	MP2B	X	0	4.72
11	MP2B	Z	-22.388	4.72
12	MP2B	Mx	.012	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	-30.872	1.2
15	MP2C	Mx	.012	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	-30.872	4.72
18	MP2C	Mx	.012	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	-27.925	1.2
21	MP2A	Mx	.002	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	-27.925	4.72
24	MP2A	Mx	.002	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	-22.388	1.2
27	MP2B	Mx	.017	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	-22.388	4.72
30	MP2B	Mx	.017	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	-30.872	1.2
33	MP2C	Mx	-.026	1.2
34	MP2C	X	0	4.72
35	MP2C	Z	-30.872	4.72
36	MP2C	Mx	-.026	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	-11.853	1.97
39	MP3A	Mx	-.004	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	-11.853	3.96
42	MP3A	Mx	-.004	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	-6.844	1.97
45	MP3B	Mx	.003	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	-6.844	3.96
48	MP3B	Mx	.003	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	-14.518	1.97
51	MP3C	Mx	-.002	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	-14.518	3.96
54	MP3C	Mx	-.002	3.96
55	MP1A	X	0	.22
56	MP1A	Z	-23.336	.22
57	MP1A	Mx	-.015	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	0	3.72
59	MP1A	Z	-23.336	3.72
60	MP1A	Mx	-.015	3.72
61	MP1B	X	0	.22
62	MP1B	Z	-21.773	.22
63	MP1B	Mx	.021	.22
64	MP1B	X	0	3.72
65	MP1B	Z	-21.773	3.72
66	MP1B	Mx	.021	3.72
67	MP1C	X	0	.22
68	MP1C	Z	-24.168	.22
69	MP1C	Mx	-.008	.22
70	MP1C	X	0	3.72
71	MP1C	Z	-24.168	3.72
72	MP1C	Mx	-.008	3.72
73	MP4A	X	0	.22
74	MP4A	Z	-23.336	.22
75	MP4A	Mx	-.015	.22
76	MP4A	X	0	3.72
77	MP4A	Z	-23.336	3.72
78	MP4A	Mx	-.015	3.72
79	MP4B	X	0	.22
80	MP4B	Z	-21.773	.22
81	MP4B	Mx	.021	.22
82	MP4B	X	0	3.72
83	MP4B	Z	-21.773	3.72
84	MP4B	Mx	.021	3.72
85	MP4C	X	0	.22
86	MP4C	Z	-24.168	.22
87	MP4C	Mx	-.008	.22
88	MP4C	X	0	3.72
89	MP4C	Z	-24.168	3.72
90	MP4C	Mx	-.008	3.72
91	MP2A	X	0	2.97
92	MP2A	Z	-14.138	2.97
93	MP2A	Mx	.005	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	-11.521	2.97
96	MP2B	Mx	-.006	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	-15.53	2.97
99	MP2C	Mx	.003	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	-14.057	1.97
102	MP1A	Mx	.005	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	-11.331	1.97
105	MP1B	Mx	-.006	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	-15.507	1.97
108	MP1C	Mx	.003	1.97
109	OVP1	X	0	1
110	OVP1	Z	-31.25	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	-31.25	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	11.626	1.2
2	MP2A	Z	-20.136	1.2
3	MP2A	Mx	-.02	1.2
4	MP2A	X	11.626	4.72
5	MP2A	Z	-20.136	4.72
6	MP2A	Mx	-.02	4.72
7	MP2B	X	13.099	1.2
8	MP2B	Z	-22.688	1.2
9	MP2B	Mx	.002	1.2
10	MP2B	X	13.099	4.72
11	MP2B	Z	-22.688	4.72
12	MP2B	Mx	.002	4.72
13	MP2C	X	15.868	1.2
14	MP2C	Z	-27.484	1.2
15	MP2C	Mx	.025	1.2
16	MP2C	X	15.868	4.72
17	MP2C	Z	-27.484	4.72
18	MP2C	Mx	.025	4.72
19	MP2A	X	11.626	1.2
20	MP2A	Z	-20.136	1.2
21	MP2A	Mx	-.009	1.2
22	MP2A	X	11.626	4.72
23	MP2A	Z	-20.136	4.72
24	MP2A	Mx	-.009	4.72
25	MP2B	X	13.099	1.2
26	MP2B	Z	-22.688	1.2
27	MP2B	Mx	.025	1.2
28	MP2B	X	13.099	4.72
29	MP2B	Z	-22.688	4.72
30	MP2B	Mx	.025	4.72
31	MP2C	X	15.868	1.2
32	MP2C	Z	-27.484	1.2
33	MP2C	Mx	-.017	1.2
34	MP2C	X	15.868	4.72
35	MP2C	Z	-27.484	4.72
36	MP2C	Mx	-.017	4.72
37	MP3A	X	3.813	1.97
38	MP3A	Z	-6.604	1.97
39	MP3A	Mx	-.004	1.97
40	MP3A	X	3.813	3.96
41	MP3A	Z	-6.604	3.96
42	MP3A	Mx	-.004	3.96
43	MP3B	X	5.145	1.97
44	MP3B	Z	-8.912	1.97
45	MP3B	Mx	.004	1.97
46	MP3B	X	5.145	3.96
47	MP3B	Z	-8.912	3.96
48	MP3B	Mx	.004	3.96
49	MP3C	X	7.65	1.97
50	MP3C	Z	-13.25	1.97
51	MP3C	Mx	.001	1.97
52	MP3C	X	7.65	3.96
53	MP3C	Z	-13.25	3.96
54	MP3C	Mx	.001	3.96
55	MP1A	X	11.009	.22
56	MP1A	Z	-19.067	.22
57	MP1A	Mx	-.021	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	11.009	3.72
59	MP1A	Z	-19.067	3.72
60	MP1A	Mx	-.021	3.72
61	MP1B	X	11.424	.22
62	MP1B	Z	-19.788	.22
63	MP1B	Mx	.018	.22
64	MP1B	X	11.424	3.72
65	MP1B	Z	-19.788	3.72
66	MP1B	Mx	.018	3.72
67	MP1C	X	12.206	.22
68	MP1C	Z	-21.141	.22
69	MP1C	Mx	.004	.22
70	MP1C	X	12.206	3.72
71	MP1C	Z	-21.141	3.72
72	MP1C	Mx	.004	3.72
73	MP4A	X	11.009	.22
74	MP4A	Z	-19.067	.22
75	MP4A	Mx	-.021	.22
76	MP4A	X	11.009	3.72
77	MP4A	Z	-19.067	3.72
78	MP4A	Mx	-.021	3.72
79	MP4B	X	11.424	.22
80	MP4B	Z	-19.788	.22
81	MP4B	Mx	.018	.22
82	MP4B	X	11.424	3.72
83	MP4B	Z	-19.788	3.72
84	MP4B	Mx	.018	3.72
85	MP4C	X	12.206	.22
86	MP4C	Z	-21.141	.22
87	MP4C	Mx	.004	.22
88	MP4C	X	12.206	3.72
89	MP4C	Z	-21.141	3.72
90	MP4C	Mx	.004	3.72
91	MP2A	X	5.965	2.97
92	MP2A	Z	-10.331	2.97
93	MP2A	Mx	.006	2.97
94	MP2B	X	6.661	2.97
95	MP2B	Z	-11.537	2.97
96	MP2B	Mx	-.005	2.97
97	MP2C	X	7.969	2.97
98	MP2C	Z	-13.803	2.97
99	MP2C	Mx	-.001	2.97
100	MP1A	X	5.878	1.97
101	MP1A	Z	-10.181	1.97
102	MP1A	Mx	.006	1.97
103	MP1B	X	6.603	1.97
104	MP1B	Z	-11.437	1.97
105	MP1B	Mx	-.005	1.97
106	MP1C	X	7.966	1.97
107	MP1C	Z	-13.798	1.97
108	MP1C	Mx	-.001	1.97
109	OVP1	X	13.823	1
110	OVP1	Z	-23.942	1
111	OVP1	Mx	0	1
112	OVP2	X	13.823	1
113	OVP2	Z	-23.942	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	19.388	1.2
2	MP2A	Z	-11.194	1.2
3	MP2A	Mx	-.012	1.2
4	MP2A	X	19.388	4.72
5	MP2A	Z	-11.194	4.72
6	MP2A	Mx	-.012	4.72
7	MP2B	X	26.736	1.2
8	MP2B	Z	-15.436	1.2
9	MP2B	Mx	-.012	1.2
10	MP2B	X	26.736	4.72
11	MP2B	Z	-15.436	4.72
12	MP2B	Mx	-.012	4.72
13	MP2C	X	24.184	1.2
14	MP2C	Z	-13.963	1.2
15	MP2C	Mx	.026	1.2
16	MP2C	X	24.184	4.72
17	MP2C	Z	-13.963	4.72
18	MP2C	Mx	.026	4.72
19	MP2A	X	19.388	1.2
20	MP2A	Z	-11.194	1.2
21	MP2A	Mx	-.017	1.2
22	MP2A	X	19.388	4.72
23	MP2A	Z	-11.194	4.72
24	MP2A	Mx	-.017	4.72
25	MP2B	X	26.736	1.2
26	MP2B	Z	-15.436	1.2
27	MP2B	Mx	.026	1.2
28	MP2B	X	26.736	4.72
29	MP2B	Z	-15.436	4.72
30	MP2B	Mx	.026	4.72
31	MP2C	X	24.184	1.2
32	MP2C	Z	-13.963	1.2
33	MP2C	Mx	-.002	1.2
34	MP2C	X	24.184	4.72
35	MP2C	Z	-13.963	4.72
36	MP2C	Mx	-.002	4.72
37	MP3A	X	5.927	1.97
38	MP3A	Z	-3.422	1.97
39	MP3A	Mx	-.003	1.97
40	MP3A	X	5.927	3.96
41	MP3A	Z	-3.422	3.96
42	MP3A	Mx	-.003	3.96
43	MP3B	X	12.573	1.97
44	MP3B	Z	-7.259	1.97
45	MP3B	Mx	.002	1.97
46	MP3B	X	12.573	3.96
47	MP3B	Z	-7.259	3.96
48	MP3B	Mx	.002	3.96
49	MP3C	X	10.265	1.97
50	MP3C	Z	-5.926	1.97
51	MP3C	Mx	.004	1.97
52	MP3C	X	10.265	3.96
53	MP3C	Z	-5.926	3.96
54	MP3C	Mx	.004	3.96
55	MP1A	X	18.856	.22
56	MP1A	Z	-10.887	.22
57	MP1A	Mx	-.021	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	18.856	3.72
59	MP1A	Z	-10.887	3.72
60	MP1A	Mx	-.021	3.72
61	MP1B	X	20.93	.22
62	MP1B	Z	-12.084	.22
63	MP1B	Mx	.008	.22
64	MP1B	X	20.93	3.72
65	MP1B	Z	-12.084	3.72
66	MP1B	Mx	.008	3.72
67	MP1C	X	20.21	.22
68	MP1C	Z	-11.668	.22
69	MP1C	Mx	.015	.22
70	MP1C	X	20.21	3.72
71	MP1C	Z	-11.668	3.72
72	MP1C	Mx	.015	3.72
73	MP4A	X	18.856	.22
74	MP4A	Z	-10.887	.22
75	MP4A	Mx	-.021	.22
76	MP4A	X	18.856	3.72
77	MP4A	Z	-10.887	3.72
78	MP4A	Mx	-.021	3.72
79	MP4B	X	20.93	.22
80	MP4B	Z	-12.084	.22
81	MP4B	Mx	.008	.22
82	MP4B	X	20.93	3.72
83	MP4B	Z	-12.084	3.72
84	MP4B	Mx	.008	3.72
85	MP4C	X	20.21	.22
86	MP4C	Z	-11.668	.22
87	MP4C	Mx	.015	.22
88	MP4C	X	20.21	3.72
89	MP4C	Z	-11.668	3.72
90	MP4C	Mx	.015	3.72
91	MP2A	X	9.977	2.97
92	MP2A	Z	-5.761	2.97
93	MP2A	Mx	.006	2.97
94	MP2B	X	13.449	2.97
95	MP2B	Z	-7.765	2.97
96	MP2B	Mx	-.003	2.97
97	MP2C	X	12.244	2.97
98	MP2C	Z	-7.069	2.97
99	MP2C	Mx	-.005	2.97
100	MP1A	X	9.813	1.97
101	MP1A	Z	-5.666	1.97
102	MP1A	Mx	.006	1.97
103	MP1B	X	13.429	1.97
104	MP1B	Z	-7.754	1.97
105	MP1B	Mx	-.003	1.97
106	MP1C	X	12.173	1.97
107	MP1C	Z	-7.028	1.97
108	MP1C	Mx	-.005	1.97
109	OVP1	X	22.381	1
110	OVP1	Z	-12.922	1
111	OVP1	Mx	0	1
112	OVP2	X	22.381	1
113	OVP2	Z	-12.922	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	26.198	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-.002	1.2
4	MP2A	X	26.198	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	-.002	4.72
7	MP2B	X	31.736	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	-.025	1.2
10	MP2B	X	31.736	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	-.025	4.72
13	MP2C	X	23.251	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	.02	1.2
16	MP2C	X	23.251	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	.02	4.72
19	MP2A	X	26.198	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	-.025	1.2
22	MP2A	X	26.198	4.72
23	MP2A	Z	0	4.72
24	MP2A	Mx	-.025	4.72
25	MP2B	X	31.736	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	.017	1.2
28	MP2B	X	31.736	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	.017	4.72
31	MP2C	X	23.251	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	.009	1.2
34	MP2C	X	23.251	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	.009	4.72
37	MP3A	X	10.29	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	-.004	1.97
40	MP3A	X	10.29	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	-.004	3.96
43	MP3B	X	15.299	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	-.001	1.97
46	MP3B	X	15.299	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	-.001	3.96
49	MP3C	X	7.625	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	.004	1.97
52	MP3C	X	7.625	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	.004	3.96
55	MP1A	X	22.849	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	-.018	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	22.849	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	-.018	3.72
61	MP1B	X	24.412	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	-.004	.22
64	MP1B	X	24.412	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	-.004	3.72
67	MP1C	X	22.017	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	.021	.22
70	MP1C	X	22.017	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	.021	3.72
73	MP4A	X	22.849	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	-.018	.22
76	MP4A	X	22.849	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	-.018	3.72
79	MP4B	X	24.412	.22
80	MP4B	Z	0	.22
81	MP4B	Mx	-.004	.22
82	MP4B	X	24.412	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	-.004	3.72
85	MP4C	X	22.017	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	.021	.22
88	MP4C	X	22.017	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	.021	3.72
91	MP2A	X	13.321	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	.005	2.97
94	MP2B	X	15.938	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	.001	2.97
97	MP2C	X	11.929	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	-.006	2.97
100	MP1A	X	13.206	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	.005	1.97
103	MP1B	X	15.932	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	.001	1.97
106	MP1C	X	11.756	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	-.006	1.97
109	OVP1	X	27.646	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	27.646	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	26.736	1.2
2	MP2A	Z	15.436	1.2
3	MP2A	Mx	.012	1.2
4	MP2A	X	26.736	4.72
5	MP2A	Z	15.436	4.72
6	MP2A	Mx	.012	4.72
7	MP2B	X	24.184	1.2
8	MP2B	Z	13.963	1.2
9	MP2B	Mx	-.026	1.2
10	MP2B	X	24.184	4.72
11	MP2B	Z	13.963	4.72
12	MP2B	Mx	-.026	4.72
13	MP2C	X	19.388	1.2
14	MP2C	Z	11.194	1.2
15	MP2C	Mx	.012	1.2
16	MP2C	X	19.388	4.72
17	MP2C	Z	11.194	4.72
18	MP2C	Mx	.012	4.72
19	MP2A	X	26.736	1.2
20	MP2A	Z	15.436	1.2
21	MP2A	Mx	-.026	1.2
22	MP2A	X	26.736	4.72
23	MP2A	Z	15.436	4.72
24	MP2A	Mx	-.026	4.72
25	MP2B	X	24.184	1.2
26	MP2B	Z	13.963	1.2
27	MP2B	Mx	.002	1.2
28	MP2B	X	24.184	4.72
29	MP2B	Z	13.963	4.72
30	MP2B	Mx	.002	4.72
31	MP2C	X	19.388	1.2
32	MP2C	Z	11.194	1.2
33	MP2C	Mx	.017	1.2
34	MP2C	X	19.388	4.72
35	MP2C	Z	11.194	4.72
36	MP2C	Mx	.017	4.72
37	MP3A	X	12.573	1.97
38	MP3A	Z	7.259	1.97
39	MP3A	Mx	-.002	1.97
40	MP3A	X	12.573	3.96
41	MP3A	Z	7.259	3.96
42	MP3A	Mx	-.002	3.96
43	MP3B	X	10.265	1.97
44	MP3B	Z	5.926	1.97
45	MP3B	Mx	-.004	1.97
46	MP3B	X	10.265	3.96
47	MP3B	Z	5.926	3.96
48	MP3B	Mx	-.004	3.96
49	MP3C	X	5.927	1.97
50	MP3C	Z	3.422	1.97
51	MP3C	Mx	.003	1.97
52	MP3C	X	5.927	3.96
53	MP3C	Z	3.422	3.96
54	MP3C	Mx	.003	3.96
55	MP1A	X	20.93	.22
56	MP1A	Z	12.084	.22
57	MP1A	Mx	-.008	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	20.93	3.72
59	MP1A	Z	12.084	3.72
60	MP1A	Mx	-.008	3.72
61	MP1B	X	20.21	.22
62	MP1B	Z	11.668	.22
63	MP1B	Mx	-.015	.22
64	MP1B	X	20.21	3.72
65	MP1B	Z	11.668	3.72
66	MP1B	Mx	-.015	3.72
67	MP1C	X	18.856	.22
68	MP1C	Z	10.887	.22
69	MP1C	Mx	.021	.22
70	MP1C	X	18.856	3.72
71	MP1C	Z	10.887	3.72
72	MP1C	Mx	.021	3.72
73	MP4A	X	20.93	.22
74	MP4A	Z	12.084	.22
75	MP4A	Mx	-.008	.22
76	MP4A	X	20.93	3.72
77	MP4A	Z	12.084	3.72
78	MP4A	Mx	-.008	3.72
79	MP4B	X	20.21	.22
80	MP4B	Z	11.668	.22
81	MP4B	Mx	-.015	.22
82	MP4B	X	20.21	3.72
83	MP4B	Z	11.668	3.72
84	MP4B	Mx	-.015	3.72
85	MP4C	X	18.856	.22
86	MP4C	Z	10.887	.22
87	MP4C	Mx	.021	.22
88	MP4C	X	18.856	3.72
89	MP4C	Z	10.887	3.72
90	MP4C	Mx	.021	3.72
91	MP2A	X	13.449	2.97
92	MP2A	Z	7.765	2.97
93	MP2A	Mx	.003	2.97
94	MP2B	X	12.244	2.97
95	MP2B	Z	7.069	2.97
96	MP2B	Mx	.005	2.97
97	MP2C	X	9.977	2.97
98	MP2C	Z	5.761	2.97
99	MP2C	Mx	-.006	2.97
100	MP1A	X	13.429	1.97
101	MP1A	Z	7.754	1.97
102	MP1A	Mx	.003	1.97
103	MP1B	X	12.173	1.97
104	MP1B	Z	7.028	1.97
105	MP1B	Mx	.005	1.97
106	MP1C	X	9.813	1.97
107	MP1C	Z	5.666	1.97
108	MP1C	Mx	-.006	1.97
109	OVP1	X	27.063	1
110	OVP1	Z	15.625	1
111	OVP1	Mx	0	1
112	OVP2	X	27.063	1
113	OVP2	Z	15.625	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	15.868	1.2
2	MP2A	Z	27.484	1.2
3	MP2A	Mx	.025	1.2
4	MP2A	X	15.868	4.72
5	MP2A	Z	27.484	4.72
6	MP2A	Mx	.025	4.72
7	MP2B	X	11.626	1.2
8	MP2B	Z	20.136	1.2
9	MP2B	Mx	-.02	1.2
10	MP2B	X	11.626	4.72
11	MP2B	Z	20.136	4.72
12	MP2B	Mx	-.02	4.72
13	MP2C	X	13.099	1.2
14	MP2C	Z	22.688	1.2
15	MP2C	Mx	.002	1.2
16	MP2C	X	13.099	4.72
17	MP2C	Z	22.688	4.72
18	MP2C	Mx	.002	4.72
19	MP2A	X	15.868	1.2
20	MP2A	Z	27.484	1.2
21	MP2A	Mx	-.017	1.2
22	MP2A	X	15.868	4.72
23	MP2A	Z	27.484	4.72
24	MP2A	Mx	-.017	4.72
25	MP2B	X	11.626	1.2
26	MP2B	Z	20.136	1.2
27	MP2B	Mx	-.009	1.2
28	MP2B	X	11.626	4.72
29	MP2B	Z	20.136	4.72
30	MP2B	Mx	-.009	4.72
31	MP2C	X	13.099	1.2
32	MP2C	Z	22.688	1.2
33	MP2C	Mx	.025	1.2
34	MP2C	X	13.099	4.72
35	MP2C	Z	22.688	4.72
36	MP2C	Mx	.025	4.72
37	MP3A	X	7.65	1.97
38	MP3A	Z	13.25	1.97
39	MP3A	Mx	.001	1.97
40	MP3A	X	7.65	3.96
41	MP3A	Z	13.25	3.96
42	MP3A	Mx	.001	3.96
43	MP3B	X	3.813	1.97
44	MP3B	Z	6.604	1.97
45	MP3B	Mx	-.004	1.97
46	MP3B	X	3.813	3.96
47	MP3B	Z	6.604	3.96
48	MP3B	Mx	-.004	3.96
49	MP3C	X	5.145	1.97
50	MP3C	Z	8.912	1.97
51	MP3C	Mx	.004	1.97
52	MP3C	X	5.145	3.96
53	MP3C	Z	8.912	3.96
54	MP3C	Mx	.004	3.96
55	MP1A	X	12.206	.22
56	MP1A	Z	21.141	.22
57	MP1A	Mx	.004	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	12.206	3.72
59	MP1A	Z	21.141	3.72
60	MP1A	Mx	.004	3.72
61	MP1B	X	11.009	.22
62	MP1B	Z	19.067	.22
63	MP1B	Mx	-.021	.22
64	MP1B	X	11.009	3.72
65	MP1B	Z	19.067	3.72
66	MP1B	Mx	-.021	3.72
67	MP1C	X	11.424	.22
68	MP1C	Z	19.788	.22
69	MP1C	Mx	.018	.22
70	MP1C	X	11.424	3.72
71	MP1C	Z	19.788	3.72
72	MP1C	Mx	.018	3.72
73	MP4A	X	12.206	.22
74	MP4A	Z	21.141	.22
75	MP4A	Mx	.004	.22
76	MP4A	X	12.206	3.72
77	MP4A	Z	21.141	3.72
78	MP4A	Mx	.004	3.72
79	MP4B	X	11.009	.22
80	MP4B	Z	19.067	.22
81	MP4B	Mx	-.021	.22
82	MP4B	X	11.009	3.72
83	MP4B	Z	19.067	3.72
84	MP4B	Mx	-.021	3.72
85	MP4C	X	11.424	.22
86	MP4C	Z	19.788	.22
87	MP4C	Mx	.018	.22
88	MP4C	X	11.424	3.72
89	MP4C	Z	19.788	3.72
90	MP4C	Mx	.018	3.72
91	MP2A	X	7.969	2.97
92	MP2A	Z	13.803	2.97
93	MP2A	Mx	-.001	2.97
94	MP2B	X	5.965	2.97
95	MP2B	Z	10.331	2.97
96	MP2B	Mx	.006	2.97
97	MP2C	X	6.661	2.97
98	MP2C	Z	11.537	2.97
99	MP2C	Mx	-.005	2.97
100	MP1A	X	7.966	1.97
101	MP1A	Z	13.798	1.97
102	MP1A	Mx	-.001	1.97
103	MP1B	X	5.878	1.97
104	MP1B	Z	10.181	1.97
105	MP1B	Mx	.006	1.97
106	MP1C	X	6.603	1.97
107	MP1C	Z	11.437	1.97
108	MP1C	Mx	-.005	1.97
109	OVP1	X	16.526	1
110	OVP1	Z	28.623	1
111	OVP1	Mx	0	1
112	OVP2	X	16.526	1
113	OVP2	Z	28.623	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	27.925	1.2
3	MP2A	Mx	.026	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	27.925	4.72
6	MP2A	Mx	.026	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	22.388	1.2
9	MP2B	Mx	-.012	1.2
10	MP2B	X	0	4.72
11	MP2B	Z	22.388	4.72
12	MP2B	Mx	-.012	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	30.872	1.2
15	MP2C	Mx	-.012	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	30.872	4.72
18	MP2C	Mx	-.012	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	27.925	1.2
21	MP2A	Mx	-.002	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	27.925	4.72
24	MP2A	Mx	-.002	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	22.388	1.2
27	MP2B	Mx	-.017	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	22.388	4.72
30	MP2B	Mx	-.017	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	30.872	1.2
33	MP2C	Mx	.026	1.2
34	MP2C	X	0	4.72
35	MP2C	Z	30.872	4.72
36	MP2C	Mx	.026	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	11.853	1.97
39	MP3A	Mx	.004	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	11.853	3.96
42	MP3A	Mx	.004	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	6.844	1.97
45	MP3B	Mx	-.003	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	6.844	3.96
48	MP3B	Mx	-.003	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	14.518	1.97
51	MP3C	Mx	.002	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	14.518	3.96
54	MP3C	Mx	.002	3.96
55	MP1A	X	0	.22
56	MP1A	Z	23.336	.22
57	MP1A	Mx	.015	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	0	3.72
59	MP1A	Z	23.336	3.72
60	MP1A	Mx	.015	3.72
61	MP1B	X	0	.22
62	MP1B	Z	21.773	.22
63	MP1B	Mx	-.021	.22
64	MP1B	X	0	3.72
65	MP1B	Z	21.773	3.72
66	MP1B	Mx	-.021	3.72
67	MP1C	X	0	.22
68	MP1C	Z	24.168	.22
69	MP1C	Mx	.008	.22
70	MP1C	X	0	3.72
71	MP1C	Z	24.168	3.72
72	MP1C	Mx	.008	3.72
73	MP4A	X	0	.22
74	MP4A	Z	23.336	.22
75	MP4A	Mx	.015	.22
76	MP4A	X	0	3.72
77	MP4A	Z	23.336	3.72
78	MP4A	Mx	.015	3.72
79	MP4B	X	0	.22
80	MP4B	Z	21.773	.22
81	MP4B	Mx	-.021	.22
82	MP4B	X	0	3.72
83	MP4B	Z	21.773	3.72
84	MP4B	Mx	-.021	3.72
85	MP4C	X	0	.22
86	MP4C	Z	24.168	.22
87	MP4C	Mx	.008	.22
88	MP4C	X	0	3.72
89	MP4C	Z	24.168	3.72
90	MP4C	Mx	.008	3.72
91	MP2A	X	0	2.97
92	MP2A	Z	14.138	2.97
93	MP2A	Mx	-.005	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	11.521	2.97
96	MP2B	Mx	.006	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	15.53	2.97
99	MP2C	Mx	-.003	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	14.057	1.97
102	MP1A	Mx	-.005	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	11.331	1.97
105	MP1B	Mx	.006	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	15.507	1.97
108	MP1C	Mx	-.003	1.97
109	OVP1	X	0	1
110	OVP1	Z	31.25	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	31.25	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-11.626	1.2
2	MP2A	Z	20.136	1.2
3	MP2A	Mx	.02	1.2
4	MP2A	X	-11.626	4.72
5	MP2A	Z	20.136	4.72
6	MP2A	Mx	.02	4.72
7	MP2B	X	-13.099	1.2
8	MP2B	Z	22.688	1.2
9	MP2B	Mx	-.002	1.2
10	MP2B	X	-13.099	4.72
11	MP2B	Z	22.688	4.72
12	MP2B	Mx	-.002	4.72
13	MP2C	X	-15.868	1.2
14	MP2C	Z	27.484	1.2
15	MP2C	Mx	-.025	1.2
16	MP2C	X	-15.868	4.72
17	MP2C	Z	27.484	4.72
18	MP2C	Mx	-.025	4.72
19	MP2A	X	-11.626	1.2
20	MP2A	Z	20.136	1.2
21	MP2A	Mx	.009	1.2
22	MP2A	X	-11.626	4.72
23	MP2A	Z	20.136	4.72
24	MP2A	Mx	.009	4.72
25	MP2B	X	-13.099	1.2
26	MP2B	Z	22.688	1.2
27	MP2B	Mx	-.025	1.2
28	MP2B	X	-13.099	4.72
29	MP2B	Z	22.688	4.72
30	MP2B	Mx	-.025	4.72
31	MP2C	X	-15.868	1.2
32	MP2C	Z	27.484	1.2
33	MP2C	Mx	.017	1.2
34	MP2C	X	-15.868	4.72
35	MP2C	Z	27.484	4.72
36	MP2C	Mx	.017	4.72
37	MP3A	X	-3.813	1.97
38	MP3A	Z	6.604	1.97
39	MP3A	Mx	.004	1.97
40	MP3A	X	-3.813	3.96
41	MP3A	Z	6.604	3.96
42	MP3A	Mx	.004	3.96
43	MP3B	X	-5.145	1.97
44	MP3B	Z	8.912	1.97
45	MP3B	Mx	-.004	1.97
46	MP3B	X	-5.145	3.96
47	MP3B	Z	8.912	3.96
48	MP3B	Mx	-.004	3.96
49	MP3C	X	-7.65	1.97
50	MP3C	Z	13.25	1.97
51	MP3C	Mx	-.001	1.97
52	MP3C	X	-7.65	3.96
53	MP3C	Z	13.25	3.96
54	MP3C	Mx	-.001	3.96
55	MP1A	X	-11.009	.22
56	MP1A	Z	19.067	.22
57	MP1A	Mx	.021	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-11.009	3.72
59	MP1A	Z	19.067	3.72
60	MP1A	Mx	.021	3.72
61	MP1B	X	-11.424	.22
62	MP1B	Z	19.788	.22
63	MP1B	Mx	-.018	.22
64	MP1B	X	-11.424	3.72
65	MP1B	Z	19.788	3.72
66	MP1B	Mx	-.018	3.72
67	MP1C	X	-12.206	.22
68	MP1C	Z	21.141	.22
69	MP1C	Mx	-.004	.22
70	MP1C	X	-12.206	3.72
71	MP1C	Z	21.141	3.72
72	MP1C	Mx	-.004	3.72
73	MP4A	X	-11.009	.22
74	MP4A	Z	19.067	.22
75	MP4A	Mx	.021	.22
76	MP4A	X	-11.009	3.72
77	MP4A	Z	19.067	3.72
78	MP4A	Mx	.021	3.72
79	MP4B	X	-11.424	.22
80	MP4B	Z	19.788	.22
81	MP4B	Mx	-.018	.22
82	MP4B	X	-11.424	3.72
83	MP4B	Z	19.788	3.72
84	MP4B	Mx	-.018	3.72
85	MP4C	X	-12.206	.22
86	MP4C	Z	21.141	.22
87	MP4C	Mx	-.004	.22
88	MP4C	X	-12.206	3.72
89	MP4C	Z	21.141	3.72
90	MP4C	Mx	-.004	3.72
91	MP2A	X	-5.965	2.97
92	MP2A	Z	10.331	2.97
93	MP2A	Mx	-.006	2.97
94	MP2B	X	-6.661	2.97
95	MP2B	Z	11.537	2.97
96	MP2B	Mx	.005	2.97
97	MP2C	X	-7.969	2.97
98	MP2C	Z	13.803	2.97
99	MP2C	Mx	.001	2.97
100	MP1A	X	-5.878	1.97
101	MP1A	Z	10.181	1.97
102	MP1A	Mx	-.006	1.97
103	MP1B	X	-6.603	1.97
104	MP1B	Z	11.437	1.97
105	MP1B	Mx	.005	1.97
106	MP1C	X	-7.966	1.97
107	MP1C	Z	13.798	1.97
108	MP1C	Mx	.001	1.97
109	OVP1	X	-13.823	1
110	OVP1	Z	23.942	1
111	OVP1	Mx	0	1
112	OVP2	X	-13.823	1
113	OVP2	Z	23.942	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.388	1.2
2	MP2A	Z	11.194	1.2
3	MP2A	Mx	.012	1.2
4	MP2A	X	-19.388	4.72
5	MP2A	Z	11.194	4.72
6	MP2A	Mx	.012	4.72
7	MP2B	X	-26.736	1.2
8	MP2B	Z	15.436	1.2
9	MP2B	Mx	.012	1.2
10	MP2B	X	-26.736	4.72
11	MP2B	Z	15.436	4.72
12	MP2B	Mx	.012	4.72
13	MP2C	X	-24.184	1.2
14	MP2C	Z	13.963	1.2
15	MP2C	Mx	-.026	1.2
16	MP2C	X	-24.184	4.72
17	MP2C	Z	13.963	4.72
18	MP2C	Mx	-.026	4.72
19	MP2A	X	-19.388	1.2
20	MP2A	Z	11.194	1.2
21	MP2A	Mx	.017	1.2
22	MP2A	X	-19.388	4.72
23	MP2A	Z	11.194	4.72
24	MP2A	Mx	.017	4.72
25	MP2B	X	-26.736	1.2
26	MP2B	Z	15.436	1.2
27	MP2B	Mx	-.026	1.2
28	MP2B	X	-26.736	4.72
29	MP2B	Z	15.436	4.72
30	MP2B	Mx	-.026	4.72
31	MP2C	X	-24.184	1.2
32	MP2C	Z	13.963	1.2
33	MP2C	Mx	.002	1.2
34	MP2C	X	-24.184	4.72
35	MP2C	Z	13.963	4.72
36	MP2C	Mx	.002	4.72
37	MP3A	X	-5.927	1.97
38	MP3A	Z	3.422	1.97
39	MP3A	Mx	.003	1.97
40	MP3A	X	-5.927	3.96
41	MP3A	Z	3.422	3.96
42	MP3A	Mx	.003	3.96
43	MP3B	X	-12.573	1.97
44	MP3B	Z	7.259	1.97
45	MP3B	Mx	-.002	1.97
46	MP3B	X	-12.573	3.96
47	MP3B	Z	7.259	3.96
48	MP3B	Mx	-.002	3.96
49	MP3C	X	-10.265	1.97
50	MP3C	Z	5.926	1.97
51	MP3C	Mx	-.004	1.97
52	MP3C	X	-10.265	3.96
53	MP3C	Z	5.926	3.96
54	MP3C	Mx	-.004	3.96
55	MP1A	X	-18.856	.22
56	MP1A	Z	10.887	.22
57	MP1A	Mx	.021	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-18.856	3.72
59	MP1A	Z	10.887	3.72
60	MP1A	Mx	.021	3.72
61	MP1B	X	-20.93	.22
62	MP1B	Z	12.084	.22
63	MP1B	Mx	-.008	.22
64	MP1B	X	-20.93	3.72
65	MP1B	Z	12.084	3.72
66	MP1B	Mx	-.008	3.72
67	MP1C	X	-20.21	.22
68	MP1C	Z	11.668	.22
69	MP1C	Mx	-.015	.22
70	MP1C	X	-20.21	3.72
71	MP1C	Z	11.668	3.72
72	MP1C	Mx	-.015	3.72
73	MP4A	X	-18.856	.22
74	MP4A	Z	10.887	.22
75	MP4A	Mx	.021	.22
76	MP4A	X	-18.856	3.72
77	MP4A	Z	10.887	3.72
78	MP4A	Mx	.021	3.72
79	MP4B	X	-20.93	.22
80	MP4B	Z	12.084	.22
81	MP4B	Mx	-.008	.22
82	MP4B	X	-20.93	3.72
83	MP4B	Z	12.084	3.72
84	MP4B	Mx	-.008	3.72
85	MP4C	X	-20.21	.22
86	MP4C	Z	11.668	.22
87	MP4C	Mx	-.015	.22
88	MP4C	X	-20.21	3.72
89	MP4C	Z	11.668	3.72
90	MP4C	Mx	-.015	3.72
91	MP2A	X	-9.977	2.97
92	MP2A	Z	5.761	2.97
93	MP2A	Mx	-.006	2.97
94	MP2B	X	-13.449	2.97
95	MP2B	Z	7.765	2.97
96	MP2B	Mx	.003	2.97
97	MP2C	X	-12.244	2.97
98	MP2C	Z	7.069	2.97
99	MP2C	Mx	.005	2.97
100	MP1A	X	-9.813	1.97
101	MP1A	Z	5.666	1.97
102	MP1A	Mx	-.006	1.97
103	MP1B	X	-13.429	1.97
104	MP1B	Z	7.754	1.97
105	MP1B	Mx	.003	1.97
106	MP1C	X	-12.173	1.97
107	MP1C	Z	7.028	1.97
108	MP1C	Mx	.005	1.97
109	OVP1	X	-22.381	1
110	OVP1	Z	12.922	1
111	OVP1	Mx	0	1
112	OVP2	X	-22.381	1
113	OVP2	Z	12.922	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-26.198	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	.002	1.2
4	MP2A	X	-26.198	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	.002	4.72
7	MP2B	X	-31.736	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	.025	1.2
10	MP2B	X	-31.736	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	.025	4.72
13	MP2C	X	-23.251	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	-.02	1.2
16	MP2C	X	-23.251	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	-.02	4.72
19	MP2A	X	-26.198	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	.025	1.2
22	MP2A	X	-26.198	4.72
23	MP2A	Z	0	4.72
24	MP2A	Mx	.025	4.72
25	MP2B	X	-31.736	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	-.017	1.2
28	MP2B	X	-31.736	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	-.017	4.72
31	MP2C	X	-23.251	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	-.009	1.2
34	MP2C	X	-23.251	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	-.009	4.72
37	MP3A	X	-10.29	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	.004	1.97
40	MP3A	X	-10.29	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	.004	3.96
43	MP3B	X	-15.299	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	.001	1.97
46	MP3B	X	-15.299	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	.001	3.96
49	MP3C	X	-7.625	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	-.004	1.97
52	MP3C	X	-7.625	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	-.004	3.96
55	MP1A	X	-22.849	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	.018	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-22.849	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	.018	3.72
61	MP1B	X	-24.412	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	.004	.22
64	MP1B	X	-24.412	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	.004	3.72
67	MP1C	X	-22.017	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	-.021	.22
70	MP1C	X	-22.017	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	-.021	3.72
73	MP4A	X	-22.849	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	.018	.22
76	MP4A	X	-22.849	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	.018	3.72
79	MP4B	X	-24.412	.22
80	MP4B	Z	0	.22
81	MP4B	Mx	.004	.22
82	MP4B	X	-24.412	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	.004	3.72
85	MP4C	X	-22.017	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	-.021	.22
88	MP4C	X	-22.017	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	-.021	3.72
91	MP2A	X	-13.321	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	-.005	2.97
94	MP2B	X	-15.938	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	-.001	2.97
97	MP2C	X	-11.929	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	.006	2.97
100	MP1A	X	-13.206	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	-.005	1.97
103	MP1B	X	-15.932	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	-.001	1.97
106	MP1C	X	-11.756	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	.006	1.97
109	OVP1	X	-27.646	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	-27.646	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-26.736	1.2
2	MP2A	Z	-15.436	1.2
3	MP2A	Mx	-.012	1.2
4	MP2A	X	-26.736	4.72
5	MP2A	Z	-15.436	4.72
6	MP2A	Mx	-.012	4.72
7	MP2B	X	-24.184	1.2
8	MP2B	Z	-13.963	1.2
9	MP2B	Mx	.026	1.2
10	MP2B	X	-24.184	4.72
11	MP2B	Z	-13.963	4.72
12	MP2B	Mx	.026	4.72
13	MP2C	X	-19.388	1.2
14	MP2C	Z	-11.194	1.2
15	MP2C	Mx	-.012	1.2
16	MP2C	X	-19.388	4.72
17	MP2C	Z	-11.194	4.72
18	MP2C	Mx	-.012	4.72
19	MP2A	X	-26.736	1.2
20	MP2A	Z	-15.436	1.2
21	MP2A	Mx	.026	1.2
22	MP2A	X	-26.736	4.72
23	MP2A	Z	-15.436	4.72
24	MP2A	Mx	.026	4.72
25	MP2B	X	-24.184	1.2
26	MP2B	Z	-13.963	1.2
27	MP2B	Mx	-.002	1.2
28	MP2B	X	-24.184	4.72
29	MP2B	Z	-13.963	4.72
30	MP2B	Mx	-.002	4.72
31	MP2C	X	-19.388	1.2
32	MP2C	Z	-11.194	1.2
33	MP2C	Mx	-.017	1.2
34	MP2C	X	-19.388	4.72
35	MP2C	Z	-11.194	4.72
36	MP2C	Mx	-.017	4.72
37	MP3A	X	-12.573	1.97
38	MP3A	Z	-7.259	1.97
39	MP3A	Mx	.002	1.97
40	MP3A	X	-12.573	3.96
41	MP3A	Z	-7.259	3.96
42	MP3A	Mx	.002	3.96
43	MP3B	X	-10.265	1.97
44	MP3B	Z	-5.926	1.97
45	MP3B	Mx	.004	1.97
46	MP3B	X	-10.265	3.96
47	MP3B	Z	-5.926	3.96
48	MP3B	Mx	.004	3.96
49	MP3C	X	-5.927	1.97
50	MP3C	Z	-3.422	1.97
51	MP3C	Mx	-.003	1.97
52	MP3C	X	-5.927	3.96
53	MP3C	Z	-3.422	3.96
54	MP3C	Mx	-.003	3.96
55	MP1A	X	-20.93	.22
56	MP1A	Z	-12.084	.22
57	MP1A	Mx	.008	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-20.93	3.72
59	MP1A	Z	-12.084	3.72
60	MP1A	Mx	.008	3.72
61	MP1B	X	-20.21	.22
62	MP1B	Z	-11.668	.22
63	MP1B	Mx	.015	.22
64	MP1B	X	-20.21	3.72
65	MP1B	Z	-11.668	3.72
66	MP1B	Mx	.015	3.72
67	MP1C	X	-18.856	.22
68	MP1C	Z	-10.887	.22
69	MP1C	Mx	-.021	.22
70	MP1C	X	-18.856	3.72
71	MP1C	Z	-10.887	3.72
72	MP1C	Mx	-.021	3.72
73	MP4A	X	-20.93	.22
74	MP4A	Z	-12.084	.22
75	MP4A	Mx	.008	.22
76	MP4A	X	-20.93	3.72
77	MP4A	Z	-12.084	3.72
78	MP4A	Mx	.008	3.72
79	MP4B	X	-20.21	.22
80	MP4B	Z	-11.668	.22
81	MP4B	Mx	.015	.22
82	MP4B	X	-20.21	3.72
83	MP4B	Z	-11.668	3.72
84	MP4B	Mx	.015	3.72
85	MP4C	X	-18.856	.22
86	MP4C	Z	-10.887	.22
87	MP4C	Mx	-.021	.22
88	MP4C	X	-18.856	3.72
89	MP4C	Z	-10.887	3.72
90	MP4C	Mx	-.021	3.72
91	MP2A	X	-13.449	2.97
92	MP2A	Z	-7.765	2.97
93	MP2A	Mx	-.003	2.97
94	MP2B	X	-12.244	2.97
95	MP2B	Z	-7.069	2.97
96	MP2B	Mx	-.005	2.97
97	MP2C	X	-9.977	2.97
98	MP2C	Z	-5.761	2.97
99	MP2C	Mx	.006	2.97
100	MP1A	X	-13.429	1.97
101	MP1A	Z	-7.754	1.97
102	MP1A	Mx	-.003	1.97
103	MP1B	X	-12.173	1.97
104	MP1B	Z	-7.028	1.97
105	MP1B	Mx	-.005	1.97
106	MP1C	X	-9.813	1.97
107	MP1C	Z	-5.666	1.97
108	MP1C	Mx	.006	1.97
109	OVP1	X	-27.063	1
110	OVP1	Z	-15.625	1
111	OVP1	Mx	0	1
112	OVP2	X	-27.063	1
113	OVP2	Z	-15.625	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-15.868	1.2
2	MP2A	Z	-27.484	1.2
3	MP2A	Mx	-.025	1.2
4	MP2A	X	-15.868	4.72
5	MP2A	Z	-27.484	4.72
6	MP2A	Mx	-.025	4.72
7	MP2B	X	-11.626	1.2
8	MP2B	Z	-20.136	1.2
9	MP2B	Mx	.02	1.2
10	MP2B	X	-11.626	4.72
11	MP2B	Z	-20.136	4.72
12	MP2B	Mx	.02	4.72
13	MP2C	X	-13.099	1.2
14	MP2C	Z	-22.688	1.2
15	MP2C	Mx	-.002	1.2
16	MP2C	X	-13.099	4.72
17	MP2C	Z	-22.688	4.72
18	MP2C	Mx	-.002	4.72
19	MP2A	X	-15.868	1.2
20	MP2A	Z	-27.484	1.2
21	MP2A	Mx	.017	1.2
22	MP2A	X	-15.868	4.72
23	MP2A	Z	-27.484	4.72
24	MP2A	Mx	.017	4.72
25	MP2B	X	-11.626	1.2
26	MP2B	Z	-20.136	1.2
27	MP2B	Mx	.009	1.2
28	MP2B	X	-11.626	4.72
29	MP2B	Z	-20.136	4.72
30	MP2B	Mx	.009	4.72
31	MP2C	X	-13.099	1.2
32	MP2C	Z	-22.688	1.2
33	MP2C	Mx	-.025	1.2
34	MP2C	X	-13.099	4.72
35	MP2C	Z	-22.688	4.72
36	MP2C	Mx	-.025	4.72
37	MP3A	X	-7.65	1.97
38	MP3A	Z	-13.25	1.97
39	MP3A	Mx	-.001	1.97
40	MP3A	X	-7.65	3.96
41	MP3A	Z	-13.25	3.96
42	MP3A	Mx	-.001	3.96
43	MP3B	X	-3.813	1.97
44	MP3B	Z	-6.604	1.97
45	MP3B	Mx	.004	1.97
46	MP3B	X	-3.813	3.96
47	MP3B	Z	-6.604	3.96
48	MP3B	Mx	.004	3.96
49	MP3C	X	-5.145	1.97
50	MP3C	Z	-8.912	1.97
51	MP3C	Mx	-.004	1.97
52	MP3C	X	-5.145	3.96
53	MP3C	Z	-8.912	3.96
54	MP3C	Mx	-.004	3.96
55	MP1A	X	-12.206	.22
56	MP1A	Z	-21.141	.22
57	MP1A	Mx	-.004	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-12.206	3.72
59	MP1A	Z	-21.141	3.72
60	MP1A	Mx	-.004	3.72
61	MP1B	X	-11.009	.22
62	MP1B	Z	-19.067	.22
63	MP1B	Mx	.021	.22
64	MP1B	X	-11.009	3.72
65	MP1B	Z	-19.067	3.72
66	MP1B	Mx	.021	3.72
67	MP1C	X	-11.424	.22
68	MP1C	Z	-19.788	.22
69	MP1C	Mx	-.018	.22
70	MP1C	X	-11.424	3.72
71	MP1C	Z	-19.788	3.72
72	MP1C	Mx	-.018	3.72
73	MP4A	X	-12.206	.22
74	MP4A	Z	-21.141	.22
75	MP4A	Mx	-.004	.22
76	MP4A	X	-12.206	3.72
77	MP4A	Z	-21.141	3.72
78	MP4A	Mx	-.004	3.72
79	MP4B	X	-11.009	.22
80	MP4B	Z	-19.067	.22
81	MP4B	Mx	.021	.22
82	MP4B	X	-11.009	3.72
83	MP4B	Z	-19.067	3.72
84	MP4B	Mx	.021	3.72
85	MP4C	X	-11.424	.22
86	MP4C	Z	-19.788	.22
87	MP4C	Mx	-.018	.22
88	MP4C	X	-11.424	3.72
89	MP4C	Z	-19.788	3.72
90	MP4C	Mx	-.018	3.72
91	MP2A	X	-7.969	2.97
92	MP2A	Z	-13.803	2.97
93	MP2A	Mx	.001	2.97
94	MP2B	X	-5.965	2.97
95	MP2B	Z	-10.331	2.97
96	MP2B	Mx	-.006	2.97
97	MP2C	X	-6.661	2.97
98	MP2C	Z	-11.537	2.97
99	MP2C	Mx	.005	2.97
100	MP1A	X	-7.966	1.97
101	MP1A	Z	-13.798	1.97
102	MP1A	Mx	.001	1.97
103	MP1B	X	-5.878	1.97
104	MP1B	Z	-10.181	1.97
105	MP1B	Mx	-.006	1.97
106	MP1C	X	-6.603	1.97
107	MP1C	Z	-11.437	1.97
108	MP1C	Mx	.005	1.97
109	OVP1	X	-16.526	1
110	OVP1	Z	-28.623	1
111	OVP1	Mx	0	1
112	OVP2	X	-16.526	1
113	OVP2	Z	-28.623	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	-5.371	1.2
3	MP2A	Mx	-.005	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	-5.371	4.72
6	MP2A	Mx	-.005	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	-3.137	1.2
9	MP2B	Mx	.002	1.2
10	MP2B	X	0	4.72
11	MP2B	Z	-3.137	4.72
12	MP2B	Mx	.002	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	-6.559	1.2
15	MP2C	Mx	.003	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	-6.559	4.72
18	MP2C	Mx	.003	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	-5.371	1.2
21	MP2A	Mx	.000441	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	-5.371	4.72
24	MP2A	Mx	.000441	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	-3.137	1.2
27	MP2B	Mx	.002	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	-3.137	4.72
30	MP2B	Mx	.002	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	-6.559	1.2
33	MP2C	Mx	-.006	1.2
34	MP2C	X	0	4.72
35	MP2C	Z	-6.559	4.72
36	MP2C	Mx	-.006	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	-2.994	1.97
39	MP3A	Mx	-.000962	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	-2.994	3.96
42	MP3A	Mx	-.000962	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	-1.517	1.97
45	MP3B	Mx	.000747	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	-1.517	3.96
48	MP3B	Mx	.000747	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	-3.78	1.97
51	MP3C	Mx	-.000646	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	-3.78	3.96
54	MP3C	Mx	-.000646	3.96
55	MP1A	X	0	.22
56	MP1A	Z	-7.553	.22
57	MP1A	Mx	-.005	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	0	3.72
59	MP1A	Z	-7.553	3.72
60	MP1A	Mx	-.005	3.72
61	MP1B	X	0	.22
62	MP1B	Z	-7.005	.22
63	MP1B	Mx	.007	.22
64	MP1B	X	0	3.72
65	MP1B	Z	-7.005	3.72
66	MP1B	Mx	.007	3.72
67	MP1C	X	0	.22
68	MP1C	Z	-7.845	.22
69	MP1C	Mx	-.003	.22
70	MP1C	X	0	3.72
71	MP1C	Z	-7.845	3.72
72	MP1C	Mx	-.003	3.72
73	MP4A	X	0	.22
74	MP4A	Z	-7.553	.22
75	MP4A	Mx	-.005	.22
76	MP4A	X	0	3.72
77	MP4A	Z	-7.553	3.72
78	MP4A	Mx	-.005	3.72
79	MP4B	X	0	.22
80	MP4B	Z	-7.005	.22
81	MP4B	Mx	.007	.22
82	MP4B	X	0	3.72
83	MP4B	Z	-7.005	3.72
84	MP4B	Mx	.007	3.72
85	MP4C	X	0	.22
86	MP4C	Z	-7.845	.22
87	MP4C	Mx	-.003	.22
88	MP4C	X	0	3.72
89	MP4C	Z	-7.845	3.72
90	MP4C	Mx	-.003	3.72
91	MP2A	X	0	2.97
92	MP2A	Z	-4.205	2.97
93	MP2A	Mx	.001	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	-3.347	2.97
96	MP2B	Mx	-.002	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	-4.661	2.97
99	MP2C	Mx	.000797	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	-3.467	1.97
102	MP1A	Mx	.001	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	-2.732	1.97
105	MP1B	Mx	-.001	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	-3.858	1.97
108	MP1C	Mx	.00066	1.97
109	OVP1	X	0	1
110	OVP1	Z	-9.363	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	-9.363	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	1.743	1.2
2	MP2A	Z	-3.018	1.2
3	MP2A	Mx	-.003	1.2
4	MP2A	X	1.743	4.72
5	MP2A	Z	-3.018	4.72
6	MP2A	Mx	-.003	4.72
7	MP2B	X	2.337	1.2
8	MP2B	Z	-4.048	1.2
9	MP2B	Mx	.000384	1.2
10	MP2B	X	2.337	4.72
11	MP2B	Z	-4.048	4.72
12	MP2B	Mx	.000384	4.72
13	MP2C	X	3.454	1.2
14	MP2C	Z	-5.982	1.2
15	MP2C	Mx	.005	1.2
16	MP2C	X	3.454	4.72
17	MP2C	Z	-5.982	4.72
18	MP2C	Mx	.005	4.72
19	MP2A	X	1.743	1.2
20	MP2A	Z	-3.018	1.2
21	MP2A	Mx	-.001	1.2
22	MP2A	X	1.743	4.72
23	MP2A	Z	-3.018	4.72
24	MP2A	Mx	-.001	4.72
25	MP2B	X	2.337	1.2
26	MP2B	Z	-4.048	1.2
27	MP2B	Mx	.004	1.2
28	MP2B	X	2.337	4.72
29	MP2B	Z	-4.048	4.72
30	MP2B	Mx	.004	4.72
31	MP2C	X	3.454	1.2
32	MP2C	Z	-5.982	1.2
33	MP2C	Mx	-.004	1.2
34	MP2C	X	3.454	4.72
35	MP2C	Z	-5.982	4.72
36	MP2C	Mx	-.004	4.72
37	MP3A	X	.874	1.97
38	MP3A	Z	-1.513	1.97
39	MP3A	Mx	-.000821	1.97
40	MP3A	X	.874	3.96
41	MP3A	Z	-1.513	3.96
42	MP3A	Mx	-.000821	3.96
43	MP3B	X	1.267	1.97
44	MP3B	Z	-2.194	1.97
45	MP3B	Mx	.00097	1.97
46	MP3B	X	1.267	3.96
47	MP3B	Z	-2.194	3.96
48	MP3B	Mx	.00097	3.96
49	MP3C	X	2.005	1.97
50	MP3C	Z	-3.473	1.97
51	MP3C	Mx	.000348	1.97
52	MP3C	X	2.005	3.96
53	MP3C	Z	-3.473	3.96
54	MP3C	Mx	.000348	3.96
55	MP1A	X	3.545	.22
56	MP1A	Z	-6.141	.22
57	MP1A	Mx	-.007	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	3.545	3.72
59	MP1A	Z	-6.141	3.72
60	MP1A	Mx	-.007	3.72
61	MP1B	X	3.691	.22
62	MP1B	Z	-6.393	.22
63	MP1B	Mx	.006	.22
64	MP1B	X	3.691	3.72
65	MP1B	Z	-6.393	3.72
66	MP1B	Mx	.006	3.72
67	MP1C	X	3.965	.22
68	MP1C	Z	-6.868	.22
69	MP1C	Mx	.001	.22
70	MP1C	X	3.965	3.72
71	MP1C	Z	-6.868	3.72
72	MP1C	Mx	.001	3.72
73	MP4A	X	3.545	.22
74	MP4A	Z	-6.141	.22
75	MP4A	Mx	-.007	.22
76	MP4A	X	3.545	3.72
77	MP4A	Z	-6.141	3.72
78	MP4A	Mx	-.007	3.72
79	MP4B	X	3.691	.22
80	MP4B	Z	-6.393	.22
81	MP4B	Mx	.006	.22
82	MP4B	X	3.691	3.72
83	MP4B	Z	-6.393	3.72
84	MP4B	Mx	.006	3.72
85	MP4C	X	3.965	.22
86	MP4C	Z	-6.868	.22
87	MP4C	Mx	.001	.22
88	MP4C	X	3.965	3.72
89	MP4C	Z	-6.868	3.72
90	MP4C	Mx	.001	3.72
91	MP2A	X	1.74	2.97
92	MP2A	Z	-3.015	2.97
93	MP2A	Mx	.002	2.97
94	MP2B	X	1.969	2.97
95	MP2B	Z	-3.41	2.97
96	MP2B	Mx	-.002	2.97
97	MP2C	X	2.397	2.97
98	MP2C	Z	-4.152	2.97
99	MP2C	Mx	-.000416	2.97
100	MP1A	X	1.423	1.97
101	MP1A	Z	-2.465	1.97
102	MP1A	Mx	.001	1.97
103	MP1B	X	1.619	1.97
104	MP1B	Z	-2.804	1.97
105	MP1B	Mx	-.001	1.97
106	MP1C	X	1.986	1.97
107	MP1C	Z	-3.441	1.97
108	MP1C	Mx	-.000345	1.97
109	OVP1	X	4.233	1
110	OVP1	Z	-7.333	1
111	OVP1	Mx	0	1
112	OVP2	X	4.233	1
113	OVP2	Z	-7.333	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.717	1.2
2	MP2A	Z	-1.568	1.2
3	MP2A	Mx	-.002	1.2
4	MP2A	X	2.717	4.72
5	MP2A	Z	-1.568	4.72
6	MP2A	Mx	-.002	4.72
7	MP2B	X	5.68	1.2
8	MP2B	Z	-3.28	1.2
9	MP2B	Mx	-.003	1.2
10	MP2B	X	5.68	4.72
11	MP2B	Z	-3.28	4.72
12	MP2B	Mx	-.003	4.72
13	MP2C	X	4.651	1.2
14	MP2C	Z	-2.685	1.2
15	MP2C	Mx	.005	1.2
16	MP2C	X	4.651	4.72
17	MP2C	Z	-2.685	4.72
18	MP2C	Mx	.005	4.72
19	MP2A	X	2.717	1.2
20	MP2A	Z	-1.568	1.2
21	MP2A	Mx	-.002	1.2
22	MP2A	X	2.717	4.72
23	MP2A	Z	-1.568	4.72
24	MP2A	Mx	-.002	4.72
25	MP2B	X	5.68	1.2
26	MP2B	Z	-3.28	1.2
27	MP2B	Mx	.006	1.2
28	MP2B	X	5.68	4.72
29	MP2B	Z	-3.28	4.72
30	MP2B	Mx	.006	4.72
31	MP2C	X	4.651	1.2
32	MP2C	Z	-2.685	1.2
33	MP2C	Mx	-.000441	1.2
34	MP2C	X	4.651	4.72
35	MP2C	Z	-2.685	4.72
36	MP2C	Mx	-.000441	4.72
37	MP3A	X	1.314	1.97
38	MP3A	Z	-.758	1.97
39	MP3A	Mx	-.000747	1.97
40	MP3A	X	1.314	3.96
41	MP3A	Z	-.758	3.96
42	MP3A	Mx	-.000747	3.96
43	MP3B	X	3.273	1.97
44	MP3B	Z	-1.89	1.97
45	MP3B	Mx	.000646	1.97
46	MP3B	X	3.273	3.96
47	MP3B	Z	-1.89	3.96
48	MP3B	Mx	.000646	3.96
49	MP3C	X	2.593	1.97
50	MP3C	Z	-1.497	1.97
51	MP3C	Mx	.000962	1.97
52	MP3C	X	2.593	3.96
53	MP3C	Z	-1.497	3.96
54	MP3C	Mx	.000962	3.96
55	MP1A	X	6.066	.22
56	MP1A	Z	-3.502	.22
57	MP1A	Mx	-.007	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	6.066	3.72
59	MP1A	Z	-3.502	3.72
60	MP1A	Mx	-.007	3.72
61	MP1B	X	6.794	.22
62	MP1B	Z	-3.923	.22
63	MP1B	Mx	.003	.22
64	MP1B	X	6.794	3.72
65	MP1B	Z	-3.923	3.72
66	MP1B	Mx	.003	3.72
67	MP1C	X	6.541	.22
68	MP1C	Z	-3.777	.22
69	MP1C	Mx	.005	.22
70	MP1C	X	6.541	3.72
71	MP1C	Z	-3.777	3.72
72	MP1C	Mx	.005	3.72
73	MP4A	X	6.066	.22
74	MP4A	Z	-3.502	.22
75	MP4A	Mx	-.007	.22
76	MP4A	X	6.066	3.72
77	MP4A	Z	-3.502	3.72
78	MP4A	Mx	-.007	3.72
79	MP4B	X	6.794	.22
80	MP4B	Z	-3.923	.22
81	MP4B	Mx	.003	.22
82	MP4B	X	6.794	3.72
83	MP4B	Z	-3.923	3.72
84	MP4B	Mx	.003	3.72
85	MP4C	X	6.541	.22
86	MP4C	Z	-3.777	.22
87	MP4C	Mx	.005	.22
88	MP4C	X	6.541	3.72
89	MP4C	Z	-3.777	3.72
90	MP4C	Mx	.005	3.72
91	MP2A	X	2.899	2.97
92	MP2A	Z	-1.674	2.97
93	MP2A	Mx	.002	2.97
94	MP2B	X	4.036	2.97
95	MP2B	Z	-2.33	2.97
96	MP2B	Mx	-.000797	2.97
97	MP2C	X	3.641	2.97
98	MP2C	Z	-2.102	2.97
99	MP2C	Mx	-.001	2.97
100	MP1A	X	2.366	1.97
101	MP1A	Z	-1.366	1.97
102	MP1A	Mx	.001	1.97
103	MP1B	X	3.341	1.97
104	MP1B	Z	-1.929	1.97
105	MP1B	Mx	-.00066	1.97
106	MP1C	X	3.003	1.97
107	MP1C	Z	-1.734	1.97
108	MP1C	Mx	-.001	1.97
109	OVP1	X	6.944	1
110	OVP1	Z	-4.009	1
111	OVP1	Mx	0	1
112	OVP2	X	6.944	1
113	OVP2	Z	-4.009	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.674	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	-.000384	1.2
4	MP2A	X	4.674	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	-.000384	4.72
7	MP2B	X	6.908	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	-.005	1.2
10	MP2B	X	6.908	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	-.005	4.72
13	MP2C	X	3.485	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	.003	1.2
16	MP2C	X	3.485	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	.003	4.72
19	MP2A	X	4.674	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	-.004	1.2
22	MP2A	X	4.674	4.72
23	MP2A	Z	0	4.72
24	MP2A	Mx	-.004	4.72
25	MP2B	X	6.908	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	.004	1.2
28	MP2B	X	6.908	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	.004	4.72
31	MP2C	X	3.485	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	.001	1.2
34	MP2C	X	3.485	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	.001	4.72
37	MP3A	X	2.533	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	-.00097	1.97
40	MP3A	X	2.533	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	-.00097	3.96
43	MP3B	X	4.01	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	-.000348	1.97
46	MP3B	X	4.01	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	-.000348	3.96
49	MP3C	X	1.747	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	.000821	1.97
52	MP3C	X	1.747	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	.000821	3.96
55	MP1A	X	7.382	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	-.006	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	7.382	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	-.006	3.72
61	MP1B	X	7.931	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	-.001	.22
64	MP1B	X	7.931	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	-.001	3.72
67	MP1C	X	7.091	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	.007	.22
70	MP1C	X	7.091	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	.007	3.72
73	MP4A	X	7.382	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	-.006	.22
76	MP4A	X	7.382	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	-.006	3.72
79	MP4B	X	7.931	.22
80	MP4B	Z	0	.22
81	MP4B	Mx	-.001	.22
82	MP4B	X	7.931	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	-.001	3.72
85	MP4C	X	7.091	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	.007	.22
88	MP4C	X	7.091	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	.007	3.72
91	MP2A	X	3.937	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	.002	2.97
94	MP2B	X	4.795	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	.000416	2.97
97	MP2C	X	3.481	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	-.002	2.97
100	MP1A	X	3.238	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	.001	1.97
103	MP1B	X	3.973	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	.000345	1.97
106	MP1C	X	2.847	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	-.001	1.97
109	OVP1	X	8.467	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	8.467	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.68	1.2
2	MP2A	Z	3.28	1.2
3	MP2A	Mx	.003	1.2
4	MP2A	X	5.68	4.72
5	MP2A	Z	3.28	4.72
6	MP2A	Mx	.003	4.72
7	MP2B	X	4.651	1.2
8	MP2B	Z	2.685	1.2
9	MP2B	Mx	-.005	1.2
10	MP2B	X	4.651	4.72
11	MP2B	Z	2.685	4.72
12	MP2B	Mx	-.005	4.72
13	MP2C	X	2.717	1.2
14	MP2C	Z	1.568	1.2
15	MP2C	Mx	.002	1.2
16	MP2C	X	2.717	4.72
17	MP2C	Z	1.568	4.72
18	MP2C	Mx	.002	4.72
19	MP2A	X	5.68	1.2
20	MP2A	Z	3.28	1.2
21	MP2A	Mx	-.006	1.2
22	MP2A	X	5.68	4.72
23	MP2A	Z	3.28	4.72
24	MP2A	Mx	-.006	4.72
25	MP2B	X	4.651	1.2
26	MP2B	Z	2.685	1.2
27	MP2B	Mx	.000441	1.2
28	MP2B	X	4.651	4.72
29	MP2B	Z	2.685	4.72
30	MP2B	Mx	.000441	4.72
31	MP2C	X	2.717	1.2
32	MP2C	Z	1.568	1.2
33	MP2C	Mx	.002	1.2
34	MP2C	X	2.717	4.72
35	MP2C	Z	1.568	4.72
36	MP2C	Mx	.002	4.72
37	MP3A	X	3.273	1.97
38	MP3A	Z	1.89	1.97
39	MP3A	Mx	-.000646	1.97
40	MP3A	X	3.273	3.96
41	MP3A	Z	1.89	3.96
42	MP3A	Mx	-.000646	3.96
43	MP3B	X	2.593	1.97
44	MP3B	Z	1.497	1.97
45	MP3B	Mx	-.000962	1.97
46	MP3B	X	2.593	3.96
47	MP3B	Z	1.497	3.96
48	MP3B	Mx	-.000962	3.96
49	MP3C	X	1.314	1.97
50	MP3C	Z	.758	1.97
51	MP3C	Mx	.000747	1.97
52	MP3C	X	1.314	3.96
53	MP3C	Z	.758	3.96
54	MP3C	Mx	.000747	3.96
55	MP1A	X	6.794	.22
56	MP1A	Z	3.923	.22
57	MP1A	Mx	-.003	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	6.794	3.72
59	MP1A	Z	3.923	3.72
60	MP1A	Mx	-.003	3.72
61	MP1B	X	6.541	.22
62	MP1B	Z	3.777	.22
63	MP1B	Mx	-.005	.22
64	MP1B	X	6.541	3.72
65	MP1B	Z	3.777	3.72
66	MP1B	Mx	-.005	3.72
67	MP1C	X	6.066	.22
68	MP1C	Z	3.502	.22
69	MP1C	Mx	.007	.22
70	MP1C	X	6.066	3.72
71	MP1C	Z	3.502	3.72
72	MP1C	Mx	.007	3.72
73	MP4A	X	6.794	.22
74	MP4A	Z	3.923	.22
75	MP4A	Mx	-.003	.22
76	MP4A	X	6.794	3.72
77	MP4A	Z	3.923	3.72
78	MP4A	Mx	-.003	3.72
79	MP4B	X	6.541	.22
80	MP4B	Z	3.777	.22
81	MP4B	Mx	-.005	.22
82	MP4B	X	6.541	3.72
83	MP4B	Z	3.777	3.72
84	MP4B	Mx	-.005	3.72
85	MP4C	X	6.066	.22
86	MP4C	Z	3.502	.22
87	MP4C	Mx	.007	.22
88	MP4C	X	6.066	3.72
89	MP4C	Z	3.502	3.72
90	MP4C	Mx	.007	3.72
91	MP2A	X	4.036	2.97
92	MP2A	Z	2.33	2.97
93	MP2A	Mx	.000797	2.97
94	MP2B	X	3.641	2.97
95	MP2B	Z	2.102	2.97
96	MP2B	Mx	.001	2.97
97	MP2C	X	2.899	2.97
98	MP2C	Z	1.674	2.97
99	MP2C	Mx	-.002	2.97
100	MP1A	X	3.341	1.97
101	MP1A	Z	1.929	1.97
102	MP1A	Mx	.00066	1.97
103	MP1B	X	3.003	1.97
104	MP1B	Z	1.734	1.97
105	MP1B	Mx	.001	1.97
106	MP1C	X	2.366	1.97
107	MP1C	Z	1.366	1.97
108	MP1C	Mx	-.001	1.97
109	OVP1	X	8.109	1
110	OVP1	Z	4.682	1
111	OVP1	Mx	0	1
112	OVP2	X	8.109	1
113	OVP2	Z	4.682	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.454	1.2
2	MP2A	Z	5.982	1.2
3	MP2A	Mx	.005	1.2
4	MP2A	X	3.454	4.72
5	MP2A	Z	5.982	4.72
6	MP2A	Mx	.005	4.72
7	MP2B	X	1.743	1.2
8	MP2B	Z	3.018	1.2
9	MP2B	Mx	-.003	1.2
10	MP2B	X	1.743	4.72
11	MP2B	Z	3.018	4.72
12	MP2B	Mx	-.003	4.72
13	MP2C	X	2.337	1.2
14	MP2C	Z	4.048	1.2
15	MP2C	Mx	.000384	1.2
16	MP2C	X	2.337	4.72
17	MP2C	Z	4.048	4.72
18	MP2C	Mx	.000384	4.72
19	MP2A	X	3.454	1.2
20	MP2A	Z	5.982	1.2
21	MP2A	Mx	-.004	1.2
22	MP2A	X	3.454	4.72
23	MP2A	Z	5.982	4.72
24	MP2A	Mx	-.004	4.72
25	MP2B	X	1.743	1.2
26	MP2B	Z	3.018	1.2
27	MP2B	Mx	-.001	1.2
28	MP2B	X	1.743	4.72
29	MP2B	Z	3.018	4.72
30	MP2B	Mx	-.001	4.72
31	MP2C	X	2.337	1.2
32	MP2C	Z	4.048	1.2
33	MP2C	Mx	.004	1.2
34	MP2C	X	2.337	4.72
35	MP2C	Z	4.048	4.72
36	MP2C	Mx	.004	4.72
37	MP3A	X	2.005	1.97
38	MP3A	Z	3.473	1.97
39	MP3A	Mx	.000348	1.97
40	MP3A	X	2.005	3.96
41	MP3A	Z	3.473	3.96
42	MP3A	Mx	.000348	3.96
43	MP3B	X	.874	1.97
44	MP3B	Z	1.513	1.97
45	MP3B	Mx	-.000821	1.97
46	MP3B	X	.874	3.96
47	MP3B	Z	1.513	3.96
48	MP3B	Mx	-.000821	3.96
49	MP3C	X	1.267	1.97
50	MP3C	Z	2.194	1.97
51	MP3C	Mx	.00097	1.97
52	MP3C	X	1.267	3.96
53	MP3C	Z	2.194	3.96
54	MP3C	Mx	.00097	3.96
55	MP1A	X	3.965	.22
56	MP1A	Z	6.868	.22
57	MP1A	Mx	.001	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	3.965	3.72
59	MP1A	Z	6.868	3.72
60	MP1A	Mx	.001	3.72
61	MP1B	X	3.545	.22
62	MP1B	Z	6.141	.22
63	MP1B	Mx	-.007	.22
64	MP1B	X	3.545	3.72
65	MP1B	Z	6.141	3.72
66	MP1B	Mx	-.007	3.72
67	MP1C	X	3.691	.22
68	MP1C	Z	6.393	.22
69	MP1C	Mx	.006	.22
70	MP1C	X	3.691	3.72
71	MP1C	Z	6.393	3.72
72	MP1C	Mx	.006	3.72
73	MP4A	X	3.965	.22
74	MP4A	Z	6.868	.22
75	MP4A	Mx	.001	.22
76	MP4A	X	3.965	3.72
77	MP4A	Z	6.868	3.72
78	MP4A	Mx	.001	3.72
79	MP4B	X	3.545	.22
80	MP4B	Z	6.141	.22
81	MP4B	Mx	-.007	.22
82	MP4B	X	3.545	3.72
83	MP4B	Z	6.141	3.72
84	MP4B	Mx	-.007	3.72
85	MP4C	X	3.691	.22
86	MP4C	Z	6.393	.22
87	MP4C	Mx	.006	.22
88	MP4C	X	3.691	3.72
89	MP4C	Z	6.393	3.72
90	MP4C	Mx	.006	3.72
91	MP2A	X	2.397	2.97
92	MP2A	Z	4.152	2.97
93	MP2A	Mx	-.000416	2.97
94	MP2B	X	1.74	2.97
95	MP2B	Z	3.015	2.97
96	MP2B	Mx	.002	2.97
97	MP2C	X	1.969	2.97
98	MP2C	Z	3.41	2.97
99	MP2C	Mx	-.002	2.97
100	MP1A	X	1.986	1.97
101	MP1A	Z	3.441	1.97
102	MP1A	Mx	-.000345	1.97
103	MP1B	X	1.423	1.97
104	MP1B	Z	2.465	1.97
105	MP1B	Mx	.001	1.97
106	MP1C	X	1.619	1.97
107	MP1C	Z	2.804	1.97
108	MP1C	Mx	-.001	1.97
109	OVP1	X	4.906	1
110	OVP1	Z	8.497	1
111	OVP1	Mx	0	1
112	OVP2	X	4.906	1
113	OVP2	Z	8.497	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1.2
2	MP2A	Z	5.371	1.2
3	MP2A	Mx	.005	1.2
4	MP2A	X	0	4.72
5	MP2A	Z	5.371	4.72
6	MP2A	Mx	.005	4.72
7	MP2B	X	0	1.2
8	MP2B	Z	3.137	1.2
9	MP2B	Mx	-.002	1.2
10	MP2B	X	0	4.72
11	MP2B	Z	3.137	4.72
12	MP2B	Mx	-.002	4.72
13	MP2C	X	0	1.2
14	MP2C	Z	6.559	1.2
15	MP2C	Mx	-.003	1.2
16	MP2C	X	0	4.72
17	MP2C	Z	6.559	4.72
18	MP2C	Mx	-.003	4.72
19	MP2A	X	0	1.2
20	MP2A	Z	5.371	1.2
21	MP2A	Mx	-.000441	1.2
22	MP2A	X	0	4.72
23	MP2A	Z	5.371	4.72
24	MP2A	Mx	-.000441	4.72
25	MP2B	X	0	1.2
26	MP2B	Z	3.137	1.2
27	MP2B	Mx	-.002	1.2
28	MP2B	X	0	4.72
29	MP2B	Z	3.137	4.72
30	MP2B	Mx	-.002	4.72
31	MP2C	X	0	1.2
32	MP2C	Z	6.559	1.2
33	MP2C	Mx	.006	1.2
34	MP2C	X	0	4.72
35	MP2C	Z	6.559	4.72
36	MP2C	Mx	.006	4.72
37	MP3A	X	0	1.97
38	MP3A	Z	2.994	1.97
39	MP3A	Mx	.000962	1.97
40	MP3A	X	0	3.96
41	MP3A	Z	2.994	3.96
42	MP3A	Mx	.000962	3.96
43	MP3B	X	0	1.97
44	MP3B	Z	1.517	1.97
45	MP3B	Mx	-.000747	1.97
46	MP3B	X	0	3.96
47	MP3B	Z	1.517	3.96
48	MP3B	Mx	-.000747	3.96
49	MP3C	X	0	1.97
50	MP3C	Z	3.78	1.97
51	MP3C	Mx	.000646	1.97
52	MP3C	X	0	3.96
53	MP3C	Z	3.78	3.96
54	MP3C	Mx	.000646	3.96
55	MP1A	X	0	.22
56	MP1A	Z	7.553	.22
57	MP1A	Mx	.005	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	0	3.72
59	MP1A	Z	7.553	3.72
60	MP1A	Mx	.005	3.72
61	MP1B	X	0	.22
62	MP1B	Z	7.005	.22
63	MP1B	Mx	-.007	.22
64	MP1B	X	0	3.72
65	MP1B	Z	7.005	3.72
66	MP1B	Mx	-.007	3.72
67	MP1C	X	0	.22
68	MP1C	Z	7.845	.22
69	MP1C	Mx	.003	.22
70	MP1C	X	0	3.72
71	MP1C	Z	7.845	3.72
72	MP1C	Mx	.003	3.72
73	MP4A	X	0	.22
74	MP4A	Z	7.553	.22
75	MP4A	Mx	.005	.22
76	MP4A	X	0	3.72
77	MP4A	Z	7.553	3.72
78	MP4A	Mx	.005	3.72
79	MP4B	X	0	.22
80	MP4B	Z	7.005	.22
81	MP4B	Mx	-.007	.22
82	MP4B	X	0	3.72
83	MP4B	Z	7.005	3.72
84	MP4B	Mx	-.007	3.72
85	MP4C	X	0	.22
86	MP4C	Z	7.845	.22
87	MP4C	Mx	.003	.22
88	MP4C	X	0	3.72
89	MP4C	Z	7.845	3.72
90	MP4C	Mx	.003	3.72
91	MP2A	X	0	2.97
92	MP2A	Z	4.205	2.97
93	MP2A	Mx	-.001	2.97
94	MP2B	X	0	2.97
95	MP2B	Z	3.347	2.97
96	MP2B	Mx	.002	2.97
97	MP2C	X	0	2.97
98	MP2C	Z	4.661	2.97
99	MP2C	Mx	-.000797	2.97
100	MP1A	X	0	1.97
101	MP1A	Z	3.467	1.97
102	MP1A	Mx	-.001	1.97
103	MP1B	X	0	1.97
104	MP1B	Z	2.732	1.97
105	MP1B	Mx	.001	1.97
106	MP1C	X	0	1.97
107	MP1C	Z	3.858	1.97
108	MP1C	Mx	-.00066	1.97
109	OVP1	X	0	1
110	OVP1	Z	9.363	1
111	OVP1	Mx	0	1
112	OVP2	X	0	1
113	OVP2	Z	9.363	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-1.743	1.2
2	MP2A	Z	3.018	1.2
3	MP2A	Mx	.003	1.2
4	MP2A	X	-1.743	4.72
5	MP2A	Z	3.018	4.72
6	MP2A	Mx	.003	4.72
7	MP2B	X	-2.337	1.2
8	MP2B	Z	4.048	1.2
9	MP2B	Mx	-.000384	1.2
10	MP2B	X	-2.337	4.72
11	MP2B	Z	4.048	4.72
12	MP2B	Mx	-.000384	4.72
13	MP2C	X	-3.454	1.2
14	MP2C	Z	5.982	1.2
15	MP2C	Mx	-.005	1.2
16	MP2C	X	-3.454	4.72
17	MP2C	Z	5.982	4.72
18	MP2C	Mx	-.005	4.72
19	MP2A	X	-1.743	1.2
20	MP2A	Z	3.018	1.2
21	MP2A	Mx	.001	1.2
22	MP2A	X	-1.743	4.72
23	MP2A	Z	3.018	4.72
24	MP2A	Mx	.001	4.72
25	MP2B	X	-2.337	1.2
26	MP2B	Z	4.048	1.2
27	MP2B	Mx	-.004	1.2
28	MP2B	X	-2.337	4.72
29	MP2B	Z	4.048	4.72
30	MP2B	Mx	-.004	4.72
31	MP2C	X	-3.454	1.2
32	MP2C	Z	5.982	1.2
33	MP2C	Mx	.004	1.2
34	MP2C	X	-3.454	4.72
35	MP2C	Z	5.982	4.72
36	MP2C	Mx	.004	4.72
37	MP3A	X	-.874	1.97
38	MP3A	Z	1.513	1.97
39	MP3A	Mx	.000821	1.97
40	MP3A	X	-.874	3.96
41	MP3A	Z	1.513	3.96
42	MP3A	Mx	.000821	3.96
43	MP3B	X	-1.267	1.97
44	MP3B	Z	2.194	1.97
45	MP3B	Mx	-.00097	1.97
46	MP3B	X	-1.267	3.96
47	MP3B	Z	2.194	3.96
48	MP3B	Mx	-.00097	3.96
49	MP3C	X	-2.005	1.97
50	MP3C	Z	3.473	1.97
51	MP3C	Mx	-.000348	1.97
52	MP3C	X	-2.005	3.96
53	MP3C	Z	3.473	3.96
54	MP3C	Mx	-.000348	3.96
55	MP1A	X	-3.545	.22
56	MP1A	Z	6.141	.22
57	MP1A	Mx	.007	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-3.545	3.72
59	MP1A	Z	6.141	3.72
60	MP1A	Mx	.007	3.72
61	MP1B	X	-3.691	.22
62	MP1B	Z	6.393	.22
63	MP1B	Mx	-.006	.22
64	MP1B	X	-3.691	3.72
65	MP1B	Z	6.393	3.72
66	MP1B	Mx	-.006	3.72
67	MP1C	X	-3.965	.22
68	MP1C	Z	6.868	.22
69	MP1C	Mx	-.001	.22
70	MP1C	X	-3.965	3.72
71	MP1C	Z	6.868	3.72
72	MP1C	Mx	-.001	3.72
73	MP4A	X	-3.545	.22
74	MP4A	Z	6.141	.22
75	MP4A	Mx	.007	.22
76	MP4A	X	-3.545	3.72
77	MP4A	Z	6.141	3.72
78	MP4A	Mx	.007	3.72
79	MP4B	X	-3.691	.22
80	MP4B	Z	6.393	.22
81	MP4B	Mx	-.006	.22
82	MP4B	X	-3.691	3.72
83	MP4B	Z	6.393	3.72
84	MP4B	Mx	-.006	3.72
85	MP4C	X	-3.965	.22
86	MP4C	Z	6.868	.22
87	MP4C	Mx	-.001	.22
88	MP4C	X	-3.965	3.72
89	MP4C	Z	6.868	3.72
90	MP4C	Mx	-.001	3.72
91	MP2A	X	-1.74	2.97
92	MP2A	Z	3.015	2.97
93	MP2A	Mx	-.002	2.97
94	MP2B	X	-1.969	2.97
95	MP2B	Z	3.41	2.97
96	MP2B	Mx	.002	2.97
97	MP2C	X	-2.397	2.97
98	MP2C	Z	4.152	2.97
99	MP2C	Mx	.000416	2.97
100	MP1A	X	-1.423	1.97
101	MP1A	Z	2.465	1.97
102	MP1A	Mx	-.001	1.97
103	MP1B	X	-1.619	1.97
104	MP1B	Z	2.804	1.97
105	MP1B	Mx	.001	1.97
106	MP1C	X	-1.986	1.97
107	MP1C	Z	3.441	1.97
108	MP1C	Mx	.000345	1.97
109	OVP1	X	-4.233	1
110	OVP1	Z	7.333	1
111	OVP1	Mx	0	1
112	OVP2	X	-4.233	1
113	OVP2	Z	7.333	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.717	1.2
2	MP2A	Z	1.568	1.2
3	MP2A	Mx	.002	1.2
4	MP2A	X	-2.717	4.72
5	MP2A	Z	1.568	4.72
6	MP2A	Mx	.002	4.72
7	MP2B	X	-5.68	1.2
8	MP2B	Z	3.28	1.2
9	MP2B	Mx	.003	1.2
10	MP2B	X	-5.68	4.72
11	MP2B	Z	3.28	4.72
12	MP2B	Mx	.003	4.72
13	MP2C	X	-4.651	1.2
14	MP2C	Z	2.685	1.2
15	MP2C	Mx	-.005	1.2
16	MP2C	X	-4.651	4.72
17	MP2C	Z	2.685	4.72
18	MP2C	Mx	-.005	4.72
19	MP2A	X	-2.717	1.2
20	MP2A	Z	1.568	1.2
21	MP2A	Mx	.002	1.2
22	MP2A	X	-2.717	4.72
23	MP2A	Z	1.568	4.72
24	MP2A	Mx	.002	4.72
25	MP2B	X	-5.68	1.2
26	MP2B	Z	3.28	1.2
27	MP2B	Mx	-.006	1.2
28	MP2B	X	-5.68	4.72
29	MP2B	Z	3.28	4.72
30	MP2B	Mx	-.006	4.72
31	MP2C	X	-4.651	1.2
32	MP2C	Z	2.685	1.2
33	MP2C	Mx	.000441	1.2
34	MP2C	X	-4.651	4.72
35	MP2C	Z	2.685	4.72
36	MP2C	Mx	.000441	4.72
37	MP3A	X	-1.314	1.97
38	MP3A	Z	.758	1.97
39	MP3A	Mx	.000747	1.97
40	MP3A	X	-1.314	3.96
41	MP3A	Z	.758	3.96
42	MP3A	Mx	.000747	3.96
43	MP3B	X	-3.273	1.97
44	MP3B	Z	1.89	1.97
45	MP3B	Mx	-.000646	1.97
46	MP3B	X	-3.273	3.96
47	MP3B	Z	1.89	3.96
48	MP3B	Mx	-.000646	3.96
49	MP3C	X	-2.593	1.97
50	MP3C	Z	1.497	1.97
51	MP3C	Mx	-.000962	1.97
52	MP3C	X	-2.593	3.96
53	MP3C	Z	1.497	3.96
54	MP3C	Mx	-.000962	3.96
55	MP1A	X	-6.066	.22
56	MP1A	Z	3.502	.22
57	MP1A	Mx	.007	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-6.066	3.72
59	MP1A	Z	3.502	3.72
60	MP1A	Mx	.007	3.72
61	MP1B	X	-6.794	.22
62	MP1B	Z	3.923	.22
63	MP1B	Mx	-.003	.22
64	MP1B	X	-6.794	3.72
65	MP1B	Z	3.923	3.72
66	MP1B	Mx	-.003	3.72
67	MP1C	X	-6.541	.22
68	MP1C	Z	3.777	.22
69	MP1C	Mx	-.005	.22
70	MP1C	X	-6.541	3.72
71	MP1C	Z	3.777	3.72
72	MP1C	Mx	-.005	3.72
73	MP4A	X	-6.066	.22
74	MP4A	Z	3.502	.22
75	MP4A	Mx	.007	.22
76	MP4A	X	-6.066	3.72
77	MP4A	Z	3.502	3.72
78	MP4A	Mx	.007	3.72
79	MP4B	X	-6.794	.22
80	MP4B	Z	3.923	.22
81	MP4B	Mx	-.003	.22
82	MP4B	X	-6.794	3.72
83	MP4B	Z	3.923	3.72
84	MP4B	Mx	-.003	3.72
85	MP4C	X	-6.541	.22
86	MP4C	Z	3.777	.22
87	MP4C	Mx	-.005	.22
88	MP4C	X	-6.541	3.72
89	MP4C	Z	3.777	3.72
90	MP4C	Mx	-.005	3.72
91	MP2A	X	-2.899	2.97
92	MP2A	Z	1.674	2.97
93	MP2A	Mx	-.002	2.97
94	MP2B	X	-4.036	2.97
95	MP2B	Z	2.33	2.97
96	MP2B	Mx	.000797	2.97
97	MP2C	X	-3.641	2.97
98	MP2C	Z	2.102	2.97
99	MP2C	Mx	.001	2.97
100	MP1A	X	-2.366	1.97
101	MP1A	Z	1.366	1.97
102	MP1A	Mx	-.001	1.97
103	MP1B	X	-3.341	1.97
104	MP1B	Z	1.929	1.97
105	MP1B	Mx	.00066	1.97
106	MP1C	X	-3.003	1.97
107	MP1C	Z	1.734	1.97
108	MP1C	Mx	.001	1.97
109	OVP1	X	-6.944	1
110	OVP1	Z	4.009	1
111	OVP1	Mx	0	1
112	OVP2	X	-6.944	1
113	OVP2	Z	4.009	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.674	1.2
2	MP2A	Z	0	1.2
3	MP2A	Mx	.000384	1.2
4	MP2A	X	-4.674	4.72
5	MP2A	Z	0	4.72
6	MP2A	Mx	.000384	4.72
7	MP2B	X	-6.908	1.2
8	MP2B	Z	0	1.2
9	MP2B	Mx	.005	1.2
10	MP2B	X	-6.908	4.72
11	MP2B	Z	0	4.72
12	MP2B	Mx	.005	4.72
13	MP2C	X	-3.485	1.2
14	MP2C	Z	0	1.2
15	MP2C	Mx	-.003	1.2
16	MP2C	X	-3.485	4.72
17	MP2C	Z	0	4.72
18	MP2C	Mx	-.003	4.72
19	MP2A	X	-4.674	1.2
20	MP2A	Z	0	1.2
21	MP2A	Mx	.004	1.2
22	MP2A	X	-4.674	4.72
23	MP2A	Z	0	4.72
24	MP2A	Mx	.004	4.72
25	MP2B	X	-6.908	1.2
26	MP2B	Z	0	1.2
27	MP2B	Mx	-.004	1.2
28	MP2B	X	-6.908	4.72
29	MP2B	Z	0	4.72
30	MP2B	Mx	-.004	4.72
31	MP2C	X	-3.485	1.2
32	MP2C	Z	0	1.2
33	MP2C	Mx	-.001	1.2
34	MP2C	X	-3.485	4.72
35	MP2C	Z	0	4.72
36	MP2C	Mx	-.001	4.72
37	MP3A	X	-2.533	1.97
38	MP3A	Z	0	1.97
39	MP3A	Mx	.00097	1.97
40	MP3A	X	-2.533	3.96
41	MP3A	Z	0	3.96
42	MP3A	Mx	.00097	3.96
43	MP3B	X	-4.01	1.97
44	MP3B	Z	0	1.97
45	MP3B	Mx	.000348	1.97
46	MP3B	X	-4.01	3.96
47	MP3B	Z	0	3.96
48	MP3B	Mx	.000348	3.96
49	MP3C	X	-1.747	1.97
50	MP3C	Z	0	1.97
51	MP3C	Mx	-.000821	1.97
52	MP3C	X	-1.747	3.96
53	MP3C	Z	0	3.96
54	MP3C	Mx	-.000821	3.96
55	MP1A	X	-7.382	.22
56	MP1A	Z	0	.22
57	MP1A	Mx	.006	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-7.382	3.72
59	MP1A	Z	0	3.72
60	MP1A	Mx	.006	3.72
61	MP1B	X	-7.931	.22
62	MP1B	Z	0	.22
63	MP1B	Mx	.001	.22
64	MP1B	X	-7.931	3.72
65	MP1B	Z	0	3.72
66	MP1B	Mx	.001	3.72
67	MP1C	X	-7.091	.22
68	MP1C	Z	0	.22
69	MP1C	Mx	-.007	.22
70	MP1C	X	-7.091	3.72
71	MP1C	Z	0	3.72
72	MP1C	Mx	-.007	3.72
73	MP4A	X	-7.382	.22
74	MP4A	Z	0	.22
75	MP4A	Mx	.006	.22
76	MP4A	X	-7.382	3.72
77	MP4A	Z	0	3.72
78	MP4A	Mx	.006	3.72
79	MP4B	X	-7.931	.22
80	MP4B	Z	0	.22
81	MP4B	Mx	.001	.22
82	MP4B	X	-7.931	3.72
83	MP4B	Z	0	3.72
84	MP4B	Mx	.001	3.72
85	MP4C	X	-7.091	.22
86	MP4C	Z	0	.22
87	MP4C	Mx	-.007	.22
88	MP4C	X	-7.091	3.72
89	MP4C	Z	0	3.72
90	MP4C	Mx	-.007	3.72
91	MP2A	X	-3.937	2.97
92	MP2A	Z	0	2.97
93	MP2A	Mx	-.002	2.97
94	MP2B	X	-4.795	2.97
95	MP2B	Z	0	2.97
96	MP2B	Mx	-.000416	2.97
97	MP2C	X	-3.481	2.97
98	MP2C	Z	0	2.97
99	MP2C	Mx	.002	2.97
100	MP1A	X	-3.238	1.97
101	MP1A	Z	0	1.97
102	MP1A	Mx	-.001	1.97
103	MP1B	X	-3.973	1.97
104	MP1B	Z	0	1.97
105	MP1B	Mx	-.000345	1.97
106	MP1C	X	-2.847	1.97
107	MP1C	Z	0	1.97
108	MP1C	Mx	.001	1.97
109	OVP1	X	-8.467	1
110	OVP1	Z	0	1
111	OVP1	Mx	0	1
112	OVP2	X	-8.467	1
113	OVP2	Z	0	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.68	1.2
2	MP2A	Z	-3.28	1.2
3	MP2A	Mx	-.003	1.2
4	MP2A	X	-5.68	4.72
5	MP2A	Z	-3.28	4.72
6	MP2A	Mx	-.003	4.72
7	MP2B	X	-4.651	1.2
8	MP2B	Z	-2.685	1.2
9	MP2B	Mx	.005	1.2
10	MP2B	X	-4.651	4.72
11	MP2B	Z	-2.685	4.72
12	MP2B	Mx	.005	4.72
13	MP2C	X	-2.717	1.2
14	MP2C	Z	-1.568	1.2
15	MP2C	Mx	-.002	1.2
16	MP2C	X	-2.717	4.72
17	MP2C	Z	-1.568	4.72
18	MP2C	Mx	-.002	4.72
19	MP2A	X	-5.68	1.2
20	MP2A	Z	-3.28	1.2
21	MP2A	Mx	.006	1.2
22	MP2A	X	-5.68	4.72
23	MP2A	Z	-3.28	4.72
24	MP2A	Mx	.006	4.72
25	MP2B	X	-4.651	1.2
26	MP2B	Z	-2.685	1.2
27	MP2B	Mx	-.000441	1.2
28	MP2B	X	-4.651	4.72
29	MP2B	Z	-2.685	4.72
30	MP2B	Mx	-.000441	4.72
31	MP2C	X	-2.717	1.2
32	MP2C	Z	-1.568	1.2
33	MP2C	Mx	-.002	1.2
34	MP2C	X	-2.717	4.72
35	MP2C	Z	-1.568	4.72
36	MP2C	Mx	-.002	4.72
37	MP3A	X	-3.273	1.97
38	MP3A	Z	-1.89	1.97
39	MP3A	Mx	.000646	1.97
40	MP3A	X	-3.273	3.96
41	MP3A	Z	-1.89	3.96
42	MP3A	Mx	.000646	3.96
43	MP3B	X	-2.593	1.97
44	MP3B	Z	-1.497	1.97
45	MP3B	Mx	.000962	1.97
46	MP3B	X	-2.593	3.96
47	MP3B	Z	-1.497	3.96
48	MP3B	Mx	.000962	3.96
49	MP3C	X	-1.314	1.97
50	MP3C	Z	-.758	1.97
51	MP3C	Mx	-.000747	1.97
52	MP3C	X	-1.314	3.96
53	MP3C	Z	-.758	3.96
54	MP3C	Mx	-.000747	3.96
55	MP1A	X	-6.794	.22
56	MP1A	Z	-3.923	.22
57	MP1A	Mx	.003	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-6.794	3.72
59	MP1A	Z	-3.923	3.72
60	MP1A	Mx	.003	3.72
61	MP1B	X	-6.541	.22
62	MP1B	Z	-3.777	.22
63	MP1B	Mx	.005	.22
64	MP1B	X	-6.541	3.72
65	MP1B	Z	-3.777	3.72
66	MP1B	Mx	.005	3.72
67	MP1C	X	-6.066	.22
68	MP1C	Z	-3.502	.22
69	MP1C	Mx	-.007	.22
70	MP1C	X	-6.066	3.72
71	MP1C	Z	-3.502	3.72
72	MP1C	Mx	-.007	3.72
73	MP4A	X	-6.794	.22
74	MP4A	Z	-3.923	.22
75	MP4A	Mx	.003	.22
76	MP4A	X	-6.794	3.72
77	MP4A	Z	-3.923	3.72
78	MP4A	Mx	.003	3.72
79	MP4B	X	-6.541	.22
80	MP4B	Z	-3.777	.22
81	MP4B	Mx	.005	.22
82	MP4B	X	-6.541	3.72
83	MP4B	Z	-3.777	3.72
84	MP4B	Mx	.005	3.72
85	MP4C	X	-6.066	.22
86	MP4C	Z	-3.502	.22
87	MP4C	Mx	-.007	.22
88	MP4C	X	-6.066	3.72
89	MP4C	Z	-3.502	3.72
90	MP4C	Mx	-.007	3.72
91	MP2A	X	-4.036	2.97
92	MP2A	Z	-2.33	2.97
93	MP2A	Mx	-.000797	2.97
94	MP2B	X	-3.641	2.97
95	MP2B	Z	-2.102	2.97
96	MP2B	Mx	-.001	2.97
97	MP2C	X	-2.899	2.97
98	MP2C	Z	-1.674	2.97
99	MP2C	Mx	.002	2.97
100	MP1A	X	-3.341	1.97
101	MP1A	Z	-1.929	1.97
102	MP1A	Mx	-.00066	1.97
103	MP1B	X	-3.003	1.97
104	MP1B	Z	-1.734	1.97
105	MP1B	Mx	-.001	1.97
106	MP1C	X	-2.366	1.97
107	MP1C	Z	-1.366	1.97
108	MP1C	Mx	.001	1.97
109	OVP1	X	-8.109	1
110	OVP1	Z	-4.682	1
111	OVP1	Mx	0	1
112	OVP2	X	-8.109	1
113	OVP2	Z	-4.682	1
114	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.454	1.2
2	MP2A	Z	-5.982	1.2
3	MP2A	Mx	-.005	1.2
4	MP2A	X	-3.454	4.72
5	MP2A	Z	-5.982	4.72
6	MP2A	Mx	-.005	4.72
7	MP2B	X	-1.743	1.2
8	MP2B	Z	-3.018	1.2
9	MP2B	Mx	.003	1.2
10	MP2B	X	-1.743	4.72
11	MP2B	Z	-3.018	4.72
12	MP2B	Mx	.003	4.72
13	MP2C	X	-2.337	1.2
14	MP2C	Z	-4.048	1.2
15	MP2C	Mx	-.000384	1.2
16	MP2C	X	-2.337	4.72
17	MP2C	Z	-4.048	4.72
18	MP2C	Mx	-.000384	4.72
19	MP2A	X	-3.454	1.2
20	MP2A	Z	-5.982	1.2
21	MP2A	Mx	.004	1.2
22	MP2A	X	-3.454	4.72
23	MP2A	Z	-5.982	4.72
24	MP2A	Mx	.004	4.72
25	MP2B	X	-1.743	1.2
26	MP2B	Z	-3.018	1.2
27	MP2B	Mx	.001	1.2
28	MP2B	X	-1.743	4.72
29	MP2B	Z	-3.018	4.72
30	MP2B	Mx	.001	4.72
31	MP2C	X	-2.337	1.2
32	MP2C	Z	-4.048	1.2
33	MP2C	Mx	-.004	1.2
34	MP2C	X	-2.337	4.72
35	MP2C	Z	-4.048	4.72
36	MP2C	Mx	-.004	4.72
37	MP3A	X	-2.005	1.97
38	MP3A	Z	-3.473	1.97
39	MP3A	Mx	-.000348	1.97
40	MP3A	X	-2.005	3.96
41	MP3A	Z	-3.473	3.96
42	MP3A	Mx	-.000348	3.96
43	MP3B	X	-.874	1.97
44	MP3B	Z	-1.513	1.97
45	MP3B	Mx	.000821	1.97
46	MP3B	X	-.874	3.96
47	MP3B	Z	-1.513	3.96
48	MP3B	Mx	.000821	3.96
49	MP3C	X	-1.267	1.97
50	MP3C	Z	-2.194	1.97
51	MP3C	Mx	-.00097	1.97
52	MP3C	X	-1.267	3.96
53	MP3C	Z	-2.194	3.96
54	MP3C	Mx	-.00097	3.96
55	MP1A	X	-3.965	.22
56	MP1A	Z	-6.868	.22
57	MP1A	Mx	-.001	.22

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	X	-3.965	3.72
59	MP1A	Z	-6.868	3.72
60	MP1A	Mx	-.001	3.72
61	MP1B	X	-3.545	.22
62	MP1B	Z	-6.141	.22
63	MP1B	Mx	.007	.22
64	MP1B	X	-3.545	3.72
65	MP1B	Z	-6.141	3.72
66	MP1B	Mx	.007	3.72
67	MP1C	X	-3.691	.22
68	MP1C	Z	-6.393	.22
69	MP1C	Mx	-.006	.22
70	MP1C	X	-3.691	3.72
71	MP1C	Z	-6.393	3.72
72	MP1C	Mx	-.006	3.72
73	MP4A	X	-3.965	.22
74	MP4A	Z	-6.868	.22
75	MP4A	Mx	-.001	.22
76	MP4A	X	-3.965	3.72
77	MP4A	Z	-6.868	3.72
78	MP4A	Mx	-.001	3.72
79	MP4B	X	-3.545	.22
80	MP4B	Z	-6.141	.22
81	MP4B	Mx	.007	.22
82	MP4B	X	-3.545	3.72
83	MP4B	Z	-6.141	3.72
84	MP4B	Mx	.007	3.72
85	MP4C	X	-3.691	.22
86	MP4C	Z	-6.393	.22
87	MP4C	Mx	-.006	.22
88	MP4C	X	-3.691	3.72
89	MP4C	Z	-6.393	3.72
90	MP4C	Mx	-.006	3.72
91	MP2A	X	-2.397	2.97
92	MP2A	Z	-4.152	2.97
93	MP2A	Mx	.000416	2.97
94	MP2B	X	-1.74	2.97
95	MP2B	Z	-3.015	2.97
96	MP2B	Mx	-.002	2.97
97	MP2C	X	-1.969	2.97
98	MP2C	Z	-3.41	2.97
99	MP2C	Mx	.002	2.97
100	MP1A	X	-1.986	1.97
101	MP1A	Z	-3.441	1.97
102	MP1A	Mx	.000345	1.97
103	MP1B	X	-1.423	1.97
104	MP1B	Z	-2.465	1.97
105	MP1B	Mx	-.001	1.97
106	MP1C	X	-1.619	1.97
107	MP1C	Z	-2.804	1.97
108	MP1C	Mx	.001	1.97
109	OVP1	X	-4.906	1
110	OVP1	Z	-8.497	1
111	OVP1	Mx	0	1
112	OVP2	X	-4.906	1
113	OVP2	Z	-8.497	1
114	OVP2	Mx	0	1

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%28

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%53

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-.909	1.2
2	MP2A	My	-7.5e-5	1.2
3	MP2A	Mz	.000854	1.2
4	MP2A	Y	-.909	4.72
5	MP2A	My	-7.5e-5	4.72
6	MP2A	Mz	.000854	4.72
7	MP2B	Y	-.909	1.2
8	MP2B	My	-.000702	1.2
9	MP2B	Mz	-.000492	1.2
10	MP2B	Y	-.909	4.72
11	MP2B	My	-.000702	4.72
12	MP2B	Mz	-.000492	4.72
13	MP2C	Y	-.909	1.2
14	MP2C	My	.000777	1.2
15	MP2C	Mz	-.000362	1.2
16	MP2C	Y	-.909	4.72
17	MP2C	My	.000777	4.72
18	MP2C	Mz	-.000362	4.72
19	MP2A	Y	-.909	1.2
20	MP2A	My	-.000854	1.2
21	MP2A	Mz	-7.5e-5	1.2
22	MP2A	Y	-.909	4.72
23	MP2A	My	-.000854	4.72
24	MP2A	Mz	-7.5e-5	4.72
25	MP2B	Y	-.909	1.2
26	MP2B	My	.000492	1.2
27	MP2B	Mz	-.000702	1.2
28	MP2B	Y	-.909	4.72
29	MP2B	My	.000492	4.72
30	MP2B	Mz	-.000702	4.72
31	MP2C	Y	-.909	1.2
32	MP2C	My	.000362	1.2
33	MP2C	Mz	.000777	1.2
34	MP2C	Y	-.909	4.72
35	MP2C	My	.000362	4.72
36	MP2C	Mz	.000777	4.72
37	MP3A	Y	-1.192	1.97
38	MP3A	My	-.000457	1.97
39	MP3A	Mz	.000383	1.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP3A	Y	-1.192	3.96
41	MP3A	My	-.000457	3.96
42	MP3A	Mz	.000383	3.96
43	MP3B	Y	-1.192	1.97
44	MP3B	My	-.000103	1.97
45	MP3B	Mz	-.000587	1.97
46	MP3B	Y	-1.192	3.96
47	MP3B	My	-.000103	3.96
48	MP3B	Mz	-.000587	3.96
49	MP3C	Y	-1.192	1.97
50	MP3C	My	.00056	1.97
51	MP3C	Mz	.000204	1.97
52	MP3C	Y	-1.192	3.96
53	MP3C	My	.00056	3.96
54	MP3C	Mz	.000204	3.96
55	MP1A	Y	-.416	.22
56	MP1A	My	-.000319	.22
57	MP1A	Mz	.000267	.22
58	MP1A	Y	-.416	3.72
59	MP1A	My	-.000319	3.72
60	MP1A	Mz	.000267	3.72
61	MP1B	Y	-.416	.22
62	MP1B	My	-7.2e-5	.22
63	MP1B	Mz	-.00041	.22
64	MP1B	Y	-.416	3.72
65	MP1B	My	-7.2e-5	3.72
66	MP1B	Mz	-.00041	3.72
67	MP1C	Y	-.416	.22
68	MP1C	My	.000391	.22
69	MP1C	Mz	.000142	.22
70	MP1C	Y	-.416	3.72
71	MP1C	My	.000391	3.72
72	MP1C	Mz	.000142	3.72
73	MP4A	Y	-.416	.22
74	MP4A	My	-.000319	.22
75	MP4A	Mz	.000267	.22
76	MP4A	Y	-.416	3.72
77	MP4A	My	-.000319	3.72
78	MP4A	Mz	.000267	3.72
79	MP4B	Y	-.416	.22
80	MP4B	My	-7.2e-5	.22
81	MP4B	Mz	-.00041	.22
82	MP4B	Y	-.416	3.72
83	MP4B	My	-7.2e-5	3.72
84	MP4B	Mz	-.00041	3.72
85	MP4C	Y	-.416	.22
86	MP4C	My	.000391	.22
87	MP4C	Mz	.000142	.22
88	MP4C	Y	-.416	3.72
89	MP4C	My	.000391	3.72
90	MP4C	Mz	.000142	3.72
91	MP2A	Y	-3.291	2.97
92	MP2A	My	.001	2.97
93	MP2A	Mz	-.001	2.97
94	MP2B	Y	-3.291	2.97
95	MP2B	My	.000286	2.97
96	MP2B	Mz	.002	2.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
97	MP2C	Y	-3.291	2.97
98	MP2C	My	-.002	2.97
99	MP2C	Mz	-.000563	2.97
100	MP1A	Y	-3.108	1.97
101	MP1A	My	.001	1.97
102	MP1A	Mz	-.000999	1.97
103	MP1B	Y	-3.108	1.97
104	MP1B	My	.00027	1.97
105	MP1B	Mz	.002	1.97
106	MP1C	Y	-3.108	1.97
107	MP1C	My	-.001	1.97
108	MP1C	Mz	-.000531	1.97
109	OVP1	Y	-1.331	1
110	OVP1	My	0	1
111	OVP1	Mz	0	1
112	OVP2	Y	-1.331	1
113	OVP2	My	0	1
114	OVP2	Mz	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Z	-2.272	1.2
2	MP2A	Mx	-.002	1.2
3	MP2A	Z	-2.272	4.72
4	MP2A	Mx	-.002	4.72
5	MP2B	Z	-2.272	1.2
6	MP2B	Mx	.001	1.2
7	MP2B	Z	-2.272	4.72
8	MP2B	Mx	.001	4.72
9	MP2C	Z	-2.272	1.2
10	MP2C	Mx	.000905	1.2
11	MP2C	Z	-2.272	4.72
12	MP2C	Mx	.000905	4.72
13	MP2A	Z	-2.272	1.2
14	MP2A	Mx	.000187	1.2
15	MP2A	Z	-2.272	4.72
16	MP2A	Mx	.000187	4.72
17	MP2B	Z	-2.272	1.2
18	MP2B	Mx	.002	1.2
19	MP2B	Z	-2.272	4.72
20	MP2B	Mx	.002	4.72
21	MP2C	Z	-2.272	1.2
22	MP2C	Mx	-.002	1.2
23	MP2C	Z	-2.272	4.72
24	MP2C	Mx	-.002	4.72
25	MP3A	Z	-2.98	1.97
26	MP3A	Mx	-.000958	1.97
27	MP3A	Z	-2.98	3.96
28	MP3A	Mx	-.000958	3.96
29	MP3B	Z	-2.98	1.97
30	MP3B	Mx	.001	1.97
31	MP3B	Z	-2.98	3.96
32	MP3B	Mx	.001	3.96
33	MP3C	Z	-2.98	1.97
34	MP3C	Mx	-.00051	1.97
35	MP3C	Z	-2.98	3.96

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	MP3C	Mx	-.00051	3.96
37	MP1A	Z	-1.04	.22
38	MP1A	Mx	-.000668	.22
39	MP1A	Z	-1.04	3.72
40	MP1A	Mx	-.000668	3.72
41	MP1B	Z	-1.04	.22
42	MP1B	Mx	.001	.22
43	MP1B	Z	-1.04	3.72
44	MP1B	Mx	.001	3.72
45	MP1C	Z	-1.04	.22
46	MP1C	Mx	-.000356	.22
47	MP1C	Z	-1.04	3.72
48	MP1C	Mx	-.000356	3.72
49	MP4A	Z	-1.04	.22
50	MP4A	Mx	-.000668	.22
51	MP4A	Z	-1.04	3.72
52	MP4A	Mx	-.000668	3.72
53	MP4B	Z	-1.04	.22
54	MP4B	Mx	.001	.22
55	MP4B	Z	-1.04	3.72
56	MP4B	Mx	.001	3.72
57	MP4C	Z	-1.04	.22
58	MP4C	Mx	-.000356	.22
59	MP4C	Z	-1.04	3.72
60	MP4C	Mx	-.000356	3.72
61	MP2A	Z	-8.226	2.97
62	MP2A	Mx	.003	2.97
63	MP2B	Z	-8.226	2.97
64	MP2B	Mx	-.004	2.97
65	MP2C	Z	-8.226	2.97
66	MP2C	Mx	.001	2.97
67	MP1A	Z	-7.769	1.97
68	MP1A	Mx	.002	1.97
69	MP1B	Z	-7.769	1.97
70	MP1B	Mx	-.004	1.97
71	MP1C	Z	-7.769	1.97
72	MP1C	Mx	.001	1.97
73	OVP1	Z	-3.328	1
74	OVP1	Mx	0	1
75	OVP2	Z	-3.328	1
76	OVP2	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.272	1.2
2	MP2A	Mx	-.000187	1.2
3	MP2A	X	2.272	4.72
4	MP2A	Mx	-.000187	4.72
5	MP2B	X	2.272	1.2
6	MP2B	Mx	-.002	1.2
7	MP2B	X	2.272	4.72
8	MP2B	Mx	-.002	4.72
9	MP2C	X	2.272	1.2
10	MP2C	Mx	.002	1.2
11	MP2C	X	2.272	4.72
12	MP2C	Mx	.002	4.72

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	2.272	1.2
14	MP2A	Mx	-.002	1.2
15	MP2A	X	2.272	4.72
16	MP2A	Mx	-.002	4.72
17	MP2B	X	2.272	1.2
18	MP2B	Mx	.001	1.2
19	MP2B	X	2.272	4.72
20	MP2B	Mx	.001	4.72
21	MP2C	X	2.272	1.2
22	MP2C	Mx	.000905	1.2
23	MP2C	X	2.272	4.72
24	MP2C	Mx	.000905	4.72
25	MP3A	X	2.98	1.97
26	MP3A	Mx	-.001	1.97
27	MP3A	X	2.98	3.96
28	MP3A	Mx	-.001	3.96
29	MP3B	X	2.98	1.97
30	MP3B	Mx	-.000259	1.97
31	MP3B	X	2.98	3.96
32	MP3B	Mx	-.000259	3.96
33	MP3C	X	2.98	1.97
34	MP3C	Mx	.001	1.97
35	MP3C	X	2.98	3.96
36	MP3C	Mx	.001	3.96
37	MP1A	X	1.04	.22
38	MP1A	Mx	-.000797	.22
39	MP1A	X	1.04	3.72
40	MP1A	Mx	-.000797	3.72
41	MP1B	X	1.04	.22
42	MP1B	Mx	-.000181	.22
43	MP1B	X	1.04	3.72
44	MP1B	Mx	-.000181	3.72
45	MP1C	X	1.04	.22
46	MP1C	Mx	.000977	.22
47	MP1C	X	1.04	3.72
48	MP1C	Mx	.000977	3.72
49	MP4A	X	1.04	.22
50	MP4A	Mx	-.000797	.22
51	MP4A	X	1.04	3.72
52	MP4A	Mx	-.000797	3.72
53	MP4B	X	1.04	.22
54	MP4B	Mx	-.000181	.22
55	MP4B	X	1.04	3.72
56	MP4B	Mx	-.000181	3.72
57	MP4C	X	1.04	.22
58	MP4C	Mx	.000977	.22
59	MP4C	X	1.04	3.72
60	MP4C	Mx	.000977	3.72
61	MP2A	X	8.226	2.97
62	MP2A	Mx	.003	2.97
63	MP2B	X	8.226	2.97
64	MP2B	Mx	.000714	2.97
65	MP2C	X	8.226	2.97
66	MP2C	Mx	-.004	2.97
67	MP1A	X	7.769	1.97
68	MP1A	Mx	.003	1.97
69	MP1B	X	7.769	1.97

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
70	MP1B	Mx	.000675	1.97
71	MP1C	X	7.769	1.97
72	MP1C	Mx	-.004	1.97
73	OVP1	X	3.328	1
74	OVP1	Mx	0	1
75	OVP2	X	3.328	1
76	OVP2	Mx	0	1

Joint Loads and Enforced Displacements

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

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N90	N114	N112	N89	Y	Two Way	-.005
2	N7	N87B	N87C	N6	Y	Two Way	-.005
3	N127	N151	N149	N126	Y	Two Way	-.005

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N90	N114	N112	N89	Y	Two Way	-.01
2	N7	N87B	N87C	N6	Y	Two Way	-.01
3	N127	N151	N149	N126	Y	Two Way	-.01

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N90	N114	N112	N89	Y	Two Way	-.000216
2	N7	N87B	N87C	N6	Y	Two Way	-.000216
3	N127	N151	N149	N126	Y	Two Way	-.000216

Member Area Loads (BLC 85 : Structure Eh (0 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N90	N114	N112	N89	Z	Two Way	-.000541
2	N7	N87B	N87C	N6	Z	Two Way	-.000541
3	N127	N151	N149	N126	Z	Two Way	-.000541

Member Area Loads (BLC 86 : Structure Eh (90 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N90	N114	N112	N89	X	Two Way	.000541
2	N7	N87B	N87C	N6	X	Two Way	.000541
3	N127	N151	N149	N126	X	Two Way	.000541

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	N3	max	921.272	10	2585.989	13	2829.165	1	5.643	1	1.35	4	.306	3
2		min	-927.119	4	-9.409	7	-2992.931	7	-1.693	7	-1.363	10	-.27	9
3	N87	max	2267.983	10	2422.648	21	1465.923	3	.587	3	1.251	12	1.3	3
4		min	-2371.438	4	-77.296	3	-1380.261	9	-2.549	21	-1.231	6	-4.685	9
5	N124	max	2613.872	11	2586.587	17	1729.448	12	.948	11	1.354	8	4.81	5
6		min	-2506.579	5	-10.236	11	-1649.787	6	-2.995	5	-1.381	2	-1.384	11

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
7	Totals:	max	5511.184	10	6822.014	20	5542.337	1						
8		min	-5511.185	4	2166.412	66	-5542.335	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N3	77.511	2073.582	2829.165	5.643	-.429	.192
2	1	N87	-1065.253	419.95	1079.696	-.231	.399	-.356
3	1	N124	987.751	534.961	1633.476	.256	-1.357	.125
4	1	Totals:	.009	3028.493	5542.337			
5	1	COG (ft):	X: .039	Y: 1.17	Z: -.017			
6	2	N3	-379.899	1922.384	2589.518	5.229	.208	.292
7	2	N87	-1952.75	48.21	1349.316	.356	.149	.812
8	2	N124	-422.943	1057.888	834.01	-.704	-1.381	1.67
9	2	Totals:	-2755.592	3028.482	4772.844			
10	2	COG (ft):	X: .039	Y: 1.17	Z: -.017			
11	3	N3	-889.77	1531.768	1522.291	3.977	1.305	.306
12	3	N87	-2361.096	-77.296	1465.923	.587	.383	1.3
13	3	N124	-1508.48	1574.01	-240.406	-1.729	-.519	3.219
14	3	Totals:	-4759.346	3028.482	2747.808			
15	3	COG (ft):	X: .039	Y: 1.17	Z: -.017			
16	4	N3	-927.119	1008.363	-83.493	2.187	1.35	.274
17	4	N87	-2371.438	74.08	1046.621	.425	-.19	.995
18	4	N124	-2212.628	1946.051	-963.143	-2.558	-.237	4.365
19	4	Totals:	-5511.185	3028.494	-.015			
20	4	COG (ft):	X: .039	Y: 1.17	Z: -.017			
21	5	N3	-565.942	491.747	-1576.844	.307	.513	.187
22	5	N87	-1727.26	464.792	159.216	-.103	-1.231	-.028
23	5	N124	-2506.579	2071.976	-1353.552	-2.995	-.417	4.81
24	5	Totals:	-4799.781	3028.514	-2771.179			
25	5	COG (ft):	X: .039	Y: 1.17	Z: -.017			
26	6	N3	-287.284	119.345	-2560.301	-1.124	.239	.024
27	6	N87	-412.265	993.799	-603.204	-.876	-1.231	-1.507
28	6	N124	-2079.399	1915.393	-1649.787	-2.912	.227	4.425
29	6	Totals:	-2778.948	3028.538	-4813.293			
30	6	COG (ft):	X: .039	Y: 1.17	Z: -.017			
31	7	N3	-81.417	-9.409	-2992.931	-1.693	.413	-.154
32	7	N87	968.216	1518.389	-990.814	-1.671	-.377	-3.04
33	7	N124	-886.809	1519.578	-1558.591	-2.307	1.327	3.311
34	7	Totals:	-.01	3028.558	-5542.335			
35	7	COG (ft):	X: .039	Y: 1.17	Z: -.017			
36	8	N3	378.559	139.375	-2752.009	-1.277	-.226	-.255
37	8	N87	1853.65	1895.33	-1258.77	-2.254	-.127	-4.202
38	8	N124	523.382	993.864	-762.063	-1.351	1.354	1.771
39	8	Totals:	2755.591	3028.569	-4772.842			
40	8	COG (ft):	X: .039	Y: 1.17	Z: -.017			
41	9	N3	886.274	525.156	-1678.941	-.016	-1.322	-.27
42	9	N87	2257.908	2023.582	-1380.261	-2.484	-.365	-4.685
43	9	N124	1615.163	479.831	311.395	-.325	.494	.218
44	9	Totals:	4759.345	3028.569	-2747.807			
45	9	COG (ft):	X: .039	Y: 1.17	Z: -.017			
46	10	N3	921.272	1045.812	-71.314	1.781	-1.363	-.236
47	10	N87	2267.983	1869.819	-963.819	-2.323	.207	-4.38
48	10	N124	2321.929	112.926	1035.149	.508	.213	-.935
49	10	Totals:	5511.184	3028.557	.016			
50	10	COG (ft):	X: .039	Y: 1.17	Z: -.017			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
51	11	N3	556.093	1564.556	1417.042	3.657	-.525	-.148
52	11	N87	1629.815	1474.216	-77.435	-1.8	1.248	-3.366
53	11	N124	2613.872	-10.236	1431.573	.948	.388	-1.384
54	11	Totals:	4799.78	3028.537	2771.18			
55	11	COG (ft):	X: .039	Y: 1.17	Z: -.017			
56	12	N3	277.087	1942.122	2397.712	5.08	-.251	.015
57	12	N87	317.506	942.397	686.135	-1.029	1.251	-1.892
58	12	N124	2184.354	143.995	1729.448	.866	-.257	-.997
59	12	Totals:	2778.947	3028.513	4813.294			
60	12	COG (ft):	X: .039	Y: 1.17	Z: -.017			
61	13	N3	-29.227	2585.989	476.144	5.428	-.046	.084
62	13	N87	-330.843	2028.41	372.81	-1.997	.151	-3.538
63	13	N124	360.07	2207.596	523.825	-2.045	-.385	3.556
64	13	Totals:	0	6821.995	1372.779			
65	13	COG (ft):	X: .052	Y: 1.246	Z: -.023			
66	14	N3	-130.182	2548.806	413.128	5.327	.063	.103
67	14	N87	-564.573	1936.3	422.273	-1.851	.046	-3.251
68	14	N124	11.968	2336.886	347.218	-2.28	-.434	3.929
69	14	Totals:	-682.786	6821.992	1182.619			
70	14	COG (ft):	X: .052	Y: 1.246	Z: -.023			
71	15	N3	-253.444	2452.782	160.526	5.022	.312	.102
72	15	N87	-664.542	1905.077	436.302	-1.792	.087	-3.131
73	15	N124	-261.503	2464.134	84.158	-2.528	-.24	4.306
74	15	Totals:	-1179.489	6821.992	680.985			
75	15	COG (ft):	X: .052	Y: 1.246	Z: -.023			
76	16	N3	-279.802	2323.822	-225.948	4.588	.364	.091
77	16	N87	-658.358	1942.57	338.706	-1.832	-.008	-3.207
78	16	N124	-427.404	2555.603	-112.76	-2.727	-.128	4.588
79	16	Totals:	-1365.565	6821.995	-.002			
80	16	COG (ft):	X: .052	Y: 1.246	Z: -.023			
81	17	N3	-194.139	2196.151	-597.177	4.132	.176	.071
82	17	N87	-507.705	2039.263	124.67	-1.961	-.245	-3.459
83	17	N124	-487.011	2586.587	-213.886	-2.828	-.157	4.7
84	17	Totals:	-1188.855	6822	-686.394			
85	17	COG (ft):	X: .052	Y: 1.246	Z: -.023			
86	18	N3	-105.373	2103.865	-841.689	3.784	.066	.036
87	18	N87	-198.705	2169.81	-75.836	-2.149	-.288	-3.823
88	18	N124	-384.118	2548.331	-274.456	-2.803	-.046	4.609
89	18	Totals:	-688.196	6822.006	-1191.981			
90	18	COG (ft):	X: .052	Y: 1.246	Z: -.023			
91	19	N3	-45.275	2071.964	-939.614	3.645	.094	0
92	19	N87	145.923	2298.829	-178.037	-2.345	-.096	-4.2
93	19	N124	-100.653	2451.218	-255.124	-2.652	.203	4.34
94	19	Totals:	-.005	6822.011	-1372.774			
95	19	COG (ft):	X: .052	Y: 1.246	Z: -.023			
96	20	N3	55.87	2109.009	-876.526	3.746	-.015	-.02
97	20	N87	379.502	2391.249	-227.366	-2.49	.009	-4.486
98	20	N124	247.409	2321.756	-78.723	-2.417	.251	3.967
99	20	Totals:	682.781	6822.014	-1182.615			
100	20	COG (ft):	X: .052	Y: 1.246	Z: -.023			
101	21	N3	179	2204.744	-623.6	4.052	-.263	-.019
102	21	N87	479.261	2422.648	-241.678	-2.549	-.033	-4.606
103	21	N124	521.224	2194.621	184.297	-2.169	.058	3.59
104	21	Totals:	1179.485	6822.014	-680.981			
105	21	COG (ft):	X: .052	Y: 1.246	Z: -.023			
106	22	N3	205.198	2333.534	-236.992	4.487	-.316	-.009
107	22	N87	473.04	2385.019	-144.283	-2.51	.063	-4.53

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
108	22	N124	687.322	2103.458	381.281	-1.97	-.054	3.308
109	22	Totals:	1365.56	6822.011	.006			
110	22	COG (ft):	X: .052	Y: 1.246	Z: -.023			
111	23	N3	119.322	2461.32	133.957	4.942	-.127	.012
112	23	N87	322.729	2288.035	69.707	-2.381	.299	-4.278
113	23	N124	746.799	2072.651	482.735	-1.869	-.025	3.195
114	23	Totals:	1188.85	6822.006	686.398			
115	23	COG (ft):	X: .052	Y: 1.246	Z: -.023			
116	24	N3	30.52	2553.913	378.264	5.29	-.017	.047
117	24	N87	13.922	2157.315	270.286	-2.193	.342	-3.915
118	24	N124	643.75	2110.772	543.435	-1.894	-.136	3.287
119	24	Totals:	688.191	6822	1191.986			
120	24	COG (ft):	X: .052	Y: 1.246	Z: -.023			
121	25	N3	2.796	935.742	79.736	1.86	-.039	.047
122	25	N87	-118.173	1673.814	108.254	-2.296	.029	-2.763
123	25	N124	115.373	1168.977	131.249	-1.272	-.087	1.574
124	25	Totals:	-.004	3778.533	319.239			
125	25	COG (ft):	X: -.486	Y: .938	Z: .78			
126	26	N3	-23.621	927.119	65.91	1.836	-.002	.053
127	26	N87	-169.221	1652.252	123.73	-2.263	.015	-2.696
128	26	N124	34.118	1199.162	85.278	-1.327	-.089	1.663
129	26	Totals:	-158.724	3778.532	274.918			
130	26	COG (ft):	X: -.486	Y: .938	Z: .78			
131	27	N3	-52.933	904.769	4.285	1.764	.061	.054
132	27	N87	-192.612	1644.949	130.568	-2.25	.028	-2.668
133	27	N124	-28.591	1228.814	23.42	-1.386	-.039	1.752
134	27	Totals:	-274.136	3778.532	158.274			
135	27	COG (ft):	X: -.486	Y: .938	Z: .78			
136	28	N3	-55.028	874.713	-88.25	1.66	.064	.052
137	28	N87	-193.186	1653.744	106.485	-2.259	-.004	-2.685
138	28	N124	-69.236	1250.076	-18.233	-1.434	-.023	1.819
139	28	Totals:	-317.451	3778.533	.001			
140	28	COG (ft):	X: -.486	Y: .938	Z: .78			
141	29	N3	-34.122	844.914	-174.125	1.552	.016	.047
142	29	N87	-156.228	1676.402	55.384	-2.289	-.064	-2.744
143	29	N124	-86.116	1257.219	-40.876	-1.459	-.033	1.844
144	29	Totals:	-276.466	3778.534	-159.617			
145	29	COG (ft):	X: -.486	Y: .938	Z: .78			
146	30	N3	-18.068	823.331	-230.705	1.47	0	.038
147	30	N87	-80.563	1706.963	11.436	-2.333	-.064	-2.829
148	30	N124	-61.44	1248.242	-57.974	-1.454	.004	1.822
149	30	Totals:	-160.071	3778.536	-277.243			
150	30	COG (ft):	X: -.486	Y: .938	Z: .78			
151	31	N3	-6.38	815.832	-255.602	1.437	.01	.027
152	31	N87	-1	1737.132	-11.05	-2.379	-.015	-2.917
153	31	N124	7.376	1225.572	-52.583	-1.419	.067	1.758
154	31	Totals:	-.005	3778.537	-319.235			
155	31	COG (ft):	X: -.486	Y: .938	Z: .78			
156	32	N3	20.046	824.448	-241.772	1.461	-.027	.022
157	32	N87	50.04	1758.712	-26.52	-2.413	0	-2.984
158	32	N124	88.63	1195.378	-6.621	-1.364	.069	1.669
159	32	Totals:	158.716	3778.537	-274.914			
160	32	COG (ft):	X: -.486	Y: .938	Z: .78			
161	33	N3	49.351	846.781	-180.129	1.534	-.09	.021
162	33	N87	73.417	1766.023	-33.374	-2.426	-.015	-3.012
163	33	N124	151.359	1165.733	55.233	-1.305	.019	1.579
164	33	Totals:	274.128	3778.537	-158.27			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
165	33	COG (ft):	X: -.486	Y: .938	Z: .78			
166	34	N3	51.439	876.829	-87.587	1.637	-.093	.023
167	34	N87	73.991	1757.221	-9.3	-2.417	.018	-2.995
168	34	N124	192.013	1144.487	96.889	-1.257	.003	1.513
169	34	Totals:	317.442	3778.537	.003			
170	34	COG (ft):	X: -.486	Y: .938	Z: .78			
171	35	N3	30.519	906.635	-1.728	1.745	-.044	.028
172	35	N87	37.053	1734.547	41.797	-2.387	.078	-2.936
173	35	N124	208.886	1137.354	119.552	-1.232	.013	1.488
174	35	Totals:	276.458	3778.536	159.621			
175	35	COG (ft):	X: -.486	Y: .938	Z: .78			
176	36	N3	14.463	928.235	54.842	1.827	-.029	.037
177	36	N87	-38.603	1703.976	85.749	-2.342	.078	-2.851
178	36	N124	184.203	1146.323	136.655	-1.237	-.024	1.51
179	36	Totals:	160.063	3778.534	277.247			
180	36	COG (ft):	X: -.486	Y: .938	Z: .78			
181	37	N3	.823	920.801	83.832	1.889	-.031	.005
182	37	N87	-113.376	1267.192	103.617	-1.519	.029	-1.792
183	37	N124	112.554	1590.526	131.789	-2.042	-.092	2.227
184	37	Totals:	.001	3778.519	319.238			
185	37	COG (ft):	X: .234	Y: .938	Z: .78			
186	38	N3	-25.591	912.165	69.997	1.865	.006	.01
187	38	N87	-164.443	1245.625	119.102	-1.485	.015	-1.725
188	38	N124	31.315	1620.729	85.817	-2.097	-.094	2.315
189	38	Totals:	-158.719	3778.518	274.917			
190	38	COG (ft):	X: .234	Y: .938	Z: .78			
191	39	N3	-54.897	889.806	8.372	1.792	.069	.011
192	39	N87	-187.847	1238.302	125.951	-1.472	.028	-1.697
193	39	N124	-31.386	1650.411	23.949	-2.157	-.044	2.404
194	39	Totals:	-274.131	3778.518	158.273			
195	39	COG (ft):	X: .234	Y: .938	Z: .78			
196	40	N3	-56.984	859.741	-84.159	1.689	.071	.009
197	40	N87	-188.428	1247.071	101.878	-1.481	-.005	-1.714
198	40	N124	-72.033	1671.707	-17.719	-2.204	-.028	2.471
199	40	Totals:	-317.446	3778.519	0			
200	40	COG (ft):	X: .234	Y: .938	Z: .78			
201	41	N3	-36.067	829.941	-170.021	1.581	.023	.004
202	41	N87	-151.467	1269.701	50.786	-1.511	-.065	-1.773
203	41	N124	-88.926	1678.879	-40.383	-2.23	-.038	2.496
204	41	Totals:	-276.461	3778.52	-159.618			
205	41	COG (ft):	X: .234	Y: .938	Z: .78			
206	42	N3	-20.006	808.368	-226.581	1.499	.007	-.005
207	42	N87	-75.788	1300.234	6.84	-1.556	-.065	-1.858
208	42	N124	-64.272	1669.92	-57.502	-2.225	-.001	2.474
209	42	Totals:	-160.066	3778.522	-277.244			
210	42	COG (ft):	X: .234	Y: .938	Z: .78			
211	43	N3	-8.316	800.885	-251.461	1.466	.017	-.015
212	43	N87	3.795	1330.387	-15.651	-1.602	-.016	-1.946
213	43	N124	4.521	1647.251	-52.124	-2.19	.062	2.41
214	43	Totals:	0	3778.523	-319.236			
215	43	COG (ft):	X: .234	Y: .938	Z: .78			
216	44	N3	18.106	809.513	-237.621	1.49	-.019	-.021
217	44	N87	54.856	1351.971	-31.131	-1.635	-.001	-2.013
218	44	N124	85.759	1617.04	-6.162	-2.135	.064	2.321
219	44	Totals:	158.721	3778.523	-274.915			
220	44	COG (ft):	X: .234	Y: .938	Z: .78			
221	45	N3	47.405	831.856	-175.977	1.562	-.082	-.022

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
222	45	N87	78.247	1359.304	-37.996	-1.649	-.015	-2.041
223	45	N124	148.481	1587.364	55.702	-2.076	.014	2.232
224	45	Totals:	274.133	3778.523	-158.27			
225	45	COG (ft):	X: .234	Y: .938	Z: .78			
226	46	N3	49.484	861.911	-83.44	1.666	-.085	-.02
227	46	N87	78.827	1350.526	-13.933	-1.639	.018	-2.024
228	46	N124	189.137	1566.085	97.375	-2.028	-.002	2.166
229	46	Totals:	317.447	3778.523	.002			
230	46	COG (ft):	X: .234	Y: .938	Z: .78			
231	47	N3	28.554	891.719	2.406	1.774	-.037	-.015
232	47	N87	41.886	1327.88	37.156	-1.609	.078	-1.965
233	47	N124	206.023	1558.923	120.058	-2.003	.008	2.14
234	47	Totals:	276.463	3778.522	159.62			
235	47	COG (ft):	X: .234	Y: .938	Z: .78			
236	48	N3	12.492	913.309	58.957	1.856	-.021	-.006
237	48	N87	-33.784	1297.338	81.106	-1.565	.078	-1.88
238	48	N124	181.36	1567.874	137.183	-2.007	-.029	2.162
239	48	Totals:	160.068	3778.52	277.246			
240	48	COG (ft):	X: .234	Y: .938	Z: .78			
241	49	N3	1.645	967.964	-106.16	1.746	-.028	-.021
242	49	N87	-79.239	1482.846	64.557	-1.875	.002	-3.067
243	49	N124	77.586	952.731	41.606	-.924	-.002	1.435
244	49	Totals:	-.007	3403.541	.003			
245	49	COG (ft):	X: -.699	Y: 1.041	Z: .426			
246	50	N3	-3.276	944.931	-84.204	1.834	-.008	.011
247	50	N87	-54.194	1161.455	44.452	-1.308	.008	-1.825
248	50	N124	57.47	1297.137	39.753	-1.523	-.015	1.966
249	50	Totals:	0	3403.524	0			
250	50	COG (ft):	X: .1	Y: 1.041	Z: .426			
251	51	N3	-3.337	1201.127	-98.516	2.318	-.01	.022
252	51	N87	-62.31	1132.423	52.35	-1.113	.01	-1.986
253	51	N124	65.646	1199.729	46.167	-1.201	-.017	2.011
254	51	Totals:	0	3533.28	0			
255	51	COG (ft):	X: .039	Y: 1.17	Z: -.017			
256	52	N3	-4.275	1105.852	47.846	2.194	-.007	.026
257	52	N87	-94.52	982.941	106.474	-.96	.048	-1.709
258	52	N124	98.795	1044.712	108.157	-1.019	-.059	1.722
259	52	Totals:	0	3133.504	262.477			
260	52	COG (ft):	X: .039	Y: 1.17	Z: -.017			
261	53	N3	-25.535	1099.975	30.439	2.18	.017	.028
262	53	N87	-143.563	968.358	118.08	-.937	.03	-1.664
263	53	N124	37.86	1065.17	78.785	-1.055	-.065	1.779
264	53	Totals:	-131.238	3133.504	227.305			
265	53	COG (ft):	X: .039	Y: 1.17	Z: -.017			
266	54	N3	-40.747	1084.791	-18.523	2.132	.035	.028
267	54	N87	-168.942	963.401	110.486	-.927	.007	-1.644
268	54	N124	-17.614	1085.312	39.275	-1.094	-.058	1.838
269	54	Totals:	-227.304	3133.504	131.238			
270	54	COG (ft):	X: .039	Y: 1.17	Z: -.017			
271	55	N3	-45.838	1064.367	-85.932	2.064	.041	.026
272	55	N87	-163.862	969.395	85.725	-.933	-.016	-1.656
273	55	N124	-52.776	1099.743	.207	-1.124	-.039	1.882
274	55	Totals:	-262.476	3133.504	0			
275	55	COG (ft):	X: .039	Y: 1.17	Z: -.017			
276	56	N3	-39.436	1044.18	-153.724	1.994	.034	.022
277	56	N87	-129.673	984.736	50.433	-.954	-.033	-1.697
278	56	N124	-58.195	1104.589	-27.947	-1.139	-.014	1.9

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
279	56	Totals:	-227.304	3133.505	-131.238			
280	56	COG (ft):	X: .039	Y: 1.17	Z: -.017			
281	57	N3	-23.261	1029.637	-203.729	1.941	.015	.017
282	57	N87	-75.55	1005.315	14.072	-.984	-.038	-1.754
283	57	N124	-32.427	1098.554	-37.647	-1.134	.011	1.886
284	57	Totals:	-131.238	3133.506	-227.304			
285	57	COG (ft):	X: .039	Y: 1.17	Z: -.017			
286	58	N3	-1.643	1024.632	-222.556	1.918	-.01	.013
287	58	N87	-15.988	1025.621	-13.623	-1.015	-.03	-1.813
288	58	N124	17.63	1083.254	-26.297	-1.11	.029	1.845
289	58	Totals:	0	3133.507	-262.475			
290	58	COG (ft):	X: .039	Y: 1.17	Z: -.017			
291	59	N3	19.622	1030.506	-205.145	1.933	-.034	.011
292	59	N87	33.049	1040.211	-25.227	-1.038	-.012	-1.859
293	59	N124	78.565	1062.79	3.069	-1.074	.034	1.787
294	59	Totals:	131.237	3133.507	-227.303			
295	59	COG (ft):	X: .039	Y: 1.17	Z: -.017			
296	60	N3	34.834	1045.683	-156.177	1.98	-.052	.011
297	60	N87	58.424	1045.174	-17.636	-1.047	.011	-1.878
298	60	N124	134.045	1042.651	42.577	-1.036	.027	1.728
299	60	Totals:	227.303	3133.507	-131.237			
300	60	COG (ft):	X: .039	Y: 1.17	Z: -.017			
301	61	N3	39.919	1066.101	-88.765	2.048	-.058	.013
302	61	N87	53.344	1039.178	7.118	-1.041	.034	-1.866
303	61	N124	169.212	1028.227	81.649	-1.005	.008	1.684
304	61	Totals:	262.474	3133.507	.001			
305	61	COG (ft):	X: .039	Y: 1.17	Z: -.017			
306	62	N3	33.513	1086.291	-20.977	2.118	-.051	.017
307	62	N87	19.161	1023.829	42.408	-1.02	.05	-1.826
308	62	N124	174.629	1023.386	109.808	-.99	-.017	1.667
309	62	Totals:	227.303	3133.506	131.239			
310	62	COG (ft):	X: .039	Y: 1.17	Z: -.017			
311	63	N3	17.338	1100.841	29.022	2.172	-.032	.022
312	63	N87	-34.957	1003.245	78.773	-.991	.055	-1.769
313	63	N124	148.856	1029.419	119.511	-.996	-.042	1.68
314	63	Totals:	131.237	3133.505	227.305			
315	63	COG (ft):	X: .039	Y: 1.17	Z: -.017			
316	64	N3	-3.364	777.062	74.794	1.56	-.005	.02
317	64	N87	-77.441	672.996	92.159	-.655	.045	-1.166
318	64	N124	80.805	716.355	95.524	-.691	-.054	1.171
319	64	Totals:	0	2166.413	262.477			
320	64	COG (ft):	X: .039	Y: 1.17	Z: -.017			
321	65	N3	-24.641	771.192	57.393	1.545	.02	.022
322	65	N87	-126.481	658.431	103.748	-.632	.027	-1.12
323	65	N124	19.885	736.789	66.163	-.727	-.06	1.229
324	65	Totals:	-131.238	2166.412	227.304			
325	65	COG (ft):	X: .039	Y: 1.17	Z: -.017			
326	66	N3	-39.865	756.026	8.444	1.497	.037	.022
327	66	N87	-151.867	653.48	96.137	-.622	.004	-1.101
328	66	N124	-35.572	756.907	26.657	-.765	-.053	1.288
329	66	Totals:	-227.304	2166.412	131.238			
330	66	COG (ft):	X: .039	Y: 1.17	Z: -.017			
331	67	N3	-44.958	735.626	-58.949	1.429	.044	.02
332	67	N87	-146.8	659.467	71.365	-.629	-.019	-1.113
333	67	N124	-70.718	771.319	-12.417	-.796	-.034	1.332
334	67	Totals:	-262.475	2166.413	0			
335	67	COG (ft):	X: .039	Y: 1.17	Z: -.017			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
336	68	N3	-38.551	715.463	-126.725	1.359	.036	.016
337	68	N87	-112.628	674.791	36.071	-.65	-.035	-1.153
338	68	N124	-76.125	776.159	-40.584	-.81	-.009	1.349
339	68	Totals:	-227.304	2166.414	-131.238			
340	68	COG (ft):	X: .039	Y: 1.17	Z: -.017			
341	69	N3	-22.363	700.938	-176.719	1.306	.018	.011
342	69	N87	-58.521	695.345	-.284	-.679	-.04	-1.21
343	69	N124	-50.355	770.131	-50.301	-.805	.016	1.335
344	69	Totals:	-131.238	2166.415	-227.304			
345	69	COG (ft):	X: .039	Y: 1.17	Z: -.017			
346	70	N3	-.727	695.939	-195.543	1.284	-.007	.007
347	70	N87	1.031	715.628	-27.966	-.71	-.033	-1.27
348	70	N124	-.305	754.849	-38.966	-.781	.033	1.294
349	70	Totals:	0	2166.415	-262.476			
350	70	COG (ft):	X: .039	Y: 1.17	Z: -.017			
351	71	N3	20.554	701.806	-178.138	1.298	-.032	.005
352	71	N87	50.066	730.2	-39.553	-.733	-.015	-1.315
353	71	N124	60.617	734.41	-9.612	-.746	.039	1.236
354	71	Totals:	131.237	2166.416	-227.303			
355	71	COG (ft):	X: .039	Y: 1.17	Z: -.017			
356	72	N3	35.777	716.965	-129.183	1.346	-.049	.005
357	72	N87	75.447	735.156	-31.946	-.743	.008	-1.334
358	72	N124	116.079	714.295	29.893	-.707	.032	1.178
359	72	Totals:	227.303	2166.416	-131.237			
360	72	COG (ft):	X: .039	Y: 1.17	Z: -.017			
361	73	N3	40.865	737.359	-61.788	1.414	-.055	.007
362	73	N87	70.38	729.166	-7.18	-.736	.031	-1.322
363	73	N124	151.229	699.889	68.97	-.676	.013	1.134
364	73	Totals:	262.475	2166.415	.001			
365	73	COG (ft):	X: .039	Y: 1.17	Z: -.017			
366	74	N3	34.453	757.525	5.984	1.484	-.048	.011
367	74	N87	36.214	713.835	28.112	-.715	.048	-1.282
368	74	N124	156.636	695.054	97.143	-.662	-.012	1.116
369	74	Totals:	227.303	2166.415	131.239			
370	74	COG (ft):	X: .039	Y: 1.17	Z: -.017			
371	75	N3	18.265	772.057	55.973	1.537	-.03	.016
372	75	N87	-17.888	693.276	64.471	-.686	.053	-1.225
373	75	N124	130.86	701.081	106.862	-.667	-.037	1.13
374	75	Totals:	131.237	2166.414	227.305			
375	75	COG (ft):	X: .039	Y: 1.17	Z: -.017			

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

	Member	Shape	Code Check	L...	LC	Shear Check	Loc[..	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
1	M1	PIPE_3.0	.159	4...	9	.086	8.307		6	21266.1	65205	5.749	5.749	2...	H1-1b
2	M4	HSS4X4X4	.385	0	1	.074	0	y	14	124657...	139518	16.181	16.181	2...	H1-1b
3	M10	HSS4X4X4	.166	2...	1	.053	.223	z	1	136263...	139518	16.181	16.181	1...	H1-1b
4	MP3A	PIPE_2.0	.452	4...	5	.102	4.625		6	20866....	32130	1.872	1.872	1...	H1-1b
5	MP4A	PIPE_2.0	.362	3...	5	.128	3.625		6	20866....	32130	1.872	1.872	2...	H1-1b
6	MP2A	PIPE_2.0	.508	4...	10	.086	4.625		11	20866....	32130	1.872	1.872	1...	H1-1b
7	MP1A	PIPE_2.0	.341	3...	9	.088	3.625		8	20866....	32130	1.872	1.872	2...	H1-1b
8	M43	HSS4X4X4	.169	0	24	.052	0	y	13	136263...	139518	16.181	16.181	1...	H1-1b
9	M46	PL1/2x6	.225	....	7	.128	0	y	10	66009....	97200	1.012	12.15	1...	H1-1b
10	M51B	L2x2x3	.174	4...	2	.011	4.162	y	16	9823.1...	23392.8	.558	1.108	1...	H2-1
11	M52B	L2x2x3	.153	4...	12	.013	4.162	y	21	9823.1...	23392.8	.558	1.114	1...	H2-1
12	M76	PL3/8x6	.271	0	1	.255	0	y	18	70647....	72900	.57	9.113	1...	H1-1b

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

	Member	Shape	Code Check	L...	LC	Shear Check	Loc[..	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
13	M77	PL3/8x6	.295	....	8	.322	0	y	13	71583....	72900	.57	9.058	1	H1-1b
14	M80	PL1/2x6	.071	....	7	.099	0	y	11	96757....	97200	1.012	12.15	1...	H1-1b
15	M84	PL3/8x6	.220	0	3	.245	0	y	21	70647....	72900	.57	9.113	1...	H1-1b
16	M85	PL3/8x6	.261	....	7	.342	0	y	24	71583....	72900	.57	9.113	1...	H1-1b
17	M91	PL1/2x6	.068	....	1	.133	.112	y	9	96757....	97200	1.012	12.15	1...	H1-1b
18	M44	HSS4X4X4	.360	0	9	.090	0	y	33	124657...	139518	16.181	16.181	2...	H1-1b
19	M45	HSS4X4X4	.168	2...	21	.054	.223	z	9	136263...	139518	16.181	16.181	1...	H1-1b
20	M46A	HSS4X4X4	.168	0	20	.052	0	y	33	136263...	139518	16.181	16.181	1...	H1-1b
21	M47	PL1/2x6	.222	....	3	.130	0	y	6	66009....	97200	1.012	12.15	1...	H1-1b
22	M50A	L2x2x3	.176	4...	10	.011	4.162	y	24	9823.1...	23392.8	.558	1.108	1...	H2-1
23	M51C	L2x2x3	.153	4...	8	.013	4.162	y	17	9823.1...	23392.8	.558	1.114	1...	H2-1
24	M55	PL3/8x6	.274	0	9	.255	0	y	14	70647....	72900	.57	9.113	1...	H1-1b
25	M56	PL3/8x6	.292	....	4	.325	0	y	21	71583....	72900	.57	9.091	1...	H1-1b
26	M58A	PL1/2x6	.071	....	9	.100	0	y	7	96757....	97200	1.012	12.15	1...	H1-1b
27	M60	PL3/8x6	.220	0	11	.238	0	y	17	70647....	72900	.57	9.113	1...	H1-1b
28	M61	PL3/8x6	.262	....	3	.336	0	y	20	71583....	72900	.57	9.113	1...	H1-1b
29	M63	PL1/2x6	.070	....	9	.135	.112	y	5	96757....	97200	1.012	12.15	1...	H1-1b
30	M71	HSS4X4X4	.386	0	5	.094	0	y	42	124657...	139518	16.181	16.181	2...	H1-1b
31	M72	HSS4X4X4	.165	2...	5	.053	.223	z	5	136263...	139518	16.181	16.181	1...	H1-1b
32	M73	HSS4X4X4	.171	0	16	.051	0	y	17	136263...	139518	16.181	16.181	1...	H1-1b
33	M74	PL1/2x6	.225	....	11	.128	0	y	2	66009....	97200	1.012	12.15	1...	H1-1b
34	M77A	L2x2x3	.174	4...	6	.010	4.162	y	20	9823.1...	23392.8	.558	1.114	1...	H2-1
35	M78	L2x2x3	.155	4...	4	.013	4.162	y	13	9823.1...	23392.8	.558	1.108	1...	H2-1
36	M82	PL3/8x6	.266	0	11	.249	0	y	22	70647....	72900	.57	9.113	1...	H1-1b
37	M83A	PL3/8x6	.295	....	12	.322	0	y	17	71583....	72900	.57	9.087	1...	H1-1b
38	M85A	PL1/2x6	.071	....	11	.098	0	y	3	96757....	97200	1.012	12.15	1...	H1-1b
39	M87	PL3/8x6	.219	0	7	.233	0	y	13	70647....	72900	.57	9.113	1...	H1-1b
40	M88A	PL3/8x6	.259	....	11	.338	0	y	16	71583....	72900	.57	9.113	1...	H1-1b
41	M90	PL1/2x6	.067	....	5	.133	.112	y	1	96757....	97200	1.012	12.15	1...	H1-1b
42	M98	PIPE_3.0	.160	4...	5	.083	8.307		2	21266.1	65205	5.749	5.749	2...	H1-1b
43	M99A	PIPE_3.0	.159	4...	1	.086	8.307		10	21266.1	65205	5.749	5.749	2...	H1-1b
44	MP4C	PIPE_2.0	.360	3...	1	.123	3.625		2	20866....	32130	1.872	1.872	2...	H1-1b
45	MP1C	PIPE_2.0	.340	3...	5	.087	3.688		11	20866....	32130	1.872	1.872	2...	H1-1b
46	MP4B	PIPE_2.0	.369	3...	9	.127	3.625		10	20866....	32130	1.872	1.872	2...	H1-1b
47	MP1B	PIPE_2.0	.336	3...	1	.087	3.625		12	20866....	32130	1.872	1.872	2...	H1-1b
48	MP3C	PIPE_2.0	.453	4...	1	.102	4.625		2	20866....	32130	1.872	1.872	1...	H1-1b
49	MP2C	PIPE_2.0	.508	4...	6	.089	4.625		7	20866....	32130	1.872	1.872	1...	H1-1b
50	MP3B	PIPE_2.0	.461	4...	9	.104	4.625		10	20866....	32130	1.872	1.872	1...	H1-1b
51	MP2B	PIPE_2.0	.496	4...	2	.086	4.625		3	20866....	32130	1.872	1.872	1...	H1-1b
52	OVP1	PIPE_2.0	.207	3	12	.021	3		12	26521....	32130	1.872	1.872	1...	H1-1b
53	OVP2	PIPE_2.0	.207	3	6	.021	3		6	26521....	32130	1.872	1.872	1...	H1-1b
54	M108	PIPE_2.5	.183	1...	7	.081	.911		7	14558....	50715	3.596	3.596	1...	H1-1b
55	M109	PIPE_2.5	.182	1...	3	.084	10.5...		8	14558....	50715	3.596	3.596	1...	H1-1b
56	M110	PIPE_2.5	.181	1...	11	.081	10.5...		4	14558....	50715	3.596	3.596	1...	H1-1b
57	M117	L3X3X4	.391	1...	6	.051	0	y	6	43476....	46656	1.688	3.756	2...	H2-1
58	M118	L3X3X4	.373	1...	2	.049	0	y	2	43476....	46656	1.688	3.756	2...	H2-1
59	M119	L3X3X4	.377	1...	10	.050	0	y	10	43476....	46656	1.688	3.756	2...	H2-1

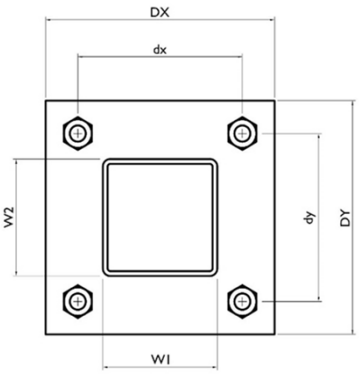
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/5/2024
Site Name:	COLUMBIA SOUTH CT		
MDG #:	5000120820		
Fuze ID #:	16067472	Page:	1

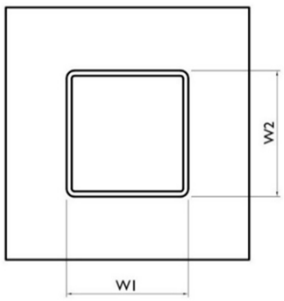
Version 2.00

I. Mount-to-Tower Connection Check

Custom Orientation Required	No
Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	7
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	7
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	5.9
Required Shear Strength / bolt (kips):	0.6
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	**28.6%**



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	10
Plate Height, D_y (in):	10
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):	0.625
Length of Yield Line, L_y (in):	7.75
Bolt Eccentricity, e (in):	2.35
M_u (kip-in):	13.95
Phi*M_n (kip-in):	24.52
Plate Bending Utilization:	**56.9%**



VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/5/2024
Site Name:	COLUMBIA SOUTH CT		
PSLC #:	5000120820		
Fuze ID #:	16067472	Page:	2

Version 2.00

Tower Connection Weld Checks	Yes
Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Stiffener Notch Length, n (in):	0
Weld Size (1/16 in):	6
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	16.00
Z_x (in^3/in):	21.33
Z_y (in^3/in):	21.33
J_p (in^4/in):	85.33
c_x (in)	2.25
c_y (in)	2.25
Required combined strength (kip/in):	2.41
Weld Capacity (kip/in):	8.35
Weld Utilization:	**28.8%**

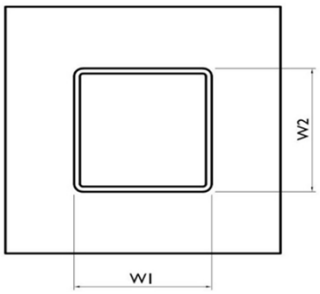


EXHIBIT 5

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:
411179

Site Name:
Colchester South CT

Location:
Colchester, Connecticut

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

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

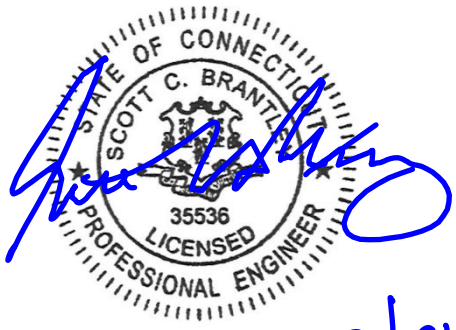
February 29th, 2024

68977 P-421192

Prepared By:

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

Approved By:



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Non-Ionizing Electromagnetic Radiation (NIER) Study

411179 Colchester South CT
Colchester, 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 411179 Colchester South CT is located at 856 Middletown Rd., in Colchester, Connecticut at coordinates 41.836606°, -72.254976°. The support structure is a 181' 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 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' 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.

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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 411179 Colchester South CT.RF NIER Study 02/16/24.
- 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.

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APPENDIX 1 Site Photos

Aerial View of Site

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Appendix 2 Antenna Inventory

411179 Colchester South CT

Antenna Inventory

Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	030	40000	180.0
2	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	150	40000	180.0
3	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	270	40000	180.0
4	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	030	40000	180.0
5	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	150	40000	180.0
6	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	270	40000	180.0
7	Verizon	Samsung	MT6413-77A	3700-3900	030	18286	180.0
8	Verizon	Samsung	MT6413-77A	3700-3900	150	18286	180.0
9	Verizon	Samsung	MT6413-77A	3700-3900	270	18286	180.0
10	AT&T	Scala	80010966	700/800/1900/2100	023	63231	160.0
11	AT&T	Scala	80010966	700/800/1900/2100	023	63231	160.0
12	AT&T	Scala	80010966	700/800/1900/2100	023	63231	160.0
13	AT&T	Scala	80010966	700/800/1900/2100	023	63231	160.0
14	AT&T	Scala	80010964	700/800/1900/2100	023	63231	160.0
15	AT&T	Scala	80010964	700/800/1900/2100	023	63231	160.0
16	AT&T	Allgon	7770	700/800/1900	023	10249	160.0
17	AT&T	Allgon	7770	700/800/1900	153	10249	160.0
18	AT&T	Allgon	7770	700/800/1900	263	10249	160.0
19	T-Mobile	Ericsson	Air6419 B41	2500	000	14356	145.0
20	T-Mobile	Ericsson	Air6419 B41	2500	110	14356	145.0
21	T-Mobile	Ericsson	Air6419 B41	2500	240	14356	145.0
22	T-Mobile	JMA	APXVAARR24	600/700	000	12222	145.0
23	T-Mobile	JMA	APXVAARR24	600/700	110	12222	145.0
24	T-Mobile	JMA	APXVAARR24	600/700	240	12222	145.0
25	T-Mobile	Commscope	VV-65A-R1B	1900/2100	000	25027	145.0
26	T-Mobile	Commscope	VV-65A-R1B	1900/2100	110	25027	145.0
27	T-Mobile	Commscope	VV-65A-R1B	1900/2100	240	25027	145.0

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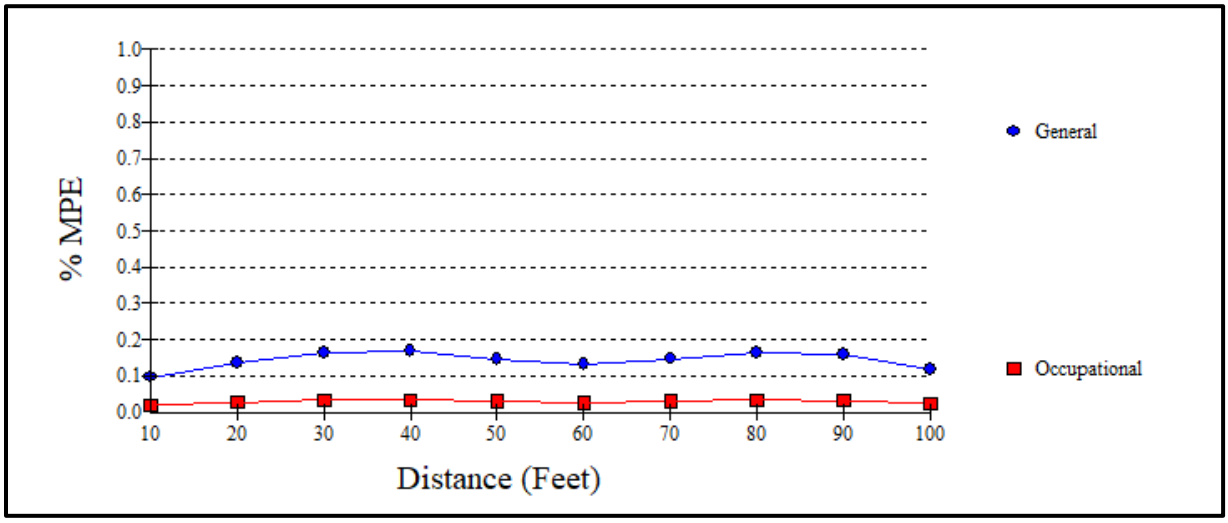
Appendix 3.1 MPE Limit Study



Maximum Power Density (@40'):	0.00011 mW/cm²
General Population MPE (@40'):	0.1683%
Occupational MPE (@40'):	0.0337%

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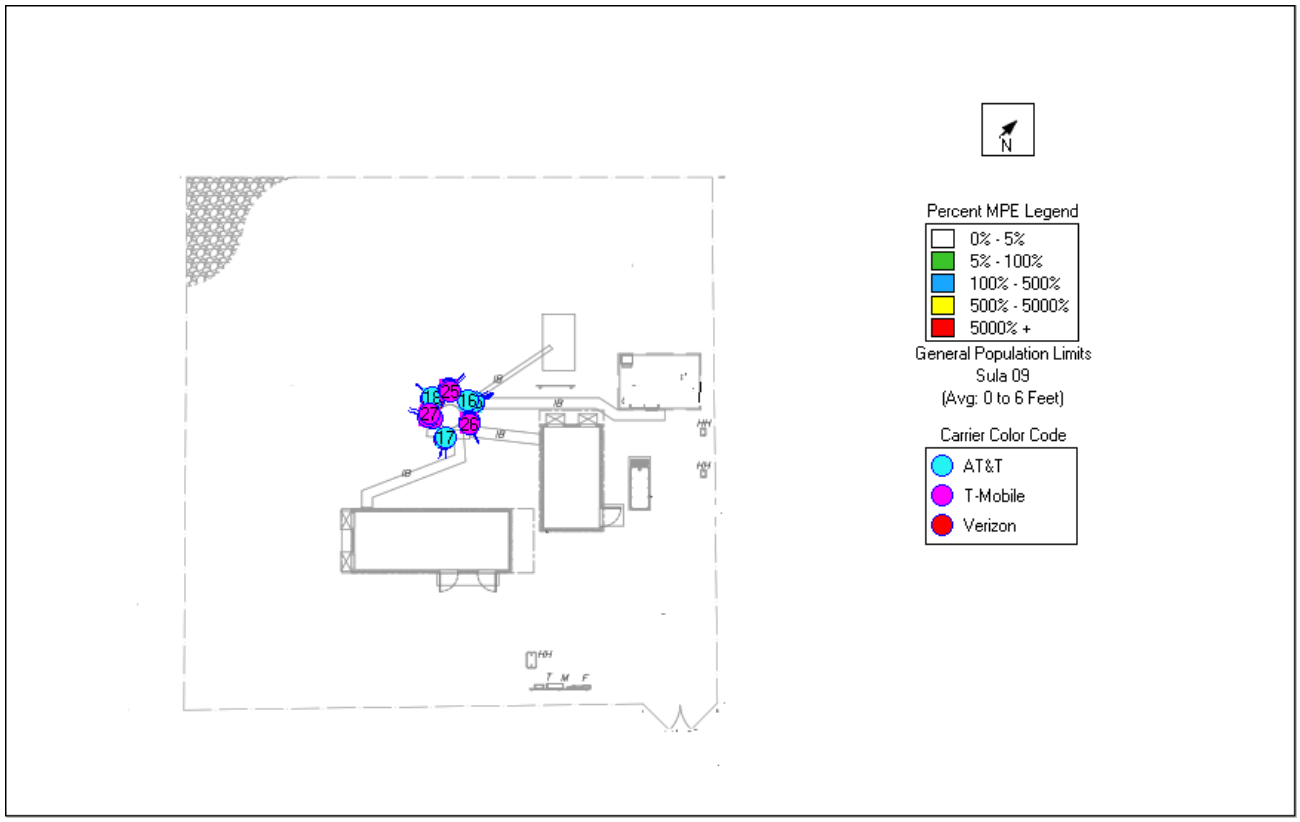
Appendix 3.2 MPE Limit Study



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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.

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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/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.

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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.

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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^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	$900/F^2$	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

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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^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	$180/F^2$	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.

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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

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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

θ_{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.

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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

Petition No. 586
SpectraSite Communications, Inc.
Columbia, Connecticut
Staff Report
November 12, 2002

On October 16, 2002 Connecticut Siting Council (Council) member Colin C. Tait with Robert Mercier of Council staff met SpectraSite Communications, Inc. (SpectraSite) representatives Julie Donaldson Kohler, Jason Catalini, David Trace, and Ray Vergati, and Town of Columbia Zoning Enforcement Official Carl Fontneau at 330 Middletown Road in Columbia for a field review of this petition. SpectraSite is petitioning the Council for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) would be required for the extension of an existing 120-foot monopole owned by SpectaSite.

SpectraSite proposes to install a 30-foot extension on an existing 120-foot monopole to accommodate the needs of AT&T Wireless PCS, LLC (AT&T). AT&T seeks to install six panel antennas on the extension at a centerline height of 150 feet above ground level (agl). The total height of the structure would be approximately 153 feet agl. AT&T would install equipment cabinets on a concrete pad within the existing compound.

Propagation models indicate adequate coverage on Route 66 between the proposed site and AT&T site CT-861 in Columbia with antennas located at 150 feet agl. According to the models, a coverage gap of approximately 0.25 miles would result if antennas were placed at the proposed site at 130 feet agl.

The cumulative worst-case power density for the telecommunications operations at the site has been calculated to be 18.7% of the applicable standard for uncontrolled environments.

The tower is located in the northeastern portion of a 26-acre wooded parcel. Adjacent properties include five residential properties, privately owned and town owned vacant land and the town recreation area.

The town issued a special permit for the construction of the facility on January 11, 2000. The permit limited the height of the structure to 120 feet. The Town contends that Council jurisdiction regarding modifications to municipally approved towers is unclear and requests that SpectraSite file a special permit application for the proposed extension. In addition, the Town is requesting a public hearing in Columbia to allow for a discussion on Council jurisdiction and the merits of the application.

SpectraSite contends that the proposed modification of the structure would not cause a substantial adverse environmental impact and would prevent the construction of a new tower in the area

EXHIBIT 7

Hello, your package has been delivered.

Delivery Date: Tuesday, 03/26/2024
Delivery Time: 12:35 PM
Signed by: DONNA

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030338881545
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14569549

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UPS Delivery Notification, Tracking Number 1Z9Y45030304554837

UPS <pkginfo@ups.com>
Tue 3/26/2024 11:06 AM
To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Tuesday, 03/26/2024
Delivery Time: 11:04 AM
Signed by: CLERK

CENTERLINE SITE ACQUISITION

Tracking Number:	**1Z9Y45030304554837**
Ship To:	STEVEN M. EVERETT FIRST SELECTMAN 323 ROUTE 87 COLUMBIA TOWN HALL COLUMBIA, CT 062371156 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14569549

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UPS <pkginfo@ups.com>
Tue 3/26/2024 11:06 AM
To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Tuesday, 03/26/2024
Delivery Time: 11:04 AM
Signed by: CLERK

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030330052937
Ship To:	CONSTANCE KISLUK, ZONING ENFORCEMEN 323 ROUTE 87 COLUMBIA TOWN HALL COLUMBIA, CT 062371156 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14569549

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